

**ARTHROSCOPY
SPORTS MEDICINE
SPINE SURGERY**

5th EDITION 2/2014 US

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STORZ



THE WORLD OF ENDOSCOPY



Information on events is available on the KARL STORZ website
www.karlstorz.com

ARTHROSCOPY, SPORTS MEDICINE SPINE SURGERY

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Important information for U.S. customers

Note:

Certain devices and references made herein to specific indications of use may have not received clearance or approval by the United States Food and Drug Administration. Practitioners in the United States should first consult with their local KARL STORZ representative in order to ascertain product availability and specific labeling claims. Federal (USA) law restricts certain devices referenced herein to sale, distribution, and use by, or on the order of a physician, dentist, veterinarian, or other practitioner licensed by the law of the State in which she/he practices to use or order the use of the device.

Important Notes:

It is recommended to check the suitability of the product for the intended procedure prior to use.

Endoscopes and accessories contained in this catalog have been designed in part with the cooperation of physicians and are manufactured by the KARL STORZ group. If subcontractors are hired to manufacture individual components, these are made according to proprietary KARL STORZ plans or drawings. Furthermore, these products are subject to strict quality and control guidelines of the KARL STORZ group. Both contractual and general legal provisions prohibit subcontractors from supplying components manufactured by order of KARL STORZ to competitors.

Any assumptions that competitors' endoscopes and accessories are acquired from the same suppliers as the KARL STORZ products are not correct. Moreover, endoscopes and instruments provided by competitors are not manufactured according to the design specifications of KARL STORZ. This means it cannot be assumed that these endoscopes and accessories – even if they look identical on the outside – are constructed in the same manner and have been tested according to the same criteria.

Standardized Design and Labeling

KARL STORZ participates both in national and international bodies involved in the development of standards for endoscopes and endoscopic accessories. Standardized design and development therefore have long been implemented consistently by KARL STORZ. The user can rest assured that all products by the KARL STORZ group have been designed and constructed not only in compliance with strict internal quality guidelines, but also with international standards. All data relevant for safe use, such as viewing direction, sizes and diameters, or notes regarding sterilization of telescopes, are applied to the instruments, have been formulated according to international standards, and therefore provide reliable information.

As we constantly seek to improve and modify our products, we reserve the right to make changes in design that vary from catalog descriptions.

Original or Counterfeit

KARL STORZ products are name brand articles renowned around the world and represent the state of the art in important areas of healthcare. A large number of "copy cat" products are currently being offered in many markets. These products are designed intentionally to resemble KARL STORZ products and use marketing strategies that at least point out their compatibility with KARL STORZ products. These products are by no means genuine products, since genuine KARL STORZ products are sold worldwide exclusively under the name of KARL STORZ, which appears on the packaging and the product. In the absence of such labeling, the product is not from KARL STORZ.

KARL STORZ, therefore, is unable to ensure that such products are actually compatible with genuine KARL STORZ products or can be used with them without injury to the patient.

KARL STORZ Items Not Available in the U.S. January, 2015

Pending 510(k) / PMA not currently available for sale in the U.S.

Order no.	Description	Section	Page
2870310 BP	BioPlug	ART-S 23	217
2870411 BP	BioPlug	ART-S 23	217
2870514 BP	BioPlug	ART-S 23	217
2870309 ST	Titanium Suture Anchor	ART-S 22 A	216
2870514 TI	Titanium Suture Anchor	ART-S 22 A	216
2870614 TI	Titanium Suture Anchor	ART-S 22 A	216
28310 GA – 28310 GX	ENDOSCREW	ART-HE 16	248
28163 BSN	TAKE-APART® Bipolar Coagulation Suction Tube	CV-LT 21 B	305
28163 SI	TWINFlow Suction and Irrigation Handle	CV-BD 2	352
SD1	STORZ MEDICAL DUOLITH® SD1 »ultra«	chapter 16	409-412
MP50, MP100, MP200	STORZ MEDICAL MASTERPULS® »elite edition«	chapter 16	409-412
28272 EH	ENDOCRANE®	ART-HS 6 A	404

Note: References made herein to specific endoscopic procedures or techniques represent the opinions and/or experiences of the named physician(s). KARL STORZ Endoscopy-America, Inc. neither warrants nor represents the appropriateness or efficacy of said procedures. Physicians are encouraged to consult medical literature regarding techniques, compliances and hazards prior to performance of any endoscopic procedure.

Note: Some items are pending 510(k). Please contact KARL STORZ Customer Support at (800) 421-0837 regarding the current regulatory status of products above.

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2. PRICES. Prices are subject to change without notice. Nevertheless, prices in effect at the time that an order is accepted will prevail. Written quotations are valid for 60 days unless otherwise specified. All applicable taxes, as well as shipping and/or handling charges, will be added to the invoice.

3. TERMS. Shipments are F.O.B. shipping point, shipping and handling prepaid by KARL STORZ and added to the invoice. Invoices are due and payable upon receipt; net 30 days. A finance charge equal to 1-1/2% per month, or the maximum amount allowed by law, whichever is less, may be assessed on all balances outstanding for more than 30 days. Any and all collection expenses, including reasonable attorneys' fees, incurred by KARL STORZ to secure payment of any sums due from Customer and/or effectuate repossession of products purchased from KARL STORZ, but not paid for, will be borne by Customer. All controversies, disputes and claims, shall be adjudicated by a court of competent jurisdiction within the County of Los Angeles, State of California or the United States District Court, Central District of California, which courts shall have exclusive jurisdiction over such matters. All transactions by and between Customer and KARL STORZ shall be governed by and construed in accordance with the laws of the State of California without regard to its conflict of laws principles. The invalidity or unenforceability of any of the within Terms and Conditions will not affect the validity or enforceability of any other or remaining term or condition hereof. The within Terms and Conditions apply to products that are supplied to Customer as samples or loans from KARL STORZ. Amounts payable to KARL STORZ for the purchase, lease or rental of products and/or services are not subject to withholding, set-off, or counter-claim under any circumstances without prior written consent of KARL STORZ.

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5. SHIPPING. Although KARL STORZ products are carefully packed to minimize in-transit damage, all shipments should be carefully examined upon receipt and if a product is damaged, Customer must document the nature and extent of the damage and immediately contact KARL STORZ. If concealed loss or damage is discovered, Customer must retain all packing materials and immediately notify KARL STORZ, requesting an inspection. If shipments are received short, Customer must contact KARL STORZ's Customer Support Department at once. KARL STORZ reserves the right to make partial shipments on any order. Invoices for partial shipments are payable upon receipt. KARL STORZ is not liable for any damages caused by or attributable to delays and/or non-delivery due to any cause whatsoever.

6. RETURN POLICY. A return merchandise authorization (RMA) must be obtained from KARL STORZ's Customer Support Department prior to returning any products. When phoning or writing KARL STORZ, for an RMA, the Customer Support Representative must be provided with: (a) Customer name and number, as it appears on the invoice; (b) the telephone number and the person to contact; (c) the applicable P.O. number; (d) the KARL STORZ catalog number and, if applicable, the serial number for each product; and, (e) the reason for the return. KARL STORZ reserves the right to refuse or return any products sent back to KARL STORZ without prior authorization of its Customer Support Department. Returns must be carefully packed and shipped pre-paid to KARL STORZ, Attn: RMA number. KARL STORZ's Customer Support Department will provide the return address and the RMA number. When returning products, Customer should include a copy of the original invoice or packing slip to ensure prompt issuing of credit. Full credit will only be issued for products that are returned and received within 120 days of date of shipment ("Ship Date") so long as such items are unused, in resalable condition and in their original product packaging. If unopened products are received by KARL STORZ 120 or more days after the Ship Date, KARL STORZ may, in its sole and absolute discretion, either refuse acceptance of the returned products or, as a condition to authorizing a return, require payment of an inspection fee of up to 25% of the invoiced price of the product, which will require a separate P.O. number before the RMA is issued. Shipping charges will be reimbursed, inspection fees will not be charged and full credit will be given if the return was due to an error on the part of KARL STORZ. The following products may not be returned for credit or exchanged: (a) products held longer than 120 days from Ship Date (except as provided above); (b) sterile packaged products where the package is opened and/or damaged; (c) discontinued products; (d) instruments that are etched or engraved by Customer; (e) products damaged by Customer; (f) products purchased "as is" or as demo products; and (g) used products. In order to prevent the transmission of disease to the medical facilities' and/or KARL STORZ's personnel, all products must be cleaned and then sterilized and/or disinfected before returning such products to KARL STORZ, which reserves the right to return unclean and contaminated products to Customer. Additionally, if any product becomes damaged and is not immediately returned for repair or exchange, KARL STORZ assumes no responsibility or liability for Customer's continued use of that damaged product. KARL STORZ does not guarantee the performance of, and may decline to repair or accept for repair/exchange, any product that has been repaired, modified and/or altered by any person or entity other than KARL STORZ or an authorized repair facility of KARL STORZ.

7. INSTALLATION, PREVENTATIVE MAINTENANCE, AND OTHER SERVICES. Subject to resource availability, KARL STORZ may, in its sole discretion, (a) install and setup the product, (b) perform preventative maintenance services, (c) provide onsite or remote troubleshooting services and other services, (d) provide software updates, and (e) provide loaners in case of back orders.

8. TRAINING. To the extent reasonable as to the complexity and quantity of products, KARL STORZ will provide training regarding the proper use of products at or near the time of delivery or installation, as applicable. KARL STORZ may also provide additional training regarding the proper use of products upon Customer's request, in KARL STORZ's sole discretion and subject to availability of KARL STORZ personnel.

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12. DISCOUNTS AND REBATES. The dollar value of discounts and rebates (if any) provided by KARL STORZ to Customer are intended to be discounts or reductions in price described in and in accordance with 42 U.S.C. Section 1320a-7b(b)(3)(A) and 42 C.F.R. Section 1001.952(h). Customer has an obligation to accurately record and may have an obligation to report all such reductions in purchase price to the Department of Health and Human Services ("DHHS") or other federal agency, state agencies, or other payers, as applicable. Customer acknowledges that this section is sufficient to advise Customer of its obligations under applicable federal and state laws and regulations.

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KARL STORZ GmbH & Co. KG is the proprietor and/or licensee of the following US-Patents in the fields of ARTHROSCOPY, SPORTS MEDICINE, SPINE SURGERY



US 7105003

28205 EHS, EGS
28208 EHS, EGS

US 6902573

28729 MT, TT

US 6589245

2870619 B, C
2870623 B, C
2870719 B, C
2870723 B, C
2870819 B, C
2870823 B, C
2870828 B, C
2870923 B, C
2870928 B, C
2870823 P, CP
2870828 P, CP
2870923 P, CP
2870928 P, CP
2870935 P, CP
2871028 P, CP
2871035 P, CP
2871135 P, CP

US 6863671

2870823 P, CP
2870828 P, CP
2870923 P, CP
2870928 P, CP
2870935 P, CP
2871028 P, CP
2871035 P, CP
2871135 P, CP

US 6613065

28179 GH, GK

US 6965715

28731 AWA, BWA, FWA, CWA
28728 BWA
28718 BA, CA
28208 BA
28300 BA, CA
28305 AA, BA
50230 BA
26046 AA, BA, BUA, FA
26003 AA, BA, FA

US 6397286

20535220-11x
20721020-1

US 5586873

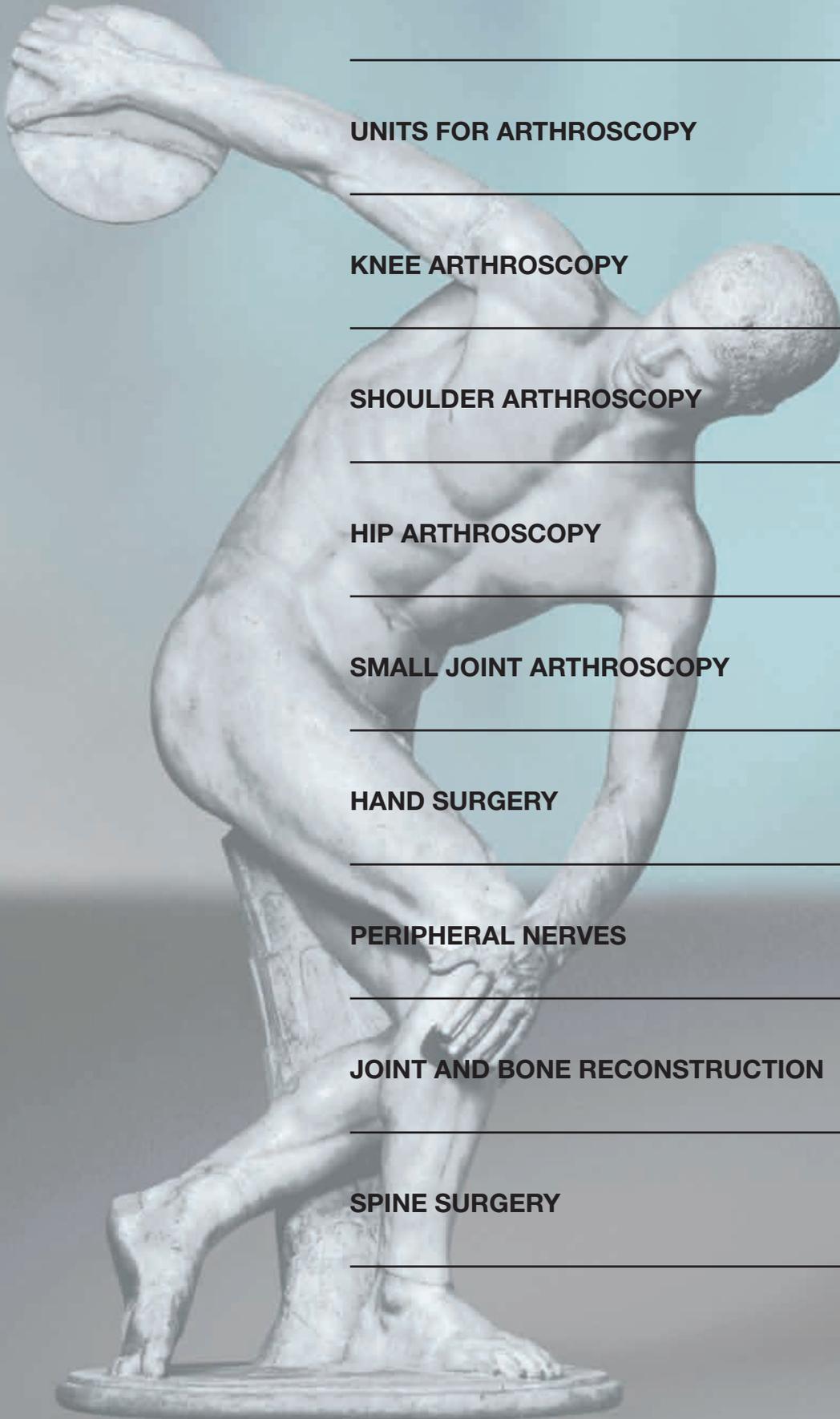
US 5569026
2833020-1

Patent Pending

US 20080319547 A1

US 20060015189 A1

BASIC SETS



UNITS FOR ARTHROSCOPY

2-3

KNEE ARTHROSCOPY

4-11

SHOULDER ARTHROSCOPY

12-15

HIP ARTHROSCOPY

16-17

SMALL JOINT ARTHROSCOPY

18-19

HAND SURGERY

20-22

PERIPHERAL NERVES

23-24

JOINT AND BONE RECONSTRUCTION

25-39

SPINE SURGERY

40-66

Units for Arthroscopy

Basic Set

Imaging

20 0905 19 9627 NB	19" Touch Screen , wall mounting, power supply 100 VAC – 240 VAC, 50/60 Hz
20 1614 01-1	27" FULL HD Monitor , wall-mounted with VESA 100 adaption, color systems PAL/NTSC, power supply 85 – 264 VAC, 50/60 Hz
TC 200EN	Cold Light Fountain Power LED 175 SCB , with integrated KARL STORZ-SCB, high-performance LED and one KARL STORZ light outlet, power supply 110 – 240 VAC, 50/60 Hz
TC 300	IMAGE1 S CONNECT , connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated KARL STORZ-SCB and digital Image Processing Module, power supply 100 – 120 VAC/200 – 240 VAC, 50/60 Hz
TH 100	IMAGE1 S H3-LINK , link module, for use with IMAGE1 FULL HD three-chip camera heads, power supply 100 – 120 VAC/200 – 240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT TC 200EN
	IMAGE1 S H3-Z Three-Chip FULL HD Camera Head , S-Technologies available, max. resolution 1920 x 1080 pixels, progressive scan, soakable, gas- and plasma-sterilizable, with integrated Parfocal Zoom Lens, focal length f = 15 – 31 mm (2x), 2 freely programmable camera head buttons, for use with IMAGE1 S and IMAGE 1 HUB™ HD/HD

Documentation

20 0409 13-EN	KARL STORZ AIDA® compact NEO advanced , documentation system for digital storage of still images, video sequences and audio files, power supply 115/230 VAC, 50/60 Hz
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Motor System UNIDRIVE® S III ARTHRO

28 7230 01-1	UNIDRIVE® S III ARTHRO SCB , with color display, touch screen operation, two motor outputs, with integrated SCB module, 100 – 120/230 – 240 VAC, 50/60 Hz
20 0168 31	Two-Pedal Footswitch

Recommended Handpieces UNIDRIVE® S III ARTHRO

28 7210 50	Hybrid Shaver Handpiece , up to 7000 rpm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB
28 7210 40	Small Joint Shaver Handpiece , up to 6000 rpm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB
28 7210 36	Multifunction Handpiece , for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB
28 7210 37	Jacobs Chuck , up to diameter 6.5 mm
28 7210 39	Sagittal Saw Attachment , keyless, with tilt lever, for use with Multifunction Handpiece 28 7210 36 and Saw Blades 28207 only
28 7210 33	Pin Driver , for drilling wires diameter 1.5 – 3 mm
28 7210 34	Pin Driver , for Synthes attachments

Optional

5x 28205 SA	Irrigation Adaptor , for validated cleaning of shaver handpieces
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Basic Set for Units for Arthroscopy continued on next page

Units for Arthroscopy

Basic Set

Recommended Standard Shaver Blades

28205 AC	Aggressive Cutter , reusable, sterilizable, diameter 4.2 mm, working length 120 mm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: green
28205 ACS	Aggressive Cutter , for single use, sterile, diameter 4.2 mm, working length 120 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: green
28205 CC	Full Radius Resector , reusable, sterilizable, diameter 4.2 mm, working length 120 mm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: yellow
28205 CCS	Full Radius Resector , for single use, sterile, diameter 4.2 mm, working length 120 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: yellow
28205 NK	Aggressive Pro Line Shaver Blade , reusable, sterilizable, diameter 4.5 mm, working length 120 mm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: light blue
28205 NKS	Aggressive Pro Line Shaver Blade , for single use, sterile, diameter 4.5 mm, working length 120 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: light blue
28205 HE	Aggressive Barrel Burr , reusable, sterilizable, diameter 6.5 mm, working length 120 mm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: pink
28205 HES	Aggressive Barrel Burr , for single use, sterile, diameter 6.5 mm, working length 120 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: pink
28206 DA	Aggressive Full Radius Resector , reusable, sterilizable, diameter 2.5 mm, working length 70 mm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: blue
28206 DAS	Aggressive Full Radius Resector , for single use, sterile, diameter 2.5 mm, working length 70 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB, color code: blue

Optional

5x 28205 SAA	Irrigation Adaptor , for validated cleaning of outer blades
5x 28205 SAI	Irrigation Adaptor , for validated cleaning of inner blades

ARTHROPUMP® Power Set

283407 01-1	ARTHROPUMP® Power
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AUTOCON® II 200

205322 01	AUTOCON® II 200 , power supply 200 – 240 VAC, 50/60 Hz
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Equipment Cart and Accessories

29005 DRB	Equipment Cart , basic equipment cart, rides on 4 antistatic dual wheels, 2 equipped with locking brakes (rear), 3 fixed shelves, 1 with push handles, mains switch in side boom, 1 drawer unit with lock, integrated cable conduits in both vertical beams, 1 set of non-sliding stands for units, double rear panel with integrated electrical subdistributors (with 12 sockets), holder for power supplies, potential earth connectors and cable winding on the outside, 1 camera holder, 2 equipment rails on the side, dimensions: equipment cart: 730 x 1490 x 716 mm (w x h x d), shelf: 630 x 480 mm (w x d), caster diameter: 150 mm
29005 TBG	Isolation Transformer , 230 VAC, 2000 VA, with 8 special mains socket expulsion fuses, 8 grounding plugs, for Equipment Carts 29005 BAS/DRB/LAP/GU
29003 IW	Earth Leakage Monitor , for use with Isolation Transformer 29003 TBK and 29005 TBG
29005 KKM	Mains Cord , with cold device plug and socket, with UL approval, length 100 cm
29005 MZD	Monitor Holding Arm , height and side adjustable, swiveling and tilting, central mount, swivel range 190°, reach 300 mm, loading capacity max. 15 kg, with monitor holder VESA 75/100, with integrated cable conduit, for use with Equipment Cart 29005 DRB
29005 SZD	Monitor Swivel Arm , height and side adjustable, can be mounted on the left or on the right side, swivel range 180°, reach 600 mm, for side boom as of 800 mm, loading capacity max. 14 kg, with monitor holder VESA 75/100, for Equipment Cart 29005 DRB
200403 75	RS 232 Connecting Cable , length 300 cm

28731 BWA	HOPKINS® Wide Angle Forward-Oblique Telescope 30° , enlarged view, diameter 4 mm, length 18 cm, autoclavable , fiber optic light transmission incorporated, color code: red
28136 CR	High-Flow Arthroscope Sheath , with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, two stopcocks, rotatable, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28126 BC/BT/BS, 28134 O, color code: red
28126 BT	Obturator , semisharp, for use with Arthroscope Sheaths 28229 DR, 28129 CR, 28126 CR/R/B, 28136 CR, 28135 CR and 28136 EC, color code: green-red-yellow
28145 LH	Probe , graduated, blunt, length of hook 5.5 mm, diameter 1.5 mm, working length 13 cm
28571 BB	SilCut® 1 Punch , through-cutting, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm
28171 CBN	SilCut® Punch , through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 30° curved to left, handle with cleaning connector, working length 12 cm
28171 DBN	SilCut® Punch , through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 30° curved to right, handle with cleaning connector, working length 12 cm
28171 AGN	SilGrasp® Alligator Grasping Forceps , surgical, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm
495 NA	Fiber Optic Light Cable , with straight connector, diameter 3.5 mm, length 230 cm

Optional for 28731 BWA and 28136 CR

28731 AE	ENDOCAMELEON® ARTHRO HOPKINS® Telescope , diameter 4 mm, length 18 cm, autoclavable , variable direction of view from 15° – 90°, adjustment knob for selecting the desired direction of view, fiber optic light transmission incorporated, color code: gold
28136 EC	Arthroscope Sheath ENDOCAMELEON® , with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, distal tapered, with irrigation holes, two stopcocks, rotatable, for use with ENDOCAMELEON® ARTHRO HOPKINS® Telescope 28731 AE and Obturator 28134 O with cannulated handle or Obturators 28126 BC/BT

Pediatric Interventions

28719 BA	HOPKINS® Forward-Oblique Telescope 30° , diameter 2.7 mm, length 18 cm, autoclavable , fiber optic light transmission incorporated, color code: red
28132 CR	Arthroscope Sheath , with standard coupling mechanism, diameter 4 mm, working length 12.5 cm, two stopcocks, rotatable, for use with HOPKINS® telescope 30° and Obturators 28132 BC/BT, color code: red-yellow
28132 BC	Obturator , blunt, for use with Arthroscope Sheath 28132 CR

Meniscus Suture

28179 HG	Handle , for use with monofilament threads size USP 2-0 to 2, for use with Suture Attachments 28179 PA – PH, 28728 NA – NG and Wheel Attachment 28179 HR
28728 NA	Suture Attachment , straight, working length 13 cm, for use with Handle 28179 HG
28728 NB	Suture Attachment , distal angled 180° to the right, straight, working length 13 cm, for use with Handle 28179 HG
28728 NC	Suture Attachment , distal angled 180° to the left, straight, working length 13 cm, for use with Handle 28179 HG
28728 ND	Suture Attachment , distal angled 360° to the right, straight, working length 13 cm, for use with Handle 28179 HG
28728 NE	Suture Attachment , distal angled 360° to the left, straight, working length 13 cm, for use with Handle 28179 HG
28728 NF	Suture Attachment , distal angled 20° upwards, straight, working length 13 cm, for use with Handle 28179 HG
28728 NG	Suture Attachment , distal angled 20° upwards, straight, working length 14 cm, for use with Handle 28179 HG
28728 NH	Knot Tier
28728 NJ	SilGrasp® Thread Grasping Forceps , working length 8 cm
28179 HR	Wheel Attachment , for use with monofilament threads size USP 2-0 to 2, for use with Handle 28179 HG and Wheel 28179 R

MPFL Reconstruction

MPFL Reconstruction with the Quadriceps Tendon

28185 QS	Quadriceps Tendon Cutter , for subcutaneous terminal cutting of the quadriceps tendon
2x 28185 MH	Handle , for use with Quadriceps Tendon Knives 28185 FA – FF and Quadriceps Tendon Separators 28185 EA – EC
3x 28185 FA	Tendon Knife , for removal of the quadriceps tendon for MPFL reconstruction, vertical parallel cutting, width 10 mm, height 4 mm, sterile, for use with Handle 28185 MH
3x 28185 FB	Same , width 12 mm
3x 28185 EA	Tendon Separator , for removal of the quadriceps tendon for MPFL reconstruction, horizontal parallel cutting, height 2 mm, sterile, for use with Handle 28185 MH
3x 28185 EB	Same , height 3 mm
28789 SK	CrossDrive® Screwdriver , cannulated, size 8 – 11, for use with bioresorbable Mega Fix® screws diameter 8 – 11 mm
2870823 B	Mega Fix® B , bioresorbable interference screw, diameter 8 mm, length 23 mm, sterile
28729 D	Drilling Wire , spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, for use with Bone Drills 28729 BA – BH, Collar Burrs 28729 BKC – BKF/BLC – BLF and Drills 28729 GA – GE

MPFL Reconstruction with the Gracilis Tendon and the Patellar Tunnel

28728 BLB	Drill , for preparation of the tunnel for MPFL reconstruction, with penetration stop, diameter 4.5 mm, for use with Gauge 28728 BL
28728 BL	Gauge , for MPFL reconstruction, with handle, for use with Drill 28728 BLB
28729 BLK	Collar Burr , tibial, cannulated, collar diameter 8 mm, diameter 6.5 x 43 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28729 D	Drilling Wire , spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, for use with Bone Drills 28729 BA – BH, Collar Burrs 28729 BKC – BKF/BLC – BLF and Drills 28729 GA – GE
2870823 B	Mega Fix® B , bioresorbable interference screw, diameter 8 mm, length 23 mm, sterile
28789 SK	CrossDrive® Screwdriver , cannulated, size 8 – 11, for use with bioresorbable Mega Fix® screws diameter 8 – 11 mm
28729 BD	Bone Drill , cannulated, diameter 7 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28728 NJ	SilGrasp® Thread Grasping Forceps , working length 8 cm

MPFL Reconstruction with the Gracilis Tendon and the BioPlug Suture Anchor

28179 KB	Drill , for preparation of the tunnel for BioPlug 2870411 BP, with lasermarking for the depth of the drill hole, diameter 3.7 mm, length 15 cm
28179 KI	Insertor , with lateral thread guide and thread clip at the handle, working length 9 cm, for use with BioPlug 2870411 BP
2x 2870411 BP	BioPlug, bioresorbable suture anchor , diameter 4.2 mm, length 11 mm, sterile, for single use, for use with Insertor 28179 TI or 28179 KI
28729 P	Tissue Forceps , 1 x 2 teeth, medium, distal curved to left, length 14.5 cm
28728 K	Suture Curette Attachment , for retinaculum suture, for use with Handle 28728 G
28728 G	Handle , for use with Mirror Attachments 28728 MA/MC and Suture Curette Attachment 28728 K
28728 NJ	SilGrasp® Thread Grasping Forceps , working length 8 cm
28179 HD	Threading Device , for use with Suture Hooks 28179 HA – HC
28729 BE	Bone Drill , cannulated, diameter 8 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
200400	BEYER Rongeur , slender, curved, length 17 cm
28729 D	Drilling Wire , spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, for use with Bone Drills 28729 BA – BH, Collar Burrs 28729 BKC – BKF/BLC – BLF and Drills 28729 GA – GE
2870823 B	Mega Fix® B , bioresorbable interference screw, diameter 8 mm, length 23 mm, sterile
28789 SK	CrossDrive® Screwdriver , cannulated, size 8 – 11, for use with bioresorbable Mega Fix® screws diameter 8 – 11 mm
2x 801810	LANGENBECK Retractor , size 43 x 13 mm, length 21 cm
2x 786003	Retractor , sharp, 3 prongs, length 17 cm
2x 498400	COTTLE Retractor , narrow (standard model), length 14 cm

Graft Removal and Preparation for Cruciate Ligament Reconstruction

Graft Removal and Preparation of Hamstrings

28729 AC	Open Tendon Stripper , graduated, diameter 7.5 mm, length 30 cm or
28729 AB	Tendon Stripper , graduated, diameter 7 mm, length 30 cm
28729 SH	Tendon Hook
28729 P	Tissue Forceps , 1 x 2 teeth, medium, distal curved to left, length 14.5 cm
28729 SB	Tendon Board , including FLIPPTACK® Retainer 28729 SC
28729 FK	Thread Clip
208000	Surgical Handle , Fig. 3, length 12.5 cm, for Blades 208010 – 15, 208210 – 15
28729 SE	Tendon Thickness Tester , for determination of tendon thickness size 7 – 12 mm at intervals of 0.5 mm

Optional

28729 LT	Looping Tower , with FLIPPTACK® Retainer 28729 SC, for use with Tendon Board 28729 SB
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Graft Removal and the Quadriceps Tendon

28185 QS	Quadriceps Tendon Cutter , for subcutaneous terminal cutting of the quadriceps tendon
2x 28185 MH	Handle , for use with Quadriceps Tendon Knives 28185 FA – FF and Quadriceps Tendon Separators 28185 EA – EC
3x 28185 FC	Tendon Knife , for removal of the quadriceps tendon for cruciate ligament reconstruction, vertical parallel cutting, width 8 mm, height 6 mm, sterile, for use with Handle 28185 MH
3x 28185 FD	Same , width 9 mm
3x 28185 FE	Same , width 10 mm
5x 28185 EC	Tendon Separator , for removal of the quadriceps tendon for cruciate ligament reconstruction, horizontal parallel cutting, height 5 mm, sterile, for use with Handle 28185 MH
28185 MB	Tendon Thickness Tester , for determining the thickness of the quadriceps tendon

Graft Removal and Preparation of the Patellar Tendon (BTB)

28729 PC	Patellar Saw Template , for harvesting a bone block with tendon (BTB), width 7 mm
28729 PD	Same , width 8 mm
28729 PE	Same , width 9 mm
28729 PF	Same , width 10 mm
28729 PG	Same , width 11 mm
28729 PL	Fluted Coring Reamer , for harvesting a bone block with tendon (BTB), with coil, diameter 7 mm, for use with Handle 28729 PQ
28729 PM	Same , diameter 8 mm
28729 PN	Same , diameter 9 mm
28729 PO	Same , diameter 10 mm
28729 PP	Same , diameter 11 mm
28729 PQ	Handle , T-shaped, for use with Fluted Coring Reamers 28729 PL – PP and Revision Blades 28728 TA – TI
2x 28729 PJ	Bone Block Holder , for use with Tendon Board 28729 SB
28729 PH	Measuring Block , to determine the size of a bone block
28729 PK	Bone Forceps , for use with Measuring Block 28729 PH
28729 PA	Chisel , width 8 mm
28729 PB	Tendon Knife , blunt

Cruciate Ligament Reconstruction

Basic Set

2x 28729 D	Drilling Wire , spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, for use with Bone Drills 28729 BA – BH, Collar Burrs 28729 BKC – BKF/BLC – BLF and Drills 28729 GA – GE
28729 E	Larding Wire , pyramidal tip, diameter 2.4 mm, length 32 cm, package of 10, for use with Bone Drills 28729 BA – BH, Collar Burrs 28729 BKC – BKF/BLC – BLF and Drills 28729 GA – GE
28729 ZE	Femoral Target Guide , for ACL reconstruction, graduated, 3 mm offset, for drilling diameter smaller than 7 mm
28729 ZD	Femoral Target Guide , for ACL reconstruction, graduated, 4 mm offset, for drilling diameter 7 and 8 mm
28729 ZC	Femoral Target Guide , for ACL reconstruction, graduated, 5.5 mm offset, for drilling diameter 9 and 10 mm
28729 ZA	Tibial Target Guide , for ACL reconstruction
28729 TM	Tensiometer , for measuring and controlling the tension of the graft
28729 N	Notcher , with fin-like blade to assist screw insertion, working length 15 cm
174800	Metal Mallet , with plastic replacement head, length 22.5 cm
28729 BA	Bone Drill , cannulated, diameter 4.5 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28729 BB	Same , diameter 5 mm
28729 BI	Same , diameter 5.5 mm
28729 BC	Same , diameter 6 mm
28729 BK	Same , diameter 6.5 mm
28729 BD	Same , diameter 7 mm
28729 BL	Same , diameter 7.5 mm
28729 BE	Same , diameter 8 mm
28729 BM	Same , diameter 8.5 mm
28729 BF	Same , diameter 9 mm
28729 BN	Same , diameter 9.5 mm
28729 BG	Same , diameter 10 mm
28729 BO	Same , diameter 10.5 mm
28729 BH	Same , diameter 11 mm
28171 SGN	SilGrasp® Suture Grasper , straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 14 cm

Optional

28729 WZ	Femoral Target Guide Attachment , for ACL reconstruction via a medial port, with 7 mm offset, for use with Handle 28729 ZG
28729 VX	Femoral Target Guide Attachment , for ACL reconstruction via a medial port, with 8 mm offset, for use with Handle 28729 ZG
28729 VY	Femoral Target Guide Attachment , for ACL reconstruction via a medial port, with 9 mm offset, for use with Handle 28729 ZG
28729 VZ	Femoral Target Guide Attachment , for ACL reconstruction via a medial port, with 10 mm offset, for use with Handle 28729 ZG
28729 ZG	Handle , with ratchet, for use with Inserts 28729 ZM – ZQ, WZ, VX – VZ, WU – WW, WA – WD

Basic Set for Cruciate Ligament Reconstruction continued on next page

Cruciate Ligament Reconstruction

Optional

Collar Burr, femoral

28729 BKC	Collar Burr , femoral, diameter 6 mm, cannulated, collar diameter 7.5 mm at 23 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28729 BKK	Same , diameter 6.5 mm, collar diameter 8 mm at 23 mm
28729 BKD	Same , diameter 7 mm, collar diameter 8.5 mm at 23 mm
28729 BKL	Same , diameter 7.5 mm, collar diameter 9 mm at 23 mm
28729 BKE	Same , diameter 8 mm, collar diameter 9.5 mm at 23 mm
28729 BKM	Same , diameter 8.5 mm, collar diameter 10 mm at 23 mm
28729 BKF	Same , diameter 9 mm, collar diameter 10.5 mm at 23 mm

Optional

Collar Burr, tibial

28729 BLC	Collar Burr , tibial, diameter 6 mm, cannulated, collar diameter 7.5 mm at 43 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28729 BLK	Same , diameter 6.5 mm, collar diameter 8 mm at 43 mm
28729 BLD	Same , diameter 7 mm, collar diameter 8.5 mm at 43 mm
28729 BLL	Same , diameter 7.5 mm, collar diameter 9 mm at 43 mm
28729 BLE	Same , diameter 8 mm, collar diameter 9.5 mm at 43 mm
28729 BLM	Same , diameter 8.5 mm, collar diameter 10 mm at 43 mm
28729 BLF	Same , diameter 9 mm, collar diameter 10.5 mm at 43 mm

Optional

Drills, with cannulated drill sleeve

28729 GA	Drill , cannulated, diameter 6 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28729 GD	Same , diameter 9 mm
28729 GE	Same , diameter 10 mm
28729 HA	Cannulated Drill Sleeve , for use with Drill 28729 GA
28729 HB	Cannulated Drill Sleeve , for use with Drill 28729 GB
28729 HC	Cannulated Drill Sleeve , for use with Drill 28729 GC
28729 HD	Cannulated Drill Sleeve , for use with Drill 28729 GD
28729 HE	Cannulated Drill Sleeve , for use with Drill 28729 GE

Optional

Blade Dilators, oval

28970 AC	Blade Dilator , oval, for compression of the cancellous bone, cannulated, oval 5 x 7 mm, scaled to 70 mm, for use with Handle 28900 H
28970 AD	Same , oval 5 x 8 mm
28970 BD	Same , oval 6 x 8 mm
28970 BE	Same , oval 6 x 9 mm
28970 CE	Same , oval 7 x 9 mm
28970 CF	Same , oval 7 x 10 mm
28900 H	Handle , T-shaped, with quick coupling system, for use with Blade Dilators 28970 AC/AD/BD/BE/CE/CF
28729 SO	Tendon Thickness Tester , oval

Basic Set for Cruciate Ligament Reconstruction continued on next page

Cruciate Ligament Reconstruction

Additional Instruments for Anterior Cruciate Ligament Reconstruction, double bundle technique

28729 WT	Tibial Target Guide , for the double bundle technique, exit point from the tibial plateau adjustable between 8 – 10 mm
28729 WU	Femoral Target Guide Attachment , for the double bundle technique, with 8 mm offset, for use with Handle 28729 ZG
28729 WV	Same , with 9 mm offset
28729 WW	Same , with 10 mm offset
28729 WX	Femoral Target Guide Attachment , for ACL reconstruction via a medial port, with 5 mm offset, for use with Handle 28729 ZG
28729 VX	Same , with 8 mm offset
28729 VY	Same , with 9 mm offset
28729 ZG	Handle , with ratchet, for use with Inserts 28729 ZM – ZQ, WZ, VX – VZ, WU – WW, WA – WD
28729 SBD	Tendon Board Add-on , for the double bundle retainer technique, including FLIPPTRACK® Retainer 28729 SC
28729 FK	Thread Clip
28729 SD	Tendon Thickness Tester , for determination of tendon thickness size 4 – 7 mm at intervals of 0.5 mm

Additional Instruments for Anterior Cruciate Ligament Reconstruction, rectangular bone canals

28729 CF	Tibial Target Guide , for the placement of a maximum of 3 parallel drilling wires
28185 GA	Rasp , femoral, cannulated, straight, coarse, one side plain, width 8 mm, height 5 mm, working length 15 cm
28185 GB	Same , width 10 mm
28185 HA	Dilator , rectangular, femoral, width 8 mm, height 5 mm, working length 15 cm
28185 HB	Same , width 9 mm
28185 HC	Same , width 10 mm
28185 HD	Same , width 12 mm
28185 IA	Dilator , rectangular, tibial, width 8.5 mm, height 5.5 mm, working length 15 cm
28185 IB	Same , width 9.5 mm
28185 IC	Same , width 10.5 mm
28185 ID	Same , width 12.5 mm
28185 MB	Tendon Thickness Tester , for determining the thickness of the quadriceps tendon

Additional Instruments for Posterior Cruciate Ligament Reconstruction

28729 AH	Awl , for PCL reconstruction, working length 20 cm
28729 R	Raspatory , for PCL reconstruction, working length 13 cm
28729 ZG	Handle , with ratchet, for use with Inserts 28729 ZM – ZQ, WZ, VX – VZ, WU – WW, WA – WD
28729 WA	Femoral Target Guide Attachment , for PCL reconstruction, for use through the anterolateral port, for precise anatomic placement of the femoral tunnel, 4 locking positions, for drill diameter 7 mm, for use with Handle 28729 ZG
28729 WB	Same , for drill diameter 8 mm
28729 WC	Same , for drill diameter 9 mm
28729 WD	Same , for drill diameter 10 mm
28729 WE	Femoral Target Guide Attachment , for PCL reconstruction, for use through the anterolateral portal, for precise anatomic placement of the femoral tunnel, 4 locking positions, for drill diameter 11 mm, for use with Handle 28729 ZG
28729 EH	Elevator , for PCL reconstruction, working length 15.5 cm
28729 ZB	Tibial Target Guide , for PCL reconstruction
28729 ZL	Same , curved to left
28729 ZR	Same , curved to right
28729 WJ	Thread Catcher , for PCL reconstruction, with T-shaped handle

Cruciate Ligament Reconstruction Fixation Systems

Extracortical Fixation Single Bundle, Instruments

28729 L	Length Gauge , for cruciate ligament reconstruction, graduated, working length 23 cm
28729 MS	Button Wrench , for use with ENDOTACK® 28729 TT
28729 ST	Positioning Device , for use with ENDOTACK® 28729 TT
28728 NJ	SilGrasp® Thread Grasping Forceps , working length 8 cm
28729 KK	Knot Holder , small, 1 x 1 mm, working length 14.5 cm

Implants

5x 28729 FT	FLIPTACK® , extracortical fixation button, 4 x 12 mm, sterile
5x 28729 TT	ENDOTACK® , tibial fixation button, 10 x 16 mm, sterile

Extracortical Fixation Double Bundle, Instruments

28729 L	Length Gauge , for cruciate ligament reconstruction, graduated, working length 23 cm
28729 MS	Button Wrench , for use with ENDOTACK® 28729 TT
28729 ST	Positioning Device , for use with ENDOTACK® 28729 TT
28729 SM	Positioning Device , for use with Mini ENDOTACK® 28729 MT, color code: red
28729 MM	Button Wrench , for use with Mini ENDOTACK® 28729 MT, color code: red

Implants

5x 28729 FT	FLIPTACK® , extracortical fixation button, 4 x 12 mm, sterile
5x 28729 MT	Mini ENDOTACK® , tibial fixation button, 8 x 12 mm, sterile

Fixation near the Joint with Bioresorbable MEGAFIX Interference Screws

28760 SK	CrossDrive® Screwdriver , cannulated, size 6, for use with bioresorbable Mega Fix® screws diameter 6 mm
28770 SK	CrossDrive® Screwdriver , cannulated, size 7, for use with bioresorbable Mega Fix® screws diameter 7 mm
28789 SK	CrossDrive® Screwdriver , cannulated, size 8 – 11, for use with bioresorbable Mega Fix® screws diameter 8 – 11 mm
2x 28789 GW	Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, package of 6, for use with CrossDrive® Screwdrivers 28789 SK, 28770 SK and 28760 SK

Implants Mega Fix® B/P/C/CP

For a range of sizes see chapter 7, INSTRUMENTS FOR CRUCIATE LIGAMENT RECONSTRUCTION

Fixation near the Joint with Mega Fix® Titanium Interference Screws

28789 CD	CrossDrive® Plus Screwdriver , cannulated, for use with Mega Fix® titanium interference screws and Nitinol Guide Wire 28789 FW
2x 28789 FW	Nitinol Guide Wire , diameter 2 mm, length 38.5 cm, package of 6

Implants Mega Fix® T

For a range of sizes see chapter 7, INSTRUMENTS FOR CRUCIATE LIGAMENT RECONSTRUCTION

Fixation near the Joint with Bioresorbable MEGASHIM™

28728 DS	Dilator , graduated, diameter 4 mm, working length 15 cm, for use with MEGASHIM™ 6x20 2870620 MSP and MEGASHIM™ 7x20 2870720 MSP
28728 DL	Dilator , graduated, diameter 5 mm, working length 15 cm, for use with MEGASHIM™ 8x20 2870820 MSP and MEGASHIM™ 9x20 2870920 MSP
28767 E	Applicator , distal marking at 2 mm and 4 mm, with strike plate, working length 15 cm, for use with MEGASHIM™ 6x20 2870620 MSP and MEGASHIM™ 7x20 2870720 MSP
28789 EK	Applicator , cannulated, distal marking at 2 and 4 mm, with strike plate, working length 15 cm, for use with MEGASHIM™ 8x20 2870820 MSP and MEGASHIM™ 9x20 2870920 MSP
28767 C	Pusher , distal marked at 2 and 4 mm, working length 15 cm, for use with MEGASHIM™ 6x20 2870620 MSP and MEGASHIM™ 7x20 2870720 MSP
28789 C	Pusher , distal marked at 2 and 4 mm, working length 15 cm, for use with MEGASHIM™ 8x20 2870820 MSP and MEGASHIM™ 9x20 2870920 MSP
28728 SH	Half Pipe® , without handle, short, working length 85 mm
2x 28789 GW	Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, package of 6, for use with CrossDrive® Screwdrivers 28789 SK, 28770 SK and 28760 SK

Implants MEGASHIM™

For a range of sizes see chapter 7, INSTRUMENTS FOR CRUCIATE LIGAMENT RECONSTRUCTION

Shoulder Arthroscopy

Basic Set

28731 BWA	HOPKINS® Wide Angle Forward-Oblique Telescope 30° , enlarged view, diameter 4 mm, length 18 cm, autoclavable , fiber optic light transmission incorporated, color code: red
28136 DS	High-Flow Arthroscope Sheath , with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, distal tapered, with irrigation holes, two stopcocks, rotating, for use with HOPKINS® telescopes 30°, 70° and Obturators 28136 BC/BT, color code: red
28136 BT	Obturator , semisharp, for use with Arthroscope Sheaths 28136 DS/S
28270 T	Probe , graduated, length of hook 2 mm, diameter 1.5 mm, working length 18 cm
28270 W	Changing Rod , length 35 cm, for use with arthroscope sheaths with inner diameter 4 mm
28171 SGN	SilGrasp® Suture Grasper , straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 14 cm
495 NA	Fiber Optic Light Cable , with straight connector, diameter 3.5 mm, length 230 cm

Optional for 28731 BWA, 28136 DS and 28136 BT

28731 AE	ENDOCAMELEON® ARTHRO HOPKINS® Telescope , diameter 4 mm, length 18 cm, autoclavable , variable direction of view from 15° – 90°, adjustment knob for selecting the desired direction of view, fiber optic light transmission incorporated, color code: gold
28136 EC	Arthroscope Sheath ENDOCAMELEON® , with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, distal tapered, with irrigation holes, two stopcocks, rotatable, for use with ENDOCAMELEON® ARTHRO HOPKINS® Telescope 28731 AE and Obturator 28134 O with cannulated handle or Obturators 28126 BT/BC
28126 BT	Obturator , semisharp, for use with Arthroscope Sheaths 28229 DR, 28129 CR, 28126 CR/R/B, 28136 CR, 28135 CR and 28136 EC, color code: green-red-yellow

Basic Set

28179 E	Basic Set for SPS – Secure Portal System including: Positioning Needle Obturator Guide Wire , package of 6 Dilator Handle , for Dilator 28179 DL Valve Housing Set of Gaskets , unsterile, package of 10
28179 GH	Half Pipe® , long, working length 95 mm, for use with Obturator 28179 OB
28179 EC	Dilator , with handle
28179 EP	Obturator , diameter 4 mm, for use with Dilator 28179 EC
28179 FC	Dilator , with handle
28179 FP	Obturator , diameter 4 mm, for use with Dilator 28179 FC
28179 SD	Cannula , with thread, transparent, for single use
28179 SB	Cannula , with thread, transparent, for single use
28179 BB	Elevator , width 4 mm, 15° curved upwards, working length 15 cm
28179 CB	Glenoid Rasp , width 5.5 mm, 30° curved upwards, working length 15 cm

Optional

28180 GO	Dilator , with handle and thread attachment, cannulated, inner diameter 1.6 mm, for use with Cannula 28180 GT and Nitinol Guide Wire 28140 GW
28180 GT	Cannula , with thread, limited reuse (5x), non-sterile, single packaging, for Gasket 28180 GD, inner diameter 8.25 mm, working length 7 cm, for use with Dilator 28180 GO
28180 GDS	Gasket Set , for single use, non-sterile, with sealing cap, package of 5, for use with Cannula 28180 GT
2x 28140 GW	Guide Wire , diameter 1.5 mm, working length 40 cm, package of 6
28140 DB	Puncture Needle , diameter 2.1 mm, working length 21.3 cm, for use with Guide Wire 28140 GW and Obturator 28140 DO
28140 DO	Obturator , for use with Puncture Needle 28140 DB

Reconstruction of the Shoulder Joint

Basic Set

28270 H	Mallet , ergonomic handle, two plane faces, length 17 cm, color code: blue
28179 I	Crochet Hook , working length 15 cm
28180 CE	S.L.A.P Rasp , width 4.5 mm, 30° curved downwards, also curved downwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm
28180 DC	Glenoid Rasp , width 4.5 mm, 30° curved upwards, also curved upwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm
28180 CB	Elevator , width 4 mm, 15° curved downwards, also curved downwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm
28180 CC	Same , 30° curved downwards
28180 GC	SNAPPER® SHOULDER PRO® Suture Forceps , for punching soft tissue and suture management in shoulder arthroscopy, straight, working length 15 cm, color code: blue
28180 GL	SNAPPER® SHOULDER PRO® Suture Forceps , for punching soft tissue and suture management in shoulder arthroscopy, curved to left, also curved to left in sheath, working length 15 cm, color code: red
28180 GR	SNAPPER® SHOULDER PRO® Suture Forceps , for punching soft tissue and suture management in shoulder arthroscopy, curved to right, also curved to right in sheath, working length 15 cm, color code: green
28179 KP	Knot Pusher , working length 18 cm
2870356 KP	or Knot Pusher and Suture Cutter , for cutting sutures up to size USP 2

Optional

SHOULDER PRO® Suture System

28179 HG	Handle , for use with monofilament threads size USP 2-0 to 2, for use with Suture Attachments 28179 PA – PH, 28728 NA – NG and Wheel Attachment 28179 HR
28179 HR	Wheel Attachment , for use with monofilament threads size USP 2-0 to 2, for use with Handle 28179 HG and Wheel 28179 R
28179 PA	Suture Attachment , distal tip curved upwards, straight, 5 mm in height, working length 15 cm, for use with Handle 28179 HG
28179 PD	Same , hook-shaped distal tip curved upwards, 8 mm in height
28179 PE	Suture Attachment , hook-shaped distal tip curved upwards, straight, 8.7 mm in height, working length 15 cm, for use with Handle 28179 HG
28179 PF	Same , 10 mm in height
28179 PG	Suture Attachment , distal tip angled 30° to right, straight, 8 mm in height, working length 15 cm, for use with Handle 28179 HG
28179 PH	Same , distal tip angled 30° to left
28180 BG	Suture Catcher , with inserter, sterile, package of 10, for use with Suture Attachments 28179 PA – PH and 28728 NA – NG, Wheel Attachment 28179 HR and Handle 28179 HG

Optional

WONDERHOOK® Suture System

28184 WH	Handle , for transporting monofilament threads up to size USP 1
28184 NR	WONDERHOOK® Suture Attachment , for use with monofilament threads up to size USP 1, distally strongly curved to right, working length 15 cm, for use with Handle 28184 WH, color code: red
28184 NL	Same , distally strongly curved to left
28184 MR	Suture Attachment , for use with monofilament threads up to size USP 1, distal tip curved 25° right, working length 15 cm, for use with Handle 28184 WH, color code: green
28184 ML	Same , distal tip curved 25° left
28184 NG	Suture Attachment , for use with monofilament threads up to size USP 1, straight, working length 15 cm, for use with Handle 28184 WH, color code: blue
28184 NA	Suture Attachment , for use with monofilament threads up to size USP 1, distal tip slightly curved upwards, working length 15 cm, for use with Handle 28184 WH, color code: gold
28184 RA	Cleaning Adaptor , for use with WONDERHOOK® Suture Attachments 28184 ML/MR/NG/NGL/NA/NR/NL

Implants for Shoulder Arthroscopy – Labrum Refixation

BioPlug

28179 TI	Inserters , with lateral thread guide and thread clip at the handle, working length 18 cm, for use with BioPlug 2870411 BP and 2870514 BP
28179 TB	Drill , for preparation of the tunnel for BioPlug 2870411 BP, with laser marking for the depth of the drill hole, diameter 3.7 mm, length 15 cm
28179 TD	Drill , for preparation of the tunnel for BioPlug 2870310 BP, with laser marking for the depth of the drill hole, diameter 2.7 mm, length 15 cm
28179 TK	Inserters , with lateral thread guide and thread clip at the handle, working length 18 cm, for use with BioPlug 2870310 BP
28179 HD	Threading Device , for use with Suture Hooks 28179 HA – HC
28179 GG	Glenoid Guide , working length 12.5 cm, for use with BioPlug 2870411 BP, 2870310 BP and Drills 28179 TB/TD

Range of Implants

2870310 BP	BioPlug, bioresorbable suture anchor , diameter 3.5 mm, length 10 mm, with one MegaFibre® USP 2 suture, sterile, for single use, for use with Inserters 28179 TK
2870411 BP	BioPlug, bioresorbable suture anchor , diameter 4.2 mm, length 11 mm, sterile, for single use, for use with Inserters 28179 TI or 28179 KI

Titanium Suture Anchors

28179 KS	Bone Punch , for use with Titanium Suture Anchors 2870514 TI, 2870614 TI and 2870309 ST
28179 GG	Glenoid Guide , working length 12.5 cm, for use with BioPlug 2870411 BP, 2870310 BP and Drills 28179 TB/TD

Implants

2870309 ST	Titanium Suture Anchor , diameter 3 mm, length 9 mm, with 2 MegaFibre® threads USP 2, pre-assembled, self-tapping, with inserter, sterile, for single use
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Implants for Shoulder Arthroscopy – Rotator Cuff

BioPlug

- 28179 TI **Insertor**, with lateral thread guide and thread clip at the handle, working length 18 cm, for use with BioPlug 2870411 BP and 2870514 BP
- 28179 TC **Drill**, for preparation of the tunnel for BioPlug 2870514 BP, with laser marking for the depth of the drill hole, diameter 4.6 mm, length 18 cm

Range of Implants

- 2870514 BP **BioPlug, bioresorbable suture anchor**, diameter 5.2 mm, length 14 mm, sterile, for single use, for use with Insertor 28179 TI

Titanium Suture Anchor

- 28179 TT **Threaded Drill**, for use with Titanium Suture Anchor 2870309 TI

Range of Implants

- 2870514 TI **Titanium Suture Anchor**, diameter 5 mm, length 12.5 mm, with two MegaFibre® threads USP 2, pre-assembled, self-tapping, with inserter, sterile, for single use
- 2870614 TI **Titanium Suture Anchor**, diameter 6.5 mm, length 12.5 mm, with two MegaFibre® threads USP 2, pre-assembled, self-tapping, with inserter, sterile, for single use

Hip Arthroscopy

Basic Set

28731 CWA	HOPKINS® Wide Angle Lateral Telescope 70° , enlarged view, diameter 4 mm, length 18 cm, autoclavable , fiber optic light transmission incorporated, color code: yellow
28131 CR	High-Flow Arthroscope Sheath , with snap-in coupling mechanism, diameter 5.5 mm, working length 13.5 cm, two stopcocks, rotatable, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28130 BC/BT, 28140 O, color code: blue
2x 28130 BC	Obturator , blunt, for use with Arthroscope Sheaths 28131 CR/R, 28130 CR/R, color code: green-red-yellow
28140 GH	Half Pipe® , for use in hip arthroscopy, handle axis 90°, with extra slim distal design, working length 95 mm
28130 CR	High-Flow Arthroscope Sheath , with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, two stopcocks, rotatable, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28130 BC/BT, 28140 O, color code: red
29131 R	Same , one stopcock
2x 28140 D	Gasket Attachment , with cone, including Gasket 28140 GU, for use with all Arthroscope Sheaths
2x 28140 DB	Puncture Needle , diameter 2.1 mm, working length 21.3 cm, for use with Guide Wire 28140 GW and Obturator 28140 DO
2x 28140 DO	Obturator , for use with Puncture Needle 28140 DB
4x 28140 GU	Gasket , for single use, unsterile, single-packaged, for use with Gasket Attachment 28140 D
28140 MB	Mirror Attachment , curved, 10° upwards, diameter 6.2 mm, working length 28 cm, for use with Handle 28728 G
28140 MC	Same , 40° upwards
28140 O	Obturator , cannulated, with handle, diameter 4.8 mm, for use with Arthroscope Sheaths 28130 CR/R and 28131 CR/R as well as Guide Wire 28140 GW
28140 S	Evacuation Cannula , with LUER-Lock and one stopcock, working length 18 cm, for use with Arthroscope Sheaths 28130 CR/R and 28131 CR/R
28140 Z	Aimer , complete, for portal placement in hip arthroscopy, for use with KARL STORZ arthroscope sheaths with a working length of 13.5 cm
28140 WK	Changing Rod , cannulated, diameter 4.8 mm, working length 31 cm, for use with Arthroscope Sheaths 28130 CR/R and 28131 CR/R as well as Guide Wire 28140 GW
28728 G	Handle , for use with Mirror Attachments 28728 MA/MC and Suture Curette 28728 K
2x 28140 GW	Guide Wire , diameter 1.5 mm, working length 40 cm, package of 6
28140 HD	Half Pipe® , for use in hip arthroscopy, handle rotated 90°, handle axis 120°, working length 95 mm
28140 HC	Half Pipe® , for use in hip arthroscopy, handle rotated 90°, handle axis 120°, distal end flat, atraumatic tip, working length 120 mm
28140 CD	Microfracture Chisel , curved 30°, working length 18 cm
28140 CE	Microfracture Chisel , curved 70°, working length 18 cm
28146 E	Pointed Knife , straight, working length 11.5 cm
28140 T	Probe , graduated, length of hook 3 mm, diameter 1.5 mm, working length 18 cm
533 TVA	Adaptor, autoclavable , permits telescope changing under sterile conditions

Optional for 28731 CWA, 28131 CR and 28130 BC

28731 AE	ENDOCAMELEON® ARTHRO HOPKINS® Telescope , diameter 4 mm, length 18 cm, autoclavable , variable direction of view from 15° – 90°, adjustment knob for selecting the desired direction of view, fiber optic light transmission incorporated, color code: gold
28136 EC	Arthroscope Sheath ENDOCAMELEON® , with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, distal tapered, with irrigation holes, two stopcocks, rotatable, for use with ENDOCAMELEON® HOPKINS® Telescope 28731 AE and Obturator 28134 O with cannulated handle or Obturators 28126 BT/BC
28126 BT	Obturator , semisharp, for use with Arthroscope Sheaths 28229 DR, 28129 CR, 28126 CR/R/B, 28136 CR, 28135 CR and 28136 EC, color code: green-red-yellow

Basic Set for Hip Arthroscopy continued on next page

Hip Arthroscopy

Basic Set

Optional Portal Management System

28140 EB	Dilator , with integrated handle, short, diameter 6 mm, for use with Threaded Cannula 28140 SA and Obturator 28140 EO
28140 EO	Obturator , cannulated, for use with Dilator 28140 EB
28140 FC	Dilator , with integrated handle, long, diameter 8.1 mm, for use with Threaded Cannula 28140 SD and Obturator 28140 FP
28140 FP	Obturator , cannulated, for use with Dilator 28140 FC
3x 28179 DG	Valve Housing , with LUER-Lock, for use with Set of Gaskets 28179 GU/GS
28140 SA	Cannula , with thread, transparent, inner diameter 6.1 mm, working length 9 cm, for single use, unsterile, single packaged, for use with Dilator 28140 EB
28140 SD	Cannula , with thread, transparent, inner diameter 8.25 mm, working length 12 cm, for single use, unsterile, single-packaged, for use with Dilator 28140 FC

Recommended Shaver Blades Hip Arthroscopy

28208 CCS	Full Radius Resector , for single use, sterile, diameter 4.5 mm, working length 180 mm, package of 6, for use with POWERSHAVER SL SCB and UNIDRIVE® S III ARTHRO SCB, color code: yellow
28208 EHS	Curved Aggressive Full Radius Resector , for single use, sterile, diameter 4.5 mm, working length 180 mm, package of 6, for use with POWERSHAVER SL SCB and UNIDRIVE® S III ARTHRO SCB, color code: light green
28208 IDS	Semi Hooded Barrel Burr , for single use, sterile, diameter 5.5 mm, working length 180 mm, package of 6, for use with POWERSHAVER SL SCB and UNIDRIVE® S III ARTHRO SCB, color code: pink

Wrist Arthroscopy

28300 BA	HOPKINS® Wide Angle Forward-Oblique Telescope 30° , diameter 2.4 mm, length 10 cm, autoclavable , fiber optic light transmission incorporated, color code: red
28302 BV	Obturator , blunt, for use with Arthroscope Sheaths 28303 DS/BS
28302 S	Probe , graduated, length of hook 1 mm, diameter 1 mm, working length 7.5 cm
28302 W	Changing Rod , diameter 2 mm, working length 15 cm, for use with Arthroscope Sheaths 28303 CR, 28303 DS
28303 CR	Arthroscope Sheath , with lock-in coupling mechanism, diameter 3.5 mm, working length 6.5 cm, two stopcocks, rotatable, for use with HOPKINS® Telescope 30° 28300 BA and Obturators 28302 BU/BV
28303 DS	High-Flow Arthroscope Sheath , with snap-in coupling mechanism, diameter 3.5 mm, working length 6.5 cm, two stopcocks, rotatable, for use with HOPKINS® Telescope 30° 28300 BA and Obturators 28302 BU/BV
28305 BA	HOPKINS® Forward-Oblique Telescope 30° , diameter 1.9 mm, length 6.5 cm, autoclavable , fiber optic light transmission incorporated, color code: red
28306 BN	High-Flow Arthroscope Sheath , with standard coupling mechanism, diameter 2.5 mm, working length 4 cm, one stopcock, fixed , for use with HOPKINS® Telescope 30° 28305 BA and Obturators 28306 BS/BT, color code: red
28306 BT	Obturator , blunt, for use with Arthroscope Sheaths 28306 BN
535012	HALSTEAD “ Mosquito ” Artery Forceps , straight, length 12.5 cm
6002000	LUER Cone Set
9210560	Case Insert , grooved foam
28572 AD	SilCut® 1 Punch , through-cutting, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 AE	SilCut® 1 Punch , through-cutting, cutting width 1 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 O	SilCut® 1 Oval Biter , through-cutting, cross-toothed, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

Optional Threaded Portals

28304 BH	KÖNIGSBERGER Trocar with Thread , diameter 4.5 mm, working length 2.5 cm, for instruments up to diameter 3 mm, working length 10 cm, color code: red-yellow
28304 DH	KÖNIGSBERGER Trocar with Thread , diameter 5 mm, working length 5 cm, for instruments up to diameter 3.5 mm, working length 13 cm, color code: red-yellow

Elbow Arthroscopy

28208 BA	HOPKINS® Forward-Oblique Telescope 30° , diameter 2.7 mm, length 11 cm, autoclavable , fiber optic light transmission incorporated, color code: red
28133 DS	Arthroscope Sheath , with snap-in coupling mechanism, diameter 4 mm, working length 7.5 cm, two stopcocks, rotatable, for use with HOPKINS® telescope 30° and Obturator 28133 BC
28133 BC	Obturator , blunt, for use with Arthroscope Sheath 28133 DS
28124 BZ	Changing Rod , diameter 2.7, working length 23 cm, for use with Arthroscope Sheath 28132 CR
28001 AB	Cartilage Forceps , 30° curved upwards, length of jaws 5.5 mm, working length 11 cm
28145 S	Probe , graduated, length of hook 2 mm, diameter 1.5 mm, working length 8.5 cm
28728 CF	Microfracture Chisel , straight, working length 9 cm
28728 CG	Microfracture Chisel , angled 30°, working length 9 cm
28728 CH	Same , angled 70°
28572 AD	SilCut® 1 Punch , through-cutting, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 AE	SilCut® 1 Punch , through-cutting, cutting width 1 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 O	SilCut® 1 Oval Biter , through-cutting, cross-toothed, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

Arthroscopy of the Upper Ankle Joint

28208 BA	HOPKINS® Forward-Oblique Telescope 30° , diameter 2.7 mm, length 11 cm, autoclavable , fiber optic light transmission incorporated, color code: red
28133 DS	Arthroscope Sheath , with snap-in coupling mechanism, diameter 4 mm, working length 7.5 cm, two stopcocks, rotatable, for use with HOPKINS® telescope 30° and Obturator 28133 BC
28133 BC	Obturator , blunt, for use with Arthroscope Sheath 28133 DS
28124 BZ	Changing Rod , diameter 2.7, working length 23 cm, for use with Arthroscope Sheath 28132 CR
28001 AB	Cartilage Forceps , 30° curved upwards, length of jaws 5.5 mm, working length 11 cm
28145 S	Probe , graduated, length of hook 2 mm, diameter 1.5 mm, working length 8.5 cm
28728 CF	Microfracture Chisel , straight, working length 9 cm
28728 CG	Microfracture Chisel , angled 30°, working length 9 cm
28728 CH	Same , angled 70°
28572 AD	SilCut® 1 Punch , through-cutting, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 AE	SilCut® 1 Punch , through-cutting, cutting width 1 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 O	SilCut® 1 Oval Biter , through-cutting, cross-toothed, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

Basic Set

28310 Z	Target Guide , complete including: Target Hook Guide Tube Insert
28310 TK	Depth Gauge , short, for use with system diameter 2.1 mm and system diameter 2.5 mm
28310 TL	Same , long
28310 SK	Screwdriver , short, cannulated
28310 SL	Same , long
28310 SD	Handle , for use with Screwdriver 28310 SK/SL
28310 I	Inbus , for use with Inbus Attachment 28310 IA
28310 IA	Inbus Attachment , for use with Inbus 28310 I
5x 28310 U	Shim , 0.7 mm, package of 10
5x 28310 UB	Same , 1.4 mm
28310 C	Wire Tray , for KÖNIGSBERGER screw set, with removable Screw Tray System 2.5 28310 TRG and Tray System 2.1 28310 TRK, outer dimensions (w x h x d): 480 x 250 x 70 mm

ENDOSCREW System, diameter 2.1 mm

28310 KKK	Core Hole Drill , short, system diameter 2.1 mm
28310 KKL	Core Hole Drill , long, system diameter 2.1 mm
28310 KGK	Gliding Hole Drill , short, system diameter 2.1 mm
28310 KGL	Gliding Hole Drill , long, system diameter 2.1 mm
28310 DK	Larding Wire , pyramidal tip, diameter 0.8 mm, length 12 cm, package of 10
28310 DG	Same , length 21 cm
3x 28310 KA	ENDOSCREW , blue, cannulated, diameter 2.1 mm, length 6 mm, unsterile
3x 28310 KB	Same , length 7 mm
3x 28310 KC	Same , length 8 mm
3x 28310 KD	Same , length 9 mm
3x 28310 KE	Same , length 10 mm
3x 28310 KF	Same , length 11 mm
3x 28310 KG	Same , length 12 mm
3x 28310 KH	Same , length 13 mm
3x 28310 KI	Same , length 14 mm
3x 28310 KJ	Same , length 15 mm
3x 28310 KK	Same , length 16 mm
3x 28310 KL	Same , length 17 mm
3x 28310 KM	Same , length 18 mm
3x 28310 KN	Same , length 19 mm
3x 28310 KO	Same , length 20 mm
3x 28310 KP	Same , length 22 mm
3x 28310 KQ	Same , length 24 mm
3x 28310 KR	Same , length 26 mm
3x 28310 KS	Same , length 28 mm
3x 28310 KT	Same , length 30 mm
28310 TRK	Tray System 2.1 , for the sterilization and storage of instruments

Basic Set for Hand Surgery continued on next page

ENDOSCREW System, diameter 2.5 mm

28310 GKK	Core Hole Drill , short, system diameter 2.5 mm
28310 GKL	Core Hole Drill , long, system diameter 2.5 mm
28310 GGK	Gliding Hole Drill , short, system diameter 2.5 mm
28310 GGL	Gliding Hole Drill , long, system diameter 2.5 mm
28310 FK	Larding Wire , pyramidal tip, diameter 1 mm, length 12 cm, package of 10
28310 FG	Same , length 21 cm
3x 28310 GA	ENDOSCREW , gold, cannulated, diameter 2.5 mm, length 6 mm, unsterile
3x 28310 GB	Same , length 7 mm
3x 28310 GC	Same , length 8 mm
3x 28310 GD	Same , length 9 mm
3x 28310 GE	Same , length 10 mm
3x 28310 GF	Same , length 11 mm
3x 28310 GG	Same , length 12 mm
3x 28310 GH	Same , length 13 mm
3x 28310 GI	Same , length 14 mm
3x 28310 GJ	Same , length 15 mm
3x 28310 GK	Same , length 16 mm
3x 28310 GL	Same , length 17 mm
3x 28310 GM	Same , length 18 mm
28310 GN	Same , length 19 mm
28310 GO	Same , length 20 mm
28310 GP	Same , length 22 mm
28310 GQ	Same , length 24 mm
28310 GR	Same , length 26 mm
28310 GS	Same , length 28 mm
28310 GT	Same , length 30 mm
28310 GU	Same , length 35 mm
28310 GV	Same , length 40 mm
28310 GW	Same , length 45 mm
28310 GX	Same , length 50 mm
28310 TRG	Tray System 2.5 , for the sterilization and storage of instruments

VITOM® – Visualization System for Open Surgery with Minimal Access

28100 AA	VITOM® Telescope 0° with Integrated Illuminator , VITOM® HOPKINS® straight forward telescope 0°, working distance 25 – 75 cm, length 11 cm, autoclavable , with fiber optic light transmission incorporated and condensor lenses, color code: green
495 TIP	Fiber Optic Light Cable , highly heat resistant, diameter 4.8 mm, length 300 cm
39501 A2	Wire Tray for Cleaning, Sterilization and Storage of two rigid endoscopes and one light cable, including holder for light post adaptors, silicone telescope holders and lid, external dimensions (w x d x h): 352 x 125 x 54 mm, for rigid endoscopes up to diameter 10 mm and working length 20 cm
28272 HC	Articulated Stand , L-shaped, long, reinforced version, especially large swivel range, with one mechanical central clamp for all five joint functions, height 48 cm, swivel range 66 cm, with quick release coupling KSLOCK (female)
28172 HR	Rotation Socket , to clamp to the operating table, with one mounted Butterfly Nut 28172 HRS, for European and US standard rails, with lateral clamp for height and angle adjustment of the articulated stand
28272 UGK	Clamping Jaw , with ball joint, large, clamping range 16.5 to 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed HOPKINS® telescopes
28172 HM	Extension Rod , 50 cm, with lateral clamp for height adjustment of the articulated stand, for use with Articulated Stands 28272 HA/HB/HC and Sockets 28172 HK/HR
28272 CN	Clamping Cylinder , folding, for flexible mounting of 10 mm telescopes to telescope sheath, autoclavable . The clamping cylinder allows vertical movement and rotation of the telescope.

Note: To use the VITOM® system, a FULL HD camera system and the XENON 300 SCB cold light source from KARL STORZ is recommended.

Carpal Tunnel Syndrome

28216 BVA	HOPKINS® Forward-Oblique Telescope 30° , diameter 4 mm, length 11 cm, autoclavable , fiber optic light connector in line of sight, fiber optic light transmission incorporated, color code: red
28147 C	GILBERT Operating Sheath , continuously slotted, diameter 5.5 mm, working length 9 cm, for use with Obturator 28147 CO, HOPKINS® Telescopes 28731 BVA, 28216 BVA and Telescope Sheaths 28147 CL/CK
28147 CO	Obturator , blunt, with attached segment, for use with Operating Sheath 28147 C
28147 E	GILBERT Rasp , for preparation of the carpal ligament
28147 S	Dilator Set including: Dilator , diameter 4 mm Dilator , diameter 5 mm Dilator , diameter 6 mm Dilator , diameter 7 mm
28147 R	Knife , retractable, backward cutting, with exchangeable knife attachment, diameter 3.5 mm, working length 9 cm
28147 RM	Knife Attachment , backward cutting, for use with Knife 28147 R

Cubital Tunnel Syndrome

50600	HOFFMANN Cubital Tunnel Set including: HOPKINS® Forward-Oblique Telescope 30° , enlarged view, diameter 4 mm, length 18 cm, autoclavable Optical Dissector , with distal spatula, fenestrated, large, sharp Speculum , with fiber optic light carrier, with set screw, blade length 90 mm, length 13.5 cm COTTLE Speculum , with fiber optic light carrier, without set screw, special matt finish, blade length 55 mm, length 13 cm Speculum , with fiber optic light carrier, with set screw, blade length 110 mm, length 13.5 cm DUPLAY Dressing and Sponge Holding Forceps , curved, with ratchet, length 21 cm DUPLAY Dressing and Sponge Holding Forceps , straight, with ratchet, length 21 cm METZENBAUM Scissors , curved, length 18 cm METZENBAUM Scissors , curved, length 23 cm METZENBAUM Scissors , curved, length 28 cm TAKE-APART® Bipolar Forceps , with fine jaws, width 1 mm, distally angled 45°, horizontal closing, outer diameter 3.4 mm, working length 20 cm Additional Forceps Insert: TAKE-APART® Forceps Insert , for TAN bipolar Coagulation Forceps, size 3 mm, length 20 cm
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Nerve Compression Syndrome

28163 PN

Peripheral Nerve Set

including:

HOPKINS® Straight Forward Telescope 0°, enlarged view, diameter 4 mm, length 18 cm

HOPKINS® Forward-Oblique Telescope 30°, enlarged view, diameter 4 mm, length 18 cm

Optical Retractor

Irrigation Sheath 30°

Irrigation Sheath 0°

Optical Retractor

FERGUSON Suction Tube, diameter 4 mm

CASTELNUOVO Elevator, double-ended

HALLE Elevator, width 4 mm, length 19 cm

REYNOLDS Dissecting Scissors, curved, length 18 cm

FOMON Angular Scissors, working length 6.5 cm

HEGAR Needle Holder

ADSON Artery Forceps

OCHSNER-KOCHER Artery Forceps

Bipolar Coagulation Forceps

Bipolar Coagulation Forceps, bayonet-shaped

Bipolar Coagulation Forceps

2x **ADSON Tissue Forceps**

2x **“ATRAUMA” Non-traumatic Tissue Forceps**

Cancellous Bone Applicators for Filling Bone Defects

Basic Set

28145 P	Palpation Hook , graduated including: Handle Hook Sliding Tube
28906 CB	Cancellous Bone Applicator Set , diameter 6 mm, color code: red including: Cancellous Bone Applicator Pusher Sealing Cap Plug
28907 CB	Same , diameter 7 mm, color code: yellow
28908 CB	Same , diameter 8 mm, color code: blue
28909 CB	Same , diameter 9 mm, color code: green
28910 CB	Same , diameter 10 mm, color code: white

Standard Diamond TwinS® Set

Basic Set



Standard Diamond TwInS® Set

Basic Set

T28 SDI01

- | | |
|---------------|---|
| ① T 1200-2 | Drilling Machine Adaptor , for diamond cutters, with integrated irrigation |
| ② 174800 | Metal Mallet , with plastic replacement head, length 22.5 cm |
| ③ T22 IL1114 | Pusher , diameter 15 mm, working length 20.5 cm, for use with Metal Mallet 174800 |
| ④ T20 IM07CTS | Diamond Cutter , extensive coating, outer diameter 12.6 mm, inner diameter 11.4 mm, working length 7.5 cm, for use with Drilling Machine Adaptor T 1200-2, requires Extractor T21 IM07CTS |
| ⑤ 39502 XH | Wire Tray for Cleaning, Sterilization and Storage of instruments , stackable, with foldaway handles, external dimensions (w x d x h): 240 x 250 x 50 mm (not illustrated) |
| ⑥ 39100 SH | Silicone Grid Insert "Large Diamond Grid" , blue, extra wide mesh, for the storage of instruments in standard wire trays, plastic and sterilization containers, external dimensions: (w x d): 230 x 240 mm (not illustrated) |
| ⑦ 39100 PS | Fixation Pin , including screw and washer, to screw instruments into position in wire trays, height 38 mm, package of 12, for use with Silicone Tie-Downs 39360 AS (not illustrated) |
| ⑧ 39360 AS | Silicone Tie-Downs , package of 12, for use with Fixation Pins 39100 PS and 39360 AP (not illustrated) |

Small Transplantation Set Diamond TwinS®

short, for osteochondral transplantations and biopsies



Small Transplantation Set Diamond TwinS®

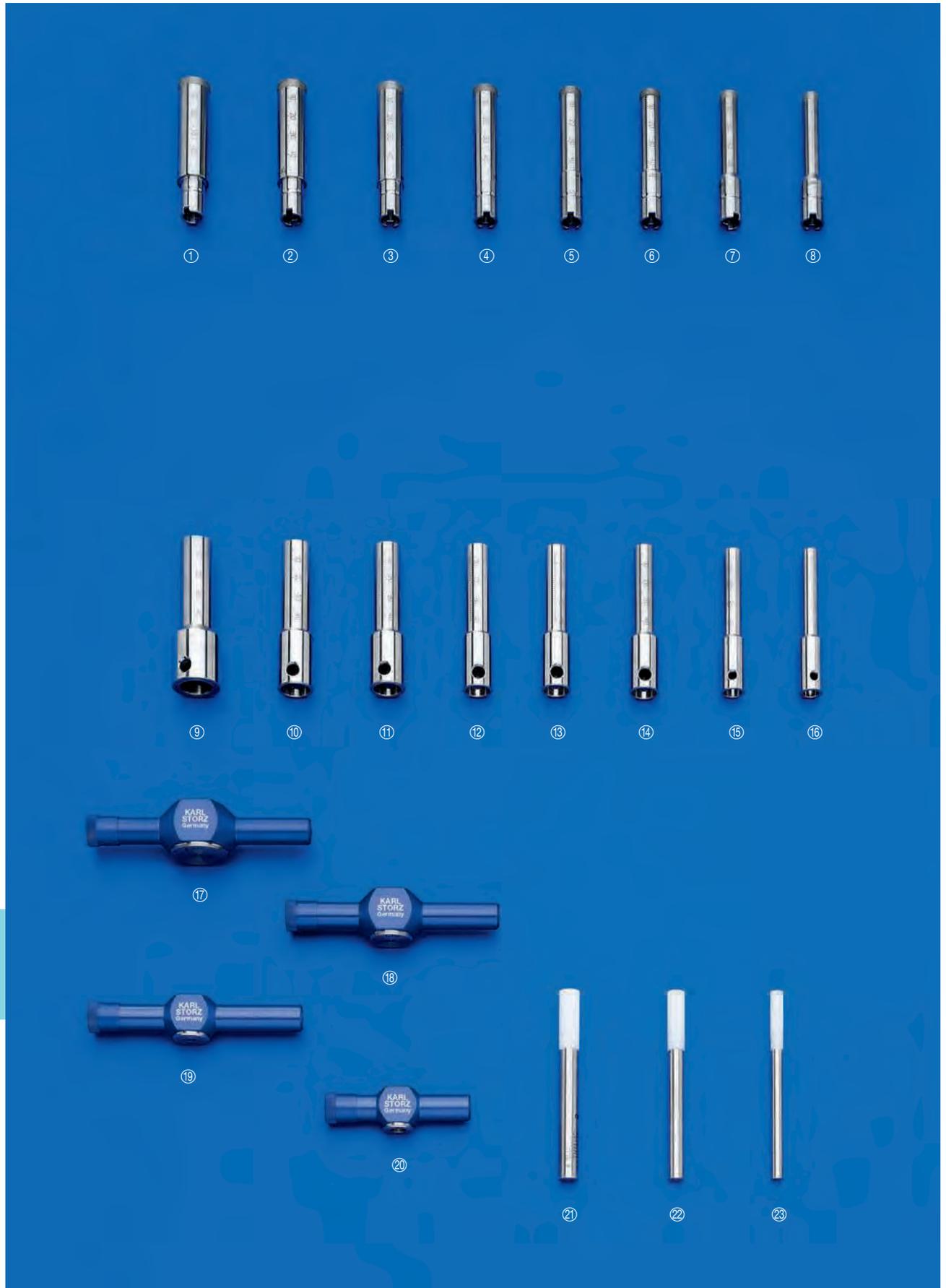
short, for osteochondral transplantations and biopsies

T28 TM01

- | | |
|--------------|--|
| ① T20 TM05 | Diamond Cutter , outer/inner diameter 7.3/6.4 mm, working length 3 cm |
| ② T20 TM04 | Diamond Cutter , outer/inner diameter 6.3/5.5 mm, working length 3 cm |
| ③ T20 TM03 | Diamond Cutter , outer/inner diameter 5.4/4.6 mm, working length 3 cm |
| ④ T20 TM02 | Diamond Cutter , outer/inner diameter 4.5/3.7 mm, working length 3 cm |
| ⑤ T20 TM01 | Diamond Cutter , outer/inner diameter 3.6/2.8 mm, working length 3 cm |
| ⑥ T21 TM05 | Extractor , inner diameter 6.4 mm, working length 3 cm |
| ⑦ T21 TM04 | Extractor , inner diameter 5.5 mm, working length 3 cm |
| ⑧ T21 TM03 | Extractor , inner diameter 4.6 mm, working length 3 cm |
| ⑨ T21 TM02 | Extractor , inner diameter 3.7 mm, working length 3 cm |
| ⑩ T21 TM01 | Extractor , inner diameter 2.8 mm, working length 3 cm |
| ⑪ T 2301 | Handle , 12 mm |
| ⑫ T22 TM0305 | Pusher , diameter 3.5 mm, working length 8.5 cm |
| ⑬ T22 TM0102 | Pusher , diameter 2 mm, working length 8.5 cm |
| T17 TM01 | Tray for Small Transplantation Set (not illustrated) |

Standard Transplantation Set Diamond TwinS®

short, for osteochondral transplantations,
bone reconstruction in ACT, treatment of pseudoarthrosis



Standard Transplantation Set Diamond TwinS®

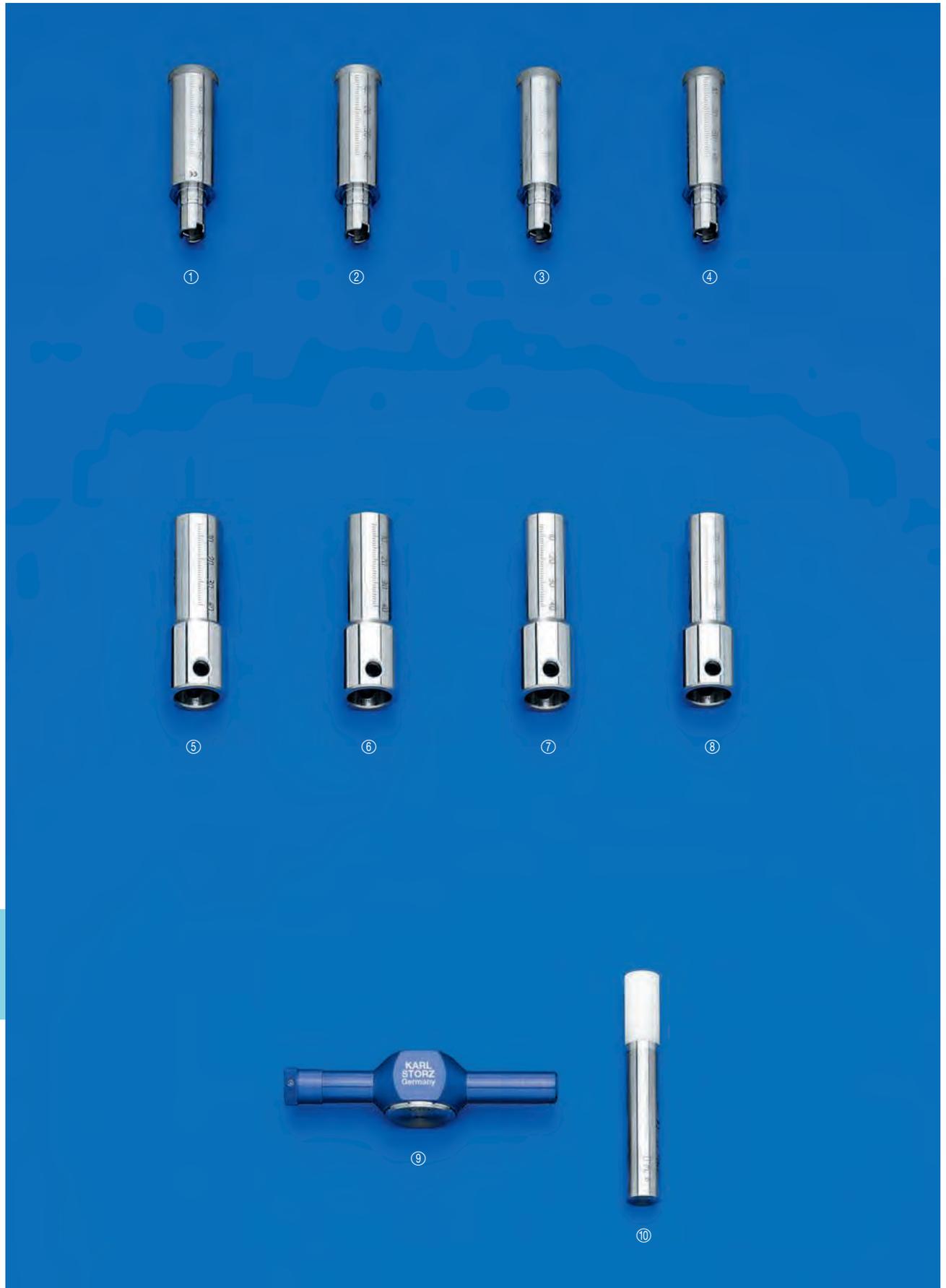
short, for osteochondral transplantations,
bone reconstruction in ACT, treatment of pseudoarthrosis

T28 TM02

- | | |
|--------------|---|
| ① T20 TM13 | Diamond Cutter , outer/inner diameter 16.3/15.25 mm, working length 4 cm |
| ② T20 TM12 | Diamond Cutter , outer/inner diameter 15.1/14.05 mm, working length 4 cm |
| ③ T20 TM11 | Diamond Cutter , outer/inner diameter 13.9/12.85 mm, working length 4 cm |
| ④ T20 TM10 | Diamond Cutter , outer/inner diameter 12.7/11.65 mm, working length 4 cm |
| ⑤ T20 TM09 | Diamond Cutter , outer/inner diameter 11.5/10.6 mm, working length 4 cm |
| ⑥ T20 TM08 | Diamond Cutter , outer/inner diameter 10.45/9.55 mm, working length 4 cm |
| ⑦ T20 TM07 | Diamond Cutter , outer/inner diameter 9.4/8.5 mm, working length 4 cm |
| ⑧ T20 TM06 | Diamond Cutter , outer/inner diameter 8.35/7.45 mm, working length 4 cm |
| ⑨ T21 TM13 | Extractor , inner diameter 15.25 mm, working length 4 cm |
| ⑩ T21 TM12 | Extractor , inner diameter 14.05 mm, working length 4 cm |
| ⑪ T21 TM11 | Extractor , inner diameter 12.85 mm, working length 4 cm |
| ⑫ T21 TM10 | Extractor , inner diameter 11.65 mm, working length 4 cm |
| ⑬ T21 TM09 | Extractor , inner diameter 10.6 mm, working length 4 cm |
| ⑭ T21 TM08 | Extractor , inner diameter 9.55 mm, working length 4 cm |
| ⑮ T21 TM07 | Extractor , inner diameter 8.5 mm, working length 4 cm |
| ⑯ T21 TM06 | Extractor , inner diameter 7.45 mm, working length 4 cm |
| ⑰ T 2304 | Handle , 24 mm |
| ⑱ T 2303 | Handle , 18 mm |
| ⑲ T 2302 | Handle , 15 mm |
| ⑳ T 2301 | Handle , 12 mm |
| ㉑ T22 TM1113 | Pusher , diameter 10 mm, working length 9.5 cm |
| ㉒ T22 TM0910 | Pusher , diameter 8.5 mm, working length 9.5 cm |
| ㉓ T22 TM0608 | Pusher , diameter 6.3 mm, working length 9.5 cm |
| T17 TM02 | Tray for Standard Transplantation Set (not illustrated) |

Large Transplantation Set Diamond TwinS®

short, for osteochondral transplantations,
bone reconstruction in ACT, treatment of pseudoarthrosis



Large Transplantation Set Diamond TwinS®

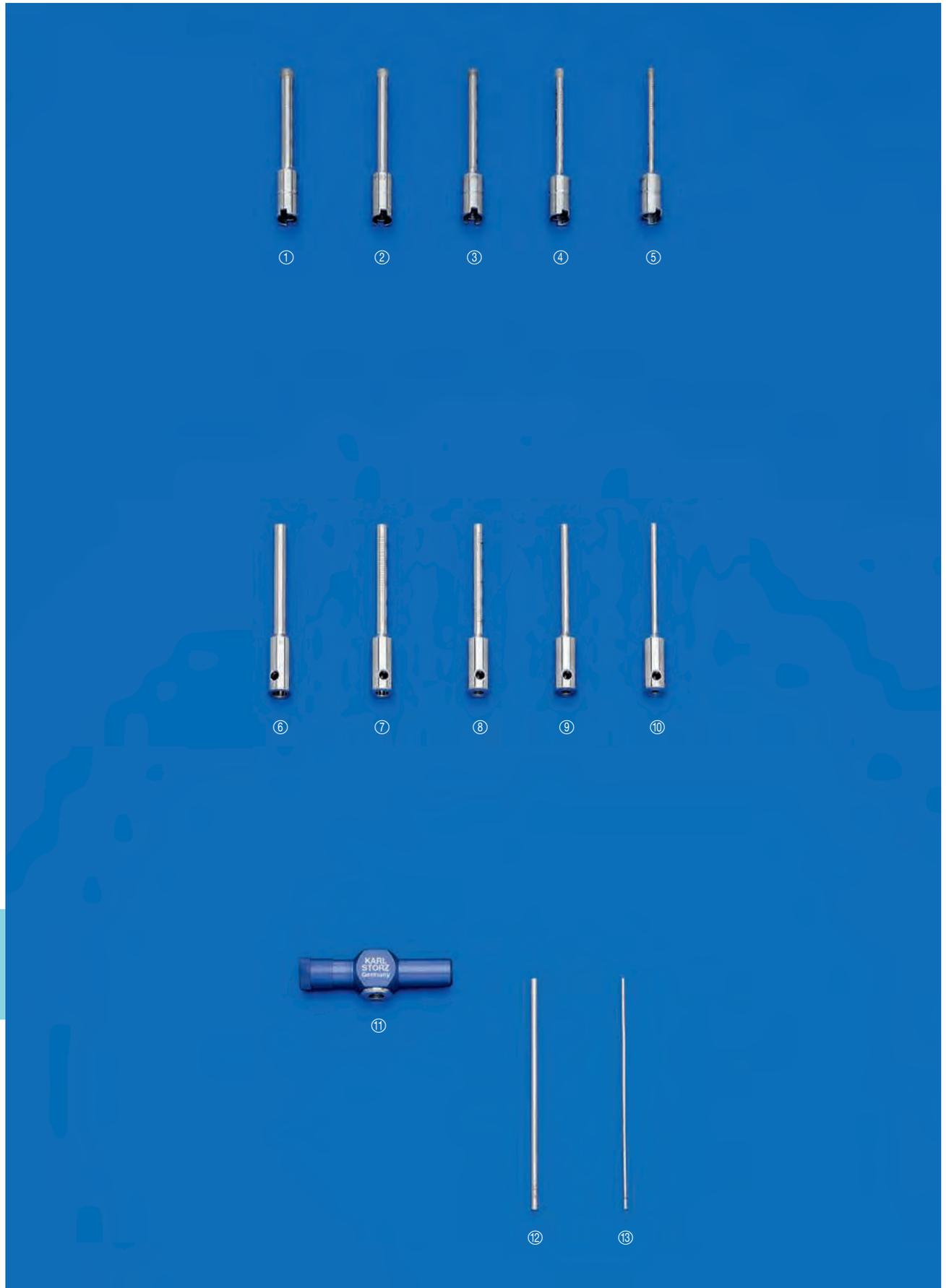
short, for osteochondral transplantations,
bone reconstruction in ACT, treatment of pseudoarthrosis

T28 TM03

- | | |
|--------------|---|
| ① T20 TM17 | Diamond Cutter , outer/inner diameter 21.1/20.05 mm, working length 4 cm |
| ② T20 TM16 | Diamond Cutter , outer/inner diameter 19.9/18.85 mm, working length 4 cm |
| ③ T20 TM15 | Diamond Cutter , outer/inner diameter 18.7/17.65 mm, working length 4 cm |
| ④ T20 TM14 | Diamond Cutter , outer/inner diameter 17.5/16.45 mm, working length 4 cm |
| ⑤ T21 TM17 | Extractor , inner diameter 20.05 mm, working length 4 cm |
| ⑥ T21 TM16 | Extractor , inner diameter 18.85 mm, working length 4 cm |
| ⑦ T21 TM15 | Extractor , inner diameter 17.65 mm, working length 4 cm |
| ⑧ T21 TM14 | Extractor , inner diameter 16.45 mm, working length 4 cm |
| ⑨ T 2304 | Handle , 24 mm |
| ⑩ T22 TM1417 | Pusher , diameter 14 mm, working length 9.5 cm |
| T17 TM03 | Tray for Large Transplantation Set (not illustrated) |

Small Transplantation Set Diamond TwinS®

long, for osteochondral transplantations and biopsies



Small Transplantation Set Diamond TwinS®

long, for osteochondral transplantations and biopsies

T28 TL01

- | | |
|--------------|--|
| ① T20 TL05 | Diamond Cutter , outer/inner diameter 7.3/6.4 mm, working length 5 cm |
| ② T20 TL04 | Diamond Cutter , outer/inner diameter 6.3/5.5 mm, working length 5 cm |
| ③ T20 TL03 | Diamond Cutter , outer/inner diameter 5.4/4.6 mm, working length 5 cm |
| ④ T20 TL02 | Diamond Cutter , outer/inner diameter 4.5/3.7 mm, working length 5 cm |
| ⑤ T20 TL01 | Diamond Cutter , outer/inner diameter 3.6/2.8 mm, working length 5 cm |
| ⑥ T21 TL05 | Extractor , inner diameter 6.4 mm, working length 5 cm |
| ⑦ T21 TL04 | Extractor , inner diameter 5.5 mm, working length 5 cm |
| ⑧ T21 TL03 | Extractor , inner diameter 4.6 mm, working length 5 cm |
| ⑨ T21 TL02 | Extractor , inner diameter 3.7 mm, working length 5 cm |
| ⑩ T21 TL01 | Extractor , inner diameter 2.8 mm, working length 5 cm |
| ⑪ T 2301 | Handle , 12 mm |
| ⑫ T22 TL0305 | Pusher , diameter 3.5 mm, working length 11 cm |
| ⑬ T22 TL0102 | Pusher , diameter 2 mm, working length 11 cm |
| T17 TL01 | Tray for Small Transplantation Set , long (not illustrated) |

Standard Transplantation Set Diamond TwinS®

long, for osteochondral transplantations,
bone reconstruction in ACT, treatment of pseudoarthrosis



Standard Transplantation Set Diamond TwinS®

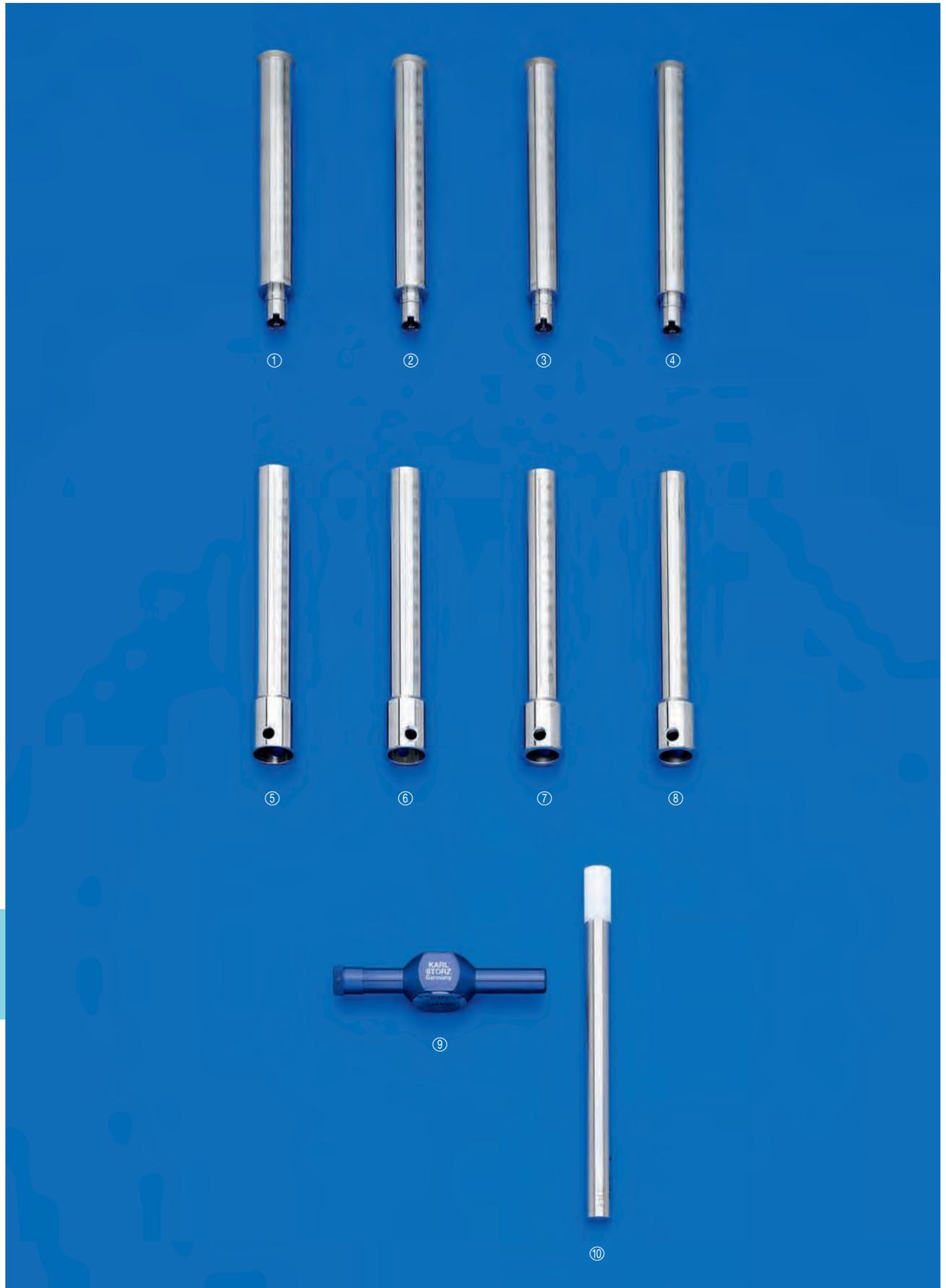
long, for osteochondral transplantations,
bone reconstruction in ACT, treatment of pseudoarthrosis

T28 TL02

① T20 TL13	Diamond Cutter , outer/inner diameter 16.3/15.25 mm, working length 12.5 cm
② T20 TL12	Diamond Cutter , outer/inner diameter 15.1/14.05 mm, working length 12.5 cm
③ T20 TL11	Diamond Cutter , outer/inner diameter 13.9/12.85 mm, working length 12.5 cm
④ T20 TL10	Diamond Cutter , outer/inner diameter 12.7/11.65 mm, working length 12.5 cm
⑤ T20 TL09	Diamond Cutter , outer/inner diameter 11.5/10.6 mm, working length 12.5 cm
⑥ T20 TL08	Diamond Cutter , outer/inner diameter 10.45/9.55 mm, working length 12.5 cm
⑦ T20 TL07	Diamond Cutter , outer/inner diameter 9.4/8.5 mm, working length 12.5 cm
⑧ T20 TL06	Diamond Cutter , outer/inner diameter 8.35/7.45 mm, working length 12.5 cm
⑨ T21 TL13	Extractor , inner diameter 15.25 mm, working length 12.5 cm
⑩ T21 TL12	Extractor , inner diameter 14.05 mm, working length 12.5 cm
⑪ T21 TL11	Extractor , inner diameter 12.85 mm, working length 12.5 cm
⑫ T21 TL10	Extractor , inner diameter 11.65 mm, working length 12.5 cm
⑬ T21 TL09	Extractor , inner diameter 10.6 mm, working length 12.5 cm
⑭ T21 TL08	Extractor , inner diameter 9.55 mm, working length 12.5 cm
⑮ T21 TL07	Extractor , inner diameter 8.5 mm, working length 12.5 cm
⑯ T21 TL06	Extractor , inner diameter 7.45 mm, working length 12.5 cm
⑰ T 2304	Handle , 24 mm
⑱ T 2303	Handle , 18 mm
⑲ T 2302	Handle , 15 mm
⑳ T 2301	Handle , 12 mm
㉑ T22 TL1113	Pusher , diameter 10 mm, working length 19 cm
㉒ T22 TL0910	Pusher , diameter 8.5 mm, working length 19 cm
㉓ T22 TL0608	Pusher , diameter 6.3 mm, working length 19 cm
T17 TL02	Tray for Standard Transplantation Set , long (not illustrated)

Large Transplantation Set Diamond TwinS®

long, for osteochondral transplantations,
bone reconstruction in ACT, treatment of pseudoarthrosis



Large Transplantation Set Diamond TwinS®

long, for osteochondral transplantations,
bone reconstruction in ACT, treatment of pseudoarthrosis

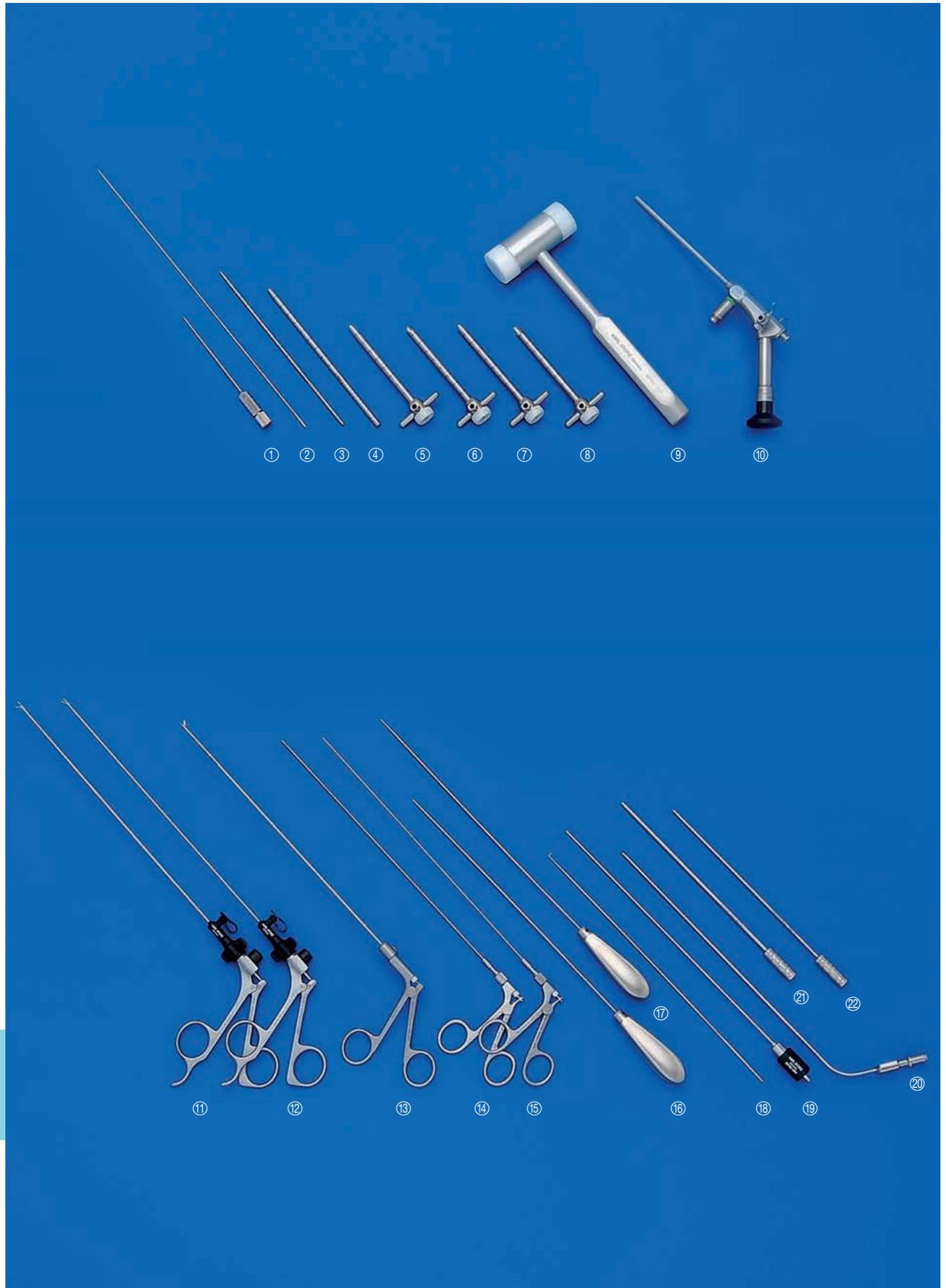
T28 TL03

- | | |
|--------------|--|
| ① T20 TL17 | Diamond Cutter , outer/inner diameter 21.1/20.05 mm, working length 12.5 cm |
| ② T20 TL16 | Diamond Cutter , outer/inner diameter 19.9/18.85 mm, working length 12.5 cm |
| ③ T20 TL15 | Diamond Cutter , outer/inner diameter 18.7/17.65 mm, working length 12.5 cm |
| ④ T20 TL14 | Diamond Cutter , outer/inner diameter 17.5/16.45 mm, working length 12.5 cm |
| ⑤ T21 TL17 | Extractor , inner diameter 20.05 mm, working length 12.5 cm |
| ⑥ T21 TL16 | Extractor , inner diameter 18.85 mm, working length 12.5 cm |
| ⑦ T21 TL15 | Extractor , inner diameter 17.65 mm, working length 12.5 cm |
| ⑧ T21 TL14 | Extractor , inner diameter 16.45 mm, working length 12.5 cm |
| ⑨ T 2304 | Handle , 24 mm |
| ⑩ T22 TL1417 | Pusher , diameter 14 mm, working length 19 cm |
| T17 TL03 | Tray for Large Transplantation Set , long (not illustrated) |

Percutaneous Endoscopic Cervical Discectomy

Basic Set

STORZ
KARL STORZ — ENDOSKOPE



Percutaneous Endoscopic Cervical Discectomy

Basic Set

HELLINGER Recommended Set

- ① 28163 PK **Puncture Needle**, including stylet, diameter 1.8 mm, working length 9 cm, with 1.3 mm opening for guide wire
- ② 28163 KD **Guide Wire**, unsterile, diameter 1.2 mm, length 31 mm, package of 10
- ③ 28163 LH **Dilation Sleeve**, graduated, diameter 3 mm, working length 18 cm, with 1.5 mm opening for guide wire
- ④ 28163 HG **Dilation Rod**, graduated, diameter 5.3 mm, working length 16 cm, with 3.1 mm opening for Dilation Sleeve 28163 LH
- ⑤ 28163 KAB **Expansion Sheath**, diameter 6.5 mm, with handle and LUER connection, distal two dilation extensions, straight
- ⑥ 28163 KBB **Same**, distal 45° inclination
- ⑦ 28163 KCB **Same**, distal with two dilation extensions, oblique
- ⑧ 28163 KDB **Same**, distal with one dilation extension, oblique
- ⑨ 28163 CM **COTTLE Metal Mallet**, with plastic replacement head, length 22.5 cm
- ⑩ 28163 PCD **PECD Endoscope 8°**, angled eyepiece, outer diameter 3.3 x 4.7 mm, working length 12 cm, **autoclavable**, with fiber optic light transmission incorporated and straight working channel diameter 2.5 mm, with Wire Tray 39501 XP
color code: green
- ⑪ 28163 UHK **CLICK^{line} Spoon Forceps**, rotating, single action jaws, size 2.5 mm, length 25 cm
- ⑫ 28163 UHM **CLICK^{line} Spoon Forceps**, oval, rotating, single action jaws, size 2 mm, length 25 cm
- ⑬ 28163 EHK **Hook Scissors**, single action jaws, diameter 2.7 mm, working length 25 cm
- ⑭ 28163 ZSH **Biopsy Forceps**, double action jaws, diameter 1.7 mm, working length 25 cm
- ⑮ 28163 FSH **Grasping Forceps**, double action jaws, diameter 1.7 mm, working length 25 cm
- ⑯ 28163 UHH **Palpation Hook**, distally angled 45°, diameter 2 mm, working length 25 cm
- ⑰ 28163 UHO **Palpation Hook**, distally angled 90°, with ball, diameter 2 mm, working length 25 cm
- ⑱ 28163 UOH **Palpation Hook**, distal end 90°, with ball end, hook length 4 mm, diameter 2 mm, working length 26 cm
- ⑲ 28762 KBH **Bipolar Coagulation Electrode**, rigid, diameter 1.7 mm, working length 25 cm
- ⑳ 28163 SRH **Suction Tube**, FREIBURG model, angular, distal end with olive, with cut-off-hole and grip plate, LUER, diameter 2.5 mm, working length 25 cm
- ㉑ 28163 TKS **Trephine**, diameter 2.5 mm, working length 18 cm
- ㉒ 28163 TKK **Same**, diameter 3.5 mm

Recommended Containers for Sterilization:

Instruments: 39360 AK

ENDOSPINE® Endoscopic Cervical Discectomy, Anterior/Posterior Access

Basic Set

STORZ
KARL STORZ — ENDOSKOPE



ENDOSPINE® Endoscopic Cervical Discectomy, Anterior/Posterior Access

Basic Set

DESTANDAU Recommended Set

- | | | |
|---|--------------|---|
| ① | 28095 AA | HOPKINS® Straight Forward Telescope 0° , enlarged view, diameter 4 mm, length 18 cm, autoclavable , fiber optic light transmission incorporated, color code: green |
| ② | 28163 DXH | DESTANDAU ENDOSPINE® Working Insert , with positioning detent, with adjustable Nerve Protector 28163 DPH, for use with ENDOSPINE® Operating Tube 28163 DW, with working channel diameter 8 mm and irrigation channel, for use with HOPKINS® Telescope 28095 AA |
| ③ | 28163 DW | DESTANDAU ENDOSPINE® Operating Tube , oval, with Obturator 28163 DO, for use with Working Insert 28163 DXH |
| ④ | 28163 DL | Bone Punch , dismantling, 90° upbiting, not through-cutting, 3 mm, working length 18 cm |
| ⑤ | 28163 DF | Bone Punch , dismantling, upbiting 45° forward, not through-cutting, 3 mm, working length 18 cm |
| ⑥ | 28163 DZ | TAKE-APART® MANHES Bipolar Coagulation Forceps , with connector pin for bipolar coagulation, width of jaws 1 mm, diameter 5 mm, length 20 cm |
| ⑦ | 28163 DC | Spoon Forceps , dismantling, robust, oval, single action jaws, spoon size 3 x 10 mm, working length 15 cm |
| ⑧ | 28163 DSS | Scissors , straight, extra delicate, working length 15 cm |
| ⑨ | 2x 755120 | HALLE-BIRKETT Forceps , slender, straight, length 20 cm |
| ⑩ | 2x 535212 | HALSTEAD "Mosquito" Artery Forceps , curved, length 12.5 cm |
| ⑪ | 515515 | CRILE-WOOD Needle Holder , length 15 cm |
| ⑫ | 512618 | METZENBAUM Scissors , with tungsten carbide inserts, curved, length 18 cm |
| ⑬ | 792003 | MAYO Scissors , curved, length 15 cm |
| ⑭ | 28163 DNN | Elevator , spatula slightly curved, distal width 5 mm, working length 13 cm |
| ⑮ | 28163 DHB | Ball Probe , diameter 4 mm, straight, working length 13 cm |
| ⑯ | 28163 DHD | Palpation Hook , blunt, distal double curved, working length 13 cm |
| ⑰ | 28163 DHN | Palpation Hook , blunt, distally angled 90°, hook length 5.5 mm, working length 13 cm |
| ⑱ | 208100 | Surgical Handle , Fig. 4, length 13.5 cm |
| | 2x 28163 DRG | ENDOSPINE® Retractor Blade , conical, length 5 cm, for use with ENDOSPINE® Operating Tube 28163 DW and 28163 DWS (not illustrated) |
| ⑲ | 2x 801910 | MICCOLI Retractor , double-ended, size 35 x 10 mm and 21 x 10 mm, length 16 cm |
| ⑳ | 28163 DU | FERGUSON Suction Tube , angled, with cut-off hole, diameter 3.7 mm, working length 11 cm |
| ㉑ | 2x 810820 | Cup Medicine , 200 cm ³ , diameter 100 mm, height 50 mm |
| ㉒ | 28163 DLD | Cervical Localization Device |

Recommended Container for Sterilization:

Instruments: 39771 A and 39360 AK

Thoracoscopic Spondylodesis

Basic Set



Thoracoscopic Spondylodesis

Basic Set

OLINGER-HILDEBRANDT Recommended Set

- ① 26003 BA **HOPKINS® Forward-Oblique Telescope 30°**, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated, color code: red
- ② 28163 MB **Biopsy and Grasping Forceps**, with central suction channel in the forceps sheath, with cleaning stylet, straight, working length 36 cm, for use with trocars size 6 mm
- ③ 30444 LR **Clip Applicator**, dismantling, rotating, size 10 mm, length 36 cm, for PILLING-WECK Titanium Clips 30460 AL (medium-large), with ratchet to lock the jaw holding the clip
- ④ 40160 CD **Trocar**, size 6 mm
- ⑤ 40103 GD **Plastic Trocar**, size 11 mm
- ⑥ 40103 HX **Plastic Trocar**, size 11 mm
- ⑦ 33321 ML **CLICKliné KELLY Dissecting and Grasping Forceps**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, long, size 5 mm, length 36 cm
- ⑧ 34321 MA **CLICKliné Scissors**, rotating, dismantling, with connector pin for unipolar coagulation, double action jaws, spoon-shaped jaws, serrated, curved, size 5 mm, length 36 cm
- ⑨ 26276 HD **TAKE-APART® MANHES Bipolar Coagulation Forceps**, width of jaws 3 mm, size 5 mm, length 33 cm
- ⑩ 26775 UF **Coagulation and Dissecting Electrode**, L-shaped, with connector pin for unipolar coagulation, size 5 mm, length 36 cm
- ⑪ 28163 FP **Fan Retractor**, dismantling, distendable, size 10 mm, length 30 cm
- ⑫ 26173 BN **Suction and Irrigation Tube**, with lateral holes, with two-way stopcock for single hand control, size 5 mm, length 36 cm
- ⑬ 28175 YR **OLSEN Suction or Irrigation Tube**, with protective basket, with trumpet valve, size 10 mm, length 36 cm
- ⑭ 28163 PKG **KERRISON Bone Punch**, dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm
- ⑮ 28163 PKS **KERRISON Bone Punch**, dismantling, graduated scale at the distal end, 40° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm
- ⑯ 28163 PGG **KERRISON Bone Punch**, dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 5 mm, round sheath diameter 10 mm, working length 30 cm
- ⑰ 28163 RKG **Rongeur**, dismantling, graduated scale at the distal end, jaw 5 mm, round sheath diameter 10 mm, working length 30 cm
- ⑱ 28163 RGG **Same**, jaw 8 mm
- ⑲ 26173 KL **KOH Macro Needle Holder**, with tungsten carbide insert, ergonomic handle with ratchet, ratchet position on top, jaws curved left, size 5 mm, length 33 cm, for use with suture material size 0/0 to 7/0 and needle sizes BV, SH or CT-1
- ⑳ 26173 KC **Same**, jaws curved to right
- ㉑ 28163 MF **Raspatory**, for dissection, size 7 mm, working length 30 cm
- ㉒ 28163 WF **Curette**, sharp, spoon-shaped, oval, 5.5 x 7.5 mm, working length 30 cm
- ㉓ 28163 WC **Curette**, sharp, spoon-shaped, oval, 3.5 x 5 mm, working length 30 cm
- ㉔ 28163 WG **Ring Curette**, graduated, distal end slightly curved, size 10 mm, ring size diameter 6 mm, working length 30 cm
- ㉕ 28163 WN **Same**, ring size diameter 8 mm
- ㉖ 28163 RP **Rasp**, for coarsening the bone surface, size 10 mm, working length 30 cm
- ㉗ 28163 MM **Chisel**, graduated, double-edged grinding, straight, size 10 mm, working length 30 cm
- ㉘ 28163 MN **Same**, size 7 mm
- ㉙ 28163 MS **Tappet**, blunt, grooved, for positioning the bone implant, size 10 mm, working length 30 cm
- ㉚ 28163 WH **Hook**, 90°, blunt, working length 30 cm
- ㉛ 28163 SBK **Curette**, stirrup-shaped, for straightening end plates, size 10 mm, working length 30 cm
- ㉜ 28163 MK **Collar**, for deflecting the mallet, for use with Chisel 28163 MM
- ㉝ 28163 WZ **Distance Measuring Instrument**, with cm-markings and cm-slots for radiologic measurement, for monosegmental measuring, 5 cm
- ㉞ 28163 WX **Same**, long, for bisegmental measuring, 8 cm
- ㉟ 495 NCS **Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, diameter 4.8 mm, length 250 cm

Recommended Container for Sterilization:

Telescope: 39501 B2

Instruments: 39502 Z with 39100 S, 39100 PS and 39360 AS

Thoracoscopic Spine Surgery

Basic Set



ROSENTHAL Recommended Set

- | | | |
|---|-----------|---|
| ① | 26003 BA | HOPKINS® Forward-Oblique Telescope 30° , enlarged view, diameter 10 mm, length 31 cm, autoclavable , fiber optic light transmission incorporated, color code: red |
| ② | 40160 CD | Trocar , size 6 mm |
| ③ | 40103 CD | Trocar , size 11 mm |
| ④ | 40107 CD | Trocar , size 13 mm |
| ⑤ | 30120 NOL | Trocar , size 6 mm |
| ⑥ | 30122 NOL | Trocar , size 9 mm |
| ⑦ | 30123 NOL | Trocar , size 11 mm |
| ⑧ | 33321 ML | CLICKliné KELLY Dissecting and Grasping Forceps , rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, long, size 5 mm, length 36 cm |
| ⑨ | 33321 UL | CLICKliné REDDICK-OLSEN Dissecting and Grasping Forceps , rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, robust, size 5 mm, length 36 cm |
| ⑩ | 33321 R | CLICKliné Dissecting and Grasping Forceps , rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, right angled, size 5 mm, length 36 cm |
| ⑪ | 34321 MS | CLICKliné METZENBAUM Scissors , rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, curved, size 5 mm, length 36 cm |
| ⑫ | 28163 BSN | TAKE-APART® Bipolar Coagulation Suction Tube , with stopcock, size 5 mm, length 30 cm |
| ⑬ | 26276 HK | TAKE-APART® SCHNEIDER Bipolar Grasping Forceps , with connector pin for bipolar coagulation, with movable inner sheath and non-retracting jaws, robust jaws, size 5 mm, length 33 cm |
| ⑭ | 26276 HD | TAKE-APART® MANHES Bipolar Coagulation Forceps , width of jaws 3 mm, size 5 mm, length 33 cm |
| ⑮ | 28163 PKG | KERRISON Bone Punch , dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm |
| ⑯ | 28163 PGG | KERRISON Bone Punch , dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 5 mm, round sheath diameter 10 mm, working length 30 cm |
| ⑰ | 28163 PKS | KERRISON Bone Punch , dismantling, graduated scale at the distal end, 40° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm |
| ⑱ | 28163 RGG | Rongeur , dismantling, graduated scale at the distal end, jaw 8 mm, round sheath diameter 10 mm, working length 30 cm |
| ⑲ | 28163 RKG | Same , jaw 5 mm |
| ⑳ | 28163 UK | Spoon Forceps , round, single action jaws, diameter 2.5 mm, working length 30 cm |
| ㉑ | 28162 ZE | Biopsy Forceps , single action jaws, diameter 2.7 mm, working length 30 cm |
| ㉒ | 28163 UM | Spoon Forceps , oval, single action jaws, diameter 2 mm, working length 30 cm |
| ㉓ | 28163 MS | Tappet , blunt, grooved, for positioning the bone implant, size 10 mm, working length 30 cm |
| ㉔ | 28163 MF | Raspatory , for dissection, size 7 mm, working length 30 cm |
| ㉕ | 28163 WC | Curette , sharp, spoon-shaped, oval, 3.5 x 5 mm, working length 30 cm |
| ㉖ | 28163 GH | Palpation Hook , hook angled 90°, blunt, diameter 5 mm, working length 36 cm |
| ㉗ | 28163 GI | Spoon Curette , sharp, 4 x 6 mm, diameter 5 mm, working length 36 cm |
| ㉘ | 28163 GK | Same , 3 x 4 mm |
| ㉙ | 28163 GL | Spoon Curette , sharp, 3 x 4 mm, spoon curved 45°, diameter 5 mm, working length 36 cm |
| ㉚ | 28163 RR | Raspatory , diameter 5 mm, working length 36 cm |
| ㉛ | 495 ND | Fiber Optic Light Cable , with straight connector, diameter 3.5 mm, length 300 cm |
| ㉜ | 28272 RKA | Holding System, autoclavable |

Recommended Container for Sterilization:

Telescope: 39501 B2

Instruments: 39502 Z with 39100 S, 39100 PS and 39360 AS

Stitchless Lumbar Disc Surgery Under Local Anesthesia

Basic Set



Stitchless Lumbar Disc Surgery Under Local Anesthesia

Basic Set

GORE Recommended Set

- | | | |
|---|------------------------|--|
| ① | 28163 PLT | Puncture Needle , including stylet, diameter 1.2 mm, working length 25 cm, with 0.8 mm opening for guide wire |
| ② | 28163 GWT | Guide Wire , blunt on both sides, diameter 0.7 mm, working length 41 cm, package of 5 |
| ③ | 28163 FRL | X-ray Ruler , with special marking for midline and 2 mm- and cm-slots for radiologic measurement, total length 30 cm |
| ④ | 28163 FHI | Dilation Sleeve , with two ports, outer diameter 6.5 mm, inner diameter 1.4 mm, length 22 cm, color code: red |
| ⑤ | 28163 FTM
28163 FTK | Trephine , with pyramidal handle, inner diameter 1.6 mm, outer diameter 2.7 mm, working length 30 cm
Trephine , with round handle, inner diameter 3.2 mm, outer diameter 4.2 mm, working length 22 cm (not illustrated) |
| ⑥ | 28163 CM | COTTLE Metal Mallet , with plastic replacement head, length 22.5 cm |
| ⑦ | 28163 FEH | Punch Sleeve , for use with operating sheaths |
| ⑧ | 28163 FKD | Fixation Handle , for adjustment of dilation sleeves with outer diameter 2.5 – 6.5 mm |
| ⑨ | 28163 FWO | Operating Sheath , distal 45° oblique, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.5 mm, length 17 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red |
| | 28163 FSG | Operating Sheath , graduated, distal straight, with clamp mechanism for fixation, integrated irrigation connector, inner diameter 7.2 mm, outer diameter 7.9 mm, length 17 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red (not illustrated) |
| ⑩ | 28163 BFA | HOPKINS® Wide Angle Telescope 25° , angled eyepiece, outer diameter 6.6 mm, working channel diameter 3.6 mm, length 18 cm, autoclavable , fiber optic light transmission incorporated, color code: red |
| | 533 TVA | Adaptor, autoclavable , permits telescope changing under sterile conditions (not illustrated) |
| ⑪ | 28163 FBH | CLICK'line® Palpation Hook , rotating, dismantling, not insulated, without connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, with distal ball, bendable to 90°, size 3.5 mm, length 36 cm |
| ⑫ | 28163 FBG | CLICK'line® Palpation Hook , rotating, dismantling, not insulated, without connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, with distal ball, bendable to 90°, size 2.7 mm, length 36 cm |
| ⑬ | 28163 FZI | CLICK'line® Raven's Beak Forceps , rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, single action jaws, size 3.5 mm, length 36 cm |
| ⑭ | 28163 FSI | CLICK'line® BLAKESLEY Grasping Forceps , rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, single action jaws, fenestrated, size 3 mm, length 36 cm |
| ⑮ | 28163 FZ | Grasping Forceps , single action jaws, with 90° angle of view, diameter 3.5 mm, working length 36 cm |
| | 28163 SE | TAKE-APART® BLAKESLEY Grasping Forceps , diameter 2.3 mm, length 30 cm (not illustrated) |
| ⑯ | 28163 FAP | Punch , bendable, single action jaws, diameter 3.5 mm, working length 36 cm |
| | 28163 FAS | Grasping Forceps , bendable, single action jaws, diameter 3.5 mm, working length 36 cm (not illustrated) |
| ⑰ | 28163 FBM | Grasping Forceps , double action jaws, diameter 2.7 mm, working length 36 cm |
| ⑱ | 28712050 | DrillCut-X® II Spine Handpiece , for use with UNIDRIVE® S III NEURO |
| | 41201 FD | Suction Burr , with integrated irrigation, straight, sterilizable, cylindrical cutter head with lateral and distal protection, shaft diameter 3.5 mm, length 30 cm (not illustrated) |
| | 41201 D | Suction Burr , with integrated irrigation, straight, sterilizable, diamond head, shaft diameter 3.5 mm, length 30 cm (not illustrated) |
| ⑲ | 28163 FBC | Bipolar Electrode , angled, diameter 2.5 mm, working length 36 cm |
| | 28762 KB | Bipolar Coagulation Electrode , diameter 1.7 mm, working length 30 cm (not illustrated) |

Recommended Container for Sterilization:

Telescopes: 39314 G
Instruments: 39360 BK

SpineTIP Percutaneous Lumbar Endoscopy System for the Transforaminal Approach

Basic Set

STORZ
KARL STORZ — ENDOSKOPE



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SpineTIP Percutaneous Lumbar Endoscopy System for the Transforaminal Approach

Basic Set

STORZ
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- ① 28163 PEL **Puncture Needle**, including stylet, diameter 1.8 mm, working length 25 cm, with 1.3 mm opening for guide wire
- ② 5x 28163 GWL **Guide Wire**, blunt, diameter 1.1 mm, working length 45 cm
- ③ 28163 FHT **Dilation Sleeve**, outer diameter 6.5 mm, inner diameter 1.4 mm, length 31 cm, with two ports, for the transforaminal approach, color code: blue
- ④ 28163 CM **COTTLE Metal Mallet**, with plastic replacement head, length 22.5 cm
- ⑤ 28163 FEH **Punch Sleeve**, for use with operating sheaths
- 28163 FKD **Fixation Handle**, for adjustment of dilation sleeves with outer diameter 2.5 – 6.5 mm (not illustrated)
- ⑥ 28163 TSG **Operating Sheath**, graduated, distal straight, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.8 mm, length 25 cm, for use with HOPKINS® Telescope 25° 28163 BTA, color code: blue
- ⑦ 28163 TSN **Operating Sheath**, graduated, with distal beak, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.8 mm, length 25 cm, for use with HOPKINS® Telescope 25° 28163 BTA, color code: blue
- ⑧ 28163 TSW **Operating Sheath**, graduated, distal oblique, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.8 mm, length 25 cm, for use with HOPKINS® Telescope 25° 28163 BTA, color code: blue
- ⑨ 28163 BTA **HOPKINS® Wide Angle Telescope 25°**, angled eyepiece, outer diameter 6.6 mm, working channel 3.6 mm, length 25.7 cm, **autoclavable**, fiber optic light transmission incorporated, color code: blue
- 495 NA **Fiber Optic Light Cable**, with straight connector, diameter 3.5 mm, length 230 cm (not illustrated)
- ⑩ 28163 FBC **Bipolar Electrode**, angled, diameter 2.5 mm, working length 36 cm
- ⑪ 28163 UH **Palpation Hook**, distally angled 45°, diameter 2 mm, working length 34 cm
- ⑫ 28163 FDW **Dissector**, distally curved 45°, diameter 2.6 mm, working length 36 cm
- ⑬ 28163 FDG **Dissector**, distally curved 90°, diameter 2.6 mm, working length 36 cm
- ⑭ 28163 FBH **CLICK^{line} Palpation Hook**, rotating, dismantling, not insulated, with distal ball, bendable to 90°, size 3.5 mm, length 36 cm
- ⑮ 28163 FZ **Grasping Forceps**, single action jaws, with 90° angle of view, diameter 3.5 mm, working length 36 cm
- ⑯ 28163 FBM **Grasping Forceps**, double action jaws, diameter 2.7 mm, working length 36 cm
- ⑰ 28163 FZI **CLICK^{line} Raven's Beak Forceps**, rotating, dismantling, insulated, single action jaws, size 3.5 mm, length 36 cm
- ⑱ 28163 FSI **CLICK^{line} BLAKESLEY Grasping Forceps**, rotating, dismantling, insulated, single action jaws, fenestrated, size 3 mm, length 36 cm
- ⑲ 28163 FM **Knife**, retractable, diameter 3.5 mm, working length 36 cm

Recommended Container for Sterilization:

Telescopes: 39314 G

Instruments: 39360 BK

SpineTIP Percutaneous Lumbar Endoscopy System for the Interlaminar Approach

Basic Set

- ① 28163 PL **Puncture Needle**, including stylet, diameter 1.8 mm, working length 18 cm, with 1.3 mm opening for guide wire
- ② 5x 28163 GWL **Guide Wire**, blunt, diameter 1.1 mm, working length 45 cm
- ③ 28163 FHI **Dilation Sleeve**, with two ports, outer diameter 6.5 mm, inner diameter 1.4 mm, length 22 cm, color code: red
- ④ 28163 CM **COTTLE Metal Mallet**, with plastic replacement head, length 22.5 cm
- ⑤ 28163 FEH **Punch Sleeve**, for use with operating sheaths
- 28163 FKD **Fixation Handle**, for adjustment of dilation sleeves with outer diameter 2.5 – 6.5 mm (not illustrated)
- ⑥ 28163 FSG **Operating Sheath**, graduated, distal straight, with clamp mechanism for fixation, integrated irrigation connector, inner diameter 7.2 mm, outer diameter 7.9 mm, length 17 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red
- ⑦ 28163 FSN **Operating Sheath**, graduated, with distal beak, with clamp mechanism for fixation, integrated irrigation connector, inner diameter 7.2 mm, outer diameter 7.9 mm, length 18 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red
- ⑧ 28163 FSW **Operating Sheath**, graduated, distal oblique, with clamp mechanism for fixation, integrated irrigation connector, inner diameter 7.2 mm, outer diameter 7.9 mm, length 18 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red
- ⑨ 28163 BFA **HOPKINS® Wide Angle Telescope 25°**, angled eyepiece, outer diameter 6.6 mm, working channel diameter 3.6 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red
- 495 NA **Fiber Optic Light Cable**, with straight connector, diameter 3.5 mm, length 230 cm (not illustrated)
- ⑩ 28163 FBC **Bipolar Electrode**, angled, diameter 2.5 mm, working length 36 cm
- ⑪ 28163 FM **Knife**, retractable, diameter 3.5 mm, working length 36 cm
- ⑫ 28163 FBH **CLICK'liné Palpation Hook**, rotating, dismantling, not insulated, with distal ball, bendable to 90°, size 3.5 mm, working length 36 cm
- ⑬ 28163 UH **Palpation Hook**, hook angled 45°, diameter 2 mm, working length 34 cm
- ⑭ 28163 FDW **Dissector**, distally curved 45°, diameter 2.6 mm, working length 36 cm
- ⑮ 28163 FDG **Dissector**, distally curved 90°, diameter 2.6 mm, working length 36 cm
- ⑯ 28163 FBM **Grasping Forceps**, double action jaws, diameter 2.7 mm, working length 36 cm
- ⑰ 28163 FZ **Grasping Forceps**, single action jaws, with 90° angle of view, diameter 3.5 mm, working length 36 cm
- ⑱ 28163 FZI **CLICK'liné Raven's Beak Forceps**, rotating, dismantling, insulated, single action jaws, size 3.5 mm, length 36 cm
- ⑲ 28163 FSI **CLICK'liné BLAKESLEY Grasping Forceps**, rotating, dismantling, insulated, single action jaws, fenestrated, size 3 mm, length 36 cm
- ⑳ 28163 FPW **SpinoFIT® Punch**, 45° downbiting, not through-cutting, working length 30 cm
- ㉑ 28163 FPG **SpinoFIT® Punch**, 90° downbiting, not through-cutting, working length 30 cm
- ㉒ 28163 FTK **Trephine**, with round handle, inner diameter 3.2 mm, outer diameter 4.2 mm, working length 22 cm
- ㉓ 28163 FTG **Trephine**, with round handle, inner diameter 7 mm, outer diameter 8 mm, working length 17.5 cm
- ㉔ 28163 FTM **Trephine**, with pyramidal handle, inner diameter 1.6 mm, outer diameter 2.7 mm, working length 30 cm

Recommended Container for Sterilization:

Telescopes: 39314 G
Instruments: 39360 BK

SpineTIP Percutaneous Lumbar Endoscopy System for the Posterolateral Approach

Basic Set

STORZ
KARL STORZ — ENDOSKOPE



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SpineTIP Percutaneous Lumbar Endoscopy System for the Posterolateral Approach

Basic Set

- ① 28163 PL **Puncture Needle**, including stylet, diameter 1.8 mm, working length 18 cm, with 1.3 mm opening for guide wire
- ② 5x 28163 GWL **Guide Wire**, blunt, diameter 1.1 mm, working length 45 cm
- ③ 28163 FHP **Dilation Sleeve**, outer diameter 6 mm, inner diameter 1 mm, length 22 cm, with two ports, for the posterolateral approach, color code: green
- ④ 28163 CM **COTTLE Metal Mallet**, with plastic replacement head, length 22.5 cm
- ⑤ 28163 FEH **Punch Sleeve**, for use with operating sheaths
- 28163 FKD **Fixation Handle**, for adjustment of dilation sleeves with outer diameter 2.5 – 6.5 mm (not illustrated)
- ⑥ 28163 PSG **Operating Sheath**, graduated, distal straight, integrated irrigation connector, inner diameter 6.2 mm, outer diameter 6.9 mm, length 17 cm, for use with HOPKINS® Telescope 15° 28163 FFA, color code: green
- ⑦ 28163 PSN **Operating Sheath**, graduated, distal beak, integrated irrigation connector, inner diameter 6.2 mm, outer diameter 6.9 mm, length 17 cm, for use with HOPKINS® Telescope 15° 28163 FFA, color code: green
- ⑧ 28163 PSW **Operating Sheath**, graduated, distal oblique, integrated irrigation connector, inner diameter 6.2 mm, outer diameter 6.9 mm, length 17 cm, for use with HOPKINS® Telescope 15° 28163 FFA, color code: green
- ⑨ 28163 FFA **HOPKINS® Wide Angle Telescope 15°**, angled eyepiece, outer diameter 6.1 mm, working channel diameter 2.9 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green
- 495 NA **Fiber Optic Light Cable**, with straight connector, diameter 3.5 mm, length 230 cm (not illustrated)
- ⑩ 28163 FBC **Bipolar Electrode**, angled, diameter 2.5 mm, working length 36 cm
- ⑪ 28163 UH **Palpation Hook**, distally angled 45°, diameter 2 mm, working length 34 cm
- ⑫ 28163 FDW **Dissector**, distally curved 45°, diameter 2.6 mm, working length 36 cm
- ⑬ 28163 FDG **Dissector**, distally curved 90°, diameter 2.6 mm, working length 36 cm
- ⑭ 28163 SE **TAKE-APART® BLAKESLEY Grasping Forceps**, diameter 2.3 mm, length 30 cm
- ⑮ 28163 SL **TAKE-APART® Grasping Forceps**, diameter 2.3 mm, length 30 cm
- ⑯ 28163 FBM **Grasping Forceps**, double action jaws, diameter 2.7 mm, working length 36 cm
- ⑰ 28163 FTK **Trephine**, with round handle, inner diameter 3.2 mm, outer diameter 4.2 mm, working length 22 cm
- ⑱ 28163 FTG **Trephine**, with round handle, inner diameter 7 mm, outer diameter 8 mm, working length 17.5 cm
- ⑲ 28163 FTM **Trephine**, with pyramidal handle, inner diameter 1.6 mm, outer diameter 2.7 mm, working length 30 cm

Recommended Container for Sterilization:

Telescopes: 39314 G
Instruments: 39360 BK

ENDOSPINE® Endoscopic Discectomy, Decompression of the Spinal Canal

Basic Set

STORZ
KARL STORZ — ENDOSKOPE



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ENDOSPINE® Endoscopic Discectomy, Decompression of the Spinal Canal

Basic Set

DESTANDAU Recommended Set

- ① 28163 DL **Bone Punch**, dismantling, 90° upbiting, not through-cutting, 3 mm, working length 18 cm
- ② 28163 DF **Same**, upbiting 45° forward, not through-cutting
- ③ 28163 DXH DESTANDAU **ENDOSPINE® Working Insert**, with positioning detent, with adjustable Nerve Protector 28163 DPH, for use with ENDOSPINE® Operating Tube 28163 DW, with working channel diameter 8 mm and irrigation channel, for use with HOPKINS® Telescope 28095 AA
- ④ 28163 DW DESTANDAU **ENDOSPINE® Operating Tube**, oval, with Obturator 28163 DO, for use with Working Insert 28163 DXH
- 28163 DRG **ENDOSPINE® Retractor Blade**, conical, length 5 cm, for use with ENDOSPINE® Operating Tube 28163 DW and 28163 DWS (not illustrated)
- ⑤ * **Bipolar Cord**, depending on the HF unit used
- ⑥ 28163 DC **Spoon Forceps**, dismantling, robust, oval, single action jaws, spoon size 3 x 10 mm, working length 15 cm
- ⑦ 28163 DZ **TAKE-APART® MANHES Bipolar Coagulation Forceps**, with connector pin for bipolar coagulation, width of jaws 1 mm, diameter 5 mm, length 20 cm
- ⑧ 28163 DG **Chisel**, flat, straight, with handle, distal width 15 mm, working length 9 cm
- ⑨ 28163 DHN **Palpation Hook**, blunt, hook angled 90°, hook length 5.5 mm, working length 13 cm
- ⑩ 28163 DNN **Elevator**, spatula slightly curved, distal width 5 mm, working length 13 cm
- ⑪ 28163 TK **Trephine**, with round handle, diameter 3 mm, working length 22 cm
- ⑫ 28163 DU **FERGUSON Suction Tube**, angled, with cut-off hole, diameter 3.7 mm, working length 11 cm
- ⑬ 28095 AA **HOPKINS® Straight Forward Telescope 0°**, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green
- ⑭ 28163 DD **Localization Device**, for fluoroscopic determination of the point of incision for ENDOSPINE® Operating Tube 28163 DW
- ⑮ 495 NA **Fiber Optic Light Cable**, with straight connector, diameter 3.5 mm, length 230 cm

Recommended Container for Sterilization:

Instruments: 39771 A

EasyGO!® System – Endoscopic Discectomy, Decompression of the Spinal Canal

Basic Set

STORZ
KARL STORZ — ENDOSKOPE



EasyGO!® System – Endoscopic Discectomy, Decompression of the Spinal Canal

Basic Set

STORZ
KARL STORZ — ENDOSKOPE

GAAB/OERTEL Recommended Set

- | | | |
|---|-----------|---|
| ① | 28163 CNS | Dilation Sleeve , graduated, inner diameter 1.5 mm, outer diameter 5.2 mm, length 23 cm, color code: white |
| ② | 28163 COS | Dilation Sleeve , graduated, inner diameter 5.3 mm, outer diameter 8.9 mm, length 21 cm, color code: yellow |
| ③ | 28163 CPS | Dilation Sleeve , graduated, inner diameter 9 mm, outer diameter 12.7 mm, length 19 cm, color code: orange |
| ④ | 28163 CQS | Dilation Sleeve , graduated, inner diameter 12.9 mm, outer diameter 14.9 mm, length 17 cm, color code: red |
| ⑤ | 28163 CRS | Dilation Sleeve , graduated, inner diameter 15.1 mm, outer diameter 16.9 mm, length 15 cm, color code: green |
| ⑥ | 28163 CSS | Dilation Sleeve , graduated, inner diameter 17.1 mm, outer diameter 18.9 mm, length 14 cm, color code: blue |
| ⑦ | 28163 CTS | Dilation Sleeve , graduated, inner diameter 19 mm, outer diameter 20.9 mm, length 13 cm, color code: black |
| ⑧ | 28163 GAG | EasyGO!® Attachment , diameter 23 mm, for use with EasyGO!® Trocars 28163 GTG/GTZ and HOPKINS® Telescopes 30° 28095 BAK/BAL |
| ⑧ | 28163 GAK | EasyGO!® Attachment , diameter 19 mm, for use with EasyGO!® Trocars 28163 GTK/GTY and HOPKINS® Telescopes 30° 28095 BAK/BAL |
| ⑧ | 28163 GAM | EasyGO!® Attachment , diameter 15 mm, for use with EasyGO!® Trocar 28163 GTM |
| ⑨ | 28163 GGL | EasyGO!® Attachment , movable inside the trocar, diameter 23 mm, for use with EasyGO!® Trocars 28163 GTG and HOPKINS® Telescope 30° 28095 BAL |
| ⑨ | 28163 GKL | EasyGO!® Attachment , movable inside the trocar, diameter 19 mm, for use with EasyGO!® Trocars 28163 GTK/GTB and HOPKINS® Telescopes 30° 28095 BAK/BAL |
| ⑨ | 28163 GML | EasyGO!® Attachment , movable inside the trocar, diameter 15 mm, for use with EasyGO!® Trocars 28163 GTM/GTA |
| | 28163 GTC | EasyGO!® Trocar , diameter 23 mm, working length 40 mm, for use with EasyGO!® Attachment 28163 GGL, EasyGO!® Telescope Sheath 28163 GKS and HOPKINS® Telescope 30° 28095 BAK, color code: black (not illustrated) |
| | 28163 GTB | EasyGO!® Trocar , diameter 19 mm, working length 40 mm, for use with EasyGO!® Attachment 28163 GKL, EasyGO!® Telescope Sheath 28163 GKS and HOPKINS® Telescope 30° 28095 BAK, color code: green (not illustrated) |
| | 28163 GTA | EasyGO!® Trocar , diameter 15 mm, working length 40 mm, for use with EasyGO!® Attachment 28163 GML, EasyGO!® Telescope Sheath 28163 GKS and HOPKINS® Telescope 30° 28095 BAK, color code: orange (not illustrated) |
| ⑩ | 28163 GTG | EasyGO!® Trocar , diameter 23 mm, working length 76 mm, for use with EasyGO!® Attachment 28163 GAG and HOPKINS® Telescope 30° 28095 BAK or EasyGO!® Attachment 28163 GGL, EasyGO!® Telescope Sheath 28163 GLS and HOPKINS® Telescope 30° 28095 BAL, color code: black |
| ⑩ | 28163 GTK | EasyGO!® Trocar , diameter 19 mm, working length 74 mm, for use with EasyGO!® Attachment 28163 GAK and HOPKINS® Telescope 30° 28095 BAK or EasyGO!® Attachment 28163 GKL, EasyGO!® Telescope Sheath 28163 GLS and HOPKINS® Telescope 30° 28095 BAL, color code: green |
| ⑩ | 28163 GTM | EasyGO!® Trocar , diameter 15 mm, working length 70 mm, for use with EasyGO!® Attachment 28163 GAM and HOPKINS® Telescope 30° 28095 BAK or EasyGO!® Attachment 28163 GML, EasyGO!® Telescope Sheath 28163 GLS and HOPKINS® Telescope 30° 28095 BAL, color code: orange |
| | 28163 GTZ | EasyGO!® Trocar , diameter 23 mm, working length 99 mm, for use with EasyGO!® Attachment 28163 GAG and HOPKINS® Telescope 30° 28095 BAL, color code: black (not illustrated) |
| | 28163 GTY | EasyGO!® Trocar , diameter 19 mm, working length 97 mm, for use with EasyGO!® Attachment 28163 GAK and HOPKINS® Telescope 30° 28095 BAL, color code: green (not illustrated) |
| ⑪ | 28095 BAK | HOPKINS® Forward-Oblique Telescope 30° , eyepiece angled 45°, diameter 4 mm, length 9.5 cm, autoclavable, fiber optic light transmission incorporated, color code: red |
| ⑫ | 28095 BAL | HOPKINS® Forward-Oblique Telescope 30° , eyepiece angled 45°, diameter 4 mm, length 12 cm, autoclavable, fiber optic light transmission incorporated, color code: red |
| | 28163 GKS | EasyGO!® Telescope Sheath , movable, for use with HOPKINS® Telescope 30° 28095 BAK and EasyGO!® Attachments 28163 GGL/GKL/GML (not illustrated) |
| ⑫ | 28163 GLS | EasyGO!® Telescope Sheath , for use with HOPKINS® Telescope 30° 28095 BAL |

EasyGO!® System – Endoscopic Discectomy, Decompression of the Spinal Canal

Basic Set

- ⑬ 28163 CFB KERRISON **Bone Punch**, dismantling, 40° upbiting, not through-cutting, 4 mm, working length 24 cm
- ⑭ 28163 CFS KERRISON **Bone Punch**, dismantling, 40° upbiting, not through-cutting, 2 mm, working length 24 cm
- ⑮ 28163 CC **Spoon Forceps**, dismantling, robust, oval, spoon size 3 x 10 mm, single action jaws, working length 20 cm
- 28163 EC **Same**, curved 30° (not illustrated)
- ⑯ 28163 EHK **Hook Scissors**, single action jaws, diameter 2.7 mm, working length 25 cm
- ⑰ 28163 GBM **Surgical Handle**, bayonet-shaped, working length 15 cm, for Blades 208010-15 and 208210-15
- ⑱ 28163 BPL **Bipolar Coagulation Forceps**, insulated, bayonet-shaped, tip 1.2 mm, length 23 cm, for use with Bipolar High Frequency Cord 847000 E or 847000 A/M/T/V
- ⑲ 28164 BDN **TAKE-APART® Bipolar Forceps**, rounded tip, width 2 mm, outer diameter 3.4 mm, working length 20 cm
- ⑳ 28163 GAH **Palpation Hook**, straight, distally 10 mm long and angled 90°, with ball end, with round handle, working length 20 cm
- ㉑ 28164 MDB **MORTINI Dissector**, “dead hand”, bayonet-shaped, sharp, 3 mm, curved upwards, with round handle, working length 16 cm
- ㉒ 28163 GRN **Nerve Retractor**, angled 30°, distal width 5 mm, working length 17 cm
- 28163 CKG **Curette**, small, spoon size (l x w): 2.7 x 4 mm, bayonet-shaped, distally angled 45°, working length 20 cm (not illustrated)
- ㉓ 28163 GX **Suction Tube**, with cut-off hole, LUER, diameter 2.7 mm, working length 15 cm
- 28163 GXN **Suction Tube**, with distal nerve retractor, with cut-off hole, LUER-Lock connector, diameter 2.7 mm, working length 15 cm (not illustrated)
- 28163 KT **FERGUSON Suction Tube**, with cut-off hole and stylet, LUER, diameter 4 mm, working length 15 cm (not illustrated)
- ㉔ 495 NL **Fiber Optic Light Cable**, with straight connector, diameter 3.5 mm, length 180 cm
- ㉕ 28172 HR **Rotation Socket**, to clamp to the operating table, with one mounted Butterfly Nut 28172 HRS, for European and US standard rails, with lateral clamp for height and angle adjustment of the articulated stand
- ㉖ 28272 HA **Articulated Stand**, reinforced version, straight, with one mechanical central clamp for all five joint functions, height 30 cm, swivel range 37 cm

EasyGO!® System – Endoscopic Discectomy, Decompression of the Spinal Canal

Basic Set

STORZ
KARL STORZ — ENDOSKOPE

GAAB/OERTEL Recommended Set

Additional Instruments for Stenoses (not illustrated)

28163 PL	Puncture Needle , including stylet, diameter 1.8 mm, working length 18 cm, with 1.3 mm opening for guide wire
28163 KD	Guide Wire , unsterile, diameter 1.2 mm, length 31 mm, package of 10
426620	GRÜNWALD Nasal Dressing Forceps , bayonet-shaped, length 20 cm
28163 AH	Palpation Hook , diameter 3.8 mm, distally angled 90°, with ball, blunt, working length 20 cm
28163 GBH	Palpation Hook , bayonet-shaped, distally angled 90°, with ball end, with round handle, working length 20 cm
28163 NBB	Nerve Hook , distal width 5 mm, bayonet-shaped, working length 16 cm
28163 NSB	Nerve Hook , distal width 3 mm, bayonet-shaped, working length 16 cm
28163 RN	Nerve Retractor , hook length 2 mm, diameter 4 mm, angled sheath, working length 20 cm
28164 DS	Dissector , sharp, tip angled 15°, with round handle, size 2 mm, length 25 cm
28163 CLB	KERRISON Bone Punch , dismantling, 90° upbiting, not through-cutting, 4 mm, working length 24 cm
28163 CLS	KERRISON Bone Punch , dismantling, 90° upbiting, not through-cutting, 2 mm, working length 24 cm
28163 BKD	KERRISON Punch , dismantling, bayonet-shaped, fixed, downbiting 40° forward, 2 mm, working length 17 cm
28163 BKU	KERRISON Punch , dismantling, bayonet-shaped, fixed, upbiting 40° forward, 2 mm, working length 17 cm
28163 FB	BLAKESLEY Nucleus Cutting Forceps , single action jaws, opening upwards, diameter 3.5 mm, working length 20 cm
28163 BPS	Bipolar Coagulation Forceps , insulated, bayonet-shaped, tip 0.7 mm, length 23 cm, for use with Bipolar High Frequency Cord 847000 E or 847000 A/M/T/V

Recommended Container for Sterilization:

Telescopes: 39301 AS

Instruments: 39360 AK (2x)

VITOM® SPINE for the Lumbar Spine

Basic Set

STORZ
KARL STORZ — ENDOSKOPE



VITOM® SPINE for the Lumbar Spine

Basic Set

ROSENTHAL Recommended Set

VITOM® SPINE and Accessories

- ⑰ 28272 RGB **Holding System, autoclavable**, with quick release coupling KSLOCK
- ① 28095 VA **VITOM® SPINE HOPKINS® Straight Forward Telescope 0°**, working distance 25 – 75 cm, diameter 10 mm, length 11 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green
- ② 20918020 **VITOM® 25 Distance Rod**, length 25 cm
- 495 NCS **Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, diameter 4.8 mm, length 250 cm (not illustrated)
- 28272 CN **Clamping Cylinder**, folding, for flexible mounting of 10 mm telescopes to telescope sheath, **autoclavable**. The clamping cylinder allows vertical movement and rotation of the telescope (not illustrated)

Lumbar, Tubular Retractor System

- ③ 28163 PL **Puncture Needle**, including stylet, diameter 1.8 mm, working length 18 cm, with 1.3 mm opening for guide wire
- ④ 28163 KD **Guide Wire**, unsterile, diameter 1.2 mm, length 31 mm, package of 10
- ⑤ 28163 CNS **Dilation Sleeve**, graduated, inner diameter 1.5 mm, outer diameter 5.2 mm, length 23 cm, color code: white
- ⑤ 28163 COS **Dilation Sleeve**, graduated, inner diameter 5.3 mm, outer diameter 8.9 mm, length 21 cm, color code: yellow
- ⑤ 28163 CPS **Dilation Sleeve**, graduated, inner diameter 9 mm, outer diameter 12.7 mm, length 19 cm, color code: orange
- ⑤ 28163 CQS **Dilation Sleeve**, graduated, inner diameter 12.9 mm, outer diameter 14.9 mm, length 17 cm, color code: red
- ⑤ 28163 CRS **Dilation Sleeve**, graduated, inner diameter 15.1 mm, outer diameter 16.9 mm, length 15 cm, color code: green
- ⑤ 28163 CSS **Dilation Sleeve**, graduated, inner diameter 17.1 mm, outer diameter 18.9 mm, length 14 cm, color code: blue
- ⑤ 28163 CTS **Dilation Sleeve**, graduated, inner diameter 19 mm, outer diameter 20.9 mm, length 13 cm, color code: black
- 28163 GTC **EasyGO!® Trocar**, diameter 23 mm, working length 40 mm (not illustrated)
- 28163 GTB **EasyGO!® Trocar**, diameter 19 mm, working length 40 mm (not illustrated)
- 28163 GTA **EasyGO!® Trocar**, diameter 15 mm, working length 40 mm (not illustrated)
- ⑥ 28163 GTG **EasyGO!® Trocar**, diameter 23 mm, working length 76 mm
- ⑦ 28163 GTK **EasyGO!® Trocar**, diameter 19 mm, working length 74 mm
- ⑧ 28163 GTM **EasyGO!® Trocar**, diameter 15 mm, working length 70 mm
- 28163 GTZ **EasyGO!® Trocar**, diameter 23 mm, working length 99 mm (not illustrated)
- 28163 GTY **EasyGO!® Trocar**, diameter 19 mm, working length 97 mm (not illustrated)
- ⑥ 28163 VBG **Glare Shield**, diameter 23 mm, for use with EasyGO!® Trocars 28163 GTG/GTC/GTZ
- ⑦ 28163 VBK **Glare Shield**, diameter 19 mm, for use with EasyGO!® Trocars 28163 GTK/GTB/GTY
- ⑧ 28163 VBM **Glare Shield**, diameter 15 mm, for use with EasyGO!® Trocars 28163 GTM/GTA
- 28272 HB **Articulated Stand**, reinforced version, L-shaped (not illustrated)
- 28272 HR **Socket** (not illustrated)
- ⑨ 28163 BXB **Suction Tube**, angled, with beaded distal end, diameter 5 mm, working length 23 cm
- ⑩ 28163 BXS **Same**, diameter 2.5 mm
- ⑪ 28164 MRA **Ring Curette**, bayonet-shaped, 45° curved upwards, sharp, diameter 2.5 mm, with round handle, working length 16 cm
- ⑫ 28164 MRB **Same**, diameter 5 mm
- ⑬ 28164 MRC **Same**, diameter 7 mm
- ⑭ 28164 MDB **MORTINI Dissector**, “dead hand”, bayonet-shaped, sharp, 3 mm, curved upwards, with round handle, working length 16 cm
- ⑮ 28163 GBH **Palpation Hook**, bayonet-shaped, distally angled 90°, with ball end, with round handle, working length 20 cm
- ⑯ 28163 NBB **Nerve Hook**, distal width 5 mm, bayonet-shaped, working length 16 cm
- ⑰ 28164 BPA **Bipolar Coagulation Forceps**, insulated, bayonet-shaped, blunt, tip 0.7 mm, working length 12 cm, total length 23 cm
- ⑱ 28164 BPC **Same**, tip 0.3 mm
- ⑲ 28164 BPB **Same**, tip 0.7 mm, working length 14 cm, total length 25 cm
- ⑳ 26184 HCS **TAKE-APART® MANHES Bipolar Coagulation Forceps**, width of jaws 1 mm, size 3 mm, length 20 cm
- ㉑ 30321 MWS **CLICKline Scissors**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, serrated, curved, conical, size 3 mm, length 20 cm
- ㉒ 28163 CC **Spoon Forceps**, robust, oval, spoon size 3 x 10 mm, single action jaws, working length 20 cm
- ㉓ 28163 BKD **KERRISON Punch**, dismantling, bayonet-shaped, fixed, downbiting 40° forward, 2 mm, working length 17 cm
- ㉔ 28163 BKU **Same**, upbiting 40° forward
- ㉕ 28163 CFB **KERRISON Bone Punch**, 40° upbiting, not through-cutting, 4 mm, working length 24 cm
- ㉖ 28163 DF **Bone Punch**, dismantling, upbiting 45° forward, not through-cutting, 3 mm, working length 18 cm

Recommended Container for Sterilization:

Telescope: 39501 A2
Instruments: 39360 AK

VITOM® SPINE
for the Thoracic Spine
 Basic Set



VITOM® SPINE for the Thoracic Spine

Basic Set

ROSENTHAL Recommended Set

VITOM® SPINE and Accessories

- ⑳ 28272 RGB **Holding System, autoclavable**, with quick release coupling KSLOCK
- ① 28095 VA **VITOM® SPINE HOPKINS® Straight Forward Telescope 0°**, working distance 25 – 75 cm, diameter 10 mm, length 11 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green
- ② 20918020 **VITOM® 25 Distance Rod**, length 25 cm
- ㉘ 495 NCS **Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, diameter 4.8 mm, length 250 cm (not illustrated)
- ③ 28272 CN **Clamping Cylinder**, for flexible mounting of 10 mm telescopes to telescope sheath, **autoclavable**. The clamping cylinder allows vertical movement and rotation of the telescope.

Thoracic, Modular Retractor System

- ④ 28163 VR ROSENTHAL **Angled Retractor**, with movable retractor blades, in three lengths, can be clamped to the holding arm with the KSLOCK

Recommended Instruments

- ⑤ 33321 ML **CLICKliné KELLY Dissecting and Grasping Forceps**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, long, size 5 mm, length 36 cm
- ⑥ 33321 UL **CLICKliné REDDICK-OLSEN Dissecting and Grasping Forceps**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, robust, size 5 mm, length 36 cm
- ⑦ 33321 R **CLICKliné Dissecting and Grasping Forceps**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, right angled, size 5 mm, length 36 cm
- ⑧ 34321 MS **CLICKliné METZENBAUM Scissors**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, double action jaws, curved, size 5 mm, length 36 cm
- ⑨ 28163 BSN **TAKE-APART® Bipolar Coagulation Suction Tube**, with stopcock, size 5 mm, length 30 cm
- ⑩ 26276 HK **TAKE-APART® SCHNEIDER Bipolar Grasping Forceps**, with connector pin for bipolar coagulation, with movable inner sheath and non-retracting jaws, robust jaws, size 5 mm, length 33 cm
- ⑪ 26276 HD **TAKE-APART® MANHES Bipolar Coagulation Forceps**, width of jaws 3 mm, size 5 mm, length 33 cm
- ⑫ 28163 PKG KERRISON **Bone Punch**, dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm
- ⑬ 28163 PGG KERRISON **Bone Punch**, dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 5 mm, round sheath diameter 10 mm, working length 30 cm
- ⑭ 28163 PKS KERRISON **Bone Punch**, dismantling, graduated scale at the distal end, 40° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm
- ⑮ 28163 RGG **Rongeur**, dismantling, graduated scale at the distal end, jaw 8 mm, round sheath diameter 10 mm, working length 30 cm
- ⑯ 28163 RKG **Rongeur**, dismantling, graduated scale at the distal end, jaw 5 mm, round sheath diameter 10 mm, working length 30 cm
- ⑰ 28163 UK **Spoon Forceps**, round, single action jaws, diameter 2.5 mm, working length 30 cm
- ⑱ 28162 ZE **Biopsy Forceps**, single action jaws, diameter 2.7 mm, working length 30 cm
- ⑲ 28163 UM **Spoon Forceps**, oval, single action jaws, diameter 2 mm, working length 30 cm
- ㉑ 28163 MS **Tappet**, blunt, grooved, for positioning the bone implant, size 10 mm, working length 30 cm
- ㉒ 28163 MF **Raspatory**, for dissection, size 7 mm, working length 30 cm
- ㉓ 28163 WC **Curette**, sharp, spoon-shaped, oval, 3.5 x 5 mm, working length 30 cm
- ㉔ 28163 GH **Palpation Hook**, hook angled 90°, blunt, diameter 5 mm, working length 36 cm
- ㉕ 28163 GI **Spoon Curette**, sharp, 4 x 6 mm, diameter 5 mm, working length 36 cm
- ㉖ 28163 GK **Spoon Curette**, sharp, 3 x 4 mm, diameter 5 mm, working length 36 cm
- ㉗ 28163 GL **Spoon Curette**, sharp, 3 x 4 mm, spoon angled 45°, diameter 5 mm, working length 36 cm
- ㉘ 28163 RR **Raspatory**, diameter 5 mm, working length 36 cm

Recommended Container for Sterilization:

Telescope: 39501 A2

Instruments: 39502 Z with 39100 S, 39100 PS and 39360 AS

For further information on the VITOM® system see chapter 14, VITOM®



HOPKINS® TELESCOPES AND SHEATHS



ENDOCAMELEON® ARTHRO

68-69

**HOPKINS® TELESCOPES, Diameter 4 mm
ARTHROSCOPE SHEATHS,
Diameter 5.5 – 6.5 mm**

70-78

**HOPKINS® TELESCOPES, Diameter 1.9 – 2.7 mm
ARTHROSCOPE SHEATHS, Diameter 2.5 – 4 mm**

79-82

ENDOCAMELEON® ARTHRO *NEW*

STORZ
KARL STORZ — ENDOSKOPE



 **EndoCAMEleon® ARTHRO**

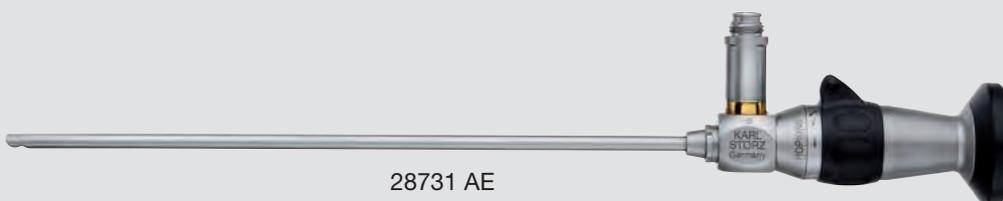
ENDOCAMELEON® ARTHRO ^{NEW}



Diameter 4 mm, length 18 cm

ENDOCAMELEON® ARTHRO is the newest member of the HOPKINS® family of rod-lens telescopes – and the most versatile. A simple turn of the adjusting knob enables the user to select the direction of view between 15° and 90°. This enables the surgeon to quickly and easily select the desired direction of view for optimal orientation and control. Consequently,

ENDOCAMELEON® ARTHRO is an excellent tool for diagnostic examinations. This can also eliminate the time-consuming switching between telescopes. ENDOCAMELEON® ARTHRO combines the user comfort of HOPKINS® telescopes with unprecedented versatility – in proven, high quality KARL STORZ style.



28731 AE

28731 AE

ENDOCAMELEON® ARTHRO HOPKINS® Telescope, diameter 4 mm, length 18 cm, **autoclavable**, variable direction of view from 15° – 90°, adjustment knob for selecting the desired direction of view, fiber optic light transmission incorporated, color code: gold



28136 EC

28136 EC

Arthroscopy Sheath ENDOCAMELEON®, with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, distal end tapered, with irrigation holes, two stopcocks, **rotatable**, for use with ENDOCAMELEON® ARTHRO HOPKINS® Telescope 28731 AE and Obturators 28136BC/BT, 28126BC/BT and Obturator 28134 O



The familiar ergonomics and handling of conventional telescopes is enhanced with the additional convenience of a variable direction of view.



The direction of view is adjusted by a mere turn of the adjusting knob at the proximal end of the ENDOCAMELEON® ARTHRO.

HOPKINS® Telescopes

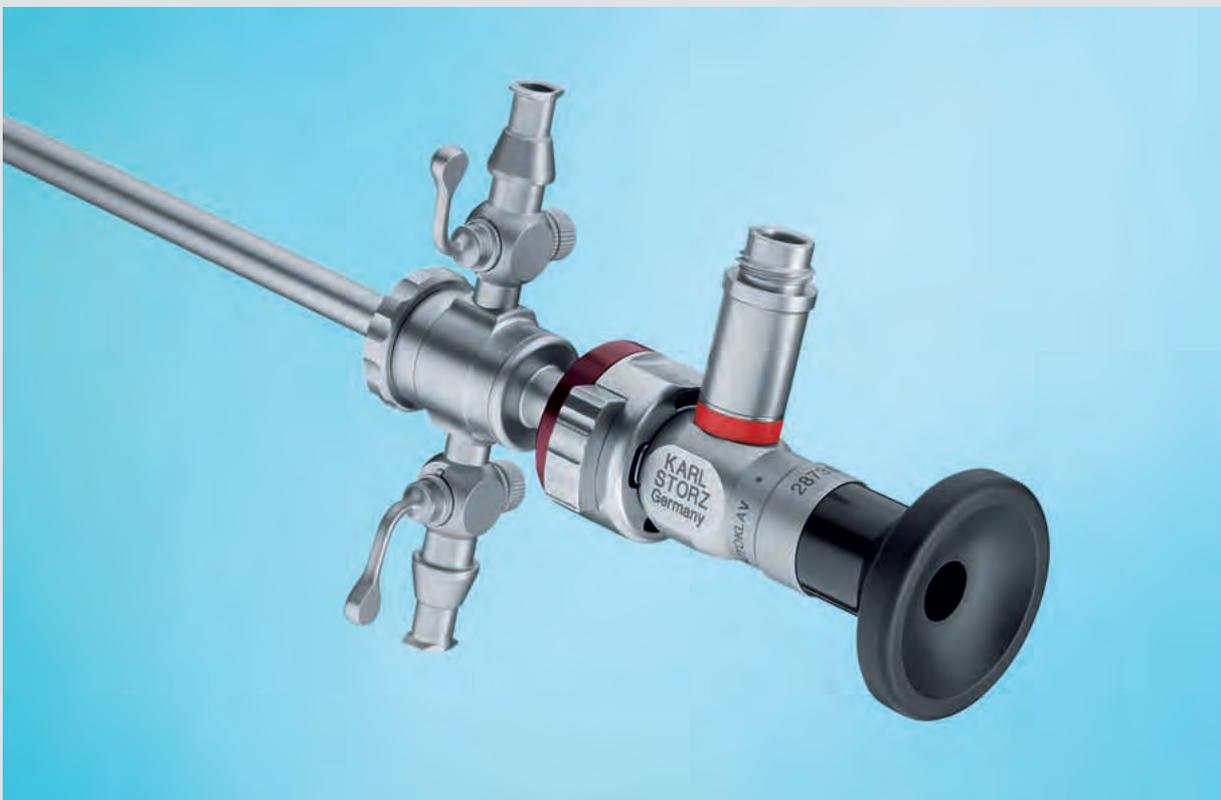
Special Features:

- Unique rod lens system
- First-class image quality with optimal brightness and contrast
- High detail resolution
- Autoclavable

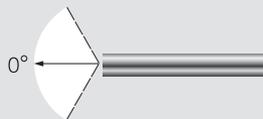
The product range includes all standard directions of view required for arthroscopy: **0°, 30° and 70°**.
 The arthroscopy portfolio includes diameter sizes ranging from **1 to 4 mm**.

The color code of the HOPKINS® telescopes denotes the direction of view.

Color Code	Direction of View
Green	0°
Red	30°
Yellow	70°



Diameter 4 mm, length 18 cm



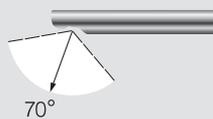
28731 AWA

HOPKINS® Wide Angle Straight Forward Telescope 0°, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green



28731 BWA

HOPKINS® Wide Angle Forward-Oblique Telescope 30°, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red



28731 CWA

HOPKINS® Wide Angle Lateral Telescope 70°, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: yellow

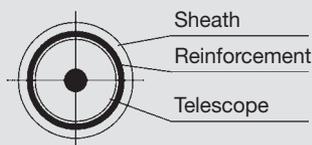
Arthroscope Sheaths

with Standard Coupling Mechanism

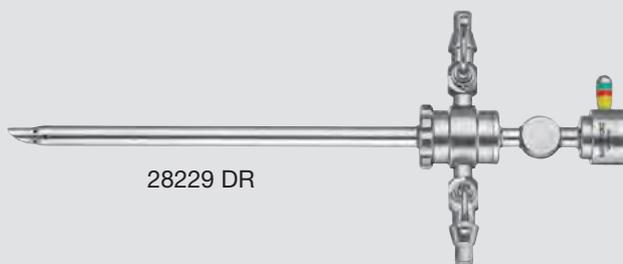
Diameter 6.5 and 5.5 mm, working length 12 cm,
for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm

Special Features:

- High mechanical stability
- Stable and reliable telescope-sheath lock
- Sheath tip is tapered towards the distal end to hold the telescope securely in place.
- Telescopes and sheaths are color-coded to ensure compatibility and to prevent wrong combinations.
- The high-flow system provides improved in- and outflow.
- Sheaths can be fully dismantled to allow proper cleaning and processing.



Increased inflow and outflow rate
without disturbing turbulence

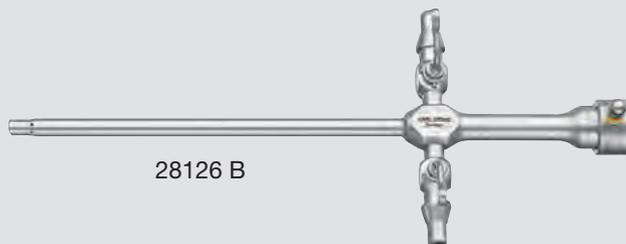


28229 DR



28229 DR

High-Flow Arthroscope Sheath, with standard coupling mechanism, diameter 6.5 mm, working length 12 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28126 BC/BT/BS, 28134 O, *color code: green-red-yellow



28126 B



28126 B

Arthroscope Sheath, with standard coupling mechanism, diameter 5.5 mm, working length 12 cm, two stopcocks, **fixed**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28126 BC/BT/BS, 28134 O, *color code: green-red-yellow

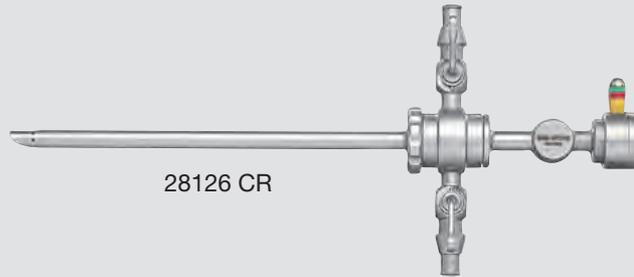
***Note:** For an overview of color codes for HOPKINS® Telescopes see page 70

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

Arthroscope Sheaths

with Standard Coupling Mechanism

Diameter 5.5 mm, working length 12 cm,
for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm



28126 CR



28126 CR

Arthroscope Sheath, with standard coupling mechanism, diameter 5.5 mm, working length 12 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28126 BC/BT/BS, 28134 O, color code: green-red-yellow

28126 R

Same, one stopcock

***Note:** For an overview of color codes for HOPKINS® Telescopes see page 70

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

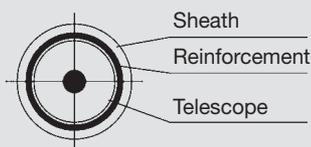
Arthroscope Sheaths

with Snap-in Coupling Mechanism

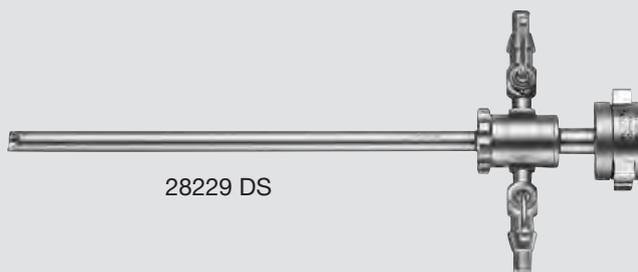
Diameter 6.5 mm, working length 13.5 cm,
for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm

Special Features:

- Quick and safe locking mechanism
- Enhanced working length
- Optimal arthroscope control
- Integrated telescope protection
- High-flow system ensures a high flow of irrigation liquid.



*Increased inflow and outflow rate
without disturbing turbulence*



28229 DS



28229 DS

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 6.5 mm, working length 13.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28229 BC/BT

28229 S

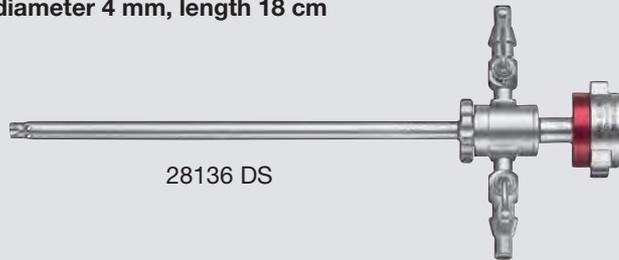
Same, one stopcock

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

Arthroscope Sheaths

with Snap-in Coupling Mechanism

Diameter 6 mm, color code red, working length 13.5 cm,
for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm



28136 DS

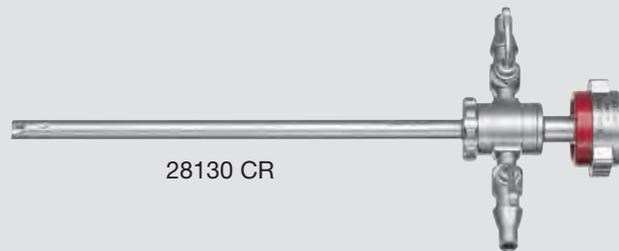


28136 DS

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, distal tapered, with irrigation holes, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 30°, 70° and Obturators 28136 BC/BT Snap-in at 6 o'clock and 12 o'clock positions, color code: red

28136 S

Same, one stopcock



28130 CR



28130 CR

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28130 BC/BT, 28140 O, color code: red

28130 R

Same, one stopcock



28136 CR



28136 CR

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28126 BC/BT/BS, 28134 O, color code: red

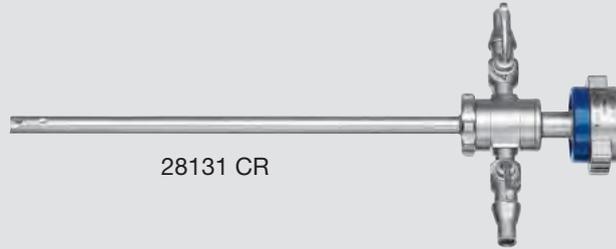
6-12

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

Arthroscope Sheaths

with Snap-in Coupling Mechanism

Diameter 5.5 mm, color code blue, working length 13.5 cm,
for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm



28131 CR

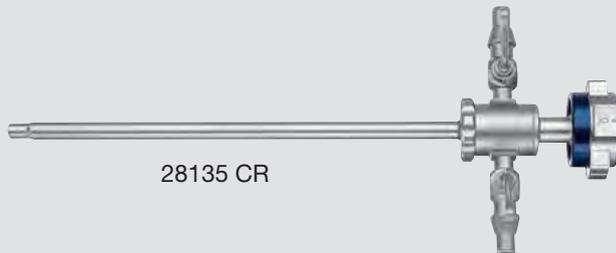


28131 CR

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 5.5 mm, working length 13.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28130 BC/BT, 28140 O, color code: blue

28131 R

Same, one stopcock



28135 CR



28135 CR

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 5.5 mm, working length 13.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28126 BC/BT/BS, 28134 O, color code: blue

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

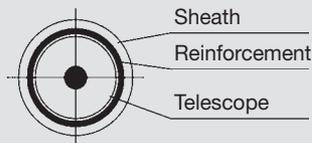
Arthroscope Sheath

with Automatic Lock-in Coupling Mechanism

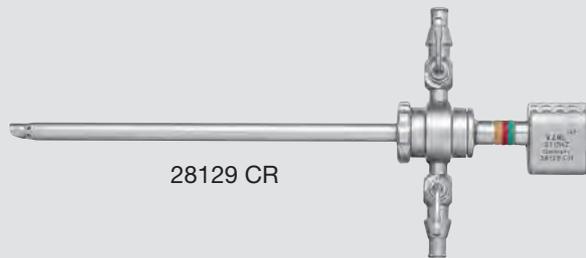
Diameter 6 mm, working length 12 cm,
for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm

Special Features:

- Click mechanism for adaption between telescope and sheath



*Increased inflow and outflow rate
without disturbing turbulence*



28129 CR



28129 CR

STROBEL **Arthroscope Sheath**, with automatic lock-in coupling mechanism, diameter 6 mm, working length 12 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28126 BC/BT/BS, 28134 O, *color code: green-red-yellow

***Note:** For an overview of color codes for HOPKINS® Telescopes see page 70

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

For use with Arthroscope Sheaths 28229 DS/S

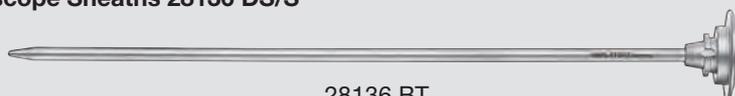


28229 BT

28229 BT **Obturator**, semisharp

28229 BC **Same**, blunt

For use with Arthroscope Sheaths 28136 DS/S

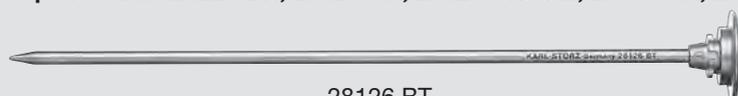


28136 BT

28136 BT **Obturator**, semisharp

28136 BC **Same**, blunt

For use with Arthroscope Sheaths 28229 DR, 28129 CR, 28126 CR/R/B, 28136 CR, 28135 CR and 28136 EC



28126 BT

28126 BT **Obturator**, semisharp

28126 BS **Same**, sharp

28126 BC **Same**, blunt



28134 O

28134 O **Obturator**, cannulated, with handle, diameter 4.1 mm

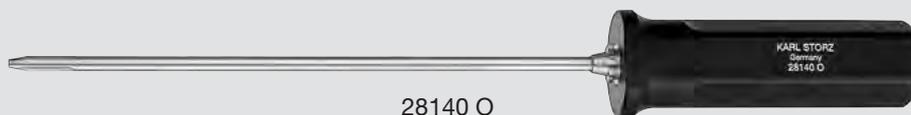
For use with Arthroscope Sheaths 28131 CR/R, 28130 CR/R



28130 BT

28130 BT **Obturator**, semisharp

28130 BC **Same**, blunt



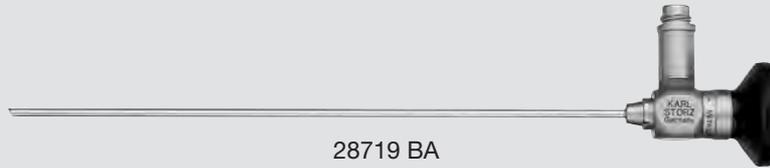
28140 O

28140 O **Obturator**, cannulated, with handle, diameter 4.8 mm

HOPKINS® Telescope and Arthroscope Sheath

with Standard Coupling Mechanism

Diameter 2.7 mm, length 18 cm



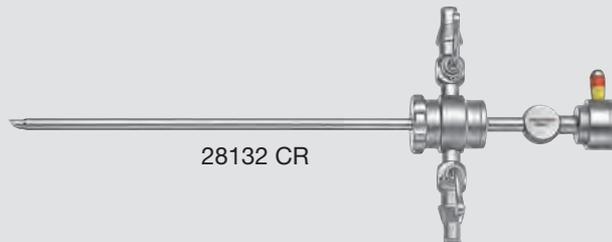
28719 BA



28719 BA

HOPKINS® Forward-Oblique Telescope 30°, diameter 2.7 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

Diameter 4 mm, working length 12.5 cm

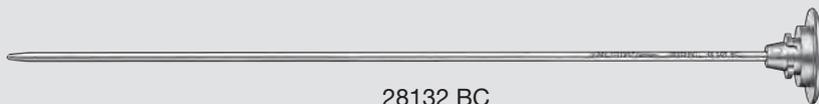


28132 CR



28132 CR

Arthroscope Sheath, with standard coupling mechanism, diameter 4 mm, working length 12.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescope 30° and Obturators 28132 BC/BT, *color code: red-yellow



28132 BC

28132 BC

Obturator, blunt, for use with Arthroscope Sheath 28132 CR

28132 BT

Same, semisharp

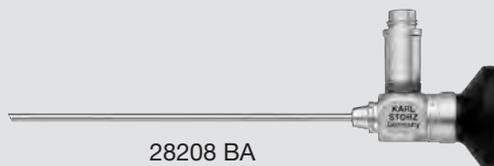
***Note: For an overview of color codes for HOPKINS® Telescopes see page 70**

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

HOPKINS® Telescope and Arthroscope Sheath

with Snap-in Coupling Mechanism

Diameter 2.7 mm, length 11 cm



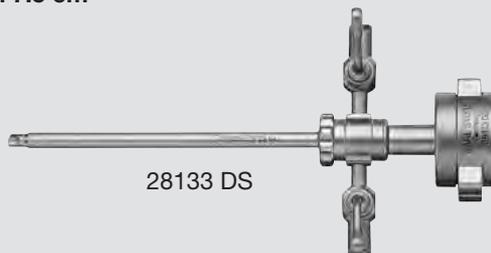
28208 BA



28208 BA

HOPKINS® Forward-Oblique Telescope 30°, diameter 2.7 mm, length 11 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

Diameter 4 mm, working length 7.5 cm



28133 DS



28133 DS

Arthroscope Sheath, with snap-in coupling mechanism, diameter 4 mm, working length 7.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescope 30° and Obturator 28133 BC



28133 BC

28133 BC

Obturator, blunt, for use with Arthroscope Sheath 28133 DS

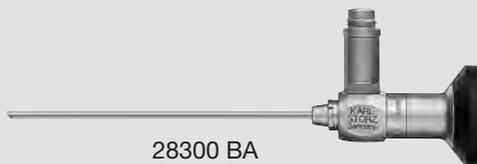
***Note:** For an overview of color codes for HOPKINS® Telescopes see page 70

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

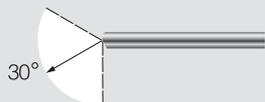
HOPKINS® Telescope and Arthroscope Sheaths

with Snap-in Coupling Mechanism

Diameter 2.4 mm, length 10 cm



28300 BA

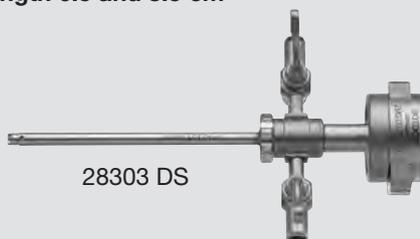


30°

28300 BA

HOPKINS® Wide Angle Forward-Oblique Telescope 30°, diameter 2.4 mm, length 10 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

Diameter 3.5 and 3.2 mm, working length 6.5 and 8.5 cm

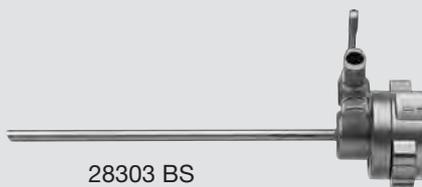


28303 DS



28303 DS

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, fenestrated, diameter 3.5 mm, working length 6.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® Telescope 30° 28300 BA and Obturators 28302 BU/BV



28303 BS



28303 BS

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 3.2 mm, working length 8.5 cm, one stopcock, **fixed**, for use with HOPKINS® Telescope 30° 28300 BA and Obturators 28302 BU/BV



28302 BU



28302 BU

Obturator, sharp, for use with Arthroscope Sheaths 28303 DS/BS



28302 BV

Same, blunt

***Note:** For an overview of color codes for HOPKINS® Telescopes see page 70

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

HOPKINS® Telescope and Arthroscope Sheath

with Standard Coupling Mechanism

Diameter 1.9 mm, length 6.5 cm



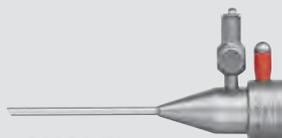
28305 BA



28305 BA

HOPKINS® Forward-Oblique Telescope 30°, diameter 1.9 mm, length 6.5 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

Diameter 2.5 mm, working length 4 cm



28306 BN



28306 BN

High-Flow Arthroscope Sheath, with standard coupling mechanism, diameter 2.5 mm, working length 4 cm, one stopcock, **fixed**, for use with HOPKINS® Telescope 30° 28305 BA and Obturators 28306 BS/BT, *color code: red



28306 BS



28306 BS

Obturator, sharp, for use with Arthroscope Sheath 28306 BN



28306 BT

Same, blunt

***Note: For an overview of color codes for HOPKINS® Telescopes see page 70**

Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

GENERAL INSTRUMENTATION

**PROBES, PALPATION HOOKS, KNIVES,
CURETTES, MIRRORS, CHISELS, RASPS,
CANNULAS**

84-92





28140 T



28140 T **Probe**, graduated, length of hook 3 mm, diameter 1.5 mm, working length 18 cm



28140 TA **Probe**, graduated, length of hook 3 mm, angled downwards 10°, diameter 1.5 mm, working length 20 cm



28140 TB **Probe**, graduated, length of hook 3 mm, angled downwards 20°, diameter 1.5 mm, working length 20 cm



28140 TL **Probe**, graduated, length of hook 3 mm, diameter 1.5 mm, working length 21.5 cm



28145 LH

28145 LH **Probe**, graduated, blunt, length of hook 5.5 mm, diameter 1.5 mm, working length 13 cm



28145 S

28145 S **Probe**, graduated, length of hook 2 mm, diameter 1.5 mm, working length 8.5 cm

28145 V **Same**, length of hook 4 mm

28145 W **Probe**, graduated, length of hook 4 mm, diameter 1.5 mm, working length 12 cm

28270 T **Probe**, graduated, length of hook 2 mm, diameter 1.5 mm, working length 18 cm



28302 S

28302 S **Probe**, graduated, length of hook 1 mm, diameter 1 mm, working length 7.5 cm

Palpation Hook ^{NEW}

with Measurement Function

In numerous arthroscopic interventions, accurate measurements of structures, defects, or distances are required. A special palpation hook was developed for this application that enables accurate measurements by using the hook tip and a sliding measuring tube.

Special Features:

- Intra-articular measurement
- Scaling in 2-mm steps
- Straightforward application

Measures:

- Defect sizes
- Defect depth (for example, in cancellous bone filling)
- Determines distances between canals and anatomical structures
- Anatomical structures



28145 P

28145 P

Palpation Hook, graduated

including:

Handle

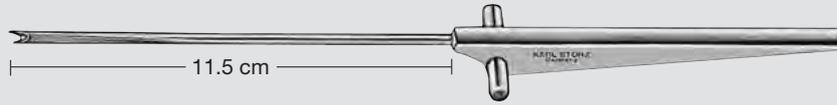
Hook

Sliding Tube



Determining the length of a cartilage defect of a femoral condyle

Working length 11.5 cm



28146 D

Probe, straight,
working length 11.5 cm



28146 E

Pointed Knife, straight,
working length 11.5 cm



28146 K

SMILLIE Knife, straight,
working length 11.5 cm



28146 L

Hook Knife, straight,
working length 11.5 cm



28146 N

Sickle Knife, straight,
working length 11.5 cm



28146 H

Rosette Knife, straight,
working length 11.5 cm

Working length 18 cm



28140 MG



28140 MG

Pointed Knife, curved, double-edged,
working length 18 cm

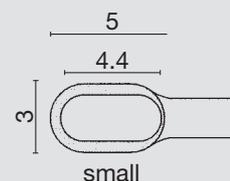
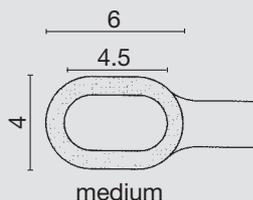
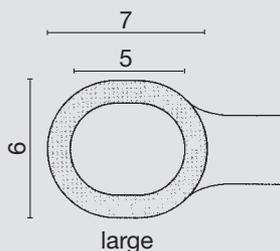
Curettes

Special Features:

- Smoothing of tunnels possible
- Easy insertion through the instrument port
- Precise treatment of cartilage lesions, without injuring adjacent intact cartilage areas



28728 KA – KF



28728 KA

Curette, oval, large, curved, 10° upwards, working length 13 cm



28728 KB

Curette, oval, large, curved, 30° upwards, working length 13 cm



28728 KC

Curette, oval, medium, curved, 10° upwards, working length 13 cm



28728 KD

Curette, oval, medium, curved, 30° upwards, working length 13 cm



28728 KE

Curette, oval, small, curved, 10° upwards, working length 13 cm



28728 KF

Curette, oval, small, curved, 30° upwards, working length 13 cm

Both sides cutting



28195 KC

Curette, oval, large, both sides cutting, curved, 20° upwards, working length 13 cm

Special Features:

- Easy-to-use system for enhanced arthroscopic view
- Better visualization of anatomic structures



28728 MA

28728 G

28728 G **Handle**, for use with Mirror Attachments 28728 MA/MC and Suture Curette 28728 K



28728 MA **Mirror Attachment**, straight, diameter 6.2 mm, working length 11 cm, for use with Handle 28728 G



28728 MC **Mirror Attachment**, curved, 40° upwards, diameter 6.2 mm, working length 11 cm, for use with Handle 28728 G

Please note: Provided that an initial order is placed, it is recommended to buy a complete set of instruments.

Chisels

Notch chisels, especially developed for notchplasty, can also be used after transplantation.

Benefits:

- **Rounded chisel tip facilitates insertion into the joint**
- **Extra wide chisel tip enables fast and efficient work**
- **Curved chisel tip, optimized resection**
- **Depth markings enables controlled removal of bone at the notch**



28729 NO



28729 NO

Notch Chisel, curved, 15° downwards, working length 13 cm



28728 CB



28728 CB

Chisel, cutting width 4 mm, working length 13 cm

These instruments were primarily developed for the smoothing of bone surfaces after removing portions of

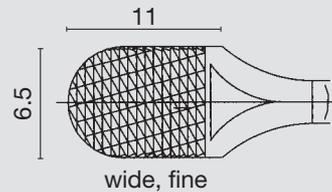
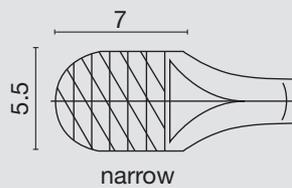
bone in the knee joint (notchplasty, osteophytes), in the upper ankle joint, in the elbow joint and the wrist.

Special Features:

- **Rounded tip which allows easier introduction of rasp into the intraarticular joint cavity through the instrument approach.**
- **The lateral rasp surfaces are slightly polished to allow improved introduction through the instrument approach.**
- **Due to the rounded edges, the rasp may be pushed over the cartilage to a certain extent without injuring it.**
- **Various diameters and angulations allow bone surfaces to be worked in different joint sites.**



28728 RF



28728 RF

Rasp, narrow, straight, fine, working length 13 cm



28728 RFG

Rasp, narrow, curved, fine, working length 13 cm



28728 RGG

Rasp, narrow, curved, coarse, working length 13 cm



28728 BFG

Rasp, wide, curved, fine, working length 13 cm

Please note: Provided that an initial order is placed, it is recommended to buy a complete set of instruments.

Special Features:

- Lateral outflow of the irrigation liquid
- Safe instrument for removal of small arthroliths and meniscus fragments still remaining in the joint. In contrast to removal using the shaver, the risk of injuring intact synovial or cartilage areas is considerably reduced.
- Easy to use



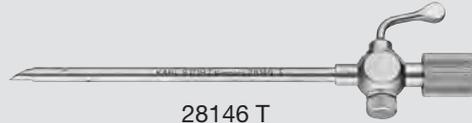
28728 DB

28728 DB **Irrigation Cannula**, diameter 5 mm,
length 14.5 cm



28728 DC

28728 DC **Irrigation Cannula**, diameter 6 mm,
length 14.5 cm



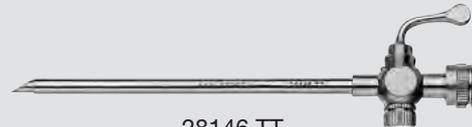
28146 T

28146 T **Irrigation Cannula**, with LUER-Lock and stopcock, diameter 3.2 mm, working length 7 cm, for use with Obturator 28146 QO



28146 QO

28146 QO **Obturator**, sharp, for use with Cannula 28146 T



28146 TT

28146 TT **Irrigation Cannula**, with LUER-Lock and stopcock, diameter 4.5 mm, working length 7 cm, for use with Obturators 28146 TO/TS



28146 TO

28146 TO **Obturator**, sharp, for use with Cannula 28146 TT

28146 TS **Same**, blunt

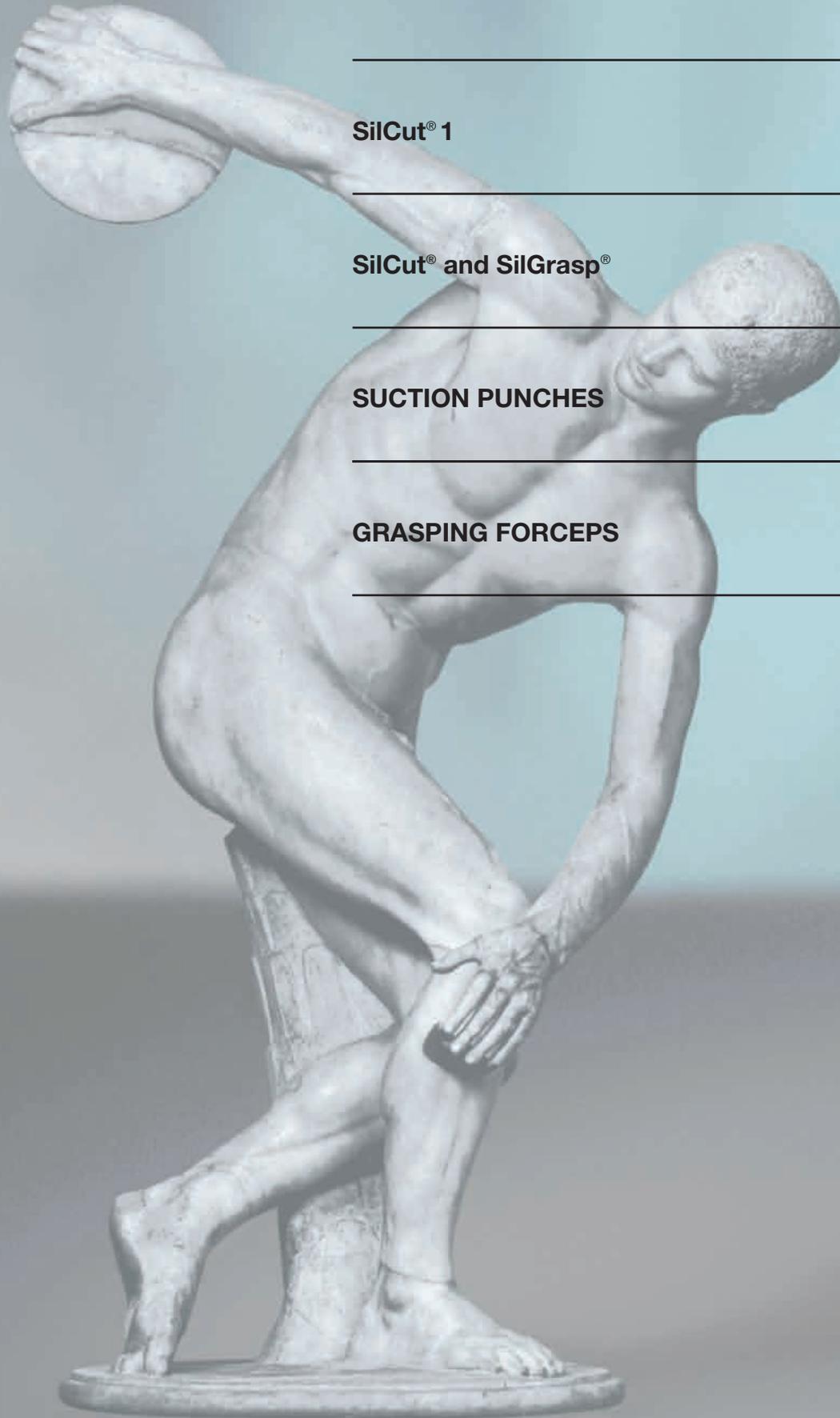


28146 Z

28146 Z **Suction Tube**, diameter 5 mm, working length 15 cm

Please note: Up to now arthroscope sheaths and trocars included 2 obturators. Due to customer demand, we no longer include obturators with sheath and trocar deliveries. Please don't forget to specify the desired obturator in your order.

PUNCHES, FORCEPS AND SCISSORS



SilCut® 1

94-95

SilCut® and SilGrasp®

96-99

SUCTION PUNCHES

100

GRASPING FORCEPS

101-102

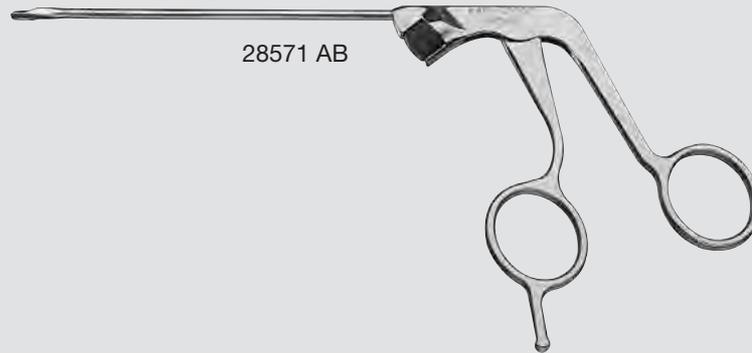


Experience Meets Innovation

The hand instruments in the new SilCut® 1 product line set new standards in resection. In addition to the new precise and powerful cutting geometry, a striking feature of these instruments is their excellent tactile feedback. This allows the safe and effective removal of pathologies and also provides the user with tactile connection to the tissue. The extremely flat jaw construction enables work even in very tight joint areas in a manner that is gentle to cartilage. Another groundbreaking feature of SilCut® 1 is its new integrated cleaning connector which seamlessly fits into the KARL STORZ CLEANFIT® range of instruments.

- **Powerful and precise cutting geometry**
- **Extremely flat jaws (< 3 mm)**
- **Various jaw types**
- **Connector integrated in the handle for optimum cleaning from the proximal to the distal end**
- **Outstanding surface properties**
- **Ergonomic handle for better “tactile feedback”**
- **Greater stability**
- **Minimized tolerances due to optimized manufacturing technology**





Cutting width 3.4 mm, sheath diameter 3.5 mm, working length 12 cm



28571 AB

SilCut® 1 Punch, through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 BB

SilCut® 1 Punch, through-cutting, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Cutting width 2.7 mm, sheath diameter 3.5 mm, working length 12 cm



28571 AC

SilCut® 1 Punch, through-cutting, cutting width 2.7 mm, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 BC

SilCut® 1 Punch, through-cutting, cutting width 2.7 mm, jaws curved, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Special Versions



28571 OC

SilCut® 1 Oval Biter, through-cutting, with circumferential teeth, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 O

SilCut® 1 Oval Biter, through-cutting, cross-toothed, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 OAC

SilCut® 1 Oval Upbiter, through-cutting, with circumferential teeth, curved jaws, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 OA

SilCut® 1 Oval Upbiter, through-cutting, cross-toothed, curved jaws, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Small Punches see chapter 10, HAND ARTHROSCOPY

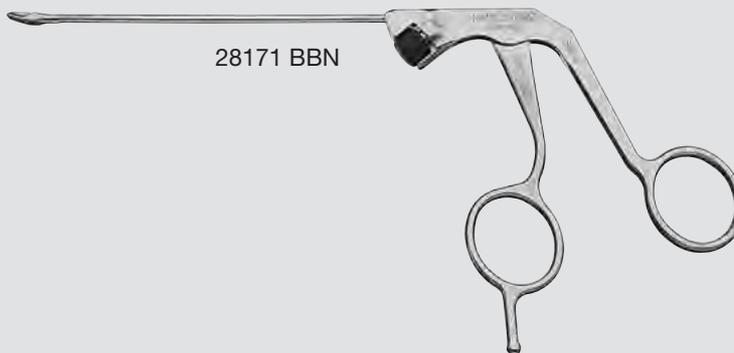
SilCut® and SilGrasp® Punches, Forceps and Scissors



SilCut® – »Feel the cut«

- **Sharp cutting**
 - Consistently sharp cutting edge
- **Large aperture angle**
 - Large aperture angle allows efficient resection
- **Flat instrument jaws**
 - Low profile instrument jaws (3 mm)
- **Different instrument and jaw shapes**
 - Different jaw shapes for all arthroscopic cutting processes – various cutting widths (3.4/2.7/1.5/0.5 mm)
 - Different cutting angles of instrument jaws and sheath
- **Ergonomic handle design**
 - Controlled, regulated and fatigue-free work in any instrument position
- **Connector integrated in the handle for optimal cleaning from proximal to distal**





28171 BBN

Cutting width 3.4 mm, sheath diameter 3 mm, working length 19 cm



28171 KPN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, curved jaws, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 19 cm



28171 KUN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 15° curved upwards, handle with cleaning connector, working length 19 cm

Cutting width 3.4 mm, sheath diameter 3 mm, working length 12 cm



28171 ABN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 BBN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, curved jaws, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 CBN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 30° curved to left, handle with cleaning connector, working length 12 cm



28171 DBN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 30° curved to right, handle with cleaning connector, working length 12 cm



28171 EBN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, curved jaws, 90° left, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 FBN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, curved jaws, 90° right, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 GBN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 15° curved upwards, handle with cleaning connector, working length 12 cm



28171 ACN

Cutting width 2.7 mm, sheath diameter 3 mm, working length 12 cm



28171 ACN **SilCut® Punch**, through-cutting, cutting width 2.7 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 BCN **SilCut® Punch**, through-cutting, cutting width 2.7 mm, curved jaws, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 CCN **SilCut® Punch**, through-cutting, cutting width 2.7 mm, straight jaws, sheath diameter 3 mm, 30° curved to left, handle with cleaning connector, working length 12 cm



28171 DCN **SilCut® Punch**, through-cutting, cutting width 2.7 mm, straight jaws, sheath diameter 3 mm, 30° curved to right, handle with cleaning connector, working length 12 cm



28171 ECN **SilCut® Punch**, through-cutting, cutting width 2.7 mm, curved jaws, 90° left, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 FCN **SilCut® Punch**, through-cutting, cutting width 2.7 mm, curved jaws, 90° right, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 GCN **SilCut® Punch**, through-cutting, cutting width 2.7 mm, straight jaws, sheath diameter 3 mm, 15° curved upwards, handle with cleaning connector, working length 12 cm

Cutting width 1.5 mm, sheath diameter 3 mm, working length 12 cm



28171 ADN **SilCut® Punch**, through-cutting, cutting width 1.5 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 BDN **SilCut® Punch**, through-cutting, cutting width 1.5 mm, curved jaws, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



Cutting width 0.5 mm, sheath diameter 3 mm, working length 12 cm



28171 SPN **SilCut® Scissor Punch**, cutting width 0.5 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 SLN **SilCut® Scissor Punch**, cutting width 0.5 mm, straight jaws, sheath diameter 3 mm, 10° curved to left, handle with cleaning connector, working length 12 cm

28171 SRN **SilCut® Scissor Punch**, cutting width 0.5 mm, straight jaws, sheath diameter 3 mm, 10° curved to right, handle with cleaning connector, working length 12 cm

Special Versions



28171 OAN **SilCut® Oval Upbiter**, through-cutting, cross-toothed, jaws curved, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm

28171 OUN **SilCut® Oval Upbiter**, through-cutting, cross-toothed, jaws curved, 15° upwards, sheath diameter 3 mm, 15° curved upwards, handle with cleaning connector, working length 12 cm



28171 SBN **SilCut® Backbiter**, backward cutting, cross-toothed, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm

SilGrasp® Grasping Forceps



28171 HAN **SilGrasp® Grasping Forceps**, spoon-shaped jaws, jaw width 4.5 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 HBN **SilGrasp® Grasping Forceps**, spoon-shaped jaws, jaw width 3.4 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 HCN **SilGrasp® Grasping Forceps**, spoon-shaped jaws, jaw width 2.7 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 KBN **SilGrasp® Grasping Forceps**, spoon-shaped jaws, serrated, jaws curved, 30° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm



28171 AGN **SilGrasp® Alligator Grasping Forceps**, surgical, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm

28171 AGSN **Same**, with ratchet



28171 PGN **SilGrasp® Foreign Body Grasper**, aggressive, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 14 cm

28171 PGSN **Same**, with ratchet



28171 KGN **SilGrasp® Foreign Body Grasper**, aggressive, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 19 cm

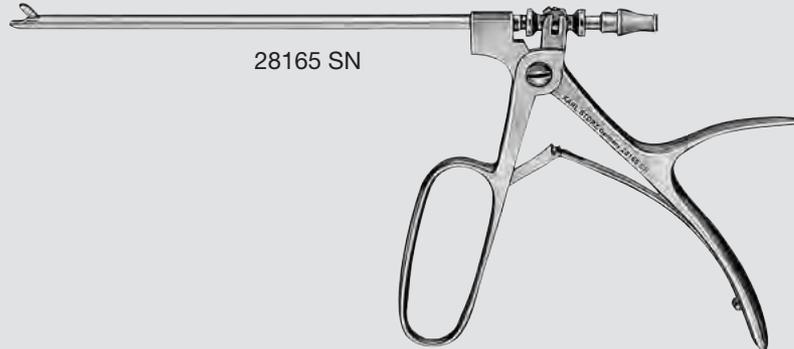
28171 KGSN **Same**, with ratchet



28171 SGN **SilGrasp® Suture Grasper**, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 14 cm

Suction Punches, Grasping Forceps

Working length 13 cm



28165 SN

Suction Punch, straight jaws, sheath diameter 4.8 mm, working length 13 cm

Working length 8.5 cm

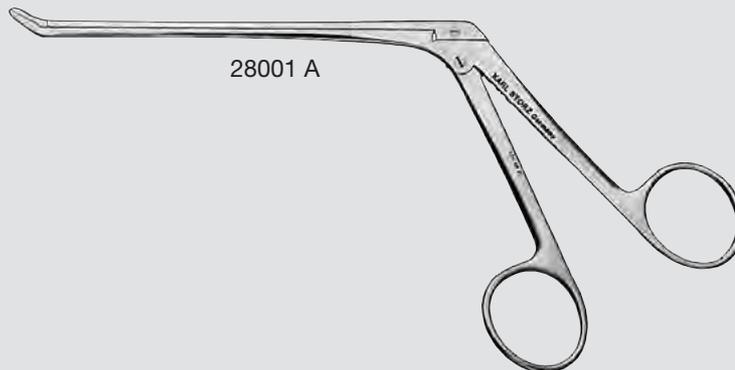


NEW

28572 NJ

Suture Forceps, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

Working length 9.5 cm

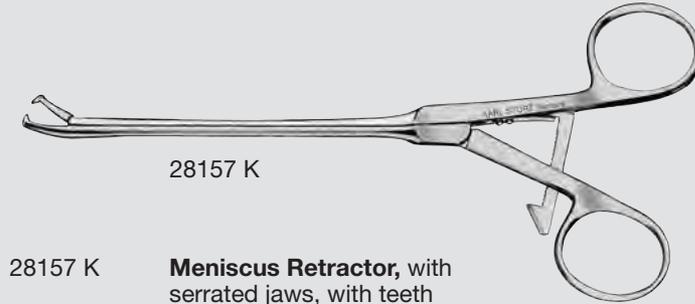


28001 A

Grasping Forceps, jaw length 11 mm, curved jaws, 30° upwards, straight sheath, working length 9.5 cm

Meniscus Retractor, Meniscus Grasping Forceps

Working length 13 cm



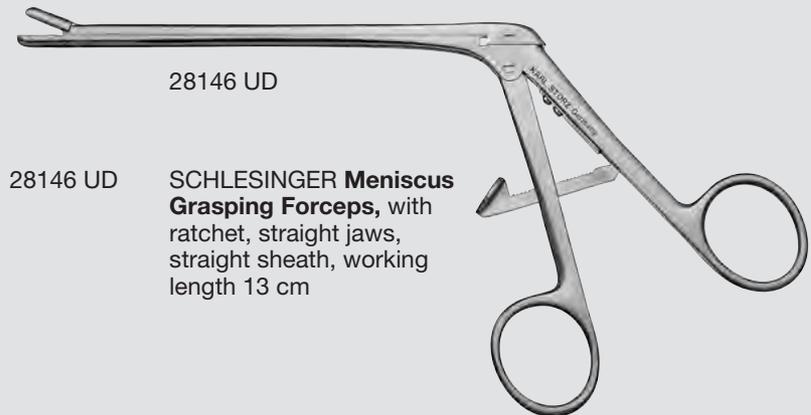
28157 K

28157 K **Meniscus Retractor**, with serrated jaws, with teeth and ratchet, straight jaws, straight sheath, working length 13 cm



28146 UH

28146 UH **SCHLESINGER Meniscus Grasping Forceps**, with teeth and ratchet, straight jaws, straight sheath, working length 13 cm

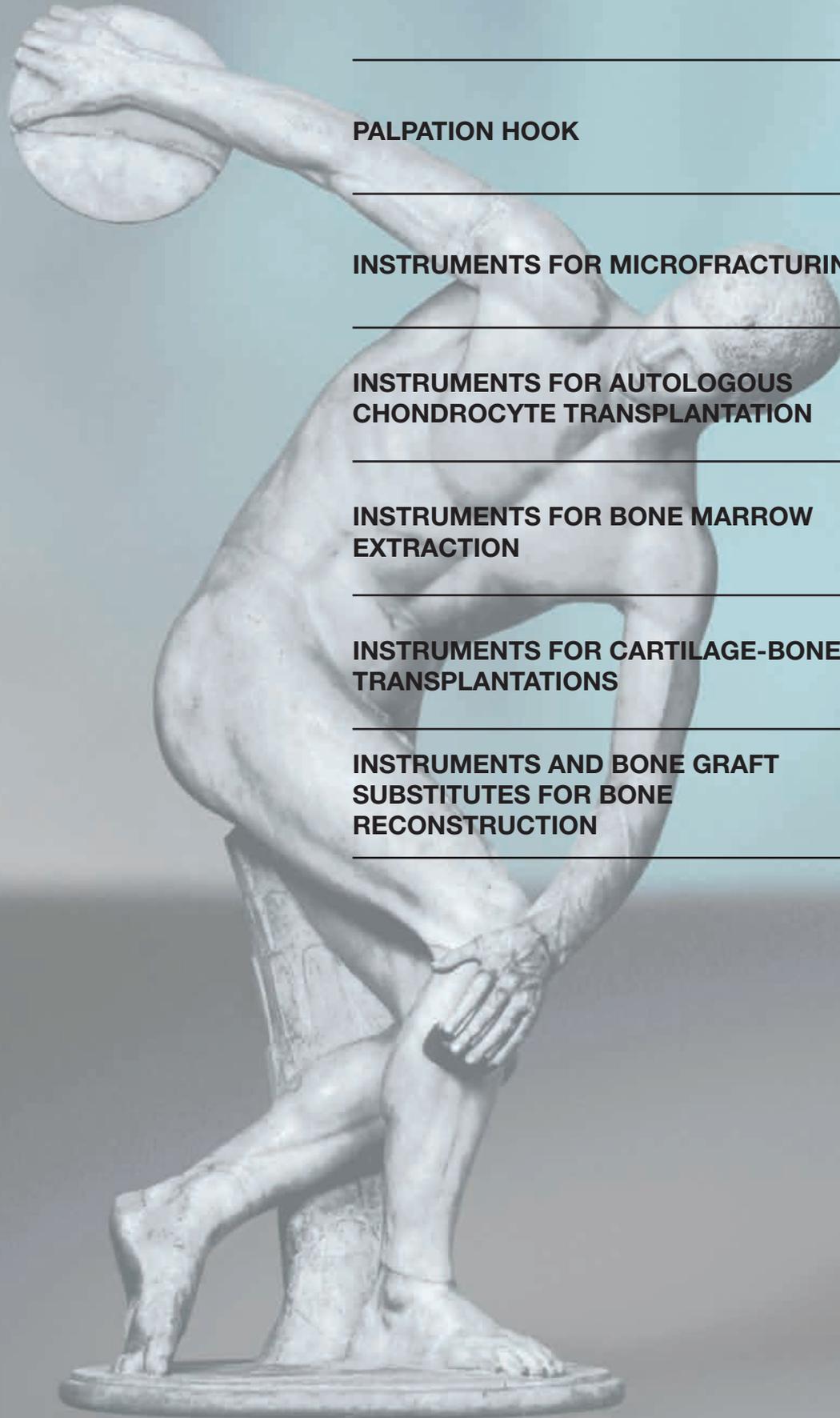


28146 UD

28146 UD **SCHLESINGER Meniscus Grasping Forceps**, with ratchet, straight jaws, straight sheath, working length 13 cm



JOINT AND BONE RECONSTRUCTION



PALPATION HOOK	106
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INSTRUMENTS FOR MICROFRACTURING	107-108
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INSTRUMENTS FOR AUTOLOGOUS CHONDROCYTE TRANSPLANTATION	109
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INSTRUMENTS FOR BONE MARROW EXTRACTION	110
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INSTRUMENTS FOR CARTILAGE-BONE TRANSPLANTATIONS	111-121
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INSTRUMENTS AND BONE GRAFT SUBSTITUTES FOR BONE RECONSTRUCTION	122-144
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KARL STORZ offers a wide range of instruments for various applications in joint and bone reconstruction, such as:

- Damage to cartilage and/or bones due to congenital or acquired lesions
- Traumatic injuries
- Degenerative changes
- Tumors and cysts
- Prosthetic complications
- Bone defects within surgical interventions

Autologous transplants of cartilage cells or bone cylinders and the use of bone graft substitutes as a supplementary therapy to standard treatment options such as osteosynthesis or antibiotic therapy as required for inflammatory processes are in the focus of KARL STORZ. Various types of bone graft substitutes such as Syntricer® (β -tricalcium phosphate) and Synthacer® (hydroxyapatite) offer an optimal solution for many applications due to their purity of substance.

Various reconstruction and therapy options are offered to treat damage to the large synovial joints depending on the size of the defect and the extent of the damage:

- Arthroscopic methods for osteochondral transplants, Autologous Chondrocyte Transplantation (ACT) or microfracturing for minor cartilage defects that do not extend to the subchondral bone.
- Arthroscopic methods for filling defects with cancellous bone or bone replacement material
- Mini-arthrotomic methods such as cartilage-bone-transplantations using DIAMOND TWINS® for advanced osteochondral damage. The use of diamond cutters allows less traumatic treatment of the microanatomy of the bone. With Syntricer® and Synthacer®, KARL STORZ also offers additional bone graft substitutes suitable for filling donor site defects.

The primary objective of KARL STORZ is to provide the patient with minimally invasive care. This also includes reducing the use of joint replacement implants with both proven and innovative methods.

Palpation Hook ^{NEW}

with Measurement Function

In numerous arthroscopic interventions, accurate measurements of structures, defects, or distances are required. A special palpation hook was developed for this application that enables accurate measurements by using the hook tip and a sliding measuring tube.

Measures:

- Defect sizes
- Defect depth (for example, in cancellous bone filling)
- Determines distances between canals and anatomical structures
- Anatomical structures

Special Features:

- Intra-articular measurement
- Scaling in 2-mm steps
- Straightforward application



28145 P

28145 P

Palpation Hook, graduated

including:

Handle

Hook

Sliding Tube



Determining the length of a cartilage defect of a femoral condyle

Components/Spare Parts see chapter 18

Instruments for Microfracturing

Chisels

Special Features:

- Complete set for the treatment of cartilage defects
- Suitable for dissection of the bone
- Application is by hand pressure or with a light tap with the mallet
- Ergonomic handle
- Autoclavable



28140 CE



28140 CE

Microfracture Chisel, curved 70°, working length 18 cm



28140 CD

Microfracture Chisel, curved 30°, working length 18 cm



28728 CC

Microfracture Chisel, straight, working length 12 cm



28728 CD

Microfracture Chisel, angled 30°, working length 12 cm



28728 CE

Microfracture Chisel, angled 70°, working length 12 cm



28728 CG

Microfracture Chisel, angled 30°, working length 9 cm



28728 CH

Microfracture Chisel, angled 70°, working length 9 cm

Please note: Provided that an initial order is placed, it is recommended to buy a complete set of instruments.

Instruments for Microfracturing ^{NEW}

One Step Chisel

To treat cartilage defects, the defect must be cleaned in order to perform microfracturing and to create optimal conditions for the generation of cartilage.

Depending on the size of the defect, the microfracture chisel is used to create several small microfracture holes in the prepared defect to cultivate the formation of cartilage.

With the aid of the one step chisel, this procedure can be performed with only one instrument. Not only does

the instrument sleeve serve as a trocar for the chisel, it can also be used like an instrument to smoothen the edges of the cartilage defect. The distal tip of the sleeve, which is gently inserted into the joint using an obturator, is sharp and can be used to trim the defect edges. Several spikes help create 7 microfracture holes in the cartilage defect in one step.

Benefits

- Time-saving
- Standardized and reproducible microfracturing

Properties

- Homogeneous distribution of the microfracture holes
- Depth of microfracture holes approx. 4.5 mm; spacing between microfracture holes approx. 3.7 mm
- Optimal depth is achieved so that stem cells from the bone marrow can exude into the defect



28904 H

28904 H **Sleeve**, for use with Obturators 28904 OK/OL and One Step Microfracture Chisel 28904 OI/OIS



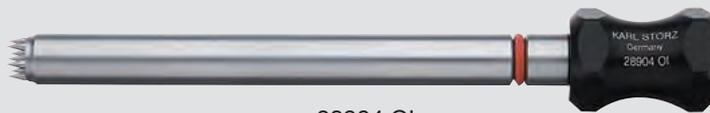
28904 OK

28904 OK **Obturator**, short, for use with Sleeve 28904 H



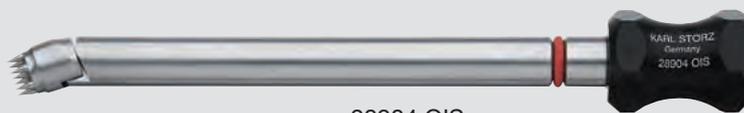
28904 OL

28904 OL **Obturator**, long, for use with Sleeve 28904 H



28904 OI

28904 OI **One Step Microfracture Chisel**, for use with Sleeve 28904 H



28904 OIS

28904 OIS **One Step Microfracture Chisel**, slewable, for use with Sleeve 28904 H

Instruments for Autologous Chondrocyte Transplantation (ACT)

Autologous Chondrocyte Transplantation (ACT) is an established therapy for treating cartilage defects in the knee. A special instrument was designed for a gentle and effective extraction of cartilage cells.

The biopsy set was designed to meet the specific demands of ACT:

- Extraction of a suitable cartilage cylinder
- Atraumatic and safe use
- Easy handling
- Effective extraction of cartilage cells
- Osteochondral cylinder to improve healing of the extraction site



28904 S

Biopsy Set

including:

Biopsy Punch, with cutting tooth, to extract cartilage cells for ACT

Obturator, to penetrate connective tissue without extracting tissue and to extrude excised biopsy sample

O-Ring, package of 10

Intact subchondral bones are crucial for successful ACT. Hemorrhaging can greatly reduce the efficacy of ACT when transferring detached cancellous bone, for example, from the iliac crest. Furthermore, the adequate reconstruction of large bone defects is particularly difficult.

The DIAMOND TWINS® instruments (see pages 112-116, 126-130) are used to reconstruct subchondral bone with press-fit implantations with one or more interconnected cylinders. Donor bone can be harvested from the iliac crest or the tibia head. The implanted autologous bone cylinders enable the application of ACT (as a matrix, chondrospheres, etc.) to dry cortical bone, which acts as a biological plate. Donor site defects can be filled with appropriate press-fit implantations composed of hydroxyapatite (HA) or β -tricalcium phosphate (β -TCP) cylinders. This ensures contact healing and hemostasis. The ceramic cylinders are available with or without lids. An overview is available on pages 132-136 (Synthacer®) and 139-142 (Syntrice®).

Components/Spare Parts see chapter 18

Bone Marrow Extraction Set

To treat cartilage defects in the knee with the MACH technique, bone marrow concentrate is required to mobilize the regenerative power of the body's own cells in addition to PRP (platelet-rich plasma) auto-hemotherapy. This eliminates the need for cartilage transplantation.

Bone marrow can be easily and safely harvested with an extractor in an arthroscopic or open application and, if desired, placed in a centrifuge and concentrated for later use. This bone marrow concentrate can also be used for other applications.

Special Features:

- Arthroscopic and open applications
- Closed system
- Possible to harvest bone marrow in the knee
- Easy and safe application

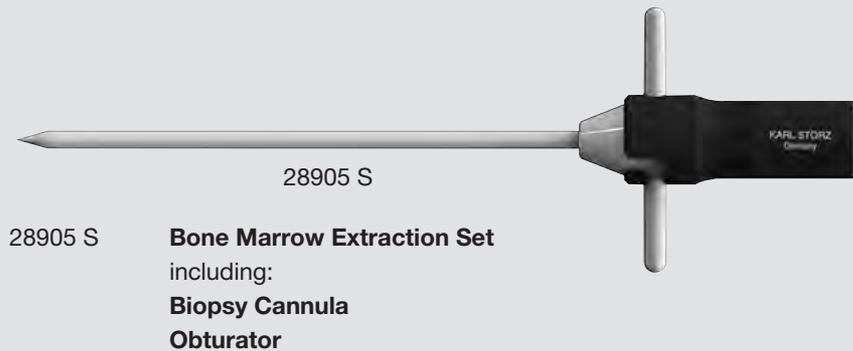


Fig. 1: Extraction point in the intercondylar notch area



Fig. 2: Introducing the biopsy cannula with the obturator



Fig. 3: Removing the bone marrow with a syringe

Components/Spare Parts see chapter 18

Instruments for Cartilage-bone Transplantations

Diamond TwInS®

Diamond TwInS® stands for autologous joint and bone reconstruction.

Autologous material is used to prevent joint replacement and to achieve bone healing with proven long-term success. Particular care is thereby taken to preserve the microanatomic and biological structure of the affected areas.

DIAMOND TWINS® tools include diamond cutters and extractors in various dimensions and lengths for ex-

tracting bone or osteochondral cylinders. Bone reconstruction is less traumatic as microfracturing is practically avoided by using the wet grinding principle. This eliminates the need for punches that cause damage to the tissue.

Typical indications for using this instrumentation:

- Cartilage-bone transplants
- Harvesting of cancellous bone
- Treatment of pseudarthrosis by means of autologous, press-fit bone dowels
- Reconstruction of subchondral bone for Autologous Chondrocyte Transplantation (ACT)
- Overdrilling of tibial/femoral tunnels and press-fit filling of bone cylinders in cruciate ligament revision surgery



Cartilage-bone Transplantations

Diamond TwInS®, T-Instruments

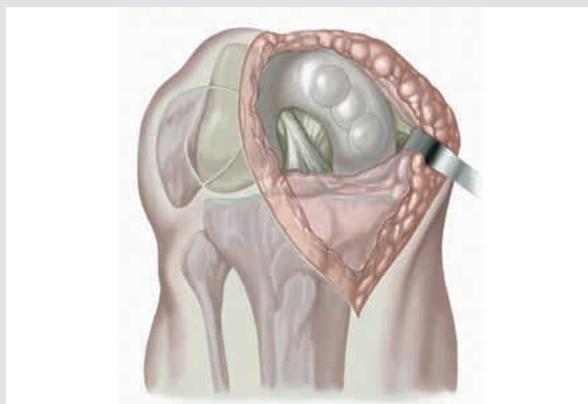
Knee Joint Reconstruction

DIAMOND TWINS® T-instruments from KARL STORZ provide the best and most gentle method for autologous transplants of osteochondral cylinders. Using the wet grinding principle, osteochondral cylinders can be harvested with 34 diamond cutters in different sizes. Unlike transplant removal with punches, microanatomic bone structures are preserved. Two consecutive sizes form twin tools (DIAMOND TWINS®) which enable press-fit implantations of osteochondral cylinders. Contact healing of the autologous graft without an intermediate connective tissue layer is guaranteed thanks to press-fit implantation. KARL STORZ offers

cylindrical HA and β -TCP bone graft substitutes matching the DIAMOND TWINS® T-instruments for press-fit filling of donor site defects.

The T-Sets consist of diamond cutters, extractors, pushers and handles. A total of 6 instrument sets are available for various indications and localizations.

Merging cylinders through appropriate grinding allows the reconstruction of continuous surfaces. Press-fit contact of the osteochondral cylinders prevents fibrocartilage formation.



Cartilage-bone Transplantations

Diamond TwinS®, Diamond Cutters, short



T20 TM04



T20 TM13

T20 TM01	Diamond Cutter , outer/inner diameter 3.6/2.8 mm, working length 3 cm
T20 TM02	Same , outer/inner diameter 4.5/3.7 mm
T20 TM03	Same , outer/inner diameter 5.4/4.6 mm
T20 TM04	Same , outer/inner diameter 6.3/5.5 mm
T20 TM05	Same , outer/inner diameter 7.3/6.4 mm
T20 TM06	Diamond Cutter , outer/inner diameter 8.35/7.45 mm, working length 4 cm
T20 TM07	Same , outer/inner diameter 9.4/8.5 mm
T20 TM08	Same , outer/inner diameter 10.45/9.55 mm
T20 TM09	Same , outer/inner diameter 11.5/10.6 mm
T20 TM10	Same , outer/inner diameter 12.7/11.65 mm
T20 TM11	Same , outer/inner diameter 13.9/12.85 mm
T20 TM12	Same , outer/inner diameter 15.1/14.05 mm
T20 TM13	Same , outer/inner diameter 16.3/15.25 mm
T20 TM14	Same , outer/inner diameter 17.5/16.45 mm
T20 TM15	Same , outer/inner diameter 18.7/17.65 mm
T20 TM16	Same , outer/inner diameter 19.9/18.85 mm
T20 TM17	Same , outer/inner diameter 21.1/20.05 mm

Cartilage-bone Transplantations

Diamond TwInS®, Diamond Cutters, long



T20 TL04



T20 TL13

T20 TL01	Diamond Cutter , outer/inner diameter 3.6/2.8 mm, working length 5 cm
T20 TL02	Same , outer/inner diameter 4.5/3.7 mm
T20 TL03	Same , outer/inner diameter 5.4/4.6 mm
T20 TL04	Same , outer/inner diameter 6.3/5.5 mm
T20 TL05	Same , outer/inner diameter 7.3/6.4 mm
T20 TL06	Diamond Cutter , outer/inner diameter 8.35/7.45 mm, working length 12.5 cm
T20 TL07	Same , outer/inner diameter 9.4/8.5 mm
T20 TL08	Same , outer/inner diameter 10.45/9.55 mm
T20 TL09	Same , outer/inner diameter 11.5/10.6 mm
T20 TL10	Same , outer/inner diameter 12.7/11.65 mm
T20 TL11	Same , outer/inner diameter 13.9/12.85 mm
T20 TL12	Same , outer/inner diameter 15.1/14.05 mm
T20 TL13	Same , outer/inner diameter 16.3/15.25 mm
T20 TL14	Same , outer/inner diameter 17.5/16.45 mm
T20 TL15	Same , outer/inner diameter 18.7/17.65 mm
T20 TL16	Same , outer/inner diameter 19.9/18.85 mm
T20 TL17	Same , outer/inner diameter 21.1/20.05 mm



T 1200-2



T 1200-3

	T 1200-2	Drilling Machine Adaptor , for diamond cutters, with integrated irrigation, for use with diamond cutters T20xxxx
NEW	T 1200-3	Drilling Machine Adaptor , for Jacobs chuck, cannulated, for use with Diamond Cutters T20xxxx and internal irrigation
NEW	T 1200-3S	Irrigation Tube , sterile, for single use, outer diameter 2.67 mm, inner diameter 2.17 mm, length 30 cm, LUER-Lock connector, for internal irrigation during drilling, package of 10, for use with cannulated drilling machines and diamond cutters T20 xxxx

Cartilage-bone Transplantations

Diamond TwInS®, Extractors, short



T21 TM04



T21 TM13

T21 TM01	Extractor , inner diameter 2.8 mm, working length 3 cm
T21 TM02	Same , inner diameter 3.7 mm
T21 TM03	Same , inner diameter 4.6 mm
T21 TM04	Same , inner diameter 5.5 mm
T21 TM05	Same , inner diameter 6.4 mm
T21 TM06	Extractor , inner diameter 7.45 mm, working length 4 cm
T21 TM07	Same , inner diameter 8.5 mm
T21 TM08	Same , inner diameter 9.55 mm
T21 TM09	Same , inner diameter 10.6 mm
T21 TM10	Same , inner diameter 11.65 mm
T21 TM11	Same , inner diameter 12.85 mm
T21 TM12	Same , inner diameter 14.05 mm
T21 TM13	Same , inner diameter 15.25 mm
T21 TM14	Same , inner diameter 16.45 mm
T21 TM15	Same , inner diameter 17.65 mm
T21 TM16	Same , inner diameter 18.85 mm
T21 TM17	Same , inner diameter 20.05 mm

Cartilage-bone Transplantations

Diamond TwInS®, Extractors, long



T21 TL04



T21 TL13

- | | |
|----------|---|
| T21 TL01 | Extractor , inner diameter 2.8 mm, working length 5 cm |
| T21 TL02 | Same , inner diameter 3.7 mm |
| T21 TL03 | Same , inner diameter 4.6 mm |
| T21 TL04 | Same , inner diameter 5.5 mm |
| T21 TL05 | Same , inner diameter 6.4 mm |
| T21 TL06 | Extractor , inner diameter 7.45 mm, working length 12.5 cm |
| T21 TL07 | Same , inner diameter 8.5 mm |
| T21 TL08 | Same , inner diameter 9.55 mm |
| T21 TL09 | Same , inner diameter 10.6 mm |
| T21 TL10 | Same , inner diameter 11.65 mm |
| T21 TL11 | Same , inner diameter 12.85 mm |
| T21 TL12 | Same , inner diameter 14.05 mm |
| T21 TL13 | Same , inner diameter 15.25 mm |
| T21 TL14 | Same , inner diameter 16.45 mm |
| T21 TL15 | Same , inner diameter 17.65 mm |
| T21 TL16 | Same , inner diameter 18.85 mm |
| T21 TL17 | Same , inner diameter 20.05 mm |



T 2312

- | | |
|--------|---|
| T 2311 | Extractor Extension , for T-Extractors 01 – 07 |
| T 2312 | Extractor Extension , for T-Extractors 08 – 10 |
| T 2313 | Extractor Extension , for T-Extractors 11 – 12 |
| T 2314 | Extractor Extension , for T-Extractors 13 – 17 |



T 2303

- | | |
|--------|---|
| T 2301 | Handle , 12 mm, for T-Extractors 01 – 07 |
| T 2302 | Handle , 15 mm, for T-Extractors 08 – 10 and extractor extension |
| T 2303 | Handle , 18 mm, for T-Extractors 11 – 12 |
| T 2304 | Handle , 24 mm, for T-Extractors 13 – 17 |

Cartilage-bone Transplantations

Diamond TwinS®, Pushers, short, long



T22 TM0305



T22 TM0608

T22 TM0102 **Pusher**, diameter 2 mm, working length 8.5 cm

T22 TM0305 **Same**, diameter 3.5 mm

T22 TM0608 **Pusher**, diameter 6.3 mm, working length 9.5 cm

T22 TM0910 **Same**, diameter 8.5 mm

T22 TM1113 **Same**, diameter 10 mm

T22 TM1417 **Same**, diameter 14 mm



T22 TL0305



T22 TL0608

T22 TL0102 **Pusher**, diameter 2 mm, working length 11 cm

T22 TL0305 **Same**, diameter 3.5 mm

T22 TL0608 **Pusher**, diameter 6.3 mm, working length 19 cm

T22 TL0910 **Same**, diameter 8.5 mm

T22 TL1113 **Same**, diameter 10 mm

T22 TL1417 **Same**, diameter 14 mm



174800

174800

Metal Mallet, with plastic replacement head, length 22.5 cm



T29 T08

- T29 T08 **Centering Aid**, to overdrill a 2.4 mm K-wire, for use with Diamond Cutter T20 TL08
- T29 T09 **Same**, for use with Diamond Cutter T20 TL09
- T29 T10 **Same**, for use with Diamond Cutter T20 TL10
- T29 T11 **Same**, for use with Diamond Cutter T20 TL11
- T29 T12 **Same**, for use with Diamond Cutter T20 TL12



Fig. 1: K-wire as guide



Fig. 2: The centering aid is slid over the K-wire



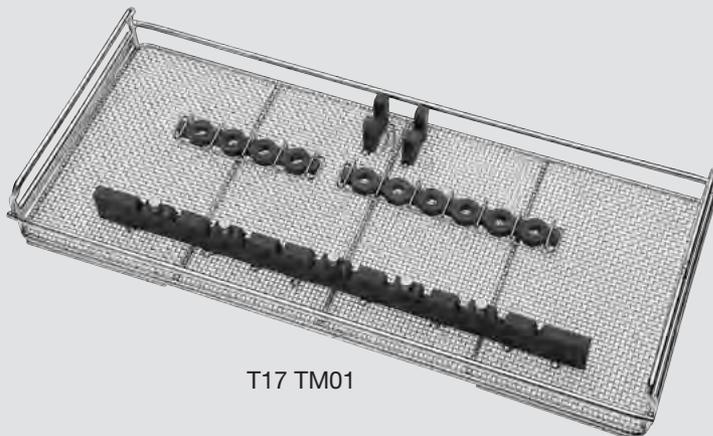
Fig. 3: Overdrilling is performed with the corresponding diamond cutter



T27 T10

- T27 T06 **Applicator Sleeve with Pusher**, transparent sleeve, length 10 cm, inner diameter 7.55 mm, for implantation of bone, cartilage-bone and Syntricer®/ Synthacer® cylinders, for single use, for use with DIAMOND TWINS® Cutters T20 TM06 or T20 TL06 and Extractors T21 TM06 or T21 TL06
- T27 T07 **Same**, inner diameter 8.6 mm, for use with DIAMOND TWINS® Cutters T20 TM07 or T20 TL07 and Extractors T21 TM07 or T21 TL07
- T27 T08 **Same**, inner diameter 9.65 mm, for use with DIAMOND TWINS® Cutters T20 TM08 or T20 TL08 and Extractors T21 TM08 or T21 TL08
- T27 T09 **Same**, inner diameter 10.7 mm, for use with DIAMOND TWINS® Cutters T20 TM09 or T20 TL09 and Extractors T21 TM09 or T21 TL09
- T27 T10 **Same**, inner diameter 11.75 mm, for use with DIAMOND TWINS® cutters T20 TM10 or T20 TL10 and Extractors T21 TM10 or T21 TL10
- T27 T11 **Same**, inner diameter 12.95 mm, for use with DIAMOND TWINS® Cutters T20 TM11 or T20 TL11 and Extractors T21 TM11 or T21 TL11
- T27 T12 **Same**, inner diameter 14.15 mm, for use with DIAMOND TWINS® Cutters T20 TM12 or T20 TL12 and Extractors T21 TM12 or T21 TL12
- T27 T13 **Same**, inner diameter 15.35 mm, for use with DIAMOND TWINS® Cutters T20 TM13 or T20 TL13 and Extractors T21 TM13 or T21 TL13

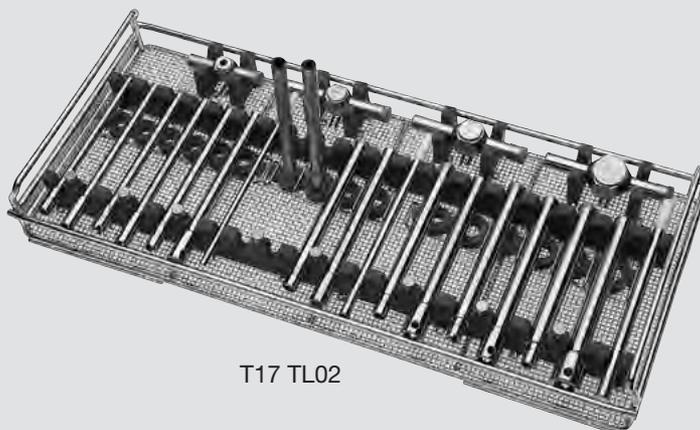
Cleaning and Storage Trays, ^{NEW} Ultrasonic Bath Rack



T17 TM01

- T17 TM01 **Tray for Small Transplantation Set**, for the sterilization and storage of DIAMOND TWINS® instruments sizes TM 01 to TM 05, with silicone brackets, stackable, external dimensions 530 x 230 mm
- T17 TM02 **Tray for Standard Transplantation Set**, for the sterilization and storage of DIAMOND TWINS® instruments sizes TM 06 to TM 13, with silicone brackets, stackable, external dimensions 530 x 230 mm
- T17 TM03 **Tray for Large Transplantation Set**, for the sterilization and storage of DIAMOND TWINS® instruments sizes TM 14 to TM 17, with silicone brackets, stackable, external dimensions 530 x 230 mm

Cleaning and Storage Trays, ^{NEW} Ultrasonic Bath Rack



T17 TL02

- T17 TL01 **Tray for Small Transplantation Set**, long, for the sterilization and storage of DIAMOND TWINS® instruments sizes TM 01 to TM 05, with silicone brackets, stackable, external dimensions 530 x 230 mm
- T17 TL02 **Tray for Standard Transplantation Set**, long, for the sterilization and storage of DIAMOND TWINS® instruments sizes TM 06 to TM 13, with silicone brackets, stackable, external dimensions 530 x 230 mm
- T17 TL03 **Tray for Large Transplantation Set**, long, for the sterilization and storage of DIAMOND TWINS® instruments sizes TM 14 to TM 17, with silicone brackets, stackable, external dimensions 530 x 230 mm



T 2621-1 / T 2621-2

- T 2621-1 **Cleaning Rack**, for 20 diamond cutters, without diamond cutter holder
- T 2621-2 **Diamond Cutter Holder**, for use with Cleaning Rack T 2621-1
- T 2621-2S **Same**, package of 5

Please note: The displayed instruments are not included in the delivery of T17TL01 – T17TL03.

Several arthroscopic interventions – mostly revision procedures – require the filling of bone defects.

Such bone-filling procedures may be indicated in the following cases:

1. Enlarged tunnels following ligament reconstruction
2. Subchondral bone cysts
3. Tumors
4. Fractures (e.g. compression fractures of the tibial head)

Up to now, the filling of defect zones with cancellous bone or bone graft materials has not been complex and extremely time-consuming. Arthroscopic treatment of defect zones in the femur in particular was difficult to perform.

As a result, this innovative and straightforward system offers several advantages:

- Easy handling
- Time-saving procedures
- Controllable application depth



Fig. 1: Several arthroscopic interventions – mostly revision procedures – require the filling of bone defects.



Fig. 2: Insertion and application of the filling material



Fig. 3: View of the femoral tunnel filled with cancellous bone

Instruments for Bone Reconstruction ^{NEW}

Cancellous Bone Applicators



28906 CB

28906 CB **Cancellous Bone Applicator Set**, diameter 6 mm,
color code: red
including:
Cancellous Bone Applicator
Tappet
Sealing Cap
Plug



28907 CB

28907 CB **Same**, diameter 7 mm,
color code: yellow



28908 CB

28908 CB **Same**, diameter 8 mm,
color code: blue



28909 CB

28909 CB **Same**, diameter 9 mm,
color code: green



28910 CB

28910 CB **Same**, diameter 10 mm,
color code: white

Components/Spare Parts see chapter 18

Instruments for Bone Reconstruction

Bone Block Harvesting

Instrumentation for bone block harvesting consists of an instrument set for the safe and easy harvesting of autologous bone or cartilage-bone-blocks for cancellous bone grafting.

The bone-block harvesting system can be used for bridging bone gaps with an opening wedge osteotomy, to treat joint stiffness or for cruciate ligament revision surgery.

Special Features:

- Wide range of harvesting sizes: 5 – 12 mm
- Various sizes are color-coded
- Ergonomic handle for optimal force regulation during harvesting
- Sharp cutting edge for precise harvesting



28729 HGA

- 28729 HGA **Sleeve**, inner diameter 5 mm, working length 70 mm, for use with Handle 28729 HH and Tap 28729 HP, color code: green
- 28729 HGB **Same**, inner diameter 6 mm, color code: black
- 28729 HGC **Same**, inner diameter 7 mm, color code: blue
- 28729 HGD **Same**, inner diameter 8 mm, color code: red
- 28729 HGE **Same**, inner diameter 9 mm, color code: yellow
- 28729 HGF **Same**, inner diameter 10 mm, color code: white-yellow
- 28729 HGG **Same**, inner diameter 11 mm, color code: white-green
- 28729 HGH **Same**, inner diameter 12 mm, color code: white-blue



28729 HH

- 28729 HH **Handle**, for use with Tap 28729 HP



28729 HP

- 28729 HP **Tap**, for use with Handle 28729 HH

Instruments for Bone Reconstruction

Bone Block Harvesting



28729 HPA

- | | |
|-----------|---|
| 28729 HPA | Tappet , diameter 5 mm, for use with Handle 28729 HH and Sleeve 28729 HGA, color code: green |
| 28729 HPB | Tappet , diameter 6 mm, for use with Handle 28729 HH and Sleeve 28729 HGB, color code: black |
| 28729 HPC | Tappet , diameter 7 mm, for use with Handle 28729 HH and Sleeve 28729 HGC, color code: blue |
| 28729 HPD | Tappet , diameter 8 mm, for use with Handle 28729 HH and Sleeve 28729 HGD, color code: red |
| 28729 HPE | Tappet , diameter 9 mm, for use with Handle 28729 HH and Sleeve 28729 HGE, color code: yellow |
| 28729 HPF | Tappet , diameter 10 mm, for use with Handle 28729 HH and Sleeve 28729 HGF, color code: white-yellow |
| 28729 HPG | Tappet , diameter 11 mm, for use with Handle 28729 HH and Sleeve 28729 HGG, color code: white-green |
| 28729 HPH | Tappet , diameter 12 mm, for use with Handle 28729 HH and Sleeve 28729 HGH, color code: white-blue |

Instruments for Bone Reconstruction

Diamond TwInS®, I-Instruments

In addition to T-instruments for transplanting osteochondral cylinders, KARL STORZ also offers a range of instruments that feature greater stability. The I-system comprises 26 diamond cutters and corresponding extractors, pushers and handles. The instruments are divided into 6 sets: small instruments, standard instruments and large instruments, both available as short and long versions. Similar to the T-system, two cutters form twin tools (DIAMOND TWINS®). This enables the grinding and transplantation of autologous press-fit cylinders. The I-instruments have a thicker wall and, therefore, a thicker diamond coating than the T-instruments. This increases the bending moment by up to 30%. Due to this greater resilience, these instruments are suitable for work on cortical or diaphyseal bones.

Sample indications include:

- Treatment of pseudarthrosis and non-unions
- Screw removal
- Cylinder harvesting from the iliac crest
- Bone fragment doweling
- Biopsies
- Arthrodesis
- Femoral neck doweling



Fig. 1: Infected non-union in the femur

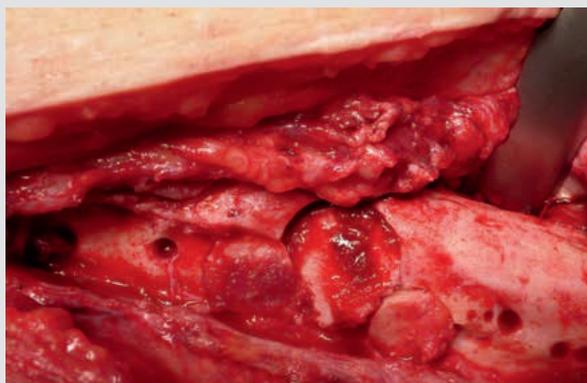


Fig. 2: Treatment with three bone cylinders (Draenert procedure)

Bone Reconstruction

Diamond TwInS®, Diamond Cutters, short



T20 IM06



T20 IM11

- | | |
|----------|--|
| T20 IM02 | Diamond Cutter , outer/inner diameter 5.6/4.4 mm, working length 7.5 cm |
| T20 IM03 | Same , outer/inner diameter 7/5.8 mm |
| T20 IM04 | Same , outer/inner diameter 8.4/7.2 mm |
| T20 IM05 | Same , outer/inner diameter 9.8/8.6 mm |
| T20 IM06 | Same , outer/inner diameter 11.2/10 mm |
| T20 IM07 | Same , outer/inner diameter 12.6/11.4 mm |
| T20 IM08 | Same , outer/inner diameter 14/12.8 mm |
| T20 IM09 | Same , outer/inner diameter 15.4/14.2 mm |
| T20 IM10 | Same , outer/inner diameter 16.8/15.6 mm |
| T20 IM11 | Same , outer/inner diameter 18.2/17 mm |
| T20 IM12 | Same , outer/inner diameter 19.6/18.4 mm |
| T20 IM13 | Same , outer/inner diameter 21/19.8 mm |
| T20 IM14 | Same , outer/inner diameter 22.4/21.2 mm |



T20 IM06CTS

- | | |
|-------------|---|
| T20 IM06CTS | Diamond Cutter , extensive coating, outer/inner diameter 11.2/10 mm, working length 7.5 cm |
| T20 IM07CTS | Same , outer/inner diameter 12.6/11.4 mm |

Bone Reconstruction

Diamond TwInS®, Diamond Cutters, long



T20 IL06



T20 IL11

- | | |
|----------|---|
| T20 IL02 | Diamond Cutter , outer/inner diameter 5.6/4.4 mm, working length 15 cm |
| T20 IL03 | Same , outer/inner diameter 7/5.8 mm |
| T20 IL04 | Same , outer/inner diameter 8.4/7.2 mm |
| T20 IL05 | Same , outer/inner diameter 9.8/8.6 mm |
| T20 IL06 | Same , outer/inner diameter 11.2/10 mm |
| T20 IL07 | Same , outer/inner diameter 12.6/11.4 mm |
| T20 IL08 | Same , outer/inner diameter 14/12.8 mm |
| T20 IL09 | Same , outer/inner diameter 15.4/14.2 mm |
| T20 IL10 | Same , outer/inner diameter 16.8/15.6 mm |
| T20 IL11 | Same , outer/inner diameter 18.2/17 mm |
| T20 IL12 | Same , outer/inner diameter 19.6/18.4 mm |
| T20 IL13 | Same , outer/inner diameter 21/19.8 mm |
| T20 IL14 | Same , outer/inner diameter 22.4/21.2 mm |



T 1200-2



T 1200-3

- | | |
|----------------------|---|
| T 1200-2 | Drilling Machine Adaptor , for diamond cutters, with integrated irrigation, for use with diamond cutters T20xxxx |
| NEW T 1200-3 | Drilling Machine Adaptor , for Jacobs chuck, cannulated, for use with Diamond Cutters T20xxxx and internal irrigation |
| NEW T 1200-3S | Irrigation Tube , sterile, for single use, outer diameter 2.67 mm, inner diameter 2.17 mm, length 30 cm, LUER-Lock connector, for internal irrigation during drilling, package of 10, for use with cannulated drilling machines and diamond cutters T20 xxxx |

Bone Reconstruction

Diamond TwInS®, Extractors, short



T21 IM06



T21 IM11

T21 IM02	Extractor , inner diameter 4.4 mm, working length 7.5 cm
T21 IM03	Same , inner diameter 5.8 mm
T21 IM04	Same , inner diameter 7.2 mm
T21 IM05	Same , inner diameter 8.6 mm
T21 IM06	Same , inner diameter 10 mm
T21 IM07	Same , inner diameter 11.4 mm
T21 IM08	Same , inner diameter 12.8 mm
T21 IM09	Same , inner diameter 14.2 mm
T21 IM10	Same , inner diameter 15.6 mm
T21 IM11	Same , inner diameter 17 mm
T21 IM12	Same , inner diameter 18.4 mm
T21 IM13	Same , inner diameter 19.8 mm
T21 IM14	Same , inner diameter 21.2 mm

Bone Reconstruction

Diamond TwInS®, Extractors, long



T21 IL06



T21 IL11

- | | |
|----------|--|
| T21 IL02 | Extractor , inner diameter 4.4 mm, working length 15 cm |
| T21 IL03 | Same , inner diameter 5.8 mm |
| T21 IL04 | Same , inner diameter 7.2 mm |
| T21 IL05 | Same , inner diameter 8.6 mm |
| T21 IL06 | Same , inner diameter 10 mm |
| T21 IL07 | Same , inner diameter 11.4 mm |
| T21 IL08 | Same , inner diameter 12.8 mm |
| T21 IL09 | Same , inner diameter 14.2 mm |
| T21 IL10 | Same , inner diameter 15.6 mm |
| T21 IL11 | Same , inner diameter 17 mm |
| T21 IL12 | Same , inner diameter 18.4 mm |
| T21 IL13 | Same , inner diameter 19.8 mm |
| T21 IL14 | Same , inner diameter 21.2 mm |



T 2312

- | | |
|--------|---|
| T 2311 | Extractor Extension , for I-extractors 01 – 05 |
| T 2312 | Extractor Extension , for I-extractors 06 – 07 |
| T 2313 | Extractor Extension , for I-extractors 08 – 09 |
| T 2314 | Extractor Extension , for I-extractors 10 – 14 |



T 2303

- | | |
|--------|---|
| T 2301 | Handle , 12 mm, for I-extractors 02 – 05 |
| T 2302 | Handle , 15 mm, for I-extractors 06 – 07 and extractor extension |
| T 2303 | Handle , 18 mm, for I-extractors 08 – 09 |
| T 2304 | Handle , 24 mm, for I-extractors 10 – 14 |

Bone Reconstruction

Diamond TwInS[®], Pushers, short, long



T22 IM0203



T22 IM0608

- T22 IM0203 **Pusher**, diameter 3.4 mm, working length 13 cm
- T22 IM0405 **Same**, diameter 5.8 mm
- T22 IM0608 **Same**, diameter 8.5 mm
- T22 IM0910 **Same**, diameter 12.3 mm
- T22 IM1114 **Same**, diameter 15 mm



T22 IL0203



T22 IL0608

- T22 IL0203 **Pusher**, diameter 3.4 mm, working length 20.5 cm
- T22 IL0405 **Same**, diameter 5.8 mm
- T22 IL0608 **Same**, diameter 8.5 mm
- T22 IL0910 **Same**, diameter 12.3 mm
- T22 IL1114 **Same**, diameter 15 mm



174800

- 174800 **Metal Mallet**, with plastic replacement head, length 22.5 cm

Bone Graft Substitutes

The synthetic bone graft substitutes Syntricer® and Synthacer® from KARL STORZ are ultrapure, highly porous and osteoconductive ceramic materials made of β -tricalcium phosphate (Syntricer®) or hydroxyapatite (Synthacer®). These materials have high compressive strength due to their shell-like, isotropic structure. Both materials promote rapid bone ingrowth and integration, resulting in the so-called load-bearing “sandwich ossification”. Syntricer® is resorbed within a few weeks.

Both materials are available in various shapes. Customized for DIAMOND TWINS® instruments, cylinders are

available that enable press-fit implantations. Moreover, the material is available in three different granules, blocks in various sizes, and wedges.

Furthermore, KARL STORZ offers a unique product called Ceraball, i.e. small spheres with diameters of 4 and 6 mm. Thanks to its high porosity and interconnecting pores, a special feature of Ceraball is that it achieves extremely rapid bone healing without an interposed layer of connective tissue. This enables the filling of bone defects in all shapes and sizes.



Bone Graft Substitutes

Synthacer® Cylinders



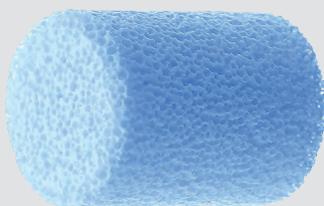
T62 04TMO-1

- T62 01TMO-1* **Synthacer® 300 Cylinder**, hydroxyapatite, size 1, diameter 3.65 mm, length 10 mm, bioactive, interconnecting pores, sterile
- T62 02TMO-1* **Synthacer® 300 Cylinder**, hydroxyapatite, size 2, diameter 4.55 mm, length 10 mm, bioactive, interconnecting pores, sterile
- T62 03TMO-1* **Synthacer® 300 Cylinder**, hydroxyapatite, size 3, diameter 5.45 mm, length 10 mm, bioactive, interconnecting pores, sterile
- T62 04TMO-1* **Synthacer® 600 Cylinder**, hydroxyapatite, size 4, diameter 6.35 mm, length 15 mm, bioactive, interconnecting pores, sterile
- T62 05TMO-1* **Synthacer® 600 Cylinder**, hydroxyapatite, size 5, diameter 7.35 mm, length 15 mm, bioactive, interconnecting pores, sterile
- T62 06TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 6, diameter 8.4 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 07TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 7, diameter 9.45 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 08TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 8, diameter 10.5 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 09TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 9, diameter 11.55 mm, length 25 mm, bioactive, interconnecting pores, sterile

* Special sizes manufactured on request

Bone Graft Substitutes

Synthacer® Cylinders

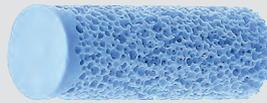


T62 14TMO-1

- T62 10TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 10, diameter 12.75 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 11TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 11, diameter 13.95 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 12TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 12, diameter 15.15 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 13TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 13, diameter 16.35 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 14TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 14, diameter 17.55 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 15TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 15, diameter 18.75 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 16TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 16, diameter 19.95 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 17TMO-1 **Synthacer® 600 Cylinder**, hydroxyapatite, size 17, diameter 21.15 mm, length 25 mm, bioactive, interconnecting pores, sterile

Bone Graft Substitutes

Synthacer® Cylinders with Lids



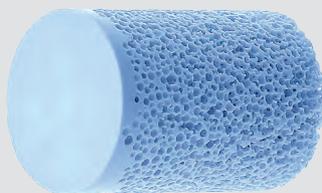
T62 06TMC-1

- T62 01TMC-1* **Synthacer® 300 Cylinder with Lid**, hydroxyapatite, size 1, diameter 3.65 mm, length 10 mm, bioactive, interconnecting pores, sterile
- T62 02TMC-1* **Synthacer® 300 Cylinder with Lid**, hydroxyapatite, size 2, diameter 4.55 mm, length 10 mm, bioactive, interconnecting pores, sterile
- T62 03TMC-1* **Synthacer® 300 Cylinder with Lid**, hydroxyapatite, size 3, diameter 5.45 mm, length 10 mm, bioactive, interconnecting pores, sterile
- T62 04TMC-1* **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 4, diameter 6.35 mm, length 15 mm, bioactive, interconnecting pores, sterile
- T62 05TMC-1* **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 5, diameter 7.35 mm, length 15 mm, bioactive, interconnecting pores, sterile
- T62 06TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 6, diameter 8.4 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 07TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 7, diameter 9.45 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 08TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 8, diameter 10.5 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 09TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 9, diameter 11.55 mm, length 25 mm, bioactive, interconnecting pores, sterile

* Special sizes manufactured on request

Bone Graft Substitutes

Synthacer® Cylinders with Lids

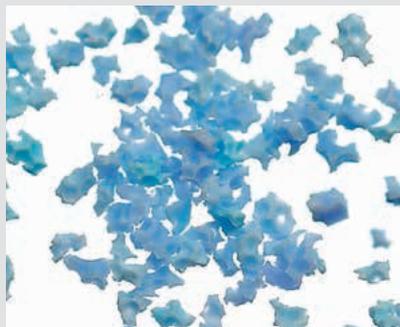


T62 13TMC-1

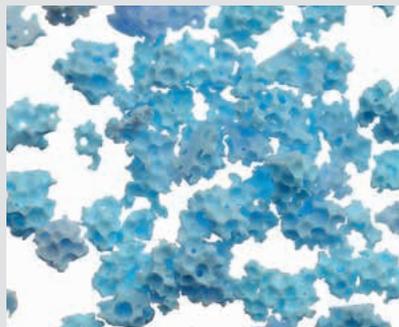
- T62 10TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 10, diameter 12.75 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 11TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 11, diameter 13.95 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 12TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 12, diameter 15.15 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 13TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 13, diameter 16.35 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 14TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 14, diameter 17.55 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 15TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 15, diameter 18.75 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 16TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 16, diameter 19.95 mm, length 25 mm, bioactive, interconnecting pores, sterile
- T62 17TMC-1 **Synthacer® 600 Cylinder with Lid**, hydroxyapatite, size 17, diameter 21.15 mm, length 25 mm, bioactive, interconnecting pores, sterile

Bone Graft Substitutes

Synthacer® Granules



T62 G01



T62 G02



T62 G03

- T62 G01-5-1 **Synthacer® 600 Granules**, hydroxyapatite, 0.1 – 0.9 mm, 5 cm³, bioactive, sterile
- T62 G01-10-1 **Synthacer® 600 Granules**, hydroxyapatite, 0.1 – 0.9 mm, 10 cm³, bioactive, sterile
- T62 G01-15-1 **Synthacer® 600 Granules**, hydroxyapatite, 0.1 – 0.9 mm, 15 cm³, bioactive, sterile
- T62 G01-20-1 **Synthacer® 600 Granules**, hydroxyapatite, 0.1 – 0.9 mm, 20 cm³, bioactive, sterile
- T62 G01-30-1 **Synthacer® 600 Granules**, hydroxyapatite, 0.1 – 0.9 mm, 30 cm³, bioactive, sterile
- T62 G02-1-1 **Synthacer® 600 Granules**, hydroxyapatite, 1 – 2.5 mm, 1 cm³, bioactive, interconnecting pores, sterile
- T62 G02-2-1 **Synthacer® 600 Granules**, hydroxyapatite, 1 – 2.5 mm, 2.5 cm³, bioactive, interconnecting pores, sterile
- T62 G02-5-1 **Synthacer® 600 Granules**, hydroxyapatite, 1 – 2.5 mm, 5 cm³, bioactive, interconnecting pores, sterile
- T62 G02-10-1 **Synthacer® 600 Granules**, hydroxyapatite, 1 – 2.5 mm, 10 cm³, bioactive, interconnecting pores, sterile
- T62 G02-15-1 **Synthacer® 600 Granules**, hydroxyapatite, 1 – 2.5 mm, 15 cm³, bioactive, interconnecting pores, sterile
- T62 G02-20-1 **Synthacer® 600 Granules**, hydroxyapatite, 1 – 2.5 mm, 20 cm³, bioactive, interconnecting pores, sterile
- T62 G02-30-1 **Synthacer® 600 Granules**, hydroxyapatite, 1 – 2.5 mm, 30 cm³, bioactive, interconnecting pores, sterile
- T62 G03-2-1 **Synthacer® 600 Granules**, hydroxyapatite, 2.6 – 4.8 mm, 2.5 cm³, bioactive, interconnecting pores, sterile
- T62 G03-5-1 **Synthacer® 600 Granules**, hydroxyapatite, 2.6 – 4.8 mm, 5 cm³, bioactive, interconnecting pores, sterile
- T62 G03-10-1 **Synthacer® 600 Granules**, hydroxyapatite, 2.6 – 4.8 mm, 10 cm³, bioactive, interconnecting pores, sterile
- T62 G03-15-1 **Synthacer® 600 Granules**, hydroxyapatite, 2.6 – 4.8 mm, 15 cm³, bioactive, interconnecting pores, sterile
- T62 G03-20-1 **Synthacer® 600 Granules**, hydroxyapatite, 2.6 – 4.8 mm, 20 cm³, bioactive, interconnecting pores, sterile
- T62 G03-30-1 **Synthacer® 600 Granules**, hydroxyapatite, 2.6 – 4.8 mm, 30 cm³, bioactive, interconnecting pores, sterile

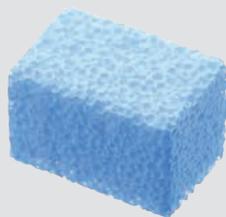
Bone Graft Substitutes

Synthacer® Ceraball, Blocks, Wedges



T62 CB0406-1

T62 CB0406-1* **Synthacer® 600 Ceraball**, hydroxyapatite, diameters 4 and 6 mm, bioactive, micro-chambered beads, sterile, 10 cm³

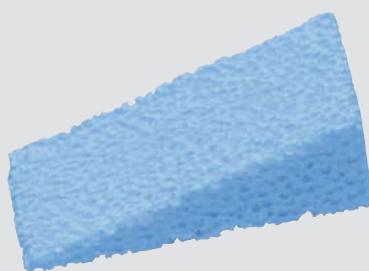


T62 MM10-1

T62 MM05-1 **Synthacer® 600 Block**, hydroxyapatite, 5 x 5 x 15 mm, bioactive, interconnecting pores, sterile

T62 MM10-1 **Synthacer® 600 Block**, hydroxyapatite, 10 x 10 x 15 mm, bioactive, interconnecting pores, sterile

T62 MM20-1 **Synthacer® 600 Block**, hydroxyapatite, 20 x 20 x 15 mm, bioactive, interconnecting pores, sterile



T62 K9-1

T62 K9-1 **Synthacer® 600 Wedge**, hydroxyapatite, height 9 mm, width 22 mm, angle 14°, length 30 mm, bioactive, interconnecting pores, sterile

T62 K11-1 **Synthacer® 600 Wedge**, hydroxyapatite, height 11 mm, width 22 mm, angle 17°, length 30 mm, bioactive, interconnecting pores, sterile

T62 K13-1 **Synthacer® 600 Wedge**, hydroxyapatite, height 13 mm, width 22 mm, angle 20°, length 30 mm, bioactive, interconnecting pores, sterile

* not available in German-speaking countries

Bone Graft Substitutes

Syntricer® Cylinders

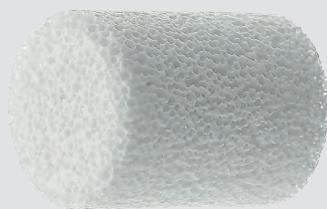


T72 04TMO-1

- T72 01TMO-1* **Syntricer® 300 Cylinder**, β -tricalcium phosphate, size 1, diameter 3.65 mm, length 10 mm, biodegradable, interconnecting pores, sterile
- T72 02TMO-1* **Syntricer® 300 Cylinder**, β -tricalcium phosphate, size 2, diameter 4.55 mm, length 10 mm, biodegradable, interconnecting pores, sterile
- T72 03TMO-1* **Syntricer® 300 Cylinder**, β -tricalcium phosphate, size 3, diameter 5.45 mm, length 10 mm, biodegradable, interconnecting pores, sterile
- T72 04TMO-1* **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 4, diameter 6.35 mm, length 15 mm, biodegradable, interconnecting pores, sterile
- T72 05TMO-1* **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 5, diameter 7.35 mm, length 15 mm, biodegradable, interconnecting pores, sterile
- T72 06TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 6, diameter 8.4 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 07TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 7, diameter 9.45 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 08TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 8, diameter 10.5 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 09TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 9, diameter 11.55 mm, length 25 mm, biodegradable, interconnecting pores, sterile

Bone Graft Substitutes

Syntricer® Cylinders



T72 14TMO-1

- T72 10TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 10, diameter 12.75 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 11TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 11, diameter 13.95 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 12TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 12, diameter 15.15 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 13TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 13, diameter 16.35 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 14TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 14, diameter 17.55 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 15TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 15, diameter 18.75 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 16TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 16, diameter 19.95 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 17TMO-1 **Syntricer® 600 Cylinder**, β -tricalcium phosphate, size 17, diameter 21.15 mm, length 25 mm, biodegradable, interconnecting pores, sterile

Bone Graft Substitutes

Syntricer® Cylinders with Lids



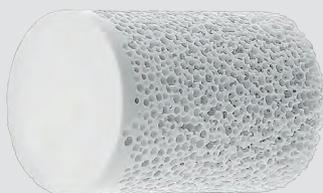
T72 06TMC-1

- T72 01TMC-1* **Syntricer® 300 Cylinder with Lid**, β -tricalcium phosphate, size 1, diameter 3.65 mm, length 10 mm, biodegradable, interconnecting pores, sterile
- T72 02TMC-1* **Syntricer® 300 Cylinder with Lid**, β -tricalcium phosphate, size 2, diameter 4.55 mm, length 10 mm, biodegradable, interconnecting pores, sterile
- T72 03TMC-1* **Syntricer® 300 Cylinder with Lid**, β -tricalcium phosphate, size 3, diameter 5.45 mm, length 10 mm, biodegradable, interconnecting pores, sterile
- T72 04TMC-1* **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 4, diameter 6.35 mm, length 15 mm, biodegradable, interconnecting pores, sterile
- T72 05TMC-1* **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 5, diameter 7.35 mm, length 15 mm, biodegradable, interconnecting pores, sterile
- T72 06TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 6, diameter 8.4 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 07TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 7, diameter 9.45 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 08TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 8, diameter 10.5 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 09TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 9, diameter 11.55 mm, length 25 mm, biodegradable, interconnecting pores, sterile

* Special sizes manufactured on request

Bone Graft Substitutes

Syntricer® Cylinders with Lids



T72 13TMC-1

- T72 10TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 10, diameter 12.75 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 11TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 11, diameter 13.95 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 12TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 12, diameter 15.15 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 13TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 13, diameter 16.35 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 14TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 14, diameter 17.55 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 15TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 15, diameter 18.75 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 16TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 16, diameter 19.95 mm, length 25 mm, biodegradable, interconnecting pores, sterile
- T72 17TMC-1 **Syntricer® 600 Cylinder with Lid**, β -tricalcium phosphate, size 17, diameter 21.15 mm, length 25 mm, biodegradable, interconnecting pores, sterile

Bone Graft Substitutes

Syntricer® Granules



T72 G01

T72 G02

T72 G03

- T72 G01-5-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 0.1 – 0.9 mm, 5 cm³, biodegradable, sterile
- T72 G01-10-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 0.1 – 0.9 mm, 10 cm³, biodegradable, sterile
- T72 G01-15-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 0.1 – 0.9 mm, 15 cm³, biodegradable, sterile
- T72 G01-20-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 0.1 – 0.9 mm, 20 cm³, biodegradable, sterile
- T72 G01-30-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 0.1 – 0.9 mm, 30 cm³, biodegradable, sterile
- T72 G02-1-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 1 – 2.5 mm, 1 cm³, biodegradable, interconnecting pores, sterile
- T72 G02-2-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 1 – 2.5 mm, 2.5 cm³, biodegradable, interconnecting pores, sterile
- T72 G02-5-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 1 – 2.5 mm, 5 cm³, biodegradable, interconnecting pores, sterile
- T72 G02-10-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 1 – 2.5 mm, 10 cm³, biodegradable, interconnecting pores, sterile
- T72 G02-15-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 1 – 2.5 mm, 15 cm³, biodegradable, interconnecting pores, sterile
- T72 G02-20-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 1 – 2.5 mm, 20 cm³, biodegradable, interconnecting pores, sterile
- T72 G02-30-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 1 – 2.5 mm, 30 cm³, biodegradable, interconnecting pores, sterile
- T72 G03-2-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 2.6 – 4.8 mm, 2.5 cm³, biodegradable, interconnecting pores, sterile
- T72 G03-5-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 2.6 – 4.8 mm, 5 cm³, biodegradable, interconnecting pores, sterile
- T72 G03-10-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 2.6 – 4.8 mm, 10 cm³, biodegradable, interconnecting pores, sterile
- T72 G03-15-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 2.6 – 4.8 mm, 15 cm³, biodegradable, interconnecting pores, sterile
- T72 G03-20-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 2.6 – 4.8 mm, 20 cm³, biodegradable, interconnecting pores, sterile
- T72 G03-30-1 **Syntricer® 600 Granules**, β -tricalcium phosphate, 2.6 – 4.8 mm, 30 cm³, biodegradable, interconnecting pores, sterile

Bone Graft Substitutes

Syntricer® Ceraball, Blocks, Wedges



T72 CB0406-1

T72 CB0406-1* **Syntricer® 600 Ceraball**, β -tricalcium phosphate, diameters 4 and 6 mm, biodegradable, micro-chambered beads, sterile, 10 cm³



T72 MM10-1

T72 MM05-1 **Syntricer® 600 Block**, β -tricalcium phosphate, 5 x 5 x 15 mm, biodegradable, interconnecting pores, sterile

T72 MM10-1 **Syntricer® 600 Block**, β -tricalcium phosphate, 10 x 10 x 15 mm, biodegradable, interconnecting pores, sterile

T72 MM20-1 **Syntricer® 600 Block**, β -tricalcium phosphate, 20 x 20 x 15 mm, biodegradable, interconnecting pores, sterile



T72 K9-1

T72 K9-1 **Syntricer® 600 Wedge**, β -tricalcium phosphate, height 9 mm, width 22 mm, angle 14°, length 30 mm, biodegradable, interconnecting pores, sterile

T72 K11-1 **Syntricer® 600 Wedge**, β -tricalcium phosphate, height 11 mm, width 22 mm, angle 17°, length 30 mm, biodegradable, interconnecting pores, sterile

T72 K13-1 **Syntricer® 600 Wedge**, β -tricalcium phosphate, height 13 mm, width 22 mm, angle 20°, length 30 mm, biodegradable, interconnecting pores, sterile

* not available in German-speaking countries

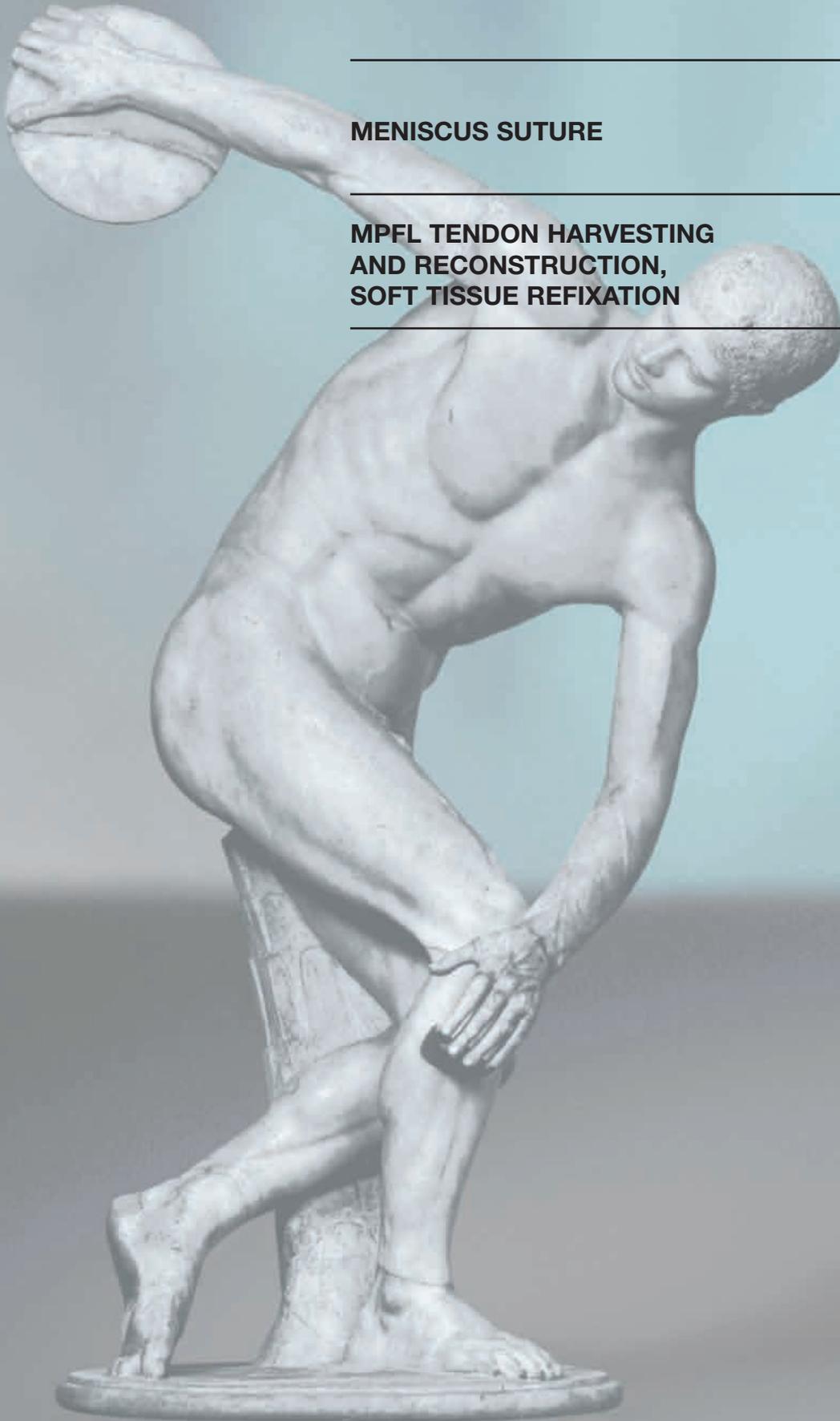
INSTRUMENTS FOR MENISCUS AND PATELLA SURGERY

MENISCUS SUTURE

146-149

**MPFL TENDON HARVESTING
AND RECONSTRUCTION,
SOFT TISSUE REFIXATION**

150-154



Meniscus Suture

for All-Inside Suture

on the Posterior Horn Area of the Lateral and Medial Meniscus

This meniscus suture set was specially developed for use with all-inside suture on the posterior horn area of the lateral and medial meniscus. A fundamental advantage of this suture set lies in the simple thread

release. After passing through the tip of the suture hooks and advancing the thread, the latter appears inside the joint. The thread may now be easily pulled out of the joint with the grasping forceps.



28179 HG

28179 HG **Handle**, for use with monofilament threads size USP 2-0 to 2, for use with Suture Attachments 28179 PA – PH, 28728 NA – NG and Wheel Attachment 28179 HR



28179 HR/R

28179 HR **Wheel Attachment**, for use with monofilament threads size USP 2-0 to 2, for use with Handle 28179 HG and Wheel 28179 R

28179 R **Wheel**, for use with monofilament threads size USP 2-0 to 2, for use with Wheel Attachment 28179 HR

Meniscus Suture

for All-Inside Suture

on the Posterior Horn Area of the Lateral and Medial Meniscus



28728 NA



28728 NA

Suture Attachment, straight, working length 13 cm, for use with Handle 28179 HG



28728 NB

Suture Attachment, distal angled 180° to the right, straight, working length 13 cm, for use with Handle 28179 HG



28728 NC

Suture Attachment, distal angled 180° to the left, straight, working length 13 cm, for use with Handle 28179 HG



28728 ND

Suture Attachment, distal angled 360° to the right, straight, working length 13 cm, for use with Handle 28179 HG



28728 NE

Suture Attachment, distal angled 360° to the left, straight, working length 13 cm, for use with Handle 28179 HG



28728 NF

Suture Attachment, distal angled 20° upwards, straight, working length 13 cm, for use with Handle 28179 HG



28728 NG

Suture Attachment, distal angled 20° upwards, straight, working length 14 cm, for use with Handle 28179 HG



28179 R1

Cleaning Adaptor, for use with Suture Attachments 28179 PA – PH and 28728 NA – NG



28179 R2

Cleaning Adaptor, for use with Handle 28179 HG

Please note: Provided that an initial order is placed, it is recommended to buy a complete set of instruments. **Plastic Container for the Sterilization and Storage of Instruments** see catalog HYGIENE

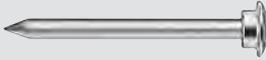
Meniscus Suture

for All-Inside Suture

on the Posterior Horn Area of the Lateral and Medial Meniscus



28728 NK **Cannula**, for use with Suture Attachments 28728 NA – NG



28728 NKO **Obturator**, for use with Cannula 28728 NK



28728 NH

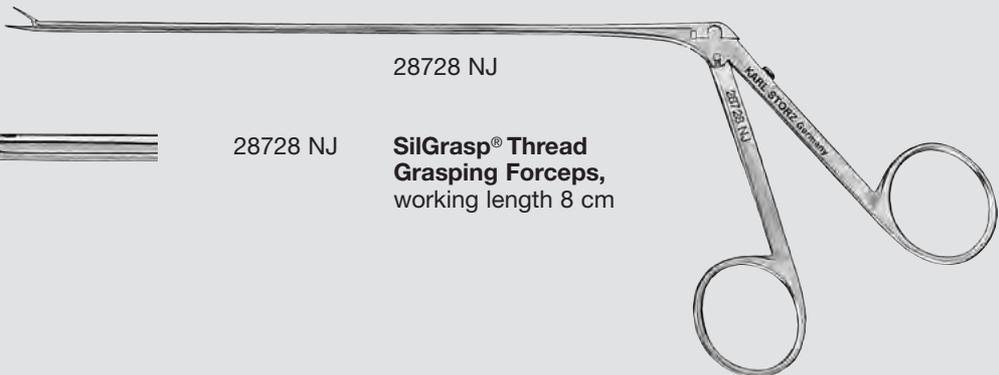


28728 NH **Knot Tier**



28728 K

28728 K **Suture Curette Attachment**, for retinaculum suture, for use with Handle 28728 G



28728 NJ



28728 NJ **SilGrasp® Thread Grasping Forceps**, working length 8 cm

Meniscus Suture ^{NEW}

for Root Refixation

The target guide was designed for refixation of the posterior meniscal root to the outer meniscus. In the case of a wide intraarticular space, the target guide can also be used for refixation of the posterior root to the inner meniscus.

The target guide enables two larding wires to be pre-drilled until they appear submeniscal under the meniscal horn.

Following adequate positioning, the initial centimeters of the K-wires are overdrilled with a 4.5 mm undercut drill to facilitate the introduction of the prepared cannulas

with suture loops. After the larding wires are withdrawn, cannulas with PDS suture loops are advanced through the channels until they appear in the submeniscal area. After any required repositioning of the meniscus, the detached posterior meniscal horn is pierced with the suture cannula. Once both suture loops emerge in the submeniscal area, the loops are widened and a fixation suture is placed. This is then withdrawn through the cannula together with the PDS suture loop. The resulting U-suture fixates the posterior horn root.



Fig. 1: Positioning the target guide for K-wire drilling



Fig. 2: K-wire in the submeniscal position



28729 ZRF

28729 ZRF **Target Guide Root Refixation,**
for refixation of the meniscus



28728 MH

28728 MH **Half Pipe®**, without handle, small,
working length 95 mm

This system was especially developed for harvesting the quadriceps tendon.

Special Features:

- Safe subcutaneous tendon harvesting
- Defined harvesting depth
- Harvesting with or without a bone block possible
- Attractive cosmetic results

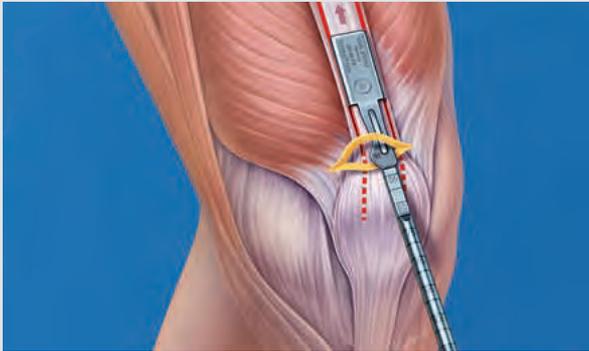


Fig. 1: Inserting the tendon knife



Fig. 2: Inserting the tendon separator



Fig. 3: Terminal cutting of the tendon with the tendon cutter



Fig. 4: Subsequent extraction of the tendon and, if required, harvesting of a bone block

MPFL Reconstruction ^{NEW}

Instruments for Harvesting the Quadriceps Tendon

This system was especially developed for harvesting the quadriceps tendon for MPFL reconstruction.

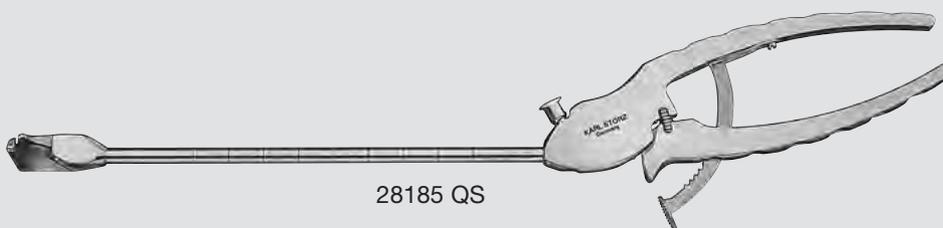
Special Features:

- Safe subcutaneous tendon harvesting
- Defined harvesting depth
- Attractive cosmetic results



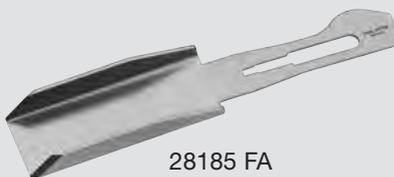
28185 MH

28185 MH **Handle**, for use with Quadriceps Tendon Knives 28185 FA – FF and Quadriceps Tendon Separators 28185 EA – EC



28185 QS

28185 QS **Quadriceps Tendon Cutter**, for subcutaneous terminal cutting of the quadriceps tendon



28185 FA

28185 FA **Tendon Knife**, for removal of quadriceps tendon for MPFL reconstruction, vertical parallel cutting, width 10 mm, height 4 mm, sterile, for use with Handle 28185 MH

28185 FB **Same**, width 12 mm



28185 EA

28185 EA **Tendon Separator**, for removal of the quadriceps tendon for MPFL reconstruction, horizontal parallel cutting, height 2 mm, sterile, for use with Handle 28185 MH

28185 EB **Same**, height 3 mm

Note:

The doctor-to-doctor manual “Minimally Invasive Reconstruction of the Medial Patellofemoral Ligament (MPFL) Using a Quadriceps Tendon Graft” from Prof. Christian FINK and Dr. Christian HOSER is available on request (96155015).

Instruments for Patella Tunneling

Special Features:

- Optimal handling
- Safe drilling in the patella
- Stable bone bridge



28728 BL

28728 BL

Gauge, for MPFL reconstruction, with handle, for use with Drill 28728 BLB



28728 BLB

Drill, for preparation of the tunnel for MPFL reconstruction, with penetration stop, diameter 4.5 mm, for use with Gauge 28728 BL

Note:

The DVD “Arthroscopically Controlled MPFL Reconstruction” from Jörg RICHTER, M.D. is available on request (KS720).

Soft Tissue Refixation, with BioPlug

The suture anchor **BioPlug** consists of a special amorphous stereo copolymer (poly-(L-co-D/L-Lactide) in a ratio of 70/30).



2870411 BP

BioPlug, bioresorbable suture anchor, diameter 4.2 mm, length 11 mm, sterile, for single use, for use with Inserter 28179 TI or 28179 KI



28179 KB



28179 KB

Drill, for preparation of the tunnel for BioPlug 2870411 BP, with laser marking for the depth of the drill hole, diameter 3.7 mm, length 15 cm



28179 KI



28179 KI

Inserter, with lateral thread guide and thread clip at the handle, working length 9 cm, for use with BioPlug 2870411 BP

Note:

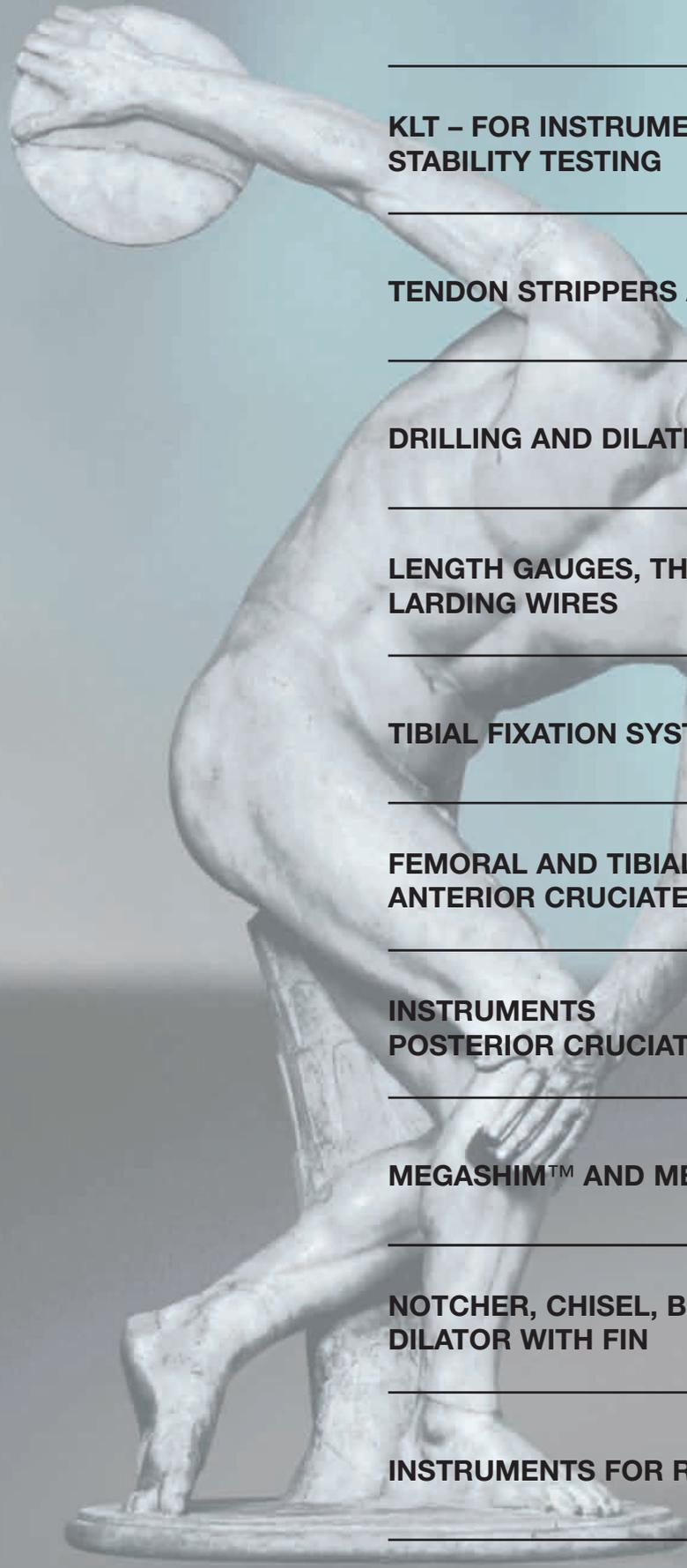
The doctor-to-doctor manual “Anatomical Reconstruction of the Medial Patellofemora Ligament Using a Free Gracilis Autograft” from Dr. Arno SCHMELING, M.D. and PD Andreas WEILER, M.D. is available on request (96155013).

Implants for Femoral Fixation see pages 185-189





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KLT – Knee Laxity Tester ^{NEW}

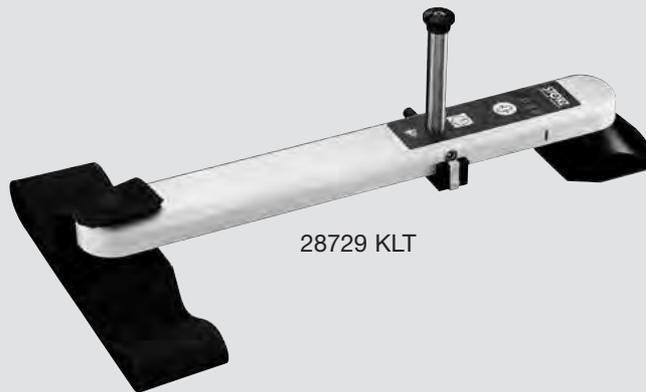
for instrumented stability testing

Instrumented stability measurement of the cruciate ligaments is a clinical examination that provides exact and reproducible measurements of the movement of the tibia in the case of cruciate ligament instability.

The Knee Laxity Tester (KLT) was developed to allow straightforward, fast and accurate instrumented stability tests in the examination room.

Special Features:

- Practical
- Easy to use
- Reproducible results
- Exact measurements



28729 KLT

28729 KLT **Knee Laxity Tester**, for instrumented stability testing



Fig. 1: Using the knee laxity tester when performing a Lachman test

Cruciate Ligament Reconstruction

Tendon Strippers – Hamstrings

Special Features:

- Length marks on the tendon stripper enables measurement of the tendon during removal
- Smaller tendon stripper for atraumatic removal of the gracilis tendon



28729 A



28729 A

Tendon Stripper, graduated,
diameter 5.5 mm, length 30 cm



28729 AB

Tendon Stripper, graduated,
diameter 7 mm, length 30 cm



28729 AC

Open Tendon Stripper, graduated,
diameter 7.5 mm, length 30 cm



28729 SH

Tendon Hook

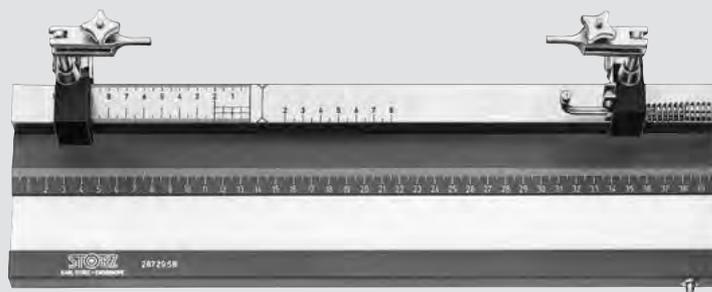
Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE

Cruciate Ligament Reconstruction

Tendon Preparation

Special Features:

- Preparation of different transplants (hamstrings, BTB) for various fixation techniques
- Measuring scales for rapid and safe transplant preparation using FLIPPTACK®
- User-friendly



28729 SB

28729 SB

Tendon Board, including FLIPPTACK® Retainer 28729 SC



28729 SBD

28729 SBD

Tendon Board Add-On, for the double bundle retainer technique, including FLIPPTACK® Retainer 28729 SC



28729 FK

28729 FK

Thread Clip



28729 P

28729 P

Tissue Forceps, 1 x 2 teeth, medium, distal curved to left, length 14.5 cm

Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE

Cruciate Ligament Reconstruction

Tendon Preparation



28729 SC

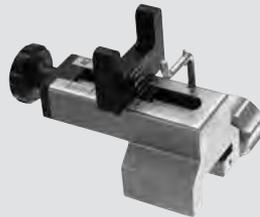


28729 FT

- 28729 SC **FLIPPTACK® Retainer**
 28729 FT **FLIPPTACK®**, extracortical fixation button, 4 x 12 mm, sterile
 28729 FS **FLIPPTACK® Set**, 24x FLIPPTACK® extracortical fixation buttons and 24x 1 mm Ethibond® Sutupak®

Special Features:

- Individual preparation of a defined thread loop
- Implant preparation before operation possible
- Easy to use



28729 LT

- 28729 LT **Looping Tower**, with FLIPPTACK® Retainer 28729 SC, for use with Tendon Board 28729 SB



28729 S



28729 SE



28729 SA



28729 SD

- 28729 S **Tendon Thickness Tester**, for determination of tendon thickness size 6 – 10 mm at intervals of 1 mm
 28729 SU **Same**, size 6.5 – 10.5 mm at intervals of 1 mm
 28729 SA **Same**, size 6 – 10.5 mm at intervals of 0.5 mm
 28729 SE **Same**, size 7 – 12 mm at intervals of 0.5 mm
 28729 SD **Same**, size 4 – 7 mm at intervals of 0.5 mm

Note: The doctor-to-doctor manual “Tendon Preparation for Cruciate Ligament Reconstruction Using the Semitendinosus and Gracilis Tendons” from Sandra STROBEL, Katrin HASLINGER, Christian HEITZER and Meho SEHIC is available on request (96155011).

Ethibond®, Johnson & Johnson

Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE

Cruciate Ligament Reconstruction ^{NEW} with the Quadriceps Tendon

This system was especially developed for harvesting the quadriceps tendon.

Special Features:

- Safe subcutaneous tendon harvesting
- Defined harvesting depth
- Harvesting with or without a bone block possible
- Attractive cosmetic results

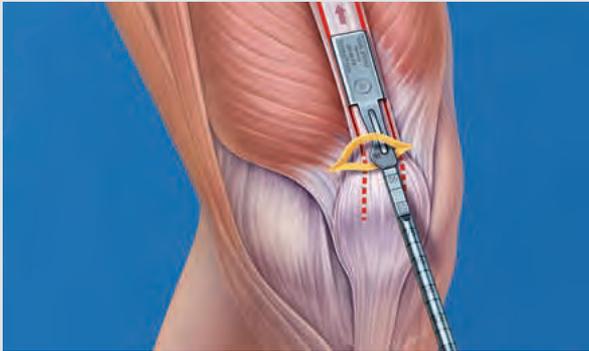


Fig. 1: Inserting the tendon knife



Fig. 2: Inserting the tendon separator



Fig. 3: Terminal cutting of the tendon with the tendon cutter



Fig. 4: Subsequent extraction of the tendon and, if required, harvesting of a bone block

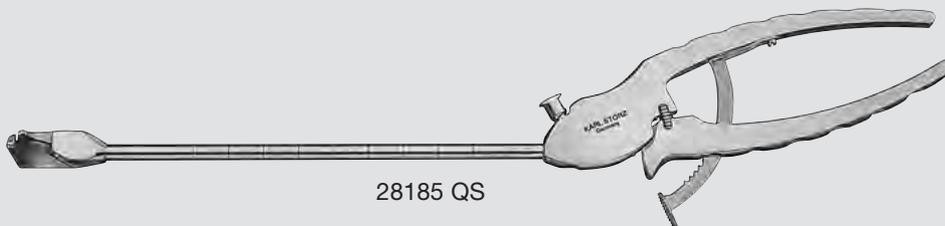
Cruciate Ligament Reconstruction ^{NEW}

with the Quadriceps Tendon



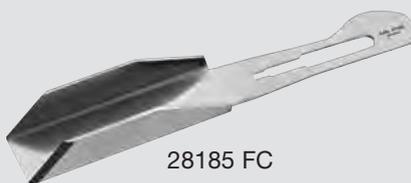
28185 MH

28185 MH **Handle**, for use with Quadriceps Tendon Knives 28185 FA – FF and Quadriceps Tendon Separators 28185 EA – EC



28185 QS

28185 QS **Quadriceps Tendon Cutter**, for subcutaneous terminal cutting of the quadriceps tendon



28185 FC

28185 FC **Tendon Knife**, for removal of the quadriceps tendon for cruciate ligament reconstruction, vertical parallel cutting, width 8 mm, height 6 mm, sterile, for use with Handle 28185 MH

28185 FD **Same**, width 9 mm

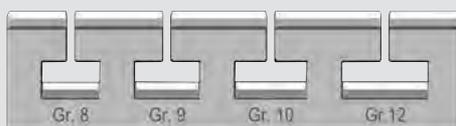
28185 FE **Same**, width 10 mm

28185 FF **Same**, width 12 mm



28185 EC

28185 EC **Tendon Separator**, for removal of the quadriceps tendon for cruciate ligament reconstruction, horizontal parallel cutting, height 5 mm, sterile, for use with Handle 28185 MH



28185 MB

28185 MB **Tendon Thickness Tester**, for determining the thickness of the quadriceps tendon

Cruciate Ligament Reconstruction

with Patellar Tendon (Bone-Tendon-Bone)



28729 PA

28729 PA **Chisel**, width 8 mm



28729 PB

28729 PB **Tendon Knife**, blunt



28729 PD

28729 PC **Patellar Saw Template**, for harvesting a bone block with tendon (BTB), width 7 mm

28729 PD **Same**, width 8 mm

28729 PE **Same**, width 9 mm

28729 PF **Same**, width 10 mm

28729 PG **Same**, width 11 mm



28729 PH



28729 PJ



28729 PK

28729 PH **Measuring Block**, to determine the size of a bone block

28729 PJ **Bone Block Holder**, for use with Tendon Board 28729 SB

28729 PK **Bone Forceps**, for use with Measuring Block 28729 PH

Please note: Provided that an initial order is placed, it is recommended to buy a complete set of instruments.

Cruciate Ligament Reconstruction

with Patellar Tendon (Bone-Tendon-Bone)



28729 PL

28729 PL **Coring Reamer**, for harvesting a bone block with tendon (BTB), with coil, diameter 7 mm, for use with Handle 28729 PQ

28729 PM **Same**, diameter 8 mm

28729 PN **Same**, diameter 9 mm

28729 PO **Same**, diameter 10 mm

28729 PP **Same**, diameter 11 mm



28729 PQ

28729 PQ **Handle**, T-shaped, for use with Fluted Coring Reamers 28729 PL – PP and Revision Blades 28728 TA – TI

Please note: Provided that an initial order is placed, it is recommended to buy a complete set of instruments.

Cruciate Ligament Reconstruction

Bone Drills and Collar Burrs



28729 BH

- 28729 BA **Bone Drill**, cannulated, diameter 4.5 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
- 28729 BB **Same**, diameter 5 mm
- 28729 BI **Same**, diameter 5.5 mm
- 28729 BC **Same**, diameter 6 mm
- 28729 BK **Same**, diameter 6.5 mm
- 28729 BD **Same**, diameter 7 mm
- 28729 BL **Same**, diameter 7.5 mm
- 28729 BE **Same**, diameter 8 mm
- 28729 BM **Same**, diameter 8.5 mm
- 28729 BF **Same**, diameter 9 mm
- 28729 BN **Same**, diameter 9.5 mm
- 28729 BG **Same**, diameter 10 mm
- 28729 BO **Same**, diameter 10.5 mm
- 28729 BH **Same**, diameter 11 mm



28729 BKM

- 28729 BKC **Collar Burr**, femoral, diameter 6 mm, cannulated, collar diameter 7.5 mm at 23 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
- 28729 BKK **Same**, diameter 6.5 mm, collar diameter 8 mm at 23 mm
- 28729 BKD **Same**, diameter 7 mm, collar diameter 8.5 mm at 23 mm
- 28729 BKL **Same**, diameter 7.5 mm, collar diameter 9 mm at 23 mm
- 28729 BKE **Same**, diameter 8 mm, collar diameter 9.5 mm at 23 mm
- 28729 BKM **Same**, diameter 8.5 mm, collar diameter 10 mm at 23 mm
- 28729 BKF **Same**, diameter 9 mm, collar diameter 10.5 mm at 23 mm



- 28729 BLC **Collar Burr**, tibial, diameter 6 mm, cannulated, collar diameter 7.5 mm at 43 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
- 28729 BLK **Same**, diameter 6.5 mm, collar diameter 8 mm at 43 mm
- 28729 BLD **Same**, diameter 7 mm, collar diameter 8.5 mm at 43 mm
- 28729 BLL **Same**, diameter 7.5 mm, collar diameter 9 mm at 43 mm
- 28729 BLE **Same**, diameter 8 mm, collar diameter 9.5 mm at 43 mm
- 28729 BLM **Same**, diameter 8.5 mm, collar diameter 10 mm at 43 mm
- 28729 BLF **Same**, diameter 9 mm, collar diameter 10.5 mm at 43 mm

Please note: Provided that an initial order is placed, it is recommended to buy a complete set of instruments.

Cruciate Ligament Reconstruction

Drills and Cannulated Drill Sleeves



28729 GA

28729 GA	Drill , cannulated, diameter 6 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28729 GB	Same , diameter 7 mm
28729 GC	Same , diameter 8 mm
28729 GD	Same , diameter 9 mm
28729 GE	Same , diameter 10 mm

Cannulated Drill Sleeves for use with Drills 28729 GA – GE

Special Features:

- Safe due to self-centering drills
- Easy to use



28729 HA

28729 HA	Cannulated Drill Sleeve , for use with Drill 28729 GA
28729 HB	Cannulated Drill Sleeve , for use with Drill 28729 GB
28729 HC	Cannulated Drill Sleeve , for use with Drill 28729 GC
28729 HD	Cannulated Drill Sleeve , for use with Drill 28729 GD
28729 HE	Cannulated Drill Sleeve , for use with Drill 28729 GE

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Cruciate Ligament Reconstruction ^{NEW}

Femoral Rasps and Tibial Dilators, Rectangular Dilators
for the Anterior Cruciate Ligament

Anatomical studies have shown that the insertion area of the anterior cruciate ligament is not circular. To adapt to the anatomical conditions in cruciate ligament recon-

struction using transplants with femoral bone blocks, special instruments were developed that enable the creation of rectangular channels.

Special Features:

- Allows use of small bone blocks
- Anatomic canal shape
- Suitable for both femoral and tibial systems
- Easy and safe application
- Suitable for revision surgery



28185 GA

28185 GA **Rasp**, femoral, cannulated, straight, coarse, one side plain, width 8 mm, height 5 mm, working length 15 cm

28185 GB **Same**, width 10 mm



28185 HA

28185 HA **Dilator**, rectangular, femoral, width 8 mm, height 5 mm, working length 15 cm

28185 HB **Same**, width 9 mm

28185 HC **Same**, width 10 mm

28185 HD **Same**, width 12 mm



28185 IA

28185 IA **Dilator**, rectangular, tibial, width 8.5 mm, height 5.5 mm, working length 15 cm

28185 IB **Same**, width 9.5 mm

28185 IC **Same**, width 10.5 mm

28185 ID **Same**, width 12.5 mm

Cruciate Ligament Reconstruction ^{NEW}

Dilators with Fin

Special Features:

- Dilation of the drill channel and notching in one step
- Cancellous bone compression through tunnel dilation
- The direction of the interference screw is pre-determined → no migration of the screw during insertion



28729 DFO



- | | |
|-----------|---|
| 28729 DFM | Dilator with Fin , for dilating the femoral drill channel to diameter 4 mm and simultaneous placement of a notch 17 mm in length |
| 28729 DFO | Dilator with Fin , cannulated, for dilating the femoral drill channel to diameter 6 mm and simultaneous placement of a notch 25 mm in length |
| 28729 DFP | Same , for dilating the femoral drill channel to diameter 6.5 mm |
| 28729 DFQ | Same , for dilating the femoral drill channel to diameter 7 mm |
| 28729 DFR | Same , for dilating the femoral drill channel to diameter 7.5 mm |
| 28729 DFS | Same , for dilating the femoral drill channel to diameter 8 mm |
| 28729 DFT | Same , for dilating the femoral drill channel to diameter 8.5 mm |
| 28729 DFU | Same , for dilating the femoral drill channel to diameter 9 mm |



Dilating a PL canal using a dilator with fin

Cruciate Ligament Reconstruction

Blade Dilators, oval

Regardless of the employed fixation technique, one of the primary objectives in cruciate ligament surgery is the accurate anatomic placement and shape of the bone tunnels. The cross-section of the ACL's original insertion zone is oval. Oval blade dilators were, there-

fore, developed to more closely match the cross-section of the generated bone tunnel with that of the original insertion zone. These instruments are complemented by a corresponding oval tendon thickness tester.

Special Features:

- Creation of an oval, anatomic bone tunnel
- Atraumatic tunnel preparation



28970 AC

- | | |
|----------|--|
| 28970 AC | Blade Dilator , oval, for compression of the cancellous bone, cannulated, oval 5 x 7 mm, scaled to 70 mm, for use with Handle 28900 H |
| 28970 AD | Same , oval 5 x 8 mm |
| 28970 BD | Same , oval 6 x 8 mm |
| 28970 BE | Same , oval 6 x 9 mm |
| 28970 CE | Same , oval 7 x 9 mm |
| 28970 CF | Same , oval 7 x 10 mm |



28729 SO

- | | |
|----------|---------------------------------------|
| 28729 SO | Tendon Thickness Tester , oval |
|----------|---------------------------------------|

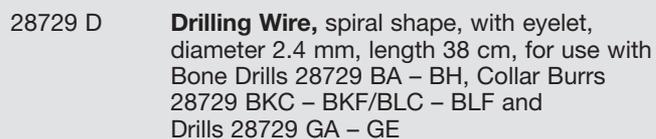
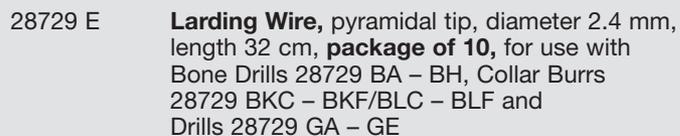
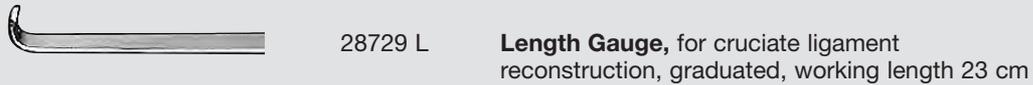


28900 H

- | | |
|---------|---|
| 28900 H | Handle , T-shaped, with quick coupling system, for use with Blade Dilators 28970 AC/AD/BD/BE/CE/CF |
|---------|---|

Cruciate Ligament Reconstruction

Length Gauges, Thread Catchers, Larding Wires



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Cruciate Ligament Reconstruction

Tibial Fixation

Special Features:

- Secure fixation
- No tilting of fixation button
- Transplant tension defined by testing with tensiometer
- Correction of transplant tension by rotating of fixation button with the button key
- Simple and safe handling
- Excellent tissue compatibility (titanium alloy)



28729 TT



28729 MT

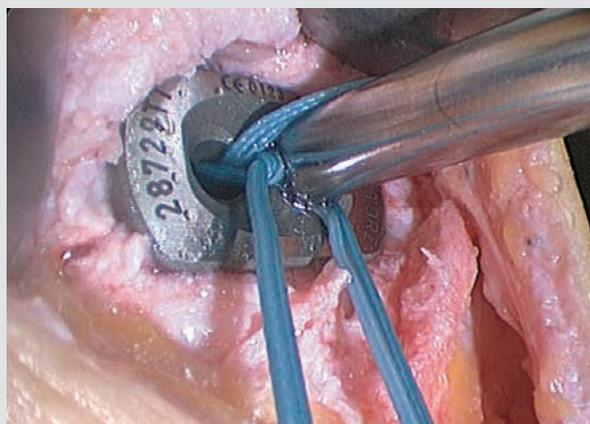
28729 TT **ENDOTACK®**, tibial fixation button, 10 x 16 mm, sterile

28729 MT **Mini ENDOTACK®**, tibial fixation button, 8 x 12 mm, sterile



28729 KK

28729 KK **Knot Holder**, small, 1 x 1 mm, working length 14.5 cm



The first knot is pressed onto the ENDOTACK® with the knot holder to keep the knot from loosening. Tie sutures of one tendon loop. Then tie sutures of other tendon loop.

Cruciate Ligament Reconstruction

Tibial Fixation in Cruciate Ligament Reconstruction with ENDOTACK®



28729 ST

28729 ST **Positioning Device**, for use with ENDOTACK® 28729 TT

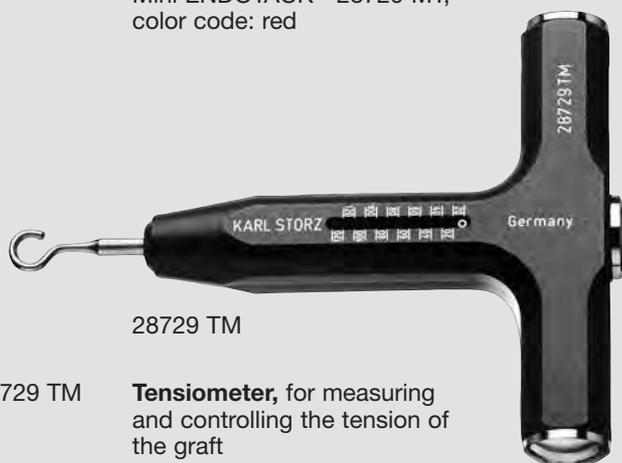
28729 SM **Positioning Device**, for use with Mini ENDOTACK® 28729 MT, color code: red



28729 MS

28729 MS **Button Wrench**, for use with ENDOTACK® 28729 TT

28729 MM **Button Wrench**, for use with Mini ENDOTACK® 28729 MT, color code: red



28729 TM

28729 TM **Tensiometer**, for measuring and controlling the tension of the graft



174800

174800 **Metal Mallet**, with plastic replacement head, length 22.5 cm

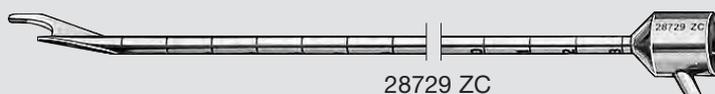
Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE

Cruciate Ligament Reconstruction, ACL

Femoral Target Guides for the Anterior Cruciate Ligament

Special Features:

- Safe target guide for positioning the femoral tunnel
- Offsets for entire range of transplantation diameters



28729 ZC



28729 ZC

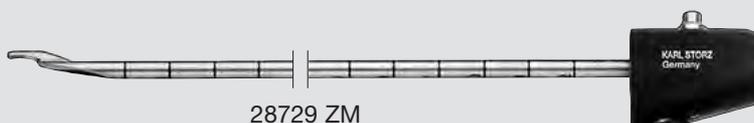
Femoral Target Guide, for ACL reconstruction, graduated, with 5.5 mm offset, for drilling diameter 9 and 10 mm

28729 ZD

Femoral Target Guide, for ACL reconstruction, graduated, with 4 mm offset, for drilling diameter 7 and 8 mm

28729 ZE

Femoral Target Guide, for ACL reconstruction, graduated, with 3 mm offset, for drilling diameter smaller than 7 mm



28729 ZM

28729 ZG

Handle, with ratchet, for use with Inserts 28729 ZM – ZQ, WZ, VX – VZ, WU – WW, WA – WD



28729 ZM

Femoral Target Guide Attachment, for ACL reconstruction, with 4 mm offset, for use with Handle 28729 ZG

28729 ZN

Same, with 5 mm offset

28729 ZO

Same, with 6 mm offset

28729 ZP

Same, with 7 mm offset

28729 ZQ

Same, with 8 mm offset



28729 ZG

Cruciate Ligament Reconstruction, ACL

Femoral Target Guide for the Anterior Cruciate Ligament

Special Features:

- Inserts for femoral tunnel placement via a medial port
- Special design enables optimal adjustment to the anatomical landmark.



28729 WY



NEW 28729 WX

Femoral Target Guide Attachment, for ACL reconstruction via a medial port, with 5 mm offset, for use with Handle 28729 ZG

NEW 28729 WY

Same, with 6 mm offset

28729 WZ

Same, with 7 mm offset

28729 VX

Same, with 8 mm offset

28729 VY

Same, with 9 mm offset

28729 VZ

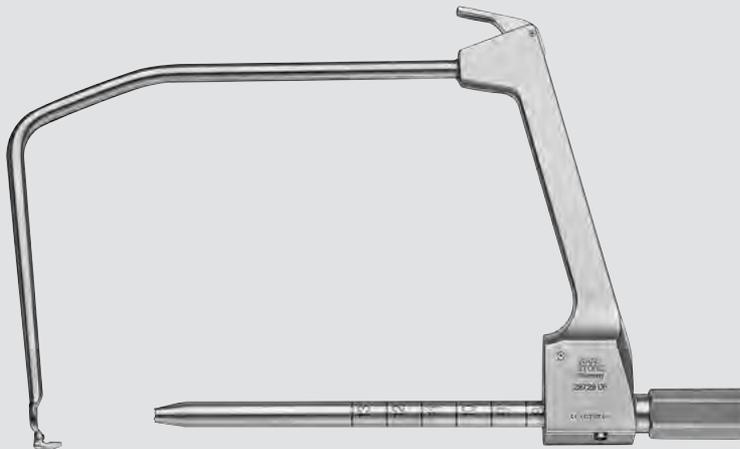
Same, with 10 mm offset

Cruciate Ligament Reconstruction, ACL

Femoral Target Guide for the Anterior Cruciate Ligament

Special Feature:

- For use in the outside-in technique



28729 DF

28729 DF

Femoral Target Guide, for
outside-in technique of the ACL

Cruciate Ligament Reconstruction, ACL

Tibial Target Guide for the Anterior Cruciate Ligament

Special Features:

- Secure positioning of the tunnel
- Measurement of the length of the tibial tunnel before placing the tunnel
- Simple and secure fixation of the guide pin
- Stable construction prevents winding and torsion of the target guide



28729 ZA

28729 ZA **Tibial Target Guide**, for ACL reconstruction



28729 DG

28729 DG **Guide Sleeve**, for the correction of the tibial tunnel, with concentric holes for a 2.4 mm guide wire diameter, realignment possible from 3 – 9 mm

Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE

Cruciate Ligament Reconstruction, ACL

Tibial Target Guides for the Anterior Cruciate Ligament

Special Features:

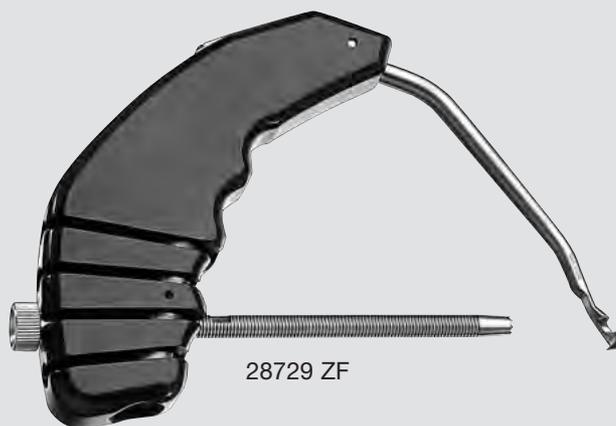
- Enables drilling of up to 3 larding wires
- Creation of an oblong tibial canal possible



28729 CF

NEW 28729 CF

Tibial Target Guide, for the placement of a maximum of 3 parallel drilling wires



28729 ZF

28729 ZF

Channel Lock® Tibial Target Guide, for ACL reconstruction, tunnel angle between 40° and 55°, adjustable in 5° increments

Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE

Cruciate Ligament Reconstruction, ACL

Femoral and Tibial Target Guides for the Anterior Cruciate Ligament, Double Bundle Technique

Special Features:

- Easy and reproducible application
- Orientation along anatomic landmarks
- Femoral tunnel placement via a medial port
- Variability in spacing of tunnels



Cruciate Ligament Reconstruction, PCL

Femoral Target Guides for the Posterior Cruciate Ligament



28729 MH

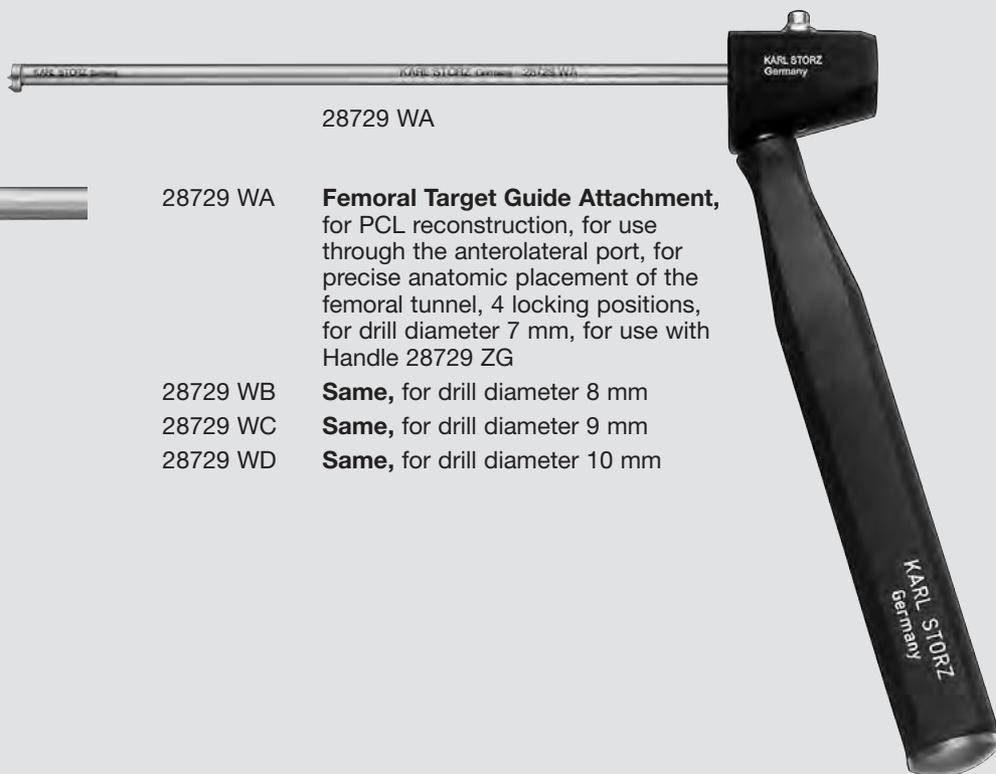


28729 MH

Femoral Target Guide, for PCL reconstruction, working length 14.5 cm

Special Features:

- Precise, reproducible tunneling



28729 WA



28729 WA

Femoral Target Guide Attachment, for PCL reconstruction, for use through the anterolateral port, for precise anatomic placement of the femoral tunnel, 4 locking positions, for drill diameter 7 mm, for use with Handle 28729 ZG

28729 WB

Same, for drill diameter 8 mm

28729 WC

Same, for drill diameter 9 mm

28729 WD

Same, for drill diameter 10 mm

28729 ZG

Cruciate Ligament Reconstruction, PCL

Tibial Target Guides for the Posterior Cruciate Ligament

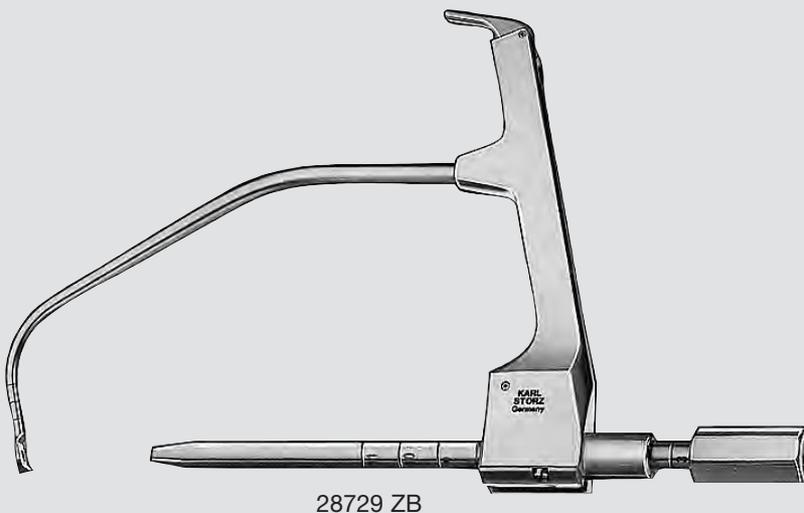
Special Features:

- Determination of the tunnel length
- Precise determination of the distance from the tibial plateau surface to the exit of the tibial tunnel on the posterior side of the tibia
- Protected target area



28729 ZBB

NEW 28729 ZBB **Tibial Target Guide**, large, for PCL reconstruction



28729 ZB

28729 ZB **Tibial Target Guide**, for PCL reconstruction
28729 ZL **Same**, curved to left
28729 ZR **Same**, curved to right

Cruciate Ligament Reconstruction, PCL

Instruments for the Posterior Cruciate Ligament

In the posterior joint region, extensive cicatrization and agglutination is often present in the area between the posterior capsule and the insertion area of the posterior cruciate ligament. Consequently, the use of a precise instrument is necessary.

Raspatory: Clear identification of the insertion area for the placement of the tunnel

Elevator: Controlled and easy insertion of the graft. The T-shaped handle offers ergonomics for secure instrument handling.



28729 WH



28729 WH **Elevator**, for PCL reconstruction, with T-shaped handle

28729 WJ **Thread Catcher**, for PCL reconstruction, with T-shaped handle



28729 AH



28729 AH **Awl**, for PCL reconstruction, working length 20 cm



28729 R **Raspatory**, for PCL reconstruction, working length 13 cm



28729 EH



28729 EH **Elevator**, for PCL reconstruction, working length 15.5 cm

1-032

Cruciate Ligament Reconstruction

MEGASHIM™ Implants and Instruments

Optimized Design

MEGASHIM™ represents the next logical step in the development of femoral fixation implants for cruciate ligament reconstruction.

The use of bioresorbable interference screws in cruciate ligament surgery is enjoying increasing popularity. This positive development is largely due to their enhanced biocompatibility and optimized degradation properties.

Experience with the use of bioresorbable interference screws has shown that these fixation implants also have their limitations.

The new implant was developed and designed with a view to minimizing these limitations.

A result of many years of research and development work, MEGASHIM™ is a bioresorbable, oval, wedge-shaped implant.

MEGASHIM™ is the optimal synthesis of:

- Optimized implant volume
- Prevention of implant lesion
- Anatomical femoral insertion
- Simplified application
- Enhanced implant stability
- Full degradation
- Osseous substitution



Cruciate Ligament Reconstruction

MEGASHIM™ Implants



2870620 MSP

2870620 MSP **MEGASHIM™**, bioresorbable oval wedge, perforated, 6x20 mm, sterile

2870720 MSP **MEGASHIM™**, bioresorbable oval wedge, perforated, 7x20 mm, sterile

2870820 MSP **MEGASHIM™**, bioresorbable oval wedge, perforated, 8x20 mm, sterile

2870920 MSP **MEGASHIM™**, bioresorbable oval wedge, perforated, 9x20 mm, sterile

Cruciate Ligament Reconstruction

MEGASHIM™ Instruments



28728 DS

28728 DS **Dilator**, graduated, diameter 4 mm, working length 15 cm, for use with MEGASHIM™ 6x20 2870620 MSP and MEGASHIM™ 7x20 2870720 MSP

28728 DL **Dilator**, graduated, diameter 5 mm, working length 15 cm, for use with MEGASHIM™ 8x20 2870820 MSP and MEGASHIM™ 9x20 2870920 MSP



28767 E

28767 E **Applicator**, distal marking at 2 and 4 mm, with strike plate, working length 15 cm, for use with MEGASHIM™ 6x20 2870620 MSP and MEGASHIM™ 7x20 2870720 MSP



28789 EK

28789 EK **Applicator**, cannulated, distal marking at 2 and 4 mm, with strike plate, working length 15 cm, for use with MEGASHIM™ 8x20 2870820 MSP and MEGASHIM™ 9x20 2870920 MSP



28767 C

28767 C **Pusher**, distal marking at 2 and 4 mm, working length 15 cm, for use with MEGASHIM™ 6x20 2870620 MSP and MEGASHIM™ 7x20 2870720 MSP

28789 C **Pusher**, distal marking at 2 and 4 mm, working length 15 cm, for use with MEGASHIM™ 8x20 2870820 MSP and MEGASHIM™ 9x20 2870920 MSP

Cruciate Ligament Reconstruction

MEGASHIM™ Instruments



28728 SH

- 28728 SH **Half Pipe®**, without handle, short, working length 85 mm
28728 LH **Half Pipe®**, without handle, long, working length 95 mm



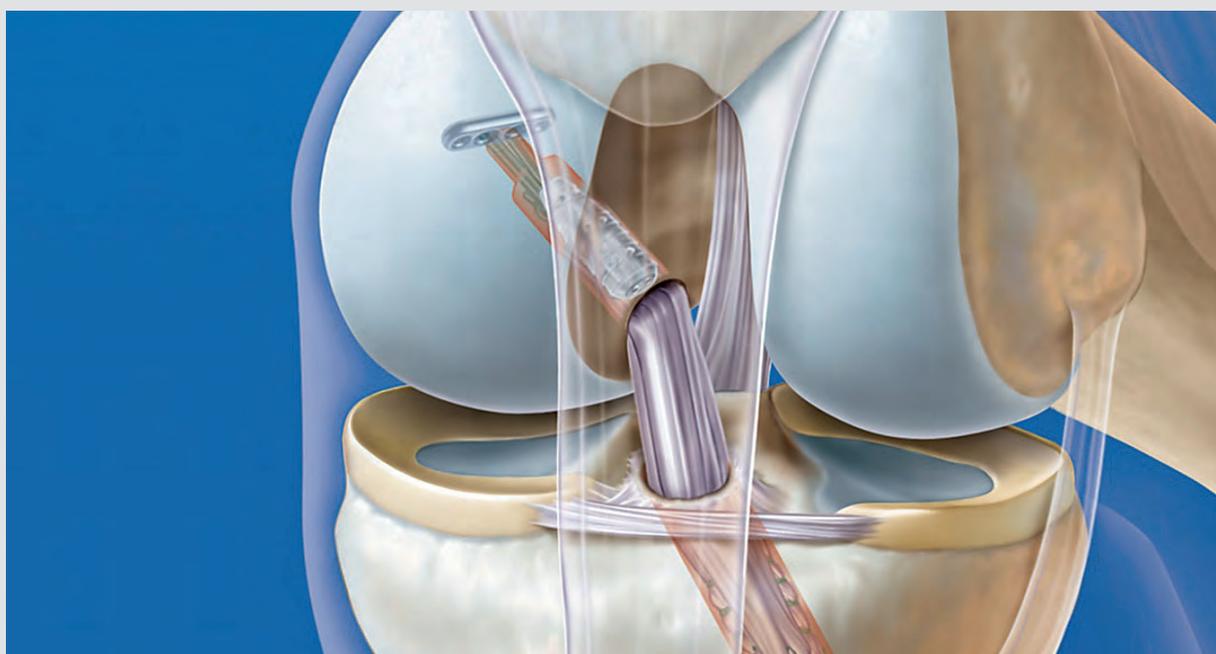
28709 S

- 28706 S **Shim Gauge**, oval, size 6, in the form of MEGASHIM™ 6x20 2870620 MSP, marking at largest cross section, with strike plate, working length 15 cm, for use with MEGASHIM™ 6x20 2870620 MSP
- 28707 S **Shim Gauge**, oval, size 7, in the form of MEGASHIM™ 7x20 2870720 MSP, marking at largest cross section, with strike plate, working length 15 cm, for use with MEGASHIM™ 7x20 2870720 MSP
- 28708 S **Shim Gauge**, oval, size 8, in the form of MEGASHIM™ 8x20 2870820 MSP, marking at largest cross section, with strike plate, working length 15 cm, for use with MEGASHIM™ 8x20 2870820 MSP
- 28709 S **Shim Gauge**, oval, size 9, in the form of MEGASHIM™ 9x20 2870920 MSP, marking at largest cross section, with strike plate, working length 15 cm, for use with MEGASHIM™ 9x20 2870920 MSP

Cruciate Ligament Reconstruction

MEGASHIM™ Overview

Art. No.	Size (width x length)	Height	Instruments
2870620 MSP	6x20 mm	4 mm	Dilator 28728 DS Applicator 28767 E Pusher 28767 C Half Pipe® 28728 SH
2870720 MSP	7x20 mm	4.5 mm	
2870820 MSP	8x20 mm	5 mm	Dilator 28728 DL Applicator 28789 EK Pusher 28789 C Half Pipe® 28728 SH
2870920 MSP	9x20 mm	5.5 mm	



Cruciate Ligament Reconstruction

Mega Fix® B and P Implants and Instruments

Bioreabsorbable Material

Poly-(L-co-D, L-lactide) (PLDLLA)

- Minimized risk of graft lesions
- No obstruction during postoperative imaging diagnosis (MRT)
- Uncompromised revision surgery
- Optimal tissue compatibility
- Complete reabsorption and osseous substitute

Perforation

- Reduced graft volume
- Increased bone-implant interface
- Three-dimensional bone ingrowth

Optimized Screw Design

- Sharp threads at the tip of the screw allow for an easy and safe start of the interference screw
- Round turns in the remaining screw body facilitates atraumatic insertion as well as strong graft fixation



Cruciate Ligament Reconstruction

Mega Fix® B and P Implants

Mega Fix® B



- 2870619 B **Mega Fix® B**, bioresorbable interference screw, diameter 6 mm, length 19 mm, sterile
2870623 B **Same**, length 23 mm
- 2870719 B **Mega Fix® B**, bioresorbable interference screw, diameter 7 mm, length 19 mm, sterile
2870723 B **Same**, length 23 mm
2870728 B **Same**, length 28 mm
- 2870819 B **Mega Fix® B**, bioresorbable interference screw, diameter 8 mm, length 19 mm, sterile
2870823 B **Same**, length 23 mm
2870828 B **Same**, length 28 mm
- 2870923 B **Mega Fix® B**, bioresorbable interference screw, diameter 9 mm, length 23 mm, sterile
2870928 B **Same**, length 28 mm

Mega Fix® P

- 2870823 P **Mega Fix® P**, bioresorbable interference screw, perforated, diameter 8 mm, length 23 mm, sterile
2870828 P **Same**, length 28 mm
- 2870923 P **Mega Fix® P**, bioresorbable interference screw, perforated, diameter 9 mm, length 23 mm, sterile
2870928 P **Same**, length 28 mm
2870935 P **Same**, length 35 mm
- 2871028 P **Mega Fix® P**, bioresorbable interference screw, perforated, diameter 10 mm, length 28 mm, sterile
2871035 P **Same**, length 35 mm
- 2871135 P **Mega Fix® P**, bioresorbable interference screw, perforated, diameter 11 mm, length 35 mm, sterile

Cruciate Ligament Reconstruction

Mega Fix® C and CP Implants and Instruments

Bioresorbable Material

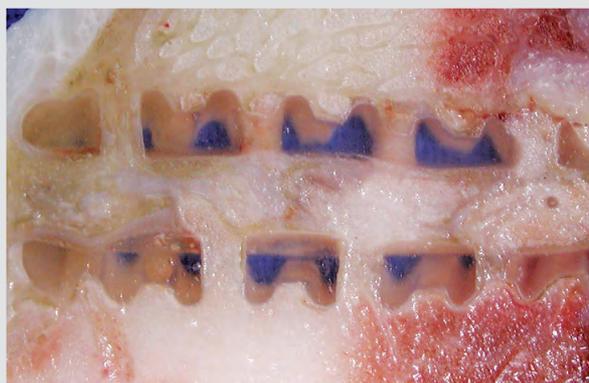
- Optimal mixing ration between the basic bioresorbable material Poly-(L-co-D, L-lactide) (PLDLLA) and the ceramic material beta-tricalcium phosphate (β -TCP)
- β -TCP material properties similar to the mineral components of bone actively promote bone metabolism
- Enhanced biocompatibility
- Optimal resorption time
- Greater mechanical stability

Perforation

- Reduced graft volume
- Increased bone-implant interface
- Three-dimensional bone ingrowth

Optimized Screw Design

- Sharp threads at the tip of the screw allow for an easy and safe start of the interference screw
- Round turns in the remaining screw body facilitates atraumatic insertion as well as strong graft fixation



Cruciate Ligament Reconstruction

Mega Fix® C and CP Implants

Mega Fix® C



- 2870619 C **Mega Fix® C**, bioresorbable composite interference screw, diameter 6 mm, length 19 mm, sterile
- 2870623 C **Same**, length 23 mm

- 2870719 C **Mega Fix® C**, bioresorbable composite interference screw, diameter 7 mm, length 19 mm, sterile
- 2870723 C **Same**, length 23 mm
- 2870728 C **Same**, length 28 mm

- 2870819 C **Mega Fix® C**, bioresorbable composite interference screw, diameter 8 mm, length 19 mm, sterile
- 2870823 C **Same**, length 23 mm
- 2870828 C **Same**, length 28 mm

- 2870923 C **Mega Fix® C**, bioresorbable composite interference screw, diameter 9 mm, length 23 mm, sterile
- 2870928 C **Same**, length 28 mm

Mega Fix® CP

- 2870823 CP **Mega Fix® CP**, bioresorbable composite interference screw, perforated, diameter 8 mm, length 23 mm, sterile
- 2870828 CP **Same**, length 28 mm

- 2870923 CP **Mega Fix® CP**, bioresorbable composite interference screw, perforated, diameter 9 mm, length 23 mm, sterile
- 2870928 CP **Same**, length 28 mm
- 2870935 CP **Same**, length 35 mm

- 2871028 CP **Mega Fix® CP**, bioresorbable composite interference screw, perforated, diameter 10 mm, length 28 mm, sterile
- 2871035 CP **Same**, length 35 mm

- 2871135 CP **Mega Fix® CP**, bioresorbable composite interference screw, perforated, diameter 11 mm, length 35 mm, sterile

Cruciate Ligament Reconstruction

Mega Fix® T Implants

Mega Fix® T for Bone-Tendon-Bone Technique

- Sharp thread enables easy insertion
- Diameter 7 – 9 mm, lengths 20 and 25 mm



2870720 T	Mega Fix® T , titanium interference screw, diameter 7 mm, length 20 mm, for Cruciate Ligament Reconstruction with Bone-Tendon-Bone Transplant, sterile
2870725 T	Same , length 25 mm
2870820 T	Mega Fix® T , titanium interference screw, diameter 8 mm, length 20 mm, for Cruciate Ligament Reconstruction with Bone-Tendon-Bone Transplant, sterile
2870825 T	Same , length 25 mm
2870920 T	Mega Fix® T , titanium interference screw, diameter 9 mm, length 20 mm, for Cruciate Ligament Reconstruction with Bone-Tendon-Bone Transplant, sterile
2870925 T	Same , length 25 mm

Mega Fix® T for the Hamstring Technique

- Blunt thread protects the transplant
- Diameter 7 – 10 mm, lengths 23 and 28 mm



2870723 T	Mega Fix® T , titanium interference screw, diameter 7 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile
2870728 T	Same , length 28 mm
2870823 T	Mega Fix® T , titanium interference screw, diameter 8 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile
2870828 T	Same , length 28 mm
2870923 T	Mega Fix® T , titanium interference screw, diameter 9 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile
2870928 T	Same , length 28 mm
2871023 T	Mega Fix® T , titanium interference screw, diameter 10 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile
2871028 T	Same , length 28 mm

Cruciate Ligament Reconstruction

Mega Fix® CrossDrive® Screwdriver

CrossDrive®

- Special cross drive
- Optimum torsion stability due to the fine-tuned regulation of force transmission between the screwdriver and the interference screw



- | | |
|----------|--|
| 28789 SK | CrossDrive® Screwdriver , cannulated, size 8 – 11, for use with bioresorbable Mega Fix® screws diameter 8 – 11 mm and Nitinol Guide Wires 28789 GW/KW |
| 28770 SK | CrossDrive® Screwdriver , cannulated, size 7, for use with bioresorbable Mega Fix® screws diameter 7 mm and Nitinol Guide Wires 28789 GW/KW |
| 28760 SK | CrossDrive® Screwdriver , cannulated, size 6, for use with bioresorbable Mega Fix® screws diameter 6 mm and Nitinol Guide Wires 28789 GW/KW |
| 28789 CD | CrossDrive® Plus Screwdriver , cannulated, for use with Mega Fix® titanium interference screws and Nitinol Guide Wire 28789 FW |
| 28789 GW | Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, package of 6 |
| 28789 KW | Nitinol Guide Wire , short, diameter 1.1 mm, length 25.5 cm, package of 6 |
| 28789 FW | Nitinol Guide Wire , diameter 2 mm, length 38.5 cm, package of 6 |

Cruciate Ligament Reconstruction

Notcher, Chisel, Bone Wedge Chisel, Dilator with Fin



28729 N



28729 N

Notcher, with fin-like blade to assist screw insertion, working length 15 cm



28729 NM



28729 NM

Chisel, for creating a bone wedge in cruciate ligament surgery, working length 13 cm



28729 NN



28729 NN

Bone Wedge Chisel, for creating a bone wedge in cruciate ligament surgery, with wide handle, working length 13 cm



28729 DFM



28729 DFM

Dilator with Fin, for dilating the femoral drill channel to diameter 4 mm and simultaneous placement of a notch 17 mm in length

Cruciate Ligament Reconstruction

Revision Screwdriver Set

In revision surgery, it is often necessary to remove previous implants (titanium interference screws, staples). It is therefore recommended to have special

instrumentation at hand that enables implants to be removed quickly.

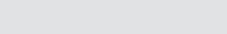
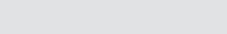
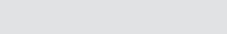
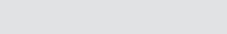
To remove titanium interference screws, a revision screwdriver set was developed to accommodate all standard interference screw sizes. In many cases, it is

necessary to remove bone from the screwdriver insertion site. Microfracture chisels have been included in the screwdriver revision set for this purpose.

Special Features:

- **Modular system: Quick coupling via T-Handle**
- **Revision screwdriver attachments available for all standard screw sizes**
- **Self-centering: Enables removal of interference screws even if access is unfavorable**
- **Tapered tip: Enables use even in the case of slightly deformed screw heads**

28728 T



Revision Set

including:

Revision Screwdriver Blade, size 1.9 mm, working length 12.5 cm

Revision Screwdriver Blade, size 2.3 mm, working length 12.5 cm

Revision Screwdriver Blade, size 2.4 mm, working length 12.5 cm

Revision Screwdriver Blade, size 2.7 mm, working length 12.5 cm

Revision Screwdriver Blade, size 3.4 mm, working length 12.5 cm

Large Fragment Screwdriver Blade, size 3.5 mm, working length 12.5 cm

Small Fragment Screwdriver Blade, size 2.5 mm, working length 12.5 cm

Microfracture Chisel, straight, working length 12.5 cm

Microfracture Chisel, curved 30°, working length 12.5 cm

Handle, T-shaped, for use with 28728 TA – TI



Handle

Components/Spare Parts see chapter 18

Cruciate Ligament Reconstruction

Staple Remover

A staple remover is useful for the fast and reliable removal of staples.

Special Features:

- Flat staple insertion
- Curved rear side for powerful, yet atraumatic work



28729 CR

28729 CR

Staple Remover, width 6 mm,
working length 16 cm

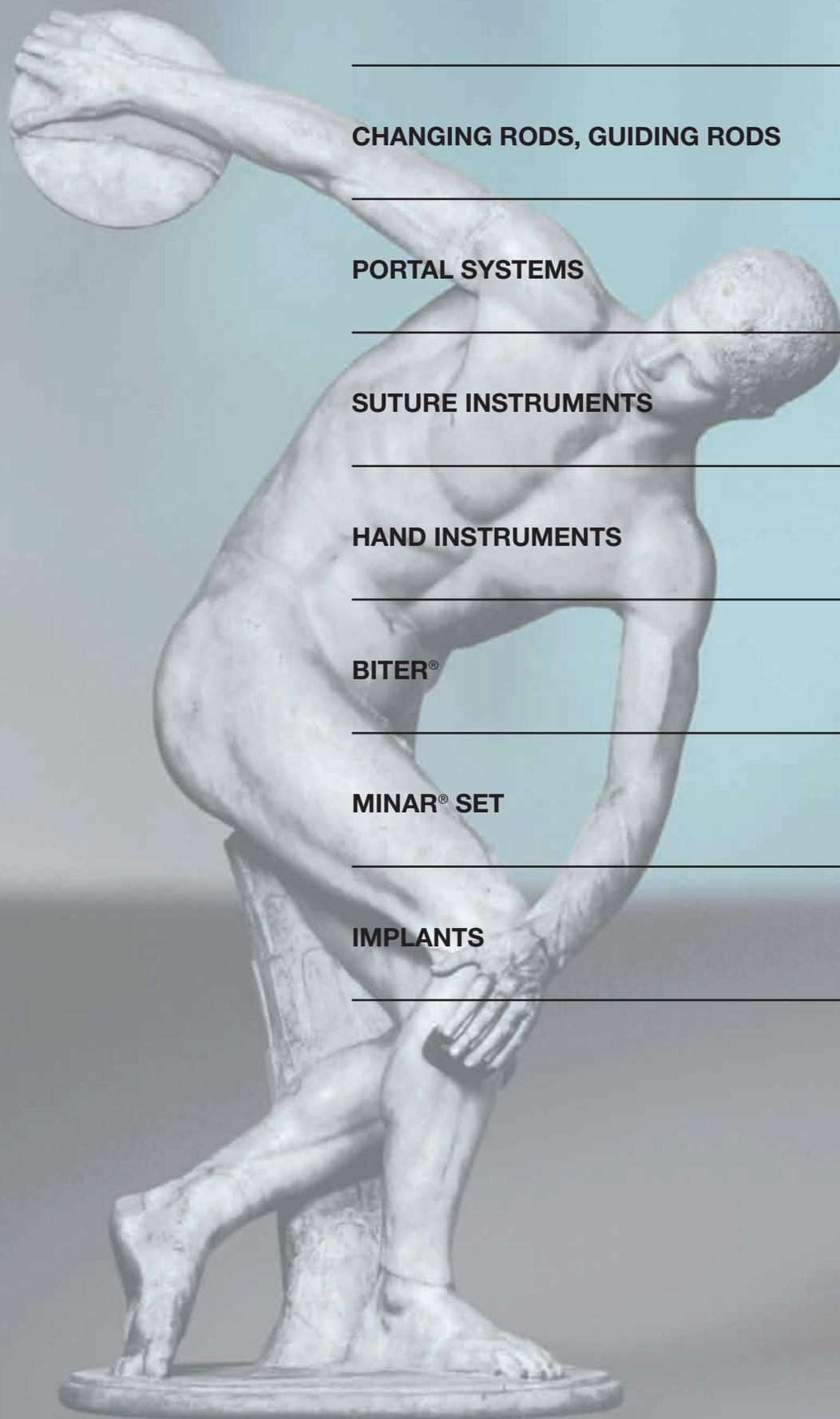


Fig. 1: Introducing and positioning the staple remover



Fig. 2: Positioning and subsequent staple removal

INSTRUMENTS FOR SHOULDER ARTHROSCOPY



CHANGING RODS, GUIDING RODS 196

PORTAL SYSTEMS 197-203

SUTURE INSTRUMENTS 204-211

HAND INSTRUMENTS 212-213

BITER® 214

MINAR® SET 215

IMPLANTS 216-220

Changing Rods, Guiding Rod

For use with arthroscope sheaths that can be used with telescopes with diameter 4 mm

Changing Rods



28124 BX

- | | |
|----------|---|
| 28124 BX | Changing Rod , length 23 cm, package of 6, for use with arthroscope sheaths with inner diameter 4 mm |
| 28270 W | Same , length 35 cm |

Guiding Rod

The guiding rod is routinely used during shoulder arthroscopy to create an anterior portal to change the position of the arthroscope from posterior to anterior location in the joint. With the arthroscope sheath placed

posterior in the shoulder joint, the guiding rod is inserted into the sheath and directed across the the joint and through the anterior skin. Then a second sheath is inserted over the guiding rod to create the second portal.



28124 BY

- | | |
|----------|---|
| 28124 BY | Guiding Rod , with pressure plate, length 35 cm, for use with arthroscope sheaths with inner diameter 4 mm |
|----------|---|

Portal Systems for Shoulder Arthroscopy

SHOULDER PRO®

Special Features:

- Dilator with handle and thread attachment for optimal rotation
- Cannulated dilator with thread for use via a guide wire
- Various thread depths of the cannulas ensure very good tissue compression
- Good stability due to special thread wings



28180 GO

28180 GO **Dilator, with handle and thread attachment, cannulated, inner diameter 1.6 mm, for use with Cannula 28180 GT and Nitinol Guide Wire 28140 GW**



28180 GT

28180 GT **Cannula, with thread, limited reuse (5x), non-sterile, single packaging, for Gasket 28180 GD, inner diameter 8.25 mm, working length 7 cm, for use with Dilator 28180 GO**



28180 GDS

28180 GDS **Gasket Set, for single use, non-sterile, with sealing cap, package of 5, for use with Cannula 28180 GT**

Dilator 28180 GO is for use with Guide Wire 28140 GW and corresponding puncture needle see page 223

The SPS – Secure Portal System facilitates the positioning of the portals during shoulder arthroscopy and offers better support for the introduced trocar sheaths by protecting the surrounding soft tissue. The atraumatic and targeted insertion of the positioning needle makes it possible to introduce both the subsequent dilatation system as well as the trocar sheath system into the shoulder joint without any problems. It is possible to probe the target structures in this joint in advance with the positioning needle,

whereby it is also possible to confirm the correct position of the trocar sheath to be inserted. If the positioning needle is unable to reach the desired areas, it can be easily repositioned without trauma to the soft tissue.

The individual steps during the insertion of the trocar sheath system are arthroscopically controlled, which prevents damage when the joint is entered.

For shoulder portals, we use the SPS – Secure Portal System.

This system allows for an optimal control of the direction and position of the portals.



Fig. 1

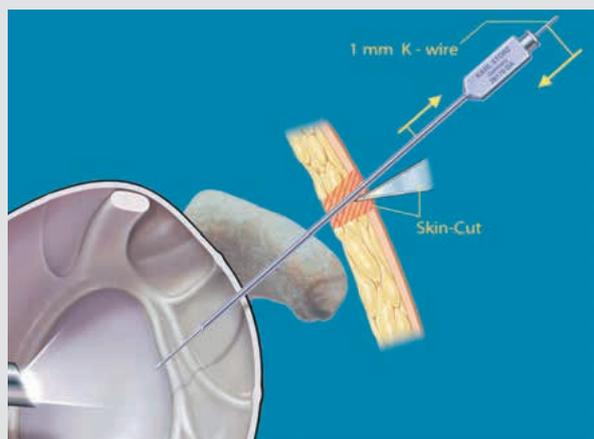


Fig. 2

- The positioning needle with a diameter of 1.5 mm is introduced transcutaneously into the joint. The position must be corrected until the positioning needle penetrates the capsule at the desired point in the correct direction.
- The obturator is removed from the positioning needle.
- A guide wire with a diameter of 0.9 mm is introduced through the positioning needle into the joint.
- The positioning needle is removed from the joint while the Kirschner wire is left in position.
- Skin incision along Kirschner wire corresponding to cannula size

Portal Systems for Shoulder Arthroscopy

SPS – Secure Portal System

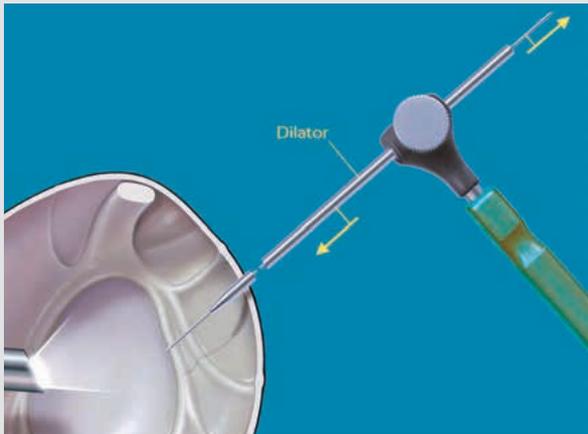


Fig. 3

- A cannulated dilator is pushed along the Kirschner wire into joint, using a handle.
- The Kirschner wire is removed.

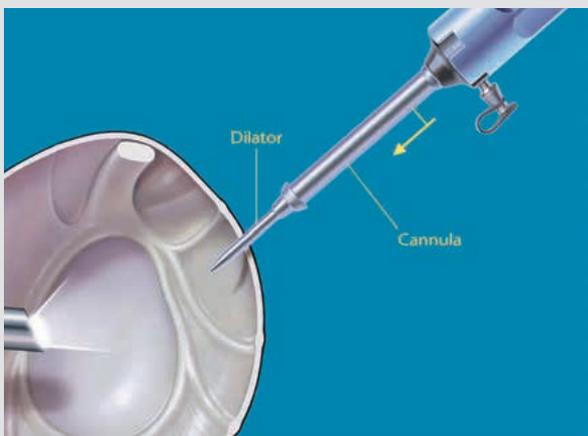


Fig. 4

- The trocar sheath that was inserted into the handle for easy handling is advanced along the dilator.
- The soft tissue is hereby dilated until the trocar sheath “snaps” safely in place behind the capsule.



Fig. 5

- Then the handle can be pulled off the trocar sheath. The trocar sheath then is ready for use and remains safely in the joint.

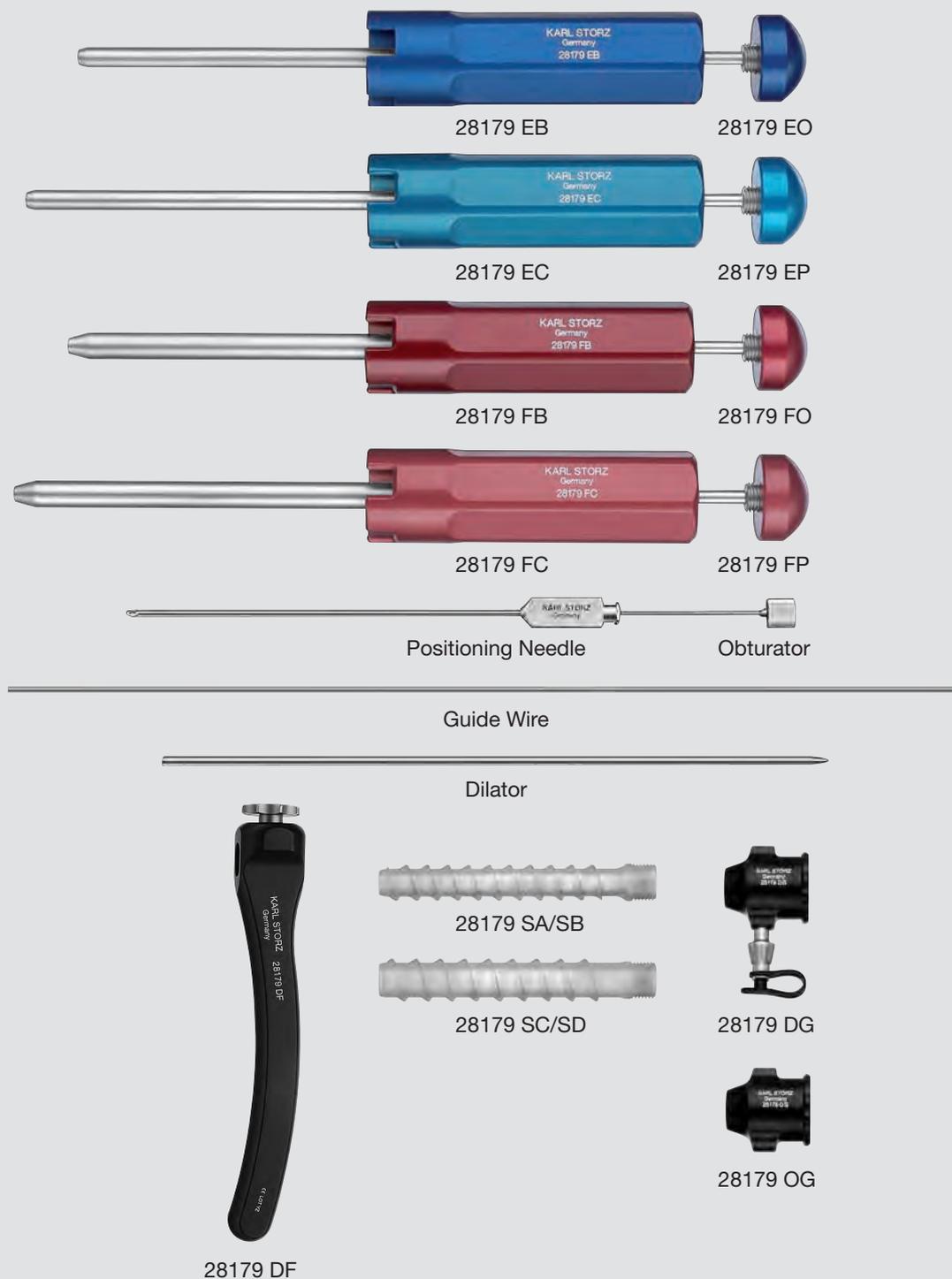
The SPS – Secure Portal System provides a portal to the joint by merely dilating the soft tissue without injuring the soft tissue. Positioning is performed under

arthroscopic vision in order to provide optimal positioning of the lastly inserted cannula.

Portal Systems for Shoulder Arthroscopy

SPS – Secure Portal System

Recommended Sets



Optional:

The sets include Handle 28179 DF, which makes it easier to introduce Dilator 28179 DL. Transparent plastic cannulas for single use, sterile, package of 10, are available as an alternative to reusable cannulas. Threaded Cannulas 28179 SA – SD are for single use and are supplied unsterile.

Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE

28179 E **Basic Set for SPS – Secure Portal System**

including:

Positioning Needle

Obturator

Guide Wire, package of 6

Dilator

Handle, for Dilator 28179 DL

Valve Housing

Set of Gaskets, unsterile, package of 10

A workable instrument set requires the following supplementary sets:

1. For inner diameter 6.1 mm, working length 7 cm

28179 EB **Dilator**, with handle

28179 EO **Obturator**, diameter 4 mm, for use with Dilator 28179 EB

28179 SA **Cannula**, with thread, transparent, for single use

2. For inner diameter 6.1 mm, working length 8.5 cm

28179 EC **Dilator**, with handle

28179 EP **Obturator**, diameter 4 mm, for use with Dilator 28179 EC

28179 SB **Cannula**, with thread, transparent, for single use

3. For inner diameter 8.25 mm, working length 7 cm

28179 FB **Dilator**, with handle

28179 FO **Obturator**, diameter 4 mm, for use with Dilator 28179 FB

28179 SC **Cannula**, with thread, transparent, for single use

4. For inner diameter 8.25 mm, working length 8,5 cm

28179 FC **Dilator**, with handle

28179 FP **Obturator**, diameter 4 mm, for use with Dilator 28179 FC

28179 SD **Cannula**, with thread, transparent, for single use

Optional:

28179 GS **Set of Gaskets**, 10x 2 sealing caps, sterile,
for use with Valve Housing 28179 DG/OG

28179 GU **Set of Gaskets**, 10x 2 sealing caps, unsterile,
for use with Valve Housing 28179 DG/OG

28179 OG **Valve Housing**, without LUER-Lock, for use with
Cannulas and Set of Gaskets 28179 GU/GS

Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE

Components/Spare Parts see chapter 18

Portal Systems for Shoulder Arthroscopy

Half Pipe®

Benefits:

- Insertion through the soft tissue into the joint is not limited by the diameter of the cannula
- High flexibility of the operation instruments, since the Half Pipe® is removed again instrument changeover
- Safe exchange of instruments in joints in which no cannulas can be used (such as elbow, wrist, etc.)



Insertion of the Half Pipe® along an instrument



Removal of the instrument



Maintenance of the portal



Insertion of a given instrument along the Half Pipe®

Portal Systems for Shoulder Arthroscopy

Half Pipe®



28179 OB



28179 GH

28179 GK

28179 GH **Half Pipe®**, long, working length 95 mm,
for use with Obturator 28179 OB

28179 GK **Half Pipe®**, short, working length 80 mm,
for use with Obturator 28179 OB

28179 OB **Obturator**, for use with Half Pipe®
28179 GH/GK

1-03z

Half Pipe® for Hip Arthroscopy see page 227 and for **Knee Arthroscopy** see page 184
Plastic Container for Sterilization and Storage of Instruments see catalog HYGIENE



28179 HG

28179 HG **Handle**, for use with monofilament threads size USP 2-0 to 2, for use with Suture Attachments 28179 PA – PH, 28728 NA – NG and Wheel Attachment 28179 HR



28179 HR/R

28179 HR **Wheel Attachment**, for use with monofilament threads size USP 2-0 to 2, for use with Handle 28179 HG and Wheel 28179 R

28179 R **Wheel**, for use with monofilament threads size USP 2-0 to 2, for use with Wheel Attachment 28179 HR



28180 BG



28180 BG **Suture Catcher**, with inserter, sterile, package of 10, for use with Suture Attachments 28179 PA – PH and 28728 NA – NG, Wheel Attachment 28179 HR and Handle 28179 HG

Suture Instruments Shoulder Arthroscopy

SHOULDER PRO® Suture System



28179 PA



28179 PA

Suture Attachment, distal tip curved upwards, straight, 5 mm in height, working length 15 cm, for use with Handle 28179 HG



28179 PB

Same, 7 mm in height



28179 PC

Same, 8 mm in height



28179 PD

Same, hook-shaped distal tip curved upwards, 8 mm in height



28179 PE



28179 PE

Suture Attachment, hook-shaped distal tip curved upwards, straight, 8.7 mm in height, working length 15 cm, for use with Handle 28179 HG

28179 PF

Same, 10 mm in height



28179 PG

Suture Attachment, distal tip angled 30° to right, straight, 8 mm in height, working length 15 cm, for use with Handle 28179 HG



28179 PH

Same, angled 30° to left



28179 R1

Cleaning Adaptor, for use with Suture Attachments 28179 PA – PH and 28728 NA – NG



28179 R2

Cleaning Adaptor, for use with Handle 28179 HG

WONDERHOOK®

Suture Attachment Set



28184 NR

28184 WH

28184 WH **Handle**, complete, for transporting monofilament threads up to size USP 1 including:
Transport Cassette



28184 NR



NEW 28184 NG

Suture Attachment, for use with monofilament threads up to size USP 1, straight, working length 15 cm, for use with Handle 28184 WH, color code: blue

NEW 28184 NGL

Suture Attachment, for use with monofilament threads up to size USP 1, straight, long, working length 15 cm, for use with Handle 28184 WH, color code: blue



NEW 28184 NA

Suture Attachment, for use with monofilament threads up to size USP 1, distal tip slightly curved upwards, working length 15 cm, for use with Handle 28184 WH, color code: gold



NEW 28184 MR

Suture Attachment, for use with monofilament threads up to size USP 1, distal tip curved 25° right, working length 15 cm, for use with Handle 28184 WH, color code: green



NEW 28184 ML

Same, distal tip curved 25° left



28184 NR

WONDERHOOK® Suture Attachment, for use with monofilament threads up to size USP 1, distally strongly curved to right, working length 15 cm, for use with Handle 28184 WH, color code: red



28184 NL

Same, distally strongly curved to left



28184 RA

28184 RA **Cleaning Adaptor**, for use with Suture Attachments 28184 NR/NL/MR/ML/NA/NG/NGL

Components/Spare Parts see chapter 18

Suture Instruments

Shoulder Arthroscopy

Suture Forceps

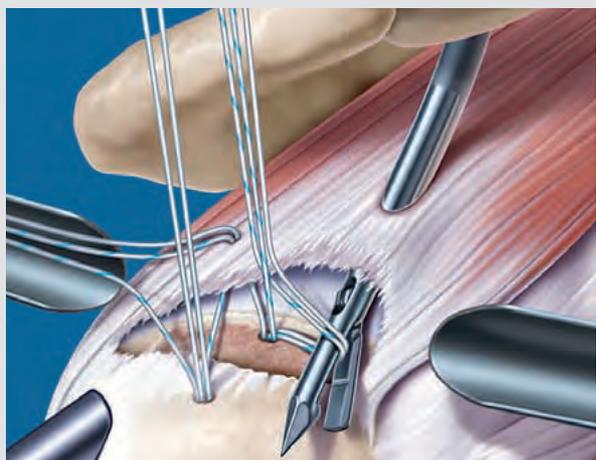
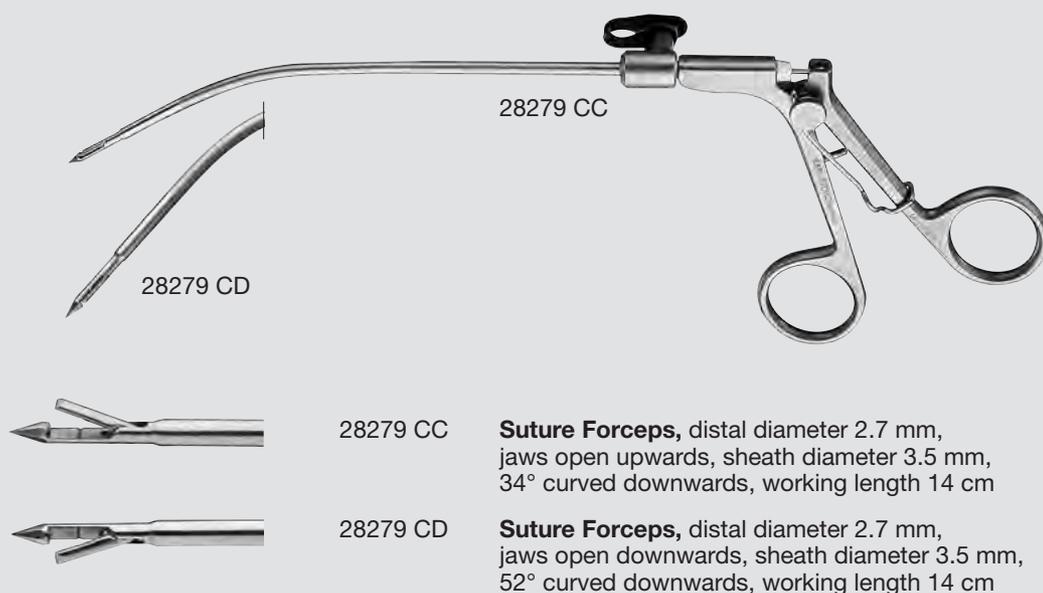
These suture forceps were specially designed for the anatomic reconstruction of the rotator cuff.

Sutures can be retrieved through the cuff in a retrograde fashion or passed through in an antegrade direction using these forceps under direct vision. Two types of

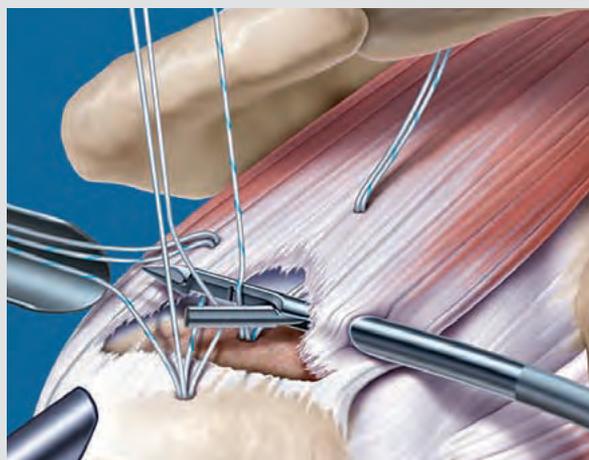
forceps allow for easy suture management and retrieval through the rotator cuff from any portal. The system is versatile, allowing multiple suture techniques to be utilized to suit individual cuff tear patterns and surgeon preferences.

Special Features:

- Anatomical design of suture shuttle instrument sheath
- Special design for use through Neviaser portal
- Sharp distal tip



Penetration of the rotator cuff via the Neviaser portal for suture management



Suture management in rotator cuff reconstruction

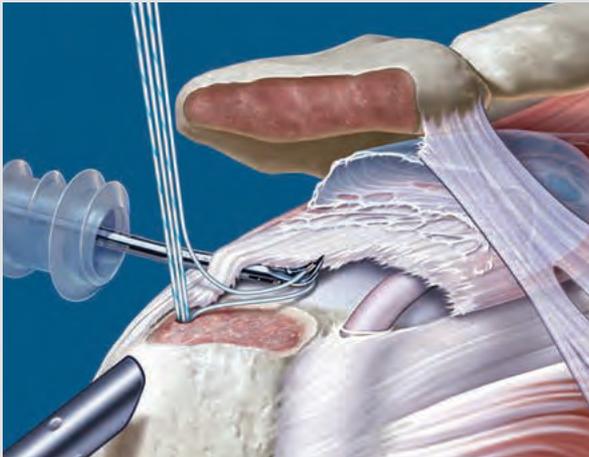
SHOULDER PRO® Line

SNAPPER® SHOULDER PRO® Suture Forceps

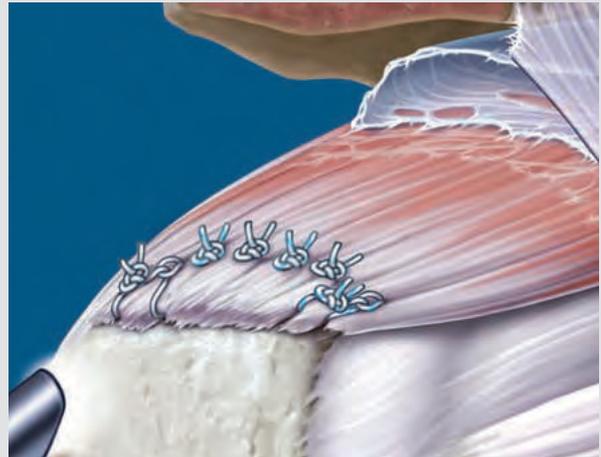


This forceps was specially designed for suture management in shoulder arthroscopy, in particular for the reconstruction of the rotator cuff. It provides the following features and benefits:

- Very slender jaw design
- Sharp distal tip
- Large eyelet and angle of view
- Additional bending at the distal end of the sheath
- Ergonomic handle design

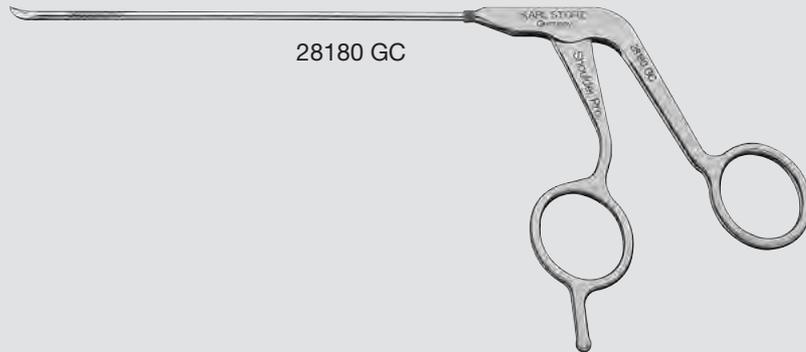


Rotator cuff suture with SNAPPER® SHOULDER PRO®



Reconstructed rotator cuff

SHOULDER PRO® Line
SNAPPER® SHOULDER PRO® Suture Forceps



28180 GC



28180 GA

SNAPPER® SHOULDER PRO® Suture Forceps, for punching soft tissue and suture management in shoulder arthroscopy, curved upwards, working length 15 cm, color code: black



28180 GC

SNAPPER® SHOULDER PRO® Suture Forceps, for punching soft tissue and suture management in shoulder arthroscopy, straight, working length 15 cm, color code: blue



28180 GL

SNAPPER® SHOULDER PRO® Suture Forceps, for punching soft tissue and suture management in shoulder arthroscopy, curved to left, also curved to left in sheath, working length 15 cm, color code: red



28180 GR

SNAPPER® SHOULDER PRO® Suture Forceps, for punching soft tissue and suture management in shoulder arthroscopy, curved to right, also curved to right in sheath, working length 15 cm, color code: green



28180 GRG

SNAPPER® SHOULDER PRO® Suture Forceps, for punching soft tissue and suture management in shoulder arthroscopy, retrograde opening, also curved upwards in sheath, working length 15 cm, color code: white

Suture Instruments Shoulder Arthroscopy

SHOULDER PRO® Suture Attachments



33136 P

33136 P **CLICK'line Handle**, with thumb release, with 4 locking positions, for use with Suture Attachments 28180 LA/LC/LL/LR/LRG



28180 LA



28180 LA **SHOULDER PRO® Suture Attachment**, for punching soft tissue and suture management in shoulder arthroscopy, curved upwards, working length 15 cm, for use with Handle 33136 P, color code: black



28180 LC **Same**, straight, color code: blue



28180 LL **Same**, curved to left, also curved to left in sheath, color code: red



28180 LR **Same**, curved to right, also curved to right in sheath, color code: green



28180 LRG **Same**, retrograde opening, also curved upwards in sheath, color code: white



28179 HA

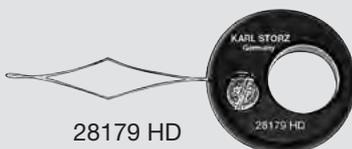
28179 HA **Suture Hook**, with eyelet, curved to left



28179 HB **Suture Hook**, with eyelet, curved to right



28179 HC **Suture Hook**, with eyelet, straight

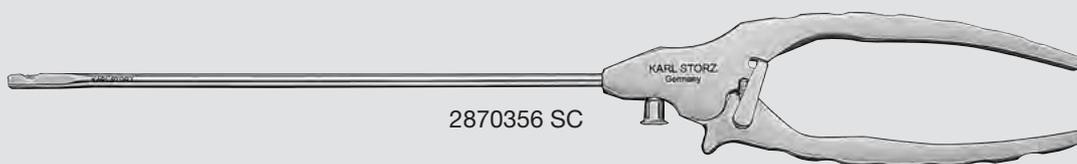


28179 HD

28179 HD **Threading Device**, for use with Suture Hooks 28179 HA – HC

Suture Instruments Shoulder Arthroscopy

Suture Cutters, Crochet Hook, Knot Pushers



2870356 SC



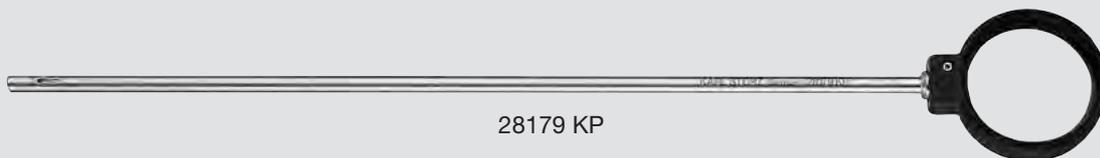
2870356 SC **Suture Cutter**, for cutting sutures size USP 2



28179 I



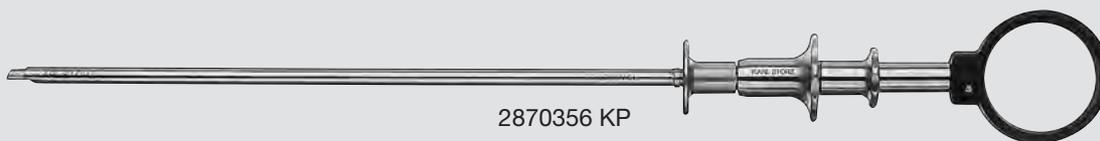
28179 I **Crochet Hook**, working length 15 cm



28179 KP



28179 KP **Knot Pusher**, working length 18 cm



2870356 KP



2870356 KP **Knot Pusher and Suture Cutter**, for cutting sutures up to size USP 2 including:
Insert and Blade
Handle



28180 CB



28180 CB

Elevator, width 4 mm, curved 15° downwards, also curved downwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm



28180 CC

Same, curved 30° downwards



28180 DC

Glenoid Rasp, width 4.5 mm, curved 30° upwards, also curved upwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm



28180 CE

S.L.A.P Rasp, width 4.5 mm, curved 30° downwards, also curved downwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm



28180 CF

Elevator, width 4 mm, curved 15° downwards, blade turned 180°, also curved downwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm



28180 CJ

Same, curved 30° downwards



28180 CL

Rasp, for use as Glenoid or S.L.A.P rasps, **double-sided**, width 4.5 mm, curved 30° downwards, also curved downwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm

Hand Instruments Shoulder Arthroscopy

for Treatment of Bone



28179 BB



28179 BB

Elevator, width 4 mm, 15° curved upwards, working length 15 cm



28179 BC

Elevator, width 4 mm, 30° curved upwards, working length 15 cm



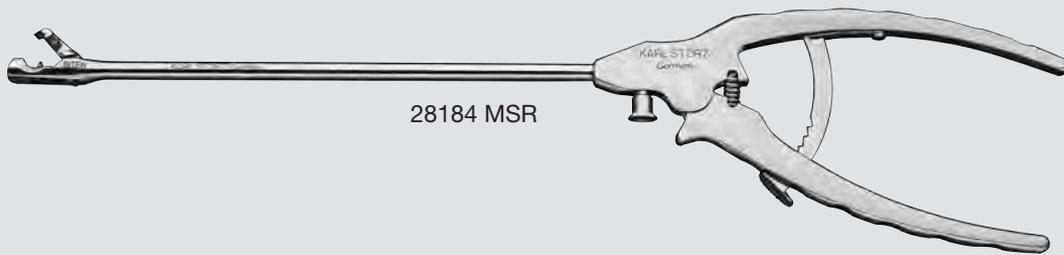
28179 CB

Glenoid Rasp, width 5.5 mm, 30° curved upwards, working length 15 cm



Special Features:

- Unique instrument for simple and precise tenotomy of the biceps tendon and/or biceps tenodesis
- Combined cutting and grasping instrument
- Anatomic design for optimal use



28184 MSR



28184 MSL **BITER®**, for the arthroscopic, terminal cutting of the biceps tendon, for the left shoulder
28184 MSR **Same**, for the right shoulder



Fig. 1: Exposure of the biceps tendon



Fig. 2: Introducing the BITER™ instrument and grasping the biceps tendon



Figs. 3 and 4: Cutting the biceps tendon and subsequent removal with the tendon grasped in the BITER™

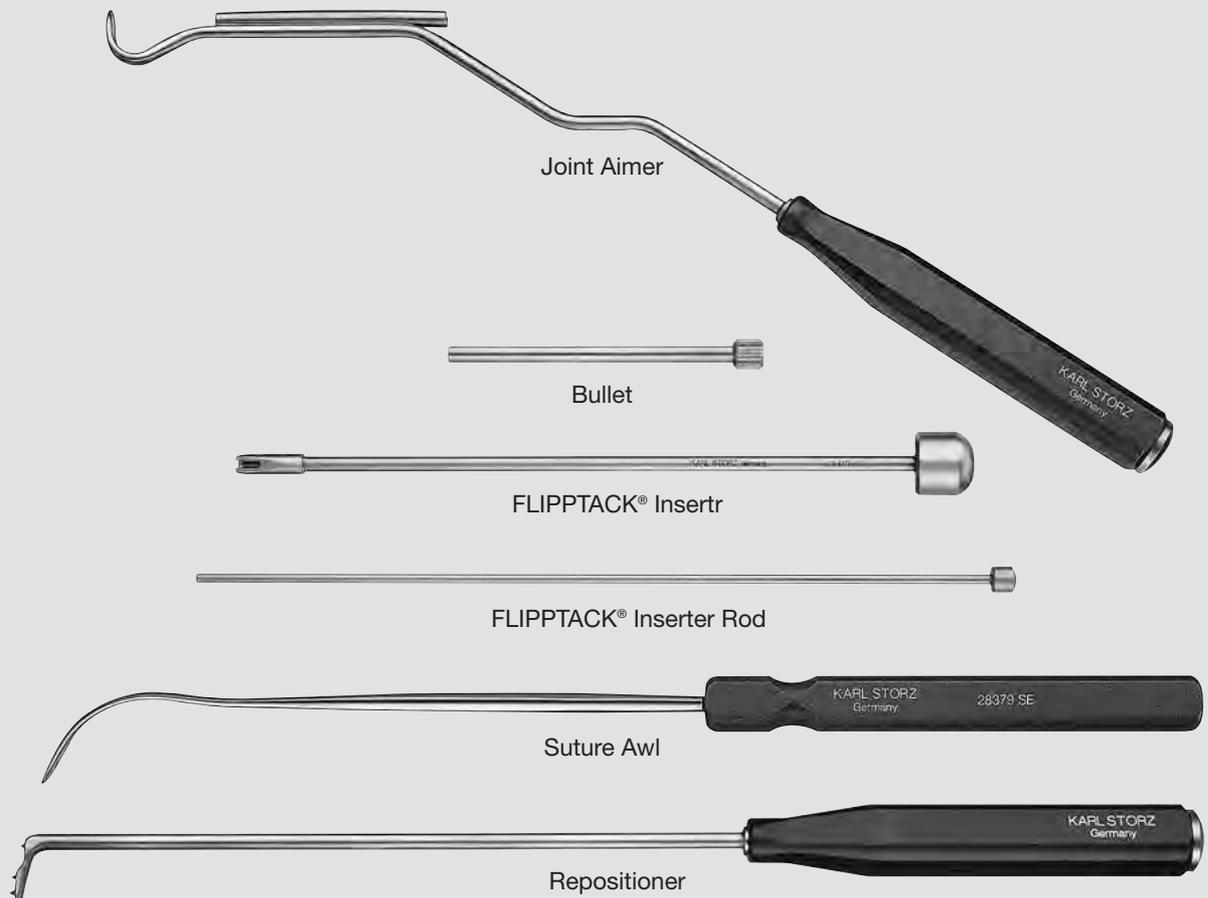
MINAR® Set

Minimally Invasive AC Joint Reconstruction

Special Features:

- Complete technique using a 3-cm skin incision
- Minimally invasive
- Easy application
- No need to remove implants
- Use of aimer protects neurovascular structures
- Compact instrument set

28379 S **MINAR® SET**, minimally invasive AC joint repair including:
AC Joint Aimer
Bullet
***FLIPPTACK® Inserter**
FLIPPTACK® Inserter Rod
Suture Awl
Repositioner



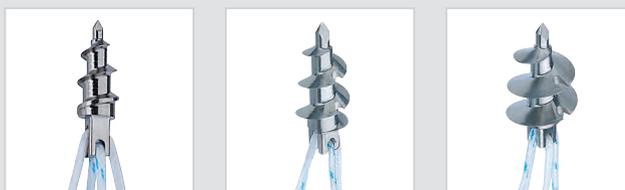
* **FLIPPTACK® Implants** see page 159
Components/Spare Parts see chapter 18

Implants for Shoulder Arthroscopy

Titanium Suture Anchors and Accessories

Special Features:

- Anchor is available in three different sizes
- Pre-loaded inserter for single use
- Anchors are pre-assembled with MegaFibre® threads USP 2-0
- Special MegaFibre® threads are made of braided, non-resorbable, ultra-high molecular polyethylene
- Extremely smooth surface and flat design ensures enhanced knot strength and distinguishes MegaFibre® threads from other threads such as polyester and polyblend
- Laser markings at the distal end aid orientation during anchor placement



2870309 ST



NEW

2870309 ST

Titanium Suture Anchor, diameter 3 mm, length 9 mm, with two MegaFibre® threads USP 2, pre-assembled, self-tapping, with inserter, sterile, for single use



2870514 TI



2870514 TI

Titanium Suture Anchor, diameter 5 mm, length 12.5 mm, with two MegaFibre® threads USP 2, pre-assembled, self-tapping, with inserter, sterile, for single use



2870614 TI



2870614 TI

Titanium Suture Anchor, diameter 6.5 mm, length 12.5 mm, with two MegaFibre® threads USP 2, pre-assembled, self-tapping, with inserter, sterile, for single use



28179 KS

Bone Punch, for use with Titanium Suture Anchors 2870514 TI, 2870614 TI and 2870309 ST

Implants for Shoulder Arthroscopy

BioPlug, bioresorbable and Drills

The suture anchor BioPlug consists of a special amorphous stereo copolymer (poly-(L-co-D/L-Lactide) in a ratio of 70/30).

Special Features:

- The implants consist of a special amorphous stereo copolymer (poly-(L-co-D, L-Lactide) in a ratio of 70/30)
- Biocompatible
- Very good degradation behavior
- Revisable



- 2870310 BP **BioPlug, bioresorbable suture anchor**, diameter 3.5 mm, length 10 mm, with one MegaFibre® USP 2 suture, sterile, for single use, for use with Inserter 28179 TK
- 2870411 BP **BioPlug, bioresorbable suture anchor**, diameter 4.2 mm, length 11 mm, sterile, for single use, for use with Inserter 28179 TI or 28179 KI
- 2870514 BP **BioPlug, bioresorbable suture anchor**, diameter 5.2 mm, length 14 mm, sterile, for single use, for use with Inserter 28179 TI



28179 TB



- 28179 TC **Drill**, for preparation of the tunnel for BioPlug 2870514 BP, with laser marking for the depth of the drill hole, diameter 4.6 mm, length 18 cm



- 28179 TB **Drill**, for preparation of the tunnel for BioPlug 2870411 BP, with laser marking for the depth of the drill hole, diameter 3.7 mm, length 15 cm



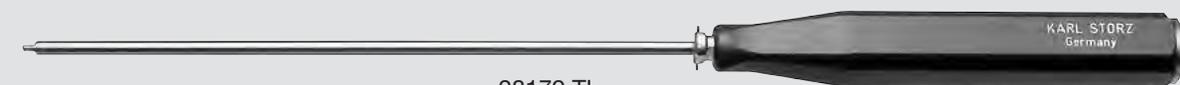
- 28179 TD **Drill**, for preparation of the tunnel for BioPlug 2870310 BP, with laser marking for the depth of the drill hole, diameter 2.7 mm, length 15 cm

Note:

The doctor-to-doctor manual "Shoulder Arthroscopy" from Georg LAJTAI, M.D. (university lecturer) is available on request (96155008).

Implants for Shoulder Arthroscopy

Inserters, Glenoid Guide, Mallet



28179 TI



28179 TI

Inserter, with lateral thread guide and thread clip at the handle, working length 18 cm, for use with BioPlug 2870411 BP and 2870514 BP

28179 TK

Inserter, with lateral thread guide and thread clip at the handle, working length 18 cm, for use with BioPlug 2870310 BP

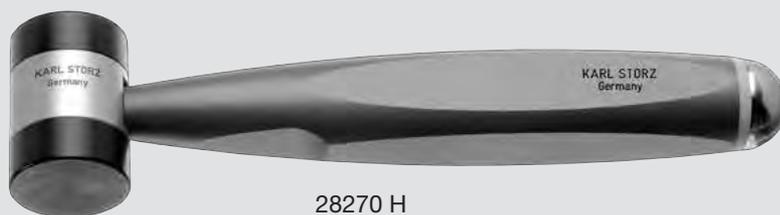


28179 GG



28179 GG

Glenoid Guide, working length 12.5 cm, for use with BioPlug 2870411 BP, 2870310 BP and Drills 28179 TB/TD



28270 H

28270 H

Mallet, ergonomic handle, two plane faces, length 17 cm, color code: blue





INSTRUMENTS FOR HIP ARTHROSCOPY

HPS – HIP PORTAL SYSTEM

222-232



HPS – Hip Portal System

The HPS – Hip Portal System provides the ideal synthesis between a cannulated access/arthroscopy system and various hip instruments. It offers the

surgeon a complete instrument set for safe portal placement as well as diagnostic and therapeutic hip arthroscopy.

Benefits:

- Precise portal placement with cannulated system and target guide
- Versatile portal management:
 - a. Stable ports and safe fluid management
 - b. Half Pipe® – enhanced maneuverability and faster changeover of instruments
 - c. Portal-free instrumentation – maximum instrument flexibility
- Arthroscope sheath and instruments with longer working length
- Easier instrument changeover

Special Features:

- High-flow sheaths, specially designed for the hip, with an outer diameter 5.5 or 6 mm and a working length of 13.5 cm
- Fast, stable and reliable telescope and sheath connection
- Fully cannulated construction system
- Half Pipe®s, specially designed for the hip, for fast instrument changeover and greater flexibility of operating instruments



Note:

The doctor-to-doctor manual “A Guide To Hip Arthroscopy: Preparation, Positioning, Diagnosis, Indications and Technique – Tips and Tricks” from Dr. med. Manfred LAIS is available on request (96155014).

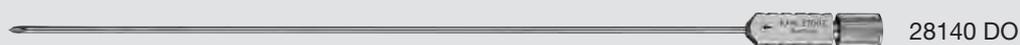
HPS – Hip Portal System

Instruments for Hip Arthroscopy



28140 GW

28140 GW **Guide Wire**, diameter 1.5 mm, working length 40 cm, package of 6



28140 DB

28140 DO

28140 DB **Puncture Needle**, diameter 2.1 mm, working length 21.3 cm, for use with Guide Wire 28140 GW and Obturator 28140 DO

28140 DO **Obturator**, for use with Puncture Needle 28140 DB



28140 W



28140 W **Changing Rod**, diameter 4.8 mm, working length 31 cm, for use with Arthroscope Sheaths 28130 CR/R and 28131 CR/R

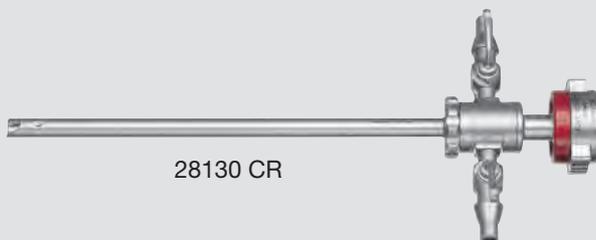


28140 WK **Changing Rod**, cannulated, diameter 4.8 mm, working length 31 cm, for use with Arthroscope Sheaths 28130 CR/R and 28131 CR/R as well as Guide Wire 28140 GW

HPS – Hip Portal System

Instruments for Hip Arthroscopy

Diameter 6 mm, color code red and diameter 5.5 mm, color code blue, working length 13.5 cm, for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm



28130 CR

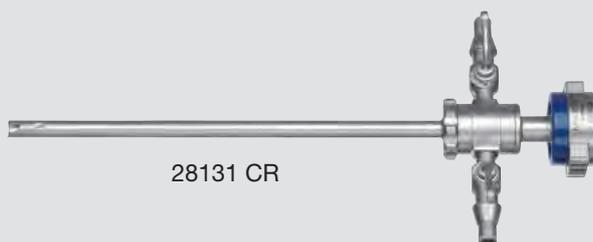


28130 CR

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28130 BC/BT, 28140 O, color code: red

28130 R

Same, one stopcock



28131 CR

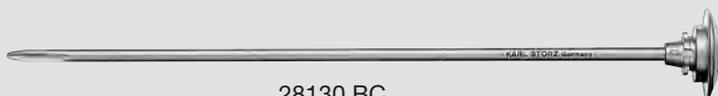


28131 CR

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 5.5 mm, working length 13.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® telescopes 0°, 30°, 70° and Obturators 28130 BC/BT, 28140 O, color code: blue

28131 R

Same, one stopcock



28130 BC

28130 BC

Obturator, blunt



28140 O

28140 O

Obturator, cannulated, with handle, diameter 4.8 mm

HPS – Hip Portal System

Instruments for Hip Arthroscopy



28140 D

28140 D **Gasket Attachment**, with cone, including Gasket 28140 GU, for use with all Arthroscope Sheaths



28140 GU

28140 GU **Gasket**, for single use, unsterile, single-packaged, for use with Gasket Attachment 28140 D



28140 T



28140 T **Probe**, graduated, length of hook 3 mm, diameter 1.5 mm, working length 18 cm

28140 TL **Same**, working length 21.5 cm



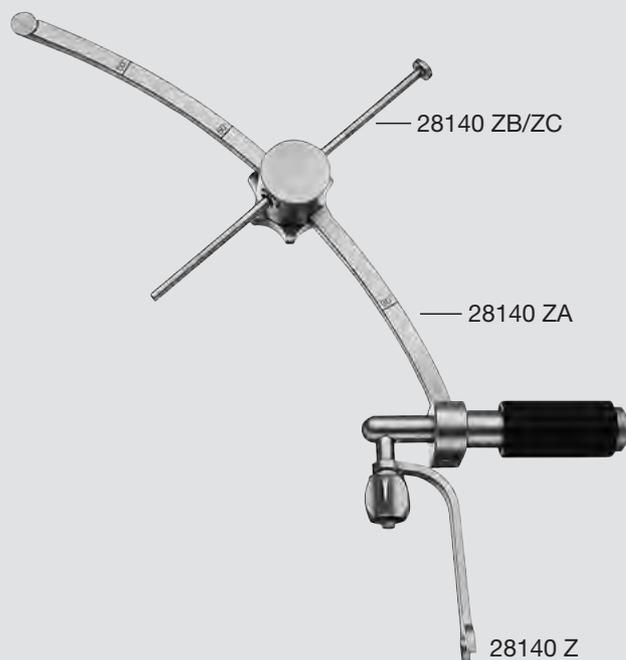
28140 TA **Probe**, graduated, length of hook 3 mm, angled downwards 10°, diameter 1.5 mm, working length 20 cm



28140 TB **Same**, angled downwards 20°

HPS – Hip Portal System

Instruments for Hip Arthroscopy



- 28140 Z **Aimer, complete**, for portal placement in hip arthroscopy, for use with KARL STORZ arthroscope sheaths with a working length of 13.5 cm including:
- Aimer**, with attachment for bullets
 - Bullet**, short, working length 10.5 cm
 - Bullet**, long, working length 14.5 cm

Components/Spare Parts see chapter 18

HPS – Hip Portal System

Instruments for Hip Arthroscopy



28140 HD

28140 HC

28140 GH

28140 HD **Half Pipe**®, for use in hip arthroscopy, handle rotated 90°, handle axis 120°, working length 95 mm

28140 HC **Half Pipe**®, for use in hip arthroscopy, handle rotated 90°, handle axis 120°, distal end flat, atraumatic tip, working length 120 mm

28140 GH **Half Pipe**®, for use in hip arthroscopy, handle axis 90°, with extra slim distal design, working length 95 mm

HPS – Hip Portal System

Instruments for Hip Arthroscopy



28140 SA

- 28140 SA **Cannula**, with thread, transparent, inner diameter 6.1 mm, working length 9 cm, for single use, unsterile, single-packaged, for use with Dilator 28140 EB
- 28140 SB **Same**, working length 12 cm, for use with Dilator 28140 EC
- 28140 SC **Cannula**, with thread, transparent, inner diameter 8.25 mm, working length 9 cm, for single use, unsterile, single-packaged, for use with Dilator 28140 FB
- 28140 SD **Same**, working length 12 cm, for use with Dilator 28140 FC



28179 DG



28179 OG

- 3x* 28179 DG **Valve Housing**, with LUER-Lock, for use with Set of Gaskets 28179 GU/GS
- 3x* 28179 OG **Valve Housing**, without LUER-Lock, for use with Cannulas and Set of Gaskets 28179 GU/GS



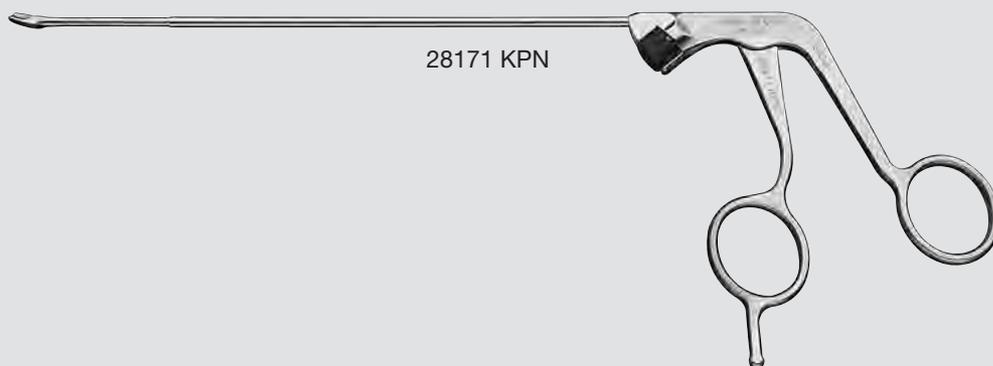
28179 GU

- 28179 GU **Set of Gaskets**, 10x 2 sealing caps, unsterile, for use with Valve Housing 28179 DG/OG
- 28179 GS **Set of Gaskets**, 10x 2 sealing caps, sterile, for use with Valve Housing 28179 DG/OG

* No. of items recommended

HPS – Hip Portal System

Instruments for Hip Arthroscopy



28171 KPN



28171 KPN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, curved jaws, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 19 cm



28171 KUN **SilCut® Punch**, through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 15° curved upwards, handle with cleaning connector, working length 19 cm



28171 KGN **SilGrasp® Foreign Body Grasper**, aggressive, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 19 cm

28171 KGSN **Same**, with ratchet

HPS – Hip Portal System

Instruments for Hip Arthroscopy



28140 CD



28140 CD

Microfracture Chisel, curved 30°,
working length 18 cm



28140 CE



28140 CE

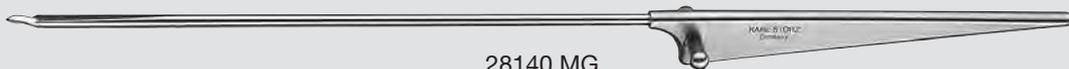
Microfracture Chisel, curved 70°,
working length 18 cm



533 TVA

533 TVA

Adaptor, autoclavable, permits telescope
changing under sterile conditions



28140 MG



28140 MG

Pointed Knife, curved, double-edged,
working length 18 cm



INSTRUMENTS FOR HAND ARTHROSCOPY AND FOR THE TREATMENT OF CARPAL TUNNEL SYNDROME



HOPKINS® TELESCOPES, Diameter 1.9 and 2.4 mm, ARTHROSCOPE SHEATHS, Diameter 2.5 – 3.5 mm, OBTURATORS 235-236

PROBES, CHANGING RODS, SICKLE KNIFE 237

PORTAL SYSTEMS 238-239

SilCut® 1 PUNCHES 240-241

MICROFRACTURE CHISELS 242

VITOM®, ENDOSCREW SYSTEM 243-249

INSTRUMENTS FOR ENDOSCOPIC TREATMENT OF THE CARPAL TUNNEL SYNDROME 250-252

ENDOSCOPIC TREATMENT OF THE SULCUS ULNARIS SYNDROME 253-256

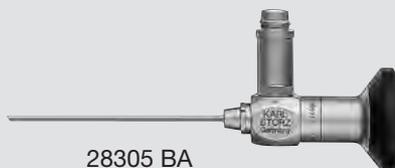
NERVE COMPRESSION SYNDROME 257-262



HOPKINS® Telescopes

for use with Arthroscope Sheaths

Diameter 1.9 mm, length 6.5 cm



28305 BA



28305 BA

HOPKINS® Forward-Oblique Telescope 30°, diameter 1.9 mm, length 6.5 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

Diameter 2.5 mm, working length 4 cm



28306 BN



28306 BN

High-Flow Arthroscope Sheath, with standard coupling mechanism, diameter 2.5 mm, working length 4 cm, one stopcock, **fixed**, for use with HOPKINS® Telescope 30° 28305 BA and Obturators 28306 BS/BT, *color code: red



28306 BS



28306 BS

Obturator, sharp, for use with Arthroscope Sheath 28306 BN



28306 BT

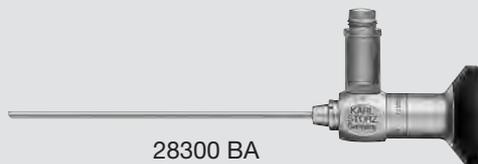
Same, blunt

*Note: For an overview of color codes for HOPKINS® Telescopes see page 70

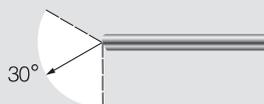
HOPKINS® Telescopes

for use with Arthroscope Sheaths

Diameter 2.4 mm, length 10 cm



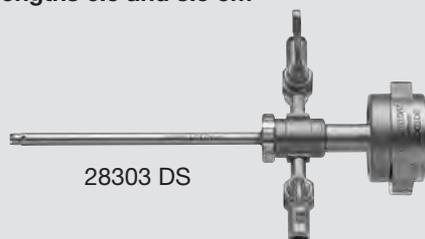
28300 BA



28300 BA

HOPKINS® Wide Angle Forward-Oblique Telescope 30°, diameter 2.4 mm, length 10 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

Diameters 3.5 and 3.2 mm, working lengths 6.5 and 8.5 cm

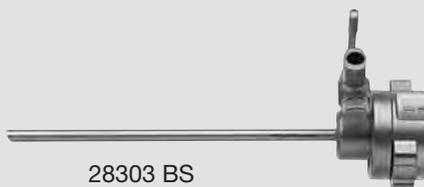


28303 DS



28303 DS

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 3.5 mm, working length 6.5 cm, two stopcocks, **rotatable**, for use with HOPKINS® Telescope 30° 28300 BA and Obturators 28302 BU/BV



28303 BS



28303 BS

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, diameter 3.2 mm, working length 8.5 cm, one stopcock, **fixed**, for use with HOPKINS® Telescope 30° 28300 BA and Obturators 28302 BU/BV



28302 BU



28302 BU

Obturator, sharp, for use with Arthroscope Sheaths 28303 DS/BS



28302 BV

Same, blunt

*Note: For an overview of color codes for HOPKINS® Telescopes see page 70

Probes, Changing Rods, Sickle Knife



28302 S



28302 S

Probe, graduated, length of hook 1 mm, diameter 1 mm, working length 7.5 cm



28145 SN

28145 SN

Probe, graduated, length of hook 2 mm, diameter 1 mm, working length 4 cm



28124 BZ

28124 BZ

Changing Rod, diameter 2.7, working length 23 cm, for use with Arthroscope Sheath 28132 CR



28302 W

28302 W

Changing Rod, diameter 2 mm, working length 15 cm, for use with Arthroscope Sheaths 28303 CR, 28303 DS



28302 M



28302 M

Sickle Knife, bayonet-shaped, diameter 1.5 mm, working length 7.5 cm

Portal Systems for Arthroscopy

Small joint arthroscopy is a routine procedure in which the establishment and maintenance of portals plays an important role. In order to perform safe and effective

arthroscopy, threaded portals were developed. These enable the portals to be maintained and achieve good dilation of the joint capsule.

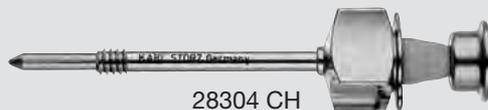
Special Features:

- Sealing of the joint for better expansion of the joint capsule
- Self-retaining portal due to thread turns
- No risk of the telescope or instrument slipping out
- Quicker to change ports



Portal Systems for Arthroscopy

Diameter 5 mm, working length 5 cm,
for instruments up to diameter 3.5 mm, working length 13 cm



Size:		5 mm
Working length:		5 cm
Color code:		red-yellow
	KÖNIGSBERGER Trocar with Thread including: Cannula Trocar, with pyramidal tip Automatic Valve	28304 CH 28304 EB 28304 DU 28304 E1
	KÖNIGSBERGER Trocar with Thread including: Cannula Trocar, with blunt tip Automatic Valve	28304 DH 28304 EB 28304 DV 28304 E1

Diameter 4.5 mm, working length 2.5 cm,
for instruments up to diameter 3 mm, working length 10 cm



Size:		4.5 mm
Working length:		2.5 cm
Color code:		red-yellow
	KÖNIGSBERGER Trocar with Thread including: Cannula Trocar, with pyramidal tip Automatic Valve	28304 AH 28304 EA 28304 EU 28304 E1
	KÖNIGSBERGER Trocar with Thread including: Cannula Trocar, with blunt tip Automatic Valve	28304 BH 28304 EA 28304 EV 28304 E1

Telescopes for use with trocars size 5 and 4.5 mm see pages 235-236



Experience Meets Innovation

The hand instruments in the new SilCut® 1 product line set new standards in resection. In addition to the new precise and powerful cutting geometry, a striking feature of these instruments is their excellent tactile feedback. This allows the safe and effective removal of pathologies and also provides the user with tactile connection to the tissue. The extremely flat jaw construction enables work even in very tight joint areas in a manner that is gentle to cartilage. Another groundbreaking feature of SilCut® 1 is its new integrated cleaning connector which seamlessly fits into the KARL STORZ CLEANFIT® range of instruments.

- **Powerful and precise cutting geometry**
- **Extremely flat jaws (< 3 mm)**
- **Various jaw types**
- **Connector integrated in the handle for optimum cleaning from the proximal to the distal end**
- **Outstanding surface properties**
- **Ergonomic handle for better “tactile feedback”**
- **Greater stability**
- **Minimized tolerances due to optimized manufacturing technology**



SilCut® 1 Punches *NEW*
for Small Joint Arthroscopy



28572 AD



28572 AD

SilCut® 1 Punch, through-cutting, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 AE

SilCut® 1 Punch, through-cutting, cutting width 1 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 O

SilCut® 1 Oval Biter, through-cutting, cross-toothed, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 NJ



28572 NJ

Suture Forceps, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

Microfracture Chisels

Special Features:

- Complete set for the treatment of cartilage defects
- Suitable for perforation of the corticalis
- Treatment by hand pressure or with a light tap of the mallet
- Ergonomic handle
- Autoclavable



28728 CG



28728 CG

Microfracture Chisel, angled 30°, working length 9 cm



28728 CH

Same, angled 70°

Please note: Provided that an initial order is placed, it is recommended to buy a complete set of instruments.

The VITOM® system offers a possibility to display open surgical interventions with an incision length of up to approx. 12 cm in a high-quality manner. The VITOM® exoscope is based on the renowned HOPKINS® rod lens system from KARL STORZ.

Unlike an arthroscope, the VITOM® exoscope is not inserted into the joint but placed at a working distance of 25 – 75 cm above the surgical field with the help of a holding system. This gives the surgeon more room to work.

The VITOM® system offers:

- Excellent FULL HD image quality
- Great depth of view
- Large working distance
- High flexibility thanks to VITOM® exoscope 0° and 90° versions
- Optimal illumination due to integrated lighting
- Compact design requiring minimal space in the OR
- Use of existing KARL STORZ FULL HD endoscopy system possible

The VITOM® system is suitable for the visualization of the following procedures in hand surgery:

- Fasciectomy (Dupuytren's contracture)
- Arthroplasty
- Ulnar-shortening osteotomy
- Ulnar and radial head prosthesis
- Four-corner fusion
- Annular ligament transection
- Neurolysis

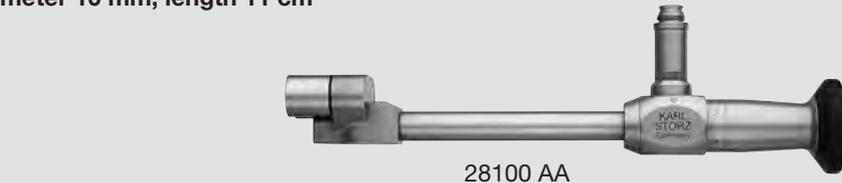


Using the VITOM® system in hand surgery

OR photographs courtesy of: Prof. Dr. Christophe Mathoulin, Institut le la Main, Clinique Jouvenet, Paris, France

For further information on the VITOM® system see chapter 14, VITOM®

Diameter 10 mm, length 11 cm

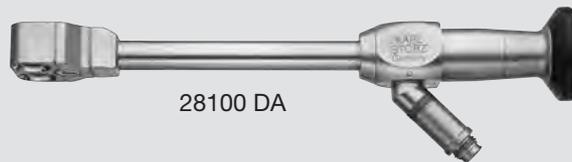


28100 AA



28100 AA

VITOM® Telescope 0° with Integrated Illuminator,
VITOM® HOPKINS® straight forward telescope 0°, working distance 25 – 75 cm, length 11 cm, **autoclavable**, with fiber optic light transmission incorporated and condensor lenses, color code: green



28100 DA



28100 DA

VITOM® Telescope 90° with Integrated Illuminator,
VITOM® HOPKINS® telescope 90°, working distance 25 – 75 cm, length 11 cm, **autoclavable**, with fiber optic light transmission incorporated and condensor lenses, color code: blue

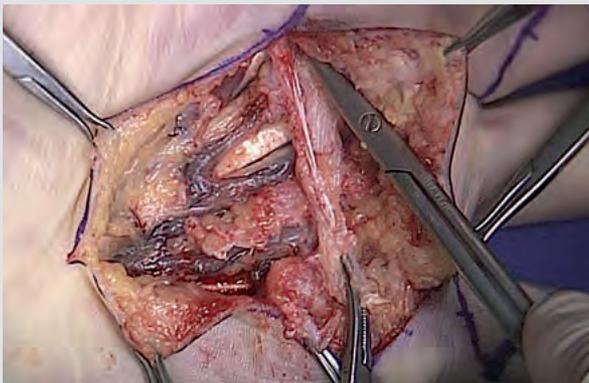


Fig. 1: Fasciectomy, visualized with the VITOM® system



Fig. 2: Ulnar head prosthesis, visualized with the VITOM® system



Fig. 3: Annular ligament transection, visualized with the VITOM® system



Fig. 4: Four-corner fusion, visualized with the VITOM® system

For further information on the VITOM® system see chapter 14, VITOM®

ENDOSCREW System

Cannulated Screw System with Target Guide

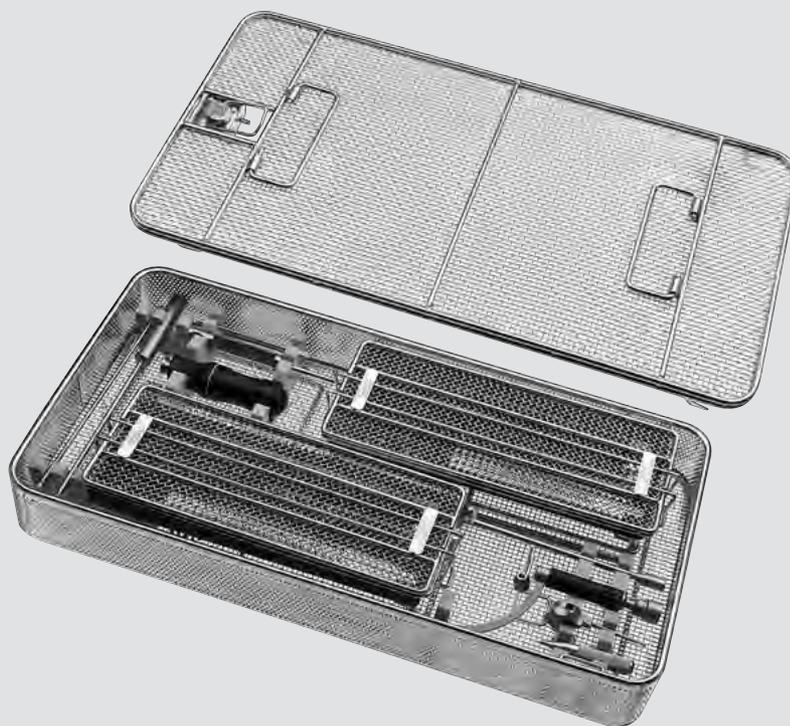
This system was developed for treating osteosyntheses, refixations, arthrodeses and corrective osteotomies in small joints.

The system can be used for both endoscopic and open surgical interventions. To provide an optimal display of the operative field in open surgical procedures, the VITOM® system proves to be particularly useful.

This innovative system is excellent for documenting surgical procedures and an ideal teaching and training aid. Furthermore, 100 % compatibility of the VITOM® system with existing KARL STORZ HD endoscopy systems is guaranteed.

Indication possibilities

- Endoscopically controlled or open osteosyntheses
- Placement of Kirschner wires during partial arthrodesis
- Percutaneous osteosynthesis
- Temporary transmetacarpal blockages
- Percutaneous screw fixation



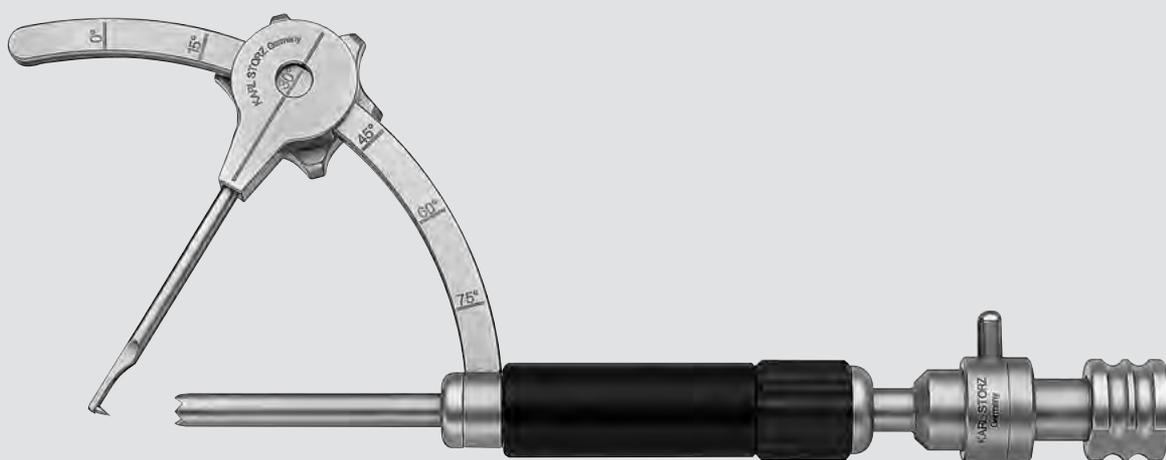
For further information on the VITOM® system see pages 243-244 and chapter 14, VITOM®

ENDOSCREW System

Target Guide

Special Features:

- Target guide with repositioning aid
- Compression aid
- Suitable for both endoscopic and open surgery



28310 Z

28310 Z

Target Guide, complete
including:
Target Hook
Guide Tube
Insert

Components/Spare Parts see chapter 18

ENDOSCREW System

Drills, Implants and Tray for Diameter 2.1 mm



28310 KKK

- 28310 KKK **Core Hole Drill**, short, system diameter 2.1 mm
- 28310 KKL **Core Hole Drill**, long, system diameter 2.1 mm



28310 KGL

- 28310 KGK **Gliding Hole Drill**, short, system diameter 2.1 mm
- 28310 KGL **Gliding Hole Drill**, long, system diameter 2.1 mm



28310 KH

- 28310 KA **ENDOSCREW**, blue, cannulated, diameter 2.1 mm, length 6 mm, unsterile
- 28310 KB **Same**, length 7 mm
- 28310 KC **Same**, length 8 mm
- 28310 KD **Same**, length 9 mm
- 28310 KE **Same**, length 10 mm
- 28310 KF **Same**, length 11 mm
- 28310 KG **Same**, length 12 mm
- 28310 KH **Same**, length 13 mm
- 28310 KI **Same**, length 14 mm
- 28310 KJ **Same**, length 15 mm
- 28310 KK **Same**, length 16 mm
- 28310 KL **Same**, length 17 mm
- 28310 KM **Same**, length 18 mm
- 28310 KN **Same**, length 19 mm
- 28310 KO **Same**, length 20 mm
- 28310 KP **Same**, length 22 mm
- 28310 KQ **Same**, length 24 mm
- 28310 KR **Same**, length 26 mm
- 28310 KS **Same**, length 28 mm
- 28310 KT **Same**, length 30 mm



28310 TRK

- 28310 TRK **Tray System 2.1**, for the sterilization and storage of instruments

ENDOSCREW System

Drills, Implants and Tray for Diameter 2.5 mm



28310 GKK

28310 GKK **Core Hole Drill**, short, system diameter 2.5 mm

28310 GKL **Core Hole Drill**, long, system diameter 2.5 mm



28310 GGL

28310 G GK **Gliding Hole Drill**, short, system diameter 2.5 mm

28310 GGL **Gliding Hole Drill**, long, system diameter 2.5 mm



28310 GA

28310 GA **ENDOSCREW**, gold, cannulated, diameter 2.5 mm, length 6 mm, unsterile

28310 GB **Same**, length 7 mm

28310 GC **Same**, length 8 mm

28310 GD **Same**, length 9 mm

28310 GE **Same**, length 10 mm

28310 GF **Same**, length 11 mm

28310 GG **Same**, length 12 mm

28310 GH **Same**, length 13 mm

28310 GI **Same**, length 14 mm

28310 GJ **Same**, length 15 mm

28310 GK **Same**, length 16 mm

28310 GL **Same**, length 17 mm

28310 GM **Same**, length 18 mm

28310 GN **Same**, length 19 mm

28310 GO **Same**, length 20 mm

28310 GP **Same**, length 22 mm

28310 GQ **Same**, length 24 mm

28310 GR **Same**, length 26 mm

28310 GS **Same**, length 28 mm

28310 GT **Same**, length 30 mm

28310 GU **Same**, length 35 mm

28310 GV **Same**, length 40 mm

28310 GW **Same**, length 45 mm

28310 GX **Same**, length 50 mm



28310 TRG

28310 TRG **Tray System 2.5**, for the sterilization and storage of instruments

ENDOSCREW System

Depth Gauges, Screwdrivers, Larding Wires, Inbus,
Shims, Wire Tray



28310 TK

28310 TK **Depth Gauge**, short, for use with system diameter 2.1 mm and system diameter 2.5 mm

28310 TL **Same**, long



28310 SK

28310 SK **Screwdriver**, short, cannulated

28310 SL **Same**, long



28310 SD

28310 SD **Handle**, for use with Screwdriver 28310 SK/SL



28310 I

28310 IA

28310 I **Inbus**, for use with Inbus Attachment 28310 IA

28310 IA **Inbus Attachment**, for use with Inbus 28310 I

28310 DG

28310 DK **Larding Wire**, pyramidal tip, diameter 0.8 mm, length 12 cm, package of 10, for use with system diameter 2.1 mm

28310 DG **Same**, length 21 cm

28310 FK **Larding Wire**, pyramidal tip, diameter 1 mm, length 12 cm, package of 10, for use with system diameter 2.5 mm

28310 FG **Same**, length 21 cm



28310 U

28310 U **Shim**, 0.7 mm, package of 10

28310 UB **Same**, 1.4 mm



28310 C **Wire Tray**, for KÖNIGSBERGER screw set, with removable Screw Tray System 2.5 28310 TRG and Tray System 2.1 28310 TRK, outer dimensions (w x h x d): 480 x 250 x 70 mm

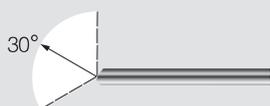
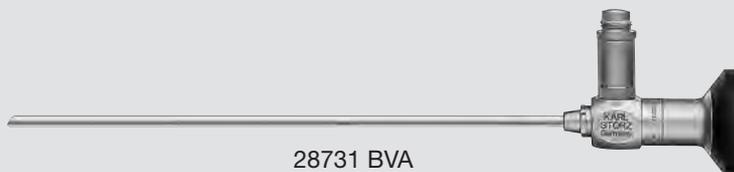
Instruments for Endoscopic Treatment of the Carpal Tunnel Syndrome

2-Portal Technique

Compared to open operating procedures, endoscopic cutting of the carpal ligament greatly reduces discomfort resulting from skin incision.

In this method, endoscope and instruments are introduced simultaneously from proximal and distal into the carpal tunnel and the carpal ligament is then severed

under optical control. The clear and detailed picture from the HOPKINS® telescope allows precise optical control of the operation. All instruments can be sterilized and reused and therefore also help to reduce instrument costs.



28731 BVA **HOPKINS® Wide Angle Forward-Oblique Telescope 30°**, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light connector in line of sight, fiber optic light transmission incorporated, color code: red

28216 BVA **HOPKINS® Forward-Oblique Telescope 30°**, diameter 4 mm, length 11 cm, **autoclavable**, fiber optic light connector in line of sight, fiber optic light transmission incorporated, color code: red

Instruments for Endoscopic Treatment of the Carpal Tunnel Syndrome

2-Portal Technique – Long and Short Version



28147 C



28147 CO

28147 C **GILBERT Operating Sheath**, continuously slotted, diameter 5.5 mm, working length 9 cm, for use with Obturator 28147 CO, HOPKINS® Telescopes 28731 BVA, 28216 BVA and Telescope Sheaths 28147 CL/CK

28147 CO **Obturator**, blunt, with attached segment, for use with Operating Sheath 28147 C



28147 E



28147 E **GILBERT Rasp**, for preparation of the carpal ligament

Instruments for Endoscopic Treatment of the Carpal Tunnel Syndrome

2-Portal Technique



28147 SA – SD

- 28147 S **Dilator Set**
including:
Dilator, diameter 4 mm
Dilator, diameter 5 mm
Dilator, diameter 6 mm
Dilator, diameter 7 mm



28147 R



28147 RM



- 28147 R **Knife**, retractable, backward cutting,
with exchangeable knife attachment,
diameter 3.5 mm, working length 9 cm



- 28147 RM **Knife Attachment**, backward cutting,
for use with Knife 28147 R

Components/Spare Parts see chapter 18

Endoscopic Treatment of the Sulcus Ulnaris Syndrome

Cubital Tunnel Syndrome

Apart from the carpal tunnel syndrome, the cubital tunnel syndrome (sulcus ulnaris syndrome) is the second most frequent peripheral nerve compression syndrome.

Standard surgical techniques require a skin incision of between 8 – 12 cm and, in many cases, are projected on the nerve in an unphysiological manner.

The endoscopic technique, however, only requires a skin incision of 1.5 – 2 cm and a longer neurolysis path (15 – 20 cm). This allows the transection of all fibrous arcades between the heads of the flexor carpi ulnaris muscle and thus provides better nerve decompression compared to previous methods.

With the endoscopic technique, a subcutaneous pocket is formed using a dressing and sponge holding forceps as a tunnel forceps where first an illuminating speculum is inserted and then a 4 mm endoscope with a dissector at its tip. Dissection is then performed under visual control.

The benefits of endoscopic surgery over previous methods are as follows:

- **Lower morbidity (> 90 % of patients can move their elbow freely within 24 hours)**
- **Rapid pathological improvement (> 95 % of patients within 24 hours)**
- **More rapid recovery**

Our experience shows that this technique has been successful in over 100 interventions, is safe and easy to learn and provides an excellent alternative to conventional open procedures.

The instrument set has also proved particularly valuable in endoscopic and minimally invasive surgery for radiohumeral and medial humeral epicondylitis, radial compression of the forearm (Wartenberg's syndrome) and the pronator syndrome.

*R. HOFFMANN, M.D.,
Oldenburg, Germany*

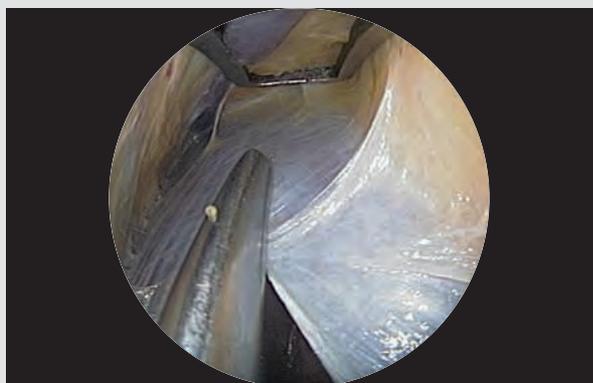


Fig. 1: Endoscopic division of the forearm fascia

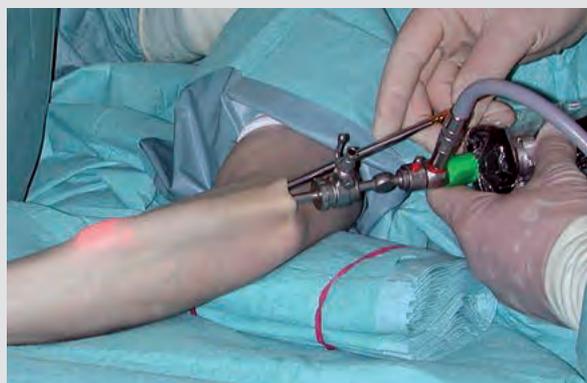
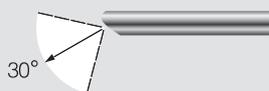
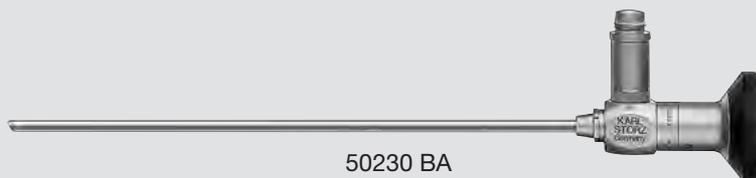


Fig. 2: "Long-distance" decompression (15 cm) towards the distal end

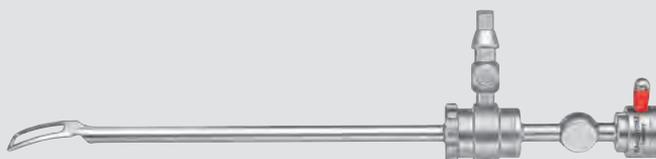
Endoscopic Treatment of the Sulcus Ulnaris Syndrome

Cubital Tunnel Syndrome



50230 BA

HOPKINS® Forward-Oblique Telescope 30°, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

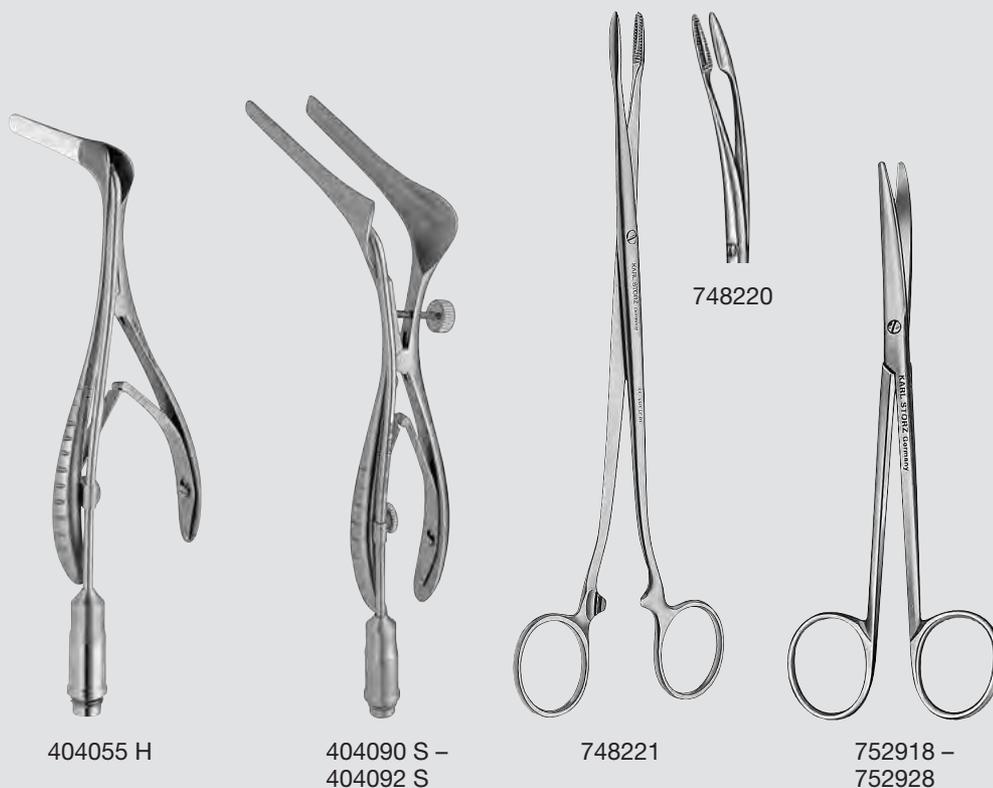


50200 ES

Optical Dissector, with distal spatula, fenestrated, large, sharp, for use with HOPKINS® telescopes 30°

Endoscopic Treatment of the Sulcus Ulnaris Syndrome

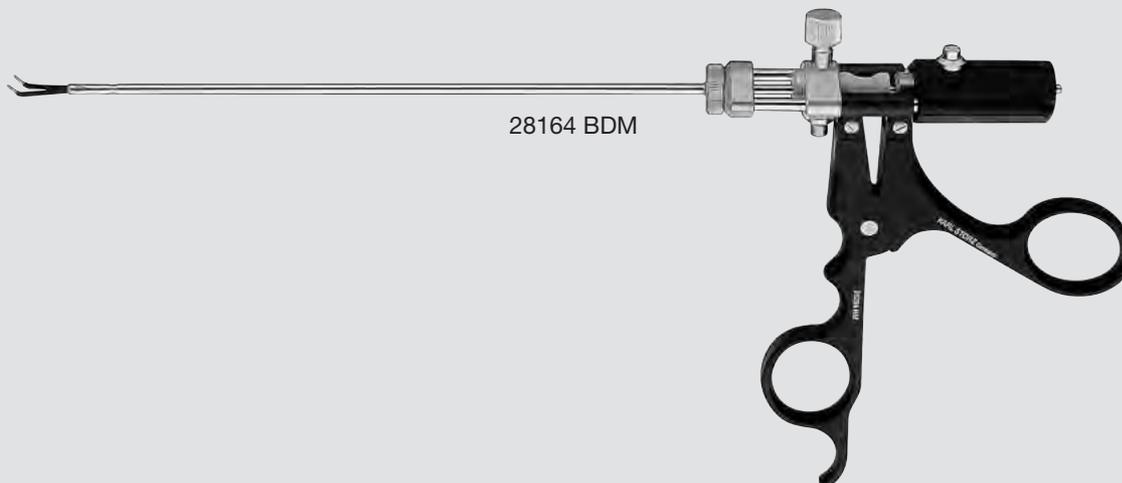
Cubital Tunnel Syndrome



- | | |
|----------|---|
| 404055 H | COTTLE Speculum , with fiber optic light carrier, without set screw, special matt finish, blade length 55 mm, length 13 cm |
| 404090 S | Speculum , with fiber optic light carrier, with set screw, blade length 90 mm, length 13.5 cm |
| 404092 S | Same , blade length 110 mm |
| 748220 | DUPLAY Dressing and Sponge Holding Forceps , curved, with ratchet, length 21 cm |
| 748221 | Same , straight |
| 752918 | METZENBAUM Scissors , curved, length 18 cm |
| 752923 | Same , length 23 cm |
| 752928 | Same , length 28 cm |

Endoscopic Treatment of the Sulcus Ulnaris Syndrome

Cubital Tunnel Syndrome



28164 BDM



28164 BDM **TAKE-APART® Bipolar Forceps**, with fine jaws, width 1 mm, distally angled 45°, horizontal closing, outer diameter 3.4 mm, length 20 cm

including:

Bipolar Ring Handle

Outer Sheath

Inner Sheath

Forceps Insert



Additional Forceps Insert:

26184 PTS **TAKE-APART® TAN Forceps Insert**, size 3 mm, length 20 cm

Components/Spare Parts see chapter 18

Nerve Compression Syndrome

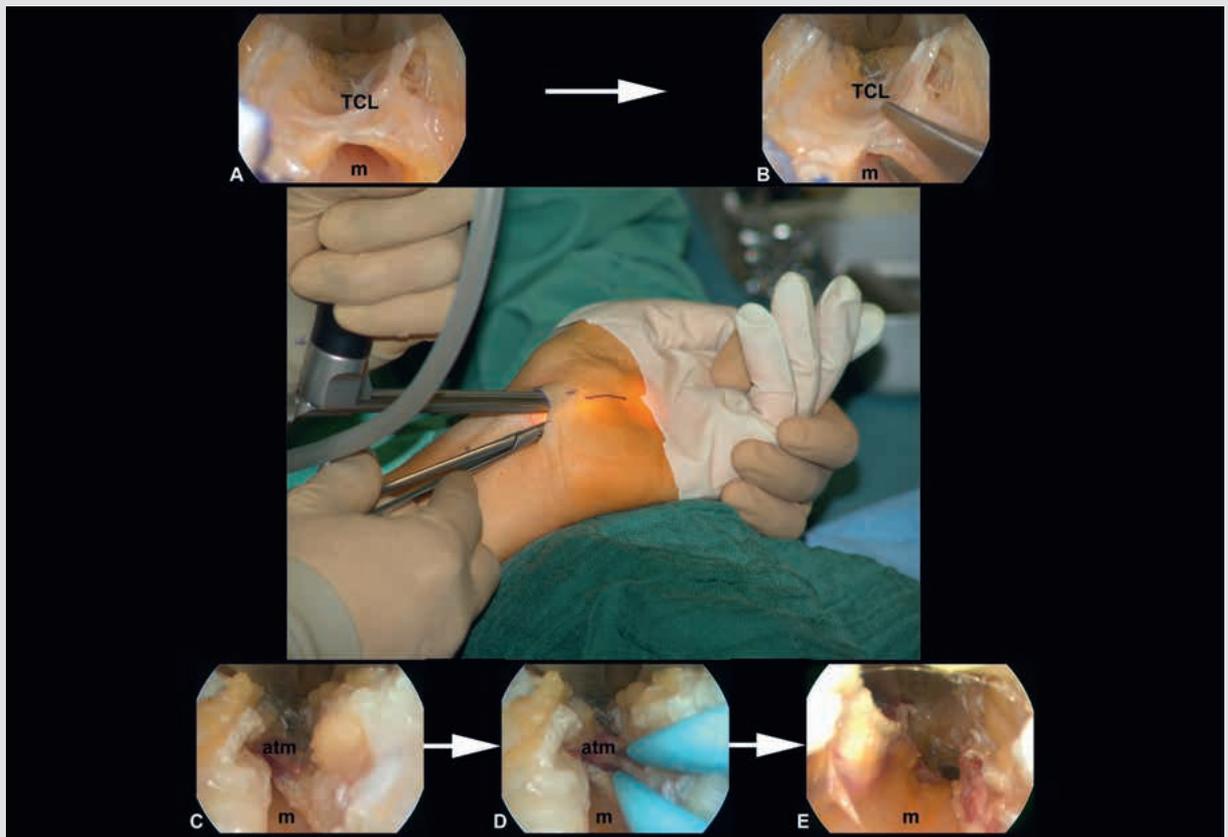
Endoscopic Decompression and Nerve Transposition for the Treatment of the Peripheral Nerve Compression Syndrome

Endoscopic techniques have come to play an increasingly important role in the surgical treatment of various nosological entities, facilitated and accelerated through the sustained development and commercial availability of surgical tools. Minimally invasive techniques represent the contemporary gold standard in many surgical conditions, whereas in others, they remain an ancillary option for assisting an open procedure for cosmetic reasons. Decompressive surgery for solitary neuropathies without a concomitant pathology should be governed by the following principles: release all (including potential) compression sites at the given anatomical location, preserve the neural vascularity, if possible (relating to the ulnar nerve) transpose the nerve to a more favorable site, where a recurrent compression is discouraged, and permit early mobilization of the associated joint. These goals are elegantly achieved in a safe manner using the minimally invasive endoscopic technique we have evolved.

This technique principally differs from the temporarily advocated endoscopic carpal tunnel release (ECTR). In the ECTR the space between the median nerve and the transverse carpal ligament is dilated by a

bouge. Later the endoscope is introduced into this dilated space to cut the overlying ligament. The nerve itself is not visualized herewith. Similar principles have been applied to release entrapments of the ulnar nerve in the cubital canal and the tibial nerve in the tarsal tunnel. Concerns have been shown in regards to the blind introduction of a dilator into an already cramped space between the nerve and the compressing ligament, making potential nerve injury or inappropriate introduction probable, especially in inexperienced hands. Moreover, transposition of nerves is excluded. The technique we have evolved, on the contrary, does not call for the introduction of a dilator, offers a bird-eye's view of the manipulated structures and all its branches and nourishing vessels, is easy in handling and the learning curve is without the potential hazards listed above.

*K. G. KRISHNAN, M. D.,
Abteilung Neurochirurgie,
Universitätsklinikum Carl Gustav Carus, Dresden,
Germany*



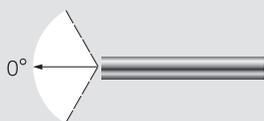
Nerve Compression Syndrome

Endoscopic Decompression and Nerve Transposition for the Treatment of the Peripheral Nerve Compression Syndrome

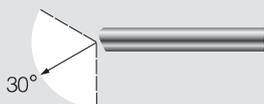


28163 RKS

- 28163 RKS **Optical Retractor**, with handle, with cut-off hole for suction, width of blade at proximal end 8 mm, at distal end 7.5 mm, with fixation screw for control of penetration depth of endoscope, for use with Irrigation Sheath 28163 RSA/RSB and HOPKINS® telescopes diameter 4 mm
- 28163 RKB **Same**, width of blade at proximal end 15 mm
- 28163 RSA **Irrigation Sheath 0°**, outer diameter 4.8 x 6 mm, working length 14 cm, for Optical Retractors 28163 RKB/RKS, for use with HOPKINS® telescopes diameter 4 mm and KARL STORZ lens irrigation system CLEARVISION®II
- 28163 RSB **Same, 30°**



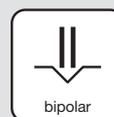
- 28731 AWA **HOPKINS® Wide Angle Straight Forward Telescope 0°**, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green



- 28731 BWA **HOPKINS® Wide Angle Forward-Oblique Telescope 30°**, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

Nerve Compression Syndrome

Endoscopic Decompression and Nerve Transposition for the Treatment of the Peripheral Nerve Compression Syndrome



28163 BP

28163 BP **Bipolar Coagulation Forceps**, insulated, angled tip, blunt, tip 1 mm, length 19 cm, for use with Bipolar High Frequency Cords 847000 E or 847000 A/M/T/V



28163 BPB

28163 BPB **Bipolar Coagulation Forceps**, insulated, bayonet-shaped, slender, blunt, tip 0.5 mm, length 19 cm, for use with Bipolar High Frequency Cords 847000 E or 847000 A/F/M/N/S/T/V



844523

844523 **Bipolar Coagulation Forceps**, insulated, bayonet-shaped, tip 0.7 mm, length 23 cm, for use with Bipolar High Frequency Cords 847000 E or 847000 A/F/M/N/S/T/V

Nerve Compression Syndrome

Endoscopic Decompression and Nerve Transposition for the Treatment of the Peripheral Nerve Compression Syndrome



28163 EK

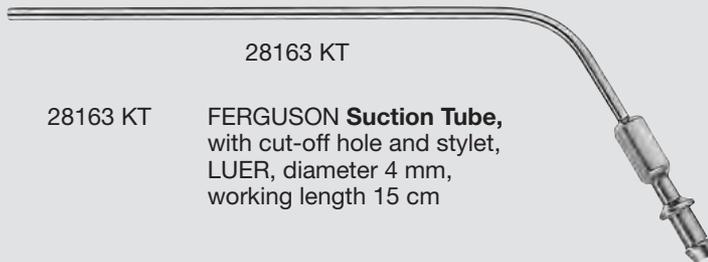


28163 EK HALLE **Elevator**, width 4 mm, length 19 cm



28164 EC

28164 EC CASTELNUOVO **Elevator**, double-ended, blunt end angled, semisharp end slightly curved, graduated, length 26 cm



28163 KT

28163 KT FERGUSON **Suction Tube**, with cut-off hole and stylet, LUER, diameter 4 mm, working length 15 cm



530416

530416 "ATRAUMA" **Atraumatic Tissue Forceps**, width of jaws, length 16 cm



533112

533112 ADSON **Tissue Forceps**, 1 x 2 teeth, length 12 cm

Nerve Compression Syndrome

Endoscopic Decompression and Nerve Transposition for the Treatment of the Peripheral Nerve Compression Syndrome



28163 SC



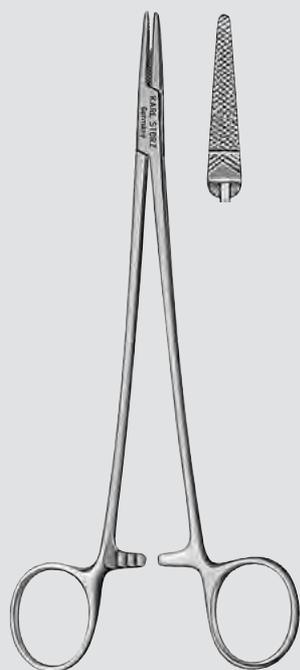
28163 SCD



794228



794814



798418

- 28163 SC FOMON **Angular Scissors**, serrated blades, slender, working length 6.5 cm
- 28163 SCD REYNOLDS **Dissecting Scissors**, curved, delicate tips, length 18 cm
- 794228 ADSON **Artery Forceps**, curved 90°, slender, length 18 cm
- 794814 OCHSNER-KOCHER **Artery Forceps**, curved, 1 x 2 teeth, length 14 cm
- 798418 HEGAR **Needle Holder**, slender, length 18 cm



INSTRUMENTS FOR RHEUMATOLOGY

NEEDLE ARTHROSCOPES

264-266



Needle Arthroscopes

Special Features:

- Small diameter
- Eyepiece and light connection are remote from the instrument
- Elimination of any obtrusive eyepiece/camera head combination from the working area.

Connected to the miniature endoscope with a flexible cable, the eyepiece with attached camera table can be fixed in a holder to the OR table.

- Fiber optic system in proven quality

Field of Application and Indications

In the diagnosis of inflammatory rheumatic illnesses, especially arthritis associated with an infection, examination of the synovial membrane is becoming increasingly important due to new methods of molecular biology.

When inflammation of a joint begins, the changes in the joint are often only locally pronounced. For this reason a biopsy taken under vision is more informative. The development of needle arthroscopy, and the appropriate instruments, allow medium-sized joints, and in particular also small finger and toe joints, to be examined under local anesthesia.

Since needle arthroscopy is only negligibly more invasive than a customary arthrocentesis, it can be repeated several times. This opens up the possibility of monitoring the effects of therapeutic interventions directly at the joint itself.

*P. BRÜHLMANN, M. D.,
Rheumaklinik Universitätsspital
Zurich, Switzerland*



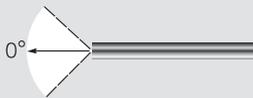
28272 KLA

Needle Arthroscopes

Diameter 1 mm, length 6 cm



11508



11508

Miniature Straight Forward Telescope 0°, diameter 1 mm, length 6 cm, fiber optic light transmission incorporated, eyepiece and light connection separate from the instrument



28117 R

28117 R

Arthroscope Sheath, with lateral LUER-Lock connector, diameter 1.3 mm, length 4 cm, for use with Miniature Straight Forward Telescope 0° 11508



28117 RS



28117 RS

Obturator, sharp, for use with Arthroscope Sheath 28117 R



28117 RB

Same, blunt



SPINE SURGERY

CERVICAL

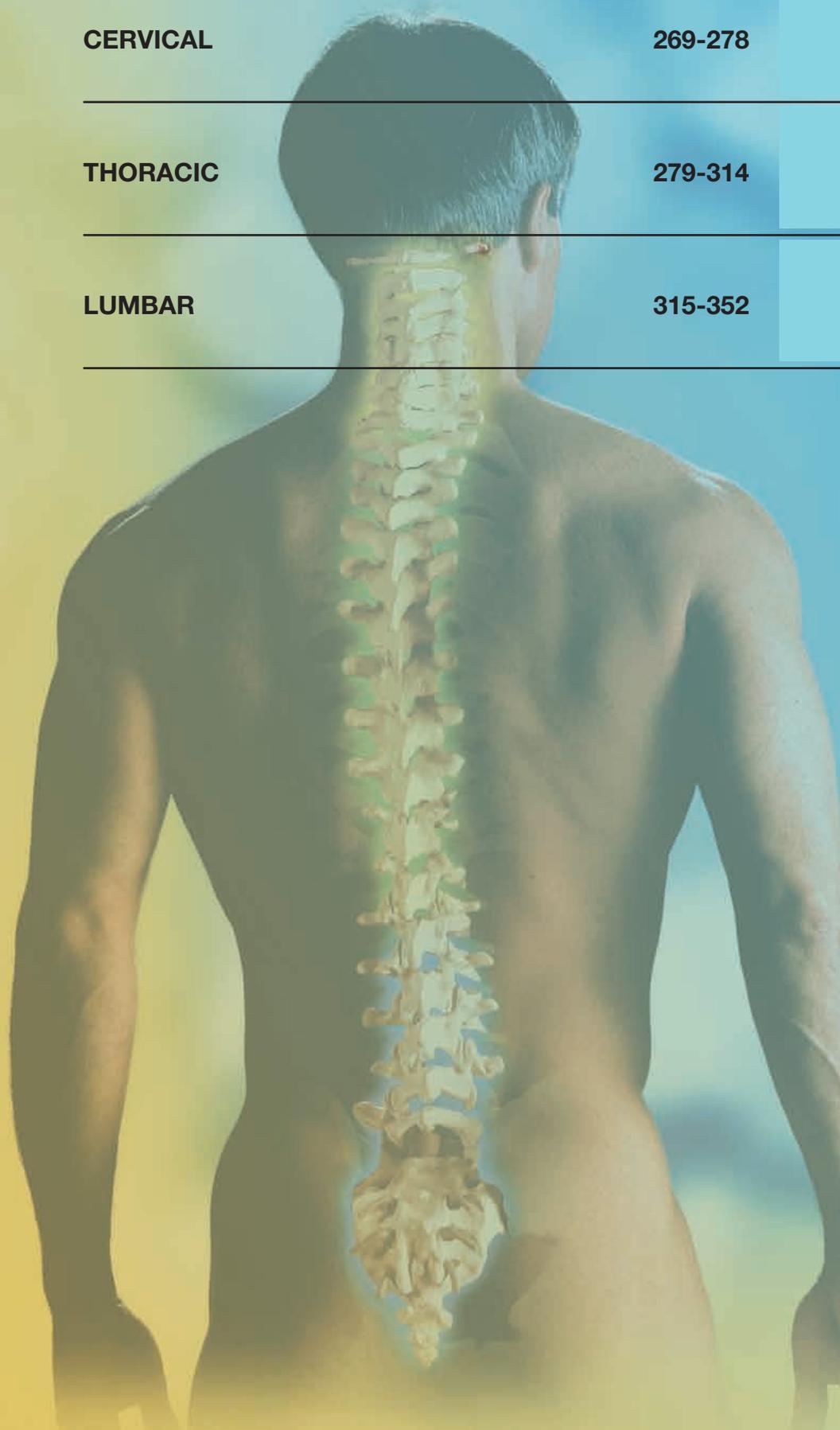
269-278

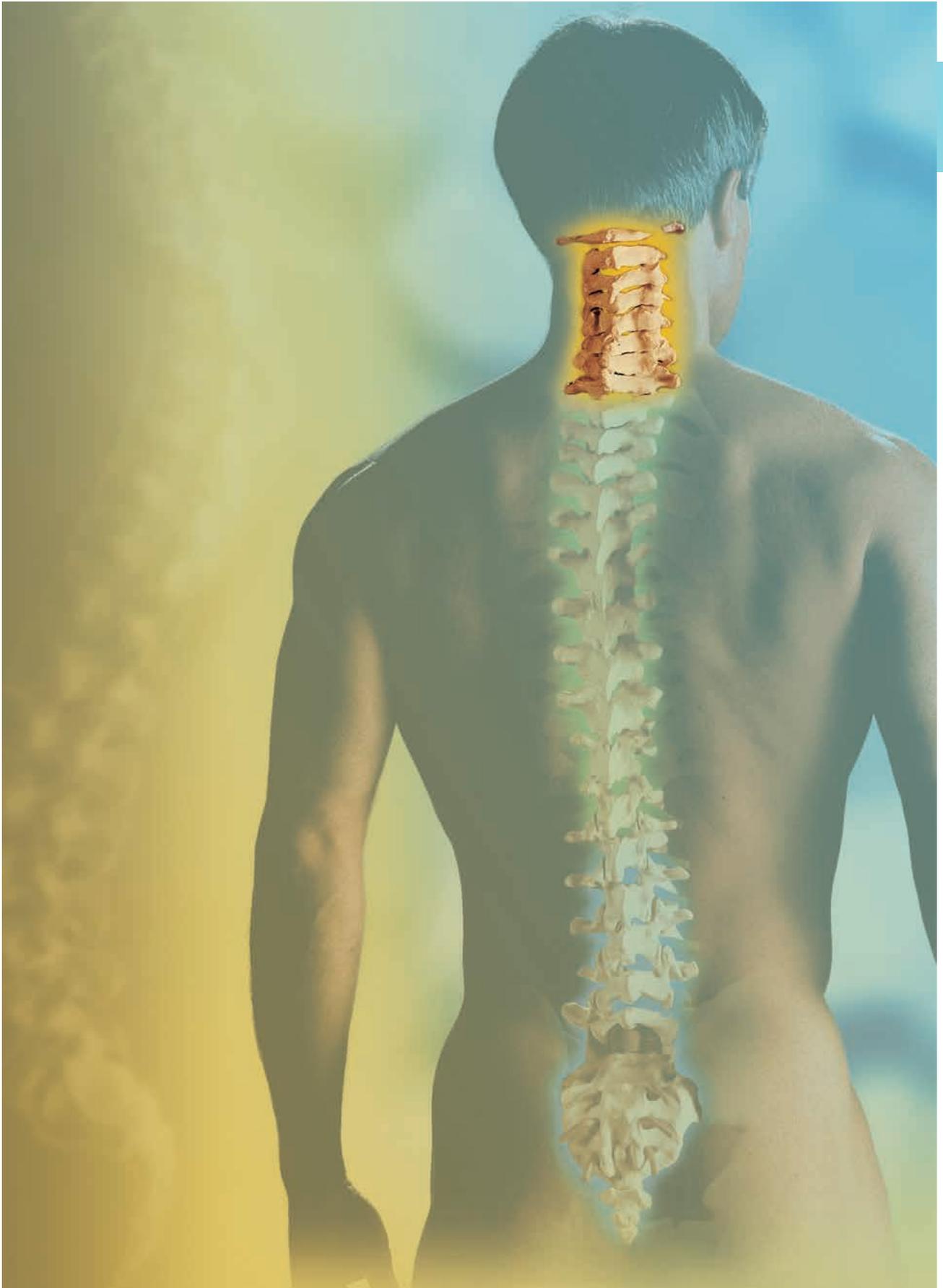
THORACIC

279-314

LUMBAR

315-352

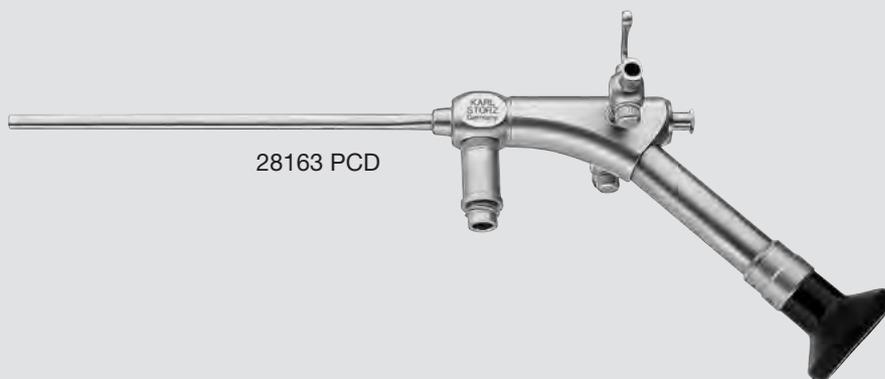




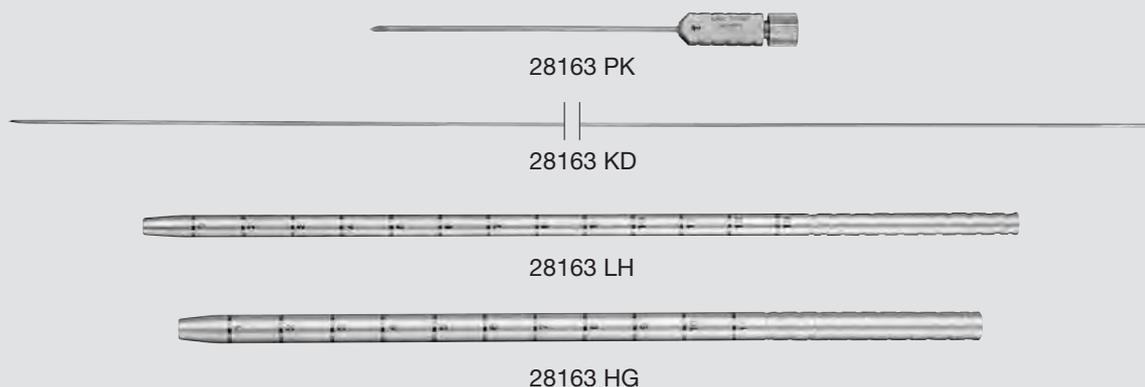
Percutaneous Endoscopic Cervical Discectomy

Telescope and Surgical Access Instruments

HELLINGER Recommended Set



28163 PCD **PECD Endoscope 8°**, angled eyepiece, outer diameter 3.3 x 4.7 mm, working length 12 cm, **autoclavable**, with fiber optic light transmission incorporated and straight working channel diameter 2.5 mm, with Wire Tray 39501 XP, color code: green



28163 PK **Puncture Needle**, including stylet, diameter 1.8 mm, working length 9 cm, with 1.3 mm opening for guide wire

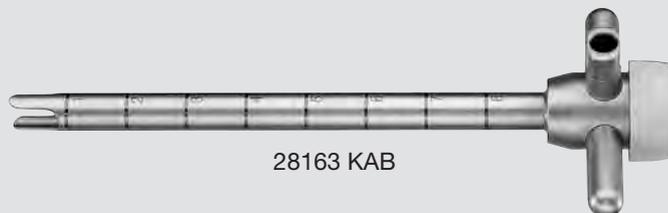
28163 KD **Guide Wire**, unsterile, diameter 1.2 mm, length 31 cm, package of 10

28163 LH **Dilation Sleeve**, graduated, diameter 3 mm, working length 18 cm, with 1.5 mm opening for guide wire

28163 HG **Dilation Rod**, graduated, diameter 5.3 mm, working length 16 cm, with 3.1 mm opening for Dilation Sleeve 28163 LH

Percutaneous Endoscopic Cervical Discectomy

Telescope and Surgical Access Instruments



28163 KAB



28163 KAB **Expansion Sheath**, diameter 6.5 mm, with handle and LUER connection, distal two dilation extensions, straight



28163 KBB **Expansion Sheath**, diameter 6.5 mm, with handle and LUER connection, distal 45° inclination



28163 KCB **Expansion Sheath**, diameter 6.5 mm, with handle and LUER connection, distal two dilation extensions, oblique



28163 KDB **Expansion Sheath**, diameter 6.5 mm, with handle and LUER connection, distal with one dilation extension, oblique



27502

27502 **LUER-Lock Tube Connector**, with stopcock, dismantling



28163 CM

28163 CM **COTTLE Metal Mallet**, with plastic replacement head, length 22.5 cm

Percutaneous Endoscopic Cervical Discectomy

Palpation Hooks, Trephines, Bipolar Electrode and Suction Tube

HELLINGER Recommended Set



28163 UHH



28163 UHH **Palpation Hook**, distally angled 45°, diameter 2 mm, working length 25 cm



28163 UHO **Palpation Hook**, distally angled 90°, with ball, diameter 2 mm, working length 25 cm



28163 UOH



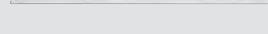
28163 UOH **Palpation Hook**, distal end 90°, with ball end, hook length 4 mm, diameter 2 mm, working length 26 cm



28163 TKK



28163 TKK **Trephine**, diameter 3.5 mm, working length 18 cm



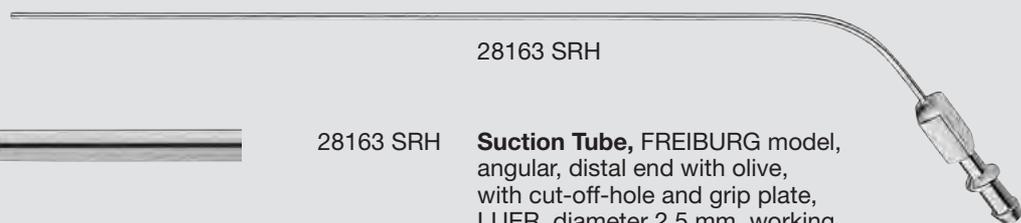
28163 TKS **Same**, diameter 2.5 mm



28762 KBH



28762 KBH **Bipolar Coagulation Electrode**, rigid, diameter 1.7 mm, working length 25 cm



28163 SRH

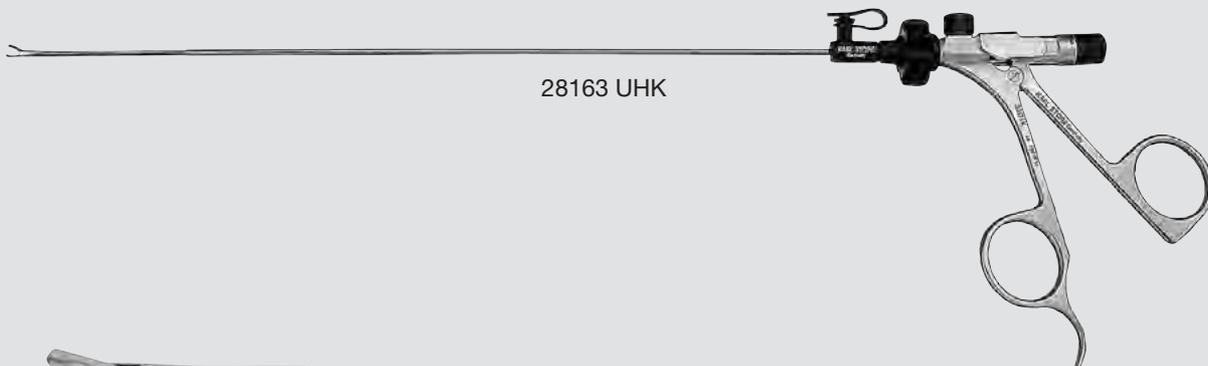


28163 SRH **Suction Tube**, FREIBURG model, angular, distal end with olive, with cut-off-hole and grip plate, LUER, diameter 2.5 mm, working length 25 cm

Percutaneous Endoscopic Cervical Discectomy

Spoon Forceps, Grasping Forceps and Biopsy Forceps

HELLINGER Recommended Set



28163 UHK



28163 UHK

CLICKline Spoon Forceps, rotating, with LUER-Lock irrigation connector for cleaning, single action jaws, size 2.5 mm, length 25 cm including:

Metal Handle, without ratchet, without overload protection, for use with overload protection, **autoclavable**

Forceps Insert

Overload Protection



28163 UHM

CLICKline Spoon Forceps, oval, rotating, with LUER-Lock irrigation connector for cleaning, single action jaws, size 2 mm, length 25 cm including:

Metal Handle, without ratchet, without overload protection, for use with overload protection, **autoclavable**

Forceps Insert

Overload Protection



28163 FSH



28163 FSH

Grasping Forceps, double action jaws, diameter 1.7 mm, working length 25 cm



28163 ZSH

Biopsy Forceps, double action jaws, diameter 1.7 mm, working length 25 cm

Components/Spare Parts see chapter 18

Use of ENDOSPINE® at cervical level

The degenerative cervical pathology entails radicular, medullar or radiculo-medullar compression.

Soft cervical hernia occurs in young patients in their forties, whereas osteophytic compressions – whether radicular or medullar – occur in old and, therefore, more fragile patients.

Life span extension gives ground to the theory that this pathology is going to continue to develop and that a minimal-invasive technique, such as Endospine, will make it possible to treat a greater number of patients, enabling a more simple post-operative course and a quicker return to normal life.

ENDOSPINE® can be used for three types of operations: posterior endoscopic foraminotomy and anterior endoscopic foraminotomy as well as anterior endoscopic foraminotomy with partial vertebrectomy according to JHO's technique.

1. Posterior endoscopic foraminotomy

Its main indication is the soft cervical hernia which occurs at C7-T1 or T1-T2 levels, levels that are difficult to approach anteriorly.

Using a posterior approach, the ENDOSPINE® operating tube is inserted along the spine and positioned on the facets under fluoroscopic control. We then achieve a posterior lamino-foraminotomy either with a small KERRISON forceps or with the help of a drill. The relief is immediate, the post-operative course extremely simple, and no special precautions are necessary during the post-operative period.

2. Anterior endoscopic foraminotomy following JHO's technique

This is indicated for soft and/or hard foraminal hernia. The technique consists of a classical antero-lateral approach, sliding between the vascular bundle on the outside and the visceral bundle on the inside to expose the desired level. We leave the longus colli aponeurosis intact in order to avoid a sympathetic lesion, but we remove the medial side of the muscle a little above the disc level.

We perform a complete anterior foraminotomy with the use of a drill, which exposes the nerve root from the spinal canal to the point at which it passes behind the vertebral artery. Once again, the relief is immediate and the post-operative course extremely simple without any particular post-operative precautions.

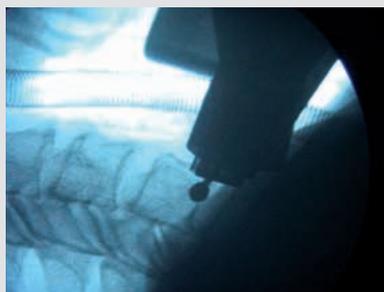
3. Endoscopic foraminotomy and partial vertebrectomy following JHO's technique

In the case of cervicarthrosic myelopathy in elderly patients with a pinched or inexistent disc, anterior endoscopic foraminotomy can easily be extended towards the midline to remove the compressive osteophytic bar. The decompression can be extended to the opposite side where the foramen begins and can be done at several levels if needed.

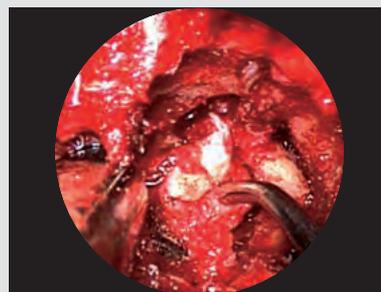
The advantages of these techniques lie in their minimal invasiveness and in the fact that they do not require immobilisation or fixation with plates, screws, spacers or disc prothesis.

This reduces costs which benefits our countries known as developed, where health costs are exponentially rising, as well as other cost-sensitive countries.

J. DESTANDAU, M. D.
Bordeaux, France



Drilling and anterior foraminotomy starts in this area at the disk level including a small part of the superior vertebra

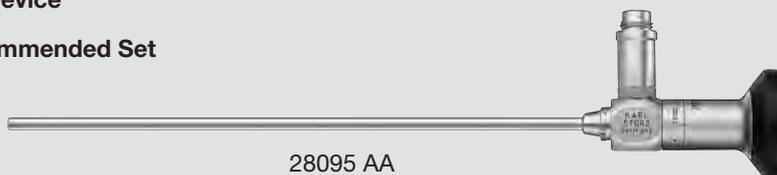


cervical hernia

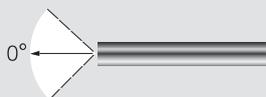
Endoscopic Cervical Discectomy, Anterior/Posterior Foraminotomy and Foraminal Corporectomy

HOPKINS® Telescope, ENDOSPINE® Operating Tube, Working Insert, Retractor Blade and Localization Device

DESTANDAU Recommended Set



28095 AA



0°

28095 AA

HOPKINS® Straight Forward Telescope 0°, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green



28163 DO

28163 DW

28163 DW

DESTANDAU ENDOSPINE® Operating Tube, oval, with Obturator 28163 DO, for use with Working Insert 28163 DXH



28163 DXH

28163 DXH

DESTANDAU ENDOSPINE® Working Insert, with positioning detent, with adjustable Nerve Protector 28163 DPH, for use with ENDOSPINE® Operating Tube 28163 DW, with working channel diameter 8 mm, with irrigation channel for use with HOPKINS® Telescope 28095 AA



28163 DRG

28163 DRG

ENDOSPINE® Retractor Blade, conical, length 5 cm, for use with ENDOSPINE® Operating Tube 28163 DW and 28163 DWS



28163 DLD

28163 DLD

Cervical Localization Device, for fluoroscopic determination of the point of incision of the ENDOSPINE® operating tube

Endoscopic Cervical Discectomy, Anterior/Posterior Foraminotomy and Foraminal Corporectomy

Bipolar Coagulating Forceps, Elevator, Palpation Hook, Ball Probe and Suction Tube

DESTANDAU Recommended Set



28163 DZ

28163 DZ **TAKE-APART® MANHES Bipolar Coagulation Forceps**, with connecting pin for bipolar coagulation, width of jaws 1 mm, diameter 5 mm, length 20 cm including:
Handle
Outer Sheath, diameter 5 mm
MANHES Forceps Insert



28163 DNN



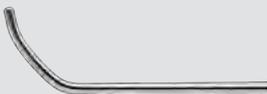
28163 DNN **Elevator**, spatula slightly curved, distal width 5 mm, working length 13 cm



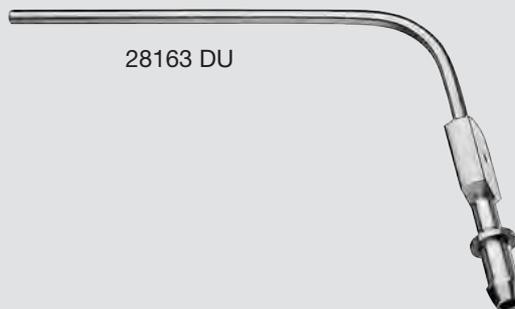
28163 DHN **Palpation Hook**, blunt, hook angled 90°, hook length 5.5 mm, working length 13 cm



28163 DHB **Ball Probe**, diameter 4 mm, straight, working length 13 cm



28163 DHD **Palpation Hook**, blunt, distal double curved, working length 13 cm



28163 DU

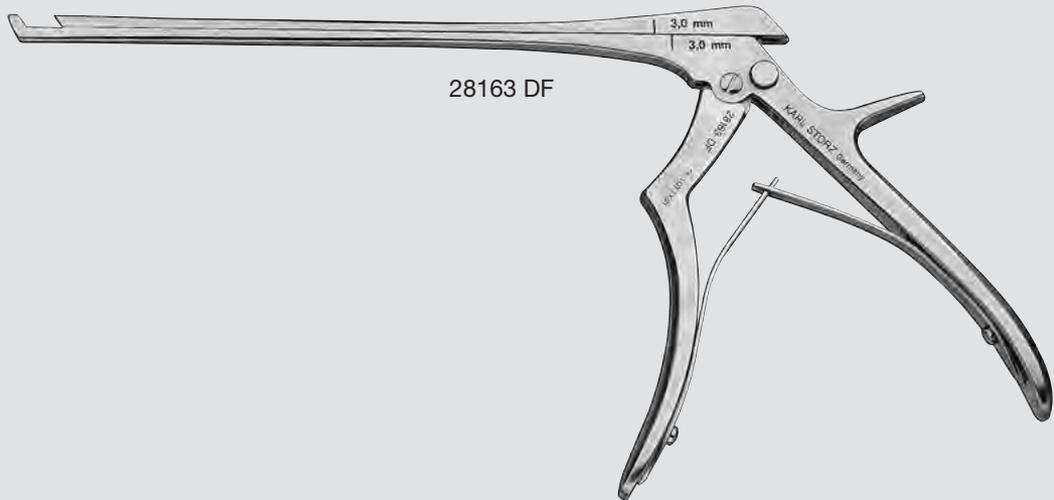
28163 DU **FERGUSON Suction Tube**, angled, with cut-off hole, diameter 3.7 mm, working length 11 cm

Components/Spare Parts see chapter 18

Endoscopic Cervical Discectomy, Anterior/Posterior Foraminotomy and Foraminal Corporectomy

Bone Punches, Forceps and Scissors

DESTANDAU Recommended Set



28163 DF



28163 DL

Bone Punch, dismantling, 90° upbiting, not through-cutting, 3 mm, working length 18 cm



28163 DF

Bone Punch, dismantling, upbiting 45° forward, not through-cutting, 3 mm, working length 18 cm



28163 DC



28163 DC

Spoon Forceps, dismantling, robust, oval, single action jaws, spoon size 3 x 10 mm, working length 15 cm



28163 DSS

Scissors, straight, extra delicate, working length 15 cm

Endoscopic Cervical Discectomy, Anterior/Posterior Foraminotomy and Foraminal Corporectomy

Forceps, Needle Holder, Scissors, Surgical Handle and Retractor

DESTANDAU Recommended Set



755120



535212



515515



512618



792003

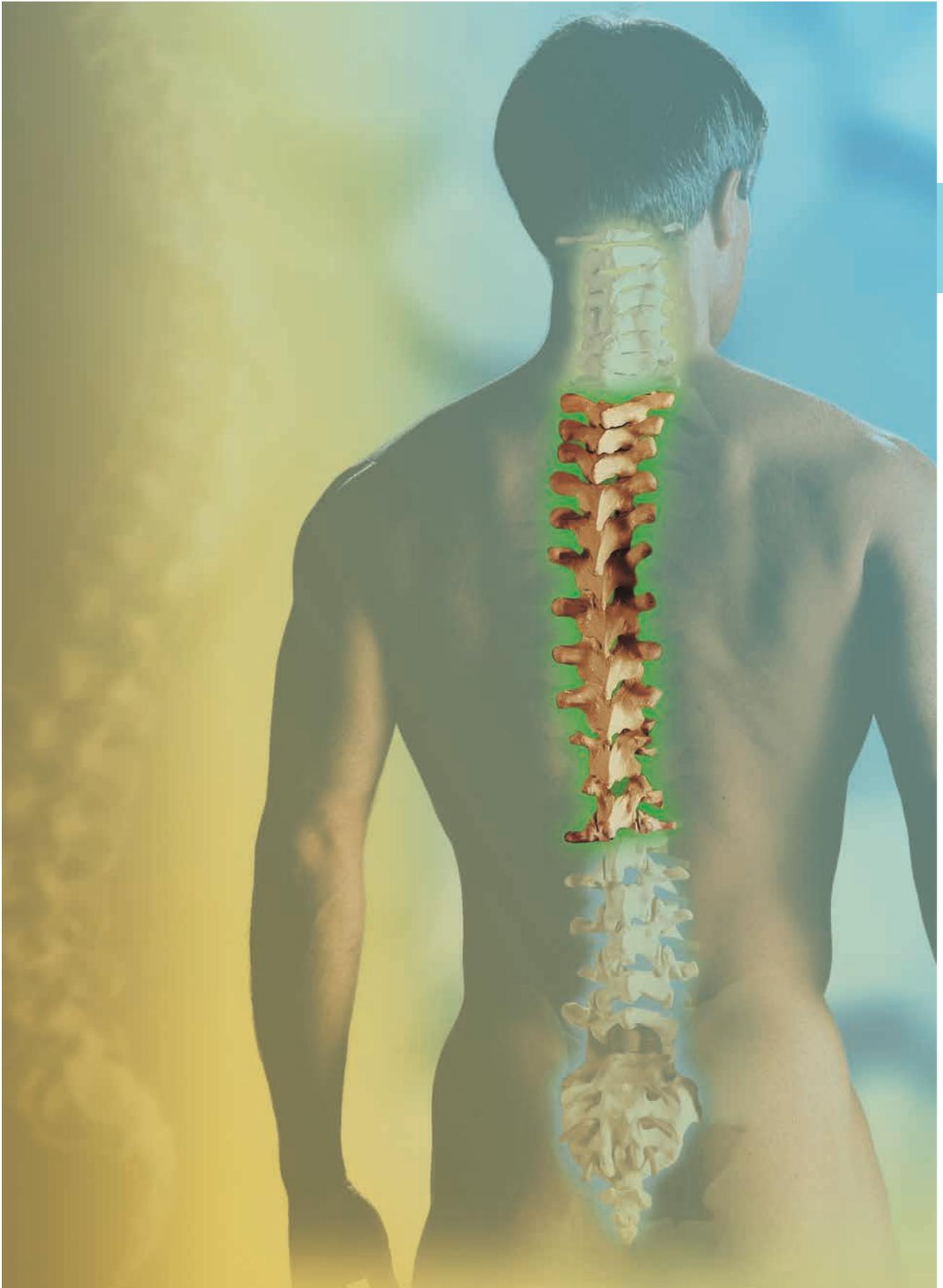


208100



801910

- 755120 HALLE-BIRKETT **Forceps**, slender, straight, length 20 cm
- 535212 HALSTEAD "Mosquito" **Artery Forceps**, curved, length 12.5 cm
- 515515 CRILE-WOOD **Needle Holder**, length 15 cm
- 512618 METZENBAUM **Scissors**, with tungsten carbide inserts, curved, length 18 cm
- 792003 MAYO **Scissors**, curved, length 15 cm
- 208100 **Surgical Handle**, Fig. 4, length 13.5 cm, for Blades 208019, 208120 - 21, 208320 - 21
- 801910 MICCOLI **Retractor**, double-ended, size 35 x 10 mm and 21 x 10 mm, length 16 cm



Endoscopic approaches to the intervertebral disc and the vertebral bodies continue to grow in importance. Efforts to decrease surgical trauma have led to the use of procedures based on familiar principles in laparoscopic and thoracic surgery.

Instruments such as curettes, rongeurs, rasps, osteotomes and punches were especially designed to meet the needs of these surgical techniques in laparoscopy and thoracoscopy.

Indications and thoracoscopic surgical possibilities:

Scoliosis	Ventral release Intercorporeal spondylodesis, hemivertebrectomy Convex epiphyseodesis
Kyphosis	Ventral release Intercorporeal spondylodesis
Spondylodiscitis	Biopsy, interlesional cleaning Filling the defect
Herniated disc	Discectomy
Fractures	

Indications and laparoscopic surgical possibilities:

Intervertebral disc generation	Ventral laparoscopic fusion
---------------------------------------	-----------------------------

The Advantages of the Method:

- Less invasiveness due to the avoidance of large abdominal incisions
- 4 to 5 trocar approaches
- Reduced postoperative pain
- High primary stability
- Reduced hospital stay

Advantages of the instrument set:

- **KARL STORZ complete system**
 - Instrument set for the approach
 - Optical components
 - Specially configurated instrument set for intervention on the spine
 - Units and accessories
- Reusable and autoclavable instruments
- All system components are optimally harmonized to each other, ensuring functional and safe handling during the intervention

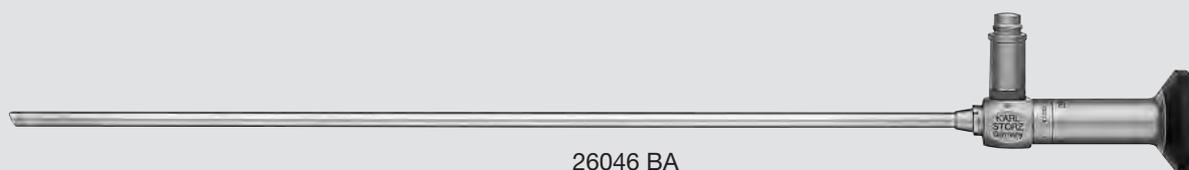
Laparoscopic and Thoracoscopic Spine Surgery

HOPKINS® Telescopes

Diameter 5 mm, length 29 cm,
for use with trocars size 6 mm

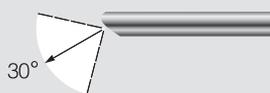
Benefits of the new HOPKINS® laparoscopic telescopes:

- 2.5-fold increased brightness
- Evenly distributed brightness: No decrease of brightness from center to margins
- Superior preciseness



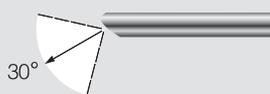
26046 AA

HOPKINS® Straight Forward Telescope 0°, enlarged view, diameter 5 mm, length 29 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green



26046 BA

HOPKINS® Forward-Oblique Telescope 30°, diameter 5 mm, length 29 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red



26046 BUA

HOPKINS® Forward-Oblique Telescope 30°, enlarged view, diameter 5 mm, length 29 cm, **autoclavable**, fiber optic light transmission incorporated, **connection for fiber optic light cable offset by 90°**, color code: red



26046 FA

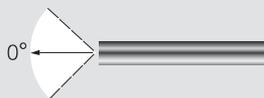
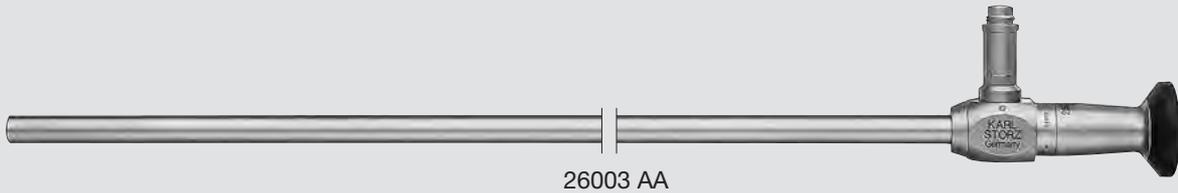
HOPKINS® Telescope 45°, enlarged view, diameter 5 mm, length 29 cm, **autoclavable**, fiber optic light transmission incorporated, color code: black

Laparoscopic and Thoracoscopic Spine Surgery

HOPKINS® Telescopes

STORZ
KARL STORZ — ENDOSKOPE

Diameter 10 mm, length 31 cm,
for use with trocar size 11 mm



26003 AA

HOPKINS® Straight Forward Telescope 0°, enlarged view, diameter 10 mm, length 31 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green



26003 BA

HOPKINS® Forward-Oblique Telescope 30°, enlarged view, diameter 10 mm, length 31 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red



26003 FA

HOPKINS® Telescope 45°, enlarged view, diameter 10 mm, length 31 cm, **autoclavable**, fiber optic light transmission incorporated, color code: black



6-12



Telescope with variable direction of view

Until now, surgeons had to choose in advance which telescope or direction of view to use in a procedure. Moreover, surgeons were restricted to the selected direction of view throughout the surgery or had to make an intraoperative telescope change.

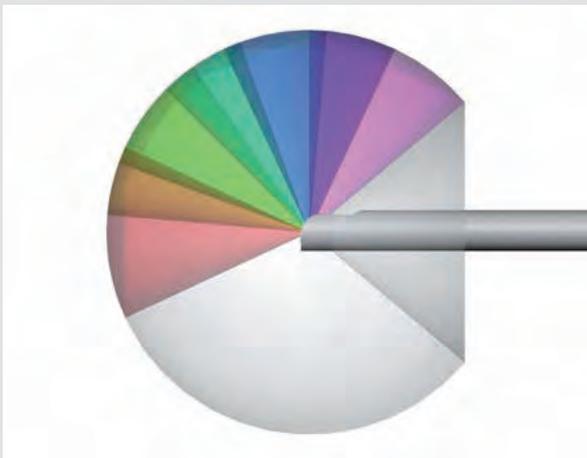
To prevent this predicament in the future, we developed the ENDOCAMELEON®: a telescope that allows you to adjust the desired direction of view – also during surgery – between 0° and 120°.

The ENDOCAMELEON® combines the user comfort of the proven 0° HOPKINS® telescope with the advantages and potential of a telescope featuring a variable direction of view – offering you the quality you expect from KARL STORZ telescopes.

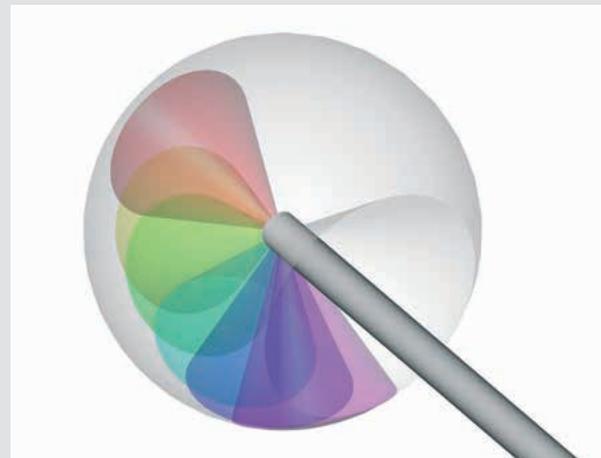
The innovative ENDOCAMELEON® technology is not difficult to use and, due to the external moving parts, does not take up extra intracorporal space. Handling remains straightforward and ergonomic. Image alignment is the same as rigid telescopes: the direction of view is selected by simply turning the adjustment knob, making the system very intuitive to use. As the ENDOCAMELEON® is equipped with a standard eyepiece, the variable direction of view benefits all standard camera systems. Thanks to the HOPKINS® rod lens system, ENDOCAMELEON® also offers image quality that enables a useful application of three-chip cameras or HD camera systems.

To have the direction of view best suited for each situation available at all times offers the surgeon a higher degree of safety. With the ENDOCAMELEON®, visual inspection of the entire surgical field is easily achieved. Instrument movement can be controlled throughout the entire procedure and hemorrhages in

previously inaccessible areas can be detected and controlled. With a simple turn of the adjusting knob, the ENDOCAMELEON® enables the user to easily select the direction of view between 0° and 120° to suit all OR requirements.



ENDOCAMELEON® with variable direction of view, lateral view



ENDOCAMELEON® with variable direction of view, isometric view



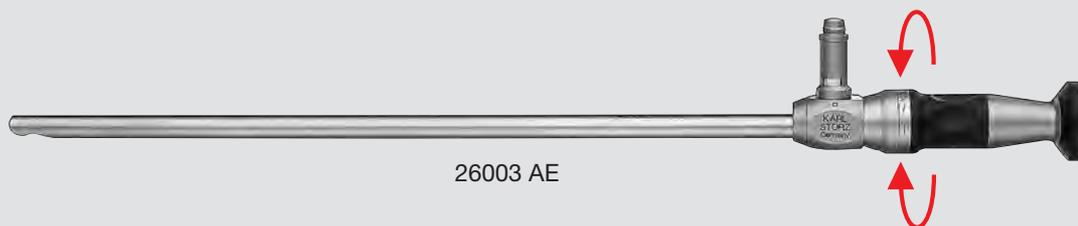
Diameter 10 mm, length 32 cm

Trocar size 11 mm

Recommended Fiber Optic Light Cables: 495 NB, 495 NCS or 495 NE

Special Features:

- Variable direction of view 0° – 120°
- HOPKINS® telescope with unique rod lens system
- Easy-to-use adjusting knob for selecting the direction of view
- Rigid sheath with a diameter of 10 mm



26003 AE

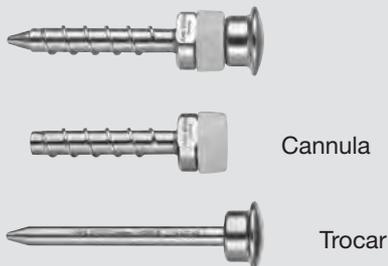
ENDOCAMELEON® HOPKINS® Telescope, diameter 10 mm, **length 32 cm, autoclavable,** variable direction of view from 0° – 120°, adjustment knob for selecting the desired direction of view, fiber optic light transmission incorporated, color code: gold

Laparoscopic and Thoracoscopic Spine Surgery

Trocars

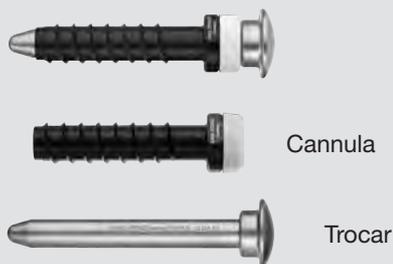
Trocars, size 6 mm, for use with instruments size 5 mm

Trocars, size 11 mm, for use with instruments size 10 mm



Size:		6 mm	
Working length:		4 cm	6 cm
	Trocar, with blunt tip	40160 AB	40160 CD
	including:		
	Cannula, with thread	40160 A	40160 C
	Trocar	40160 B	40160 D

Size:		11 mm	
Working length:		4 cm	6 cm
	Trocar, with blunt tip	40103 AB	40103 CD
	including:		
	Cannula, with thread	40103 A	40103 C
	Trocar	40103 B	40103 D



Size :		11 mm	
Working length:		6 cm	8,5 cm
	Plastic Trocar, with blunt tip	40103 GD	40103 HX
	including:		
	Plastic Cannula, with thread	40103 G	40103 H
	Trocar	40103 D	40103 X

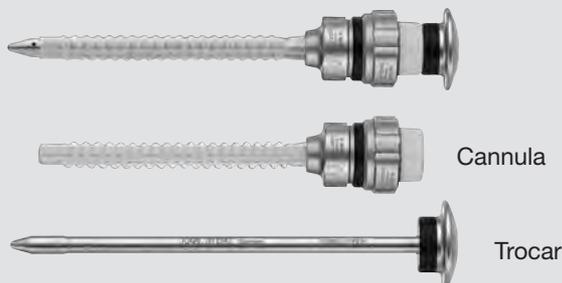
Note: Instruments with curved jaws or distally angled sheaths must be used with trocars with flexible cannulas!

For **KARL STORZ trocars** only the individual components are numbered.
The catalog number for the **entire assembled trocar**, as shown above in **bold** print, does not appear on the instrument.

Laparoscopic and Thoracoscopic Spine Surgery

Trocars, flexible

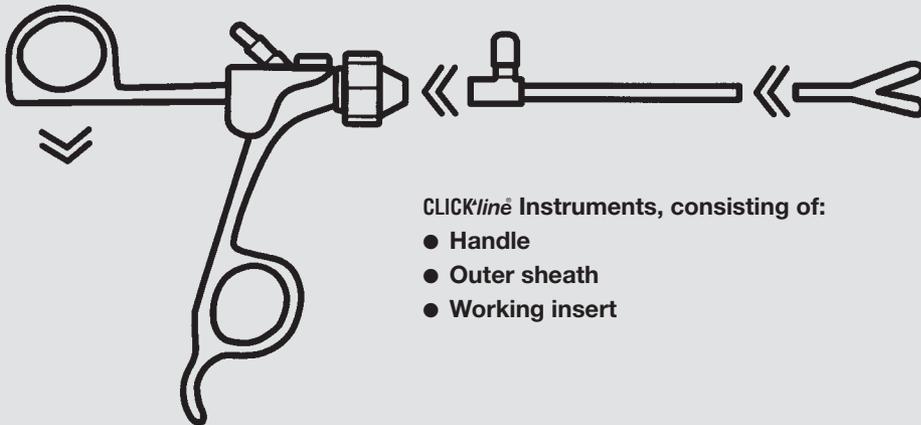
Trocars, size 6 mm, for use with instruments size 5 mm
Trocars, size 11 mm, for use with instruments size 10 mm



Size:	6 mm	11 mm
Working length:	8.5 cm	8.5 cm
Color code:	black	green
	<p>Trocar, with blunt tip including: Cannula, flexible, with silicone leaflet valve Trocar</p>	<p>30120 NOL 30120 NL 30120 NO</p>
Accessories	<p>Plastic Cannula, autoclavable, for flexible trocars, package of 5</p> 	<p>30123 NOL 30123 NL 30123 O</p>
	30120 X	30123 X

Note: Instruments with curved jaws or distally angled sheaths must be used with trocars with flexible cannulas!

For **KARL STORZ trocars** only the individual components are numbered. The catalog number for the **entire assembled trocar**, as shown above in **bold print**, does not appear on the instrument.



CLICK^{line} Instruments, consisting of:

- Handle
- Outer sheath
- Working insert

Nothing could be simpler!

The CLICK^{line} series continues the development of instruments which have proven their value for years. The simplicity of handling and ease with which the instruments can be cleaned has been improved, in particular with respect to assembly and disassembly. When the rear handle is positioned horizontally, the

handle can be separated from the outer sheath and the working insert at the press of a button. Reassembly is equally reliable and quick. The high frequency connection is mounted in a 45° angle on the upper side of the handle, thereby ergonomically guiding the high frequency cable away from the field of operation.

Available in size 2 to 10 mm, CLICK^{line} instruments can be completely disassembled into separate

- Handle
- Outer sheath/outer sheath with working insert
- Working insert

This unique, reusable two/three-piece design offers the surgeon the following benefits:

- Available in sizes 2, 3, 3.5, 5 and 10 mm and lengths 20, 30, 36 and 43 cm
- Choice of handle styles
- Fully rotational 360° sheath facilitates easy access in all clinical situations
- No hidden spaces that can trap blood or tissue debris
- Can be dismantled at the press of a button – reducing instrument cleaning time considerably
- Completely autoclavable design
- Cost-effective – reusable instruments reduce O.R. costs per case and simplify inventory management, eliminating the need to store large quantities of disposable instruments
- Environmentally correct, i.e., if damage occurs, only the component with the defect needs to be replaced – not the entire instrument
- Convenient and ergonomic handling
- Cleaning port allows the instrument to be cleaned without disassembly

Due to the modular CLICK^{line} system, the user can individually assemble the desired instrument at any time.

User Information

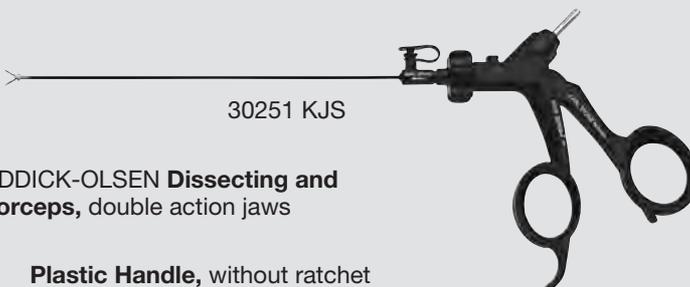
For easy location of the correct catalog number for the required CLICK*line*[®] instrument

How to find the required instrument:

- (a) Select the required **instrument size** and the required **type of jaws**
- (b) Select the required **handle style**
 - **Metal handles: without** connector pin for unipolar coagulation, against a **blue background** in the table
 - **Handles, insulated: with** connector pin for unipolar coagulation, against a **red background** in the table
- (c) The catalog number for the fully assembled instrument can be found at the point where the horizontal line of the respective working length (see below) intersects with the vertical column of the required handle.

Beispiel:

30251 KJS



30251 KJS CLICK*line*[®] REDDICK-OLSEN **Dissecting and Grasping Forceps**, double action jaws including:

33151 **Plastic Handle**, without ratchet

30210 KJS **Outer Sheath**, with working insert

Dissecting and Grasping Forceps

CLICK*line*[®] – rotating, dismantling, with and without connector pin for unipolar coagulation

Size 2 mm
Operating Instruments, length 20 cm, for use with trocars size 2.5 mm

Length	Handle			
	33151 (b)	33152	33153	33161
20 cm				
Double action jaws				
Outer Sheath with Working Insert	Complete Instrument			
30210 KJS	30251 KJS (c)	30252 KJS	30253 KJS	-

 CLICK*line*[®] REDDICK-OLSEN **Dissecting and Grasping Forceps**

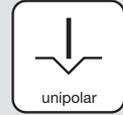
— 7 —
— — Length of jaws in mm (approx. measurements)

Please note:

For CLICK*line*[®] instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does **not** appear on the instrument. Instruments with **insulated handles with connector pin** for unipolar coagulation are shown against the **red** background. Instruments with **handles without connector pin** for unipolar coagulation are shown against the **blue** background. The color **green** indicates the **lengths**.

Plastic Handles

for Dissecting and Grasping Forceps, insulated,
CLICKline – rotating, with connector pin for unipolar coagulation



Plastic Handles, with and without ratchets, with larger contact area at the finger ring – made of high-quality plastics, meeting the highest safety requirements for both patient and user

The anatomy of the hand varies in size from person to person. With the new **CLICKline** handles, KARL STORZ meets this particular challenge. Wider contact areas at the finger and thumb ring and a more ergonomic design ensures comfortable handling, preventing pres-

sure marks even after hours of use. Due to their ergonomic shape, the new handles can be used in various holding positions and, therefore, meet a wide range of demands.

Special Features:

- Comfortable handling
- Prevention of pressure marks
- Variable holding positions due to ergonomic shape
- Appropriate design



33151 **CLICKline** Plastic Handle, without ratchet, with larger contact area at the finger ring



33152 **CLICKline** Plastic Handle, with MANHES style ratchet, with larger contact area at the finger ring



33153 **CLICKline** Plastic Handle, with hemostat style ratchet, with larger contact area at the finger ring



33156 **CLICKline** Plastic Handle, with disengageable ratchet

Metal Handles with larger contact area see page 292

Plastic Handles

for Dissecting and Grasping Forceps, insulated,
CLICK'liné – rotating, with connector pin for unipolar coagulation

Plastic Handles, with and without ratchets, made of high-quality plastics –
meeting the highest safety requirements for both patient and user



33121 **CLICK'liné Plastic Handle,
without ratchet**



33122 **CLICK'liné Plastic Handle,
with MANHES style
ratchet**



33123 **CLICK'liné Plastic Handle,
with hemostat style
ratchet**



33126 **CLICK'liné Plastic Handle,
with disengageable
ratchet**

Metal Handles

for Dissecting and Grasping Forceps,
CLICK'liné – without connector pin for unipolar coagulation

Metal Handles, with and without ratchets



33161 **CLICK'liné Metal Handle**, rotating, **without** ratchet, with plastic rings **with larger contact area**



33131 **CLICK'liné Metal Handle**, rotating, **without** ratchet



33132 **CLICK'liné Metal Handle**, rotating, **with** MANHES style ratchet



33133 **CLICK'liné Metal Handle**, rotating, with **hemostat style** ratchet



33139 **CLICK'liné Metal Handle**, rotating, **with** ratchet



33143 **CLICK'liné MOURET Metal Handle**, rotating, with **hemostat style** ratchet



33141 P **CLICK'liné Metal Handle**, non-rotating, with **disengageable** ratchet, with 4 locking positions



33141 **CLICK'liné Metal Handle**, rotating, with **disengageable** ratchet

CLICKline® Metal Outer Sheaths

Size 5 mm

Metal Outer Sheaths, insulated



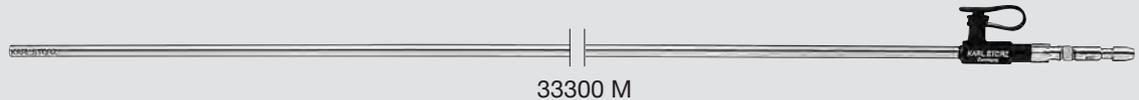
33200	CLICKline® Metal Outer Sheath, insulated, with LUER-Lock connector for cleaning, size 5 mm, length 30 cm	33200 W	CLICKline® Metal Outer Sheath, insulated, without LUER-Lock connector, size 5 mm, length 30 cm
33300	Same, length 36 cm	33300 W	Same, length 36 cm
33400	Same, length 43 cm	33400 W	Same, length 43 cm

with cm-marking



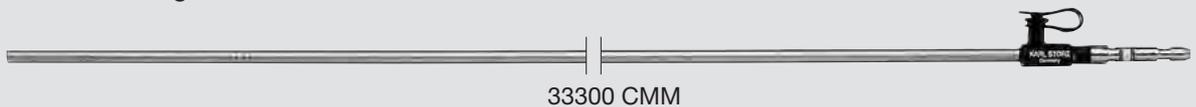
33300 CM	CLICKline® Metal Outer Sheath, with cm-marking, insulated, with LUER-Lock connector for cleaning, size 5 mm, length 36 cm
33400 CM	Same, length 43 cm

Metal Outer Sheaths



33200 M	CLICKline® Metal Outer Sheath, with LUER-Lock connector for cleaning, size 5 mm, length 30 cm
33300 M	Same, length 36 cm
33400 M	Same, length 43 cm

with cm-marking



33300 CMM	CLICKline® Metal Outer Sheath, with cm-marking, with LUER-Lock connector for cleaning, size 5 mm, length 36 cm
33400 CMM	Same, length 43 cm

Please note:

The metal outer sheaths may only be used in conjunction with handles without a connector pin for unipolar coagulation.

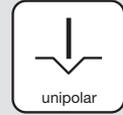
Dissecting and Grasping Forceps

CLICK^{line} – rotating, dismantling, insulated,
with connector pin for unipolar coagulation

Size 5 mm

Operating instruments, **lengths 30, 36 and 43 cm**,
for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for
use with telescopes with inbuilt working
channel and trocars size 6 mm



Length	Handle						
	33151	33152	33153	33156	33121	33125	33127
30 cm							
36 cm							
43 cm							

Double action jaws

Working Insert	Complete Instrument						
33210 R	33251 R	33252 R	33253 R	33256 R	33221 R	33225 R	33227 R
33310 R	33351 R	33352 R	33353 R	33356 R	33321 R	33325 R	33327 R
33410 R	33451 R	33452 R	33453 R	33456 R	33421 R	33425 R	33427 R



CLICK^{line} Dissecting and Grasping Forceps, right-angled

— 16 —

33210 UL	33251 UL	33252 UL	33253 UL	33256 UL	33221 UL	33225 UL	33227 UL
33310 UL	33351 UL	33352 UL	33353 UL	33356 UL	33321 UL	33325 UL	33327 UL
33410 UL	33451 UL	33452 UL	33453 UL	33456 UL	33421 UL	33425 UL	33427 UL



CLICK^{line} REDDICK-OLSEN Dissecting and Grasping Forceps, robust

— 13 —

33210 ML	33251 ML	33252 ML	33253 ML	33256 ML	33221 ML	33225 ML	33227 ML
33310 ML	33351 ML	33352 ML	33353 ML	33356 ML	33321 ML	33325 ML	33327 ML
33410 ML	33451 ML	33452 ML	33453 ML	33456 ML	33421 ML	33425 ML	33427 ML



CLICK^{line} KELLY Dissecting and Grasping Forceps, long

— 22 —

33210 HM	33251 HM	33252 HM	33253 HM	33256 HM	33221 HM	33225 HM	33227 HM
33310 HM	33351 HM	33352 HM	33353 HM	33356 HM	33321 HM	33325 HM	33327 HM
33410 HM	33451 HM	33452 HM	33453 HM	33456 HM	33421 HM	33425 HM	33427 HM



CLICK^{line} Dissecting and Grasping Forceps, "alligator jaws"

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Dissecting and Grasping Forceps

CLICK'line® – rotating, dismantling,
without connector pin for unipolar coagulation

Size 5 mm

Operating instruments, **lengths 30 and 36 cm**,
for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for
use with telescopes with inbuilt working
channel and trocars size 6 mm

Length	Handle						
	33161	33131	33132	33133	33141	33146	33147
30 cm							
36 cm							
43 cm							

Double action jaws

Working Insert	Complete Instrument						
33210 R	33261 R	33231 R	33232 R	33233 R	33241 R	33246 R	33247 R
33310 R	33361 R	33331 R	33332 R	33333 R	33341 R	33346 R	33347 R
33410 R	33461 R	33431 R	33432 R	33433 R	33441 R	33446 R	33447 R



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CLICK'line® Dissecting and Grasping Forceps, right-angled

33210 UL	33261 UL	33231 UL	33232 UL	33233 UL	33241 UL	33246 UL	33247 UL
33310 UL	33361 UL	33331 UL	33332 UL	33333 UL	33341 UL	33346 UL	33347 UL
33410 UL	33461 UL	33431 UL	33432 UL	33433 UL	33441 UL	33446 UL	33447 UL



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CLICK'line® REDDICK-OLSEN Dissecting and Grasping Forceps, robust

33210 ML	33261 ML	33231 ML	33232 ML	33233 ML	33241 ML	33246 ML	33247 ML
33310 ML	33361 ML	33331 ML	33332 ML	33333 ML	33341 ML	33346 ML	33347 ML
33410 ML	33461 ML	33431 ML	33432 ML	33433 ML	33441 ML	33446 ML	33447 ML



22

CLICK'line® KELLY Dissecting and Grasping Forceps, long

33210 HM	33261 HM	33231 HM	33232 HM	33233 HM	33241 HM	33246 HM	33247 HM
33310 HM	33361 HM	33331 HM	33332 HM	33333 HM	33341 HM	33346 HM	33347 HM
33410 HM	33461 HM	33431 HM	33432 HM	33433 HM	33441 HM	33446 HM	33447 HM



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CLICK'line® Dissecting and Grasping Forceps, "alligator jaws"

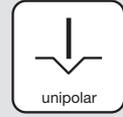
Dissecting and Grasping Forceps

CLICK^{liné} – rotating, dismantling, insulated,
with connector pin for unipolar coagulation

Size 5 mm

Operating instruments, **lengths 30, 36 and 43 cm**,
for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for
use with telescopes with inbuilt working
channel and trocars size 6 mm



Length	Handle					
	33151	33152	33153	33156	33125	33127
30 cm						
36 cm						
43 cm						

Single action jaws

Working Insert	Complete Instrument					
33310 MF	33351 MF	33352 MF	33353 MF	33356 MF	33325 MF	33327 MF
 — 24 —	CLICK^{liné} MANHES Dissecting and Grasping Forceps , atraumatic, specially designed for grasping and removal of hollow organs					
33310 MR	33351 MR	33352 MR	33353 MR	33356 MR	33325 MR	33327 MR
 — 20 —	CLICK^{liné} MANHES Dissecting and Grasping Forceps , “duckbill jaws”, blunt, specially designed for extended clinching of tissue to effect mechanical hemostasis					
33310 MS	33351 MS	33352 MS	33353 MS	33356 MS	33325 MS	33327 MS
33410 MS	33451 MS	33452 MS	33453 MS	33456 MS	33425 MS	33427 MS
 — 14 —	CLICK^{liné} MANHES Dissecting and Grasping Forceps , “duckbill jaws”, blunt, specially designed for extended clinching of tissue to effect mechanical hemostasis					
33210 MT	33251 MT	33252 MT	33253 MT	33256 MT	33225 MT	33227 MT
33310 MT	33351 MT	33352 MT	33353 MT	33356 MT	33325 MT	33327 MT
33410 MT	33451 MT	33452 MT	33453 MT	33456 MT	33425 MT	33427 MT
 — 20 —	CLICK^{liné} MANHES Dissecting and Grasping Forceps , “duckbill jaws”, blunt, specially designed for partial clinching of tissue to effect mechanical hemostasis					

Dissecting and Grasping Forceps

CLICK'linē – rotating, dismantling,
without connector pin for unipolar coagulation

Size 5 mm

Operating instruments, **lengths 30 and 36 cm**,
for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for
use with telescopes with inbuilt working
channel and trocars size 6 mm

Length	Handle				
	33161	33132	33133	33141	33144
30 cm					
36 cm					
43 cm					

Single action jaws

Working Insert	Complete Instrument				
33310 MF  — 24 —	33361 MF	33332 MF	33333 MF	33341 MF	33344 MF
	CLICK'linē MANHES Dissecting and Grasping Forceps , atraumatic, specially designed for grasping and removal of hollow organs				
33310 MR  — 20 —	33361 MR	33332 MR	33333 MR	33341 MR	33344 MR
	CLICK'linē MANHES Dissecting and Grasping Forceps , “duckbill jaws”, blunt, specially designed for extended clinching of tissue to effect mechanical hemostasis				
33310 MS 33410 MS  — 14 —	33361 MS 33461 MS	33332 MS 33432 MS	33333 MS 33433 MS	33341 MS 33441 MS	33344 MS 33444 MS
	CLICK'linē MANHES Dissecting and Grasping Forceps , “duckbill jaws”, blunt, specially designed for extended clinching of tissue to effect mechanical hemostasis				
33210 MT 33310 MT 33410 MT  — 20 —	33261 MT 33361 MT 33461 MT	33232 MT 33332 MT 33432 MT	33233 MT 33333 MT 33433 MT	33241 MT 33341 MT 33441 MT	33244 MT 33344 MT 33444 MT
	CLICK'linē MANHES Dissecting and Grasping Forceps , “duckbill jaws”, blunt, specially designed for partial clinching of tissue to effect mechanical hemostasis				

Scissors

CLICK^{line} – rotating, dismantling,
with and without connector pin for unipolar coagulation

Size 5 mm

Operating instruments, **lengths 30, 36 and 43 cm**,
for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for
use with telescopes with inbuilt working
channel and trocars size 6 mm



Length	Handle						
	33151	33121	33125	33127	33161	33131	33147
30 cm	NEW 				NEW 		NEW
36 cm							
43 cm							

Double action jaws

Working Insert	Complete Instrument						
34210 MS	34251 MS	34221 MS	34225 MS	34227 MS	34261 MS	34231 MS	34247 MS
34310 MS	34351 MS	34321 MS	34325 MS	34327 MS	34361 MS	34331 MS	34347 MS
34410 MS	34451 MS	34421 MS	34425 MS	34427 MS	34461 MS	34431 MS	34447 MS



CLICK^{line} METZENBAUM Scissors, curved

34210 MA	34251 MA	34221 MA	34225 MA	34227 MA	34261 MA	34231 MA	34247 MA
34310 MA	34351 MA	34321 MA	34325 MA	34327 MA	34361 MA	34331 MA	34347 MA
34410 MA	34451 MA	34421 MA	34425 MA	34427 MA	34461 MA	34431 MA	34447 MA



CLICK^{line} Scissors, serrated, curved, spoon-shaped blades

34210 MW	34251 MW	34221 MW	34225 MW	34227 MW	34261 MW	34231 MW	34247 MW
34310 MW	34351 MW	34321 MW	34325 MW	34327 MW	34361 MW	34331 MW	34347 MW
34410 MW	34451 MW	34421 MW	34425 MW	34427 MW	34461 MW	34431 MW	34447 MW



CLICK^{line} Scissors, serrated, curved, conical

34210 MD	34251 MD	34221 MD	34225 MD	34227 MD	34261 MD	34231 MD	34247 MD
34310 MD	34351 MD	34321 MD	34325 MD	34327 MD	34361 MD	34331 MD	34347 MD
34410 MD	34451 MD	34421 MD	34425 MD	34427 MD	34461 MD	34431 MD	34447 MD

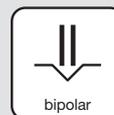


CLICK^{line} Scissors, straight

RoBi® Bipolar Grasping Forceps

rotating, dismantling, with connector pin for bipolar coagulation,
CLERMONT-FERRAND Model

Size 5 mm



Special Features:

- Jaws with robust hinge for optimized bipolar grasping
- Fully rotating 360° sheath
- Top mounted 45° high frequency connector pin takes the cable away from the operative field
- Can be disassembled into separate parts:
 - Handle
 - Outer sheath
 - Working insert
- Cleaning port
- Autoclavable



38161 **RoBi® Metal Handle,**
with larger contact area
at the finger ring

RoBi® Metal Outer Sheaths, insulated



- 38300 **RoBi® Metal Outer Sheath, insulated,**
with LUER-Lock connector for cleaning,
size 5 mm, length 36 cm
- 38400 **Same,** length 43 cm

Please note: RoBi® instruments, length 43 cm, for use with HOPKINS® Straight Forward Telescopes 26034 AA, 26038 AA and HOPKINS® Wide Angle Straight Forward Telescope 26075 AA

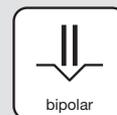
RoBi® Bipolar Grasping Forceps

rotating, dismantling, with connector pin for bipolar coagulation,
CLERMONT-FERRAND Model

Size 5 mm

Operating instruments, **lengths 36 and 43 cm**,
for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for
use with telescopes with inbuilt working
channel and trocars size 6 mm



Outer Sheath	Handle
	38161
Length 36 cm	
Length 43 cm	

Single action jaws

Working Insert	Complete Instrument
38310 CS	38361 CS
38410 CS	38461 CS
 16	RoBi® Grasping Forceps , CLERMONT-FERRAND model, narrow jaws, for fine dissection, grasping and bipolar coagulation
38310 CL	38361 CL
 12	RoBi® Grasping Forceps , CLERMONT-FERRAND model, wide jaws, for dissection, grasping and bipolar coagulation of large vessels and tissue layers
38310 KL	38361 KL
38410 KL	38461 KL
 19	RoBi® Grasping Forceps , CLERMONT-FERRAND model, flat jaws, for dissection, grasping and bipolar coagulation
38310 KF	38361 KF
 14	RoBi® Grasping Forceps , CLERMONT-FERRAND model, flat jaws, fenestrated, for dissection, grasping and bipolar coagulation

Please note:

For the instrument only the **individual component parts** are numbered. The catalog number for the complete **instrument** is not on the instrument. Please take this number from the numbers indicated in the **red** background of the table above. The color **green** indicates the working inserts.

RoBi® Bipolar Grasping Forceps

rotating, dismantling, with connector pin for bipolar coagulation,
CLERMONT-FERRAND Model

Size 5 mm

Operating instruments, **lengths 36 and 43 cm**, for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for use with telescopes with inbuilt working channel and trocars size 6 mm



Outer Sheath	Handle
	38161
Length 36 cm	
Length 43 cm	

Double action jaws

Working Insert	Complete Instrument
38310 ON	38361 ON
38410 ON	38461 ON
	<p>RoBi® Grasping Forceps, CLERMONT-FERRAND model, fenestrated, with especially fine atraumatic serration</p>
38310 MM	38361 MM
	<p>MANHES RoBi® Grasping Forceps, CLERMONT-FERRAND model, especially suitable for tying intracorporeal knots</p>
38310 WA	38361 WA
	<p>WATTIEZ RoBi® Grasping Forceps, with multiple teeth, for atraumatic and accurate grasping</p>

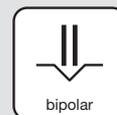
RoBi® Bipolar Grasping Forceps

rotating, dismantling, with connector pin for bipolar coagulation,
CLERMONT-FERRAND Model

Size 5 mm

Operating instruments, **lengths 36 and 43 cm**,
for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for
use with telescopes with inbuilt working
channel and trocars size 6 mm



Outer Sheath	Handle
	38161
Length 36 cm	
Length 43 cm	

Double action jaws

Working Insert	Complete Instrument
38310 MD	38361 MD
38410 MD	38461 MD
	RoBi® KELLY Dissecting and Grasping Forceps, CLERMONT-FERRAND model, especially suitable for dissection
38310 ML	38361 ML
	RoBi® KELLY Dissecting and Grasping Forceps, CLERMONT-FERRAND model, especially suitable for dissection
38310 MA	38361 MA
38410 MA	38461 MA
	RoBi® MALZONI Dissecting and Grasping Forceps, especially suitable for dissection
38310 OM	38361 OM
	RoBi® Forceps Insert, CLERMONT-FERRAND model, with especially fine atraumatic serration, fenestrated jaws, with large proximal recess
38310 H	38361 H
	RoBi® HESSELING Forceps Insert, especially suitable for point coagulation

RoBi® Bipolar Scissors

rotating, dismantling, with connector pin for bipolar coagulation,
CLERMONT-FERRAND Model

Size 5 mm

Operating instruments, **lengths 36 and 43 cm**,
for use with trocars size 6 mm

Operating instruments, **length 43 cm**, for
use with telescopes with inbuilt working
channel and trocars size 6 mm



Outer Sheath	Handle
	38161
Length 36 cm	
Length 43 cm	

Single action jaws

Working Insert	Complete Instrument
38310 MT	38361 MT
	RoBi® Scissors , CLERMONT-FERRAND model, straight, for cutting and bipolar coagulation of vessels and tissue layers
38310 MZ	38361 MZ
	RoBi® Scissors , CLERMONT-FERRAND model, straight, serrated, for cutting and bipolar coagulation

Double action jaws

38310 MW	38361 MW
38410 MW	38461 MW
	RoBi® METZENBAUM Scissors , CLERMONT-FERRAND model, curved, slender blades, for cutting and bipolar coagulation

Laparoscopic and Thoracoscopic Spine Surgery

Bipolar and Unipolar Operating Instruments

Multiple puncture approach
Operating instruments, **length 33 cm**,
for use with trocars size 6 mm



26276 HD



26276 HD

TAKE-APART® MANHES Bipolar Coagulation Forceps, width of jaws 3 mm, size 5 mm, length 33 cm

including:

Bipolar Ring Handle

Outer Sheath

Inner Sheath

Forceps Insert



26276 HK

TAKE-APART® SCHNEIDER Bipolar Grasping Forceps, with connector pin for bipolar coagulation, with movable inner sheath and non-retracting jaws, robust jaws, size 5 mm, length 33 cm

including:

Bipolar Ring Handle

Outer Sheath

Inner Sheath

Forceps Insert



26775 UF



26775 UF

Coagulation and Dissection Electrode, L-shaped, with connector pin for unipolar coagulation, size 5 mm, length 36 cm



26775 UE

Coagulation and Dissection Electrode, spatula-shaped, blunt, with connector pin for unipolar coagulation, size 5 mm, length 36 cm

High Frequency Cords and High Frequency Surgery Units AUTOCON® see chapter 17, UNITS
Components/Spare Parts see chapter 18

Laparoscopic and Thoracoscopic Spine Surgery

Suction and Irrigation Tubes, Bipolar Operating Instruments and Dismantling Fan Retractors

Sizes 5 and 10 mm

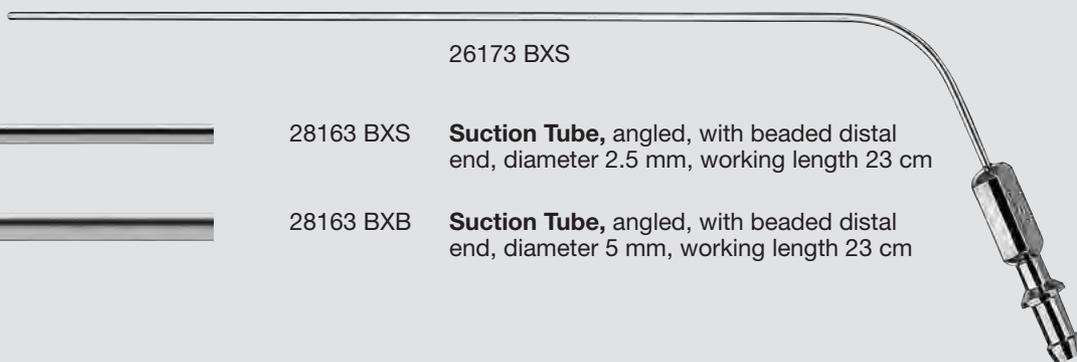
Multiple puncture approach

Operating instruments, length 36 cm, for use with trocars size 6 mm



26173 BN

Suction and Irrigation Tube, with lateral holes, with two-way stopcock for single-hand control, size 5 mm, length 36 cm



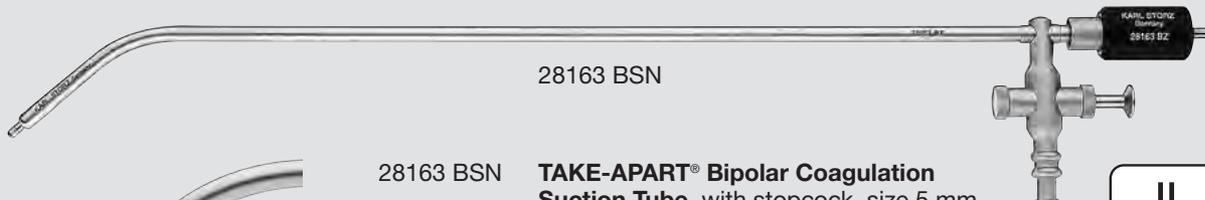
28163 BXS

Suction Tube, angled, with beaded distal end, diameter 2.5 mm, working length 23 cm



28163 BXB

Suction Tube, angled, with beaded distal end, diameter 5 mm, working length 23 cm



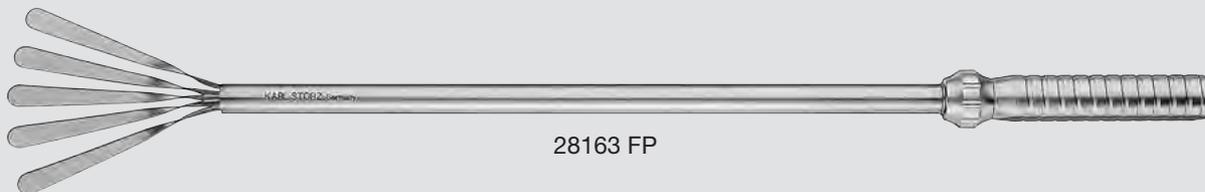
28163 BSN

TAKE-APART® Bipolar Coagulation Suction Tube, with stopcock, size 5 mm, length 30 cm

including:

Suction Tube

Coagulation Electrode, curved



28163 FP

Fan Retractor, dismantling, distendable, size 10 mm, length 30 cm

Simple opening of the fan by axial movement of the outer sheath. Wide retraction area with a sturdy platform. Easy to use and to clean.

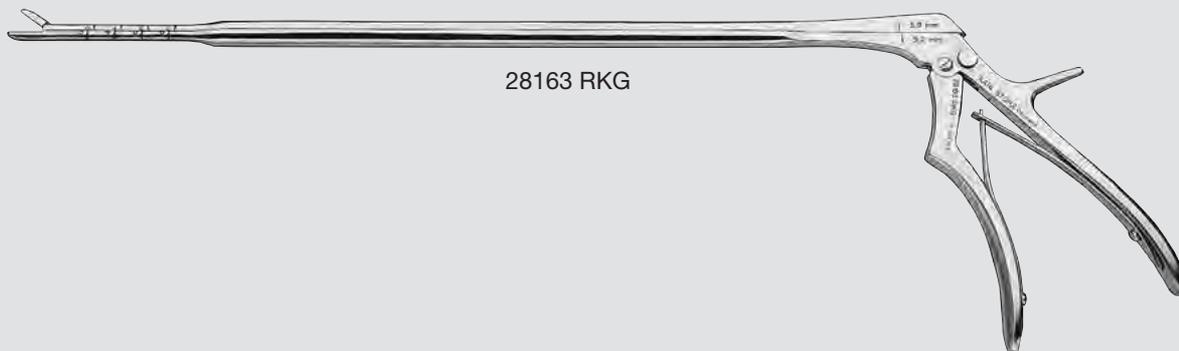
Components/Spare Parts see chapter 18

Laparoscopic and Thoracoscopic Spine Surgery

Rongeurs and Bone Punches

Size 10 mm

Operating instruments, **working length 30 cm**,
for use with trocars size 11 mm



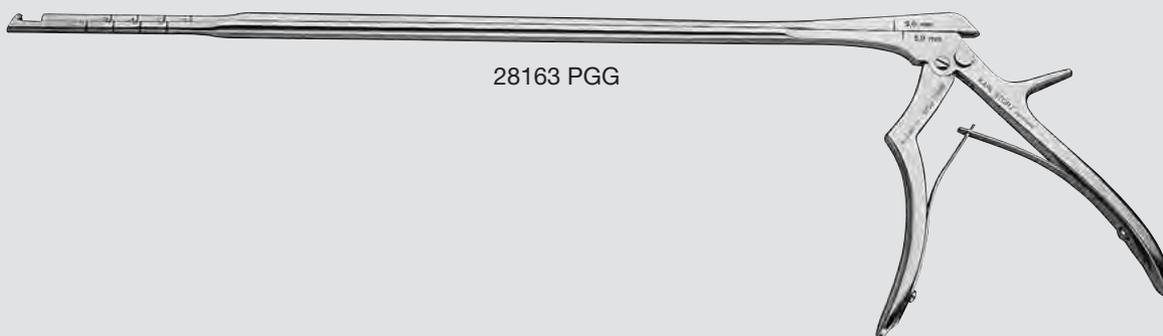
28163 RKG



28163 RKG **Rongeur**, dismantling, graduated scale at the distal end, jaw 5 mm, round sheath diameter 10 mm, working length 30 cm



28163 RGG **Same**, jaws 8 mm



28163 PGG



28163 PKS **KERRISON Bone Punch**, dismantling, graduated scale at the distal end, 40° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm



28163 PKG **KERRISON Bone Punch**, dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm



28163 PGG **Same**, 5 mm

Laparoscopic and Thoracoscopic Spine Surgery

Sharp Curettes and Hook

Size 10 mm

Operating instruments, **working length 30 cm**,
for use with trocars size 11 mm



28163 WC



28163 WC **Curette**, sharp, spoon-shaped, oval, 3.5 x 5 mm



28163 WD **Same**, 3.5 x 9 mm



28163 WE **Same**, 5 x 6.5 mm



28163 WF **Same**, 5.5 x 7.5 mm



28163 WK **Same**, round, diameter 5 mm



28163 WL **Same**, oblong, 2.5 x 6 mm



28163 WM **Same**, oblong, 3.5 x 9 mm



28163 WH **Hook**, 90°, blunt

Laparoscopic and Thoracoscopic Spine Surgery

Spoon Curettes, Palpation Hooks and Raspatories

Size 5 mm

Operating instruments, **working length 36 cm**,
for use with trocars size 6 mm



28163 GI

Spoon Curette, sharp, 4 x 6 mm,
diameter 5 mm, working length 36 cm



28163 GK

Same, 3 x 4 mm



28163 GL

Spoon Curette, sharp, 3 x 4 mm, spoon angled 45°,
diameter 5 mm, working length 36 cm



28163 GH

Palpation Hook, hook angled 90°, blunt,
diameter 5 mm, working length 36 cm



28163 RR

Raspatory, diameter 5 mm, working length 36 cm

28163 KR

Same, diameter 2 mm

Laparoscopic and Thoracoscopic Spine Surgery

Ring Curettes, Raspatory, Tappet, Rasp, Curette, Chisels and Collar

Sizes 7 and 10 mm

Operating instruments, **working length 30 cm**,
for use with trocar size 11 mm



28163 WG



28163 WN **Ring Curette**, graduated, distal end slightly curved, size 10 mm, ring size diameter 8 mm, working length 30 cm



28163 WG **Ring Curette**, graduated, distal end slightly curved, size 10 mm, ring size diameter 6 mm, working length 30 cm



28163 MF **Raspatory**, for dissection, size 7 mm, working length 30 cm



28163 MS **Tappet**, blunt, grooved, for positioning the bone implant, size 10 mm, working length 30 cm



28163 RP **Rasp**, for coarsening the bone surface, size 10 mm, working length 30 cm



28163 SBK **Curette**, stirrup-shaped, for straightening end plates, size 10 mm, working length 30 cm



28163 MN



28163 MN **Chisel**, graduated, double-edged grinding, straight, size 7 mm, working length 30 cm

28163 MM **Same**, size 10 mm



28163 MK

28163 MK **Collar**, for deflecting the mallet, for use with Chisel 28163 MM

Size 10 mm

Operating instruments, **working length 36 cm**,
for use with trocars size 11 mm



30444 LR



30444 LR

Clip Applicator, dismantling,
rotating, size 10 mm, length 36 cm,
for PILLING-WECK Titanium Clips
30460 AL (medium-large), with
ratchet to lock the jaw holding the clip
including:

Metal Handle, with ratchet

Metal Outer Sheath

Insert



actual size

30460 AL

PILLING-WECK **Titanium Clips**, medium-large,
box with 16 sterile cartridges, 10 clips each,
for use with Clip Applicator 30444 LR



28163 WZ

28163 WZ

Distance Measuring Instrument, with cm-markings and
cm-slots for radiologic measurement, for monosegmental
measuring, 5 cm

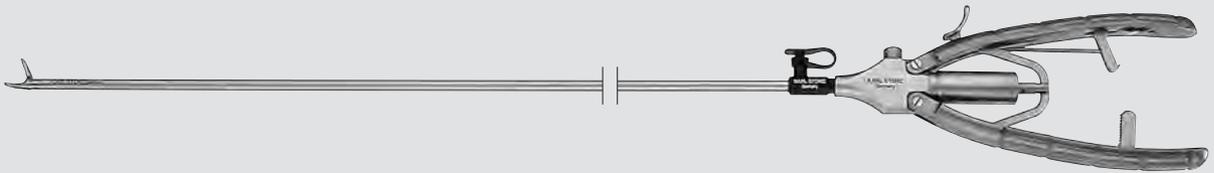
28163 WX

Distance Measuring Instrument, with cm-markings and
cm-slots for radiologic measurement, long,
for bisegmental measuring, 8 cm

Components/Spare Parts see chapter 18

KOH Macro Needle Holders

dismantling



KOH Macro Needle Holder, size 5 mm, dismantling, consisting of:

- Handle
- Outer sheath
- Working insert

Cleaning and sterilization are gaining increasing importance for KARL STORZ as a manufacturer of surgical instruments.

Similar to all our surgical instruments, the cleaning and hygiene of our needle holders also play an important

role. Our KOH macro needle holders feature consistent effectiveness and precision, with significantly improved cleaning results achieved by dismantling the instrument. The handle, outer sheath and inner part can be cleaned and sterilized separately for perfect results.

The reusable dismantling design offers the user the following benefits:

- Can be disassembled into three separate components
- Fully autoclavable
- Cleaning connector
- Choice of six different handles and three different working inserts
- With tungsten carbide inserts
- Environmentally correct: In the event of damage, only the component with the defect needs to be replaced
- User-friendly and ergonomic handling

KOH Macro Needle Holders

dismantling

Size 5 mm

Operating instruments, **lengths 33 and 43 cm**,
with axial handle for use with trocars size 6 mm

Length	Handle		
	30173 AR	30173 AL	30173 AO
33 cm			
43 cm			

Single action jaws

Working Insert	Complete Instrument		
30173 R	30173 RAR	30173 RAL	30173 RAO
30178 R	30178 RAR	30178 RAL	30178 RAO



KOH **Macro Needle Holder**, dismantling, jaws curved to right,
with tungsten carbide inserts, for use with suture material size 0/0 to 7/0

30173 L	30173 LAR	30173 LAL	30173 LAO
30178 L	30178 LAR	30178 LAL	30178 LAO



KOH **Macro Needle Holder**, dismantling, jaws curved to left,
with tungsten carbide inserts, for use with suture material size 0/0 – 7/0

30173 F	30173 FAR	30173 FAL	30173 FAO
30178 F	30178 FAR	30178 FAL	30178 FAO

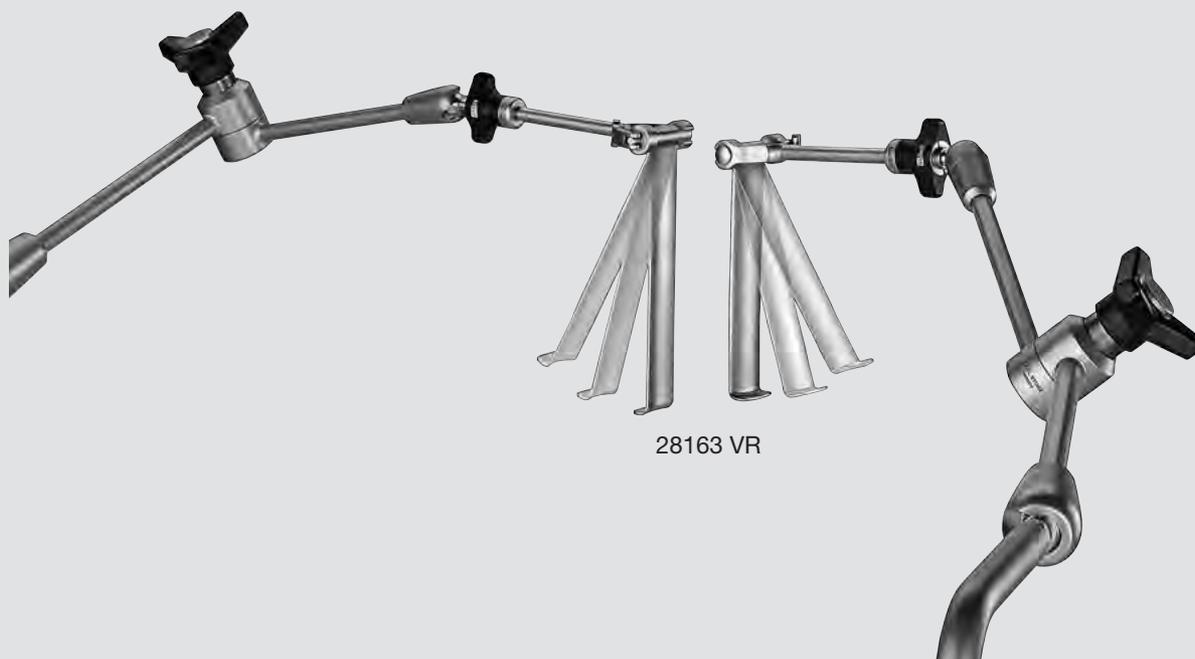


KOH **Macro Needle Holder**, dismantling, straight jaws,
with tungsten carbide inserts, for use with suture material size 0/0 – 7/0

ROSENTHAL Articulated Retractor

ROSENTHAL retractor blades are suitable for any application. These have been specially designed for “mini-open” surgical approaches. The lateral arresting lever enables the flexible angling of the blades without releasing the holding arm. This enables optimal preparation and exposure of deep-lying areas. The

retractor blades are particularly suitable for the atraumatic exposure of all spinal segments and for maintaining the ventral or dorsal intercostal access. The VITOM® telescope enables the retractor system to be used to its fullest advantage.



28163 VR

ROSENTHAL **Angled Retractor**, with movable retractor blades, in three lengths, can be clamped to the holding arm with the KSLOCK

including:

2x **Retractor Blade**, length 12 cm, width 2.5 cm, distally atraumatically angled, lockable in 20 positions

2x **Same**, length 14 cm

2x **Same**, length 18 cm

2x **Articulated Stand**, reinforced version, L-shaped, with one central clamp for all five joint functions, height 48 cm, operating range 52 cm

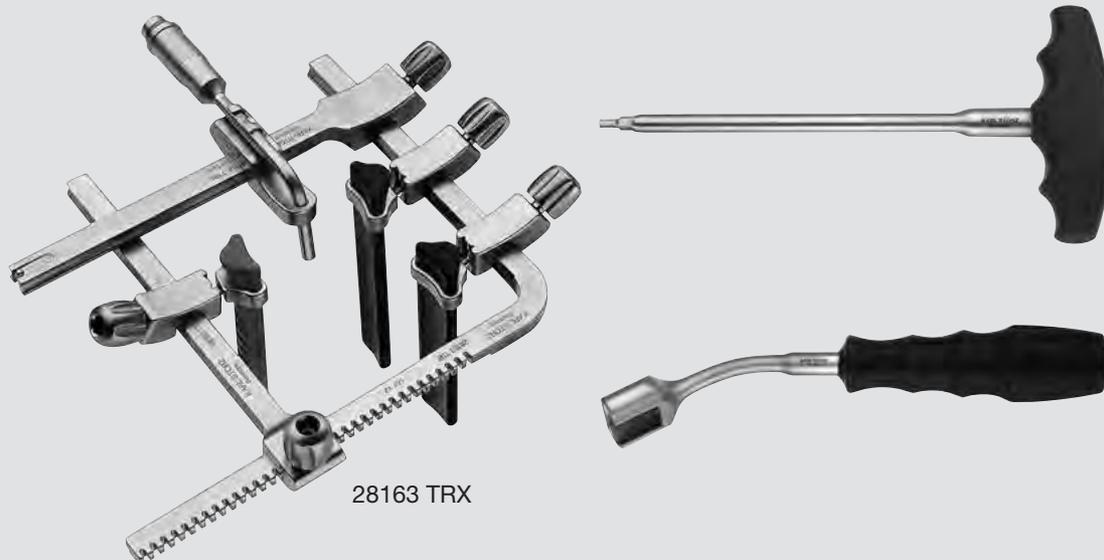
2x **Rotation Socket**, to clamp to the operating table

Spine Retractor

Illuminated Spine Retractor with Radiolucent Retractor Blades
in Various Lengths



The retractor system can be used for minimally invasive surgeries on the thoracic or lumbar spine and is used for all indications in this area.



28163 TRX

TENTACLE Spine Retractor, complete, with retractor frame, 2 retractor arms, X-ray transparent blades in 3 different lengths, light carrier with corresponding tools including:

Retractor Frame

Retractor Arm

2x **Drive Screw**

2x **Retractor Arm**, extra

4x **PEEK Retractor Blade**, length 70 mm, width 16 mm, color: black

4x **PEEK Retractor Blade**, length 50 mm, width 16 mm, color: blue

4x **PEEK Retractor Blade**, length 30 mm, width 16 mm, color: green

6x **Holder**, for retractor blades

Light Carrier

Holder, for light carriers

Screwdriver

Positioning Instrument, for fine adjustment of PEEK retractor blades

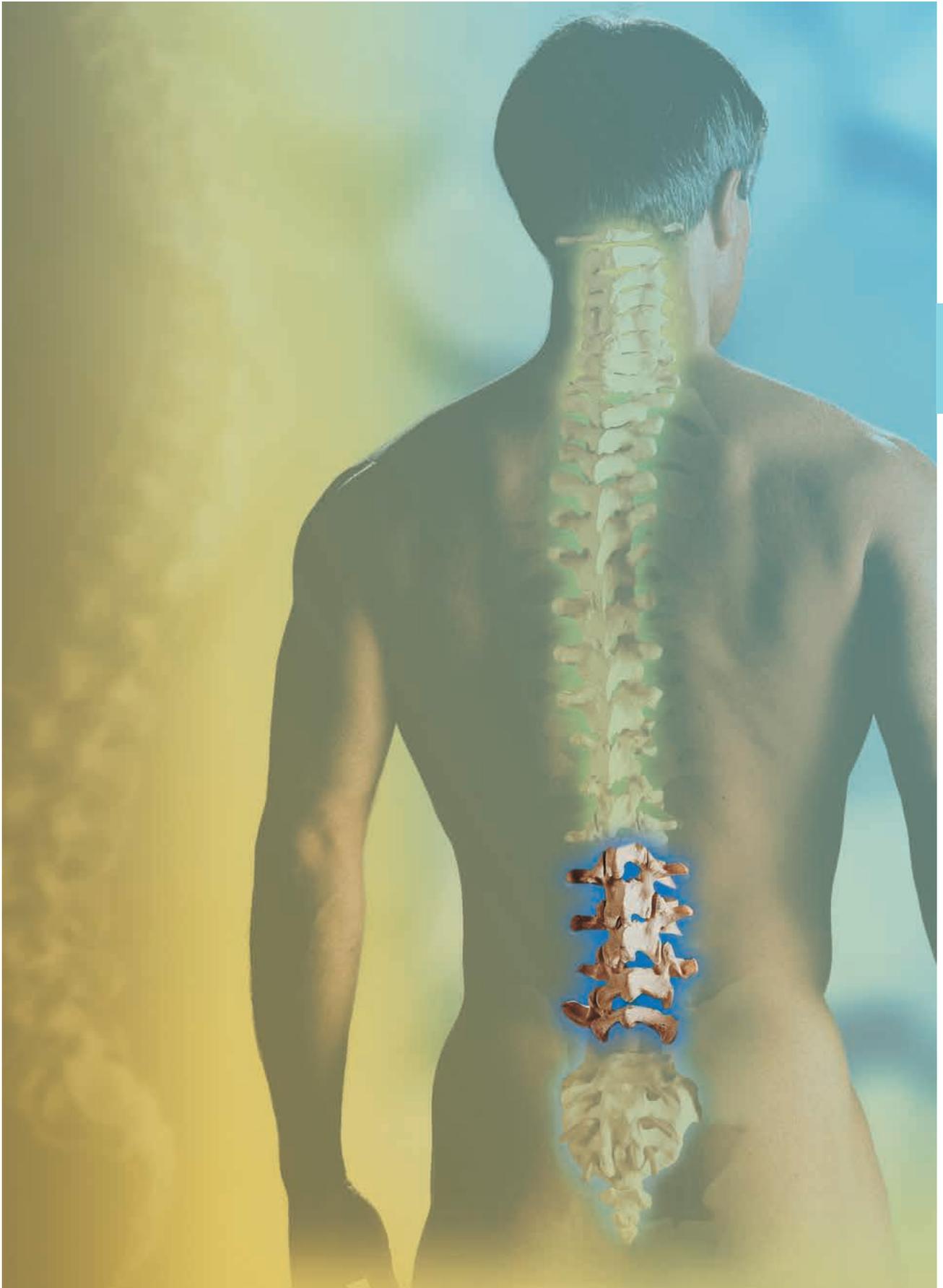
Sterilization Container



495 NA

Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 230 cm

Components/Spare Parts see chapter 18





Percutaneous **Transforaminal**, **Interlaminar** and **Posterolateral** Endoscopy System



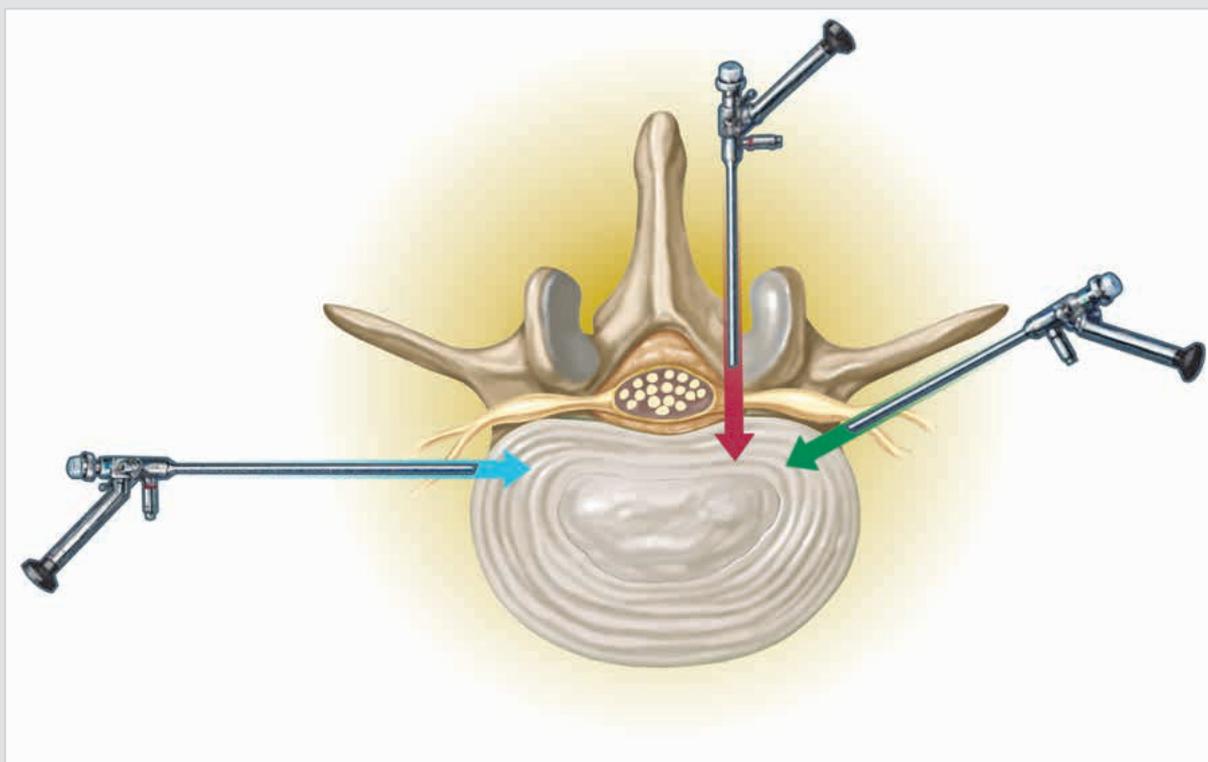
The **SpineTIP** system offers various possibilities for treating herniated discs as well as other spinal pathologies in the lumbar and thoracic regions, i.e. spondylodiscitis or spinal tumors.

Endoscopic systems that combine a high-resolution telescope, a light source as well as working and irrigation channels in one instrument make it possible to perform minimally invasive interventions via a single port under excellent visual control. The term Percutaneous

Endoscopic Lumbar Discectomy (PELD) is also used to describe the application of these systems and techniques in lumbar spinal surgery.

The **SpineTIP** system provides an endoscope and instruments that are optimized for 3 standard approaches: **transforaminal**, **interlaminar** and **posterolateral**.

*T. LÜBBERS, M. D.,
Head of Wirbelsäulenzentrum Ludmillerstift Meppen,
Germany*



Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

Puncture Needles, Guide Wires and Dilation Sleeves with two ports

T = Instrument for the transforaminal approach with HOPKINS® Telescope 28163 BTA
I = Instrument for the interlaminar approach with HOPKINS® Telescope 28163 BFA
P = Instrument for the posterolateral approach with HOPKINS® Telescope 28163 FFA



28163 PLT

28163 PEL **Puncture Needle**, including stylet, diameter 1.8 mm, working length 25 cm, with 1.3 mm opening for guide wire



28163 PLT **Puncture Needle**, including stylet, diameter 1.2 mm, working length 25 cm, with 0.8 mm opening for guide wire



28163 PL **Puncture Needle**, including stylet, diameter 1.8 mm, working length 18 cm, with 1.3 mm opening for guide wire



28163 GWL

28163 GWL **Guide Wire**, blunt, diameter 1.1 mm, working length 45 cm



28163 GWT **Guide Wire**, blunt on both sides, diameter 0.7 mm, working length 41 cm, package of 5



28163 FHI



28163 FHT **Dilation Sleeve**, outer diameter 6.5 mm, inner diameter 1.4 mm, length 31 cm, with two ports, for the transforaminal approach, color code: blue



28163 FHI **Dilation Sleeve**, with two ports, outer diameter 6.5 mm, inner diameter 1.4 mm, length 22 cm, color code: red



28163 FHP **Dilation Sleeve**, outer diameter 6 mm, inner diameter 1 mm, length 22 cm, with two ports, for the posterolateral approach, color code: green



Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

Sequential Dilatation, Impact Sleeves, Mallets and X-ray Rulers



28163 FD



28163 FD

Dilation Sleeve, outer diameter 2.5 mm, inner diameter 1.2 mm, working length 29 cm, color code: red-green



28163 FE

Dilation Sleeve, outer diameter 3.9 mm, inner diameter 2.6 mm, working length 27 cm, color code: red-green



28163 FF

Dilation Sleeve, outer diameter 5.4 mm, inner diameter 4 mm, working length 25 cm, color code: red



28163 FG

Dilation Sleeve, outer diameter 6.5 mm, inner diameter 5.5 mm, working length 23 cm, color code: red



28163 FDH

28163 FDH

Punch Device, kidney-shaped, for Dilation Sleeves diameter 2 – 6 mm



28163 FEH

28163 FEH

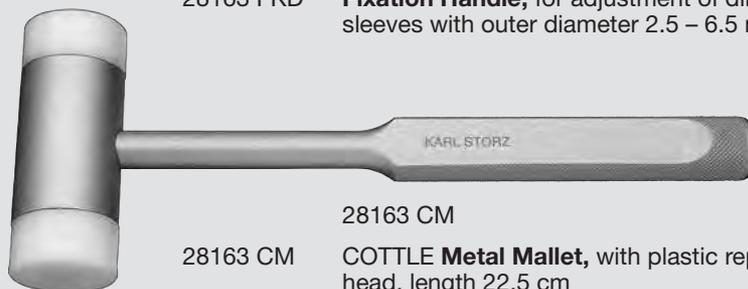
Punch Sleeve, for use with operating sheaths



28163 FKD

28163 FKD

Fixation Handle, for adjustment of dilation sleeves with outer diameter 2.5 – 6.5 mm



28163 CM

28163 CM

COTTLE Metal Mallet, with plastic replacement head, length 22.5 cm



28163 FRL

28163 FRL

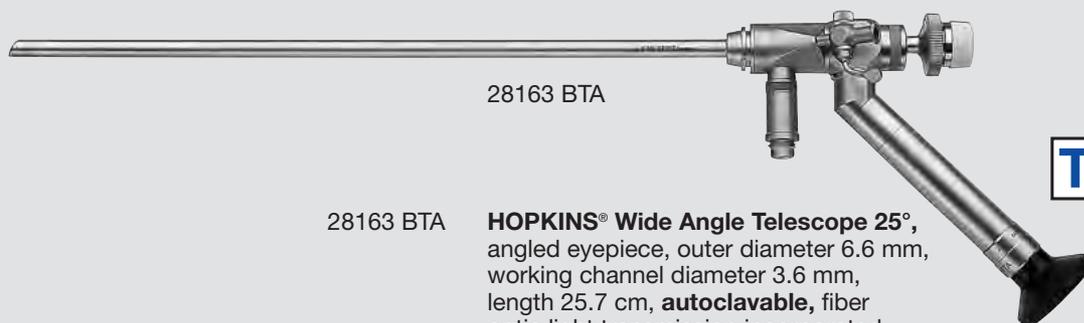
X-ray Ruler, with special marking for midline and 2 mm- and cm-slots for radiologic measurement, total length 30 cm



Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

HOPKINS® Telescopes and Operating Sheaths

For the **transforaminal** approach



28163 BTA

TIP

28163 BTA **HOPKINS® Wide Angle Telescope 25°**, angled eyepiece, outer diameter 6.6 mm, working channel diameter 3.6 mm, length 25.7 cm, **autoclavable**, fiber optic light transmission incorporated, color code: blue



28163 TSN



28163 TSG **Operating Sheath**, graduated, distal straight, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.8 mm, length 25 cm, for use with HOPKINS® Telescope 25° 28163 BTA, color code: blue

TIP



28163 TSN **Operating Sheath**, graduated, with distal beak, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.8 mm, length 25 cm, for use with HOPKINS® Telescope 25° 28163 BTA, color code: blue

TIP



28163 TSW **Operating Sheath**, graduated, distal oblique, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.8 mm, length 25 cm, for use with HOPKINS® Telescope 25° 28163 BTA, color code: blue

TIP

Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

HOPKINS® Telescopes and Operating Sheaths

For the **interlaminar** approach



28163 BFA **HOPKINS® Wide Angle Telescope 25°**, angled eyepiece, outer diameter 6.6 mm, working channel diameter 3.6 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red



28163 FSG **Operating Sheath**, graduated, distal straight, with clamp mechanism for fixation, integrated irrigation connector, inner diameter 7.2 mm, outer diameter 7.9 mm, length 17 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red



28163 FSN **Operating Sheath**, graduated, with distal beak, with clamp mechanism for fixation, integrated irrigation connector, inner diameter 7.2 mm, outer diameter 7.9 mm, length 18 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red



28163 FSW **Operating Sheath**, graduated, distal oblique, with clamp mechanism for fixation, integrated irrigation connector, inner diameter 7.2 mm, outer diameter 7.9 mm, length 18 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red



28163 FWO **Operating Sheath**, distal 45° oblique, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.5 mm, length 17 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red



Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

HOPKINS® Telescopes and Operating Sheaths

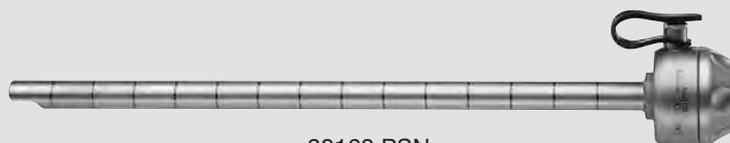
For the posterolateral approach



28163 FFA

28163 FFA

HOPKINS® Wide Angle Telescope 15°, angled eyepiece, outer diameter 6.1 mm, working channel diameter 2.9 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green



28163 PSN



28163 PSG

Operating Sheath, graduated, distal straight, integrated irrigation connector, inner diameter 6.2 mm, outer diameter 6.9 mm, length 17 cm, for use with HOPKINS® Telescope 15° 28163 FFA, color code: green



28163 PSN

Operating Sheath, graduated, distal beak, integrated irrigation connector, inner diameter 6.2 mm, outer diameter 6.9 mm, length 17 cm, for use with HOPKINS® Telescope 15° 28163 FFA, color code: green



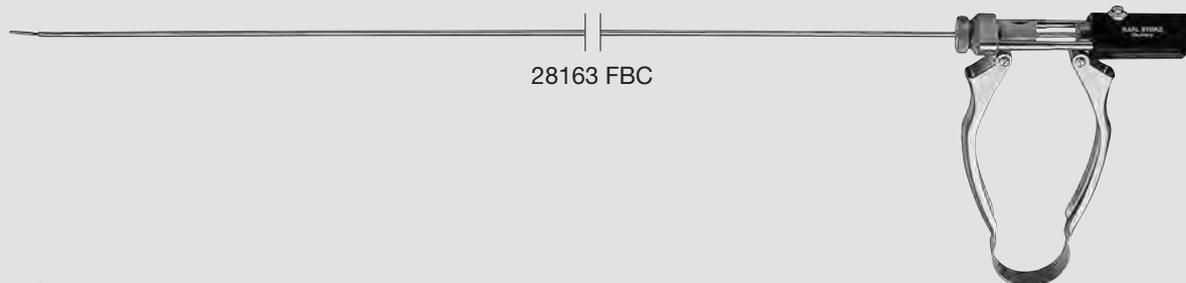
28163 PSW

Operating Sheath, graduated, distal oblique, integrated irrigation connector, inner diameter 6.2 mm, outer diameter 6.9 mm, length 17 cm, for use with HOPKINS® Telescope 15° 28163 FFA, color code: green



Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

Bipolar Electrodes, Dissectors and Palpation Hooks



28163 FBC



28163 FBC

Bipolar Electrode, angled, diameter 2.5 mm, working length 36 cm

including:

***Bipolar Electrode Insert**

Electrode Sheath

Bipolar Spring Handle



28163 UH



28163 UH

Palpation Hook, distally angled 45°, diameter 2 mm, working length 34 cm



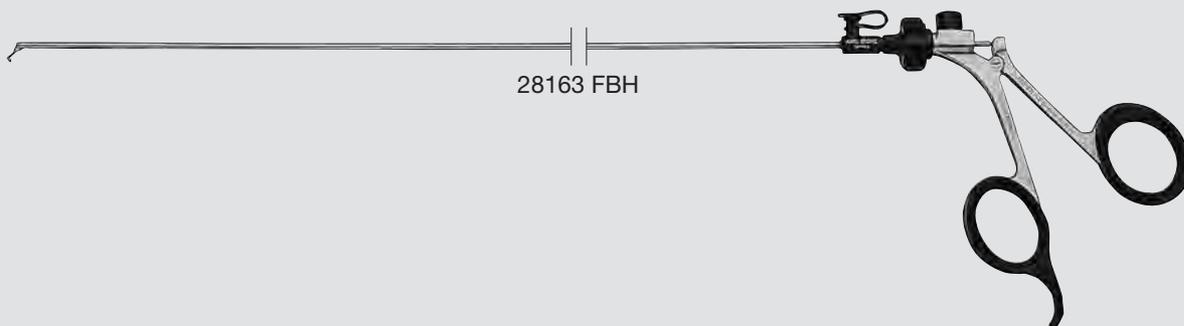
28163 FDW

Dissector, distally curved 45°, diameter 2.6 mm, working length 36 cm

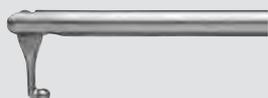


28163 FDG

Dissector, distally curved 90°, diameter 2.6 mm, working length 36 cm



28163 FBH



28163 FBH

CLICKline® Palpation Hook, rotating, dismantling, not insulated, without connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, with distal ball, bendable to 90°, size 3.5 mm, length 36 cm



including:

Metal Handle, without ratchet, with plastic rings with larger contact area

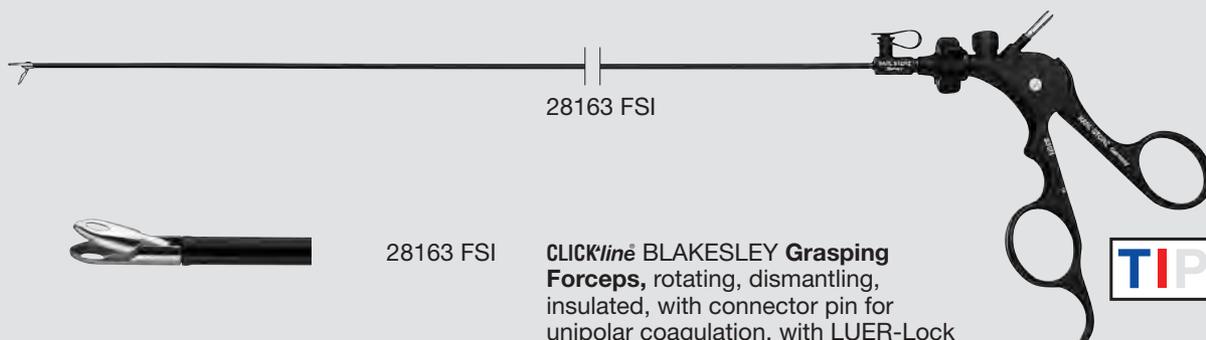
Outer Sheath, with working insert

***The bipolar electrode insert is available separately under order no. 28163 FBE.**

Components/Spare Parts see chapter 18

Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

Grasping Forceps

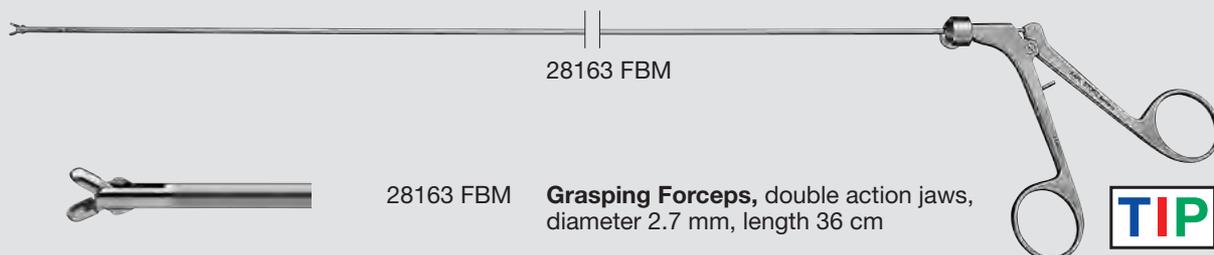


28163 FSI



28163 FSI

CLICK^{line} BLAKESLEY Grasping Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, single action jaws, fenestrated, size 3 mm, length 36 cm
including:
Plastic Handle, without ratchet
Outer Sheath, with forceps insert

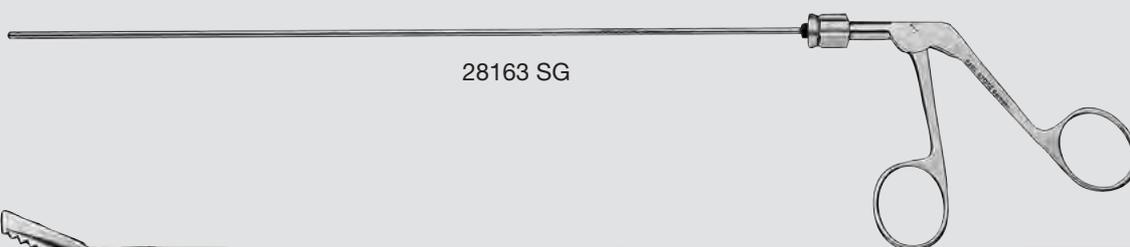


28163 FBM



28163 FBM

Grasping Forceps, double action jaws, diameter 2.7 mm, length 36 cm



28163 SG



28163 SL

TAKE-APART[®] Grasping Forceps, diameter 2.3 mm, length 30 cm
including:

Handle
Working Attachment



28163 SG

TAKE-APART[®] Spoon Forceps, oval, diameter 2.3 mm, length 30 cm
including:

Handle
Working Attachment



28163 SE

TAKE-APART[®] BLAKESLEY Grasping Forceps, diameter 2.3 mm, length 30 cm
including:

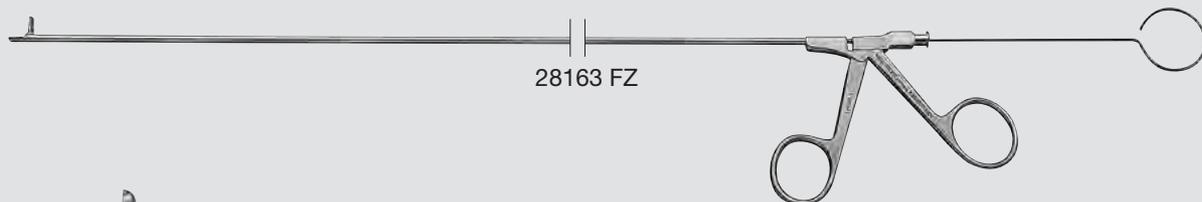
Handle
Working Attachment



Components/Spare Parts see chapter 18

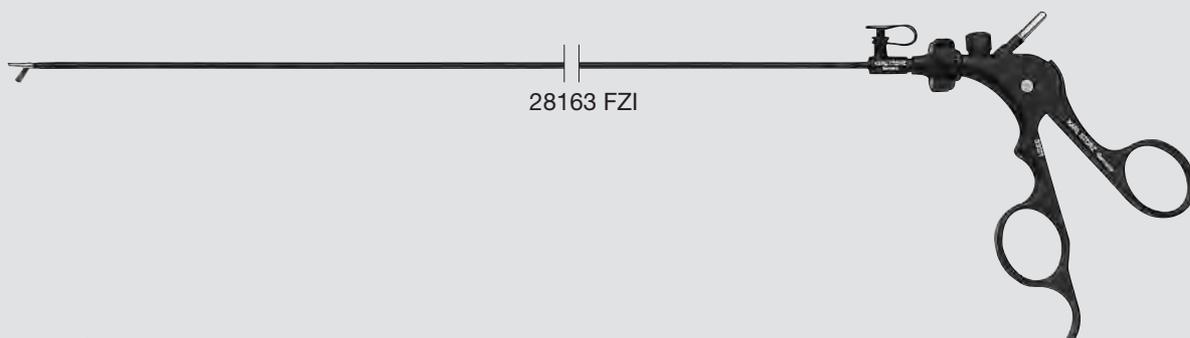
Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

Grasping Forceps, Raven's Beak Forceps and Angled Instruments



28163 FZ

Grasping Forceps, single action jaws, with 90° angle of view, diameter 3.5 mm, working length 36 cm



28163 FZI

CLICK^{line} Raven's Beak Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, single action jaws, size 3.5 mm, length 36 cm including:

- Plastic Handle**, without ratchet
- Forceps Insert**, with raven's beak



28163 FAS

Grasping Forceps, bendable, single action jaws, diameter 3.5 mm, working length 36 cm



28163 FAP

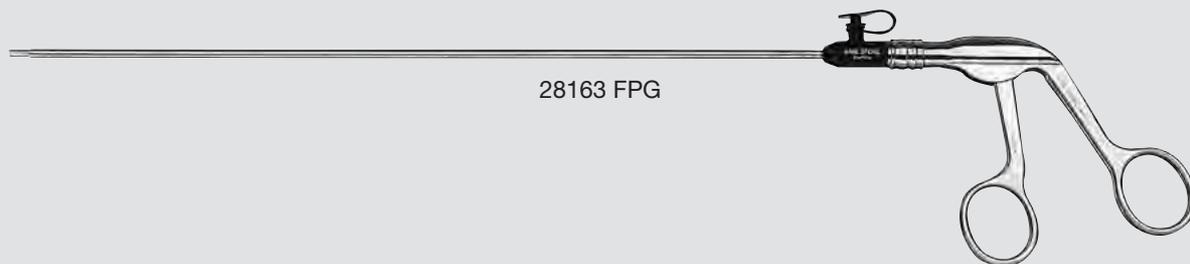
Punch, bendable, single action jaws, diameter 3.5 mm, working length 36 cm



Components/Spare Parts see chapter 18

Percutaneous Transforaminal, Interlaminar and Posterolateral Endoscopy System

Punches, Trephines and Retractable Knives



28163 FPG



28163 FPW

SpinoFIT® Punch, dismantling, 45° downbiting, not through-cutting, working length 30 cm including:

Punch Insert
Outer Sheath
Handle



28163 FPG

SpinoFIT® Punch, dismantling, 90° downbiting, not through-cutting, working length 30 cm including:

Punch Insert
Outer Sheath
Handle



28163 FTM



28163 FTM

Trephine, with pyramidal handle, inner diameter 1.6 mm, outer diameter 2.7 mm, working length 30 cm



28163 FTK



28163 FTK

Trephine, with round handle, inner diameter 3.2 mm, outer diameter 4.2 mm, working length 22 cm



28163 FTG

Trephine, with round handle, inner diameter 7 mm, outer diameter 8 mm, working length 17.5 cm



28163 FM



28163 FM

Knife, retractable, diameter 3.5 mm, working length 36 cm



Components/Spare Parts see chapter 18

Stitchless Lumbar Disc Surgery Under Local Anesthesia

Lumbar disc lesions form a major part of degenerative diseases of the functional spinal unit.

The pain generators usually reside in the lumbar intervertebral foramen where they can be easily and adequately accessed and treated. The most important step and the real crystallized learning in transforaminal stitchless disc surgery under local anesthesia is the precise positioning of the needle where it has to be as per the target identified on MRI and associated pain diagnosis.

The guide wire, dilator and operating sheath follow the needle and are used to access the disc under the superior facet. In patients with back and leg pain which does not resolve with conventional therapy, surgical intervention may be needed. A 25° scope is used to reach the relevant symptomatic pathology which is

always in the posterior annulus and under the superior facet. Graspers will help to grab a fragment and remove it. The hook facilitates the reach into the foramen. The curette allows working on the undersurface of the facet and the tip of the SAP (superior articular process), especially in cases of lateral canal stenosis.

The basic set may, therefore, be used to treat leg and back pain in lumbar spondylosis with annular tear, disc herniation and lateral canal stenosis. The surgery is performed under local anesthesia.

All instruments are an extension of the surgeon's philosophy and once we align our thinking with that philosophy, the utility of the instruments will be evident.

*S. GORE, M.D.,
Spine Endoscopist,
Pune, India*



Stitchless Lumbar Disc Surgery Under Local Anesthesia

HOPKINS® Telescope, Adaptor, Puncture Needle, Guide Wire,
Dilation Sleeve and Mallet

GORE Recommended Set



28163 BFA

28163 BFA

HOPKINS® Wide Angle Telescope 25°, angled eyepiece, outer diameter 6.6 mm, working channel diameter 3.6 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red



533 TVA

533 TVA

Adaptor, autoclavable, permits telescope changing under sterile conditions



28163 PLT

28163 PLT

Puncture Needle, including stylet, diameter 1.2 mm, working length 25 cm, with 0.8 mm opening for guide wire



28163 GWT

28163 GWT

Guide Wire, blunt on both sides, diameter 0.7 mm, working length 41 cm, package of 5



28163 FHI



28163 FHI

Dilation Sleeve, with two ports, outer diameter 6.5 mm, inner diameter 1.4 mm, length 22 cm, color code: red



28163 CM

28163 CM

COTTLE Metal Mallet, with plastic replacement head, length 22.5 cm

Stitchless Lumbar Disc Surgery Under Local Anesthesia

Operating Sheaths, Punch Sleeve, Fixation Handle,
X-ray Rule and Trephines

GORE Recommended Set



28163 FWO



28163 FWO **Operating Sheath**, distal 45° oblique, integrated irrigation connector, inner diameter 6.8 mm, outer diameter 7.5 mm, length 17 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red



28163 FSG **Operating Sheath**, graduated, distal straight, with clamp mechanism for fixation, integrated irrigation connector, inner diameter 7.2 mm, outer diameter 7.9 mm, length 17 cm, for use with HOPKINS® Telescope 25° 28163 BFA, color code: red



28163 FEH

28163 FEH **Punch Sleeve**, for use with operating sheaths



28163 FKD

28163 FKD **Fixation Handle**, for adjustment of dilation sleeves with outer diameter 2.5 – 6.5 mm



28163 FRL

28163 FRL **X-ray Ruler**, with special marking for midline and 2 mm- and cm-slots for radiologic measurement, total length 30 cm



28163 FTM



28163 FTM **Trephine**, with pyramidal handle, inner diameter 1.6 mm, outer diameter 2.7 mm, working length 30 cm



28163 FTK

28163 FTK **Trephine**, with round handle, inner diameter 3.2 mm, outer diameter 4.2 mm, working length 22 cm

Stitchless Lumbar Disc Surgery Under Local Anesthesia

Palpation Probes, Raven's Beak Forceps and Grasping Forceps

GORE Recommended Set

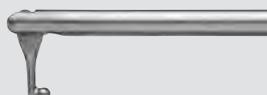


28163 FBH

CLICK'line Palpation Hook, rotating, dismantling, not insulated, without connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, with distal ball, bendable to 90°, size 3.5 mm, length 36 cm including:

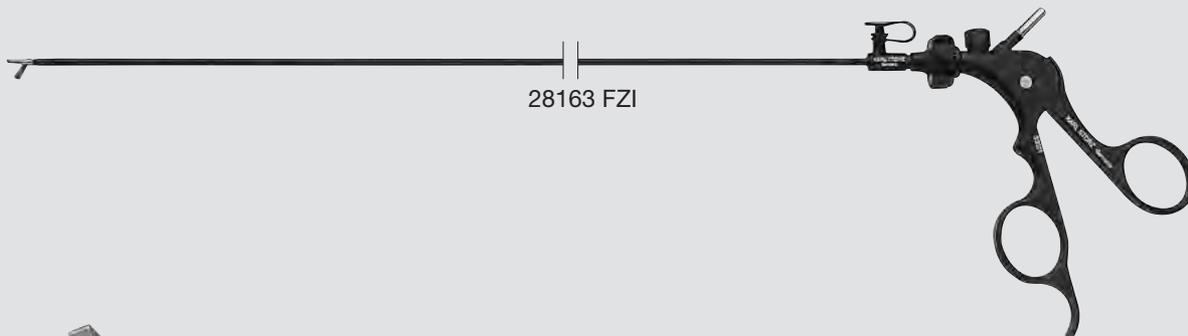
Metal Handle, without ratchet, with plastic rings with larger contact area

Outer Sheath, with working insert



28163 FBG

Same, size 2.7 mm



28163 FZI

CLICK'line Raven's Beak Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, single action jaws, size 3.5 mm, length 36 cm including:

Plastic Handle, without ratchet

Forceps Insert, with raven's beak



28163 FSI

CLICK'line BLAKESLEY Grasping Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, single action jaws, fenestrated, size 3 mm, length 36 cm including:

Plastic Handle, without ratchet

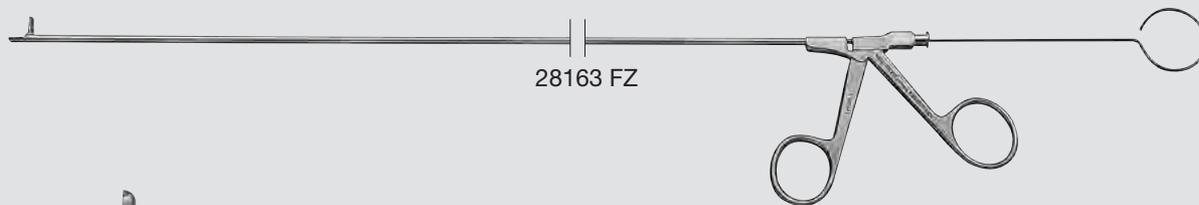
Outer Sheath, with forceps insert

Components/Spare Parts see chapter 18

Stitchless Lumbar Disc Surgery Under Local Anesthesia

Grasping Forceps and Bendable Punch

GORE Recommended Set

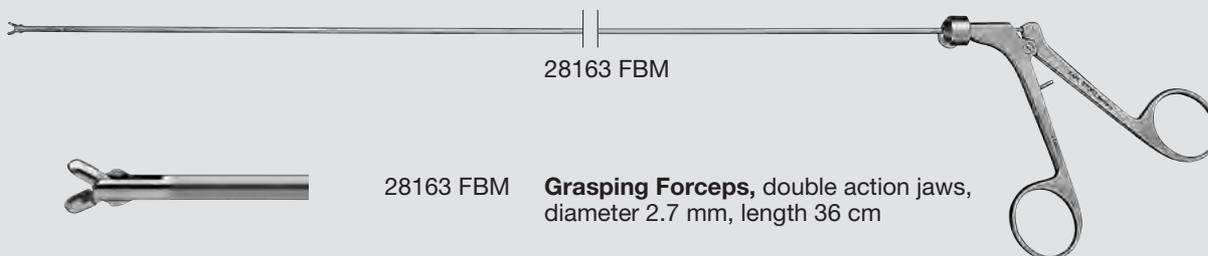


28163 FZ



28163 FZ

Grasping Forceps, single action jaws, with 90° angle of view, diameter 3.5 mm, working length 36 cm



28163 FBM



28163 FBM

Grasping Forceps, double action jaws, diameter 2.7 mm, length 36 cm



28163 SE



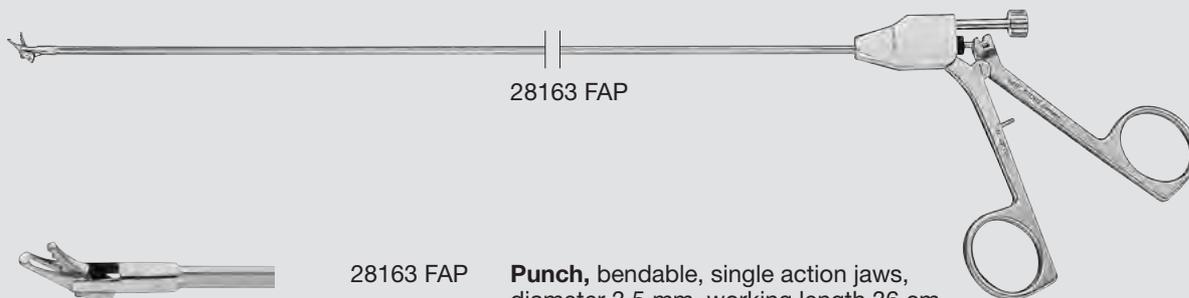
28163 SE

TAKE-APART® BLAKESLEY Grasping Forceps, diameter 2.3 mm, length 30 cm

including:

Handle

Working Attachment



28163 FAP



28163 FAP

Punch, bendable, single action jaws, diameter 3.5 mm, working length 36 cm



28163 FAS

Grasping Forceps, bendable, single action jaws, diameter 3.5 mm, working length 36 cm

Components/Spare Parts see chapter 18

Stitchless Lumbar Disc Surgery Under Local Anesthesia

Bipolar Electrodes, DrillCut-X® II Spine Handpiece and Suction Burrs

GORE Recommended Set



28163 FBC



28163 FBC

Bipolar Electrode, angled, diameter 2.5 mm, working length 36 cm including:

- ***Bipolar Electrode Insert**
- Electrode Sheath**
- Bipolar Spring Handle**



28163 FBE



28163 FBE

Bipolar Electrode Insert, distally angled, length 44 cm, for use with Sheath 28163 FBS



28762 KB



28762 KB

Bipolar Coagulation Electrode, diameter 1.7 mm, working length 30 cm



28 7120 50

28 7120 50

DrillCut-X® II Spine Handpiece, for use with UNIDRIVE® S III NEURO



41201 FD



41201 FD

Suction Burr, with integrated irrigation, straight, sterilizable, cylindrical cutter head with lateral and distal protection, shaft diameter 3.5 mm, length 30 cm, for use with DrillCut-X® II Spine Handpiece **28 7120 50**



41201 D

Suction Burr, with integrated irrigation, straight, sterilizable, diamond head, shaft diameter 3.5 mm, length 30 cm, for use with DrillCut-X® II Spine Handpiece **28 7120 50**

*The bipolar electrode insert is available separately under order no. 28163 FBE.

Components/Spare Parts see chapter 18

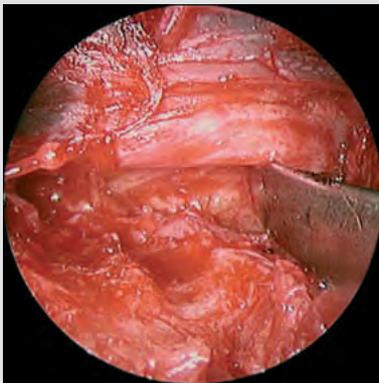
Endoscopic Discectomy, Decompression of the Spinal Canal

Endoscopic discectomy and decompression of the lumbar canal with the ENDOSPINE® offers the following advantages:

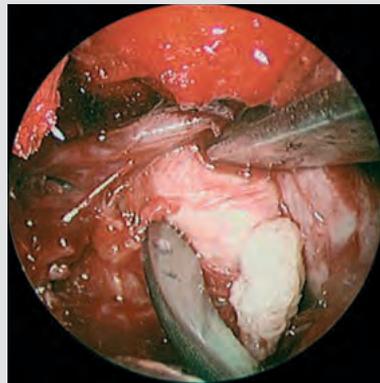
- A mobile trocar allowing image-guided targeting of bilateral and around-the-corner lumbar-thoracic anatomy
 - A powerful surgical multifunction device: 5 instruments in two working hands
 - Continuous visual monitoring of the working instruments and a simultaneous close view of the anatomical details
 - An outstanding image quality 4 mm HOPKINS® rod lens system – “a microscope that is always at your fingertips”
- Scope of use: medial, lateral and foraminal herniations – lumbar canal decompression

J. DESTANDAU, M. D.,
Bordeaux, France

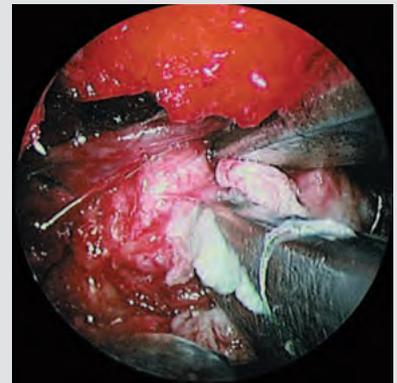
Surgical technique:



Dissection of the nerve root

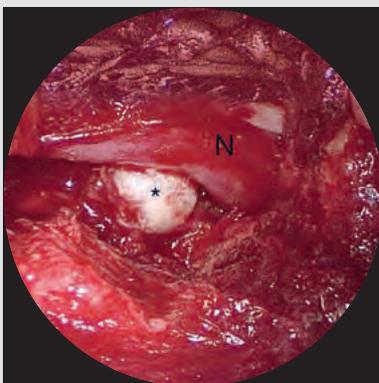


By applying pressure with the raspatorium the prolapsed hernia is eased out...

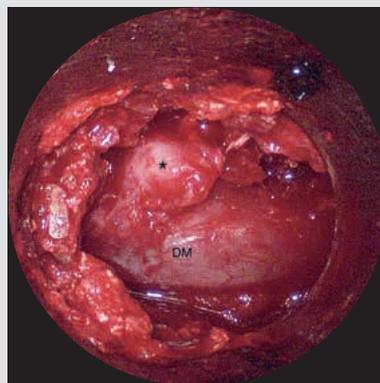


...and removed with the rongeur.

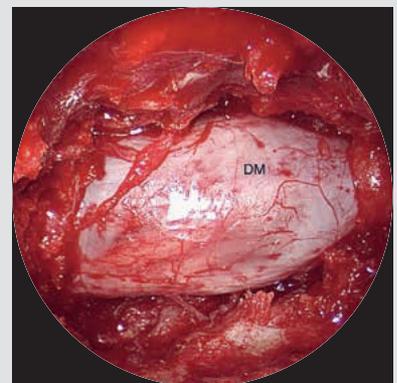
Weitere Indikationen zur Operation mit dem ENDOSPINE® System:



Compression of left S1 nerve root (N) due to extruded lumbar disc herniation (*)



Compression of the thecal sac (DM) and the underlying right L5 nerve root due to a synovial cyst (*) that developed in the facet joint

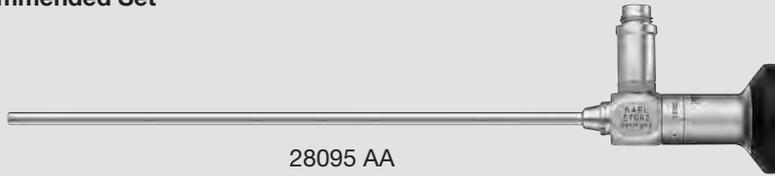


Thecal sac with excellent extension following bilateral decompression via a unilateral approach

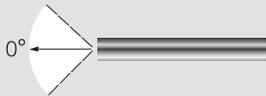
Endoscopic Discectomy, Decompression of the Spinal Canal

HOPKINS® Telescope, ENDOSPINE® Operating Tube and Working Insert

DESTANDAU Recommended Set



28095 AA



0°

28095 AA

HOPKINS® Straight Forward Telescope 0°, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

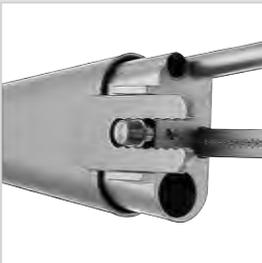


28163 DO

28163 DW

28163 DW

DESTANDAU ENDOSPINE® Operating Tube, oval, with Obturator 28163 DO, for use with Working Insert 28163 DXH

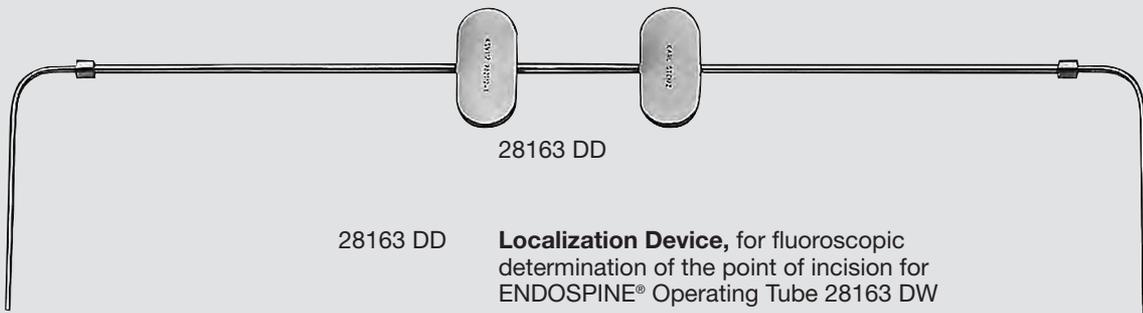


28163 DXH

28163 DPH

28163 DXH

DESTANDAU ENDOSPINE® Working Insert, with positioning detent, with adjustable Nerve Protector 28163 DPH, for use with ENDOSPINE® Operating Tube 28163 DW, with working channel diameter 8 mm, with irrigation channel for use with HOPKINS® Telescope 28095 AA



28163 DD

28163 DD

Localization Device, for fluoroscopic determination of the point of incision for ENDOSPINE® Operating Tube 28163 DW

Endoscopic Discectomy, Decompression of the Spinal Canal

ENDOSPINE® DUO, alternative for smaller skin incisions, for experienced users



- 28163 DWS DESTANDAU **ENDOSPINE® Operating Tube**, short, oval, with ENDOSPINE® Obturator 28163 DOS and ENDOSPINE® Tube Attachment 28163 DVS, for use with ENDOSPINE® Working Insert 28163 DXS
- 28163 DVS DESTANDAU **ENDOSPINE® Tube Attachment**, oval, for use with ENDOSPINE® Operating Tube 28163 DWS
- 28163 DOS **ENDOSPINE® Obturator**, blunt, for use with short ENDOSPINE® Operating Tube 28163 DWS and ENDOSPINE® Tube Attachment 28163 DVS



- 28163 DXS DESTANDAU **ENDOSPINE® Working Insert**, short version, with positioning detent, for use with ENDOSPINE® Operating Tube 28163 DWS, with working channel diameter 8 mm and irrigation channel, for use with HOPKINS® Telescope 28095 AA, with adjustable ENDOSPINE® Nerve Protector 28163 DPS
- 28163 DPS **ENDOSPINE® Nerve Protector**, adjustable, width 5.5 mm, length 112 mm, for use with ENDOSPINE® Working Insert 28163 DXS

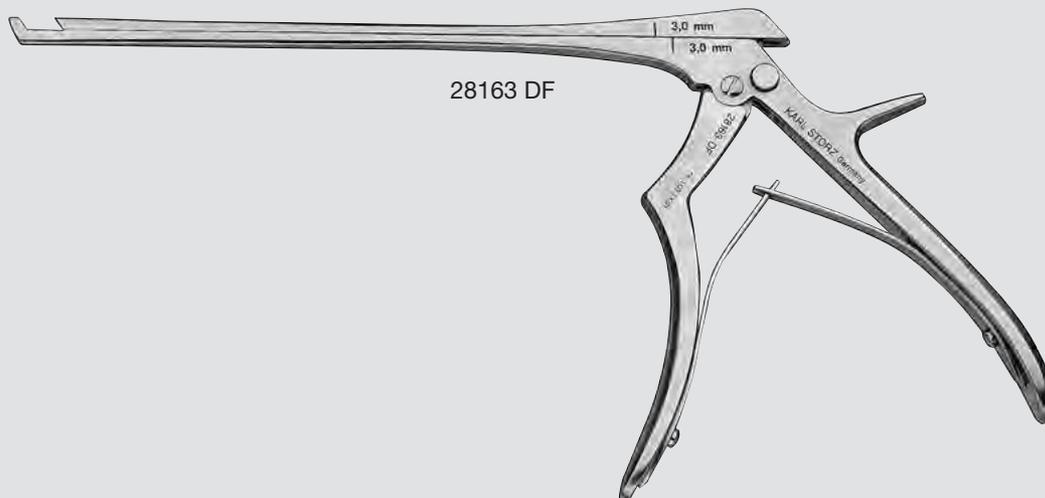


- 28163 DRG **ENDOSPINE® Retractor Blade**, conical, length 5 cm, for use with ENDOSPINE® Operating Tube 28163 DW and 28163 DWS

Endoscopic Discectomy, Decompression of the Spinal Canal

Bone Punches, Trephines and Spoon Forceps

DESTANDAU Recommended Set



28163 DF



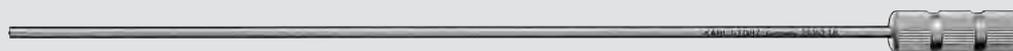
28163 DL

Bone Punch, dismantling, 90° upbiting, not through-cutting, 3 mm, working length 18 cm



28163 DF

Bone Punch, dismantling, upbiting 45° forward, not through-cutting, 3 mm, working length 18 cm



28163 TK



28163 TK

Trephine, with round handle, diameter 3 mm, working length 22 cm



28163 DC



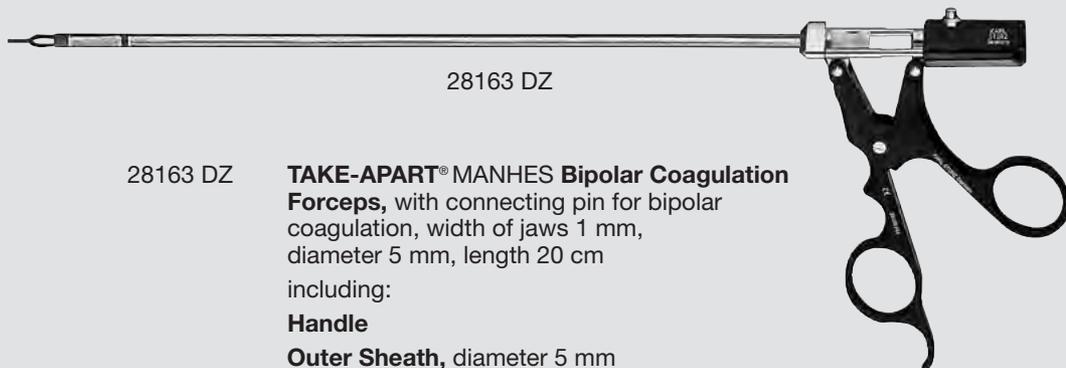
28163 DC

Spoon Forceps, dismantling, robust, oval, single action jaws, spoon size 3 x 10 mm, working length 15 cm

Endoscopic Discectomy, Decompression of the Spinal Canal

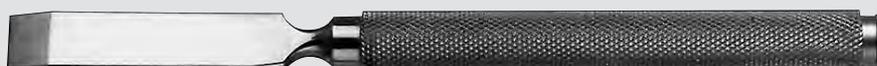
Bipolar Forceps, Chisels, Elevators, Palpation Hook and Suction Tubes

DESTANDAU Recommended Set



28163 DZ

28163 DZ **TAKE-APART® MANHES Bipolar Coagulation Forceps**, with connecting pin for bipolar coagulation, width of jaws 1 mm, diameter 5 mm, length 20 cm
including:
Handle
Outer Sheath, diameter 5 mm
MANHES Forceps Insert



28163 DG

28163 DG **Chisel**, flat, straight, with handle, distal width 15 mm, working length 9 cm



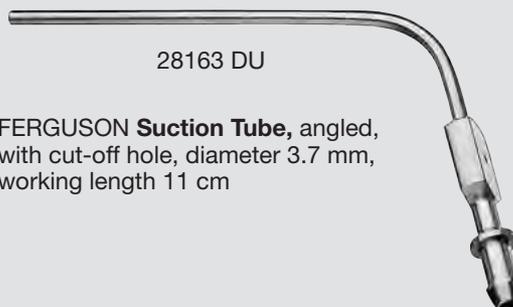
28163 DNN

28163 DNN **Elevator**, spatula slightly curved, distal width 5 mm, working length 13 cm



28163 DHN

28163 DHN **Palpation Hook**, blunt, hook angled 90°, hook length 5.5 mm, working length 13 cm



28163 DU

28163 DU **FERGUSON Suction Tube**, angled, with cut-off hole, diameter 3.7 mm, working length 11 cm

Components/Spare Parts see chapter 18

Endoscopic Discectomy, Decompression of the Spinal Canal

We developed a new universal system for minimally-invasive lumbar and dorsal cervical disc and spinal surgery. The EasyGO!® system combines all the advantages of microsurgery and spinal endoscopy. As microsurgical techniques are already firmly established in neurosurgical spinal surgery, most surgeons require only brief training in order to perform endoscopic lumbar disc surgery with EasyGO!®. The use of a dilator system in conjunction with various trocars (15, 19 and 23 mm) affords the main advantage of minimal incisions and muscle trauma. Lumbar disc procedures can be performed with EasyGO!® using small trocars via a skin incision of 1 cm. When larger trocars are used, all decompression procedures can be performed with minimal damage to the spinal structures. With adjustable height and rotatable by 360° in the trocar, the 30°

HOPKINS® wide angle telescope delivers excellent image quality. This allows for visualization and intervention at the far lateral and to the opposite side of the spine (i.e. resection of the lateral recess in the foramen along the nerve roots as well as bilateral decompression of the spinal canal via a unilateral approach). The application of pedicle screws is also possible.

*Prof. Dr. med. habil. Michael R. GAAB,
Neurosurgical Clinic,
KRH-Klinikum NORDSTADT, Hanover,
Germany*

*Prof. Dr. med. Joachim OERTEL,
Neurosurgical Clinic,
Universitätsklinikum des Saarlandes, Homburg/Saar,
Germany*



Endoscopic Discectomy, Decompression of the Spinal Canal

Puncture Needles, Guide Wires and Dilation Sleeves

GAAB/OERTEL Recommended Set



28163 PL

28163 PL **Puncture Needle**, including stylet, diameter 1.8 mm, working length 18 cm, with 1.3 mm opening for guide wire



28163 KD

28163 KD **Guide Wire**, unsterile, diameter 1.2 mm, length 31 cm, package of 10



28163 CPS

28163 CNS **Dilation Sleeve**, graduated, inner diameter 1.5 mm, outer diameter 5.2 mm, length 23 cm, color code: white

28163 COS **Dilation Sleeve**, graduated, inner diameter 5.3 mm, outer diameter 8.9 mm, length 21 cm, color code: yellow

28163 CPS **Dilation Sleeve**, graduated, inner diameter 9 mm, outer diameter 12.7 mm, length 19 cm, color code: orange

28163 CQS **Dilation Sleeve**, graduated, inner diameter 12.9 mm, outer diameter 14.9 mm, length 17 cm, color code: red

28163 CRS **Dilation Sleeve**, graduated, inner diameter 15.1 mm, outer diameter 16.9 mm, length 15 cm, color code: green

28163 CSS **Dilation Sleeve**, graduated, inner diameter 17.1 mm, outer diameter 18.9 mm, length 14 cm, color code: blue

28163 CTS **Dilation Sleeve**, graduated, inner diameter 19 mm, outer diameter 20.9 mm, length 13 cm, color code: black

Endoscopic Discectomy, Decompression of the Spinal Canal

EasyGO!® Trocars, EasyGO!® Attachments and EasyGO!® Telescope Sheaths

STORZ
KARL STORZ — ENDOSKOPE

GAAB/OERTEL Recommended Set



Diameter 15 mm

- 28163 GTA **EasyGO!® Trocar**, diameter 15 mm, working length 40 mm, for use with EasyGO!® Attachment 28163 GML, EasyGO!® Telescope Sheath 28163 GKS and HOPKINS® Telescope 30° 28095 BAK, color code: orange
- 28163 GTM **EasyGO!® Trocar**, diameter 15 mm, working length 70 mm, for use with EasyGO!® Attachment 28163 GAM and HOPKINS® Telescope 30° 28095 BAK or EasyGO!® Attachment 28163 GML, EasyGO!® Telescope Sheath 28163 GLS and HOPKINS® Telescope 30° 28095 BAL, color code: orange
- 28163 GAM **EasyGO!® Attachment**, diameter 15 mm, for use with EasyGO!® Trocar 28163 GTM
- 28163 GML **EasyGO!® Attachment**, movable inside the trocar, diameter 15 mm, for use with EasyGO!® Trocars 28163 GTM/GTA
- 28163 GKS **EasyGO!® Telescope Sheath**, movable, for use with HOPKINS® Telescope 30° 28095 BAK and EasyGO!® Attachments 28163 GGL/GKL/GML
- 28163 GLS **EasyGO!® Telescope Sheath**, for use with HOPKINS® Telescope 30° 28095 BAL

Diameter 19 mm

- 28163 GTB **EasyGO!® Trocar**, diameter 19 mm, working length 40 mm, for use with EasyGO!® Attachment 28163 GKL, EasyGO!® Telescope Sheath 28163 GKS and HOPKINS® Telescope 30° 28095 BAK, color code: green
- 28163 GTK **EasyGO!® Trocar**, diameter 19 mm, working length 74 mm, for use with EasyGO!® Attachment 28163 GAK and HOPKINS® Telescope 30° 28095 BAK or EasyGO!® Attachment 28163 GKL, EasyGO!® Telescope Sheath 28163 GLS and HOPKINS® Telescope 30° 28095 BAL, color code: green
- 28163 GTY **EasyGO!® Trocar**, diameter 19 mm, working length 97 mm, for use with EasyGO!® Attachment 28163 GAK and HOPKINS® Telescope 30° 28095 BAL, color code: green
- 28163 GAK **EasyGO!® Attachment**, diameter 19 mm, for use with EasyGO!® Trocars 28163 GTK/GTY and HOPKINS® Telescopes 30° 28095 BAK/BAL
- 28163 GKL **EasyGO!® Attachment**, movable inside the trocar, diameter 19 mm, for use with EasyGO!® Trocars 28163 GTK/GTB and HOPKINS® Telescopes 30° 28095 BAL/BAK

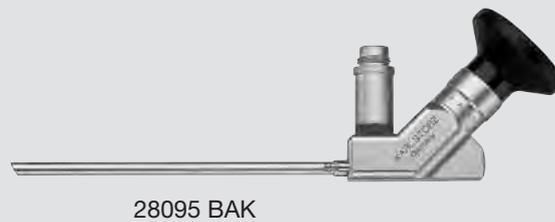
Diameter 23 mm

- 28163 GTC **EasyGO!® Trocar**, diameter 23 mm, working length 40 mm, for use with EasyGO!® Attachment 28163 GGL, EasyGO!® Telescope Sheath 28163 GKS and HOPKINS® Telescope 30° 28095 BAK, color code: black
- 28163 GTG **EasyGO!® Trocar**, diameter 23 mm, working length 76 mm, for use with EasyGO!® Attachment 28163 GAG and HOPKINS® Telescope 30° 28095 BAK or EasyGO!® Attachment 28163 GGL, EasyGO!® Telescope Sheath 28163 GLS and HOPKINS® Telescope 30° 28095 BAL, color code: black
- 28163 GTZ **EasyGO!® Trocar**, diameter 23 mm, working length 99 mm, for use with EasyGO!® Attachment 28163 GAG and HOPKINS® Telescope 30° 28095 BAL, color code: black
- 28163 GAG **EasyGO!® Attachment**, diameter 23 mm, for use with EasyGO!® Trocars 28163 GTG/GTZ and HOPKINS® Telescopes 30° 28095 BAK/BAL
- 28163 GGL **EasyGO!® Attachment**, movable inside the trocar, diameter 23 mm, for use with EasyGO!® Trocar 28163 GTG and HOPKINS® Telescope 30° 28095 BAL

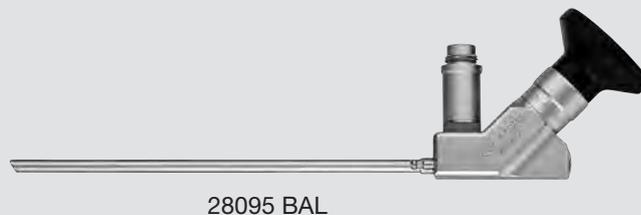
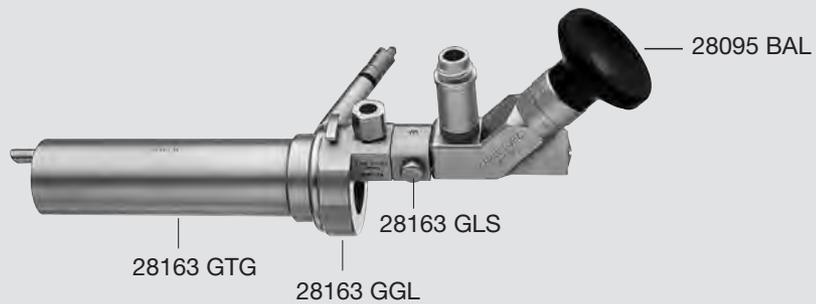
Endoscopic Discectomy, Decompression of the Spinal Canal

Forward-Oblique Telescopes

GAAB/OERTEL Recommended Set



28095 BAK **HOPKINS® Forward-Oblique Telescope 30°**, eyepiece angled 45°, diameter 4 mm, length 9.5 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

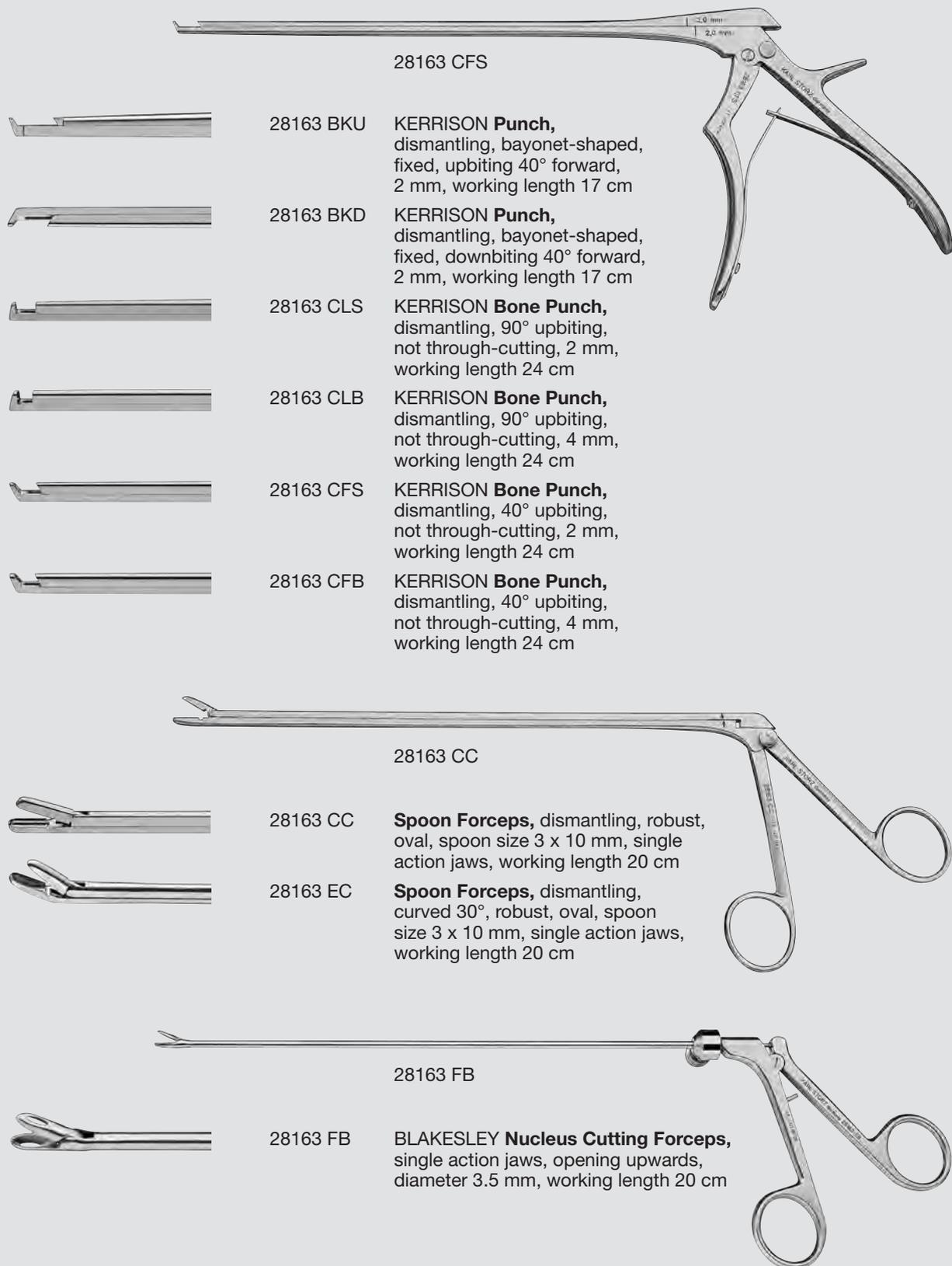


28095 BAL **HOPKINS® Forward-Oblique Telescope 30°**, eyepiece angled 45°, diameter 4 mm, length 12 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

Endoscopic Discectomy, Decompression of the Spinal Canal

Punches and Grasping Forceps

GAAB/OERTEL Recommended Set



Endoscopic Discectomy, Decompression of the Spinal Canal

Hook Scissors, Surgical Handles, Suction Tubes and Nasal Forceps

GAAB/OERTEL Recommended Set



28163 EHK

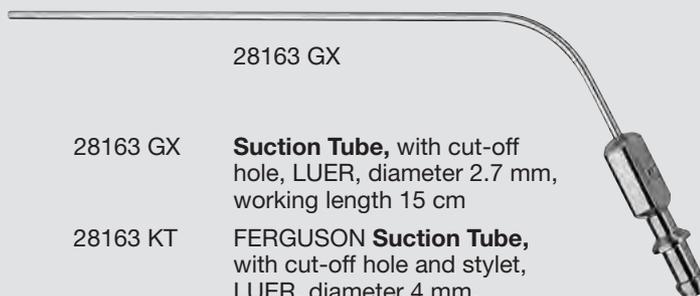


28163 EHK **Hook Scissors**, single action jaws, diameter 2.7 mm, working length 25 cm



28163 GBM

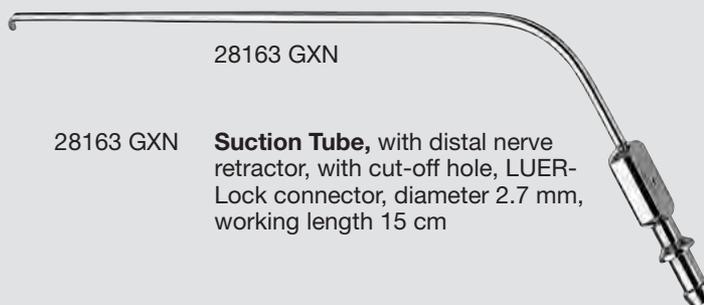
28163 GBM **Surgical Handle**, bayonet-shaped, working length 15 cm, for Blades 208010 - 15 and 208210 - 15



28163 GX

28163 GX **Suction Tube**, with cut-off hole, LUER, diameter 2.7 mm, working length 15 cm

28163 KT **FERGUSON Suction Tube**, with cut-off hole and stylet, LUER, diameter 4 mm, working length 15 cm



28163 GXN

28163 GXN **Suction Tube**, with distal nerve retractor, with cut-off hole, LUER-Lock connector, diameter 2.7 mm, working length 15 cm



426620

426620 **GRÜNWALD Nasal Dressing Forceps**, bayonet-shaped, length 20 cm

Endoscopic Discectomy, Decompression of the Spinal Canal

Palpation Hooks and Dissectors

GAAB/OERTEL Recommended Set



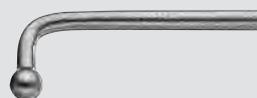
28163 GAH



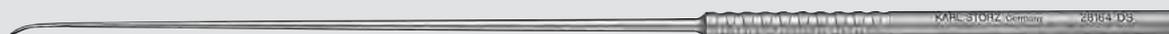
28163 GAH **Palpation Hook**, straight, distally 10 mm long and angled 90°, with ball end, with round handle, working length 20 cm



28163 GBH



28163 GBH **Palpation Hook**, bayonet-shaped, distally angled 90°, with ball end, with round handle, working length 20 cm



28164 DS



28164 DS **Dissector**, sharp, tip angled 15°, with round handle, size 2 mm, length 25 cm



28164 MDB



28164 MDB **MORTINI Dissector**, “dead hand”, bayonet-shaped, sharp, 3 mm, curved upwards, with round handle, working length 16 cm

Endoscopic Discectomy, Decompression of the Spinal Canal

Nerve Hooks, Nerve Retractors and Curettes

GAAB/OERTEL Recommended Set



28163 NSB



28163 NSB **Nerve Hook**, distal width 3 mm,
bayonet-shaped, working length 16 cm

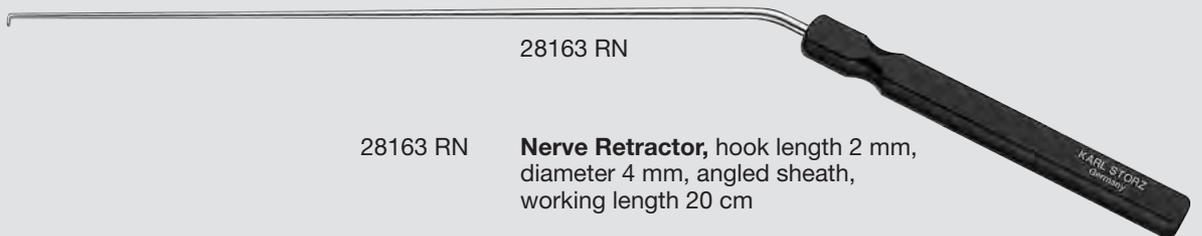


28163 NBB **Nerve Hook**, distal width 5 mm,
bayonet-shaped, working length 16 cm



28163 GRN

28163 GRN **Nerve Retractor**, angled 30°,
distal width 5 mm, working
length 17 cm



28163 RN

28163 RN **Nerve Retractor**, hook length 2 mm,
diameter 4 mm, angled sheath,
working length 20 cm



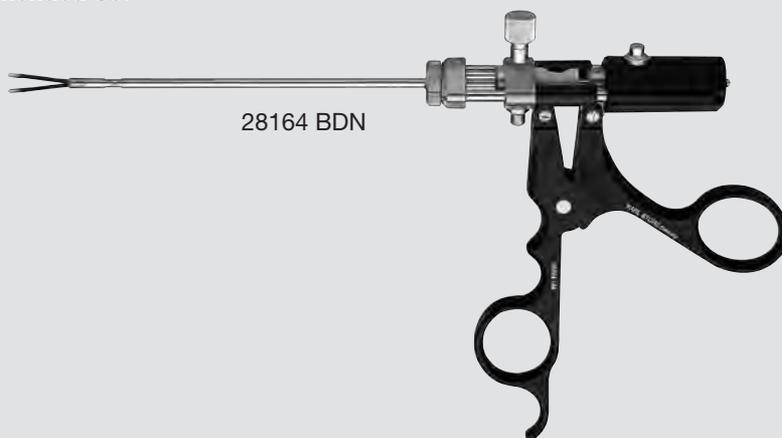
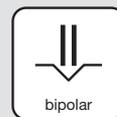
28163 CKG

28163 CKG **Curette**, small, spoon size (l x w): 2.7 x 4 mm,
bayonet-shaped, distally angled 45°,
working length 20 cm

Endoscopic Discectomy, Decompression of the Spinal Canal

TAKE-APART® Bipolar Forceps and Bipolar Coagulation Forceps

GAAB/OERTEL Recommended Set



28164 BDN



28164 BDN

TAKE-APART® Bipolar Forceps, rounded tip, width 2 mm, outer diameter 3.4 mm, working length 20 cm

including:

Bipolar Ring Handle

Outer Sheath

Inner Sheath

Forceps Insert



28163 BPS

28163 BPS

Bipolar Coagulation Forceps, insulated, bayonet-shaped, tip 0.7 mm, length 23 cm, for use with Bipolar High Frequency Cord 847000 E or 847000 A/M/T/V



28163 BPL

28163 BPL

Bipolar Coagulation Forceps, insulated, bayonet-shaped, tip 1.2 mm, length 23 cm, for use with Bipolar High Frequency Cord 847000 E or 847000 A/M/T/V

Components/Spare Parts see chapter 18

Accessories

Bipolar High Frequency Cords,
for use with Bipolar Coagulation Forceps



Bipolar High Frequency Cords

KARL STORZ High Frequency
Instrument Surgery Unit

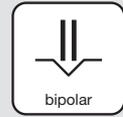
	<p>847000 E Bipolar High Frequency Cord, length 300 cm, for AUTOCON® II 400 SCB systems (111, 113, 115, 122, 125), AUTOCON® II 200, AUTOCON® II 80, Coagulator 26021 B/C/D, 860021 B/C/D, 27810 B/C/D, 28810 B/C/D, AUTOCON® systems (50, 200, 350), Erbe-Coagulator, T and ICC series and bipolar coagulation forceps</p>
	<p>847000 A Bipolar High Frequency Cord, length 300 cm, for Coagulator 26020 XA/XB, Bircher, Bovie, Keymed, Mallis, Valleylab, Neomed, Bard and bipolar coagulation forceps</p>
	<p>847000 M Bipolar High Frequency Cord, length 300 cm, for AUTOCON® systems (50, 200, 400), for Martin and Berchtold coagulators, Aesculap coagulator (latest version) and bipolar coagulation forceps</p>
	<p>847000 T Bipolar High Frequency Cord, length 300 cm, for Siemens coagulator from model Radiotom 804 upwards, for bipolar coagulation forceps</p>
	<p>847000 V Bipolar High Frequency Cord, length 300 cm, for AUTOCON® II 400 SCB systems (112, 114, 116, 122, 125), Valleylab coagulators and bipolar coagulation forceps</p>

High Frequency Surgery Units AUTOCON® see chapter 17, UNITS

Accessories

Bipolar High Frequency Cords,
for use with TAKE-APART® Bipolar Forceps

Bipolar High Frequency Cords



KARL STORZ High Frequency
Instrument Surgery Unit

	<p>26176 LE Bipolar High Frequency Cord, length 300 cm, for AUTOCON® II 400 SCB system (111, 113, 115, 122, 125), AUTOCON® II 200, AUTOCON® II 80, Coagulator 26021 B/C/D, 860021 B/C/D, 27810 B/C/D, 28810 B/C/D, AUTOCON® series (50, 200, 350), Erbe-Coagulator, T and ICC series</p>
	<p>26176 LM Bipolar High Frequency Cord, length 300 cm, for use with Martin HF units</p>
	<p>26176 L Bipolar High Frequency Cord, length 300 cm, with 2x 4 mm banana plug for Coagulator 26020 XA/XB and Ellman</p>
	<p>26176 LA Bipolar High Frequency Cord, length 300 cm, with 2x 4 mm banana plug for Coagulator 26020 XA/XB and Valleylab</p>
	<p>26176 LV Bipolar High Frequency Cord, length 300 cm, for AUTOCON® II 400 SCB system (112, 114, 116, 122, 125), AUTOCON® II 200, AUTOCON® II 80 and Valleylab coagulators</p>

Spine Retractor

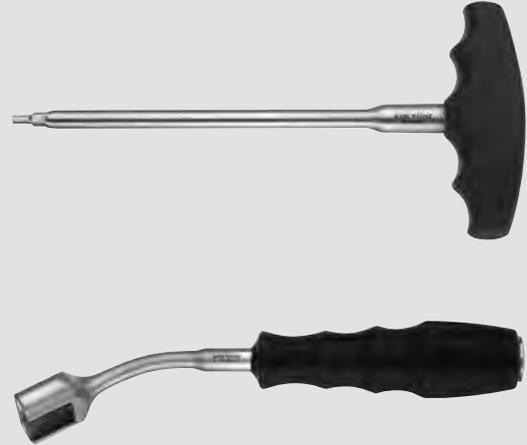
Illuminated Spine Retractor with Radiolucent Retractor Blades
in Various Lengths



The new retractor system is suitable for minimally invasive surgeries on the thoracic or lumbar spine and is used for all indications in this area.



28163 TRX



28163 TRX

TENTACLE Spine Retractor, complete, with retractor frame, 2 retractor arms, X-ray transparent blades in 3 different lengths, light carrier with corresponding tools including:

Retractor Frame

Retractor Arm

2x **Drive Screw**

2x **Retractor Arm**, extra

4x **PEEK Retractor Blade**, length 70 mm, width 16 mm, color: black

4x **PEEK Retractor Blade**, length 50 mm, width 16 mm, color: blue

4x **PEEK Retractor Blade**, length 30 mm, width 16 mm, color: green

6x **Holder**, for retractor blades

Light Carrier

Holder, for light carriers

Screwdriver

Positioning Instrument, for fine adjustment of PEEK retractor blades

Sterilization Container



495 NA

Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 230 cm

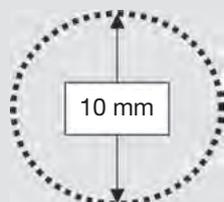
Components/Spare Parts see chapter 18

Cold-Light Retractor for Spine Surgery

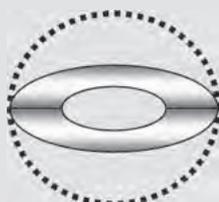
Wide opening, autostatic retractor with two adjustable valves, with built-in light delivery systems at distal ends

Specially designed for lumbar disc surgery, the spine retractor is based on three principles:

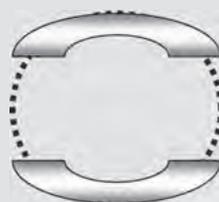
1. Standard Approach (minimal to wide distension): open tube principle. The retractor blades act like the two sides of an optimal operating tube with a diameter of 10 mm. They remain closed during insertion and, once introduced, can then be distended as required.



a. Surgical site



b. Retractor blades are introduced.



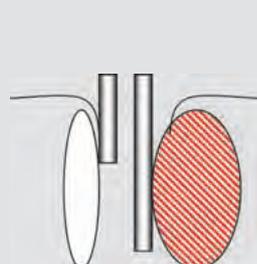
c. Retractor is distended.



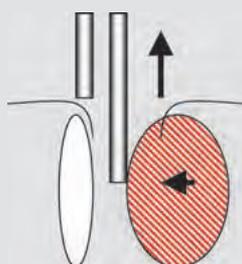
d. Retractor may, if necessary, be further distended.

2. Stable Retraction

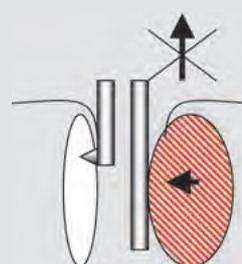
a. Two small teeth at the distal end of the medial blade prevent the retractor from slipping.



a. Retractor is introduced.



b. Retractor slips due to the muscle pressure.



c. Teeth prevent retractor from slipping.

b. The retractor cannot move accidentally, as it is clamped in the retractor arm. The retractor arm can be moved as required.

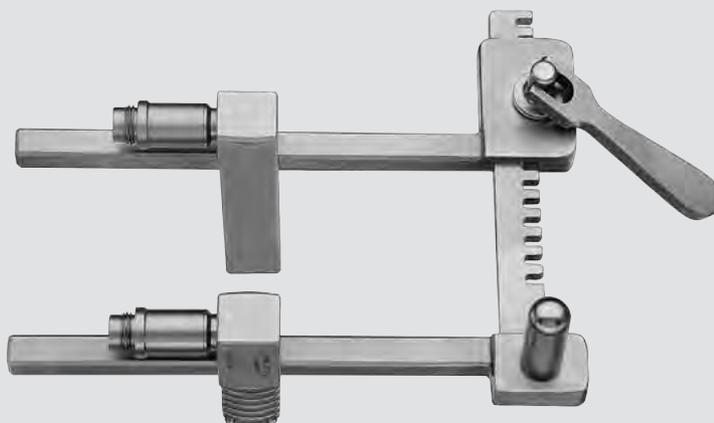
3. Optimal Lighting Conditions: High light intensity. Fiber optic light cables are incorporated at the distal end of both retractor blades to provide an optimal view of the surgical site. The surgeon, therefore, does not need a headlight and is thus able to operate with or without an enlarged view (even if loupe/microscope is switched off).

P. DECQ, M. D.
Hôpital Henri Mondor
Creteil, France

Cold-Light Retractor for Spine Surgery

Wide opening, autostatic retractor with two adjustable valves,
with built-in light delivery systems at distal ends

Spine Retractor with Cold Light for distending and retaining an opening, mainly in lumbar disc surgery



28163 R

28163 R **Spine Retractor**, complete, with integrated light transmission and changeable valves including:

Retractor Blade, short, length 70 mm, with two teeth, with integrated light transmission

Retractor Blade, long, length 85 mm, with integrated light transmission

Retractor Frame, serrated, width 106 mm, length 140 mm

Retractor Arm, adjustable, length 140 mm

Turning Handle

28272 RKB **Holding System, autoclavable**, with quick release coupling KSLOCK including:

Rotation Socket, to clamp to the OR table, for European and US standard rails, with lateral clamp for height and angle adjustment of the articulated stand

Articulated Stand, reinforced version, L-shaped, with one central clamp for all five joint functions, height 48 cm, swivel range 52 cm, with quick release coupling KSLOCK (female)

Clamping Jaw, metal, clamping range 4.8 up to 12.5 mm, with quick release coupling KSLOCK (male), for use with instrument and telescope sheaths



495 UD

495 UD **Fiber Optic Light Cable**, 2x diameter 3.5 mm, length 180 cm, for simultaneous light transmission for 2 instruments

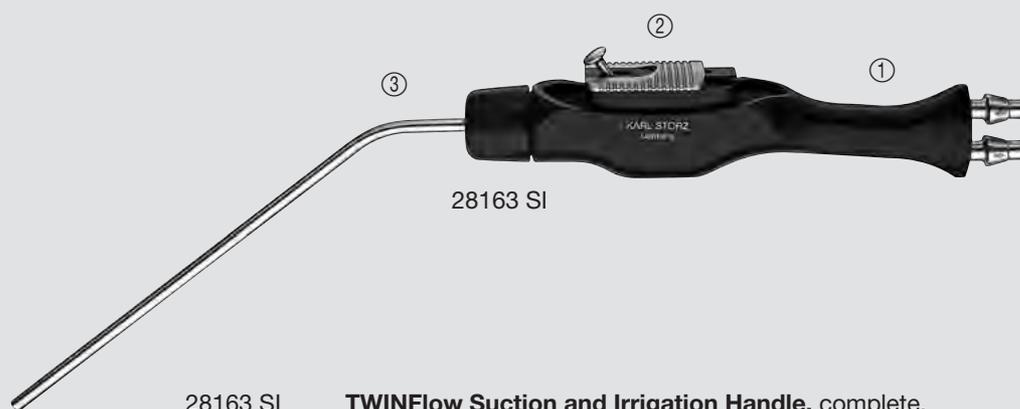
Components/Spare Parts see chapter 18

TwinFlow Suction and Irrigation Handle

with continuously adjustable suction and irrigation if required

The new suction and irrigation handle from KARL STORZ combines suction and irrigation functions in one instrument and, consequently, ensures an optimal view of the surgical field. An outstanding feature of the new system is the ergonomic handle design which prevents hand fatigue after extended use. The suction and irrigation handle allows simultaneous suction and irrigation and enables the intensity of each function to be regulated separately. The instrument is easy to use, providing

enhanced user comfort and a long service life. Fully dismantling and autoclavable, the handle is suitable for reuse. The corresponding single-use suction-irrigation handles are available in various designs and diameters. Furthermore, the handle can be used with all standard suction/irrigation pumps. The suction and irrigation handle is suitable for use in various open and endoscopic interventions in the fields of neurosurgery, skull base and spine surgery.



28163 SI

TWINFlow Suction and Irrigation Handle, complete, ergonomic design, with separate suction-irrigation unit and suction-irrigation tubes

including:

- ① **Suction and Irrigation Handle**
- ② **Suction and Irrigation Unit**, separate, with adjustable continuous suction and continuously adjustable irrigation function if required
- Cleaning Adaptor**, for assembly in sterilization trays, for use with Suction-Irrigation Unit 28163 SIU
- Set**, including loading aid with 8 O-Rings
- Cleaning Brush**, round, rigid, outer diameter 7 mm, for working channel diameter 2.5 – 5 mm, length 35 cm
- ③ 5x **Suction and Irrigation Tube**, with connector for 28163 SIH, angled, diameter 2 mm, working length 9 cm
- 5x **Suction and Irrigation Tube**, with connector for 28163 SIH, angled, diameter 2 mm, working length 13 cm
- 5x **Suction and Irrigation Tube**, with connector for 28163 SIH, angled, diameter 4 mm, working length 9 cm
- 5x **Suction and Irrigation Tube**, with connector for 28163 SIH, angled, diameter 4 mm, working length 13 cm

Components/Spare Parts see chapter 18

HD IMAGING WITH OPERATING MICROSCOPES



HD Imaging with Operating Microscopes

Direct Adaption



With the operating microscope the surgeon always has a perfect view of the operating field. Assistants, OR nurses and students, however, often experience poor video presentation, especially if FULL HD visualization is not available. KARL STORZ offers solutions from one source that equip operating microscopes from leading manufacturers with advanced FULL HD technology. To achieve optimal results, all components in the video chain – from the camera system to the monitor – must be of the highest quality.

The most straightforward and professional connection between the camera and the microscope is the so-called direct adaption.

Here the H3-M COVIEW® IMAGE1 S microscope camera and the corresponding QUINTUS® TV adaptor are directly connected to the microscope via the C-MOUNT connection.



Direct adaption to the VARIO operating microscope from CARL ZEISS MEDITEC

HD Imaging with Operating Microscopes System Overview

Camera



see page 356

TV Adaptors



see page 357-359

Camera System, Monitor and ZeroWire



see page 360-369

Documentation System



see page 370-373

Equipment Cart



see page 374

IMAGE1 S H3-M COVIEW® Camera Head

For use with IMAGE1 S Camera System IMAGE1 S CONNECT Module TC 200EN, IMAGE1 S H3-LINK Module TC 300 and with all IMAGE 1 HUB™ HD Camera Control Units



TH 106

TH 106

IMAGE1 S H3-M COVIEW® Three-Chip FULL HD C-MOUNT Camera Head, 50/60 Hz, S-Technologies available, progressive scan, with C-MOUNT thread for coupling to microscopes, 2 freely programmable camera head buttons, with detachable camera head cable, length 900 cm, for use with IMAGE1 S and IMAGE 1 HUB™ HD



20 2001 31

20 2001 31

Keypad, for H3-M camera head, for convenient control of the most important H3-M camera head functions, with PS/2 connector, cable length 1 m, alternative to a standard keyboard, for use with H3-M or H3-M COVIEW® camera heads, only compatible with IMAGE 1 HUB™ HD, not compatible with IMAGE1 S

Specifications:

IMAGE1 FULL HD Camera Heads	IMAGE1 S H3-M COVIEW®
Product no.	TH 106
Image sensor	3x 1/8" CCD chip
Pixel output signal H x V	1920 x 1080
Dimensions (w x h x d)	45 x 50 x 60 mm
Weight	240 g
Optical interface	C-MOUNT connection
Min. sensitivity	F 1.9/1.4 Lux
Grip mechanism	C-MOUNT connection
Cable	detachable
Cable length	900 cm

HD Imaging with Operating Microscopes

System Components

QUINTUS® – High-Performance TV Adaptor for Operating Microscopes

Unleash the full performance of your operating microscope from CARL ZEISS MEDITEC – with FULL HD imaging solutions from KARL STORZ

The new QUINTUS® TV adaptor is the perfect interface between the operating microscope and the IMAGE1 S H3-M COVIEW® FULL HD microscope camera head from KARL STORZ.

The innovative features of QUINTUS® are easy to use, making it one of the most flexible TV adaptors on the market.

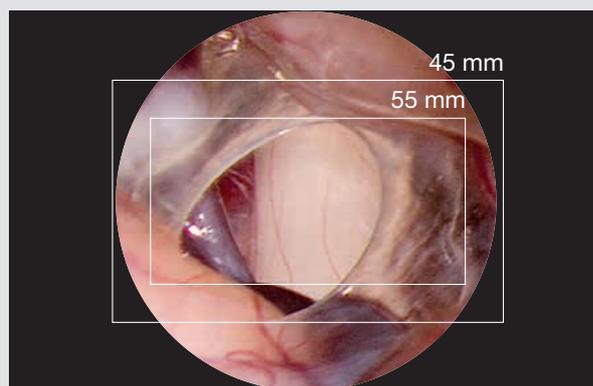


Product Features:

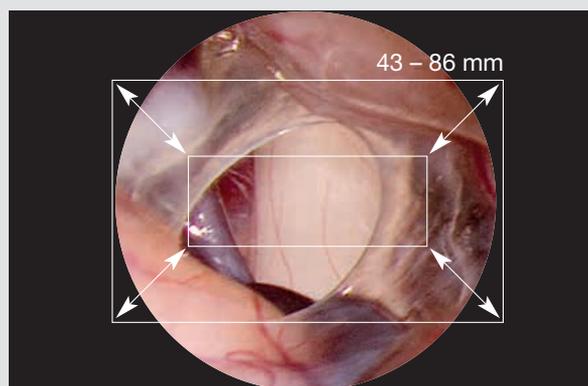
- A rotating C-MOUNT coupling at the QUINTUS® TV adaptor enables immediate correction of the camera orientation during installation.
- Focus control offers an effortless way to establish parfocality (microscope and monitor images with perfect sharpness).
- Iris control provides an optimized depth of field of the camera image.
- Pan control (X) enables horizontal positioning of the camera image.
- Tilt control (Y) enables vertical positioning of the camera image. With pan and tilt, the camera view can be adapted to the preference of the surgeon.
- The QUINTUS® ZOOM model also features a variable focal length $f = 43 - 86$ mm. This allows the surgeon even greater flexibility and allows selecting the exact area required for documentation.

Focal length of the QUINTUS® TV adaptor:

The QUINTUS® TV adaptor is available with the focal lengths $f = 45$ mm and $f = 55$ mm and as a zoom version with an adjustable focal length of $43 - 86$ mm. This provides an optimal 16:9 FULL HD image in conjunction with the IMAGE1 S H3-M COVIEW® microscope-camera head from KARL STORZ.



Fixed focal lengths: IMAGE1 S H3-M COVIEW® camera image section using a QUINTUS® TV adaptor with fixed focal lengths of 45 and 55 mm.



Variable focal lengths: Adjustable IMAGE1 S H3-M COVIEW® camera image section using a QUINTUS® zoom adaptor with variable focal lengths of 43 – 86 mm.

QUINTUS® TV Adaptor for operating microscopes from CARL ZEISS MEDITEC with fixed focal length



20 9230 45/20 9230 55

20 9230 45 **QUINTUS® Z 45 TV Adaptor**, for CARL ZEISS MEDITEC operating microscopes, $f = 45$ mm, recommended for IMAGE 1 HD H3-M/H3-M COVIEW® camera heads

20 9230 55 **QUINTUS® Z 55 TV Adaptor**, for CARL ZEISS MEDITEC operating microscopes, $f = 55$ mm, recommended for IMAGE1 HD H3-M/H3-M COVIEW®, H3, H3-Z as well as S1 and S3 camera heads

QUINTUS® Zoom TV Adaptor for operating microscopes from CARL ZEISS MEDITEC with variable focal length



20 9230 00 Z

20 9230 00 Z **QUINTUS® Zoom TV Adaptor**, for CARL ZEISS MEDITEC operating microscopes, with variable focal length $f = 43 - 86$ mm, for use with all KARL STORZ cameras (SD and HD)

Further accessories for operating microscopes from CARL ZEISS MEDITEC



20 9250 00

20 9250 00 **Iris**, for ZEISS Pentero®, iris as a necessary extension between the QUINTUS® TV adaptor and the operating microscope ZEISS Pentero®



301513

301513 **Optical Beamsplitter 50/50**, for use with ZEISS operating microscope or colposcope

Note: Optical beamsplitters for other operating microscopes (i.e. LEICA or Möller-Wedel) are available directly from the manufacturers.

HD Imaging with Operating Microscopes

System Components

QUINTUS® TV Adaptor for operating microscopes from LEICA Microsystems with fixed focal length



20 9330 45/20 9330 55

20 9330 45 **QUINTUS® L 45 TV Adaptor**, for LEICA Microsystems operating microscopes, $f = 45$ mm, recommended for IMAGE 1 H3-M/H3-M COVIEW® HD microscope camera heads

20 9330 55 **QUINTUS® L 55 TV Adaptor**, for LEICA Microsystems operating microscopes, $f = 55$ mm, recommended for IMAGE 1 HD H3-M/H3-M COVIEW®, H3, H3-Z as well as S1 and S3 camera heads

QUINTUS® Zoom TV Adaptor for operating microscopes from LEICA Microsystems with variable focal length



20 9330 00 Z

20 9330 00 Z **QUINTUS® Zoom TV Adaptor**, for LEICA Microsystems operating microscopes, with variable focal length $f = 43 - 86$ mm, for use with all KARL STORZ cameras (SD and HD)

QUINTUS® TV Adaptor for operating microscopes from Möller-Wedel with fixed focal length



20 9530 45/20 9530 55

20 9530 45 **QUINTUS® M 45 TV Adaptor**, for Möller-Wedel operating microscopes, $f = 45$ mm, recommended for IMAGE 1 HD H3-M/H3-M COVIEW® camera heads

20 9530 55 **QUINTUS® M 55 TV Adaptor**, for Möller-Wedel operating microscopes, $f = 55$ mm, recommended for IMAGE 1 HD H3-M/H3-M COVIEW®, H3, H3-Z as well as S1 and S3 camera heads

Note: Optical beamsplitters for other operating microscopes (i.e. LEICA or Möller-Wedel) are available directly from the manufacturers.

IMAGE1 S Camera System



TC 200EN

TC 200EN* **IMAGE1 S CONNECT**, connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated KARL STORZ-SCB and digital Image Processing Module, power supply 100 – 120 VAC/200 – 240 VAC, 50/60 Hz including:

Mains Cord, length 300 cm

DVI-D Connecting Cable, length 300 cm

SCB Connecting Cable, length 100 cm

USB Flash Drive, 32 GB

USB Silicone Keyboard, with touchpad, US



TC 300

TC 300 **IMAGE1 S H3-LINK**, link module, for use with IMAGE1 FULL HD three-chip camera heads, power supply 100 – 120 VAC/200 – 240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT TC 200EN including:

Mains Cord, length 300 cm

Link Cable, length 20 cm

* Available in the following languages: DE, ES, FR, IT, PT, RU

Components/Spare Parts see chapter 18

HD Imaging with Operating Microscopes

System Components

IMAGE1 S

Optional accessories for the IMAGE1 S camera system IMAGE1 S CONNECT Module TC 200EN, IMAGE1 S H3-LINK Module TC 300 and all IMAGE 1 HUB™ HD Camera Control Units



- 20 2002 31 **Keyboard**, with German character set, PS/2 connector, including AT-adaptor and protective cover
- 20 2002 31F **Same**, with French character set
- 20 2002 31I **Same**, with Italian character set
- 20 2002 31P **Same**, with Portuguese character set
- 20 2002 31S **Same**, with Spanish character set
- 20 2002 31U **Same**, with US English character set



- 20 0402 45DE **Silicone Keyboard**, with German character set, DIN AT connector, IP 68
- 20 0402 45FR **Same**, with French character set
- 20 0402 45IT **Same**, with Italian character set
- 20 0402 45PT **Same**, with Portuguese character set
- 20 0402 45ES **Same**, with Spanish character set
- 20 0402 45US **Same**, with US English character set
- 20 0402 45RU **Same**, with Russian character set



- 22 2200 72 **IMAGE 1 HUB™ HD Extension Cable**, length 520 cm, for use with IMAGE1 HD camera heads (except H3-M/H3-M COVIEW® FULL HD microscope camera heads)



- 22 2200 70 **H3-M Camera Head Cable**, detachable, length 300 cm



- 22 2200 71 **H3-M Camera Head Cable**, detachable, length 900 cm

- TC 010 **Two-Pedal Footswitch USB**, for use with IMAGE1 S CONNECT TC 200EN



- NEW** 20 0402 81 **KARL STORZ USB Flash Drive**, 4 GB



- NEW** 20 2001 31 **Keypad**, for H3-M camera head, for convenient control of the most important H3-M camera head functions, with PS/2 connector, cable length 1 m, alternative to a standard keyboard, for use with H3-M or H3-M COVIEW® camera heads, only compatible with IMAGE 1 HUB™ HD, not compatible with IMAGE1 S

Monitors



9826 NB

9826 NB

26" FULL HD Monitor, color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, power supply 100 – 240 VAC, 50/60 Hz, 5 V DC output (1 A), wall-mounted with VESA 100 adaption including:

External 24 VDC Power Supply

Mains Cord



9627 NB/NB-2

9627 NB

27" FULL HD Monitor, color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, interface: RS 232, power supply 85 – 265 VAC, 50/60 Hz, wall-mounted with VESA 100 adaption including:

including:

External 24 VDC Power Supply

Mains Cord

9627 NB-2

Same, with double video inputs

HD Imaging with Operating Microscopes ^{NEW}

System Components

Monitors

KARL STORZ FULL HD Monitors	26"	27"	
Wall-mounted with VESA 100 adaption	9826 NB	9627 NB	9627 NB-2
Inputs:			
DVI-D	1x	1x	2x
Fibre Optic	–	optional	optional
3G-SDI	1x	–	optional
RGBS (VGA)	1x	1x	2x
S-Video	1x	1x	2x
Composite/FBAS	1x	1x	2x
Outputs:			
DVI-D	1x	1x	1x
S-Video	–	1x	1x
Composite/FBAS	1x	1x	1x
3G-SDI	1x	–	optional
Signal Format Display:			
4:3	●	●	●
5:4	●	●	●
16:9	●	●	●
Picture-in-Picture	●	●	●
PAL/NTSC compatible	●	●	●

Optional accessories:

- 9826 SF **Monitor Stand**, suitable for 26" and other monitors, basic monitor stand, tiltable, rotation +/-30, disinfectable, color white, e.g. for use with 26" FULL HD Monitor 9826 NB or 26" 3D Monitor 9826 NB-3D
- 9626 SF **Monitor Stand**, with integrated cable channel, for use with FULL HD monitors 9627 NB, 9626 NB and HD Monitor 9619 NB

Specifications:

KARL STORZ FULL HD Monitor	26"	27"
Desktop with pedestal	optional	optional
Wall-mounted with 100 adaption	9826 NB	9627 NB/NB-2
Brightness	500 cd/m ² (typ)	240 cd/m ² (typ)
Max. viewing angle	178° vertical	178° vertical
Pixel distance	0.3 mm	0.3 mm
Reaction time	8 ms	12 ms
Contrast ratio	1400:1	3000:1
Mount	100 mm VESA	100 mm VESA
Weight	7.7 kg	9.8 kg
Rated power	69 W	45 W
Operating conditions	5-35°C	0-40°C
Storage	-20-60°C	-20-60°C
Rel. humidity	max. 85 %	max. 85 %
Dimensions w x h x d	643 x 396 x 87 mm	696 x 445.5 x 55 mm
Power supply	100-240 VAC	85-265 VAC

Larger KARL STORZ FULL HD Monitors see catalog KARL STORZ OR1 NEO®
Signal cables see catalog TELEPRESENCE

Accessories for HD Monitor – TROLL-E Mobile Stand



20 0200 81

- 20 0200 81 TROLL-E Mobile Stand**, rides on 4 antistatic dual wheels, 2 equipped with locking brakes, for mounting monitors with VESA 75/100 connection, integrated cable conduit in vertical beam, 1 shelf and cable manager, load capacity for monitor: max. 15 kg,
Dimensions:
Mobile stand: 670 x 1660 x 670 mm (w x h x d),
Shelf: 455 x 350 mm (w x d), caster diameter: 100 mm
Trolley is delivered unassembled.
including:
Subrack for Mobile Stand
Beam Module
Shelf

Note: This monitor cart is suitable for monitors max. 26".

HD Imaging with Operating Microscopes

System Components

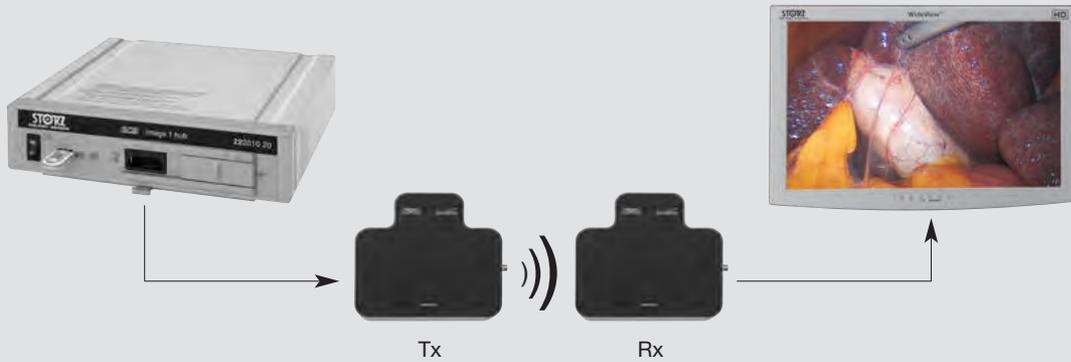
Accessories for TROLL-E Mobile Stand

	20 0200 46 Keyboard Shelf , max. capacity 5 kg, dimensions: 465 x 185 mm (w x d), for use with Beam Module 20 0200 62
	20 0200 47 Shelf , incl. installation accessories, max. capacity 12 kg, dimensions: 490 x 395 mm (w x d), for use with subbracks for Mobile Stands 20 0200 60 and 20 0200 61
	20 0200 49 Equipment Rail , for mounting to central boom, incl. installation accessories, dimensions: 350 x 25 x 10 mm (w x h x d), for use with Subrack for Mobile Stands 20 0200 60 and 20 0200 61
	29005 AK Wire Basket , for accessories, for mounting to Equipment Rail 29003 GS , dimensions (w x h x d): 300 x 100 x 200 mm, for use with Equipment Cart 29005

HD Imaging with Operating Microscopes

System Components

ZeroWire Wireless FULL HD Video Transmission System



The new ZeroWire video transmission system from KARL STORZ enables the wireless integration of secondary monitors into the camera system.

Developed specifically for use in the OR area, ZeroWire replaces the DVI cable between the Camera Control Unit (CCU) and the monitor. The unit simplifies the installation of additional monitors in the OR. ZeroWire optimizes the clinic workflow and reduces preparation time in the operating rooms. ZeroWire offers the user the best FULL HD quality for wireless connections available on the market.

KARL STORZ ZeroWire comprises a transmitter and receiver that transmit FULL HD video signals from IMAGE 1 HD CCU to a secondary monitor. Costly and sensitive light fibers or DVI cables are no longer required. ZeroWire delivers 1080p FULL HD imagery with minimal latency which is ensured by the H.264 compression method. This also provides razor-sharp image quality that can barely be distinguished from a conventional DVI connection.

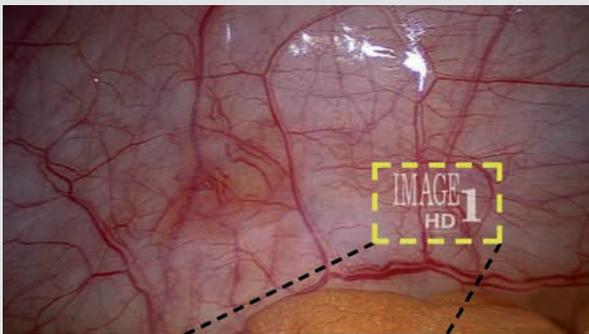
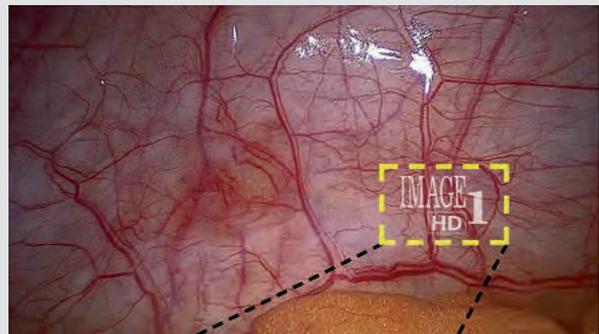


Image quality of a competitor



Very high image quality with ZeroWire

Comparison of the image quality of a competitor with ZeroWire from KARL STORZ. ZeroWire image quality of a transmitted video can barely be distinguished from a DVI connection.

ZeroWire

Wireless FULL HD Video Transmission System



9500 ZW

9500 ZW

ZeroWire Video Transmission Set,
transmitter and receiver

including:

Y-Cable, for looping into the
monitor power supply

VESA Holder 24"/26"

VESA Holder 19"/23"

2ft Spare DVI-D Cable

Bracket, long version

Instruction Manual

Further Accessories:

9500 ZW-1

ZeroWire 42"/52"/55", accessory for
video transmission set, with 2ft DVI-D cable,
power supply and VESA holder 42"/52"/55"

9500 ZW-2

ZeroWire 2ft Spare DVI-D Cable

9500 ZW-4

ZeroWire Power Supply

9500 ZW-5

ZeroWire Table Stand

9500 ZW-6

ZeroWire Y-Cable, for looping into the
monitor power supply

9500 ZW-7

ZeroWire VESA Holder, for mounting a transmitter
or receiver to a 24", 26" or 27" monitors

9500 ZW-8

ZeroWire VESA Holder, for mounting a transmitter
or receiver to a 19" or 23" monitor

9500 ZW-9

ZeroWire VESA Holder, for mounting a transmitter
or receiver to 42", 52" and 55" monitors

Components/Spare Parts see chapter 18

MULTISWITCH®

A compact solution enables the straightforward and efficient distribution and individual routing of several high-resolution video signals, even without an integrated OR. MULTISWITCH® offers the possibility to administer and distribute up to 4 DVI sources (camera systems, PC

etc.) to four independent outputs (monitors, recording devices).

The MULTISWITCH® unit can be placed directly on the videocard and can be upgraded with all FULL HD endoscopy towers from KARL STORZ.

The MULTISWITCH® features two modes of operation:

1. Mode A (switcher):

Enables the simple selection of a source and simultaneous distribution to all four outputs. This mode is used when, during live transmission, an image is switched from various sources and has to be distributed to all connected monitors.

2. Mode B (router):

Distribution of any four sources to any four outputs (monitors, documentation systems). This mode is always useful if a flexible distribution of individual DVI sources to the outputs is necessary.



Functions and Areas of Application:

- Medical-grade routing and changeover solution for DVI-D signals
- Straightforward administration and distribution of up to four DVI video signals to up to four outputs
- Two operating modes – switcher or router
- Convenient use via four membrane keyboards. LEDs on the front panel display the operating mode in use.
- Easy switching or routing of DVI-D sources in the OR or during live transmission.
- The simultaneous connection of a documentation system enables the recording of up to four sources.
- Convenient distribution of DVI-D sources in the OR to various monitors or documentation systems.

MULTISWITCH®



20 9180 40

20 9180 40 MULTISWITCH® DVI-D Switch/Router, for DVI-D video signal distribution and switching, with 4 DVI-D inputs and 4 DVI-D outputs, power supply 100 – 240 VAC, 50/60 Hz, video inputs: 4 x DVI-D (DVI jack), video outputs: 4 x DVI-D (DVI jack), dimensions (w x h x d): 305 x 84 x 249 mm, weight 2.2 kg, for use as 1 x 4 DVI-D switch or 4 x 4 DVI-D router including:

MULTISWITCH® Unit

Mains Cord, length 300 cm

2x DVI-D Connecting Cable, length 200 cm



20 0400 86

20 0400 86 DVI-D Connecting Cable, length 200 cm

20 0400 89 Same, length 300 cm

W26091 Fiber Optic Cable, for the transmission of a DVI-D signal, with fixed transmitter and receiver modules, for the transmission of a HD signal from the IMAGE 1 HUB™ Camera Control Unit to a HDTV monitor, DVI-D male connector, length 10 m

W26093 Same, length 20 m

Specifications:

Video inputs	4x DVI-D	Dimensions w x h x d	305 x 84 x 249 mm
Video outputs	4x DVI-D	Weight	2.2 kg
Use	4 membrane keyboards with LED display	Power supply	100-240 VAC, 50/60 Hz
Max. video resolution	1920 x 1080p, 50/60 Hz	Protection class	IP 20 (DIN 60529)

Components/Spare Parts see chapter 18

KARL STORZ AIDA® compact NEO advanced/standard

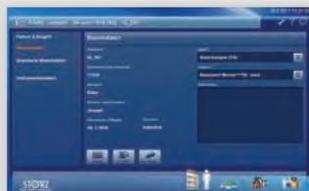
Continuous first-class documentation!



AIDA compact NEO:
Recording screen



AIDA compact NEO:
Review screen



AIDA compact NEO:
Patient data

Data Acquisition

Still images, video sequences and audio comments can easily be recorded during an examination or intervention by pressing the on-screen button, activating the footswitch, or pressing the camera head button. All captured data are displayed on the right-hand side as a thumbnail preview to ensure the data have been generated. Patient data can be entered via an onscreen or standard keyboard. The system also offers the possibility to transfer all relevant patient data via a DICOM worklist or a link to the hospital information system (HIS) without requiring manual entry in the patient entry screen.

Flexible Review, Data Storage and Efficient Data Export

Captured still images or video files can easily be viewed, edited, or deleted on-screen before final storage. KARL STORZ AIDA® compact NEO efficiently stores all recorded data on DVD, CD, USB stick, external/internal drive, the relevant network and/or on a FTP server. It is also possible to save the data directly on the PACS and/or HIS servers via the AIDA communication HL7/DICOM interface package. Data that cannot be stored successfully remains in a cache until final archiving is possible.

HD Imaging with Operating Microscopes

System Components

KARL STORZ AIDA® compact NEO advanced/standard

AIDA compact NEO advanced:

- SD and HD signal support:
 - Y/C (S-Video)
 - Composite input
 - DVI-D input
- Picture-in-Picture function: Display of channel 2 (SD) in channel 1 (FULL HD)
- Resolution:
 - Still images 1920 x 1080 and SD
 - Videos 1080p, 720p and SD
- Interface package (DICOM/H7) included
- NEO Secure security software
- Recommended applications:
 - Universal (cart or OR1™ installation)

AIDA compact NEO standard:

- SD and HD signal support (HD-SDI)**:
 - Y/C (S-Video)/RGB input
 - Composite input
 - SD/HD-SDI input
- Resolution
 - Still images 1920 x 1080 and SD**
 - Videos 720p and SD**
- Interface package (DICOM/H7) included
- NEO Secure security software
- Recommended applications:
 - OR1™ installation included
 - DVI to HDI-SDI converter
 - Equipment cart solution with focus on SD



20 0461 20

20 0409 12-EN* **KARL STORZ AIDA® compact NEO standard**, HD documentation system for digital storage of still images, video sequences and audio files, power supply 115/230 VAC, 50/60 Hz, including:

AIDA control NEO (V3.1)

AIDA control NEO V3.1 Software, incl. communication (DICOM/HL7)

USB Silicone Keyboard, with touchpad, US

AIDA compact HD Frame Grabber Card

2x **Connecting Cables**, for controlling peripheral units

Connecting Cable, mini-DIN plug to BNC socket

BNC Video Cable, length 200 cm

Mains Cord

20040913-EN **KARL STORZ AIDA® compact NEO advanced**, FULL HD documentation system for digital storage of still images, video sequences and audio files, power supply 115/230 VAC, 50/60 Hz

* Available in the following languages: DE, ES, FR, IT, PT, PL, RU, DK, SE, JP, CN

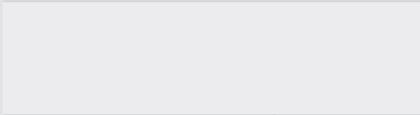
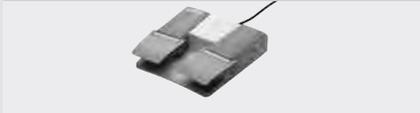
** Use of DVI-IN requires a separate converter

Components/Spare Parts see chapter 18

HD Imaging with Operating Microscopes

System Components

Accessories for KARL STORZ AIDA® compact NEO advanced/standard

	<p>20 0905 19 19" Touch Screen, 24V, wall mounting, RS 232, VGA, resolution max. 1280 x 1024 (SXGA mode), including RS 232 cable, SVGA cable, mains cord and external power supply 24 VDC, power supply 100 – 240 VAC, 50/60 Hz</p>
	<p>29005 MSK Monitor Holding Arm, height and side adjustable, tilting, can be mounted either on the left or on the right side, swivel range 190°, reach 300 mm, loading capacity max. 15 kg, with monitor holder VESA 75/100, for Equipment Carts 29005 xx</p>
	<p>20 0402 73 Bar Code Scanner</p>
	<p>9370 TQ Color Ink Jet Printer, with horizontal paper feed, incl. mains cord, USB printer cable, length 200 cm, black and color ink jet cartridges</p>
	<p>9371 LA Color Laser Printer, including mains cord, USB printer cable length 200 cm</p>
	<p>20 0902 34U PS/2 Compact Keyboard, US version, with cover</p>
	<p>20 0402 32 PS/2 Silicone Keyboard, German version, washable, disinfectable</p>
	<p>20 0104 30 Two-Pedal Footswitch, two-stage</p>

Accessories for KARL STORZ AIDA® compact NEO advanced/standard

20 0402 72	SVGA Connecting Cable , length 600 cm
20 0400 73	RS 232 Connecting Cable , length 600 cm
20 0400 74	Printer Cable , length 300 cm
20 0401 74	Printer Cable , length 500 cm
20 0103 70	Potential Equalization Cable , length 200 cm
20 0102 70	Potential Equalization Cable , length 500 cm
W20475	OR1™ Network Isolator , for galvanic decoupling of units with RJ45 network connection (100 Mbit)
20 0900 34	Ethernet Network Board , 10/100 Mbit/s
20 0900 37	Fiber Optic Network Board , 100 Base-FX (SC)
20 0901 71	Fiber Optic Network Cable , LWL-patch cable with ST and SC plugs, configured, length 100 cm
20 0900 36	Media Converter , converts a ST-Port 100 Base-FX to a RJ45 100 Base-TX, including power supply
20 0400 76	RJ45 Network Cable , length 500 cm
20 2040 80	CD-R , 700 MB, package of 10
20 2040 81	DVD+RW , 4.7 GB, package of 5
20 2040 82	DVD+R , 4.7 GB, package of 10
20 2040 83	DVD-R , 4.7 GB, package of 10

Accessories – Equipment Cart



29005 DRB **Equipment Cart**

including:

basic equipment cart, rides on 4 antistatic dual wheels, 2 equipped with locking brakes (rear), 3 fixed shelves, 1 with push handles, mains switch in side boom, 1 drawer unit with lock, integrated cable conduits in both vertical beams, 1 set of non-sliding stands for units, double rear panel with integrated electrical subdistributors (with 12 sockets), holder for power supplies, potential earth connectors and cable winding on the outside, 1 camera holder, 2 equipment rails sidwise

Dimensions:

Equipment Cart: 730 x 1490 x 716 mm (w x h x d),

Shelf: 630 x 480 mm (w x d),

Caster diameter: 150 mm

Accessories:

29005 MHB **Monitor Arm**, height adjustable, swiveling and tilting, central mount, swivel range approx. 210°, loading capacity max. 18 kg, with monitor holder VESA 75/100, for use with Equipment Cart 29005 BAS/DRB and 29003 LCG

29005 TBG **Isolation Transformer**, 230 VAC, 2000 VA, with 8 special mains socket expulsion fuses, 8 grounding plugs, for Equipment Carts 29005 BAS/DRB/LAP/GU

29003 IW **Earth Leakage Monitor**, for use with Isolation Transformer 29003 TBK and 29005 TBG

29005 KKM **Mains Cord**, with cold device plug and socket, with UL approval, length 100 cm

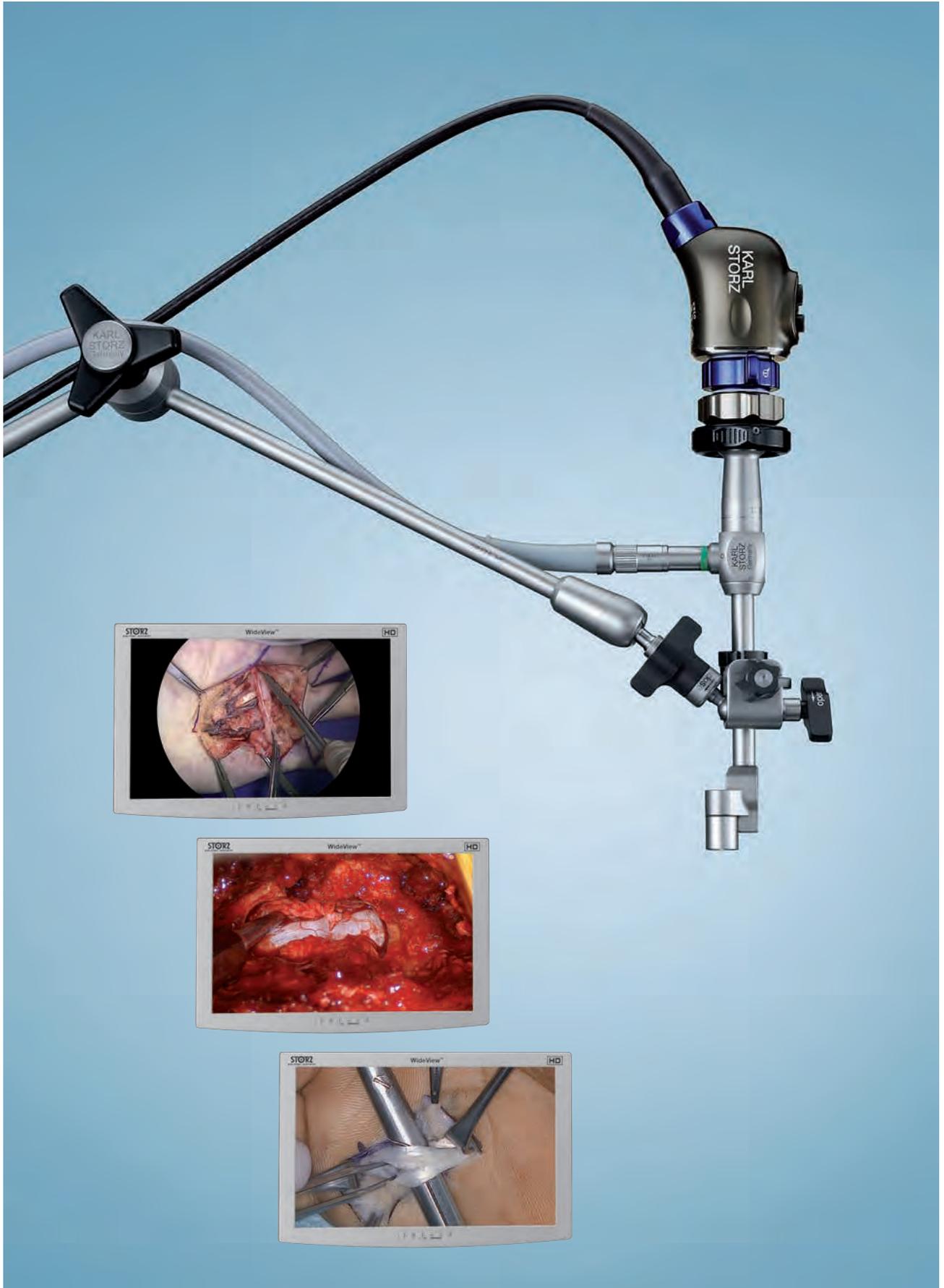
**VITOM® - VISUALIZATION SYSTEM FOR
OPEN SURGERY WITH MINIMAL ACCESS**



VITOM® *NEW*

Visualization System for Open Surgery with Minimal Access

STORZ
KARL STORZ — ENDOSKOPE



9-13

The VITOM® system from KARL STORZ represents a revolutionary and innovative way of displaying open surgical interventions with an incision length of max. 12 cm in a high-quality and ergonomic manner.

The VITOM® system is based on the renowned HOPKINS® rod lens system from KARL STORZ. With the help of a holding system, the VITOM® system is placed at a working distance of 25 – 75 cm above the surgical field. This gives the surgeon more room to work.

The small size of the VITOM® system reduces space requirements in the OR to a minimum. Due to its slim and compact design, the surgical field is not obstructed and even long instruments can be used with ease. The VITOM® system provides excellent depth of field, optimal magnification, good contrast and excellent color reproduction, which are the requisites for FULL HD display and recording. The first-

class enhanced imaging can be observed via a FULL HD monitor from a convenient distance by the surgeon, the assistant as well as the entire OR team. In orthopedic surgery, the VITOM® system has proven to be a useful tool alongside operating microscopes, loupes, or OR illumination cameras.

The VITOM® system features integrated fiber optic light transmission which enables connection to endoscopic cold light sources.

The system allows further use of existing units. A FULL HD endoscope imaging solution from KARL STORZ can also be used with the VITOM® system.

To date the VITOM® system has been successfully used in the following interventions in hand surgery: Dupuytren's contracture, ulnar-shortening osteotomy, ulnar head prosthesis, arthroplasty, ganglion resection, correction of a trigger finger, correction of a hammer finger, four-corner fusion.

The VITOM® system offers:

- Excellent FULL HD image quality
- Great depth of view
- Large working distance
- Ergonomic monitor work
- Compact design requiring minimal space in the OR
- Use of existing KARL STORZ FULL HD endoscopy system possible



Using the VITOM® system in hand surgery

OR photographs courtesy of: Prof. Dr. Christophe Mathoulin, Institut de la Main, Clinique Jouvenet, Paris, France

Exoscope



see pages 379-383

**Camera System,
Monitor and Light Source**



see pages 384-390

Holding System



see page 391

Documentation System



see pages 392-394

Equipment Cart

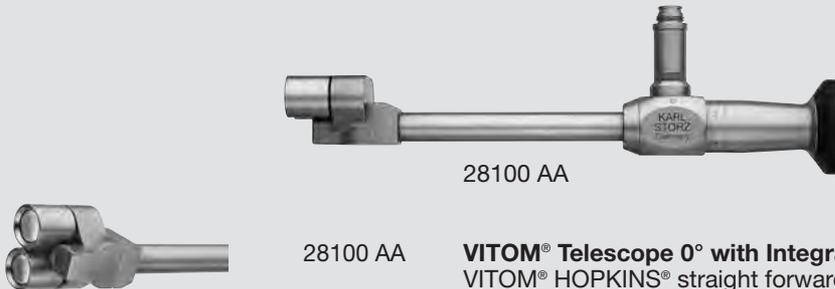


see page 395

VITOM® System Overview

Recommended Basic Set for the VITOM® System see page 22, chapter 1, BASIC SETS

Exoscope and Illumination – VITOM® Telescopes of the 2nd Generation
Length 11 cm

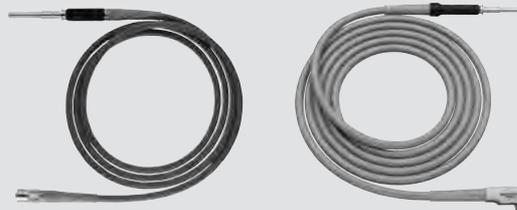


28100 AA

28100 AA

VITOM® Telescope 0° with Integrated Illuminator, VITOM® HOPKINS® straight forward telescope 0°, working distance 25 – 75 cm, length 11 cm, **autoclavable**, with fiber optic light transmission incorporated and condensor lenses, color code: green

Fiber Optic Light Cables 495 TIP or 495 NVC recommended



495 TIP

495 NVC

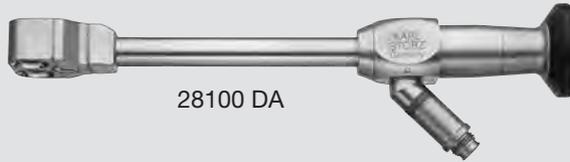
495 TIP

Fiber Optic Light Cable, diameter 4.8 mm, length 300 cm, with straight connector, extremely heat-resistant

495 NVC

Fiber Optic Light Cable, diameter 4.8 mm, length 300 cm, with 90° deflection to the instrument, very narrow radius of curvature

Exoscope and Illumination – VITOM® Telescopes of the 2nd Generation
Length 11 cm



28100 DA



28100 DA

VITOM® Telescope 90° with Integrated Illuminator,
VITOM® HOPKINS® telescope 90°, working distance 25 – 75 cm,
length 11 cm, **autoclavable**, with fiber optic light transmission
incorporated and condensor lenses,
color code: blue

Fiber Optic Light Cable 495 TIP recommended



495 TIP

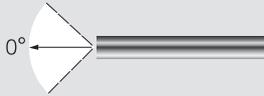
495 TIP

Fiber Optic Light Cable, diameter 4.8 mm,
length 300 cm, with straight connector,
extremely heat-resistant

Exoscope and Illumination – VITOM® Telescopes of the 1st Generation
Diameter 10 mm, length 11 cm



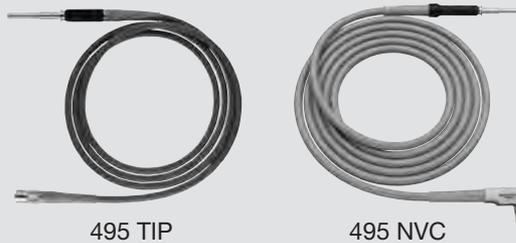
20 9160 20



20 9160 20

VITOM® 25 Telescope 0°, VITOM® 25 HOPKINS® straight forward telescope 0°, working distance 25 – 75 cm, diameter 10 mm, length 11 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

Fiber Optic Light Cables 495 TIP or 495 NVC recommended



495 TIP

Fiber Optic Light Cable, diameter 4.8 mm, length 300 cm, with straight connector, extremely heat-resistant

495 NVC

Fiber Optic Light Cable, diameter 4.8 mm, length 300 cm, with 90° deflection to the instrument, very narrow radius of curvature

Optional and suitable for VITOM® Telescope 20 9160 20



20 9170 00

20 9170 00

VITOM® 25 Illuminator, with 2 adjustable lenses and holding device for VITOM® 25 telescopes, **autoclavable**, for use with VITOM® 25 telescopes (20 9160 20 and equivalent models) and Y-Fiber Optic Light Cable 495 UV, not suitable for use with VITOM® telescopes of the 2nd generation with integrated illuminator

Note: The illuminator is only suitable for use with VITOM® Telescope 20 9160 20. Use with the VITOM® telescopes of the 2nd generation is not possible.

Y-Fiber Optic Light Cable 495 UV recommended for VITOM® 25 Illuminator 209170 00



495 UV

495 UV

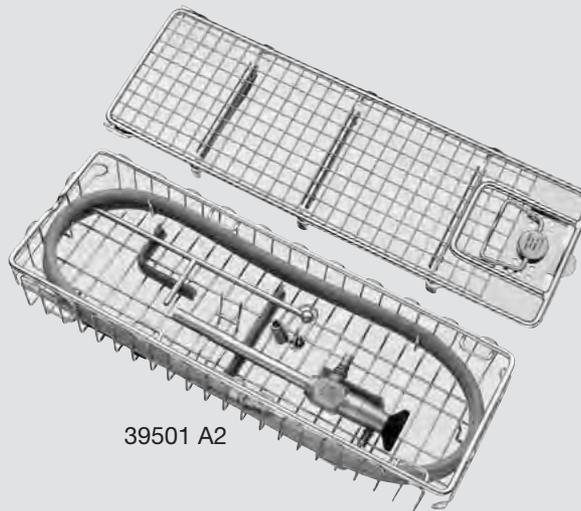
Y-Fiber Optic Light Cable, 2x diameter 3.5 mm, length 230 cm, for simultaneous connection of two instruments



20918020

20918020

VITOM® 25 Distance Rod, length 25 cm



39501 A2

39501 A2

Wire Tray for Cleaning, Sterilization and Storage of two rigid endoscopes and one light cable, including holder for light post adaptors, silicone telescope holders and lid, external dimensions (w x d x h): 352 x 125 x 54 mm, for rigid endoscopes up to diameter 10 mm and working length 20 cm

Working distance:	25 – 75 cm		
Depth of view at working distance of: Depth of view:	25 cm approx. 3.5 cm	50 cm approx. 7 cm	75 cm approx. 10 cm
Field of view at working distance of: IMAGE1 S H3-Z camera zoom 1x IMAGE1 S H3-Z camera zoom 2x	25 cm 5 cm 3.5 cm	50 cm 10 cm 7 cm	75 cm 15 cm 10.5 cm
Reproduction scale at working distance of:	25 cm	50 cm	75 cm
26" Monitor: H3-Z camera zoom 1x H3-Z camera zoom 2x	approx. 8x approx. 16x	approx. 4x approx. 8x	approx. 3x approx. 6x
42" Monitor: H3-Z camera zoom 1x H3-Z camera zoom 2x	approx. 14x approx. 28x	approx. 7x approx. 14x	approx. 5x approx. 10.5x
52" Monitor: H3-Z camera zoom 1x H3-Z camera zoom 2x	approx. 17x approx. 34x	approx. 8x approx. 16x	approx. 6x approx. 12x



9-13

Open hand surgery with the VITOM® system

Technical specifications are subject to change.

OR photographs courtesy of:

Prof. Dr. M. Haerle, Klinik für Hand- und Plastische Chirurgie, Orthopädische Klinik Markgröningen, Germany

Cold Light Fountain XENON 300 SCB

Special Features:

- Extremely high light intensity due to 300 Watt Xenon lamp
- With integrated KARL STORZ Communication Bus (KARL STORZ-SCB)



20 1331 01-1 Cold Light Fountain XENON 300 SCB,
with KARL STORZ-SCB, power supply
100 – 125/220 – 240 VAC, 50/60 Hz
including:
Mains Cord
SCB Connecting Cable, length 100 cm

Specifications:

Lamp type	XENON 15 V, 300 Watt
Color temperature	approx. 6000 K
Light outlets	1
Light intensity adjustment	continuously adjustable via a membrane keyboard or KARL STORZ Communication Bus Signal

Dimensions w x h x d	305 x 165 x 335 mm
Weight	7.96 kg
Certified to	IEC 601-1 and UL 544, protection class 1/CF

Spare Lamps and Spare Lamp Modules for Cold Light Fountains XENON see catalog TELEPRESENCE
Components/Spare Parts see chapter 18

IMAGE1 FULL HD Camera Head for Endoscopy

For use with IMAGE1 S Camera System IMAGE1 S CONNECT Module TC 200EN,
IMAGE1 S H3-LINK Module TC 300 and with all IMAGE 1 HUB™ HD Camera Control Units



TH 100

TH 100

IMAGE1 S H3-Z Three-Chip FULL HD Camera Head, 50/60 Hz, S-Technologies available, progressive scan, soakable, gas- and plasma-sterilizable, with integrated Parfocal Zoom Lens, focal length $f = 15 - 31$ mm (2x), 2 freely programmable camera head buttons, for use with IMAGE1 S and IMAGE 1 HUB™ HD/IMAGE1 HD

Accessories



533 TVB

- 040112-40* **Camera Cover**, folded inside out, 13 x 242 cm, sterile, for single use, package of 40, for use with all standard endoscopic video camera systems
- 040112-160* **Same**, package of 160
- 533 TVB **Adaptor**, with ergonomic swivel, **autoclavable**, permits telescope changing under sterile conditions

Specifications:

IMAGE1 FULL HD Camera Head	IMAGE1 S H3-Z
Product no.	TH 100
Image sensor	3x 1/3" CCD chip
Dimensions w x h x d	39 x 49 x 114 mm
Weight	270 g
Optical interface	integrated Parfocal Zoom Lens, $f = 15-31$ mm (2x)
Min. sensitivity	F 1.4/1.17 Lux
Grip mechanism	standard eyepiece adaptor
Cable	non-detachable
Cable length	300 cm

*  mtp medical technical promotion gmbh,
take-off GewerbePark 46, 78579 Neuhausen ob Eck, Germany

Optional Accessories for IMAGE 1 HUB™ HD see catalog TELEPRESENCE

IMAGE1 S Camera System



TC 200EN

TC 200EN* **IMAGE1 S CONNECT**, connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated KARL STORZ-SCB and digital Image Processing Module, power supply 100 – 120 VAC/200 – 240 VAC, 50/60 Hz including:

- Mains Cord**, length 300 cm
- DVI-D Connecting Cable**, length 300 cm
- SCB Connecting Cable**, length 100 cm
- USB Flash Drive**, 32 GB
- USB Silicone Keyboard**, with touchpad, US



TC 300

TC 300 **IMAGE1 S H3-LINK**, link module, for use with IMAGE1 FULL HD three-chip camera heads, power supply 100 – 120 VAC/200 – 240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT TC 200EN including:

- Mains Cord**, length 300 cm
- Link Cable**, length 20 cm

* Available in the following languages: DE, ES, FR, IT, PT, RU

Components/Spare Parts see chapter 18

Monitors



9826 NB

- 9826 NB **26" FULL HD Monitor**, color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, power supply 100 – 240 VAC, 50/60 Hz, 5 V DC output (1 A), wall-mounted with VESA 100 adaption
including:
External 24 VDC Power Supply
Mains Cord



9627 NB/NB-2

- 9627 NB **27" FULL HD Monitor**, color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, interface: RS 232, power supply 85 – 265 VAC, 50/60 Hz, wall-mounted with VESA 100 adaption
including:
External 24 VDC Power Supply
Mains Cord
- 9627 NB-2 **Same**, with double video inputs

Monitors

KARL STORZ FULL HD Monitors	26"	27"	
Wall-mounted with VESA 100 adaption	9826 NB	9627 NB	9627 NB-2
Inputs:			
DVI-D	1x	1x	2x
Fibre Optic	–	optional	optional
3G-SDI	1x	–	optional
RGBS (VGA)	1x	1x	2x
S-Video	1x	1x	2x
Composite/FBAS	1x	1x	2x
Outputs:			
DVI-D	1x	1x	1x
S-Video	–	1x	1x
Composite/FBAS	1x	1x	1x
3G-SDI	1x	–	optional
Signal Format Display:			
4:3	●	●	●
5:4	●	●	●
16:9	●	●	●
Picture-in-Picture	●	●	●
PAL/NTSC compatible	●	●	●

Optional accessories:

- 9826 SF **Monitor Stand**, suitable for 26" and other monitors, basic monitor stand, tiltable, rotation +/-30, disinfectable, color white, e.g. for use with 26" FULL HD Monitor 9826 NB or 26" 3D Monitor 9826 NB-3D
- 9626 SF **Monitor Stand**, with integrated cable channel, for use with FULL HD monitors 9627 NB, 9626 NB and HD Monitor 9619 NB

Specifications:

KARL STORZ FULL HD Monitor	26"	27"
Desktop with pedestal	optional	optional
Wall-mounted with VESA 100 adaption	9826 NB	9627 NB/NB-2
Brightness	500 cd/m ² (typ)	240 cd/m ² (typ)
Max. viewing angle	178° vertical	178° vertical
Pixel distance	0.3 mm	0.3 mm
Reaction time	8 ms	12 ms
Contrast ratio	1400:1	3000:1
Mount	100 mm VESA	100 mm VESA
Weight	7.7 kg	9.8 kg
Rated power	69 W	45 W
Operating conditions	5-35°C	0-40°C
Storage	-20-60°C	-20-60°C
Rel. humidity	max. 85 %	max. 85 %
Dimensions w x h x d	643 x 396 x 87 mm	696 x 445.5 x 55 mm
Power supply	100-240 VAC	85-265 VAC

Larger KARL STORZ FULL HD Monitors see catalog KARL STORZ OR1 NEO®
Signal cables see catalog TELEPRESENCE

MULTISWITCH®

A compact solution enables the straightforward and efficient distribution and individual routing of several high-resolution video signals, even without an integrated OR. MULTISWITCH® offers the possibility to administer and distribute up to 4 DVI sources (camera systems, PC

etc.) to four independent outputs (monitors, recording devices).

The MULTISWITCH® unit can be placed directly on the videocard and can be upgraded with all FULL HD endoscopy towers from KARL STORZ.

The MULTISWITCH® features two modes of operation:

1. Mode A (switcher):

Enables the simple selection of a source and simultaneous distribution to all four outputs. This mode is used when, during live transmission, an image is switched from various sources and has to be distributed to all connected monitors.

2. Mode B (router):

Distribution of any four sources to any four outputs (monitors, documentation systems). This mode is always useful if a flexible distribution of individual DVI sources to the outputs is necessary.



Functions and Areas of Application:

- Medical-grade routing and changeover solution for DVI-D signals
- Straightforward administration and distribution of up to four DVI video signals to up to four outputs
- Two operating modes – switcher or router
- Convenient use via four membrane keyboards. LEDs on the front panel display the operating mode in use.
- Easy switching or routing of DVI-D sources in the OR or during live transmission.
- The simultaneous connection of a documentation system enables the recording of up to four sources.
- Convenient distribution of DVI-D sources in the OR to various monitors or documentation systems.

MULTISWITCH®



20 9180 40

20 9180 40 **MULTISWITCH® DVI-D Switch/Router**, for DVI-D video signal distribution and switching, with 4 DVI-D inputs and 4 DVI-D outputs, power supply 100 – 240 VAC, 50/60 Hz, video inputs: 4 x DVI-D (DVI jack), video outputs: 4 x DVI-D (DVI jack), dimensions (w x h x d): 305 x 84 x 249 mm, weight 2.2 kg, for use as 1 x 4 DVI-D switch or 4 x 4 DVI-D router including:

- MULTISWITCH® Unit**
- Mains Cord**, length 300 cm
- 2x **DVI-D Connecting Cable**, length 200 cm



20 0400 86

20 0400 86 **DVI-D Connecting Cable**, length 200 cm
20 0400 89 **Same**, length 300 cm

W26091 **Fiber Optic Cable**, for the transmission of a DVI-D signal, with fixed transmitter and receiver modules, for the transmission of a HD signal from the IMAGE 1 HUB™ Camera Control Unit to a HDTV monitor, DVI-D male connector, length 10 m

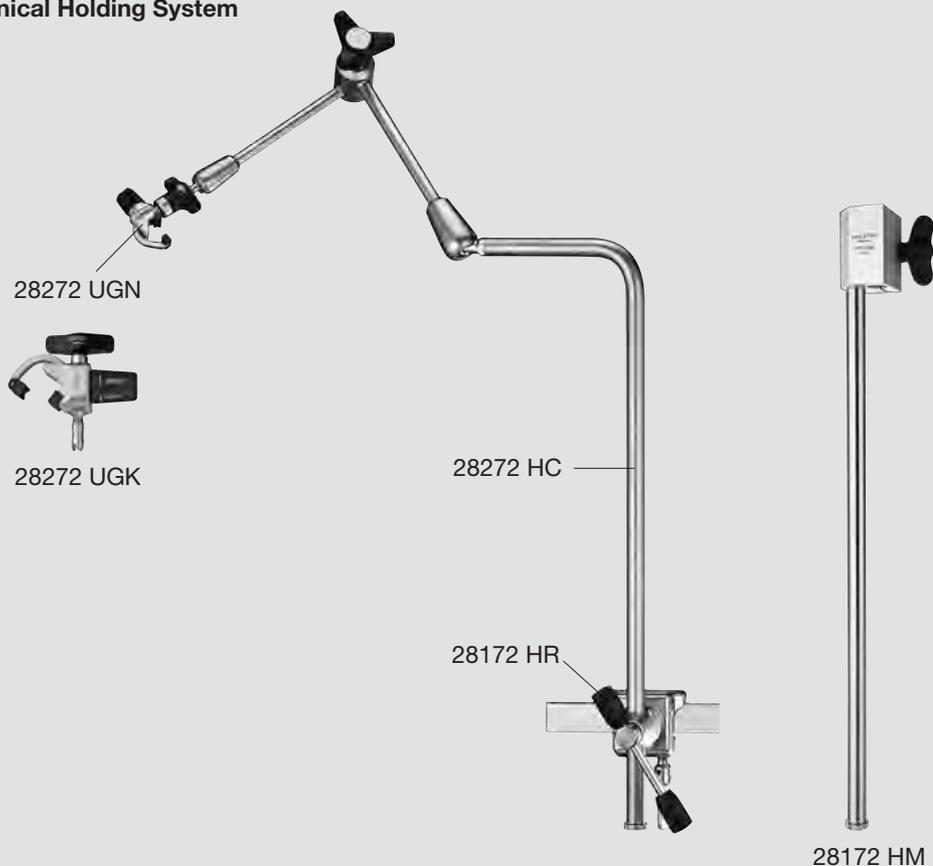
W26093 **Same**, length 20 m

Specifications:

Video inputs	4x DVI-D	Dimensions w x h x d	305 x 83 x 249 mm
Video outputs	4x DVI-D	Weight	2.2 kg
Use	4 membrane keyboards with LED display	Power supply	100-240 VAC, 50/60 Hz
Max. video resolution	1920 x 1080p, 50/60 Hz	Protection class	IP 20 (DIN 60529)

Components/Spare Parts see chapter 18

Mechanical Holding System



- 28272 HC **Articulated Stand**, L-shaped, long, reinforced version, especially large swivel range, with one mechanical central clamp for all five joint functions, height 48 cm, swivel range 66 cm, with quick release coupling KSLOCK (female)
- 28172 HR **Rotation Socket**, to clamp to the operating table, with one mounted Butterfly Nut 28172 HRS, for European and US standard rails, with lateral clamp for height and angle adjustment of the articulated stand
- 28172 HM **Extension Rod**, 50 cm, with lateral clamp for height adjustment of the articulated stand, for use with Articulated Stands 28272 HA/HB/HC and Sockets 28172 HK/HR
- 28272 UGN **Clamping Jaw**, metal, clamping range 16.5 up to 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed HOPKINS® telescopes
- Alternative to 28272 UGN:**
- 28272 UGK **Clamping Jaw**, with ball joint, large, clamping range 16.5 to 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed HOPKINS® telescopes
- 28272 CN **Clamping Cylinder**, folding, for flexible mounting of 10 mm telescopes on the telescope sheath, **autoclavable**. The clamping cylinder allows vertical movement and rotation of the telescope.
- 041150-20* **Cover**, elasticated, package of 20



mtp medical technical promotion gmbh,
Take-Off GewerbePark 46, 78579 Neuhausen ob Eck, Germany

For further versions of the articulated stand see chapter 15, HOLDING SYSTEMS

KARL STORZ AIDA® compact NEO advanced/standard

Continuous first-class documentation!



AIDA compact NEO:
Recording screen



AIDA compact NEO:
Review screen



AIDA compact NEO:
Patient data

Data Acquisition

Still images, video sequences and audio comments can easily be recorded during an examination or intervention by pressing the on-screen button, activating the footswitch, or pressing the camera head button. All captured data are displayed on the right-hand side as a thumbnail preview to ensure the data have been generated. Patient data can be entered via an onscreen or standard keyboard. The system also offers the possibility to transfer all relevant patient data via a DICOM worklist or a link to the hospital information system (HIS) without requiring manual entry in the patient entry screen.

Flexible Review, Data Storage and Efficient Data Export

Captured still images or video files can easily be viewed, edited, or deleted on-screen before final storage. KARL STORZ AIDA® compact NEO efficiently stores all recorded data on DVD, CD, USB stick, external/internal drive, the relevant network and/or on a FTP server. It is also possible to save the data directly on the PACS and/or HIS servers via the AIDA communication HL7/DICOM interface package. Data that cannot be stored successfully remains in a cache until final archiving is possible.

KARL STORZ AIDA® compact NEO advanced/standard

AIDA compact NEO advanced:

- **SD and HD signal support:**
 - Y/C (S-Video)
 - Composite input
 - DVI-D input
- **Picture-in-Picture function: Display of channel 2 (SD) in channel 1 (FULL HD)**
- **Resolution:**
 - Still images 1920 x 1080 and SD
 - Videos 1080p, 720p and SD
- **Interface package (DICOM/H7) included**
- **NEO Secure security software**
- **Recommended applications:**
 - Universal (cart or OR1™ installation)

AIDA compact NEO standard:

- **SD and HD signal support (HD-SDI)**:**
 - Y/C (S-Video)/RGB input
 - Composite input
 - SD/HD-SDI input
- **Resolution**
 - Still images 1920 x 1080 and SD**
 - Videos 720p and SD**
- **Interface package (DICOM/H7) included**
- **NEO Secure security software**
- **Recommended applications:**
 - OR1™ installation included
 - DVI to HDI-SDI converter
 - Equipment cart solution with focus on SD



20 0461 20

20 0409 12-EN* **KARL STORZ AIDA® compact NEO standard**, HD documentation system for digital storage of still images, video sequences and audio files, power supply 115/230 VAC, 50/60 Hz, including:

- AIDA control NEO (V3.1)**
- AIDA control NEO V3.1 Software**, incl. communication (DICOM/HL7)
- USB Silicone Keyboard**, with touchpad, US
- AIDA compact HD Frame Grabber Card**
- 2x **Connecting Cables**, for controlling peripheral units
- Connecting Cable**, mini-DIN plug to BNC socket
- BNC Video Cable**, length 200 cm
- Mains Cord**

20040913-EN **KARL STORZ AIDA® compact NEO advanced**, FULL HD documentation system for digital storage of still images, video sequences and audio files, power supply 115/230 VAC, 50/60 Hz

* Available in the following languages: DE, ES, FR, IT, PT, PL, RU, DK, SE, JP, CN

** Use of DVI-IN requires a separate converter

Components/Spare Parts see chapter 18

Documentation System



20 0905 19 **19" Touch Screen**, 24V, wall mounting, RS 232, VGA, resolution max. 1280 x 1024 (SXGA mode), including RS 232 cable, SVGA cable, mains cord and external power supply 24 VDC, power supply 100 – 240 VAC, 50/60 Hz



041265-20* **Sterile Cover**, for 19" KARL STORZ touch screen



29005 MSK **Monitor Holding Arm**, height and side adjustable, tilting, can be mounted either on the left or on the right side, swivel range 190°, reach 300 mm, loading capacity max. 15 kg, with monitor holder VESA 75/100, for Equipment Carts 29005 xx

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Equipment Cart



29005 DRB Equipment Cart

including:

basic equipment cart, rides on 4 antistatic dual wheels, 2 equipped with locking brakes (rear), 3 fixed shelves, 1 with push handles, mains switch in side boom, 1 drawer unit with lock, integrated cable conduits in both vertical beams, 1 set of non-sliding stands for units, double rear panel with integrated electrical subdistributors (with 12 sockets), holder for power supplies, potential earth connectors and cable winding on the outside, 1 camera holder, 2 equipment rails sidewise

Dimensions:

Equipment Cart: 730 x 1490 x 716 mm (w x h x d),
Shelf: 630 x 480 mm (w x d),
Caster diameter: 150 mm

Accessories:

29005 MHB **Monitor Arm**, height adjustable, swiveling and tilting, central mount, swivel range approx. 210°, loading capacity max. 18 kg, with monitor holder VESA 75/100, for use with Equipment Cart 29005 BAS/DRB and 29003 LCG

29005 TBG **Isolation Transformer**, 230 VAC, 2000 VA, with 8 special mains socket expulsion fuses, 8 grounding plugs, for Equipment Carts 29005 BAS/DRB/LAP/GU

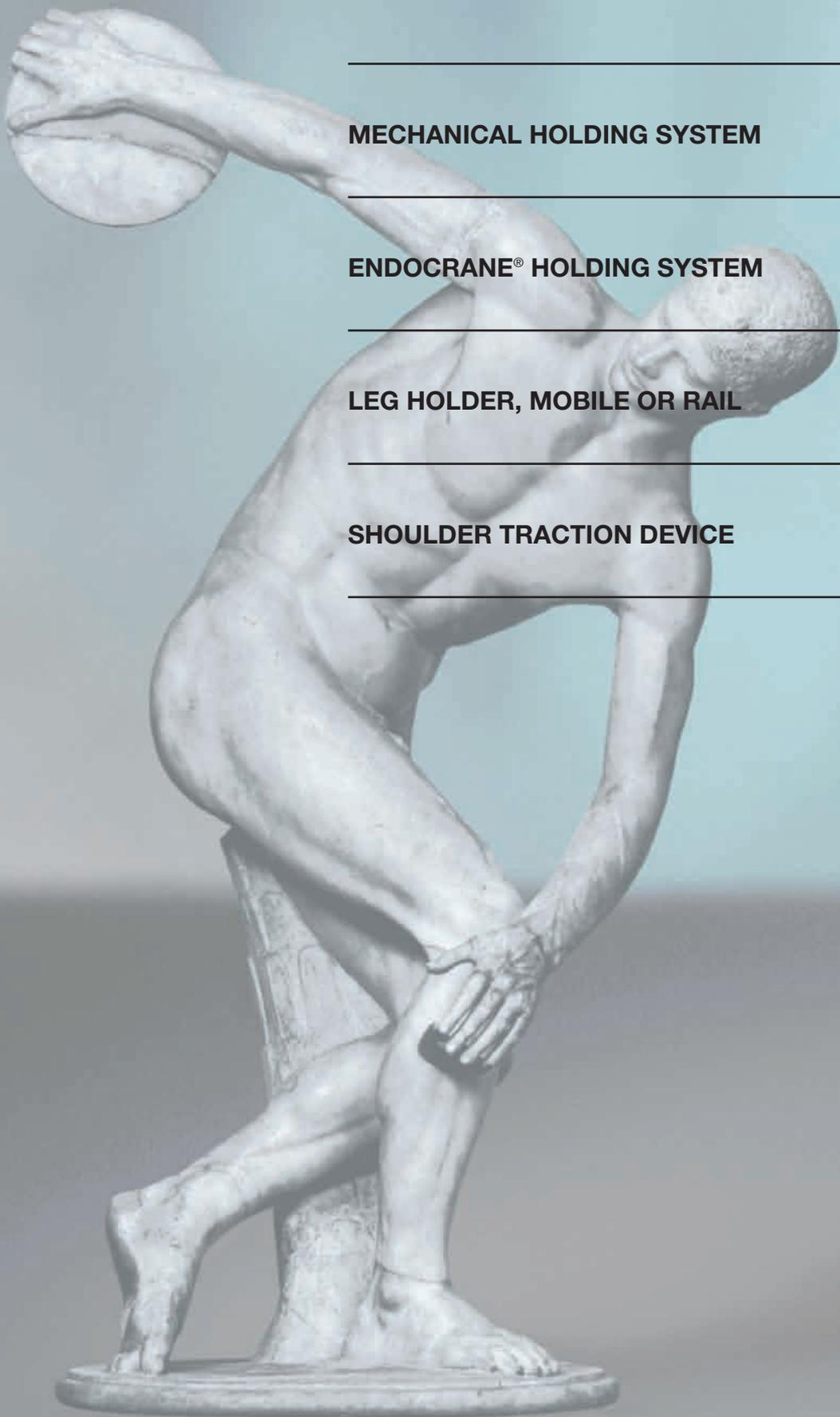
29003 IW **Earth Leakage Monitor**, for use with Isolation Transformer 29003 TBK and 29005 TBG

29005 KKM **Mains Cord**, with cold device plug and socket, with UL approval, length 100 cm

The VITOM® SPINE system has proven to be an excellent alternative to OR illumination cameras, loupes or operating microscopes in various surgical disciplines.

For further information on VITOM® SPINE see chapter 12, SPINE SURGERY

HOLDING SYSTEMS



MECHANICAL HOLDING SYSTEM 399-401

ENDOCRANE® HOLDING SYSTEM 402-405

LEG HOLDER, MOBILE OR RAIL 406-407

SHOULDER TRACTION DEVICE 408

Mechanical Holding System

with KSLOCK



The mechanical holding systems from KARL STORZ offer a versatile, convenient and cost-effective possibility for the secure positioning of instruments and telescopes.

A wide range of accessories enables the systems to be configured for any desired fields of application. The robust construction ensures reliable positioning without oscillation.

Special Features:

- Simple, fast and accurate positioning
- Many fields of application possible thanks to various articulated stands and a wide range of accessories
- Flexible positioning enables a large number of different positions
- All joints can be easily released or fixed by means of the central clamp
- Socket for use with European and United States standard rails of OR table
- Variable height adjustment by using the socket
- Extension Rod 28172 HM, for the adjustment of particularly large working distances, for example, for use with the VITOM® system
- Ergonomical positioning at the operating table
- Eases the work routine of the assistant
- Instruments and telescopes are clamped securely
- Steady imaging of the operation field
- Maintenance-free solid construction
- Autoclavable
- KSLOCK rapid coupling for mounting clamping jaws, instruments and accessories with KSLOCK pins



Mechanical Holding System

with KSLOCK



Socket

Standard Socket

28172 HK



Rotation Socket

28172 HR



Articulated Stand

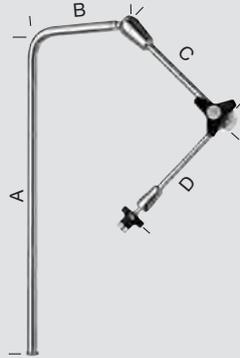
straight

28272 HA



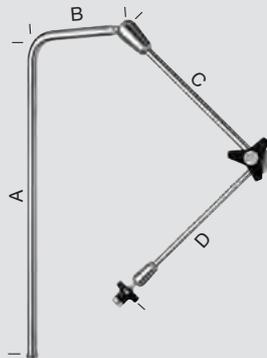
L-shaped

28272 HB



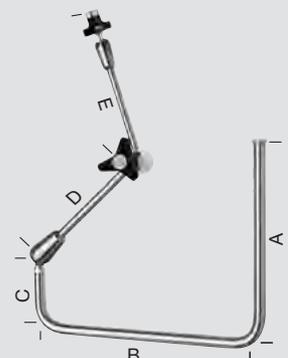
L-shaped, long

28272 HC



U-shaped

28272 HD



A 30 cm

B -

A 48 cm

B 15 cm

A 48 cm

B 15 cm

A 25 cm

B 31 cm

C 20 cm

D 17 cm

C 20 cm

D 17 cm

C 27 cm

D 24 cm

C 10 cm

D 20 cm

E 17 cm

To complete the mechanical holding system, a clamping jaw is required.
Clamping Jaws for the Mechanical Holding System see page 401

Mechanical Holding System

with KSLOCK



Clamping Jaws

	<p>28272 UGN Clamping Jaw, metal, clamping range 16.5 up to 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed HOPKINS® telescopes</p>
	<p>28272 UKN Clamping Jaw, metal, clamping range 4.8 up to 12.5 mm, with quick release coupling KSLOCK (male), for use with instrument and telescope sheaths</p>
	<p>28272 UGK Clamping Jaw, with ball joint, large, clamping range 16.5 to 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed HOPKINS® telescopes</p>
	<p>28272 UKK Clamping Jaw, with ball joint, small, metal, clamping range 4.8 to 12.5 mm, with quick release coupling KSLOCK (male), for use with instrument and telescope sheaths</p>
	<p>28272 UL Clamping Jaw, universal, clamping range 0 to 18 mm, with quick release coupling KSLOCK (male)</p>
	<p>28272 UF Clamping Jaw, for use with all KARL STORZ polymer housing fiberscopes, with quick release coupling KSLOCK (male)</p>

Accessories

	<p>28272 CN Clamping Cylinder, folding, for flexible mounting of 10 mm telescopes on the telescope sheath, autoclavable. The clamping cylinder allows vertical movement and rotation of the telescope.</p>
	<p>28172 HM Extension Rod, 50 cm, with lateral clamp for height adjustment of the articulated stand, for use with Articulated Stands 28272 HA/HB/HC and Sockets 28172 HK/HR</p>

ENDOCRANE® Holding System

The ENDOCRANE® holding arm is the system of choice if a particularly fast, accurate and safe positioning of instruments or endoscopes is required, i.e., in neurosurgery, laparoscopy or orthopedics.

The ENDOCRANE® holding arm helps surgeons and assistant surgeons to save time as the positioning of instruments and telescopes is faster and easier than with a manual holding system.

The system also relieves the assistant surgeon from having to guide the camera and delivers steady images.

The ENDOCRANE® holding system features a special piezoelectric locking joint mechanism.

This achieves positioning without misalignment as well as rapid locking (30 ms), meeting the demands of a clinical setting.

The system can be used with one hand and the large working radius of 50 cm allows variable use. A holding capacity of 20 N (2 kg) is possible in any position.

The holding arm features a fail-safe function which prevents a loss of retention force in the case of malfunction, i. e. power failure.

The system is very compact and can be mounted directly on standard OR table rails.



28272 EH

ENDOCRANE® Holding System

Product Features

- **Safety**

The fail-safe function of the ENDOCRANE® prevents loss of retention force and ensures that the arm does not collapse in case of malfunction.

- **Accuracy**

ENDOCRANE® offers accurate positioning without misalignment. This is indispensable for critical applications such as neurosurgery.

- **Speed**

The piezoelectric principle enables the joints of the ENDOCRANE® to close in 30 ms and ensures a holding force of 20 N in all positions.

- **Convenience**

The ENDOCRANE® system allows single-handed use via the handle.

- **Flexibility**

ENDOCRANE® is equipped with the proven KARL STORZ rapid coupling, which ensures fast and secure mounting of various clamping jaws. The ENDOCRANE® handle also has a manual ball joint to allow convenient fine adjustment.

- **Hygiene**

The ENDOCRANE® holding arm is equipped with a sterile cover during use. This guarantees 100 % hygiene as well as safety and ensures that the system is in continuous use.





28272 EH

- 28272 EH **ENDOCRANE®**, piezoregulated holding arm, including stand including:
- Socket**, to clamp to the OR table
 - Control Unit**
 - Cover***, sterile, package of 20
 - Spring Balance**
 - Mains Cord**
 - Case**



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Components/Spare Parts see chapter 18

ENDOCRANE® Holding System

Accessories

	28272 UGN	Clamping Jaw , metal, clamping range 16.5 up to 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed HOPKINS® telescopes
	28272 UKN	Clamping Jaw , metal, clamping range 4.8 up to 12.5 mm, with quick release coupling KSLOCK (male), for use with instrument and telescope sheaths
	28272 UL	Clamping Jaw , universal, clamping range 0 to 18 mm, with quick release coupling KSLOCK (male)
	28272 UF	Clamping Jaw , for use with all KARL STORZ polymer housing fiberscopes, with quick release coupling KSLOCK (male)
	28272 CN	Clamping Cylinder , folding, for flexible mounting of 10 mm telescopes on the telescope sheath, autoclavable . The clamping cylinder allows vertical movement and rotation of the telescope.
	041150-20*	Cover , elasticated, package of 20

Specifications:

Arm:		Control Unit:	
Maximum holding capacity	2 kg/20 N	Power supply	100 – 240 VAC
Working radius	500 mm/19.7"	Mains frequency	50/60 Hz
Swivel range	360°	Weight	5 kg/11.0 lbs
Maximum locking time	30 ms (fail-safe)	Dimensions (w x h x d)	305 x 80 x 305 mm
Weight of holding arm and stand	7 kg/15.4 lbs		
Protection against electric shock	Type BF		
Type of protection	IP 40		

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Specifications subject to change.

Leg Holder

swiveling and pivoting, with Neoprene Cushion



*adjustable jaws,
all-round padding*



pivots 360°



secure fastening



360° rotating



*height-adjustable,
swivels away from
OR table*

28188 D

Arthroscopy Leg Holder

including:

Release Clamp, 25 mm

Neoprene Cushion, 600 x 140 x 20 mm

Closure Stripe, perforated, Vulkollan 450 x 90 mm

Components/Spare Parts see chapter 18

Mobile OR Rail ^{NEW}

The mobile OR rails were specially designed for teaching and training purposes for installation on tables in anatomy classroom or laboratory settings. The OR rails allow the mounting of holding arms.



28272 MR

28272 MR

Mobile OR Rail, for installation on tables in veterinary and laboratory settings or experimental surgery

including:

Holding Plate

2x **C-Clamp**

2x **Stop Block**

Note:

The mobile OR rails are not intended for use in human medicine in the OR or outpatient/office settings.

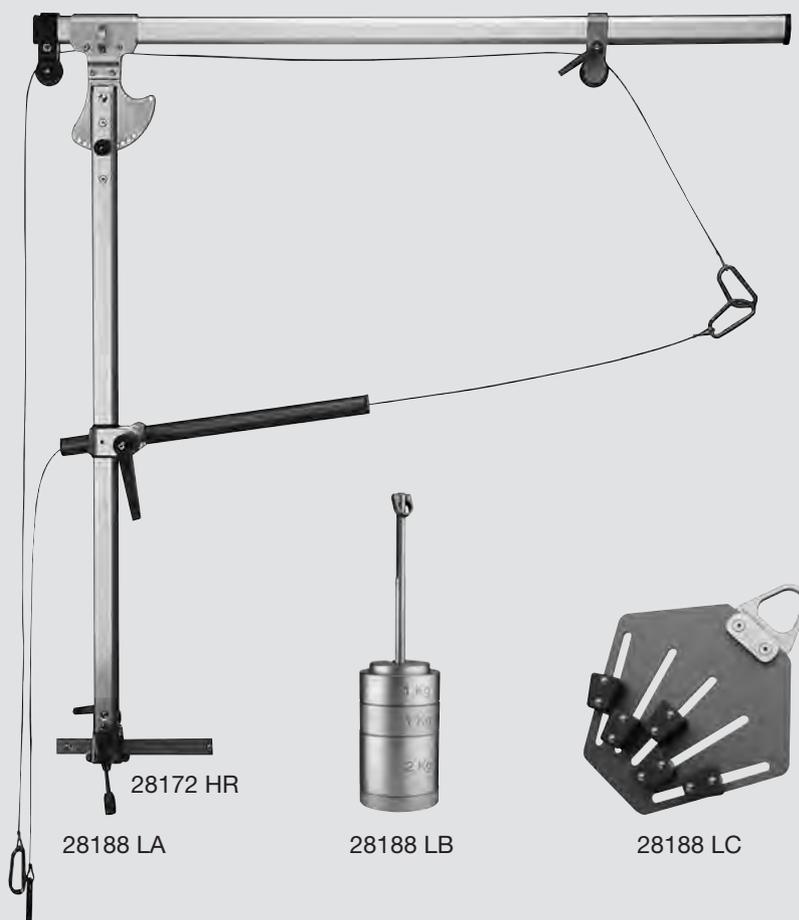
Components/Spare Parts see chapter 18

Shoulder Traction System ^{NEW}

with Set of Weights and Hand Fixation

Special Features:

- Shoulder traction system for the lateral decubitus position
- Compact design
- Very light thanks to aluminium profile tubes
- For fixation to the OR table rails
- Hand fixation for positioning the hand



- 28188 LA **Shoulder Support**, for use with Set of Weights 28188 LB and Hand Fixation 28188 LC
- 28188 LB **Set of Weights**
- 28188 LC **Hand Fixation**
- 28172 HR **Rotation Socket**, to clamp to the operating table, with one mounted Butterfly Nut 28172 HRS, for European and US standard rails, with lateral clamp for height and angle adjustment of the articulated stand

EXTRACORPOREAL SHOCK WAVE THERAPY ESWT



**STORZ MEDICAL
DUOLITH® SD1 »ultra«**

410

**STORZ MEDICAL
MASTERPULS® »elite edition«**

411-412

STORZ MEDICAL DUOLITH® SD1 »ultra«

Modular Shock Wave Therapy with Integrated Ultrasound Diagnosis

STORZ
KARL STORZ — ENDOSKOPE

STORZ MEDICAL

Merging radial (R-SW) and focused shock wave therapy (F-SW) with integrated ultrasound diagnosis in a single system, the DUOLITH® SD1 »ultra« modular system from STORZ MEDICAL ideally combines treatment, diagnosis, information and navigation. With the therapy column as the basic unit, all modules such as the control unit as well as the radial and focused shock wave generators can be combined with each other or added on and are operated centrally via the touch screen. In addition to the modular design, the new DUOLITH® SD1 »ultra« has other convincing features such as the color Doppler ultrasound, handpiece control of radial shock waves, focused shock wave application with constant high energy dynamics, on-board patient management and simple user guidance.

The DUOLITH® SD1 »ultra« system can be used to treat various types of musculoskeletal disorders such as achillodynia, pseudarthroses, epicondylitis, calcified tendinitis, plantar fasciitis, tibial stress syndrome, patellar tendinitis, trochanteric tendinopathy and the myofascial pain syndrome. Integrated ultrasound imaging simplifies both diagnosis and therapy.

Level 1: R-SW Module

- Innovative handpiece display
- Pressure and frequency selection directly at the handle
- Radial shock wave therapy:
Pressure: 1 – 5 bar, frequency: 1 – 21 Hz
- Optional vibration therapy with V-ACTOR® handpiece: 1 – 35 Hz

Level 2: R-SW Module + Control Module (+ Ultrasound Diagnosis)

- Central unit controls all modules
- Touchscreen display for ease of use
- Integrated patient management
- Intuitive selectable treatment guides
- Integrated ultrasound diagnosis b/w or color Doppler (optional)

Level 3: R-SW Module + Control Module + F-SW Module (+ Ultrasound Diagnosis)

- For treatments in near-surface and deep target areas of the body
- Focused shock wave therapy:
0.01 – 0.55 mJ/mm²
- Ergonomically optimized focal zone
- Consistently high energy dynamics
- Integrated ultrasound diagnosis b/w or color Doppler (optional)



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The striking features of the MASTERPULS® »elite edition« radial shock wave therapy system include its ease of use, compact design as well as a wide range of applicators for various indications. Simple handpiece

replacement as well as easy-to-install retrofit options and software updates ensure that the system is ideally equipped to handle new applications or clinical and technological innovations.

Radial shock wave therapy with MASTERPULS® »elite edition« is mainly used to treat the following indications:

- Calcified tendinitis
- Epicondylitis
- Patellar tendinitis
- Achillodynia
- Plantar fasciitis
- Tibial stress syndrome
- Trochanteric tendinopathy
- Pseudoarthroses
- Myofascial pain syndrome

Treatment Examples:



Fig. 1: Myofascial pain syndrome



Fig. 2: Plantar fasciitis (calcaneal spur)



Fig. 3: Radial/ulnar humeral epicondylitis



Fig. 4: Treatment using the V-ACTOR® applicator

MASTERPULS® MP50 »elite edition«

The compact radial shock wave therapy system in everyday clinical practice

- Control unit with built-in “silent” air compressor
- LED displays: Frequency, pressure, total number of impulses triggered
- Pressure: 1 – 4 bar
- Frequency: 1 – 15 Hz (pressure and frequency range are interdependent)
- Optional vibration therapy with V-ACTOR® applicator: 1 – 21 Hz
- Optional battery-powered operation



MASTERPULS® MP100 »elite edition+«

The efficient radial shock wave therapy system for extended use in everyday clinical practice

- Control unit with built-in “silent” air compressor
- LED displays: Frequency, pressure, total number of impulses triggered
- Pressure: 1 – 5 bar
- Frequency: 1 – 21 Hz (pressure and frequency range are interdependent)
- Optional vibration therapy with V-ACTOR® applicator: 1 – 31 Hz
- Optional battery-powered operation



MASTERPULS® MP200 »elite edition«

High-frequency radial shock wave therapy system

- Control unit
- External “silent” air compressor
- Pressure: 1 – 5 bar
- Frequency: 1 – 21 Hz
- Two handpiece connectors
- Touchscreen operation
- Image-based treatment guide
- Optional vibration therapy with V-ACTOR® applicator: 1 – 35 Hz



UNITS AND ACCESSORIES



SUCTION AND IRRIGATION SYSTEMS

MOTOR SYSTEMS

HIGH FREQUENCY SURGERY UNITS

Units and Accessories for Arthroscopy



- **SUCTION AND IRRIGATION SYSTEMS**
- **MOTOR SYSTEMS**
- **HIGH FREQUENCY SURGERY UNITS**

The units manufactured by KARL STORZ combine long-lasting precision mechanics with state-of-the-art micro-electronic programmable controls. At KARL STORZ, the greatest emphasis is placed on user and patient safety. The quality assurance system of KARL STORZ is certified in accordance with the requirements of ISO 9001/EN 46001. It guarantees constant quality testing in the selection of materials and components. At the end of each manufacturing process, tests are carried out with automatic measuring and testing systems developed specially for this purpose. The results are recorded and logged. That gives each device a distinct “fingerprint” that can be checked at any time before and after it is delivered to the customer.

The standardized, modular design of KARL STORZ units was developed based on extensive ergonomic studies and is conceived for ease of care and cleaning and user-friendly practice, as well as to meet the demands of the special hygienic standards required in surgery. Clearly laid out adjacent function keys and displays guarantee efficient operation and make it easier to constantly monitor actual and set parameters. Acoustic and visual warning signals also assist the user. The settings can be changed manually at any time. Automatic microelectronic control systems guarantee optimum operating conditions and therefore relieve the surgeon in his work who can then fully concentrate on medical procedures.

The overall KARL STORZ product line includes the following categories of units with accessories:

- **Insufflators**
- **Suction and Irrigation Systems**
- **Motor Systems**
- **Lithotripsy**
- **HF Surgery Units**



■ **SUCTION AND IRRIGATION SYSTEMS**
ARTHROPUMP® Power

ARTHROPUMP® Power

Special Features

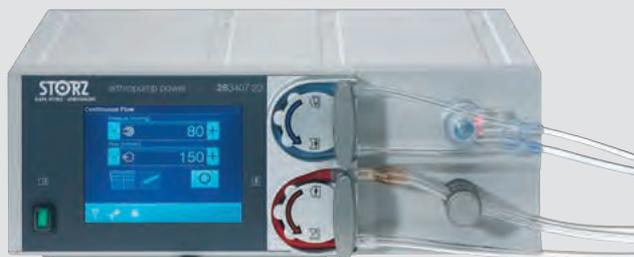
Special Features:

- Can be used as both single- and double-roller pump (single or continuous flow)
- Hemostasis mode: Rapid bleeding control by activating the red footswitch (indicated by an acoustic signal)
- Lavage mode: Rapid joint irrigation for a continuously clear view by activating the blue footswitch
- Consistently good view: Optimized control software enables constant comparison and adjustment of inflow and outflow parameters to ensure constant joint distension
- No image pulsation: Special control software and pump bed design provide a homogenous and constant irrigation inflow
- Tubing sets available for single use or as day sets
- Easy connection of the tubing set – computer animation displayed on the pump screen enables smooth installation of the tubing sets during pump start-up
- Color coding of the pump bed and tubing set facilitates identification:
 - Blue: Irrigation
 - Red: Suction
- Display and adjustment of parameters via touchscreen display: Enables both pressure and flow parameters as well as hemostasis phase values and fluid bag size to be set.
- One footswitch for UNIDRIVE® S III ARTHRO SCB and ARTHROPUMP® Power: Efficient arthroscopic work due to unique synergy between shaver system and pump
- Integrated acoustic warning signal indicates impending fluid exchange



ARTHROPUMP® Power

Fluid Management System,
Recommended Set Configuration



- 28 3407 01-1 ARTHROPUMP® Power,**
power supply 100 – 240 VAC, 50/60 Hz
including:
- Connecting Cable,** to UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB
 - SCB Connecting Cable,** length 100 cm
 - Four-Pedal Footswitch**
 - Tube Set Irrigation*,** sterile, for single use, package of 3
 - Tube Set Suction*,** sterile, for single use, package of 3

Specifications:

Pressure-regulated	- Normal: 20-200 mmHg - Hemostasis: +20% - +90% - Shaver: +0% - +80%	Power supply	100-240 VAC, 50/60 Hz
Flow-regulated	- Normal: 10-200 ml/min - Shaver: 50-500 ml/min - Lavage: 150-500 ml/min	Dimensions w x h x d	447 x 155 x 313 mm
		Weight	8.8 kg
		Certified to	IEC 601-1, CE acc. to MDD

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Optional Accessories for ARTHROPUMP® Power see pages U 9-10

Components/Spare Parts see chapter 18

ARTHROPUMP® Power

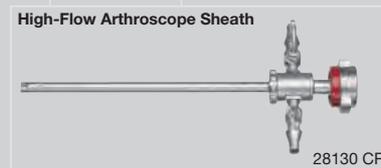
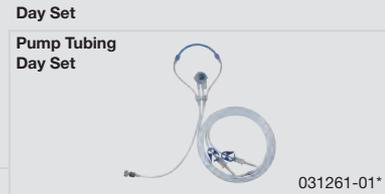
System Components

SUCTION AND IRRIGATION SYSTEMS



UNIT SIDE

PATIENT SIDE



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20 0168 34 **Four-Pedal Footswitch**



28 3407 70 **Connecting Cable**, to transmit the footswitch signal from ARTHROPUMP® Power to POWERSHAVER SL SCB/ UNIDRIVE® S III ARTHRO SCB, length 200 cm



28 3407 71 **Extension Cable**, between ARTHROPUMP® Power and Four-Pedal Footswitch 20 0128 34

for single use

Continuous-Flow – Irrigation and Suction

031328-10* **Tubing Set Irrigation**, with two puncture needles, for single use, sterile, package of 10

031228-10* **Tubing Set Suction**, with two suction tubes, for single use, sterile, package of 10

Single-Flow – Irrigation

031328-10* **Tubing Set Irrigation**, with two puncture needles, for single use, sterile, package of 10

Tubing Set Irrigation



031328-01*

Tubing Set Suction



031228-01*

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Day Set

Continuous-Flow – Irrigation and Suction

031261-10*	Pump Tubing Day Set , with two puncture needles, for day use, sterile, package of 10, for use with Patient Tubes 031162-01 or 031162-10
031162-10*	Patient Tube** , for single use, sterile, package of 10, for use with Pump Tubing Day Set 031261-01 or 031261-10
031228-10*	Tubing Set Suction , with two suction tubes, for single use, sterile, package of 10

Single-Flow – Irrigation

031261-10*	Pump Tubing Day Set , with two puncture needles, for day use, sterile, package of 10, for use with Patient Tubes 031162-01 or 031162-10
031162-10*	Patient Tube** , for single use, sterile, package of 10, for use with Pump Tubing Day Set 031261-01 or 031261-10

Pump Tubing Day Set



031261-01*

Patient Tube



031162-01*

Tubing Set Suction



031228-01*

** Also in combination with 031161-10, 031167-10, 031168-10



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■ MOTOR SYSTEMS

UNIDRIVE® S III ARTHRO SCB

UNIDRIVE® S III ARTHRO SCB

The aim of all arthroscopic procedures is the same: to complete the procedure quickly and with minimal trauma, thereby reducing patient time under anesthesia.

With the UNIDRIVE® S III ARTHRO SCB, KARL STORZ has developed a motor system that is customized to meet these requirements.

- Easy to use
- Automatic handpiece recognition
- Control of rotation speed similar to the multifunctional handpiece
- Up to 15,000 rpm
- Comprehensive portfolio of single-use and reusable blades
- Communication with ARTHROPUMP® Power



UNIDRIVE® S III ARTHRO SCB

Recommended Set Configuration

Special Features:

- Arthroscopic motor system for all joints
- Stable torque throughout entire speed range
- Motors with speed ranging from max. 6000 rpm to max. 7000 rpm
- Multifunctional handpiece with accessories:
 - Jacobs chucks
 - Pin drivers
 - Sagittal saws
 - Synthes-style drivers
- Various control options possible
 - Hand controls
 - Footswitch
 - Touch Screen
- Fast and easy change of blade via quick coupling
- Single-use and reusable blades available



28 7230 01-1 UNIDRIVE® S III ARTHRO SCB, with color display, touch screen operation, two motor outputs, integrated SCB module, power supply 100 – 120/230 – 240 VAC, 50/60 Hz including:
SCB Connecting Cable, length 100 cm
Mains Cord

Specifications:

Operating mode	- counter-clockwise - clockwise - oscillating	Power supply	100 – 120/230 – 240 VAC, 50/60 Hz
Connections	- small joint handpiece - hybrid handpiece - multifunction handpiece - footswitch - KARL STORZ-SCB	Dimensions w x h x d	305 x 165 x 280 mm
		Weight	5.2 kg
		Certified to	IEC 601-1, CE acc. to MDD

System requirements:

SCB control NEO System with installed SCB control NEO Software Release **20 0900 01-44** or higher

Components/Spare Parts see chapter 18

UNIDRIVE® S III ARTHRO SCB

Handpieces



28721040

28721040 Small Joint Shaver Handpiece, up to 6000 rpm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB



28721050

28721050 Hybrid Shaver Handpiece, up to 7000 rpm, for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB



28721036

28721036 Multifunction Handpiece, for use with UNIDRIVE® S II ARTHRO SCB and POWERSHAVER SL SCB

Please note: The shaver handpieces should not be treated with universal spray.

Optional accessories for UNIDRIVE® S III ARTHRO SCB see pages U 15 and U 17

UNIDRIVE® S III ARTHRO SCB

Handpieces

Specifications :

Handpiece	KARL STORZ Quick Coupling	for use with Reusable Blades	Oscillation (rpm)	Oscillation (rpm)	Connecting Cable	Weight
28 7210 40 Small Joint Shaver Handpiece	●	●	1000 to 6000	500 to 3000	3.5 m	0.27 kg
28 7210 50 Hybrid Shaver Handpiece	●	●	1000 to 7000	500 to 3000	3.5 m	0.43 kg
28 7210 36 Multifunction Handpiece	●	–	0 to 1700	–	3.5 m	0.65 kg

Optional accessories for UNIDRIVE® S III ARTHRO SCB shaver handpieces and blades

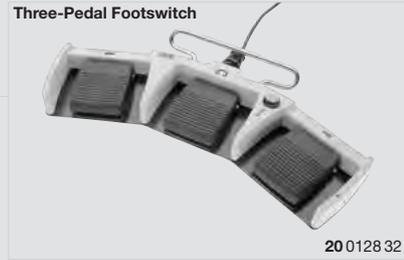
- 28205 SA **Irrigation Adaptor**, for validated cleaning of shaver handpieces
- 28205 SAA **Irrigation Adaptor**, for validated cleaning of outer blades
- 28205 SAI **Irrigation Adaptor**, for validated cleaning of inner blades

Optional accessories for Multifunctional Handpiece 28 7210 36:

- 28 7210 31 **Jacobs Chuck**, up to diameter 4 mm
- 28 7210 37 **Jacobs Chuck**, up to diameter 6.5 mm
- 28 7210 38 **Jacobs Chuck**, keyless, up to diameter 7.4 mm, for use with Multifunction Handpiece 28 7210 36
- 28 7210 39 **Sagittal Saw Attachment**, keyless, with tilt lever, for use with Multifunction Handpiece 28 7210 36 and Saw Blades 28207 only
- 28 7210 33 **Pin Driver**, for drilling wires diameter 1.5 – 3 mm
- 28 7210 34 **Pin Driver**, for Synthes attachments
- 28 7210 71 **Connecting Cable**, for FMS pump

UNIDRIVE® S III ARTHRO SCB

System Components



MOTOR SYSTEMS

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Optional Accessories

for Multifunction Handpiece 28 7210 36

	28 7210 31	Jacobs Chuck , up to diameter 4 mm
	28 7210 37	Jacobs Chuck , up to diameter 6.5 mm
	28 7210 33	Pin Driver , for drilling wires diameter 1.5 – 3 mm
	28 7210 38	Jacobs Chuck , keyless, up to diameter 7.4 mm, for use with Multifunction Handpiece 28 7210 36
	28 7210 39	Sagittal Saw Attachment , keyless, with tilt lever, for use with Multifunction Handpiece 28 7210 36 and Saw Blades 28207 only
	28 7210 34	Pin Driver , for Synthes attachments
	28 7210 71	Connecting Cable , for FMS pump

for UNIDRIVE® S III ARTHRO SCB shaver handpieces and blades

	28205 SA	Irrigation Adaptor , for validated cleaning of shaver handpieces
	28205 SAA	Irrigation Adaptor , for validated cleaning of outer blades
	28205 SAI	Irrigation Adaptor , for validated cleaning of inner blades

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB,
for cutting and grinding

Working length 180 mm

Type	Use	Order No.	Diameter	Color Code	Application
 Aggressive Cutter	for single use	28208 BKS	4.5 mm mauve	green	soft tissue
 Full Radius Resector	for single use	28208 CCS	4.5 mm mauve	yellow	soft tissue
 Aggressive Full Radius Resector	for single use	28208 DCS	4.5 mm mauve	blue	soft tissue
 Curved Full Radius Resector	for single use	28208 EGS	4.5 mm mauve	light blue	soft tissue
 Curved Aggressive Full Radius Resector	for single use	28208 EHS	4.5 mm mauve	light green	soft tissue
 Semi Hooded Barrel Burr	for single use	28208 IDS	5.5 mm dark gray	pink	bone

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB,
for cutting and grinding

Working length 120 mm

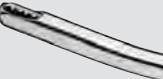
Type	Use	Order No.	Diameter	Color Code	Application
	reusable	28205 AB	3.5 mm	green	soft tissue
		28205 AC	4.2 mm		
		28205 AD	5.5 mm		
	for single use	28205 ABS	3.5 mm light gray		
		28205 ACS	4.2 mm medium gray		
		28205 ADS	5.5 mm dark gray		
	reusable	28205 AK	4.5 mm	green	soft tissue
	for single use	28205 AKS	4.5 mm mauve		
		*28208 AKS	4.5 mm dark gray		
	reusable	28205 BB	3.5 mm	red	soft tissue
		28205 BC	4.2 mm		
		28205 BD	5.5 mm		
	for single use	28205 BCS	4.2 mm medium gray		
		28205 BDS	5.5 mm dark gray		
		28205 CB	3.5 mm		
reusable	28205 CC	4.2 mm			
	28205 CD	5.5 mm			
	for single use	28205 CBS	3.5 mm light gray		
28205 CCS		4.2 mm medium gray			
28205 CDS		5.5 mm dark gray			
	reusable	28205 CK	4.5 mm	yellow	soft tissue
	for single use	28205 CKS	4.5 mm mauve		
		*28208 CKS	4.5 mm dark gray		

*28208 blades are available with distal drill guide

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB,
for cutting and grinding

Working length 120 mm

Type	Use	Order No.	Diameter	Color Code	Application
	reusable	28205 DB	3.5 mm	blue	soft tissue
		28205 DC	4.2 mm		
		28205 DD	5.5 mm		
	for single use	28205 DBS	3.5 mm light gray		
		28205 DCS	4.2 mm medium gray		
		28205 DDS	5.5 mm dark gray		
	reusable	28205 DK	4.5 mm	blue	soft tissue
	for single use	28205 DKS	4.5 mm mauve		
	reusable	28205 EG	4.2 mm	light blue	soft tissue
	for single use	28205 EGS	4.2 mm medium gray		
	reusable	28205 EH	4.2 mm	light green	soft tissue
	for single use	28205 EHS	4.2 mm medium gray		
	reusable	28205 FC	4.2 mm	orange	bone
		28205 FD	5.5 mm		
	for single use	28205 FCS	4.2 mm medium gray		
		28205 FDS	5.5 mm dark gray		
		28205 FES	6,5 mm black		

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB,
for cutting and grinding

Working length 120 mm

Type	Use	Order No.	Diameter	Color Code	Application
	reusable	28205 GD	4.2 mm	purple	bone
		28205 GE	5.5 mm		
		28205 GF	6.5 mm		
	for single use	28205 GDS	4.2 mm medium gray		
		28205 GES	5.5 mm dark gray		
		28205 GFS	6.5 mm black		
	reusable	28205 HC	4.2 mm	pink	bone
		28205 HD	5.5 mm		
		28205 HE	6.5 mm		
	for single use	28205 HCS	4.2 mm medium gray		
		28205 HDS	5.5 mm dark gray		
		28205 HES	6.5 mm schwarz		
	for single use	28205 KDS	5.5 mm medium gray	light purple	bone
	reusable	28205 MK	4.5 mm	pink	bone, soft tissue
		28205 MD	5.5 mm		
	for single use	28205 MKS	4.5 mm violett		
		28205 MDS	5.5 mm dark gray		
	reusable	28205 NK	4.5 mm	light blue	bone, soft tissue
	for single use	28205 NKS	4.5 mm mauve		
		28205 NDS	5.5 mm dark gray		

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB and POWERSHAVER SL SCB,
for cutting and grinding for small joints

Working length 70 mm

Type	Use	Order No.	Color Code	Color Code	Application
	for single use	28206 AAS	2.5 mm white	green	soft tissue
		28206 ABS	3.5 mm light gray		
	reusable	28206 CA	2.5 mm	yellow	soft tissue
	for single use	28206 CAS	2.5 mm white		
		28206 CBS	3.5 mm light gray		
	reusable	28206 DA	2.5 mm	blue	soft tissue
	for single use	28206 DB	3.5 mm		
		28206 DAS	2.5 mm white		
		28206 DBS	3.5 mm light gray		
	for single use	28206 FAS	2.5 mm white	orange	bone
		28206 FBS	3.5 mm light gray		

Accessories

Saw Blades for use with Multifunction Handpiece 28 7210 36 in conjunction with POWERSHAVER SL SCB, UNIDRIVE® S III ARTHRO SCB or

Saw Handpiece 28 7200 38 in conjunction with POWERSHAVER System S1 and S2



28207 SLA

28207 SLA **Saw Blade**, blade width 10 mm, blade thickness 0.4 mm, cutting thickness 0.6 mm, working length 50 mm



28207 SLB

28207 SLB **Same**, blade width 14 mm



28207 SLC

28207 SLC **Saw Blade**, blade width 10 mm, blade thickness 0.4 mm, cutting thickness 0.6 mm, with stopper at 15 mm, working length 25 mm



28207 SLD

28207 SLD **Same**, blade width 6 mm



28207 SLE

28207 SLE **Same**, blade width 8 mm



28207 SLF

28207 SLF **Saw Blade**, blade width 12 mm, blade thickness 0.4 mm, cutting thickness 0.6 mm, working length 22 mm



28207 SLG

28207 SLG **Saw Blade**, blade width 6 mm, blade thickness 0.4 mm, cutting thickness 0.6 mm, working length 31 mm



28207 SLH

28207 SLH **Same**, blade width 10 mm

Please note: For an overview of available drills and burrs see pages 164-165



■ HIGH FREQUENCY SURGERY UNITS

AUTOCON® II 200

AUTOCON® II 200

High Frequency Surgery Unit,
Recommended Set Configuration

Special Features:

- Degree of coagulation (effect) can be preselected in several steps: The degree of coagulation measures extent of coagulation depth
- Integrated soft and forced coagulation
- Voltage-regulated, unipolar cut for reproducible surgical results
- Autostart function for bipolar coagulation: Automatic activation of coagulation current as soon as coagulation electrode touches tissue with both branches
- Activation of HF functions possible via footswitch or manual control switch for unipolar and bipolar use
- Autostart function with bipolar coagulation deactivates the HF current as soon as the set coagulation degree has been reached



20 5322 01 AUTOCON® II 200, power supply
200 – 240 VAC, 50/60 Hz
including:
Mains Cord

20 5322 01 C AUTOCON® II 200, power supply
100 – 120 VAC, 50/60 Hz
including:
Mains Cord, US version

Specifications:

HF rated power	<ul style="list-style-type: none"> - Cutting Power-Cut (unipolar): 220 Watt/500 Ohm - Coagulation Standard Coag (unipolar): 120 Watt/50 Ohm Forced Coag (unipolar): 120 Watt/500 Ohm Standard Coag (bipolar): 120 Watt/75 Ohm
Max. voltage	<ul style="list-style-type: none"> - Cutting Power-Cut (unipolar): 740Vp - Coagulation Standard Coag (unipolar): 190Vp Forced Coag (unipolar): 1800Vp Standard Coag (bipolar): 190Vp
Degree of coagulation	<ul style="list-style-type: none"> Power-Cut: 8 Standard Coag: 8 Forced Coag: 4 Bipolar Standard Coag: 8

Autostart	Coagulation bipolar
Autostop	Coagulation bipolar standard
Safety systems	<ul style="list-style-type: none"> - permanent power control - maldosage - neutral electrode safety system - automatic self-test
Power supply	100-120 VAC or 200-240 VAC, 50/60 Hz
Dimensions w x h x d	410 x 165 x 385 mm
Weight	10 kg
Certified to	IEC 60601-1, CE acc. to MDD

Optional Accessories for AUTOCON® II 200 see pages U 28-29

Components/Spare Parts see chapter 18

AUTOCON® II 200

System Components

Two-Pedal Footswitch



20 0178 30

One-Pedal Footswitch



20 0178 32



UNIT SIDE

PATIENT SIDE



Connecting Cable



27806

Neutral Electrode



27805

Unipolar High Frequency Cord



26 5200 45

Handle



26 5200 43

Unipolar High Frequency Cord



26005 M

Arthroscopy HF Hook Electrode



28801 EF/EG/EH

Arthroscopy HF Ball Electrode



28801 EA/EB/EC/ED

CLICK'line Grasping Forceps



33321 MF

Optional Accessories

for AUTOCON® II 200

	20 0178 30	Two-Pedal Footswitch , for use with AUTOCON® II 400 SCB and AUTOCON® II 200
	20 0178 32	One-Pedal Footswitch , for activating coagulation, for use with AUTOCON® II 400 SCB and AUTOCON® II 200
	27805	Neutral Electrode , of conductive silicone with 2 rubber ties for fastening, contact surface A = 500 cm ² , for use with Connecting Cable 27806
	27806	Neutral Electrode Connecting Cable , for Neutral Electrodes 27805 and 860021 E, length 400 cm
	27806 UR	Neutral Electrode Connecting Cable , for Neutral Electrode 27805
	27806 US	Neutral Electrode Connecting Cable , for Neutral Electrode 27802
	27802	Neutral Electrode , for single use, contact surface divided into two, A = 169 cm ² , package of 50, Connecting Cable 27801 required
	27801	Connecting Cable , for connecting Neutral Electrode 27802, length 500 cm
	26 5200 43	Electrode Handle , with 2 buttons for activating the unipolar generator, yellow button: unipolar cutting, blue button: unipolar coagulation (Cable 26 5200 45 required)
	26 5200 45	High Frequency Cable , for Electrode Handle 26 5200 43, length 400 cm
	26 5200 46	Electrode Handle , without buttons, with integrated connecting cable, length 300 cm

Optional Accessories

for AUTOCON® II 200

Electrodes

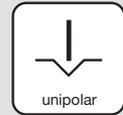


	28801 EA	Arthroscopy HF Ball Electrode , diameter 2.6 mm, ball diameter 2.5 mm, working length 6 cm, sterile, for single use, package of 5
	28801 EB	Same , working length 11 cm
	28801 EC	Arthroscopy HF Ball Electrode , diameter 2.6 mm, ball diameter 3.5 mm, working length 6 cm, sterile, for single use, package of 5
	28801 ED	Same , working length 11 cm
	28801 EF	Arthroscopy HF Hook Electrode , diameter 2.6 mm, electrode length 2.8 mm, working length 6 cm, sterile, for single use, package of 5
	28801 EG	Same , working length 11 cm
	28801 EH	Arthroscopy HF Hook Electrode , diameter 2.6 mm, electrode length 4 mm, working length 11 cm, sterile, for single use, package of 5

Accessories

Unipolar High Frequency Cords

Unipolar High Frequency Cords



KARL STORZ High Frequency
Instrument Surgery Units

	26002 M	Unipolar High Frequency Cord , with 4 mm plug, length 300 cm, for models KARL STORZ, Erbe type T, older models and Ellman
	26004 M	Unipolar High Frequency Cord , with 4 mm plug, length 300 cm, for use with Martin HF units
	26005 M	Unipolar High Frequency Cord , with 5 mm plug, length 300 cm, for AUTOCON® II 400 SCB system (111, 115, 122, 125), AUTOCON® II 200, AUTOCON® II 80, AUTOCON® system (50, 200, 350) and Erbe type ICC
	26006 M	Unipolar High Frequency Cord , with 8 mm plug, length 300 cm, for use with AUTOCON® II 400 SCB system (112, 116) and Valleylab

Please note:

All high frequency cords of this page are delivered with a length of 300 cm. If a length of 500 cm is requested please add letter **L** to the part number, e. g. 26002 **ML**, 26176 **LVL**.



**COMPONENTS
SPARE PARTS**

Introduction

The chapter “Components / Spare Parts” contains detailed information on KARL STORZ instruments.

For easy location and reference, an index is available which lists the order number of the spare parts as well as those of the entire instrument, set or unit.

Hotline

Queries concerning products, exchange, maintenance and cleaning can be addressed to the KARL STORZ EP1 Hotline: 07461/708-980, from Monday to Thursday from 7-18 h and Friday from 7-17 h.

Example:

Components / Spare Parts		Catalog page
11508	Miniature Straight Forward Telescope 0°	265
		
Spare Parts		
	495 F Receptacle, diameter 9 mm, for Wolf fiber optic light cable	
	495 G Screw Base, for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe	

Spare parts assigned to instrument with catalog page reference and order numbers for individual components/spare parts

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Arthroscopy Sheaths, with snap-in coupling mechanism, fixed stopcocks	SP 9
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HOPKINS® Telescopes and Sheaths

ENDOCAMELEON® ARTHRO HOPKINS® Telescope,
Arthroscope Sheath ENDOCAMELEON®

Components / Spare Parts

Catalog page

28731 AE **ENDOCAMELEON® ARTHRO HOPKINS® Telescope**

69



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe

Components / Spare Parts

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28136 EC **Arthroscope Sheath ENDOCAMELEON®**

69



Spare Parts



7957291
Outer Part,
with 2 stopcocks



6985691
Spring Cap



5916100
O-Ring



8484290
Nut

HOPKINS® Telescopes and Sheaths

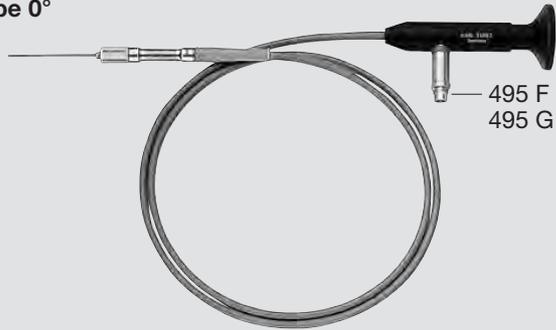
Miniature Straight Forward Telescope, HOPKINS® Telescopes

Components / Spare Parts

Catalog page

11508 Miniature Straight Forward Telescope 0°

265



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe

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Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe

HOPKINS® Telescopes and Sheaths

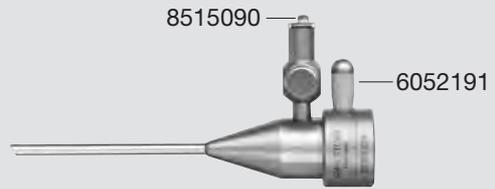
Arthroscope Sheaths, with standard coupling mechanism, fixed stopcocks

Components / Spare Parts

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28306 BN High-Flow Arthroscope Sheath

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Spare Parts



6052191
Locking Lever, red



8515090
Stopcock



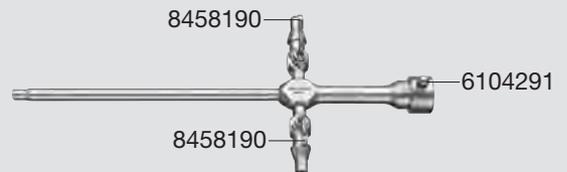
6985691
Spring Cap

Components / Spare Parts

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28126 B Arthroscope Sheath

72



Spare Parts



6104291
**Locking Lever,
green-red-yellow**



8458190
Stopcock



6985691
Spring Cap

HOPKINS® Telescopes and Sheaths

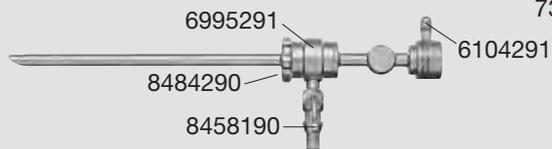
Arthroscope Sheaths, with standard coupling mechanism, rotating stopcocks

Components / Spare Parts

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28126 R Arthroscope Sheath

73



Spare Parts



5916100
O-Ring



6995291
Outer Part, with stopcock



6104291
Locking Lever,
green-red-yellow



8458190
Stopcock



6985691
Spring Cap



8484290
Nut

Components / Spare Parts

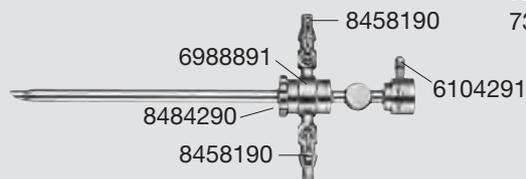
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28229 DR High-Flow Arthroscope Sheath

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Spare Parts



5916100
O-Ring



6988891
Outer Part,
with 2 stopcocks



6104291
Locking Lever,
green-red-yellow



8458190
Stopcock



6985691
Spring Cap



8484290
Nut

HOPKINS® Telescopes and Sheaths

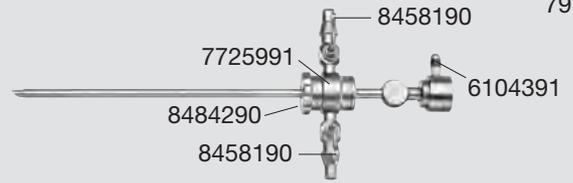
Arthroscope Sheaths, with standard coupling mechanism, rotating stopcocks

Components / Spare Parts

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28132 CR Arthroscope Sheath

79



Spare Parts



5916100
O-Ring



7725991
Outer Part,
with 2 stopcocks



6104391
Locking Lever, red-yellow



8458190
Stopcock



6985691
Spring Cap



8484290
Nut

HOPKINS® Telescopes and Sheaths

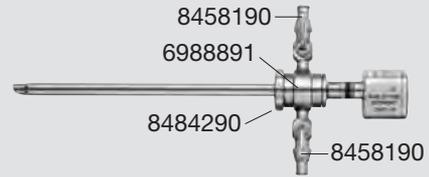
Arthroscope Sheath, with lock-in coupling mechanism, rotating stopcocks

Components / Spare Parts

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Spare Parts



5916100
O-Ring



8458190
Stopcock



6985691
Spring Cap



8484290
Nut



6988891
Outer Part,
with 2 stopcocks

HOPKINS® Telescopes and Sheaths

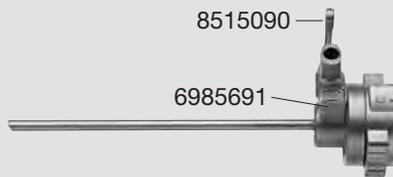
Arthroscope Sheaths, with snap-in coupling mechanism,
fixed and rotating stopcocks

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Spare Parts



6985691
Spring Cap



8515090
Stopcock

Components / Spare Parts

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28136 S High-Flow Arthroscope Sheath

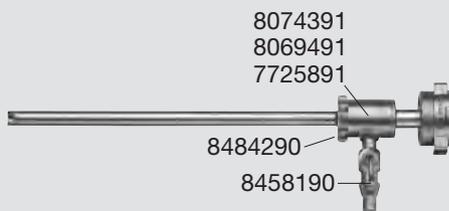
8069491 75

28130 R High-Flow Arthroscope Sheath

7725891 75, 224

28131 R High-Flow Arthroscope Sheath

8484290 76, 224



Spare Parts



5916100
O-Ring

Spare Part to 28229 S:



8074391
Outer Part, with stopcock



6985691
Spring Cap

Spare Part to 28136 S:



8069491
Outer Part, with stopcock



8484290
Nut

Spare Part to 28130 R and 28131 R:



7725891
Outer Part, with stopcock

Spare Part to 28130 R and 28131 R:



8458190
Stopcock

HOPKINS® Telescopes and Sheaths

Arthroscope Sheaths, with snap-in coupling mechanism, rotating stopcocks

Components / Spare Parts

Catalog page

28229 DS	High-Flow Arthroscope Sheath
28136 DS	High-Flow Arthroscope Sheath
28130 CR	High-Flow Arthroscope Sheath
28131 CR	High-Flow Arthroscope Sheath
28136 CR	High-Flow Arthroscope Sheath
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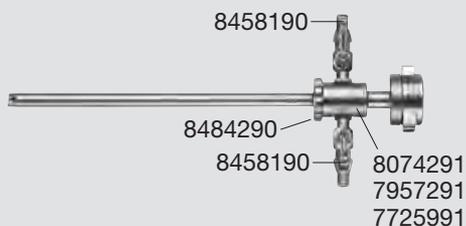
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75

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Spare Parts



5916100
O-Ring

Spare Part to 28229 DS:



8074291
Outer Part,
with 2 stopcocks



6985691
Spring Cap

Spare Part to 28136 DS/CR and 28135 CR:



7957291
Outer Part,
with 2 stopcocks



8484290
Nut

Spare Part to 28130 CR and 28131 CR:



7725991
Outer Part,
with 2 stopcocks

Spare Part to 28130 CR and 28131 CR:



8458190
Stopcock

HOPKINS® Telescopes and Sheaths

Arthroscope Sheaths

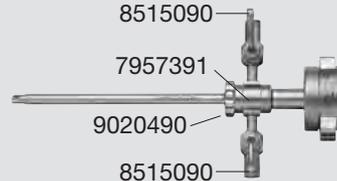
Components / Spare Parts

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28133 DS Arthroscope Sheath
28303 DS High-Flow Arthroscope Sheath

8515090
7957391
9020490
8515090

80
81, 236



Spare Parts



5900800
O-Ring



8515090
Stopcock



6985691
Spring Cap



9020490
Knurled Ring



7957391
Outer Part,
with 2 stopcocks

HOPKINS® Telescopes and Sheaths

Obturator, Accessories

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Spare Part



6055191
Color Code Disk,
red-yellow

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Spare Part



6055691
Color Code Disk,
green-red-yellow

Components / Spare Parts

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Spare Part



7701691
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Punches, Forceps and Scissors

SilCut® 1, SilCut® Punches, SilCut® and SilGrasp® Instruments

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28171 AGSN	SilGrasp® Alligator Grasping Forceps	99
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28171 PGSN	SilGrasp® Foreign Body Grasper	99
28171 KGN	SilGrasp® Foreign Body Grasper	99
28171 KGSN	SilGrasp® Foreign Body Grasper	99
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Spare Parts



28571 LK
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silicone, reusable,
unsterile, package of 10



8029491
LUER Cap, metal,
reusable, unsterile

Joint and Bone Reconstruction

Palpation Hook, Biopsy Set, Obturator

Components / Spare Parts

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28145 PA Handle

28145 PB Hook

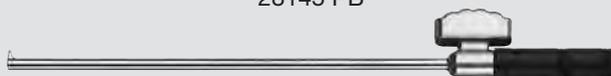
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28145 PA



28145 PB



28145 PC

Spare Part



5917800
O-Ring

Components / Spare Parts

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28904 S Biopsy Set

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28904 SA Biopsy Punch, with cutting tooth, to extract cartilage cells for ACT

28904 SO Obturator, to penetrate connective tissue without extracting tissue and to extrude excised biopsy sample

5919000 O-Ring, package of 10



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28904 SO Obturator

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Spare Part



5919000
O-Ring

Joint and Bone Reconstruction

Bone Marrow Extraction Set, Cancellous Bone Applicators

Components / Spare Parts

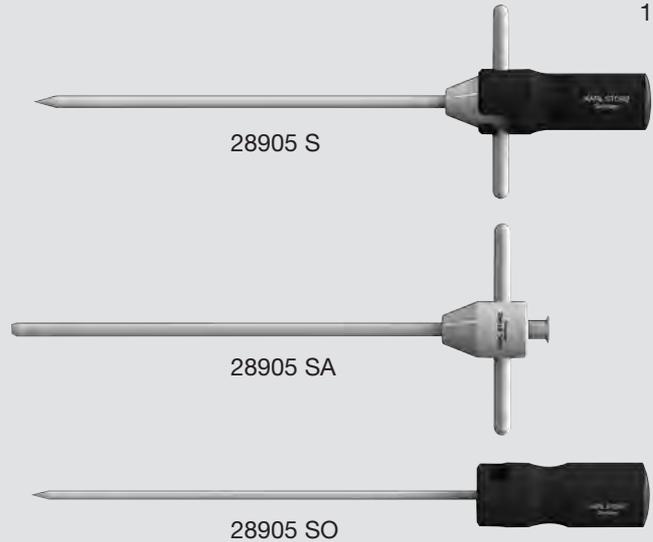
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28905 SA **Biopsy Cannula**

28905 SO **Obturator**



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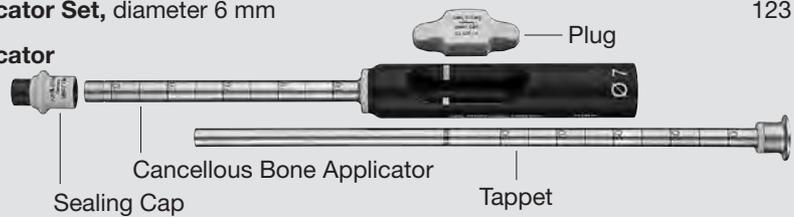
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28906 CBA **Cancellous Bone Applicator**

28906 CBP **Tappet**

28906 CBC **Sealing Cap**

28906 CBS **Plug**



Spare Part



5917100
O-Ring

Components / Spare Parts

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28907 CB **Cancellous Bone Applicator Set, diameter 7 mm**

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28907 CBA **Cancellous Bone Applicator**

28907 CBP **Tappet**

28907 CBC **Sealing Cap**

28907 CBS **Plug**

Spare Part



5916000
O-Ring

Joint and Bone Reconstruction

Cancellous Bone Applicators

Components / Spare Parts

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- 28908 CB** **Cancellous Bone Applicator Set, diameter 8 mm**
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5941400
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- 28909 CBS **Plug**

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Spare Part



5941500
O-Ring

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- 28910 CB** **Cancellous Bone Applicator Set, diameter 10 mm**
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5941600
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6985691 Spring Cap

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8458190 Stopcock

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Spare Part



6829991 Sliding Tube



6829991

Instruments for Cruciate Ligament Reconstruction

Tendon Boards, Metal Mallets

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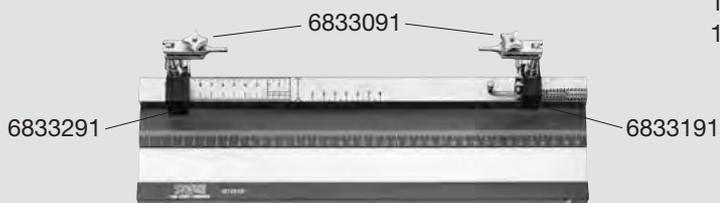
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28729 SB Tendon Board

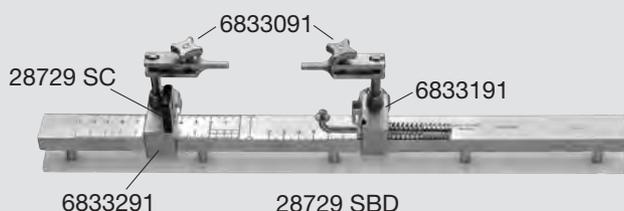
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28729 SBD Tendon Board

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28729 SB



28729 SBD

Spare Parts



28729 SC
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6833291
Measuring Slider



6833091
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8044890
Preparation Plate



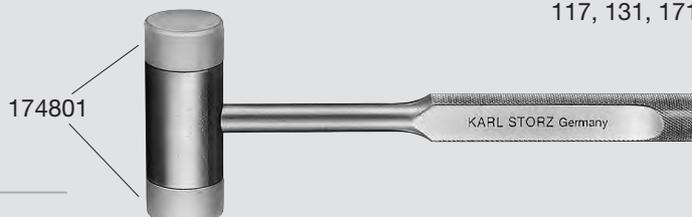
6833191
Tension Slider

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174801
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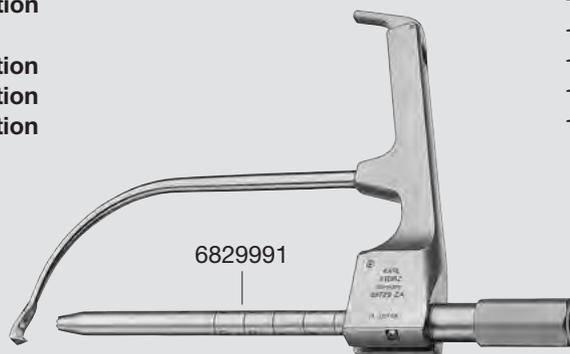
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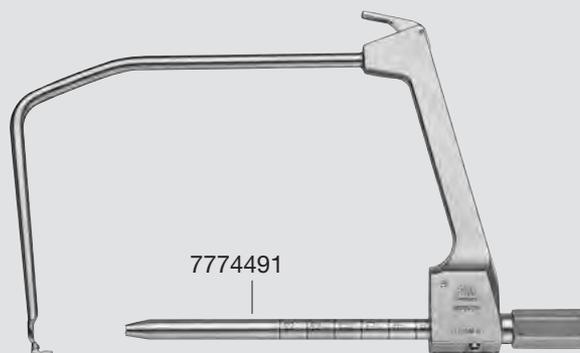


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28729 CF	Tibial Target Guide	176
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Spare Part



Instruments for Cruciate Ligament Reconstruction

Target Guides

Components / Spare Parts

Catalog page

28729 ZF Channel-Lock® Tibial Target Guide

176

Spare Part



28729 ZFH
Bullet



28729 ZFH

Components / Spare Parts

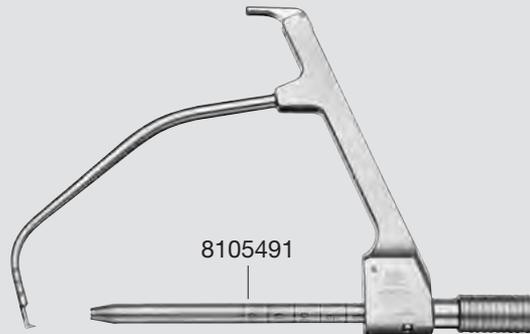
Catalog page

28729 ZBB Tibial Target Guide, for PCL reconstruction

179

Spare Part

8105491
Sliding Tube



8105491

Instruments for Cruciate Ligament Reconstruction

Revision Set

Components / Spare Parts

Catalog page

28728 T	Revision Set		193
28728 TA	Revision Screwdriver Blade , size 1.9 mm, working length 12.5 cm		28728 TA
28728 TB	Revision Screwdriver Blade , size 2.3 mm, working length 12.5 cm		
28728 TC	Revision Screwdriver Blade , size 2.4 mm, working length 12.5 cm		28728 TF
28728 TD	Revision Screwdriver Blade , size 2.7 mm, working length 12.5 cm		28728 TG
28728 TE	Revision Screwdriver Blade , size 3.4 mm, working length 12.5 cm		28728 TH
28728 TF	Large Fragment Screwdriver Blade , size 3.5 mm, working length 12.5 cm		28728 TI
28728 TG	Small Fragment Screwdriver Blade , size 2.5 mm, working length 12.5 cm		
28728 TH	Microfracture Chisel , straight, working length 12.5 cm		
28728 TI	Microfracture Chisel , curved 30°, working length 12.5 cm		
28729 PQ	Handle , T-shaped, for use with 28728 TA – TI		28729 PQ

Instruments for Shoulder Arthroscopy

SHOULDER PRO® Suture Attachments, Gasket Set, Handle, Transport Cassette

Components / Spare Parts Catalog page

28180 LA	SHOULDER PRO® Suture Attachment	210
28180 LC	SHOULDER PRO® Suture Attachment	210
28180 LL	SHOULDER PRO® Suture Attachment	210
28180 LR	SHOULDER PRO® Suture Attachment	210
28180 LRG	SHOULDER PRO® Suture Attachment	210



Spare Part



8240990
Plug, single, for LUER-Lock connector for cleaning, black, autoclavable

Components / Spare Parts Catalog page

28180 GDS	Gasket Set , package of 5	197
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Spare Part



28180 GD
Gasket, for single use, non-sterile, with sealing cap

Components / Spare Parts Catalog page

28184 WH	Handle	206
28184 HG	Handle , only	
28184 KF	Transport Cassette	



28184 WH



28184 HG



28184 KF

Components / Spare Parts Catalog page

28184 KF	Transport Cassette	206
28184 HS	Half-shell Set	
28184 RG	Wheel , large	
28184 RK	Wheel , small	



28184 KF



28184 HS



28184 RG



28184 RK

Instruments for Shoulder Arthroscopy

SPS – Secure Portal System, MINAR® Set, Mallet

Components / Spare Parts

Catalog page

28179 E Basic Set for SPS – Secure Portal System

200-201

- 28179 DB **Positioning Needle**
- 28179 DO **Obturator**
- 28179 DW **Guide Wire**, package of 6
- 28179 DL **Dilator**
- 28179 DF **Handle**, for Dilator 28179 DL
- 28179 DG **Valve Housing**
- 28179 GU **Set of Gaskets**, unsterile, package of 10



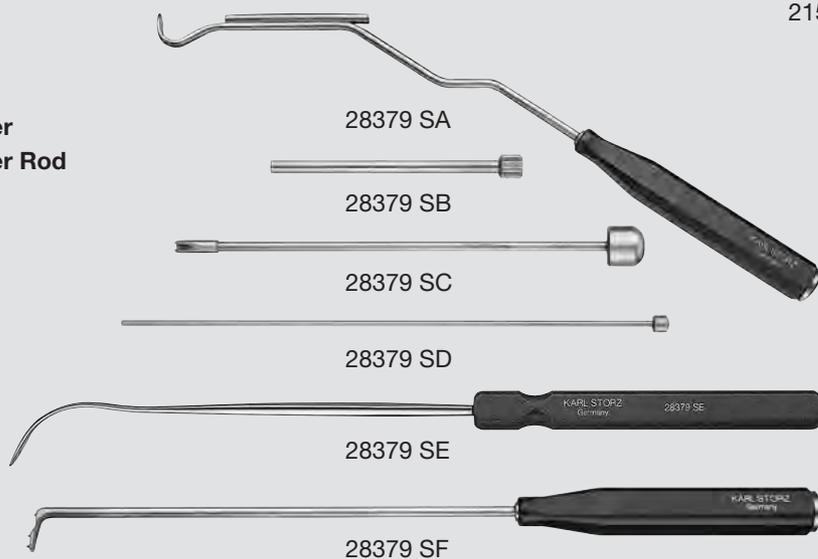
Components / Spare Parts

Catalog page

28379 S MINAR® Set

215

- 28379 SA **AC Joint Aimer**
- 28379 SB **Bullet**
- 28379 SC **FLIPPTACK® Inserter**
- 28379 SD **FLIPPTACK® Inserter Rod**
- 28379 SE **Suture Awl**
- 28379 SF **Repositioner**



Components / Spare Parts

Catalog page

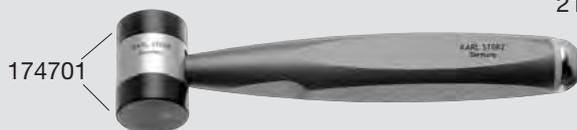
28270 H Mallet

218

Spare Part



174701
Plastic Mallet Head



Instruments for Hip Arthroscopy

Knot Pusher and Suture Cutter, Aimer, Irrigation Sheath, SilCut® 1 Punches, SilGrasp® Foreign Body Graspers

Components / Spare Parts

Catalog page

2870356 KP Knot Pusher and Suture Cutter

211

2870356 I **Insert and Blade**

2870356 HG **Handle**



Components / Spare Parts

Catalog page

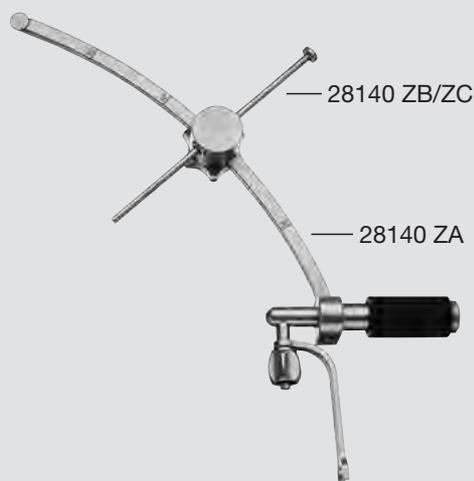
28140 Z Aimer

226

28140 ZA **Aimer**, with attachment for bullets

28140 ZB **Bullet**, short, working length 10.5 cm

28140 ZC **Bullet**, long, working length 14.5 cm



Components / Spare Parts

Catalog page

28140 S Irrigation Sheath

228



Spare Parts



6985691
Spring Cap



8541890
Stopcock

Components / Spare Parts

Catalog page

28171 KPN SilCut® Punch

230

28171 KUN SilCut® Punch

230

28171 KGN SilGrasp® Foreign Body Grasper

230

28171 KGSN SilGrasp® Foreign Body Grasper

230



Spare Parts



28571 LK
Set of LUER Caps,
silicone, reusable,
unsterile, package of 10



8029491
LUER Cap, metal,
reusable, unsterile

Instruments for Hand Arthroscopy and for the Treatment of Carpal Tunnel Syndrome

Trocars with Thread, Automatic Valve

Components / Spare Parts

Catalog page

28304 AH KÖNIGSBERGER Trocar with Thread

239

28304 EA Cannula

28304 EU Trocar only, with pyramidal tip

28304 E1 Automatic Valve



28304 BH KÖNIGSBERGER Trocar with Thread

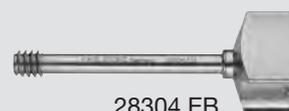
28304 EA Cannula

28304 EV Trocar only, with blunt tip

28304 E1 Automatic Valve



28304 EA



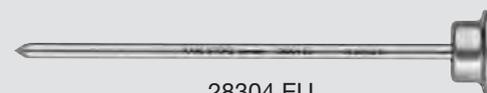
28304 EV

28304 CH KÖNIGSBERGER Trocar with Thread

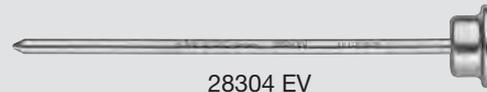
28304 EB Cannula

28304 DU Trocar only, with pyramidal tip

28304 E1 Automatic Valve



28304 EB



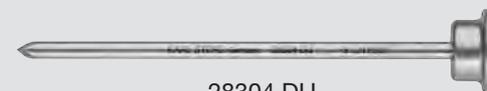
28304 DU

28304 DH KÖNIGSBERGER Trocar with Thread

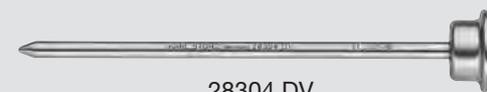
28304 EB Cannula

28304 DV Trocar only, with blunt tip

28304 E1 Automatic Valve



28304 DV



28304 CH

Spare Parts



5902800
O-Ring



8259290
Sealing Cap

Components / Spare Parts

Catalog page

28304 E1 Automatic Valve

239



8259290

Spare Parts



6089590
Seal, mushroom-shaped



8259290
Sealing Cap



6089790
Seal

Instruments for Hand Arthroscopy and for the Treatment of Carpal Tunnel Syndrome

SilCut® Punches, Optical Dissector

Components / Spare Parts

Catalog page

- 28572 AD SilCut® 1 Punch
- 28572 AE SilCut® 1 Punch
- 28572 O SilCut® 1 Oval Biter
- 28572 NJ Suture Forceps

- 241
- 241
- 241
- 241



Spare Parts



28571 LK
Set of LUER Caps,
silicone, reusable,
unsterile, package of 10



8029491
LUER Cap, metal,
reusable, unsterile

Components / Spare Parts

Catalog page

- 50200 ES Optical Dissector

254



Spare Parts



5916100
O-Ring



8458190
Stopcock



6052191
Locking Lever, red



8484290
Nut



6985691
Spring Cap

Instruments for Hand Arthroscopy and for the Treatment of Carpal Tunnel Syndrome

Target Guide, Dilator Set, TAKE-APART® Bipolar Forceps

Components / Spare Parts

Catalog page

- 28310 Z** **Target Guide**, complete
- 28310 ZG **Target Guide**
- 28310 ZH **Target Hook**
- 28310 FH **Guide Tube**
- 28310 E **Insert**

246



Components / Spare Parts

Catalog page

- 28147 S** **Dilator Set**
- 28147 SA **Dilator**, diameter 4 mm
- 28147 SB **Dilator**, diameter 5 mm
- 28147 SC **Dilator**, diameter 6 mm
- 28147 SD **Dilator**, diameter 7 mm

252

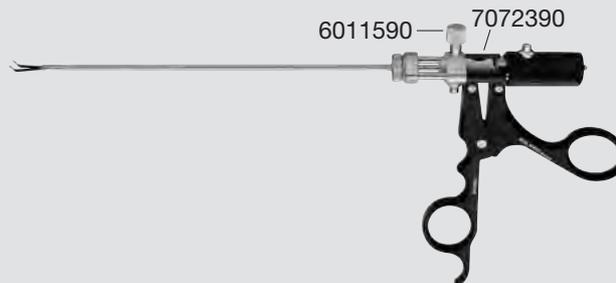


Components / Spare Parts

Catalog page

- 28164 BDM** **TAKE-APART® Bipolar Forceps**
- 26284 HM **Bipolar Ring Handle**
- 26284 AS **Outer Sheath**
- 26284 BS **Inner Sheath**
- 28164 FGM **Forceps Insert**

256



Spare Parts



6011590
Plug, for LUER-Lock connector



7072390
Sealing Cap, diameter 1.8 mm

Instruments for Hand Arthroscopy and for the Treatment of Carpal Tunnel Syndrome

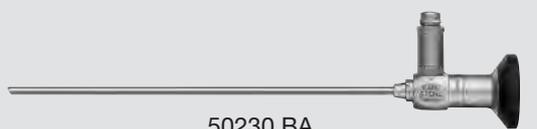
HOFFMANN Cubital Tunnel Set

Components / Spare Parts

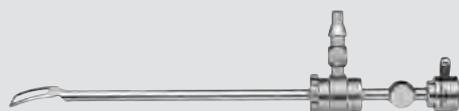
Catalog page

50600 HOFFMANN Cubital Tunnel Set

23



50230 BA



50200 ES



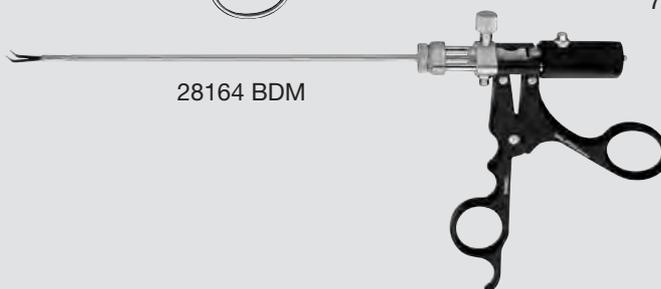
748220



748221



752918



28164 BDM



404092 S



404055 H



404090 S



752923



752928

50230 BA **HOPKINS® Forward-Oblique Telescope 30°**, enlarged view, diameter 4 mm, length 18 cm, autoclavable

50200 ES **Optical Dissector**, with distal spatula, fenestrated, large, sharp

404090 S **Speculum**, with fiber optic light carrier, with set screw, blade length 90 mm, length 13.5 cm

404055 H **COTTLE Speculum**, with fiber optic light carrier, without set screw, special matt finish, blade length 55 mm, length 13 cm

404092 S **Speculum**, with fiber optic light carrier, with set screw, blade length 110 mm, length 13.5 cm

748220 **DUPLAY Dressing and Sponge Holding Forceps**, curved, with ratchet, length 21 cm

748221 **DUPLAY Dressing and Sponge Holding Forceps**, straight, with ratchet, length 21 cm

752918 **METZENBAUM Scissors**, curved, length 18 cm

752923 **METZENBAUM Scissors**, curved, length 23 cm

752928 **METZENBAUM Scissors**, curved, length 28 cm

28164 BDM **TAKE-APART® Bipolar Forceps**, with fine jaws, width 1 mm, distally angled 45°, horizontal closing, outer diameter 3.4 mm, length 20 cm

Additional Forceps Insert:

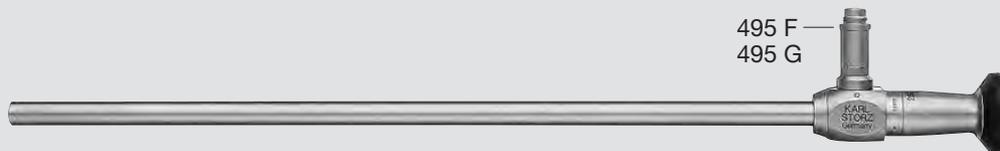
26184 PTS **TAKE-APART® Forceps Insert**, for TAN bipolar coagulation forceps, size 3 mm, length 20 cm

Spine Surgery

HOPKINS® Telescopes

Components / Spare Parts Catalog page

26003 AA	HOPKINS® Straight Forward Telescope 0° , enlarged view	282
26003 BA	HOPKINS® Forward-Oblique Telescope 30° , enlarged view	282
26003 FA	HOPKINS® Telescope 45° , enlarged view	282



Spare Parts



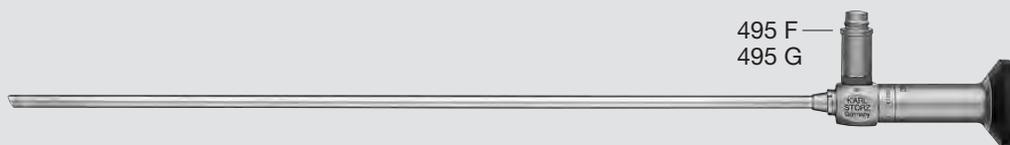
495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe

Components / Spare Parts Catalog page

26046 AA	HOPKINS® Straight Forward Telescope 0° , enlarged view	281
26046 BA	HOPKINS® Forward-Oblique Telescope 30°	281
26046 BUA	HOPKINS® Forward-Oblique Telescope 30° , enlarged view	281
26046 FA	HOPKINS® Telescope 45° , enlarged view	281
28095 AA	HOPKINS® Straight Forward Telescope 0° , enlarged view	275, 334



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe

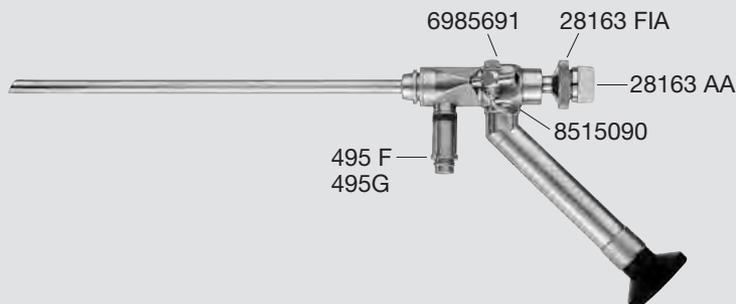
Spine Surgery

HOPKINS® Telescopes

Components / Spare Parts

Catalog page

28163 BFA	HOPKINS® Wide Angle Telescope 25°	321, 328
28163 BTA	HOPKINS® Wide Angle Telescope 25°	320
28163 FFA	HOPKINS® Wide Angle Telescope 15°	322



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



6985691
Spring Cap



495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe



8515090
Stopcock



28163 AA
Adaptor, for
working channel



28163 FIA
Irrigation Adaptor

Components / Spare Parts

Catalog page

28163 AA	Adaptor, for working channel	—
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Spare Parts



6747695
Sealing Cap, slotted

Spine Surgery

HOPKINS® Telescopes, PECD Endoscope

Components / Spare Parts

Catalog page

26003 AE ENDOCAMELEON® HOPKINS® Telescope

495 F
495 G

285



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe

Components / Spare Parts

Catalog page

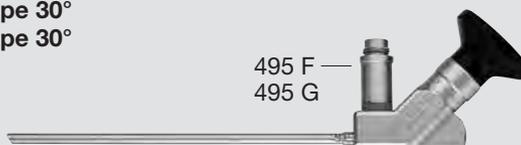
28095 BAK HOPKINS® Forward-Oblique Telescope 30°

341

28095 BAL HOPKINS® Forward-Oblique Telescope 30°

341

495 F
495 G



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe

Components / Spare Parts

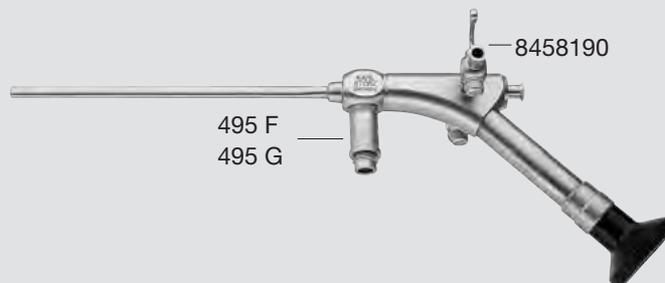
Catalog page

28163 PCD PECD Endoscope 8°

270

495 F
495 G

8458190



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



8458190
Stopcock



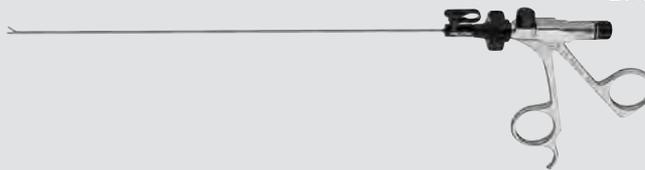
495 G
Screw Base,
for KARL STORZ fiber
optic light cable and
Olympus/Winter & Ibe

Spine Surgery

CLICK^{line} Spoon Forceps,
TAKE-APART[®] MANHES Bipolar Coagulation Forceps

Components / Spare Parts Catalog page

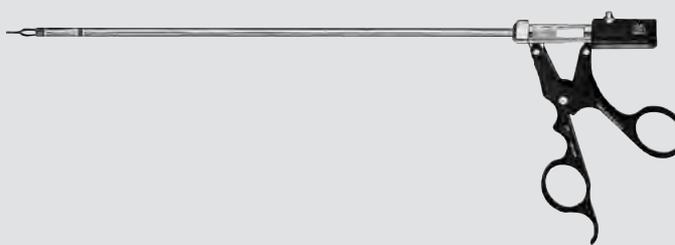
- 28163 UHK** CLICK^{line} Spoon Forceps 273
 33131 K **Metal Handle**, without ratchet,
 without overload protection,
 for use with overload protection,
autoclavable
 28163 UCK **Forceps Insert**
 33131 A **Overload Protection**



- 28163 UHM** CLICK^{line} Spoon Forceps
 33131 K **Metal Handle**, without ratchet,
 without overload protection, for use
 with overload protection,
autoclavable
 28163 UCM **Forceps Insert**
 33131 A **Overload Protection**

Components / Spare Parts Catalog page

- 28163 DZ** TAKE-APART[®] MANHES Bipolar Coagulation Forceps 276, 337
 26196 HM **Bipolar Ring Handle**
 26180 HS **Outer Sheath**, diameter 5 mm
 26180 HV **MANHES Forceps Insert**



Components / Spare Parts Catalog page

- 26196 HM** **Bipolar Ring Handle** 276, 337



Spare Parts



6875990
Sealing Cap,
diameter 2.6 mm

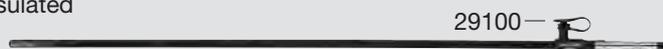
Components / Spare Parts Catalog page

- 38300** **RoBi[®] Metal Outer Sheath**, insulated 299
38400 **RoBi[®] Metal Outer Sheath**, insulated 299

Spare Parts



29100
Plug, for LUER-Lock
connector for cleaning,
black, autoclavable,
package of 10



Spine Surgery

TAKE-APART® Bipolar Forceps and MANHES Bipolar Coagulation Forceps,
TAKE-APART® SCHNEIDER Bipolar Grasping Forceps

Components / Spare Parts

Catalog page

28164 BDN TAKE-APART® Bipolar Forceps

346

26284 HM **Bipolar Ring Handle**

26284 AS **Outer Sheath**

26284 BS **Inner Sheath**

28164 FDN **Forceps Insert**



26284 HM —

Components / Spare Parts

Catalog page

26276 HD TAKE-APART® MANHES Bipolar Coagulation Forceps

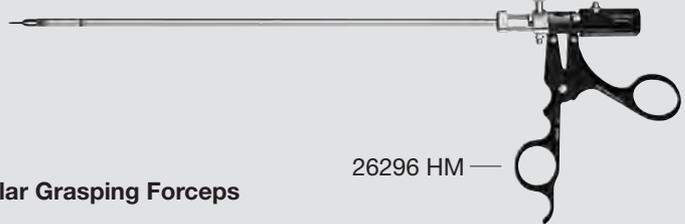
304

26296 HM **Bipolar Ring Handle**

26276 A **Outer Sheath**

26276 B **Inner Sheath**

26176 HW **Forceps Insert**



26296 HM —

26276 HK TAKE-APART® SCHNEIDER Bipolar Grasping Forceps

26296 HM **Bipolar Ring Handle**

26276 A **Outer Sheath**

26276 B **Inner Sheath**

26176 HN **Forceps Insert**

Components / Spare Parts

Catalog page

26284 HM TAKE-APART® Bipolar Ring Handle

346

26296 HM TAKE-APART® Bipolar Ring Handle

304



Spare Parts



6011590
Plug, for LUER-Lock
connector

Spare Part to 26284 HM



5910600
O-Ring, 3 x 1.5 mm

Spare Part to 26296 HM



5917800
O-Ring

Spare Part to 26284 HM



7072390
Sealing Cap,
diameter 1.8 mm

Spare Part to 26296 HM



6875990
Sealing Cap,
diameter 2.6 mm

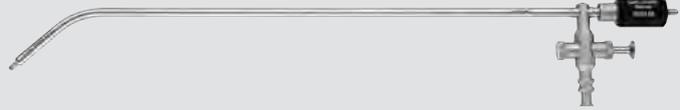
Spine Surgery

TAKE-APART® Bipolar Coagulating Suction Tube,
Clip Applicator, Fan Retractor

Components / Spare Parts

Catalog page

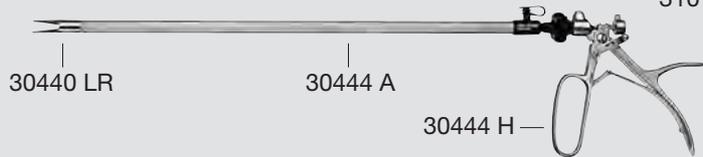
- 28163 BSN TAKE-APART® Bipolar Coagulating Suction Tube** 305
- 28163 BX **Suction Tube**
- 28163 BZ **Coagulating Electrode, curved**



Components / Spare Parts

Catalog page

- 30444 LR Clip Applicator** 310
- 30444 H **Metal Handle, with ratchet**
- 30444 A **Metal Outer Sheath**
- 30440 LR **Insert**



Components / Spare Parts

Catalog page

- 28163 FP Fan Retractor** 305



Spare Parts



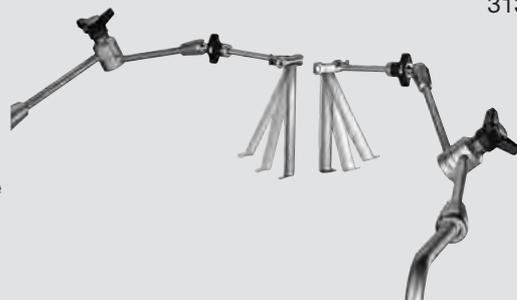
Spine Surgery

ROSENTHAL Angled Retractor, TENTACLE Spine Retractor, Spine Retractor

Components / Spare Parts

Catalog page

- 28163 VR** ROSENTHAL Angled Retractor
- 28163 VRM **Retractor Blade**, 12 cm
- 28163 VRK **Retractor Blade**, 14 cm
- 28163 VRG **Retractor Blade**, 18 cm
- 28272 HB **Articulated Stand**, L-shaped
- 28172 HR **Rotation Socket**, to clamp to the operating table



313

Components / Spare Parts

Catalog page

- 28163 TRX** TENTACLE Spine Retractor
- 28163 TRF **Retractor Frame**
- 28163 TRA **Retractor Arm**
- 28163 TRD **Drive Screw**
- 28163 TRB **Retractor Arm**, extra
- 28163 TBB **PEEK Retractor Blade**, 70 mm
- 28163 TBS **PEEK Retractor Blade**, 50 mm
- 28163 TBM **PEEK Retractor Blade**, 30 mm
- 28163 TSB **Holder**, for retractor blades
- 28163 TRL **Light Carrier**
- 28163 TSL **Holder**, for light carriers
- 28163 TSD **Screwdriver**
- 28163 TSH **Positioning Instrument**
- 39260 TRC **Sterilization Container**

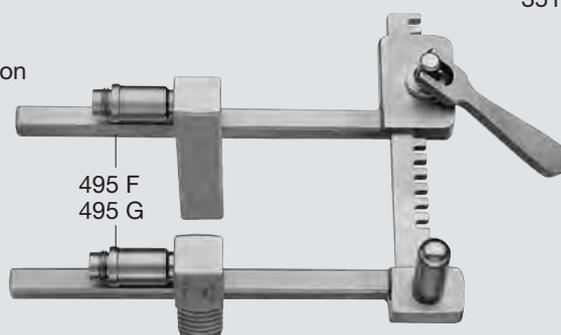


314, 349

Components / Spare Parts

Catalog page

- 28163 R** Spine Retractor
- 28163 RBS **Retractor Blade**, short, length 70 mm, with two teeth, with integrated light transmission
- 28163 RBL **Retractor Blade**, long, length 85 mm, with integrated light transmission
- 28163 RF **Retractor Frame**, serrated, length 140 mm, width 106 mm
- 28163 RFA **Retractor Arm**, adjustable, length 140 mm
- 28163 RH **Turning Handle**



351

Spare Parts



495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable



495 G
Screw Base, for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

Spine Surgery

Holding System, TWINFlow Suction and Irrigation Handle

Components / Spare Parts

Catalog page

28272 RKB Holding System, autoclavable, with quick release coupling KSLOCK

351

28172 HR Rotation Socket, to clamp to the OR table, for European and US standard rails, with lateral clamp for height and angle adjustment of the articulated stand

28272 HB Articulated Stand, reinforced version, L-shaped, with one central clamp for all five joint functions, height 48 cm, swivel range 52 cm, with quick release coupling KSLOCK (female)

28272 UKN Clamping Jaw, metal, clamping range 4.8 up to 12.5 mm, with quick release coupling KSLOCK (male), for use with instrument and telescope sheaths



Components / Spare Parts

Catalog page

28163 SI TWINFlow Suction and Irrigation Handle

352

28163 SIH Suction and Irrigation Handle

28163 SIU Suction and Irrigation Unit, separate, with adjustable continuous suction and continuously adjustable irrigation function if required

28163 SIR Cleaning Adaptor, for assembly in sterilization trays, for use with Suction-Irrigation Unit 28163 SIU

8101591 Set, including loading aid with 8 O-rings

27650 B Cleaning Brush, round, rigid, outer diameter 7 mm, for working channel diameter 2.5 – 5 mm, length 35 cm

28164 SIA Suction and Irrigation Tube, with connector for 28163 SIH, angled, diameter 2 mm, working length 9 cm

28164 SIB Suction and Irrigation Tube, with connector for 28163 SIH, angled, diameter 2 mm, working length 13 cm

28164 SIC Suction and Irrigation Tube, with connector for 28163 SIH, angled, diameter 4 mm, working length 9 cm

28164 SID Suction and Irrigation Tube, with connector for 28163 SIH, angled, diameter 4 mm, working length 13 cm



Spare Parts



8101591 Set, including loading aid with 8 O-Rings



5916900 O-Ring



7189295 Loading Aid

Spine Surgery

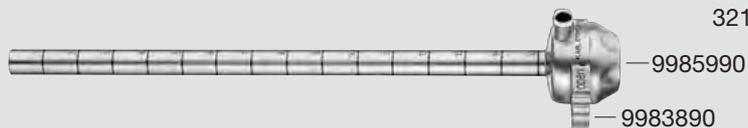
Operating Sheaths

Components / Spare Parts

Catalog page

- 28163 FSG** **Operating Sheath**
- 28163 FSN** **Operating Sheath**
- 28163 FSW** **Operating Sheath**

321, 329
321
321



Spare Parts



9985990
Cover Cap



9983890
Pusher



9986290
Collet



9986090
Seal

Components / Spare Parts

Catalog page

- 28163 FWO** **Operating Sheath**
- 28163 TSG** **Operating Sheath**
- 28163 TSW** **Operating Sheath**
- 28163 TSN** **Operating Sheath**

321, 329
320
320
320



Spare Parts



6692195
Cover Cap



29100
Plug, for LUER-Lock
connector for cleaning,
black, autoclavable,
package of 10



9986090
Seal

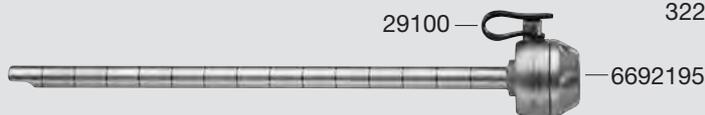
Spine Surgery

Operating Sheaths, Knife

Components / Spare Parts

Catalog page

28163 PSG	Operating Sheath	322
28163 PSN	Operating Sheath	322
28163 PSW	Operating Sheath	322



Spare Parts



6692195
Cover Cap



29100
Plug, for LUER-Lock connector for cleaning, black, autoclavable, package of 10



6443595
Seal

Components / Spare Parts

Catalog page

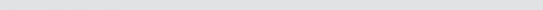
28163 FM	Knife	326
-----------------	--------------	-----



Spare Parts



28163 FMH
Handle



28163 FMI
Knife Insert



28163 FMS
Sheath

Spine Surgery

Bipolar Electrodes, Palpation Hook, Grasping Forceps

Components / Spare Parts

Catalog page

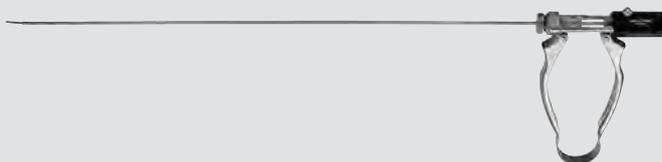
28163 FBC **Bipolar Electrode**

323, 332

28163 FBE **Bipolar Electrode Insert**

28163 FBS **Electrode Sheath**

26184 HR **Bipolar Spring Handle**



Components / Spare Parts

Catalog page

28163 FBH **CLICK'line® Palpation Hook**

323, 330

33161 **Metal Handle**, without ratchet

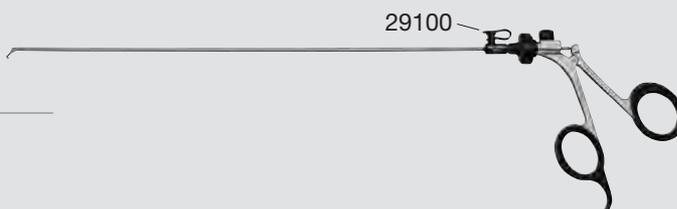
28163 FBI **Outer Sheath**, with working insert

28163 FBG **CLICK'line® Palpation Hook**

330

33161 **Metal Handle**, without ratchet

28163 FBN **Outer Sheath**, with working insert



Spare Part



29100
Plug, for LUER-Lock connector for cleaning, black, autoclavable, package of 10

Components / Spare Parts

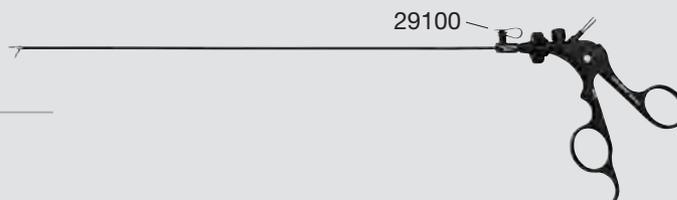
Catalog page

28163 FSI **CLICK'line® BLAKESLEY Grasping Forceps**

324, 330

33121 **Plastic Handle**, without ratchet

28163 FSE **Outer Sheath**, with forceps insert



Spare Part



29100
Plug, for LUER-Lock connector for cleaning, black, autoclavable, package of 10

Spine Surgery

Forceps, Suction Burr

Components / Spare Parts

Catalog page

28163 SL TAKE-APART® Grasping Forceps

324

28169 A **Handle**

28063 SL **Working Attachment**

28163 SG TAKE-APART® Spoon Forceps

324

28169 A **Handle**

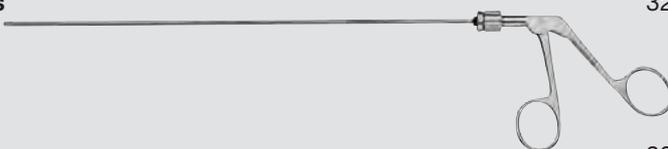
28063 SG **Working Attachment**

28163 SE TAKE-APART® BLAKESLEY Grasping Forceps

324, 331

28169 A **Handle**

28063 SE **Working Attachment**



Components / Spare Parts

Catalog page

28163 FZI CLICK'line Raven's Beak Forceps

325, 330

33121 **Plastic Handle, without ratchet**

28163 FZE **Forceps Insert, with raven's beak**

Spare Part



29100
Plug, for LUER-Lock connector for cleaning, black, autoclavable, package of 10



Components / Spare Parts

Catalog page

28163 FBM Grasping Forceps

324, 331

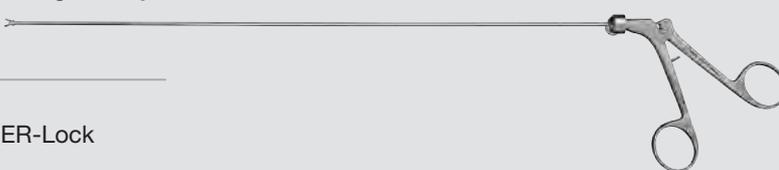
28163 FB BLAKESLEY Nucleus Cutting Forceps

342

Spare Part



6011590
Plug, for LUER-Lock connector



Components / Spare Parts

Catalog page

41201 FD Suction Burr

332

Spare Part



5920820
O-Ring Set for ENT Shaver Attachments, including:
5x O-Ring, 8 x 1 mm
1x O-Ring, 4 x 1 mm



Spine Surgery

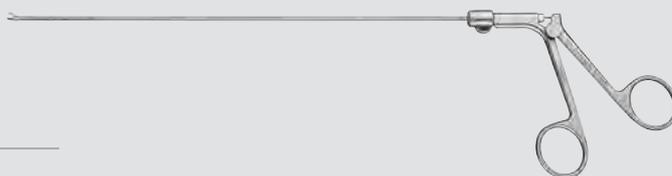
Hook Scissors, Grasping Forceps, SpinoFIT® Punches

Components / Spare Parts

Catalog page

28163 EHK Hook Scissors

343



Spare Part



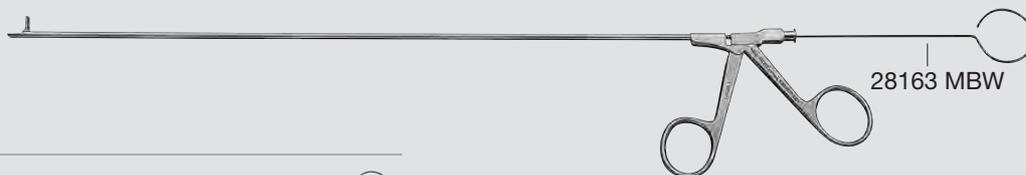
6011590
Plug, for LUER-Lock
connector

Components / Spare Parts

Catalog page

28163 FZ Grasping Forceps

325, 331



Spare Parts



28163 MBW
Stylet, diameter 1.6 mm,
working length 18 cm

Components / Spare Parts

Catalog page

28163 FPW SpinoFIT® Punch

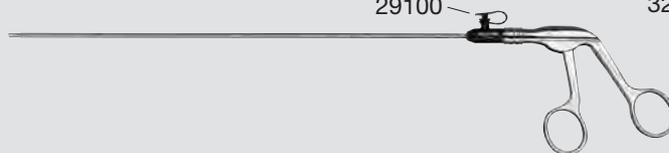
29100

326

28163 FPA **Punch Insert**

28163 FPS **Outer Sheath**

550000 **Handle**



28163 FPG SpinoFIT® Punch

28163 FPB **Punch Insert**

28163 FPS **Outer Sheath**

550000 **Handle**

Spare Parts



29100
Plug, for LUER-Lock
connector for cleaning,
black, autoclavable,
package of 10

Spine Surgery

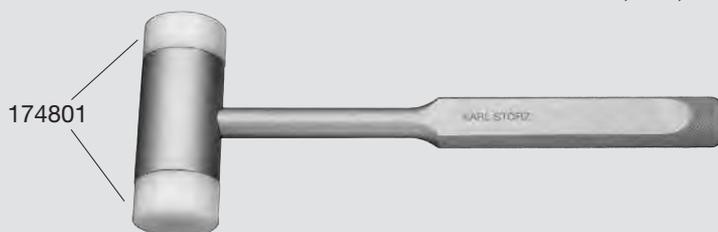
COTTLE Metal Mallet, DESTANDAU ENDOSPINE® Operating Tube

Components / Spare Parts

Catalog page

28163 CM COTTLE Metal Mallet

271, 319, 328



Spare Part



174801
Plastic Replacement

Components / Spare Parts

Catalog page

28163 DW DESTANDAU ENDOSPINE® Operating Tube

275, 334



Spare Part



28163 DO
Obturator, blunt

Components / Spare Parts

Catalog page

28163 DWS DESTANDAU ENDOSPINE® Operating Tube

335



Spare Parts



28163 DVS
DESTANDAU
ENDOSPINE® Tube
Attachment, oval



28163 DOS
ENDOSPINE® Obturator,
blunt

Spine Surgery

DESTANDAU ENDOSPINE® Working Inserts

Components / Spare Parts

Catalog page

28163 DXH DESTANDAU ENDOSPINE® Working Insert

275, 334



Spare Parts



6924491
Locking Lever



28163 DPH
ENDOSPINE® Nerve Protector

Components / Spare Parts

Catalog page

28163 DXS DESTANDAU ENDOSPINE® Working Insert

335



Spare Parts



6924491
Locking Lever



28163 DPS
ENDOSPINE® Nerve Protector

Spine Surgery

Cannulas

Components / Spare Parts

Catalog page

40160 A Cannula
40160 C Cannula

286
286



6127590

Spare Part



6127590
Sealing Cap, (50/4)

Components / Spare Parts

Catalog page

40103 A Cannula
40103 C Cannula

286
286



7228790

Spare Part



7228790
Sealing Cap, (60/11)

Spine Surgery

Cannulas

Components / Spare Parts

Catalog page

40103 G Plastic Cannula

286

40103 H Plastic Cannula

286



7228790

Spare Part



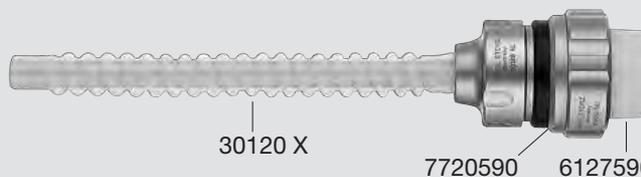
7228790
Sealing Cap, (60/11)

Components / Spare Parts

Catalog page

30120 NL Cannula

287



30120 X

7720590

6127590

Spare Parts



30120 X
Plastic Cannula,
autoclavable, package of 5



6127590
Sealing Cap, (50/4)



7720590
Silicone Leaflet Washer

Components / Spare Parts

Catalog page

30123 NL Cannula

287



30123 X

8034490

7616690

Spare Parts



30123 X
Plastic Cannula,
autoclavable, package of 5



8034490
Silicone Leaflet Washer



7616690
Sealing Cap, (60/10)

Spine Surgery

CLICK'line® Metal Outer Sheaths

Components / Spare Parts Catalog page

33200	CLICK'line® Metal Outer Sheath , insulated	293
33300	CLICK'line® Metal Outer Sheath , insulated	293
33400	CLICK'line® Metal Outer Sheath , insulated	293
33300 CM	CLICK'line® Metal Outer Sheath , insulated	293
33400 CM	CLICK'line® Metal Outer Sheath , insulated	293



Spare Parts



29100
Plug, for LUER-Lock connector for cleaning, black, autoclavable, package of 10



7909890
Halfround Plate



7944790
Silicone Ring

Components / Spare Parts Catalog page

33200 W	CLICK'line® Metal Outer Sheath , insulated	293
33300 W	CLICK'line® Metal Outer Sheath , insulated	293
33400 W	CLICK'line® Metal Outer Sheath , insulated	293



Spare Parts



7909890
Halfround Plate



7944790
Silicone Ring

Components / Spare Parts Catalog page

33200 M	CLICK'line® Metal Outer Sheath	293
33300 M	CLICK'line® Metal Outer Sheath	293
33400 M	CLICK'line® Metal Outer Sheath	293
33300 CMM	CLICK'line® Metal Outer Sheath	293
33400 CMM	CLICK'line® Metal Outer Sheath	293



Spare Parts



29100
Plug, for LUER-Lock connector for cleaning, black, autoclavable, package of 10



7909890
Halfround Plate



7944790
Silicone Ring

Components / Spare Parts

Catalog page

TC 200EN IMAGE1 S CONNECT

360, 386

- 400 A **Mains Cord**, length 300 cm
- 20040089 **DVI-D Connecting Cable**, length 300 cm
- 20090170 **SCB Connecting Cable**, length 100 cm
- 20040282 **USB Flash Drive**, 32 GB
- 20040240US **USB Silicone Keyboard**, with touchpad, US



Components / Spare Parts

Catalog page

TC 300 IMAGE1 S H3-LINK

360, 386

- 400 A **Mains Cord**, length 300 cm
- TC 011 **Link Cable**, length 20 cm



Components / Spare Parts

Catalog page

9500 ZW ZeroWire Video Transmission Set

367

- 9500 TXG **Transmitter**
- 9500 RXG **Receiver**
- 9500 ZW-6 **Y-Cable**, for looping into the monitor power supply
- 9500 ZW-7 **VESA Holder 24"/26"**
- 9500 ZW-8 **VESA Holder 19"/23"**
- 9500 ZW-2 **2ft Spare DVI-D Cable**
- ET34-20C0669 **Bracket**, long version
- 96206173E **Instruction Manual**



9500 TXG/RXG



9500 ZW-6



9500 ZW-7/ZW-8



9500 ZW-2

Components / Spare Parts

Catalog page

20918040 MULTISWITCH® DVI-D Switch/Router

369, 390

- 20057120 **MULTISWITCH® Device**
- 400 A **Mains Cord**, length 300 cm
- 20040086 **DVI-D Connecting Cable**, length 200 cm



Components / Spare Parts

Catalog page

20040912-EN/20040913-EN KARL STORZ AIDA® compact NEO advanced/standard

371, 393

- 20046120-D **AIDA control NEO (V3.1)**
- 20040402-22 **AIDA control NEO V3.1 Software,**
incl. communication (DICOM/HL7)
- 20040240US **USB Silicone Keyboard,** with touchpad, US
- 20040577-V02 **AIDA compact HD Frame Grabber Card**
- 20040578-V01 **AIDA compact FHD Frame Grabber Card**
- 20040578-C01 **AIDA FHD Frame Grabber Breakout Cable**
- 20221070 **Connecting Cable,** for controlling peripheral units
- 20040086 **DVI-D-Verbindungskabel,** Länge 200 cm
- 20040087 **Connecting Cable,** mini-DIN plug to BNC socket
- 536 MK **BNC Video Cable,** length 200 cm
- 400 A **Mains Cord**



Components / Spare Parts

Catalog page

20133101-1 Cold Light Fountain XENON 300 SCB

384

- 20133120-1 **Cold Light Fountain XENON 300 SCB,**
power supply 100 – 125/220 – 240 VAC, 50/60 Hz
- 400 A **Mains Cord**
- 20090170 **SCB Connecting Cable,** length 100 cm



Holding Systems

Mechanical Holding Systems, ENDOCRANE® Holding System

Components / Spare Parts Catalog page

28172 HK **Socket**, to clamp to the OR table 400

Spare Parts

ET35-91-090
Butterfly Nut, for
fixing the retaining rod



Components / Spare Parts Catalog page

28172 HR **Rotation Socket**, to clamp to the operating table 400

Spare Parts

28172 HRS
Butterfly Nut, to clamp
Socket 28172 HR to the
operating table, one
already mounted on
Socket 28172 HR



Components / Spare Parts Catalog page

28272 HA **Articulated Stand** 400

28272 HB **Articulated Stand** 400

28272 HC **Articulated Stand** 400

28272 HD **Articulated Stand** 400

Spare Parts



28172 HZ
Set Screw, for articulated
stands



Components / Spare Parts Catalog page

28272 EH **ENDOCRANE®**, piezoregulated holding arm 404

28272 EHS **ENDOCRANE® Arm**, including stand

28172 HG **Socket**, to clamp to the OR table

20780020 **Control Unit**

041150-20* **Cover**, elasticated, package of 20

28272 ECW **Spring Balance**

400 A **Mains Cord**, length 300 cm

27677 BV **Case**



28272 EHS

Holding Systems

Leg Holder, Mobile OR Rail

Components / Spare Parts

Catalog page

- 28188 D** **Arthroscopy Leg Holder**
- 28188 SE **Release Clamp, 25 mm**
- 28188 DP **Neoprene Cushion, 600 x 140 x 20 mm**
- 28188 PN **Closure Stripe, perforated, Vulkollan 450 x 90 mm**

406



Spare Parts



28188 FH
Fixation Device



28188 HR
Hand Wheel

Components / Spare Parts

Catalog page

- 28188 SE** **Release Clamp**
- 28188 SF** **Release Clamp**
- 28188 SG** **Release Clamp**

406

406

406



Spare Parts



28188 FS
Locking Wheel



28188 FP
Disk



28188 FK
"Small Wheel"

Components / Spare Parts

Catalog page

- 28272 MR** **Mobile OR Rail**
- 28272 MP **Holding Plate**
- 28272 MC **C-Clamp**
- 28272 MW **Stop Block**

407



Holding Systems

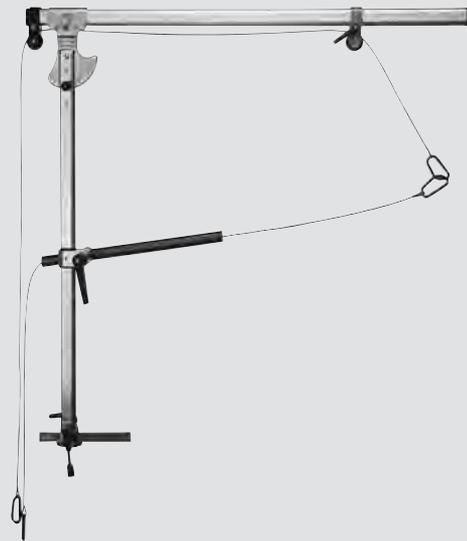
Shoulder Traction Device

Components / Spare Parts

Catalog page

28188 LA Shoulder Support

408



Spare Parts



7466795
Weight, 1 kg

6504495
Alu Carabiner Hook,
8 x 80 mm, color blue



7466895
Weight, 2 kg

6700095
Alu Carabiner Hook,
8 x 80 mm, color red



8164291
Weight Support

Holding Systems

POINT SETTER® Holding System

Components / Spare Parts

Catalog page

28172 WKS POINT SETTER®, pneumatic holding arm, set



Spare Parts



28172 WA
Connecting Tube,
for POINT SETTER®,
Dräger, max. pressure
8 bar/115 psi,
length 600 cm



28172 WB
Connecting Tube,
for POINT SETTER®,
Dräger air motor, max.
pressure 8 bar/115 psi,
length 600 cm



28172 WC
Connecting Tube,
for POINT SETTER®
compressor, max.
pressure 8 bar/115 psi,
length 600 cm



28172 WO
Connecting Tube,
for POINT SETTER®,
with open end, max.
pressure 8 bar/115 psi,
length 600 cm



28272 UA
KSLOCK Adaptor,
for KARL STORZ clamping
jaws



28272 UGN
KARL STORZ Clamping
Jaw, large



28272 UKN
KARL STORZ Clamping
Jaw, small



28272 UF
KARL STORZ Clamping
Jaw, for fiberscopes



2761291
Pressure Regulator, 7 bar

Holding Systems

POINT SETTER® Holding System

Components / Spare Parts Catalog page

- 20031002** **Air Compressor**, for POINT SETTER® —
- 20031020 **Air Compressor**, 0 – 8 bar, power supply 230 VAC, 50/60 Hz, dimensions (w x d x h): approx. 500 x 320 x 340 mm, weight approx. 22 kg
- 27630022 **Fabric Reinforced Tube**, for connecting CALCUSPLIT® SCB 27630020
- 28172 WC **Connecting Tube**, length 600 cm, for use with POINT SETTER® holding system, required pressure setting min. 6 to max. 8 bar



20031002

Components / Spare Parts Catalog page

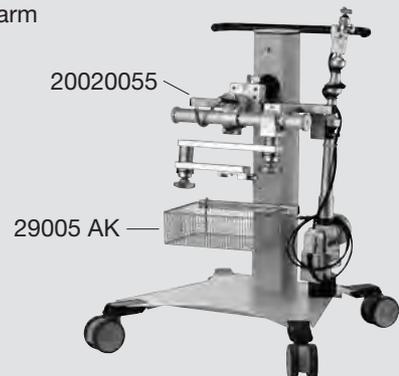
- 20031002 C** **Air Compressor**, for POINT SETTER® —
- 20031020 C **Air Compressor**, 0 – 8 bar, power supply 115 VAC, 50/60 Hz, dimensions (w x d x h): approx. 500 x 320 x 340 mm, weight approx. 22 kg
- 27630022 **Fabric Reinforced Tube**, for connecting CALCUSPLIT® SCB 27630020
- 28172 WC **Connecting Tube**, length 600 cm, for use with POINT SETTER® holding system, required pressure setting min. 6 to max. 8 bar



20031002 C

Components / Spare Parts Catalog page

- 20020083** **STOR-E® Transport Cart**, for POINT SETTER® holding arm —
- 20020061 **Subrack**, for POINT SETTER®
- 20020055 **Accessory Set**, for POINT SETTER®
- 20020057 **Top Cover**
- 29005 AK **Wire Basket**



Suction and Irrigation Systems

ARTHROPUMP® Power

Components / Spare Parts

Catalog page

- 28340701-1 ARTHROPUMP® Power, Set**
- 28340720-1 **ARTHROPUMP® Power**,
power supply 100 – 240 VAC, 50/60 Hz
- 28340770 **Connecting Cable**, to UNIDRIVE® S III ARTHRO SCB
and POWERSHAVER SL SCB
- 20090170 **SCB Connecting Cable**, length 100 cm
- 20016834 **Four-Pedal Footswitch**
- 031328-03* **Tubing Set Irrigation**, sterile, for single use,
package of 3
- 031228-03* **Tubing Set Suction**, sterile, for single use,
package of 3



28340720-1

Spare Part



1069500
Mains Fuse,
T 1.6 A, L 250 V



mtp medical technical promotion gmbh,
Take-Off GewerbePark 46, 78579 Neuhausen ob Eck, Germany

Motor Systems

UNIDRIVE® S III ARTHRO SCB

Components / Spare Parts

Catalog page

- 28723001-1 UNIDRIVE® S III ARTHRO SCB, Set**
- 28723020-1 UNIDRIVE® S III ARTHRO SCB**
- 20090170 SCB Connecting Cable, length 100 cm**
- 400 A Mains Cord**
- 96156013D Manual**

U 13



28723020-1

Spare Parts



1059700
Mains Fuse,
100 – 240 VAC, T 2.5 AL
(SB), package of 10



1222890
Fuse,
100 – 127 VAC, T 5.0 A,
package of 10

High Frequency Surgery Units

AUTOCON® II 200

Components / Spare Parts

Catalog page

- 20532201 AUTOCON® II 200**
- 20532220 **AUTOCON® II 200**,
power supply 200 – 240 VAC, 50/60 Hz
- 400 A **Mains Cord**, length 300 cm
-
- 20532201 C AUTOCON® II 200**
- 20532220C **AUTOCON® II 200**,
power supply 100 – 120 VAC, 50/60 Hz
- 400 B **Mains Cord**, US version, length 200 cm



20532220
20532220C

Spare Part for use at 230 V:



2027690
Mains Fuse,
T 4.0 AL (SB),
package of 10

Spare Part for use at 110 V:

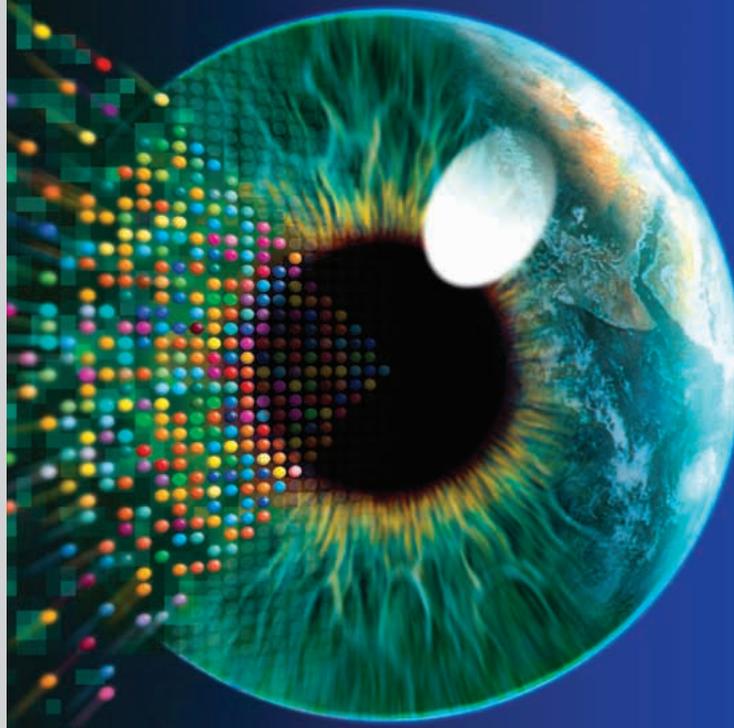


2028090
Mains Fuse,
T 8.0 AL (SB),
package of 10

KARL STORZ ORI NEO®
ERGONOMICS, SAFETY AND EFFICIENCY IN THE OR



TELEPRESENCE
IMAGING SYSTEMS - ILLUMINATION



STORZ
KARL STORZ - ENDOSKOPE

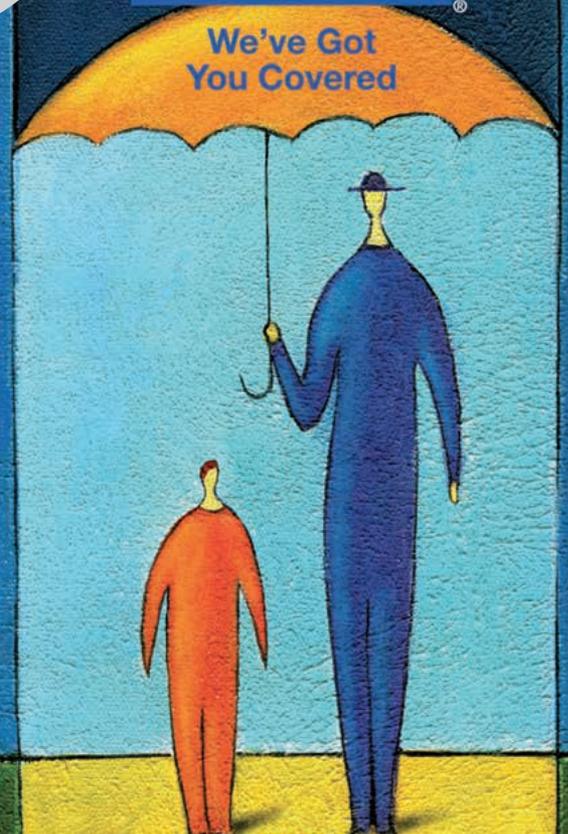
PRODUCT CATALOGS

HUMAN MEDICINE
EDITION 1/2012



PROTECTION₁

We've Got
You Covered



STORZ
KARL STORZ - ENDOSKOPE

**KARL STORZ OR1 NEO®
ERGONOMICS, SAFETY
AND EFFICIENCY IN THE OR**



The KARL STORZ OR1 NEO® objective is to provide an optimal operating room design for performing minimally invasive and conventional surgeries. Customized to meet disciplinary and interdisciplinary needs, the OR1 NEO® operating room concept offers the optimal solution to each requirement for an integrated OR workstation design. The system's modular design allows all components and functionalities to be integrated in the OR1 NEO® operating room solution and, therefore, become part of the workstation system. Once again, KARL STORZ sets new standards in ergonomics, safety and efficiency in the OR.

- **System integration**
- **Data management and documentation**
- **Telemedicine**

The OR1 NEO® components provide a customized system and compatible applications. Each component offers a reliable solution on its own; the sum of all components forms a complete multifunctional system.

TELEPRESENCE

- **Imaging systems**
- **Illumination**



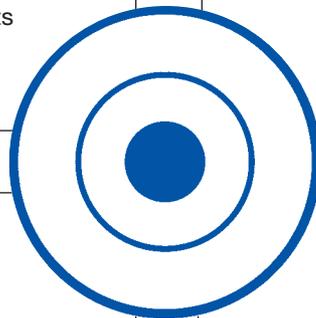
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IMAGE 1 HUB™ HD enables the connection of the latest HD camera heads and all standard IMAGE1 camera heads.

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KARL STORZ WIDEVIEW monitors deliver **optimal image display**. Using the 16:10 aspect provides a larger display window and improves the viewing ergonomics.



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- Endoscopes for Anesthesiology and Emergency Medicine
- Endoscopes and Instruments for Cardiovascular Surgery
- Thorax
- Gastroenterology
- Laparoscopy
- Gynecology
- Urology
- Proctology
- Arthroscopy, Sports Medicine & Spine Surgery
- Pediatric Surgery
- KARL STORZ OR1 NEO®
- Telepresence

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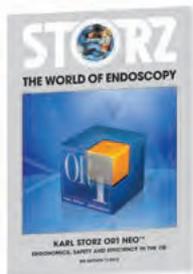


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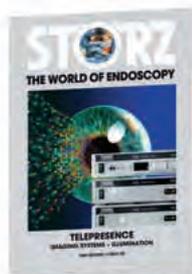


KARL STORZ OR1 NEO®

ERGONOMICS, SAFETY AND EFFICIENCY IN THE OR

We are particularly interested in:

- System integration
- Data management and documentation
- Telemedicine



TELEPRESENCE

We are particularly interested in:

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- Camera systems
- Monitors and video printers
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HUMAN MEDICINE DVD

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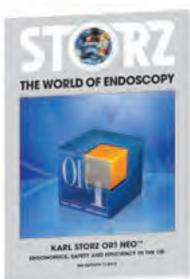
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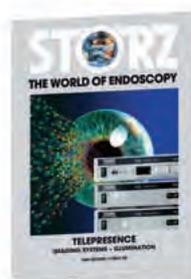


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