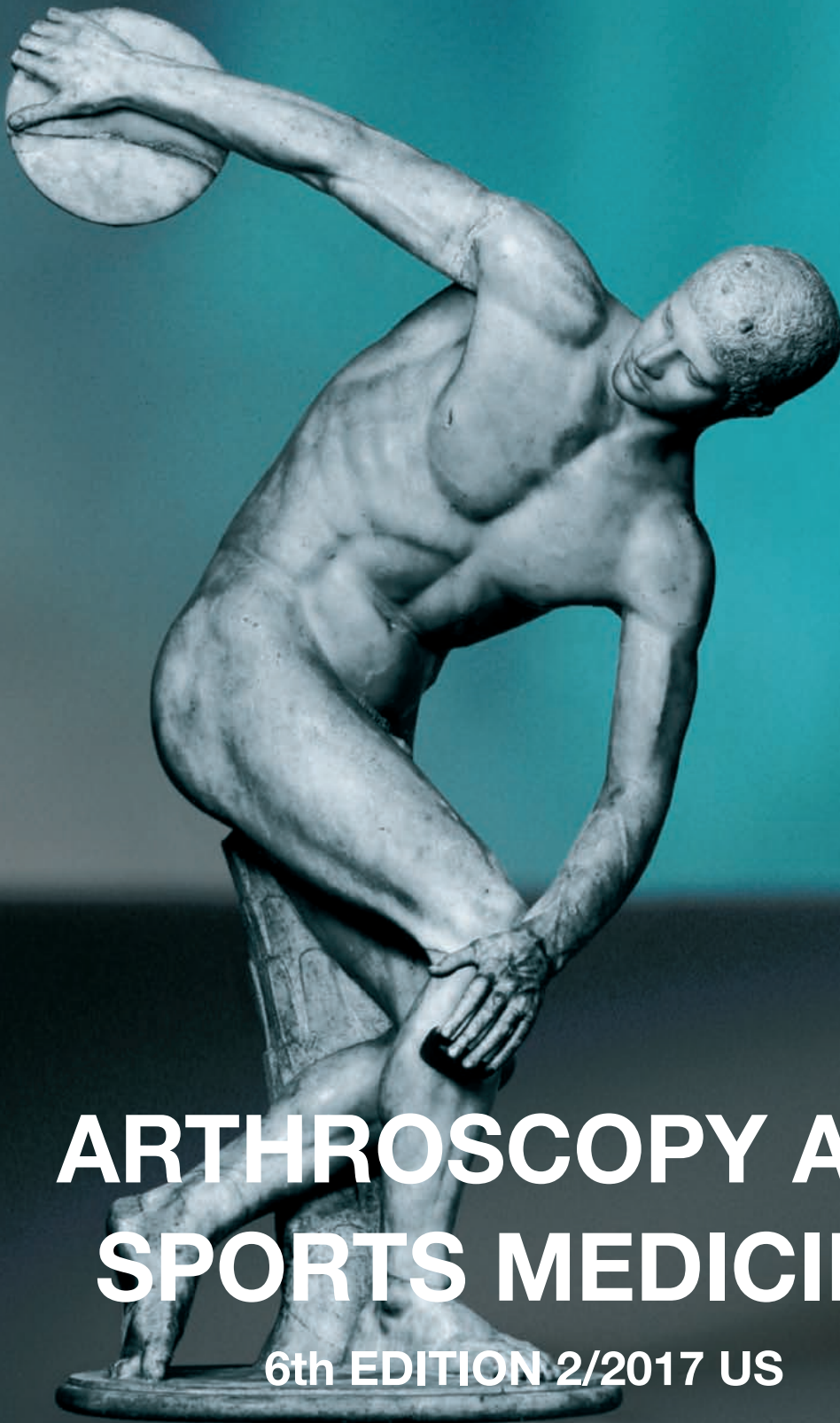




ARTHROSCOPY AND SPORTS MEDICINE

6th EDITION 2/2017 US

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THE WORLD OF ENDOSCOPY



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

ARTHROSCOPY AND SPORTS MEDICINE

6th EDITION 2/2017 US

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, 2018

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

Order no.	Description	Section	Page
UP 210	ENDOMAT® SELECT	ART-UNITS 8 F	U 12
2870723 B	MEGA FIX® B	ART-K 38	118
28729 FT	FLIPTACK	ART-K 35, ART-S 22 B	115, 148
28729 FC	Catgut Polyester-S white	ART-K 35, ART-S 22 B	115, 148
28729 TT	ENDOTACK®	ART-K 35	115
28729 MT	Mini ENDOTACK®	ART-K 35	115
2870310 BP	BioPlug	ART-S 25	151
2870411 BP	BioPlug	ART-K 10, ART-S 25	90, 151
2870514 BP	BioPlug	ART-S 25	151
2870619 B	MEGA FIX® B	ART-K 38	118
2870623 B	MEGA FIX® B	ART-K 38	118
2870719 B	MEGA FIX® B	ART-K 38	118
2870723 B	MEGA FIX® B	ART-K 38	118
2870728 B	MEGA FIX® B	ART-K 38	118
2870819 B	MEGA FIX® B	ART-K 38	118
2870823 B	MEGA FIX® B	ART-K 38	118
2870828 B	MEGA FIX® B	ART-K 38	118
2870923 B	MEGA FIX® B	ART-K 38	118
2870928 B	MEGA FIX® B	ART-K 38	118
2870823 P	MEGA FIX® P	ART-K 38	118
2870828 P	MEGA FIX® P	ART-K 38	118
2870923 P	MEGA FIX® P	ART-K 38	118
2870928 P	MEGA FIX® P	ART-K 38	118
2870935 P	MEGA FIX® P	ART-K 38	118
2871028 P	MEGA FIX® P	ART-K 38	118
2871035 P	MEGA FIX® P	ART-K 38	118
2871135 P	MEGA FIX® P	ART-K 38	118
2870619 C	MEGA FIX® C	ART-K 39	119
2870623 C	MEGA FIX® C	ART-K 39	119
2870719 C	MEGA FIX® C	ART-K 39	119
2870723 C	MEGA FIX® C	ART-K 39	119
2870728 C	MEGA FIX® C	ART-K 39	119
2870819 C	MEGA FIX® C	ART-K 39	119
2870823 C	MEGA FIX® C	ART-K 39	119
2870828 C	MEGA FIX® C	ART-K 39	119
2870923 C	MEGA FIX® C	ART-K 39	119
2870928 C	MEGA FIX® C	ART-K 39	119
2870823 CP	MEGA FIX® CP	ART-K 39	119
2870828 CP	MEGA FIX® CP	ART-K 39	119
2870923 CP	MEGA FIX® CP	ART-K 39	119
2870928 CP	MEGA FIX® CP	ART-K 39	119
2870935 CP	MEGA FIX® CP	ART-K 39	119
2871028 CP	MEGA FIX® CP	ART-K 39	119
2871035 CP	MEGA FIX® CP	ART-K 39	119
2871135 CP	MEGA FIX® CP	ART-K 39	119
2870720 T	MEGA FIX® T	ART-K 41	121
2870725 T	MEGA FIX® T	ART-K 41	121
2870820 T	MEGA FIX® T	ART-K 41	121

2870825 T	MEGA FIX® T	ART-K 41	121
2870920 T	MEGA FIX® T	ART-K 41	121
2870925 T	MEGA FIX® T	ART-K 41	121
2870723 T	MEGA FIX® T	ART-K 41	121
2870728 T	MEGA FIX® T	ART-K 41	121
2870823 T	MEGA FIX® T	ART-K 41	121
2870828 T	MEGA FIX® T	ART-K 41	121
2870923 T	MEGA FIX® T	ART-K 41	121
2870928 T	MEGA FIX® T	ART-K 41	121
2871023 T	MEGA FIX® T	ART-K 41	121
2870620 MSP	MEGASHIM	ART-K 44	124
2870720 MSP	MEGASHIM	ART-K 44	124
2870820 MSP	MEGASHIM	ART-K 44	124
2870920 MSP	MEGASHIM	ART-K 44	124
28180 GT-6	Cannula	ART-S 3	129
28180 GDS	Seal Set	ART-S 3	129
2870309 ST	Titanium Suture Anchor	ART-S 24 A	150
2870514 TI	Titanium Suture Anchor	ART-S 24 A	150
2870614 TI	Titanium Suture Anchor	ART-S 24 A	150
MP50	MASTERPULS® »ultra«	ART-ESWT 5	239
MP100	MASTERPULS® »ultra«	ART-ESWT 5	239
MP200	MASTERPULS® »ultra«	ART-ESWT 5	239

Note: SPECTRA mode not available with IMAGE 1S™

Note: In the U.S. Shock Wave Therapy is approved for the treatment of heel pain due to chronic proximal plantar fasciitis for patients of age greater than 18 years with a history of failed alternative conservative therapies for at least six months. Other indication mentioned in this catalog are unapproved.

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.

KARL STORZ Endoscopy-America, Inc. TERMS AND CONDITIONS

The following terms and conditions ("Terms") apply to the acquisition of KARL STORZ products.

1. ORDERS. Orders are to be placed with the Customer Support Department or sales force of KARL STORZ Endoscopy-America, Inc. ("KARL STORZ"); however, orders will only be accepted by KARL STORZ's Customer Support Department located in California or Massachusetts. In the event of any conflicting, inconsistent and/or additional provisions in a customer purchase order or other document, these Terms will supersede and prevail and such conflicting, inconsistent and/or additional provisions shall be of no force or effect; KARL STORZ hereby objects to such other provisions or terms proposed by customer. By accepting delivery of products from, and/or the performance of services by KARL STORZ and/or by paying for same, customer accepts and agrees to these Terms, all of which constitute the sole and entire agreement between KARL STORZ and customer.

2. PRICES. Prices are subject to change without notice. Nevertheless, prices in effect at the time that an order is accepted will prevail; provided, however, that quotations, including pricing therein, are valid until the expiration date reflected on the quotation. All applicable taxes, shipping and/or handling charges, will be added to the invoice. If customer is tax exempt, customer shall provide a tax exemption certificate for the "sold to" entity at the time of issuance of the purchase order under these Terms.

3. SHIPPING. Shipments are F.O.B. shipping point, shipping and handling prepaid by KARL STORZ and added to the invoice. However, KARL STORZ will utilize customer-designated third party freight programs for shipment and payment when requested by customer. In such case, customer is solely responsible for all third party freight charges, KARL STORZ handling charges and any loss or damage to products during shipment. If use of a customer-designated third party freight program is not requested by customer, and any loss or damage to products occurs during shipment, KARL STORZ will replace such products at no additional cost. All shipments should be carefully examined upon receipt and, if a product is damaged, customer must promptly notify KARL STORZ of the nature and extent of the damage and return such product to KARL STORZ in accordance with the "Return Policy" below. If shipments are received short, customer must promptly contact KARL STORZ's Customer Support Department. KARL STORZ may make partial shipments on any order with customer's authorization.

4. PAYMENT. Invoices are due and payable upon receipt, net 30 days from date of invoice, which shall not be earlier than the date of shipment. Invoices will be issued on authorized partial shipments and are payable as set forth in this section. 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 to effectuate repossession of products purchased from KARL STORZ but not paid for will be borne by customer. Amounts payable to KARL STORZ for the purchase, lease or rental of products and/or the provision of services are not subject to withholding, set-off or counter-claim under any circumstances without the prior written consent of KARL STORZ.

5. SECURITY INTEREST. Until customer has paid KARL STORZ in full for all products purchased pursuant to an order, KARL STORZ shall have, and customer hereby grants to KARL STORZ, a security interest in all products purchased pursuant to such order to secure payment of the entire purchase price for all products sold, shipped and delivered to customer pursuant to such order and all costs, expenses or other charges relating thereto which are payable by customer to KARL STORZ.

6. RETURN MERCHANDISE AUTHORIZATION PROCESS. A return merchandise authorization ("RMA") must be obtained from KARL STORZ's Customer Support Department prior to sending any products to KARL STORZ for any reason. When contacting KARL STORZ for an RMA, the Customer Support Representative must be provided with: (a) the applicable P.O. number; (b) the KARL STORZ catalog number and, if applicable, the serial number for each product; and (c) the reason for the return. KARL STORZ will not be responsible for products returned without an RMA. 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. In order to prevent the transmission of disease to the medical facilities' and/or KARL STORZ's personnel, all opened products must be cleaned and then sterilized and/or disinfected before sending 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 a KARL STORZ authorized repair facility.

7. RETURN POLICY. Full credit will only be issued for products that are received by KARL STORZ within 120 days of date of shipment ("Ship Date") so long as such items are unused and in resalable condition. If products are received by KARL STORZ more than 120 days after the Ship Date, KARL STORZ may, in its sole and absolute discretion, either refuse acceptance of the returned products or 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. Shipping charges will be reimbursed, inspection fees will not be charged and full credit will be given if the return was due to a shipping error on the part of KARL STORZ. Customer must follow the RMA procedure set forth in the "Return Merchandise Authorization Process" above to return products for credit. The following products may not be returned for credit or exchange: (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) products identified and purchased as discontinued products; (d) instruments that are etched or engraved by customer; (e) products damaged by customer; and (f) used products.

8. WARRANTY POLICY. This section ("Warranty Policy") applies to all warranty repairs and exchanges. All products are warranted to be in good working order and free from defects in workmanship and materials on the date of shipment and continuing for a period of one (1) year thereafter, unless otherwise specified in a quotation or product specific literature. All repairs made under this Warranty Policy shall be free from defects in materials and workmanship for the remainder of the original warranty period (if any) or 90 days, whichever is longer. To submit a warranty claim, customer must follow the RMA procedure set forth in the "Return Merchandise Authorization Process" above. Customer must return the defective product within 30 days of issuance of the RMA.

For all warranty claims submitted within the first 30 days of the applicable warranty period ("Advance Replacement Period"), a replacement product will be provided to the customer prior to receipt of the product subject to such warranty claim. KARL STORZ will notify customer if the warranty claim is not valid. In such event, customer must submit a purchase order for the replacement product including any shipping and handling costs. Some limited product categories may qualify for a longer Advance Replacement Period to be confirmed by KARL STORZ's Customer Support Department at the time of issuance of the RMA. For all warranty claims submitted after the Advance Replacement Period, KARL STORZ shall evaluate the warranty claim following receipt of the product from customer and, if valid, shall at its sole discretion either repair or replace the product at no charge to the customer. KARL STORZ will notify customer if such warranty claim is not valid and provide an estimate of the repair cost. In such event, customer must submit a purchase order for the repair.

Damage which might arise or be caused, whether by customer or by any of the users of the products provided by KARL STORZ, as a result of, in connection with, or otherwise attributable to the following is excluded from all product and service warranty coverage: (a) misuse, abuse, mishandling and/or improper operation and/or storage; (b) repairs, servicing, modifications and/or alterations performed by any person or entity other than KARL STORZ or an authorized repair facility of KARL STORZ; (c) use in combination with adaptors, accessories and/or equipment from other manufacturers unless authorized or recommended by KARL STORZ; (d) use in any manner other than those for which such products are designed and are otherwise intended to be used; or (e) a failure to comply with power and grounding specifications provided by KARL STORZ. **THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED AND/OR STATUTORY, INCLUDING, BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS AND/OR OF SUITABILITY FOR A PARTICULAR PURPOSE, WITH RESPECT TO ALL KARL STORZ PRODUCTS AND/OR SERVICES. ANY AND ALL OTHER WARRANTIES, REPRESENTATIONS AND/OR GUARANTEES, OF ANY TYPE, NATURE OR EXTENT, BE IT IMPLIED, EXPRESS AND/OR WHETHER ARISING UNDER OR AS A RESULT OF ANY STATUTE, LAW, COMMERCIAL USAGE, CUSTOM, TRADE OR OTHERWISE, ARE HEREBY EXPRESSLY EXCLUDED AND DISCLAIMED.** Any contrary course of performance by and between the parties will not modify any representations and/or warranties set forth herein. KARL STORZ neither assumes nor authorizes any person to assume for it any other liabilities in conjunction with and/or related to the sale and/or use of KARL STORZ products or provision of services. To ensure proper use, handling and care of KARL STORZ products, customer should consult the product-specific literature, instruction manual and/or labeling included with the product or otherwise available. Repair, modification or alteration of KARL STORZ products performed by any person or entity other than by KARL STORZ or an authorized repair facility of KARL STORZ nullifies and otherwise voids all applicable KARL STORZ warranties. Repair or replacement of a KARL STORZ product shall not extend the term of any applicable warranty. The remedies provided herein are customer's exclusive remedies under this Warranty Policy.

9. REPAIR PROGRAM. This section ("Repair Program") applies to all repairs and exchanges not covered under the Warranty Policy. If such repairs or exchanges become necessary, customer must follow the RMA procedure set forth in the "Return Merchandise Authorization Process" above. All repairs and exchanges shall be subject to KARL STORZ's applicable standard repair or exchange charges. Customer will be advised of the estimated cost of the repair work or a product exchange before it is undertaken. All repairs under this Repair Program carry a 90 day warranty. Any exchange product provided under this Repair Program carries the applicable KARL STORZ new product warranty. If an exchange product is provided and the damaged product is not returned within 30 days of receipt of the exchange product, Customer will be invoiced for the applicable contracted price or the full list price of the exchange product. Subject to the availability of product, KARL STORZ may, provide customer with loaner product while repairs are being made.

10. SOFTWARE OWNERSHIP AND LICENSING. Subject to annual license fees, as applicable, set forth in the applicable quotation, KARL STORZ grants to customer a non-exclusive, limited, non-transferable (except in connection with a transfer of a product), non-sublicensable and irrevocable (except as provided herein) license ("License") to use software (including, but not limited to, programmed logic, computer programs and/or operating information) programmed into and/or embedded in products provided by KARL STORZ or separately provided by KARL STORZ. Such licensed software may be developed by or on behalf of (a) KARL STORZ ("KARL STORZ Software") and/or (b) third party developers (all of whom are considered third party beneficiaries of this section) ("Third Party Software") ("KARL STORZ Software" and "Third Party Software" are referred to collectively as "Software"). The Software is licensed only in the form in which delivered to customer and only for use in accordance with KARL STORZ's written instructions for the Software or the product in which the Software is embedded or to which the Software relates and may be subject to annual license fees as set forth in the applicable quotation. The Software, and all modifications, updates, enhancements and upgrades provided by KARL STORZ, will, at all times, remain the property of KARL STORZ or the applicable third party developer. Customer may not (a) duplicate, copy, reverse-engineer, create, re-create, de-compile or disassemble the Software (or the source code of the Software), (b) create derivatives of the Software, or (c) unless authorized by KARL STORZ in advance, modify or customize the Software. Any and all duplicates, copies and derivatives of the Software, and any and all unauthorized modifications to, or customizations of, the Software will immediately become the sole property of KARL STORZ. Customer acknowledges and agrees that (a) neither the licensing of Software to customer, nor the purchase, lease or other acquisition of products by customer constitutes a transfer of the Software, (b) the Software is the property of KARL STORZ or the applicable third party developer, (c) customer neither owns nor acquires any interest in any copyright, patent or other intellectual property right in or to the Software as a result of the License granted herein or the purchase, lease or other acquisition of any product, and (d) KARL STORZ, or the applicable third party developer, retains and owns all right, title, and interest in and to the Software and the ownership rights therein, at all times, regardless of the form or media in or on which the original or any copy of the Software may exist. In the event of a failure of customer or its agents, employees or representatives to comply with any terms and conditions of the License granted herein, the License will, without any further action by KARL STORZ or any other party, immediately terminate.

11. SOFTWARE AND SECURITY SERVICES. Solely with respect to products for which customer has purchased software licenses and security services, KARL STORZ shall: (a) install security patches for such products connected to customer's network; (b) provide software updates to address bug fixes; (c) provide remote troubleshooting and related services; and (d) provide software upgrades including new features (excluding EHR implementation and interfacing, and hardware upgrades). KARL STORZ shall provide the foregoing services at times and frequency, and in the manner, determined solely by KARL STORZ based upon the critical or non-critical nature of such software patches, updates and upgrades. The services provided by KARL STORZ pursuant to this section do not apply to any related hardware issues, and do not carry a repair warranty or otherwise affect any warranty provided under these Terms. KARL STORZ does not warrant or represent that use of the software application will be uninterrupted or error-free.

12. DISPUTES. 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 will not affect the validity or enforceability of any other or remaining term or condition hereof.

13. LIMITATION OF LIABILITY. KARL STORZ is not liable for any special, incidental, consequential, punitive, exemplary or indirect damages, from any cause whatsoever in connection with or arising from the purchase, sale, lease, rental, installation, performance or use of KARL STORZ products or services, even if KARL STORZ has been advised of the possibility of such damages. **SOME JURISDICTIONS DO NOT ALLOW EXCLUSIONS AND DISCLAIMERS OF CERTAIN WARRANTIES OR LIMITATIONS OF LIABILITY, SO THE LIMITATIONS AND/OR EXCLUSIONS SET FORTH IN THESE TERMS MAY NOT APPLY. IN THAT EVENT, KARL STORZ'S LIABILITY WILL BE LIMITED TO THE GREATEST EXTENT PERMITTED BY LAW IN THE SUBJECT JURISDICTION.**

14. COMPLIANCE WITH LAWS; DISCOUNT EXCEPTION AND SAFE HARBOR. Customer shall comply with all applicable laws and regulations, including but not limited to the federal health care program anti-kickback statute, 42 U.S.C. § 1320a-7b(b) ("AKS"). Customer acknowledges its obligations to fully and accurately report the discounts, rebates, credits, product replacements (including those related to a warranty, service, or otherwise) and/or other price reductions (collectively "Discounts"), if any, it receives from KARL STORZ, under all applicable laws and regulations, including but not limited to the AKS, the Discount Exception and the Discount Safe Harbor. Customer may be obligated to report and/or provide information concerning any such Discounts provided by KARL STORZ pursuant to 42 U.S.C. § 1320a-7b(b)(3)(A) (the "Discount Exception") and/or 42 C.F.R. § 1001.952(h) (the "Discount Safe Harbor"), other federal or state laws, or agreement with third party payers. Customer should retain documentation of Discounts and make such information available to federal or state health care programs, applicable federal and/or state agencies, and/or third party payors, upon request. KARL STORZ will provide to customer invoices related to purchases, and other reports/documentation as applicable, documenting any Discounts for such products and/or services. Customer is responsible for appropriate allocation and/or apportionment of any Discounts among products and/or services purchased. Customer acknowledges that this section has put customer on notice of its obligations under the AKS, Discount Exception and Discount Safe Harbor and all other applicable laws and regulations.

KARL STORZ Intellectual Property Rights

KARL STORZ SE & Co. KG is the proprietor and/or licensee
of the following US-Patents in the field of
ARTHROSCOPY AND SPORTS MEDICINE



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
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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, CWA
28208 BA
28300 BA
28305 BA



BASIC SETS

UNITS 2-6

KNEE JOINT 7-16

SHOULDER JOINT 17-20

HIP JOINT 21-22

SMALL AND MEDIUM JOINTS 23-26



Monitor:
9826 NB **26" FULL HD Monitor**

Camera System:
TC 200EN* **IMAGE1 S CONNECT™**, basic module
TC 300 **IMAGE1 S™ H3-LINK**, module for rigid endoscopy
TH 100 **IMAGE1 S™ H3-Z Three-Chip FULL HD Camera Head**

Alternative:
TC 301 **IMAGE1 S™ X-LINK**, module for flexible endoscopy
TH 110 **IMAGE1 S™ HX One-Chip FULL HD Camera Head**

Light Source:
20 1614 01-1 **Cold Light Fountain Power LED 175 SCB**
495 NAC **Fiber Optic Light Cable**

Documentation:
WD 250-EN* **AIDA™ with SMARTSCREEN®**
TC 009 **USB Adaptor**, for ACC 1 and ACC 2

Motor System:
28 7230 01-1 **UNIDRIVE® S III ARTHRO SCB**

HF Unit:
UH 400 **AUTOCON® III 400 High-End**
27805 **Neutral Electrode**
27806 UR **Neutral Electrode Connecting Cable**
UF 902 **Two-Pedal Footswitch**

Pump System:
28 3407 01-1 **ARTHROPUMP® Power**
Alternative:
UP 210 **ENDOMAT® SELECT**, roller pump
UP 605 **Arthroscopy Software**, license

Equipment Cart:
UG 220 **Equipment Cart**, wide
UG 500 **Monitor Holder**
29005 DFH **Footswitch Holder**, for two- and three-pedal footswitches
UG 310 **Isolation Transformer**
UG 410 **Earth Leakage Monitor**
UG 626 **IV Pole**, height-adjustable
Optional:
UG 606 **Keyboard Tray**, wide

* Available in the following languages: DE, ES, FR, IT, PT, RU, SE

Units see chapter 17, UNITS AND ACCESSORIES

FULL HD Camera Platform see TELEPRESENCE catalog

Basic Set for Units for Arthroscopy continued on next page

Imaging

9826 NB

26" FULL HD Monitor, color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, video inputs: DVI, 3G-SDI, VGA, S-Video, Composite, video outputs: DVI, 3G-SDI, Composite, power supply 100 – 240 VAC, 50/60 Hz, 5 V output (1 A), wall mount with VESA 100 adaptor

20 1614 01-1

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

optional

495 NAC

Fiber Optic Light Cable, with straight connector, extremely heat-resistant, with safety lock, enhanced light transmission, can be used for ICG applications, diameter 3.5 mm, length 230 cm

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

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

TH 100

IMAGE1 S™ H3-Z Three-Chip FULL HD Camera Head, 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

Documentation

WD 250-EN

AIDA™, documentation system for recording still images and videos, dual channel up to FULL HD, 2D/3D, including SMARTSCREEN® (touch screen), power supply 100 – 240 VAC, 50/60 Hz

TC 009

USB Adaptor, for ACC 1 and ACC 2, for use in conjunction with IMAGE1 S CONNECT™ and AIDA™ HD

optional

TC 301

IMAGE1 S™ X-LINK, link module, for use with flexible video endoscopes and one-chip camera heads (up to FULL HD), power supply 100 – 120 VAC/200 – 240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT™ TC 200EN

UNIDRIVE® S III ARTHRO SCB Motor System

28 7230 01-1

UNIDRIVE® S III ARTHRO SCB, with color display, touch screen operation, two motor outputs, with integrated SCB module, power supply 100 – 120/230 – 240 VAC, 50/60 Hz including:

SCB Connecting Cable, length 100 cm

Mains Cord

20 0168 31

Two-Pedal Footswitch, for use with UNIDRIVE® S III ARTHRO SCB

optional

20 0128 32

Three-Pedal Footswitch, for use with UNIDRIVE® S III ARTHRO SCB

Recommended Handpieces and Accessories for UNIDRIVE® S III ARTHRO

28200 DX

DRILLCUT-X® ARTHRO Shaver Handpiece, up to 8000 rpm, for use with UNIDRIVE® S III ARTHRO SCB, as of software status 1.10.

28 7210 36

Multifunction Handpiece, for use with UNIDRIVE® S III ARTHRO 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 SLA – SLH

28 7210 33

Pin Driver, for drilling wires diameter 1.5 – 3 mm

28 7210 34

Pin Driver, for Synthes attachments

Basic Set for Units for Arthroscopy continued on next page

Recommended Shaver Blades, sterile, for single use, package of 6, for use with UNIDRIVE® S III ARTHRO SCB in combination with the DRILLCUT® X ARTHRO handpiece

Working length 180 mm

28208 BKS	Aggressive Cutter , diameter 4.5 mm, color code: green
28208 EHS	Curved Aggressive Full Radius Resector , diameter 4.5 mm, color code: light green
28208 IDS	Semi Hooded Barrel Burr , diameter 5.5 mm, color code: pink

Working length 120 mm

28205 DKS	Aggressive Full Radius Resector , diameter 4.5 mm, color code: blue
28205 FDS	Round Burr , diameter 5.5 mm, color code: orange
28205 GES	Finish Barrel Burr , diameter 5.5 mm, color code: purple
28205 HDS	Aggressive Barrel Burr , diameter 5.5 mm, color code: pink
28205 MKS	Pro Line Shaver Blade , diameter 4.5 mm, color code: pink
28205 NKS	Aggressive Pro Line Shaver Blade , diameter 4.5 mm, color code: light blue

Working length 70 mm

28206 CAS	Full Radius Resector , diameter 2.5 mm, color code: yellow
28206 FAS	Small Joint Burr , diameter 2.5 mm, color code: orange

optional

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

ARTHROPUMP® Power Suction and Irrigation System

283407 01-1	ARTHROPUMP® Power , power supply 100 – 240 VAC, 50/60 Hz including: Connecting Cable , to UNIDRIVE® S III ARTHRO SCB SCB Connecting Cable , length 100 cm Four-Pedal Footswitch Tubing Set Irrigation , sterile, for single use, package of 3 Tubing Set Suction , sterile, for single use, package of 3

optional

UP 210	ENDOMAT® SELECT

Equipment Carts and Accessories

UG 220	Equipment Cart , wide, tall, rides on 4 antistatic dual wheels equipped with locking brakes, mains switch on cover, energy beam with integrated electrical subdistributors with 12 sockets, grounding plugs, Dimensions: Equipment cart: 830 x 1474 x 730 mm (w x h x d), Shelf: 630 x 25 x 510 mm (w x h x d), Caster diameter: 150 mm
UG 310	Isolation Transformer , 200 – 240 V, 2000 VA, with 3 special mains sockets, automatic cutout, 3 grounding plugs, dimensions in mm: 330 x 90 x 495 (w x h x d), for use with Equipment Cart UG 220
UG 410	Earth Leakage Monitor , 200 – 240 V, for mounting to equipment carts, control panel dimensions: 44 x 80 x 29 mm (w x h x d), for use with Isolation Transformer UG 310
UG 500	Monitor Holder , height adjustable, swiveling and tilting, central mount, swivel range approx. 360°, loading capacity max. 18 kg, with monitor mount VESA 75/100, for use with Equipment Cart UG 220
UG 626	IV Pole , height adjustable, with 2 bottle hooks à 5 kg, length 118 – 203 cm, for use with Equipment Cart UG 220 including: Multifunctional Holder

optional

UG 606	Keyboard Tray , wide, for mounting under wide Shelf UG 604, load capacity max. 10 kg, dimensions: 630 x 480 mm (w x d), for use with Equipment Cart UG 220

Basic Set for Units for Arthroscopy continued on next page

HF Units

UH 400	AUTOCON® III 400 High-End , with KARL STORZ SCB control NEO, power supply 220 – 240 VAC, 50/60 Hz
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
UF 902	Two-Pedal Footswitch , with button for switchover function, for use with HF generators
UF 901	One-Pedal Footswitch , with button for switchover function, for use with HF generators

Recommended Accessories

26 5200 45	High Frequency Cable , for Electrode Handle 26 5200 43, length 400 cm
26 5200 43	Electrode Handle , with 2 buttons for activating the unipolar generator, yellow button: unipolar cutting, blue button: unipolar coagulation, High Frequency Cord 26 5200 45 required
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	Arthroscopy HF Hook Electrode , diameter 2.6 mm, electrode length 2.8 mm, working length 11 cm, sterile, for single use, package of 5
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
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	Arthroscopy HF Ball Electrode , diameter 2.6 mm, ball diameter 2.5 mm, working length 11 cm, sterile, for single use, package of 5
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	Arthroscopy HF Ball Electrode , diameter 2.6 mm, ball diameter 3.5 mm, working length 11 cm, sterile, for single use, package of 5

VITOM® 2D – 2D Visualization System for Open Surgery with Minimal Access

209160 25 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
optional 209160 25 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
TL 300 TH 100	Cold Light Fountain Power LED 300 , with KARL STORZ-SCB and high-performance LED IMAGE1 S™ H3-Z Three-Chip FULL HD Camera Head , 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
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
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
9826 NB	26" FULL HD Monitor , color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, video inputs: DVI, 3G-SDI, VGA, S-Video, Composite, video outputs: DVI, 3G-SDI, Composite, power supply 100 – 240 VAC, 50/60 Hz, 5 V output (1 A), wall mount with VESA 100 adaptor
495 TIP	Fiber Optic Light Cable , with straight connector, extremely heat-resistant, enhanced light transmission, 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 KARL STORZ 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.

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Knee Joint

Basic Sets

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® PRO Punch , through-cutting, cross-toothed, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm
28571 AG	SILGRASP® PRO Alligator Grasping Forceps , straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm
28571 BBL	SILCUT® PRO Upbiter , through-cutting, cross-toothed, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3.5 mm, curved 15° to left and 10° curved upwards, handle with cleaning connector, working length 12 cm
28571 BBR	SILCUT® PRO Upbiter , through-cutting, cross-toothed, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3.5 mm, curved 15° to right and 10° curved upwards, handle with cleaning connector, working length 12 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 Obturator 28132 BC, color code: red-yellow
28132 BC	Obturator , blunt, for use with Arthroscope Sheath 28132 CR

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog
Basic Set for Arthroscopy of the Knee Joint continued on next page

Ligament Reconstruction

28729 SB	Tendon Board , including FLIPPTACK Retainer 28729 SC
28729 FK	Thread Clip
28729 P	Tissue Forceps , 1 x 2 teeth, medium, distal curved to left, length 14.5 cm
2x 28729 D-6	Drilling Wire , spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, unsterile, for single use, package of 6, for use with Undercut Drills 28729 BA – BH, Collar Burrs 28729 BLC – BLF and Drills 28729 GA – GE
28729 E	Larding Wire , pyramidal tip, diameter 2.4 mm, length 32 cm, unsterile, for single use, package of 10, for use with Undercut Drills 28729 BA – BH, Collar Burrs BLC – BLF and Drills 28729 GA – GE
28729 BA	Undercut 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 L	Length Gauge , for cruciate ligament reconstruction, graduated, working length 23 cm or
28729 TL	Depth Gauge , for cruciate ligament reconstruction, working length 22.5 cm, for use with Larding Wire 28729 E
28729 NO	Notch Chisel , curved, 15° downwards, working length 13 cm

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, Wheel Attachment 28179 HR and Wheel 28179 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
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 NJ	Suture Grasper , dismantling, jaw length 5.5 mm, straight jaws, straight sheath, working length 8 cm

Meniscus Root Refixation

28729 ZRF	Target Guide Root Refixation , for refixation of the meniscus
28728 MH	HALF PIPE® , without handle, small, working length 95 mm
28572 NJ	SILGRASP® PRO Suture Grasper , straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

Container for the Sterilization and Storage of Instruments see HYGIENE catalog

MPFL Reconstruction

MPFL Reconstruction with the Gracilis Tendon and BIOPLUG Suture Anchor

28729 A	Tendon Stripper , graduated, diameter 5.5 mm, length 30 cm
28179 KB	Drill , for preparation of the tunnel for BIOPLUG 2870411 BP, with laser marking for the depth of the drill hole, length 7 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
200400	BEYER Rongeur , slender, curved, length 17 cm
28729 D-6	Drilling Wire , spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, unsterile, for single use, package of 6, for use with Undercut Drills 28729 BA – BH, Collar Burrs 28729 BLC – BLF and Drills 28729 GA – GE
28729 BE	Undercut Drill , cannulated, diameter 8 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28789 GW-6	Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® Screwdrivers 28789 SK, 28770 SK and 28760 SK
28770 SK	CROSSDRIVE® Screwdriver , cannulated, size 7, for use with bioresorbable MEGA FIX® screws diameter 7 mm and Nitinol Guide Wires 28789 GW/KW
2870723 B	MEGA FIX® B , bioresorbable interference screw, diameter 7 mm, length 23 mm, sterile, for single use
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

MPFL Reconstruction with the Gracilis Tendon and the Patellar Tunnel

28729 A	Tendon Stripper , graduated, diameter 5.5 mm, length 30 cm
2x 28728 BLB	Drill , for preparation of the tunnel for MPFL reconstruction, with penetration stop, diameter 4.5 mm, for use with Gauge 28728 BL
2870723 B	MEGA FIX® B , bioresorbable interference screw, diameter 7 mm, length 23 mm, sterile, for single use
28728 BL	Gauge , for MPFL reconstruction, for use with Drill 28728 BLB
28729 BLK	Collar Burr , tibial, diameter 6.5 mm, cannulated, collar diameter 8 mm at 43 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28729 D-6	Drilling Wire , spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, unsterile, for single use, package of 6, for use with Undercut Drills 28729 BA – BH, Collar Burrs 28729 BLC – BLF and Drills 28729 GA – GE
28729 BE	Undercut Drill , cannulated, diameter 8 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28789 GW-6	Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® Screwdrivers 28789 SK, 28770 SK and 28760 SK
28770 SK	CROSSDRIVE® Screwdriver , cannulated, size 7, for use with bioresorbable MEGA FIX® screws diameter 7 mm and Nitinol Guide Wires 28789 GW/KW

MPFL Reconstruction with the Quadriceps Tendon

28185 QS	Quadriceps Tendon Cutter , for subcutaneous terminal cutting of the quadriceps tendon, working length 15 cm
2x 28185 MH	Handle , working length 10 cm, for use with Quadriceps Tendon Knives 28185 FA – FF and Quadriceps Tendon Separators 28185 EA – EC
3x 28185 FA	Tendon Knife , for removal of quadriceps tendon for MPFL reconstruction, vertical parallel cutting, width 10 mm, height 4 mm, sterile, for single use, 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 single use, for use with Handle 28185 MH
3x 28185 EB	Same , height 3 mm
28729 D-6	Drilling Wire , spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, unsterile, for single use, package of 6, for use with Undercut Drills 28729 BA – BH, Collar Burrs 28729 BLC – BLF and Drills 28729 GA – GE
28729 BE	Undercut Drill , cannulated, diameter 8 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E
28789 GW-6	Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® Screwdrivers 28789 SK, 28770 SK and 28760 SK
28770 SK	CROSSDRIVE® Screwdriver , cannulated, size 7, for use with bioresorbable MEGA FIX® screws diameter 7 mm and Nitinol Guide Wires 28789 GW/KW
2870723 B	MEGA FIX® B , bioresorbable interference screw, diameter 7 mm, length 23 mm, sterile, for single use

Cruciate Ligament Reconstruction

Basic Instruments for Anterior Cruciate Ligament Reconstruction

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	Same , with 8 mm offset
28729 VY	Same , with 9 mm offset
28729 VZ	Same , with 10 mm offset
28729 ZG	Handle , with ratchet, for use with Inserts 28729 VX – VZ, WA – WD, WU – WZ, ZM – ZQ

Additional Instruments for Anterior Cruciate Ligament Reconstruction with Hamstrings, single bundle technique

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
213008	PLESTER Raspatory , width 8 mm, length 18 cm
28729 ZA	Tibial Target Guide , for ACL reconstruction
28729 SE	Tendon Thickness Tester , for determination of tendon thickness size 7 – 12 mm at intervals of 0.5 mm

Additional Instruments for Anterior Cruciate Ligament Reconstruction with Hamstrings, double bundle technique

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
213008	PLESTER Raspatory , width 8 mm, length 18 cm
28729 WU	Femoral Target Guide Attachment , for the ACL 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 WT	Tibial Target Guide , for the ACL double bundle technique, exit point from the tibial plateau adjustable between 8 – 10 mm
28729 SBD	Tendon Board Add-on , for the double bundle retainer technique, including FLIPPTACK Retainer 28729 SC
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 with the Quadriceps Tendon

28185 QS	Quadriceps Tendon Cutter , for subcutaneous terminal cutting of the quadriceps tendon, working length 15 cm
2x 28185 MH	Handle , working length 10 cm, 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 single use, 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 single use, for use with Handle 28185 MH
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 smooth, width 8 mm, height 5 mm, working length 15 cm
28185 GB	Same , width 10 mm
28185 HA	Dilator , rectangular, femoral, cannulated, 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, cannulated, 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
174800	Metal Mallet , with plastic replacement head, length 22.5 cm

Additional Instruments for Anterior Cruciate Ligament Reconstruction with the Patellar Tunnel

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	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

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 VX – VZ, WA – WD, WU – WZ, ZM – ZQ
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 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
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
28124 BX	Changing Rod , length 23 cm, for use with arthroscope sheaths with inner diameter 4 mm

optional

Cannulated Drills and Drill Sleeves

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
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

Cruciate Ligament Revision

Revision Screwdriver Set for Removing Titanium Interference Screws

28728 T

Revision Set

Instruments for Bone Block Harvesting

28729 HGA	Sleeve , inner diameter 5 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPA, color code: green
28729 HGB	Sleeve , inner diameter 6 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPB, color code: black
28729 HGC	Sleeve , inner diameter 7 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPC, color code: blue
28729 HGD	Sleeve , inner diameter 8 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPD, color code: red
28729 HGE	Sleeve , inner diameter 9 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPE, color code: yellow
28729 HGF	Sleeve , inner diameter 10 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPF, color code: white-yellow
28729 HGG	Sleeve , inner diameter 11 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPG, color code: white-green
28729 HGH	Sleeve , inner diameter 12 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPH, color code: white-blue
28729 HH	Handle , for use with Tap 28729 HP
28729 HP	Tap , for use with Handle 28729 HH
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
174800	Metal Mallet , with plastic replacement head, length 22.5 cm

Cancellous Bone Applicator Set for Filling Bone Defects

28906 CB

Cancellous Bone Applicator Set, diameter 6 mm, color code: red
including:

Cancellous Bone Applicator

Tappet

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

Fine Tunnel Preparation

28960 B	Blade Dilator , cannulated, diameter 6 mm, working length 14.5 cm, scaled to 70 mm, for compression of the tibial and femoral cancellous bone, for use with Handle 28900 H
28960 BB	Same , diameter 6.5 mm
28960 C	Same , diameter 7 mm
28960 CC	Same , diameter 7.5 mm
28960 D	Same , diameter 8 mm
28960 DD	Same , diameter 8.5 mm
28960 E	Same , diameter 9 mm
28960 EE	Same , diameter 9.5 mm
28960 F	Same , diameter 10 mm
28960 FF	Same , diameter 10.5 mm
28960 G	Same , diameter 11 mm
28900 CP	Center Punch , straight, with pyramidal tip, working length 14.5 cm, for use with Handle 28900 H
28900 H	Handle , T-shaped, with quick coupling system, for use with Blade Dilators 28970 B/BB/C/CC/D/DD/E/EE/F/FF/G and Center Punch 28900 CP
28729 N	Notcher , with fin-like blade to assist screw insertion, working length 15 cm
28729 NM	Chisel , for creating a bone wedge, working length 13 cm
28729 NN	Chisel , for creating a bone wedge, with wide handle, working length 13 cm

optional

Dilators with Fin

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
28729 DFV	Same , for dilating the femoral drill channel to diameter 9.5 mm

Implants

Extracortical Fixation with Fixation Buttons

Implants for Single Bundle Technique

28729 FT	FLIPPTACK , extracortical fixation button, 4 x 12 mm, sterile, for single use
28729 FC	Catgut Polyester-S white , 3 x 75 cm, USP 7, sterile, for single use, package of 24, for use with FLIPPTACK, extracortical fixation button
28729 TT	ENDOTACK® , tibial fixation button, 10 x 16 mm, sterile, for single use
28729 MS	Button Wrench , for use with ENDOTACK® 28729 TT
28729 ST	Positioning Device , for use with ENDOTACK® 28729 TT
28729 KK	Knot Holder , small, 1 x 1 mm, working length 14.5 cm
28729 TM	Tensiometer , for measuring and controlling the tension of the graft

Implants for Double Bundle Technique

2x 28729 FT	FLIPPTACK , extracortical fixation button, 4 x 12 mm, sterile, for single use
28729 FC	Catgut Polyester-S white , 3 x 75 cm, USP 7, sterile, for single use, package of 24, for use with FLIPPTACK, extracortical fixation button
2x 28729 MT	Mini ENDOTACK® , tibial fixation button, 8 x 12 mm, sterile, for single use
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
28729 KK	Knot Holder , small, 1 x 1 mm, working length 14.5 cm
28729 TM	Tensiometer , for measuring and controlling the tension of the graft

Interference Screws

Fixation near the Joint with Bioresorbable MEGA FIX® Interference Screws

28789 SK	CROSSDRIVE® Screwdriver , cannulated, size 8 – 11, for use with bioresorbable MEGA FIX® screws diameter 8 – 11 mm
28770 SK	CROSSDRIVE® Screwdriver , cannulated, size 7, for use with bioresorbable MEGA FIX® screws diameter 7 mm
28760 SK	CROSSDRIVE® Screwdriver , cannulated, size 6, for use with bioresorbable MEGA FIX® screws diameter 6 mm
28789 GW-6	Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® 28789 SK, 28770 SK and 28760 SK

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
28789 FW-6	Nitinol Guide Wire , diameter 2 mm, length 38.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® Plus Screwdriver 28789 CD

Hybrid Fixation

Fixation near the Joint with Bioresorbable MEGASHIM as Hybrid Fixation

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 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
28728 SH	HALF PIPE® , without handle, short, working length 85 mm
28789 GW-6	Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® Screwdrivers 28789 SK, 28770 SK and 28760 SK

MEGA FIX® Screws and MEGASHIM see pages 117-125

Shoulder Joint

Basic Sets

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
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 BC	Obturator , blunt
28130 BT	Obturator , semisharp
28140 O	Obturator , cannulated, with handle, diameter 4.8 mm
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 KPN	SILCUT® Punch , through-cutting, cross-toothed, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3 mm, straight, 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 SGN	SILGRASP® Suture Grasper , straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 14 cm

Optional for 28171 SGN

28171 SGL	SILGRASP® Suture Grasper , curved jaws, 45° left, sheath diameter 3.5 mm, 5° curved to left, handle with cleaning connector, working length 16 cm
28171 SGR	Same , 45° right, 5° curved to right

Optional for 28731 BWA

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
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

Portal Management System

28179 E	Basic Set for SPS – Secure Portal System including: Puncture Needle Obturator Guide Wire , package of 6 Dilator Handle , for Dilator 28179 DL Valve Housing
28179 GS	Seal Set , sterile, for single use, package of 10, for use with Valve Housing 28179 DG/OG
28179 GH	HALF PIPE® , long, working length 95 mm, for use with Obturator 28179 OB
28179 EC	Dilator , with integrated handle, long, diameter 6 mm, for use with threaded Cannula 28179 SB and Obturator 28179 EP
28179 EP	Obturator , diameter 4 mm, for use with Dilator 28179 EC
28179 FC	Dilator , with integrated handle, long, diameter 8.1 mm, for use with threaded Cannula 28179 SD and Obturator 28179 FP
28179 FP	Obturator , diameter 4 mm, for use with Dilator 28179 FC
28179 SD-6	Cannula , with thread, transparent, unsterile, for single use, package of 6
28179 SB-6	Cannula , with thread, transparent, unsterile, for single use, package of 6

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Reconstruction of the Shoulder Joint

28270 H	Mallet , ergonomic handle, two plane faces, length 17 cm, color code: blue
28179 KS	Bone Punch , for use with Titanium Suture Anchors 2870514 TI, 2870614 TI and 2870309 ST
28179 I	Thread Catcher , working length 15 cm
28179 KP	Knot Pusher , for sutures up to size USP 2, working length 18 cm
	or
2870356 KP	Knot Pusher and Suture Cutter , for cutting sutures up to size USP 2, working length 15 cm
2870356 SC	Suture Cutter , for cutting sutures up to size USP 2, working length 15 cm
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 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

Optional Rasps for 28180 CL

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 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 GCN	SNAPPER® SHOULDER PRO® Suture Forceps , for punching soft tissue and suture management in shoulder arthroscopy, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 15 cm, color code: blue
28180 GLN	SNAPPER® SHOULDER PRO® Suture Forceps , for punching soft tissue and suture management in shoulder arthroscopy, sheath diameter 3.5 mm, curved to left, also curved to left in sheath, handle with cleaning connector, working length 15 cm, color code: red
28180 GRN	SNAPPER® SHOULDER PRO® Suture Forceps , for punching soft tissue and suture management in shoulder arthroscopy, sheath diameter 3.5 mm, curved to right, also curved to right in sheath, handle with cleaning connector, working length 15 cm, color code: green

Optional SNAPPER® SHOULDER PRO® Suture Forceps

28180 GAN	SNAPPER® SHOULDER PRO® Suture Forceps , for punching soft tissue and suture management in shoulder arthroscopy, sheath diameter 3.5 mm, curved upwards, handle with cleaning connector, working length 15 cm, color code: black
28180 GRGN	SNAPPER® SHOULDER PRO® Suture Forceps , for punching soft tissue and suture management in shoulder arthroscopy, sheath diameter 3.5 mm, retrograde opening, also curved upwards in sheath, handle with cleaning connector, working length 15 cm, color code: white
33136 P	CLICK'line® Handle , with thumb release, with 4 locking positions, for use with Suture Attachments 28180 LA/LC/LL/LR/LRG

Suture Instruments for the Rotator Cuff: 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, Wheel Attachment 28179 HR and Wheel 28179 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	Suture Catcher , with inserter, sterile, for single use, package of 10, for use with Suture Attachments 28179 PA – PH and Handle 28179 HG
28179 PC	SHOULDER PRO® Suture Attachment , distal tip curved upwards, straight, 8 mm in height, working length 15 cm, for use with Handle 28179 HG
28179 PG	SHOULDER PRO® 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	SHOULDER PRO® Suture Attachment , distal tip angled 30° to left, straight, 8 mm in height, working length 15 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

Optional Suture Attachments

28179 PA	SHOULDER PRO® Suture Attachment , distal tip curved upwards, straight, 5 mm in height, working length 15 cm, for use with Handle 28179 HG
28179 PB	SHOULDER PRO® Suture Attachment , distal tip curved upwards, straight, 7 mm in height, working length 15 cm, for use with Handle 28179 HG
28179 PD	SHOULDER PRO® Suture Attachment , hook-shaped distal tip curved upwards, straight, 8 mm in height, working length 15 cm, for use with Handle 28179 HG
28179 PE	SHOULDER PRO® 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	SHOULDER PRO® Suture Attachment , hook-shaped distal tip curved upwards, straight, 10 mm in height, working length 15 cm, for use with Handle 28179 HG

Suture Instruments for the Rotator Cuff and Labrum: WONDERHOOK®

28184 WH	WONDERHOOK® Handle, complete , for transporting monofilament threads up to size USP 1 including: Transport Cassette
28184 NG	WONDERHOOK® Suture Attachment , for use with monofilament threads up to size USP 1, straight, length of distal end 3.5 cm, working length 15 cm, for use with Handle 28184 WH, color code: blue
28184 NGL	Same , length of distal end 5 cm, long
28184 NA	WONDERHOOK® 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 MR	WONDERHOOK® 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 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 right
28184 RA	Cleaning Adaptor , for use with WONDERHOOK® Suture Attachments 28184 ML/MR/NG/NGL/NA/NR/NL

Titanium Suture Anchor, pre-assembled, with MEGAFIBRE® sutures USP 2

2870309 ST	Titanium Suture Anchor , diameter 3 mm, length 9 mm, with two MEGAFIBRE® sutures USP 2, pre-assembled, self-tapping, with inserter, sterile, for single use
2870514 TI	Titanium Suture Anchor , diameter 5 mm, length 12.5 mm, with two MEGAFIBRE® sutures 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® sutures USP 2, pre-assembled, self-tapping, with inserter, sterile, for single use

Bioresorbable Suture Anchors

2870310 BP	BIOPLUG, bioresorbable suture anchor , diameter 3.5 mm, length 10 mm, with one MEGAFIBRE® USP 2 suture preloaded, 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 TC	Drill , for preparation of the tunnel for BIOPLUG 2870514 BP, with laser marking for the depth of the drill hole, 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, 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, length 15 cm
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	Glenoid Guide , working length 12.5 cm, for use with BIOPLUG 2870411 BP, 2870310 BP and Drills 28179 TB/TD

Combined Cutting and Grasping Instrument for Biceps Tenotomy or Tenodesis

28184 MSL	BITER® , for the arthroscopic, terminal cutting of the biceps tendon, for the left shoulder, working length 15 cm
28184 MSR	Same , for the right shoulder

Instrument Set for Minimally Invasive AC Joint Reconstruction

28379 S	MINAR® , for minimally invasive AC joint repair including: Target Guide Bullet FLIPPTACK Inserter FLIPPTACK Inserter Rod Suture Awl Repositioner
28729 FC	Catgut Polyester-S white , 3 x 75 cm, USP 7, sterile, for single use, package of 24, for use with FLIPPTACK, extracortical fixation button
2x 28729 FT	FLIPPTACK , extracortical fixation button, 4 x 12 mm, sterile, for single use
28729 E	Larding Wire , pyramidal tip, diameter 2.4 mm, length 32 cm, unsterile, for single use, package of 10, for use with Undercut Drills 28729 BA – BH, Collar Burrs BLC – BLF and Drills 28729 GA – GE
28729 BA	Undercut Drill , cannulated, diameter 4.5 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E

Hip Joint

Basic Sets

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
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 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
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
2x 28140 D	Gasket Attachment , with cone, including Gasket 28140 GU, for use with all Arthroscope Sheaths
2x 28140 DB	Puncture Needle , outer diameter 2.1 mm, inner diameter 1.6 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
28140 GU	Gasket , unsterile, for single use, package of 10, single-packaged, for use with Gasket Attachment 28140 D
28140 O	Obturator , cannulated, with handle, diameter 4.8 mm
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 ZAA	Aimer , for use with Guide Sleeves 28140 ZBA/ZCA
28140 ZBA	Guide Sleeve , short, working length 10.5 cm, for use with Aimer 28140 ZAA
28140 ZCA	Guide Sleeve , long, working length 14.5 cm, for use with Aimer 28140 ZAA
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 Nitinol Guide Wire 28140 GW
28140 GW-6	Nitinol Guide Wire , diameter 1.5 mm, length 40 cm, unsterile, for single use, 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
28140 CF	Microfracture Chisel , curved 90°, working length 16 cm
28140 LM	Knife , round, straight, working length 11.5 cm
28140 BM	Knife , round, angled 20°, working length 11.5 cm
28140 MG	Knife , pointed, curved, double-edged, working length 18 cm
28140 T	Probe , graduated, length of hook 3 mm, diameter 1.5 mm, working length 18 cm
28140 TB	Probe , graduated, length of hook 3 mm, angled downwards 20°, diameter 1.5 mm, working length 20 cm
28140 KE	Curette , oval, small, both sides cutting, curved, 20° upwards, working length 18 cm

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® ARTHRO HOPKINS® Telescope 28731 AE and Obturator 28134 O with cannulated handle or Obturators 28126 BC/BT
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
28140 EWK	Changing Rod ENDOCAMELEON® , cannulated, diameter 3.8 mm, working length 31 cm, for use with Arthroscope Sheath ENDOCAMELEON® 28136 EC and Nitinol Guide Wire 28140 GW

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

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, inner diameter 1.6 mm, for use with Guide Wire 28140 GW
- 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, inner diameter 1.6 mm, for use with Guide Wire 28140 GW
- 3x 28179 DG **Valve Housing**, with LUER-Lock, for use with Cannulas and Set of Gaskets 28179 GS
- 28140 SA-6 **Cannula**, with thread, transparent, unsterile, for single use, package of 6
- 28140 SD-6 **Cannula**, with thread, transparent, unsterile, for single use, package of 6

Recommended Shaver Blades, Hip Arthroscopy

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

Wrist Arthroscopy

28320

Wrist Arthroscopy Set

including:

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

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

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

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

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

Obturator, blunt, for use with Arthroscope Sheath 28306 BN

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

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

SILGRASP® PRO Suture Grasper, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

SILCUT® PRO Oval Biter, through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 2 mm, jaws curved to left 45°, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

Same, jaws curved to right 45°

HARTMANN Forceps, extra delicate, serrated, 1 x 4.5 mm, working length 12.5 cm

MASING Needle Holder, smooth jaws, working length 8 cm

Retractor, 2 x 3 prongs, blunt, length 10 cm

Recommended Grasping Forceps for Small Joints

28572 CGU

SILGRASP® PRO Cartilage Grasping Forceps, spoon-shaped jaws, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

28572 GU

SILGRASP® PRO Grasping Forceps, spoon-shaped jaws, serrated, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

Recommended Shaver Blades for Small Joints, Arthroscopy

28206 FAS

Small Joint Burr, sterile, for single use, diameter 2.5 mm, working length 70 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB, color code: orange

28206 FBS

Small Joint Burr, sterile, for single use, diameter 3.5 mm, working length 70 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB, color code: orange

28206 DAS

Aggressive Full Radius Resector, sterile, for single use, diameter 2.5 mm, working length 70 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB, color code: blue

28206 DBS

Aggressive Full Radius Resector, sterile, for single use, diameter 3.5 mm, working length 70 mm, package of 6, for use with UNIDRIVE® S III ARTHRO SCB, color code: blue

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

28330

Accessory Set Hand Arthroscopy, complete,

including:

Ligature Scissors, with tungsten carbide blades, curved, lower blade serrated, length 18 cm, color code: one black handle ring, one gold-plated handle ring

MAYO Scissors, curved, length 17 cm

JAMESON Scissors, curved, pointed, delicate tips, length 15.5 cm

BEYER Rongeur, slender, curved, length 17 cm

Needle Holder, tungsten carbide inserts, length 15 cm

2x **Hook**, one prong, large curve, length 18 cm

2x **JOSEPH Double Hook**, sharp, width 7 mm, length 15 cm

2x **HALSTEAD "Mosquito" Artery Forceps**, micro-model, curved, length 12.5 cm

HALSTEAD "Mosquito" Artery Forceps, micro-model, straight, length 12.5 cm

Double Elevator, size 18 cm

Retractor, double-ended, size 6 x 20 mm and 5 x 10 mm, length 14.5 cm

ADSON Tissue Forceps, 1 x 2 teeth, length 15 cm

ADSON Dressing Forceps, serrated, tungsten carbide inserts, length 12 cm

2x **Surgical Handle**, Fig. 3, length 12.5 cm, for Blades 208010 – 15, 208210 – 15

2x **Towel Forceps**, with serrated inserts, length 13 cm, for paper cover sheets

Medicine Cup, 100 cm³, diameter 80 mm, height 30 mm

Carpal Tunnel Syndrome

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
28147 C	GILBERT Operating Sheath , continuously slotted, diameter 5.5 mm, working length 9 cm, for use with Obturator 28147 CO and HOPKINS® Telescope 28731 BVA
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 28147 RM, 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® Wide Angle Forward-Oblique Telescope 30° , enlarged view, diameter 4 mm, length 18 cm, autoclavable Optical Dissector , with distal spatula, fenestrated, 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 ROBI® KELLY Grasping Forceps , CLERMONT-FERRAND model, with connector pin for bipolar coagulation, especially suitable for dissection, double action jaws, size 3.5 mm, length 20 cm, color code: light blue
optional 50300 ES	Optical Dissector , with distal spatula, working length 14.5 cm, for use with HOPKINS® telescopes 30°

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

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, length 23 cm, for use with Arthroscope Sheath 28132 CR
28145 S	Probe , graduated, length of hook 2 mm, diameter 1.5 mm, working length 8.5 cm
28728 CG	Microfracture Chisel , angled 30°, working length 9 cm
28728 CH	Microfracture Chisel , angled 70°, working length 9 cm
28572 AD	SILCUT® PRO Punch , through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 AE	SILCUT® PRO Punch , through-cutting, cross-toothed, cutting width 1 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 O	SILCUT® PRO Oval Biter , through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 G	SILGRASP® PRO Grasping Forceps , spoon-shaped jaws, serrated, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 CGU	SILGRASP® PRO Cartilage Grasping Forceps , spoon-shaped jaws, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 GU	SILGRASP® PRO Grasping Forceps , spoon-shaped jaws, serrated, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

Ankle 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, length 23 cm, for use with Arthroscope Sheath 28132 CR
28145 S	Probe , graduated, length of hook 2 mm, diameter 1.5 mm, working length 8.5 cm
28728 CG	Microfracture Chisel , angled 30°, working length 9 cm
28728 CH	Microfracture Chisel , angled 70°, working length 9 cm
28572 AD	SILCUT® PRO Punch , through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 AE	SILCUT® PRO Punch , through-cutting, cross-toothed, cutting width 1 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 O	SILCUT® PRO Oval Biter , through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 G	SILGRASP® PRO Grasping Forceps , spoon-shaped jaws, serrated, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 CGU	SILGRASP® PRO Cartilage Grasping Forceps , spoon-shaped jaws, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm
28572 GU	SILGRASP® PRO Grasping Forceps , spoon-shaped jaws, serrated, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog



HOPKINS® TELESCOPES AND SHEATHS

ENDOCAMELEON® ARTHRO 28-29

HOPKINS® TELESCOPES, Diameter 4 mm,
ARTHROSCOPE SHEATHS
Diameter 5.5 - 6.5 mm 30-36

OBTURATORS AND
CHANGING RODS 37

HOPKINS® TELESCOPES,
Diameter 1.9 - 2.7 mm,
ARTHROSCOPE SHEATHS
Diameter 2.5 - 4 mm 38-41



 **EndoCAMEleon®** ARTHRO



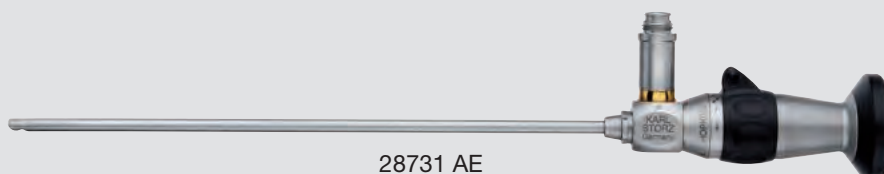
Diameter 4 mm, length 18 cm

Recommended in combination with IMAGE1 S™ (CLARA and CHROMA modes)

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.



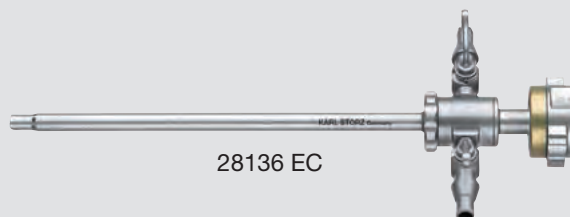
28731 AE



ENDOCAMELEON® telescope
with variable direction of view
– isometric view

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

Arthroscope 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 Obturator 28134 O with cannulated handle or Obturators 28126 BC/BT



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.

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Components/Spare Parts see chapter 18

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**.

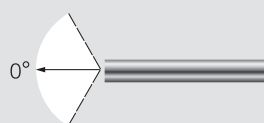
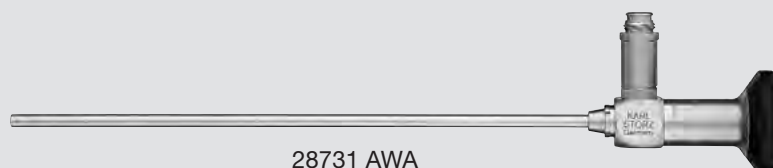
The color code of the HOPKINS® telescopes denotes the direction of view.

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



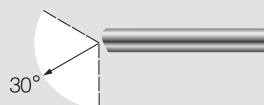
Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Diameter 4 mm, length 18 cm



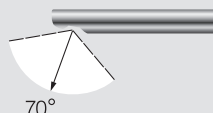
28731 AWA

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

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog
Components/Spare Parts see chapter 18

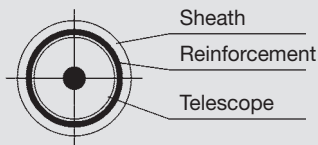
Arthroscope Sheaths

with Standard Coupling Mechanism

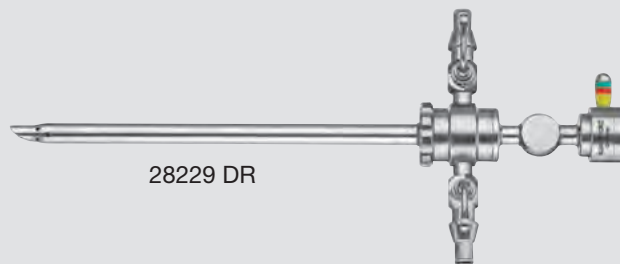
Diameter 6.5 and 5.5 mm, working length 12 cm,
for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm

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.

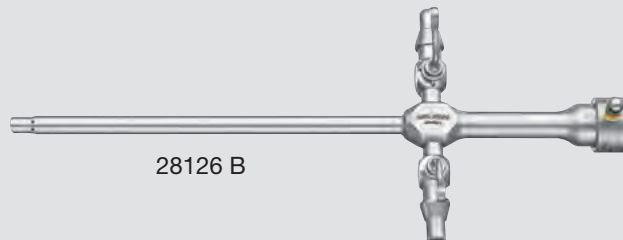


*Increased inflow and outflow rate
without disturbing turbulence*



28229 DR

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

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 30

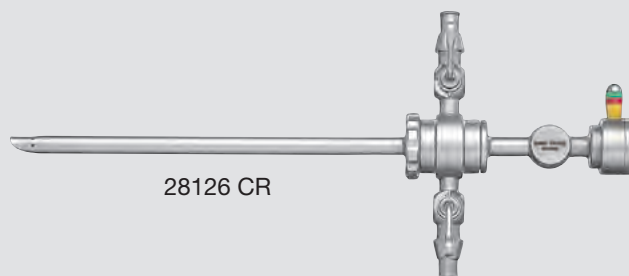
Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

Components/Spare Parts see chapter 18

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 30

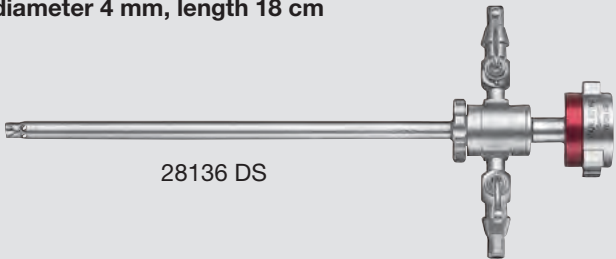
Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

Components/Spare Parts see chapter 18

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

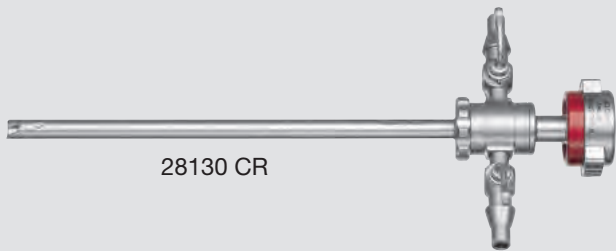


28136 DS



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, 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

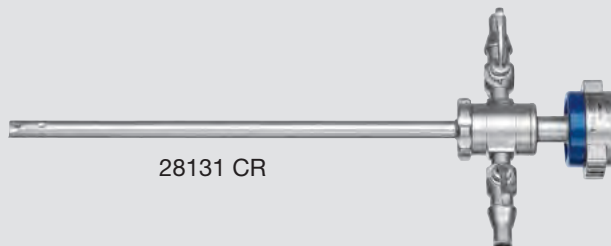
Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

Components/Spare Parts see chapter 18

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

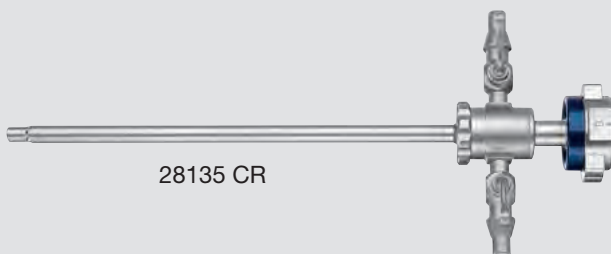


28131 CR

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.

Components/Spare Parts see chapter 18

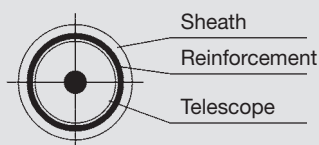
Arthroscope Sheath

with Lock-in Coupling Mechanism

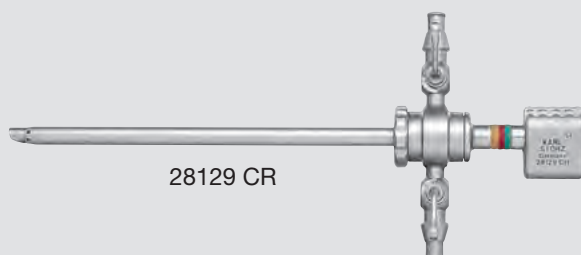
Diameter 6 mm, working length 12 cm,
for use with HOPKINS® telescopes, diameter 4 mm, length 18 cm

Special Features:

- Click mechanism for adaption between telescope and sheath



*Increased inflow and outflow rate
without disturbing turbulence*



28129 CR

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

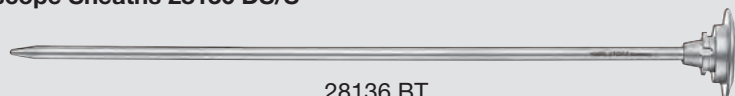
***Note:** For an overview of color codes for HOPKINS® Telescopes see page 30

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.

Components/Spare Parts see chapter 18

Obturator and Changing Rods

For use with Arthroscope Sheaths 28136 DS/S

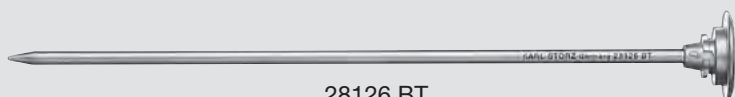


28136 BT

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

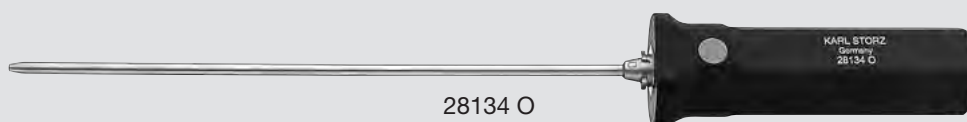


28126 BT

28126 BT **Obturator**, semisharp

28126 BS **Same**, sharp

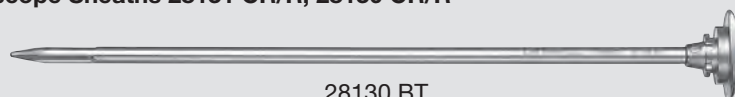
28126 BC **Same**, blunt



28134 O

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

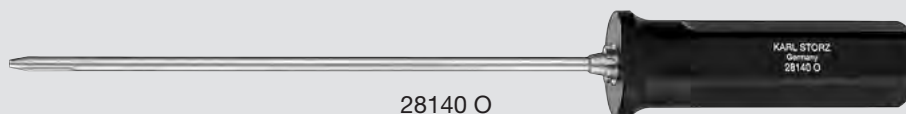
For use with Arthroscope Sheaths 28131 CR/R, 28130 CR/R



28130 BT

28130 BT **Obturator**, semisharp

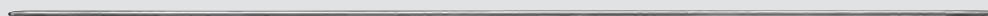
28130 BC **Same**, blunt



28140 O

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

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



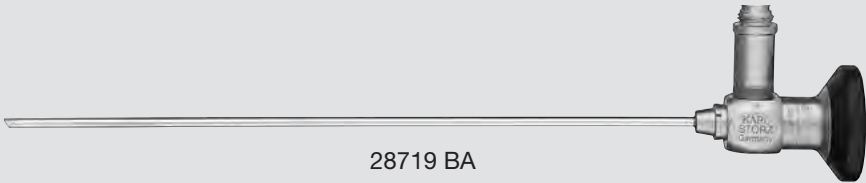
28124 BX

28124 BX **Changing Rod**, length 23 cm, for use with
arthroscope sheaths with inner diameter 4 mm

28270 W **Same**, length 35 cm

Components/Spare Parts see chapter 18

Diameter 2.7 mm, length 18 cm



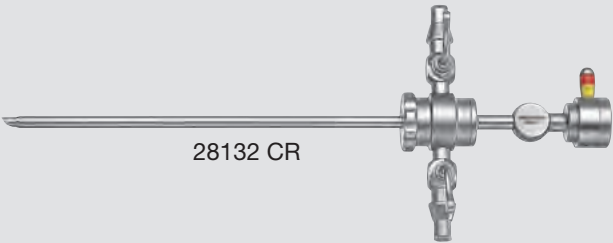
28719 BA



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

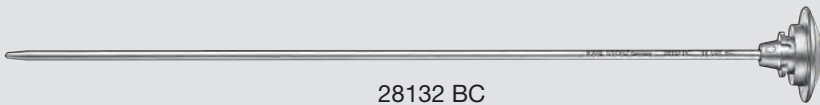


28132 CR



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 Obturator 28132 BC, *color code: red-yellow



28132 BC

28132 BC

Obturator, blunt, for use with Arthroscope Sheath 28132 CR

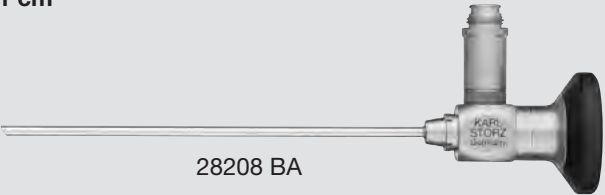
***Note: For an overview of color codes for HOPKINS® Telescopes** see page 30

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.

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog
Components/Spare Parts see chapter 18

HOPKINS® Telescope and Arthroscope Sheath with Snap-in Coupling Mechanism

Diameter 2.7 mm, length 11 cm



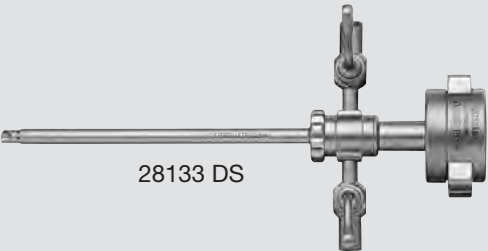
28208 BA



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

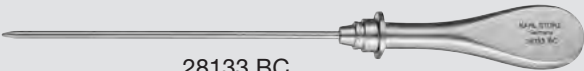


28133 DS



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

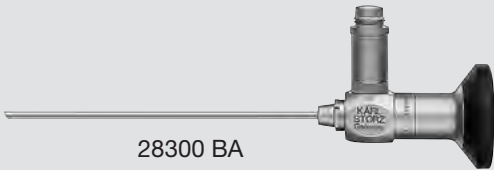
Obturator, blunt, for use with Arthroscope Sheath 28133 DS

***Note:** For an overview of color codes for HOPKINS® Telescopes see page 30

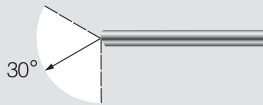
Please note: Up to now arthroscope sheaths and trocars included two obturators. Due to customer demand, we will deliver the sheaths and trocars without obturators in future. We ask you to specify the required obturator in your order.

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog
Components/Spare Parts see chapter 18

Diameter 2.4 mm, length 10 cm



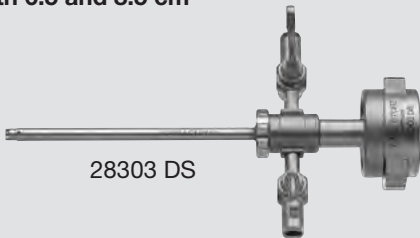
28300 BA



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

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

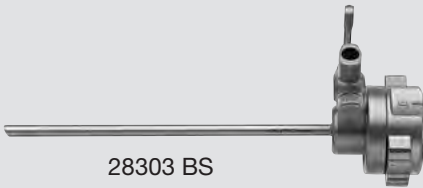


28303 DS



28303 DS

High-Flow Arthroscope Sheath, with snap-in coupling mechanism, 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

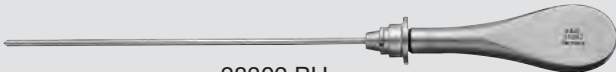


28303 BS



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

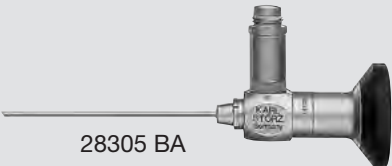
***Note: For an overview of color codes for HOPKINS® Telescopes** see page 30

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.

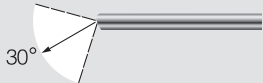
Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Components/Spare Parts see chapter 18

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 30

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.

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Components/Spare Parts see chapter 18





HOSPITAL INSTRUMENTS

RETRACTORS, PROBES, PALPATION HOOKS,
KNIVES, CURETTES, MIRRORS,
CHISELS, RASPS, CANNULAS 44-52



801810

801810 LANGENBECK **Retractor**, size 43 x 13 mm,
length 21 cm



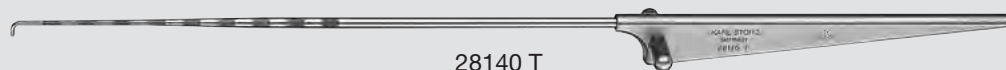
786003

786003 **Retractor**, sharp, 3 prongs,
length 17 cm



498400

498400 COTTLE **Retractor**, narrow (standard model),
length 14 cm

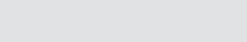


28140 T



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

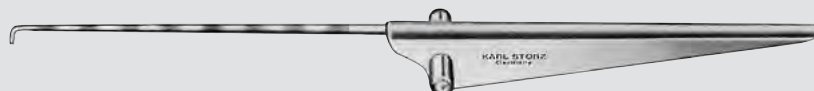
Probe, graduated, length of hook 3 mm, angled downwards 20°, diameter 1.5 mm, working length 20 cm



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

28170 S

Probe, working length 14 cm

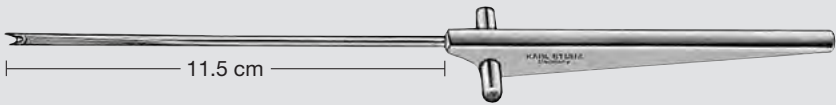


28302 S

28302 S

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

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

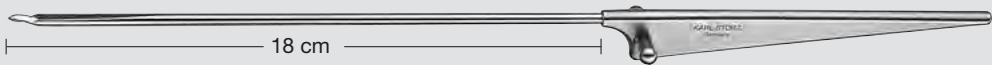


NEW 28140 LM **Knife**, round, straight,
working length 11.5 cm



NEW 28140 BM **Knife**, round, angled 20°,
working length 11.5 cm

Working length 18 cm



28140 MG



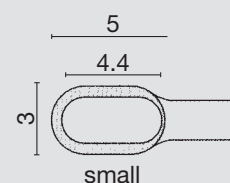
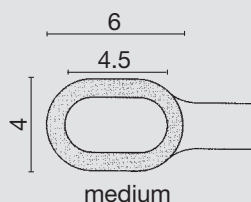
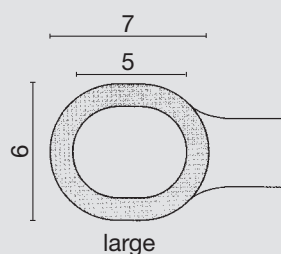
28140 MG **Knife**, pointed, curved, double-edged,
working length 18 cm

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



Single cutting edge



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

Double cutting edge



28195 KC **Curette**, oval, large, both sides cutting, curved, 20° upwards, working length 13 cm



28140 KE **Curette**, oval, small, both sides cutting, curved, 20° upwards, working length 18 cm

Special Features:

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



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

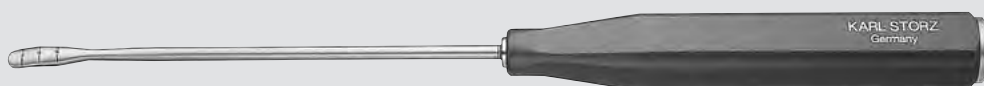
28728 MC **Mirror Attachment**, curved, 40° upwards, diameter 6.2 mm, working length 11 cm, for use with Handle 28728 G

Chisel

Notch chisels 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

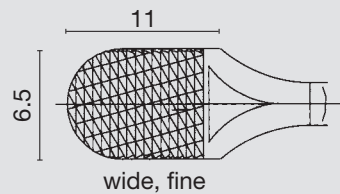
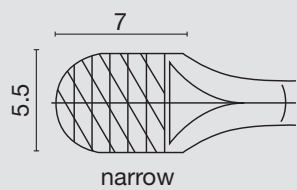
These instruments were primarily developed for the smoothing of bone surfaces after removing portions of bone in the knee joint (notchplasty, osteophytes), in the ankle joint, in the elbow joint and the wrist.

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 with a motor system, the risk of injuring intact synovial or cartilage areas is considerably reduced
- Easy to use



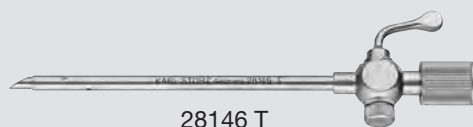
28728 DB

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



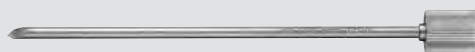
28728 DC

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



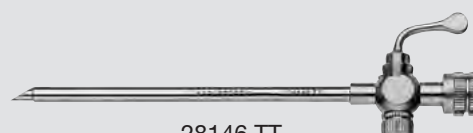
28146 T

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



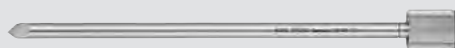
28146 QO

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

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.

Components/Spare Parts see chapter 18



PUNCHES, FORCEPS AND SCISSORS

SILCUT® PRO AND
SILCUT® PUNCHES AND SCISSORS 54-61

SILGRASP® PRO AND
SILGRASP® GRASPING FORCEPS 62-67

SPECIAL PUNCHES, FORCEPS 68-69

RETROFORCE® BIOPSY PUNCH 70-71

The new hand instruments in the SILCUT® PRO and SILCUT® product lines set standards in arthroscopic resection. The combination of utmost precision, state-of-the-art design and an optimal cleaning concept make these instruments unique.

Unique benefits of the SILCUT® PRO and SILCUT® instruments:



Unique hygiene concept for efficient instrument cleaning (KARL STORZ CLEANFIT®)



Ergonomic handle for fatigue-free work while the large aperture angle of the instrument jaws allows efficient resection

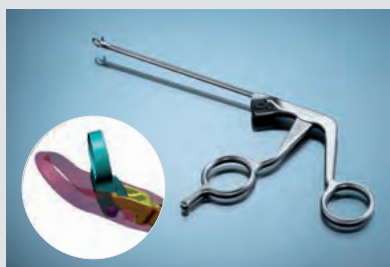
The SILCUT® PRO premium line offers further decisive advantages for your applications:



Extremely flat jaw (1.5 – 1.9 mm) for improved anatomical adaptation



Special jaw shapes for gentle access in challenging indications



Optimized mechanics for better cutting force and cutting sensation

The new hand instruments in the SILCUT® PRO and SILCUT® product lines set standards in arthroscopic resection. The combination of utmost precision, state-of-the-art design and an optimal cleaning concept make these instruments unique.

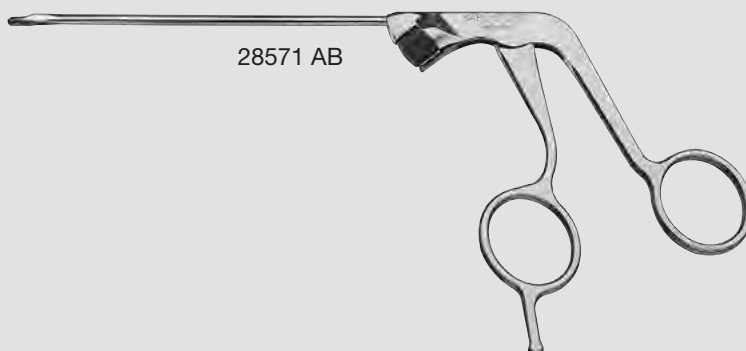
Unique benefits of the SILCUT® PRO and SILCUT® instruments:



Unique hygiene concept for efficient instrument cleaning (KARL STORZ CLEANFIT®)



Ergonomic handle for fatigue-free work while the large aperture angle of the instrument jaws allows efficient resection



28571 AB

Square jaws

Cross-toothed, cutting width 3.4 mm, sheath diameter 3.5 mm, working length 12 cm
(recommended for the knee and shoulder)



28571 AB

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 3.4 mm, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 BB

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



28571 BBL
NEW

SILCUT® PRO Upbiter, through-cutting, cross-toothed, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3.5 mm, curved 15° to left and 10° curved upwards, handle with cleaning connector, working length 12 cm



28571 BBR
NEW

Same, 15° to right

Cross-toothed, cutting width 2.7 mm, sheath diameter 3.5 mm, working length 12 cm
(recommended for the knee and shoulder)



28571 AC

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 2.7 mm, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 BC

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

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18



Cross-toothed, cutting width 2 mm, sheath diameter 2.5 mm, working length 8.5 cm
(recommended for small joints)



28572 AD

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 ADL
NEW

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 2 mm, jaws curved to left 45°, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 ADR
NEW

Same, jaws curved to right 45°

Cross-toothed, cutting width 1 mm, sheath diameter 2.5 mm, working length 8.5 cm
(recommended for small joints)



28572 AE

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 1 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

Oval jaws

Cross-toothed, cutting width 4.1 mm, sheath diameter 3.5 mm, working length 12 cm
(recommended for the knee and shoulder)



28571 O

SILCUT® PRO Oval Biter, through-cutting, cross-toothed, cutting width 4.1 mm, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 OA

SILCUT® PRO Oval Biter, through-cutting, cross-toothed, cutting width 4.1 mm, jaws curved, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Cross-toothed, cutting width 2 mm, sheath diameter 2.5 mm, working length 8.5 cm
(recommended for small joints)



28572 O

SILCUT® PRO Oval Biter, through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

Circumferential teeth, cutting width 4.1 mm, sheath diameter 3.5 mm, working length 12 cm
(recommended for the knee and shoulder)



28571 OC

SILCUT® PRO Oval Biter, through-cutting, with circumferential teeth, cutting width 4.1 mm, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 OAC

SILCUT® PRO Oval Upbiter, through-cutting, with circumferential teeth, cutting width 4.1 mm, curved jaws, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 ODC
NEW

SILCUT® PRO Oval Downbiter, through-cutting, with circumferential teeth, cutting width 4.1 mm, curved jaws, 15° downwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Container for Sterilization and Storage of Instruments see HYGIENE catalog

Components/Spare Parts see chapter 18



Special jaw design

Circumferential teeth, cutting width 5.8 mm, sheath diameter 3.5 mm, working length 12 cm (recommended for the knee and shoulder)



28571 E

SILCUT® PRO Giga Punch, through-cutting, with circumferential teeth, cutting width 5.8 mm, straight jaws, sheath diameter 3.5 mm, straight, handle with connector for cleaning, working length 12 cm



28571 EU

SILCUT® PRO Giga Punch, through-cutting, with circumferential teeth, cutting width 5.8 mm, curved jaws, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Circumferential teeth, cutting width 5 mm, sheath diameter 3.5 mm, working length 12 cm (recommended for the knee and shoulder)



28571 S

SILCUT® PRO Square Punch, through-cutting, with circumferential teeth, cutting width 5 mm, rhombic jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 SU

SILCUT® PRO Square Punch, through-cutting, with circumferential teeth, cutting width 5 mm, rhombic jaws, 15° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Circumferential teeth, cutting width 4.3 mm, sheath diameter 3.5 mm, working length 12 cm (recommended for the knee and shoulder)



28571 CL

SILCUT® PRO Side Punch, through-cutting, with circumferential teeth, cutting width 4.3 mm, angled jaws, curved to left 45°, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 CLU

SILCUT® PRO Side Punch, through-cutting, with circumferential teeth, cutting width 4.3 mm, angled jaws, 15° upwards, left 45°, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 CR

SILCUT® PRO Side Punch, through-cutting, with circumferential teeth, cutting width 4.3 mm, angled jaws, curved to right 45°, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 CRU

SILCUT® PRO Side Punch, through-cutting, with circumferential teeth, cutting width 4.3 mm, angled jaws, 15° upwards, right 45°, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Scissors

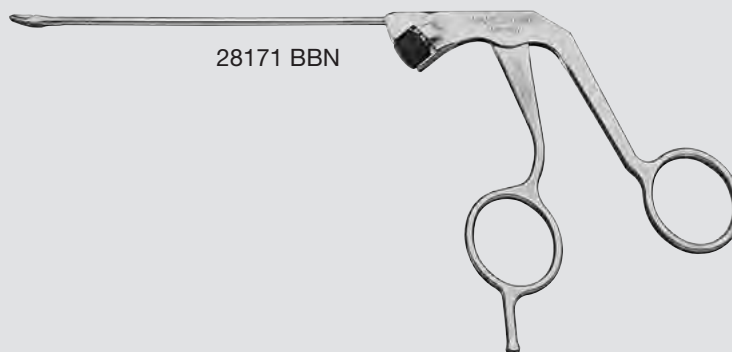


28571 SP

SILCUT® PRO Scissors, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 14 cm

Container for Sterilization and Storage of Instruments see HYGIENE catalog

Components/Spare Parts see chapter 18



28171 BBN

Square jaws

Cross-toothed, cutting width 3.4 mm, sheath diameter 3 mm, working length 19 cm (recommended for the shoulder and hip)



28171 KPN

SILCUT® Punch, through-cutting, cross-toothed, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 19 cm



28171 KUN

SILCUT® Punch, through-cutting, cross-toothed, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 15° curved upwards, handle with cleaning connector, working length 19 cm

Cross-toothed, cutting width 3.4 mm, sheath diameter 3 mm, working length 12 cm (recommended for the knee)



28171 ABN

SILCUT® Punch, through-cutting, cross-toothed, 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, cross-toothed, 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, cross-toothed, 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, cross-toothed, 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, cross-toothed, 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, cross-toothed, 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, cross-toothed, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 15° curved upwards, handle with cleaning connector, working length 12 cm

Container for Sterilization and Storage of Instruments see HYGIENE catalog

Components/Spare Parts see chapter 18



Cross-toothed, cutting width 2.7 mm, sheath diameter 3 mm, working length 12 cm (recommended for the knee)



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



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

Cross-toothed, cutting width 1.5 mm, sheath diameter 3 mm, working length 12 cm (recommended for the knee)



28171 ADN **SILCUT® Punch**, through-cutting, cross-toothed, 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, cross-toothed, cutting width 1.5 mm, jaws curved, 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 (recommended for the knee)



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



28171 SLN **SILCUT® Punch**, through-cutting, 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® Punch**, through-cutting, cutting width 0.5 mm, straight jaws, sheath diameter 3 mm, 10° curved to right, handle with cleaning connector, working length 12 cm

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18



Oval jaws

Cross-toothed, cutting width 4.1 mm, sheath diameter 3 mm, working length 12 cm
(recommended for the knee)



28171 OAN

SILCUT® Oval Upbiter, through-cutting, cross-toothed, cutting width 4.1 mm, 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, cutting width 4.1 mm, jaws curved, 15° upwards, sheath diameter 3 mm, 15° curved upwards, handle with cleaning connector, working length 12 cm

Special jaw design

Cross-toothed, cutting width 3.4 mm, sheath diameter 3 mm, working length 12 cm
(recommended for the knee)



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

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18

SILGRASP® PRO Grasping Forceps

The SILGRASP® PRO and SILGRASP® hand instruments from KARL STORZ include forceps for grasping various tissue structures. The combination of utmost precision, state-of-the-art design and an optimal cleaning concept make these instruments unique.

Unique benefits of the SILGRASP® PRO and SILGRASP® grasping forceps:



Unique hygiene concept for efficient instrument cleaning (KARL STORZ CLEANFIT®)



Ergonomic handle for fatigue-free work while the large aperture angle of the instrument jaws allows efficient grasping

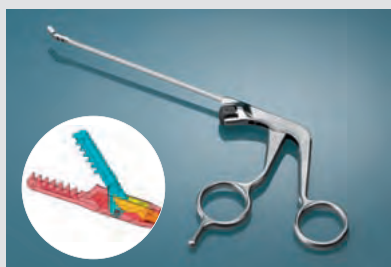
The SILGRASP® PRO premium line offers further decisive advantages for your applications:



Filigree jaws for improved anatomical adaptation



Special jaw shapes for gentle access in challenging indications



Optimized mechanics for enhanced tactile feedback

SILGRASP® Grasping Forceps

The SILGRASP® PRO and SILGRASP® hand instruments from KARL STORZ include forceps for grasping various tissue structures. The combination of utmost precision, state-of-the-art design and an optimal cleaning concept make these instruments unique.

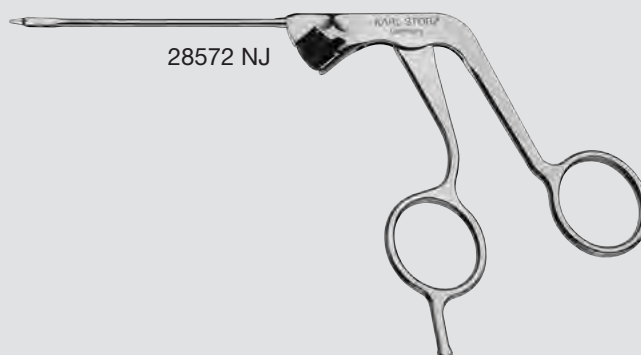
Unique benefits of the SILGRASP® PRO and SILGRASP® grasping forceps:



Unique hygiene concept for efficient instrument cleaning (KARL STORZ CLEANFIT®)



Ergonomic handle for fatigue-free work while the large aperture angle of the instrument jaws allows efficient grasping



28572 NJ

Sheath diameter 2.8 mm, working length 8.5 cm (recommended for small joints)



28572 NJ

SILGRASP® PRO Suture Grasper, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 CG

SILGRASP® PRO Cartilage Grasping Forceps, spoon-shaped jaws, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 CGU

SILGRASP® PRO Cartilage Grasping Forceps, spoon-shaped jaws, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 G

SILGRASP® PRO Grasping Forceps, spoon-shaped jaws, serrated, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 GU

SILGRASP® PRO Grasping Forceps, spoon-shaped jaws, serrated, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 AG

SILGRASP® PRO Alligator Grasping Forceps, serrated, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18

SILGRASP® PRO Grasping Forceps ^{NEW}



Sheath diameter 3.5 mm, working length 12 cm (recommended for the knee)



28571 FG

SILGRASP® PRO Foreign Body Grasper, aggressive, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 CG

SILGRASP® PRO Cartilage Grasping Forceps, spoon-shaped jaws, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 CGU

SILGRASP® PRO Cartilage Grasping Forceps, spoon-shaped jaws, jaws curved, 30° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 G

SILGRASP® PRO Grasping Forceps, spoon-shaped jaws, serrated, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 GU

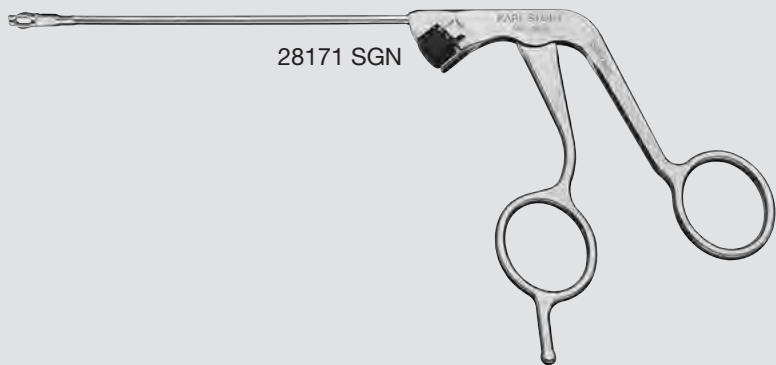
SILGRASP® PRO Grasping Forceps, spoon-shaped jaws, serrated, jaws curved, 30° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm



28571 AG

SILGRASP® PRO Alligator Grasping Forceps, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18



28171 SGN

Sheath diameter 3 mm, working length 12 cm (recommended for the knee)



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**, straight jaws, serrated, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm

28171 AGSN **Same**, with ratchet

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18

SILGRASP® Grasping Forceps



Sheath diameter 3 mm, working length 14 cm (recommended for the knee and shoulder)



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

Sheath diameter 3.5 mm, working length 16 cm (recommended for the knee and shoulder)



28171 SGL **SILGRASP® Suture Grasper**, curved jaws, 45° left, sheath diameter 3.5 mm, 5° curved to left, handle with cleaning connector, working length 16 cm

28171 SGR **Same**, 45° right, 5° curved to right

Sheath diameter 3.5 mm, working length 19 cm (recommended for the shoulder and hip)



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

Sheath diameter 4 mm, working length 22 cm (recommended for the hip)



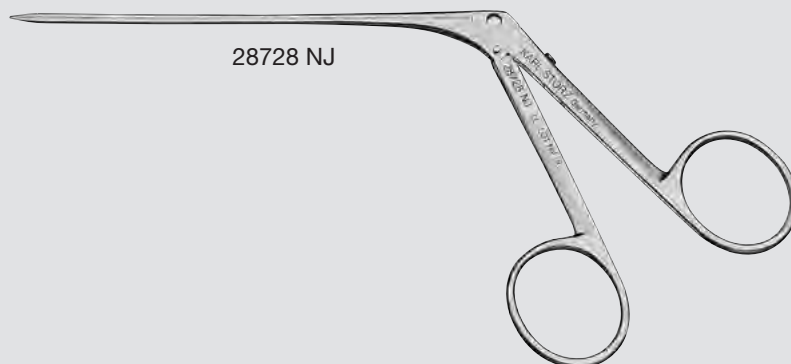
28573 FD **SILGRASP® Foreign Body Grasper**, aggressive, sheath diameter 4 mm, straight, handle with cleaning connector and ratchet, working length 22 cm

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18

Special Punches, Forceps

Grasping Forceps

Working length 8 cm (recommended for the knee and small joints)



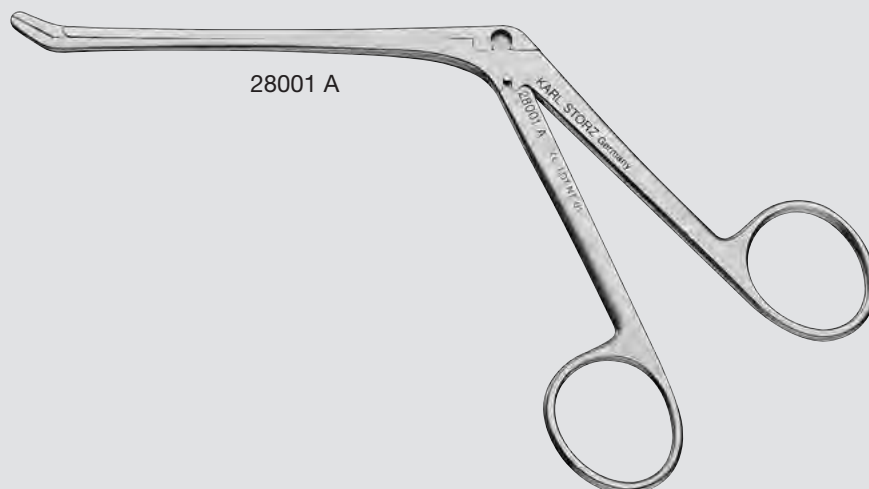
28728 NJ



28728 NJ

Suture Grasper, dismantling, jaw length 5.5 mm, straight jaws, straight sheath, working length 8 cm

Working length 9.5 cm (recommended for the knee)



28001 A



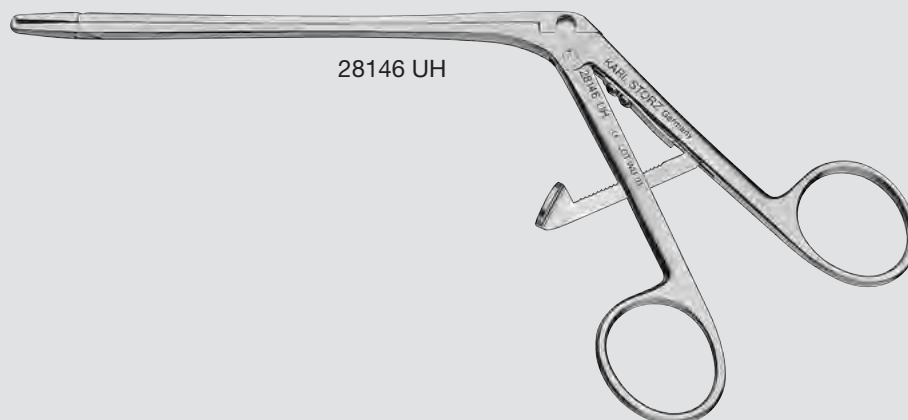
28001 A

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

Special Punches, Forceps

Meniscus Grasping Forceps, Meniscus Retractor

Working length 13 cm (recommended for the knee)

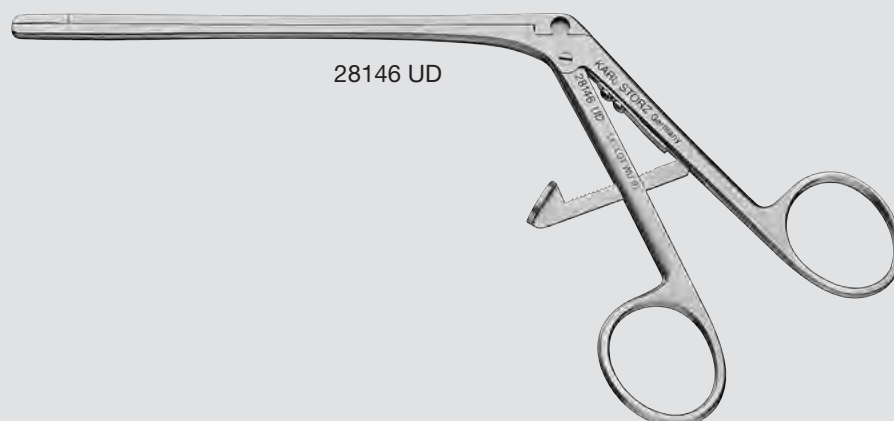


28146 UH



28146 UH

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

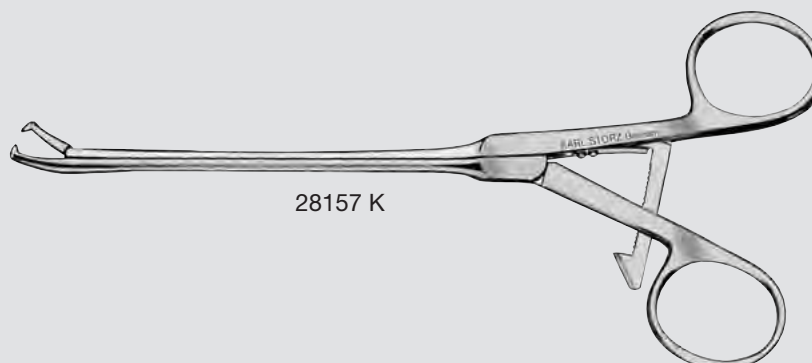


28146 UD



28146 UD

SCHLESINGER Meniscus Grasping Forceps, dismantling, with ratchet, straight jaws, straight sheath, 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

RETROFORCE® Biopsy Punch ^{NEW}

For native joints

There are a number of indications for synovial biopsy. Joint inflammation of unknown origin (e.g., sarcoidosis), the accumulation of crystals or proteins (amyloidosis) or synovial tumors (e.g. PVNS) cannot be detected in the blood or through radiological assessments. The

RETROFORCE® allows safe and fast synovial biopsies, particularly in large joints such as the shoulder, hip or knee. Thanks to this retrograde technique, biopsies can be performed without simultaneous imaging.



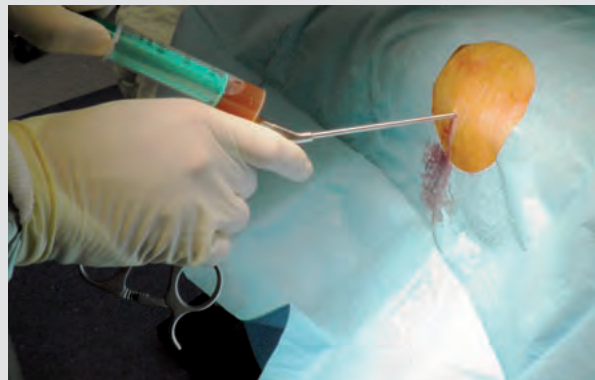
Fig. 1: The open RETROFORCE® biopsy punch after insertion via the suprapatellar recess; the correct position is confirmed by the aspiration of synovial fluid.



Fig 2: The biopsy punch is retracted until contact with the synovial tissue is obtained.



Fig. 3: The punch is closed in a retrograde manner in order to obtain the synovial biopsy.



Scan the DataMatrix code to view a video on the application of the RETROFORCE® biopsy punch.

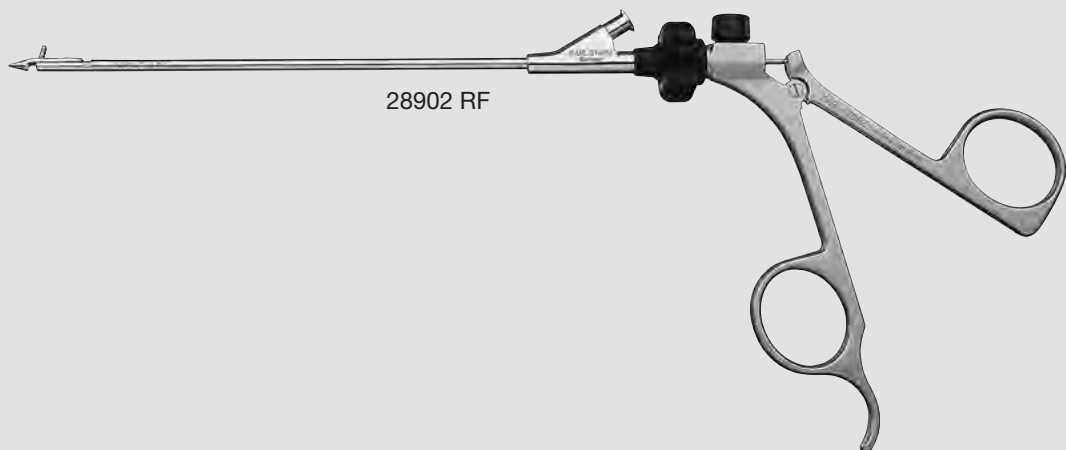
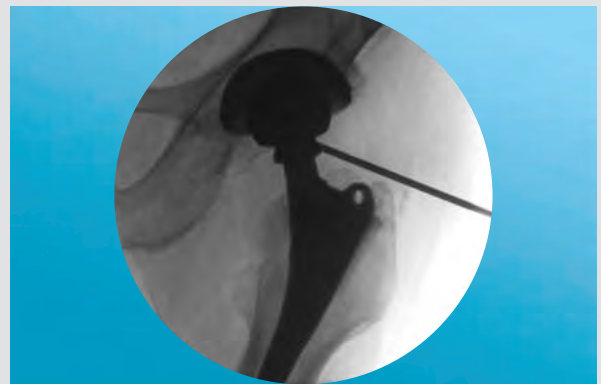
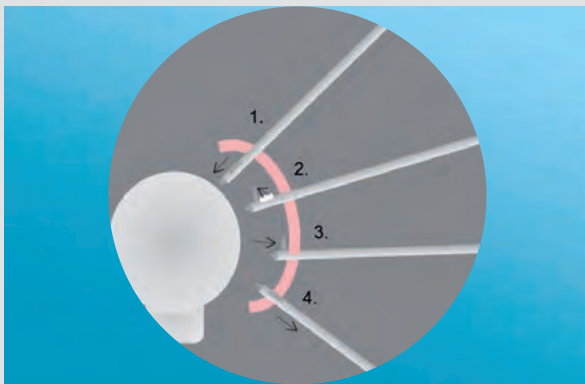


RETROFORCE® Biopsy Punch ^{NEW}

For the safe diagnosis of implant failures

Painful or loose prosthetic joints may have various causes. Infection associated with the implant, a common cause, must first be ruled out but symptoms may also arise from an allergic reaction to the implant or metal/plastic abrasion. In the case of infection in particular, synovial biopsy is far more effective than arthrocentesis alone according to available data. Furthermore, it can detect an allergic cellular reaction or

abrasion particles in the synovial membrane. RETROFORCE® allows a synovial biopsy to be safely performed under local anesthesia in a matter of minutes, e.g., in the hip, knee or shoulder joint. The robust instrument can easily pass through the tough joint capsule and provide a thorough diagnostic evaluation of possible reasons for implant failure within a short period of time.



28902 RF

RETROFORCE® Biopsy Punch, for biopsy of the joints, backward cutting, pointed, diameter 4 mm, working length 13 cm, with suction channel for the aspiration of synovial fluid, suitable for use under local anesthesia or arthroscopy

including:

Outer Sheath, with LUER-Lock connector

Inner Sheath, with backward cutting punch

Handle, without ratchet

optional:

28902 HGR **Handle**, with ratchet

Components/Spare Parts see chapter 18





JOINT AND BONE RECONSTRUCTION

INSTRUMENTS FOR MICROFRACTURING . . .74

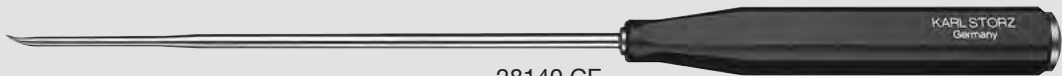
INSTRUMENTS FOR
AUTOLOGOUS CHONDROCYTE
TRANSPLANTATION 75

INSTRUMENTS FOR
BONE BLOCK HARVESTING 76-77

INSTRUMENTS FOR
CANCELLOUS BONE APPLICATION 78-79

Instruments for Microfracturing

Chisels



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



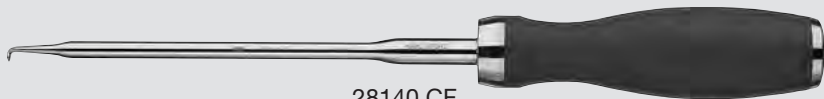
28728 CE **Microfracture Chisel**, angled 70°, working length 12 cm



28728 CG **Microfracture Chisel**, angled 30°, working length 9 cm



28728 CH **Microfracture Chisel**, angled 70°, working length 9 cm



28140 CF



28140 CF **Microfracture Chisel**, curved 90°, working length 16 cm

NEW

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

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

Components/Spare Parts see chapter 18

Instruments for Bone Reconstruction

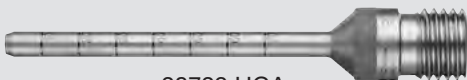
Bone Block Harvesting

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, Tap 28729 HP and Tappet 28729 HPA, color code: green
- 28729 HGB **Sleeve**, inner diameter 6 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPB, color code: black
- 28729 HGC **Sleeve**, inner diameter 7 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPC, color code: blue
- 28729 HGD **Sleeve**, inner diameter 8 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPD, color code: red
- 28729 HGE **Sleeve**, inner diameter 9 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPE, color code: yellow
- 28729 HGF **Sleeve**, inner diameter 10 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPF, color code: white-yellow
- 28729 HGG **Sleeve**, inner diameter 11 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPG, color code: white-green
- 28729 HGH **Sleeve**, inner diameter 12 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPH, color code: white-blue



28729 HH

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

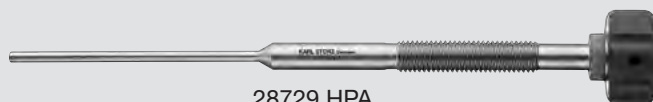


28729 HP

- 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



174800

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

Instruments for Bone Reconstruction

Cancellous Bone Applicators

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
- For use with ENDOCAMELEON®

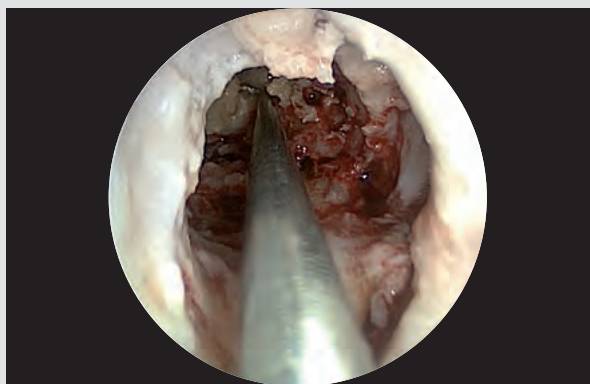


Fig. 1: Several arthroscopic interventions – mostly revision procedures – require the filling of bone defects.

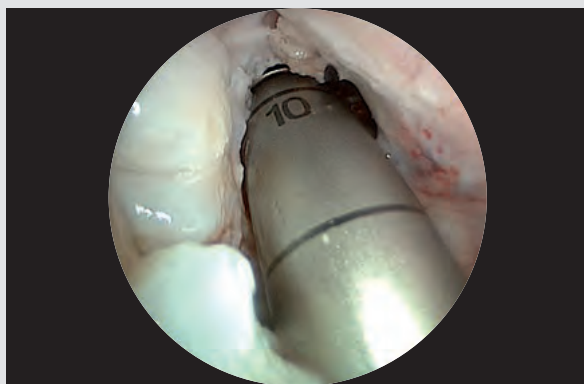


Fig. 2: Insertion and application of the filling material



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

Instruments for Bone Reconstruction

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 THE KNEE

BASIC INSTRUMENTS 82-85

MENISCUS AND MPFL
RECONSTRUCTION 86-91

CRUCIATE LIGAMENT
RECONSTRUCTION 92-113

IMPLANTS 114-125

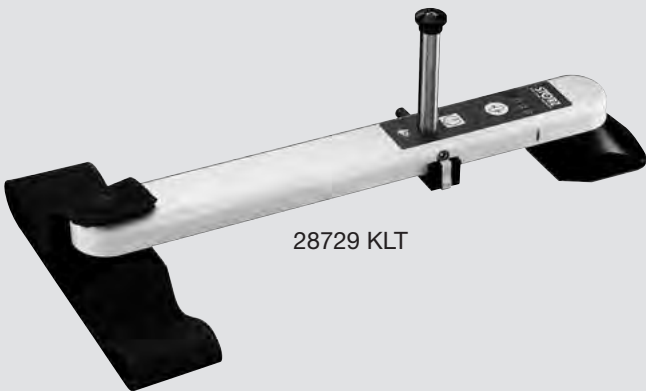
Knee Laxity Tester for Instrumented Stability Testing

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.

Special Features:

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

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



28729 KLT

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

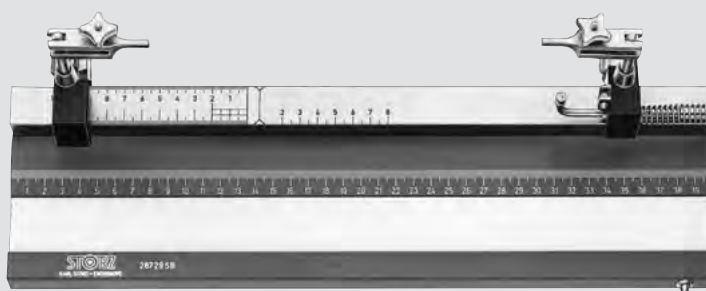


Fig. 1: Using the knee laxity tester when performing a Lachman test

Instruments for Ligament Reconstruction

Special Features:

- Preparation of different transplants (hamstrings, quadriceps tendon and patellar tendon) for various fixation techniques
- Measuring scales for rapid and safe transplant preparation using FLIPTACK
- User-friendly



28729 SB

28729 SB **Tendon Board**, including
FLIPTACK Retainer 28729 SC



28729 SC

28729 SC **FLIPTACK Retainer**



28729 FK

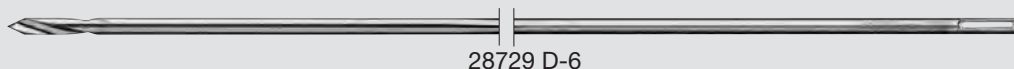
28729 FK **Thread Clip**



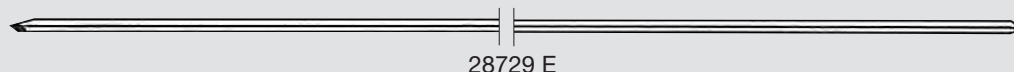
28729 P

28729 P **Tissue Forceps**, 1 x 2 teeth, medium,
distal curved to left, length 14.5 cm

Components/Spare Parts see chapter 18



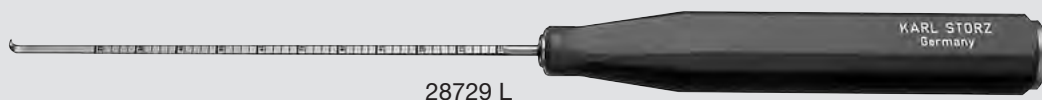
- 28729 D-6 **Drilling Wire**, spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, unsterile, for single use, package of 6, for use with Undercut Drills 28729 BA – BH, Collar Burrs 28729 BLC – BLF and Drills 28729 GA – GE



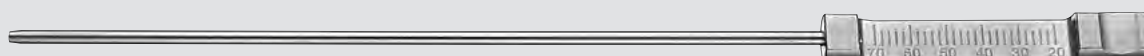
- 28729 E **Larding Wire**, pyramidal tip, diameter 2.4 mm, length 32 cm, unsterile, for single use, package of 10, for use with Undercut Drills 28729 BA – BH, Collar Burrs BLC – BLF and Drills 28729 GA – GE



- 28729 BH
28729 BA **Undercut 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 L **Length Gauge**, for cruciate ligament reconstruction, graduated, working length 23 cm



- 28729 TL **Depth Gauge**, for cruciate ligament reconstruction, working length 22.5 cm, for use with Larding Wire 28729 E

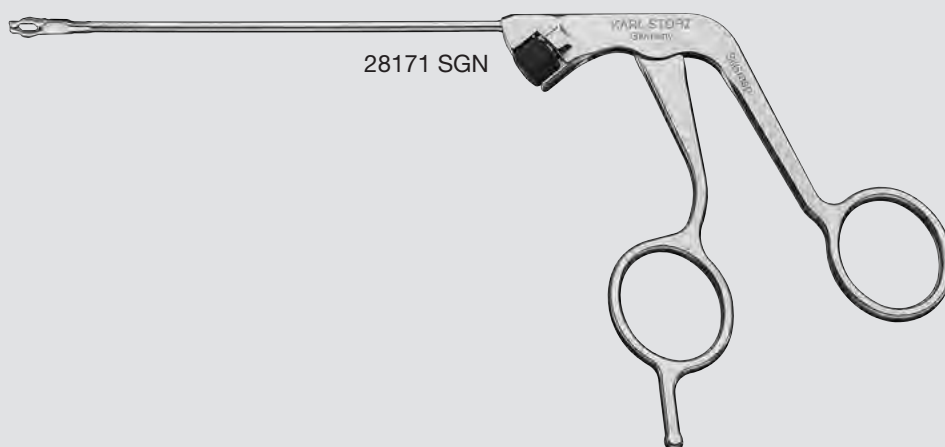


28729 FF



28729 FF

Thread Catcher, for cruciate ligament reconstruction, working length 23 cm



28171 SGN



28171 SGN

SILGRASP® Suture Grasper, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 14 cm



28729 NO



28729 NO

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

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18

Instruments for the All-Inside Suture
Meniscus Suture for 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, Wheel Attachment 28179 HR and Wheel 28179 R



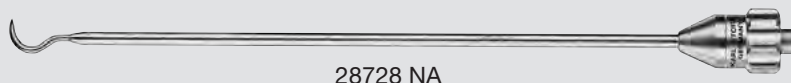
28179 HR/R

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

Instruments for the All-Inside Suture

Meniscus Suture for the Posterior Horn area of the Lateral and Medial Meniscus



28728 NA



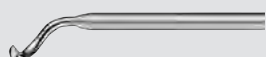
28728 NA

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



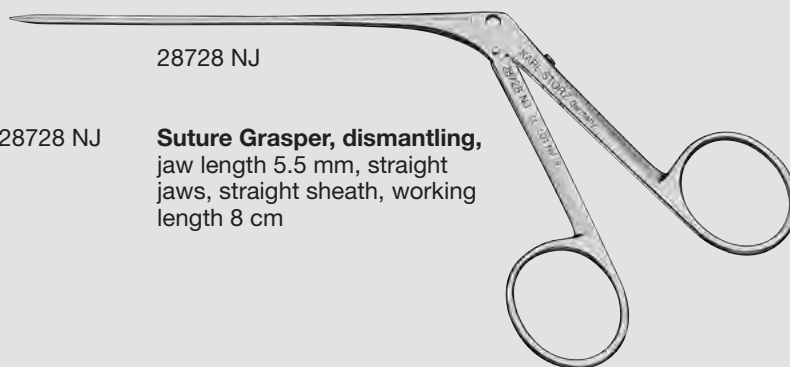
28179 R2

Cleaning Adaptor, for use with
Handle 28179 HG



28728 NJ

Suture Grasper, dismantling,
jaw length 5.5 mm, straight
jaws, straight sheath, working
length 8 cm



28728 NJ

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

Instruments for Refixation of the Meniscus Root

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.



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



28728 MH **HALF PIPE®**, without handle, small,
working length 95 mm



28572 NJ **SILGRASP® PRO Suture Grasper**, straight jaws,
sheath diameter 2.8 mm, straight, handle with
cleaning connector, working length 8.5 cm



Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18

Knee

MPFL Reconstruction with the Quadriceps Tendon

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

Special Features:

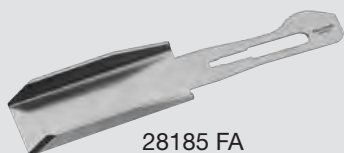
- Safe subcutaneous tendon harvesting
- Defined harvesting depth
- Attractive cosmetic results



28185 MH

28185 MH **Handle**, working length 10 cm

For use with:



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 single use, for use with Handle 28185 MH

STERILE

28185 FB **Same**, width 12 mm

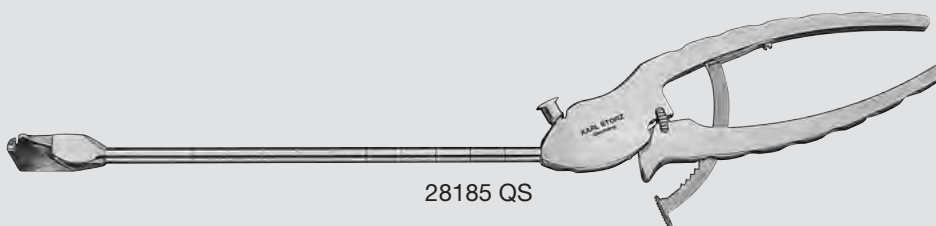


28185 EA

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

STERILE

28185 EB **Same**, height 3 mm



28185 QS

28185 QS **Quadriceps Tendon Cutter**, for subcutaneous terminal cutting of the quadriceps tendon, working length 15 cm

A workable set requires the use of additional implants see pages 114-125

Special Features:

- The implant is made of the bioresorbable material Poly(L-lactide-co-D,L-lactide)
- For Suture Anchors 2870411 BP and 2870514 BP, the use of suture material size USP 2 is recommended
- Very good degradation behavior



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

STERILE



28179 KB



28179 KB **Drill**, for preparation of the tunnel for BIOPLUG 2870411 BP, with laser marking for the depth of the drill hole, length 7 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

A workable set requires the use of additional harvesting instrumentation see page 93

A workable set requires the use of additional implants see pages 114-125

Knee

MPFL Reconstruction with the Gracilis Tendon and the Patellar Tunnel

Special Features:

- Impant-free fixation on the patella
- Optimal handling
- Safe drilling in the patella
- Stable bone bridge



28728 BL

28728 BL

Gauge, for MPFL reconstruction,
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

A workable set requires the use of additional harvesting instrumentation see page 93

A workable set requires the use of additional implants see pages 114-125



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

Special Features:

- Attachments for femoral tunnel placement via a medial port



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

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

Special Features:

- Attachments for femoral tunnel placement via a medial or transtibial port



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

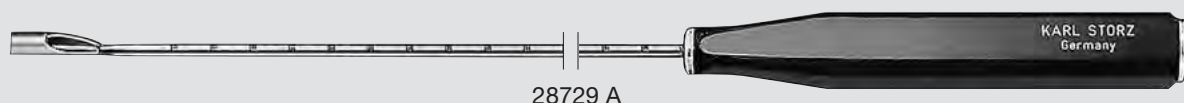
28729 ZO **Same**, with 6 mm offset

28729 ZP **Same**, with 7 mm offset

28729 ZQ **Same**, with 8 mm offset

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

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



28729 A

213008

PLESTER Raspatory,
width 8 mm, length 18 cm



28729 SA



28729 SE



28729 SD

28729 SA

Tendon Thickness Tester, for determination of
tendon thickness 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

Knee

Anterior Cruciate Ligament Reconstruction with Hamstrings Single Bundle Technique

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

A workable set requires the use of additional implants see pages 114-125

Components/Spare Parts see chapter 18

Knee

Anterior Cruciate Ligament Reconstruction with Hamstrings Double Bundle Technique



28729 SBD

28729 SBD

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

Special Features:

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



28729 WU

28729 WU

Femoral Target Guide Attachment, for the ACL 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 ZG

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



28729 ZG



28729 WT



28729 WT

Tibial Target Guide, for the ACL double bundle technique, exit point from the tibial plateau adjustable between 8 – 10 mm

A workable set requires the use of Tendon Board 28729 SB see page 83

A workable set requires the use of additional implants see pages 114-125

Components/Spare Parts see chapter 18

Knee

Anterior Cruciate Ligament Reconstruction with the Quadriceps Tendon



28185 MH

28185 MH **Handle**, working length 10 cm

For use with:



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 single use, for use with Handle 28185 MH

STERILE



28185 FD **Same**, width 9 mm

28185 FE **Same**, width 10 mm

28185 FF **Same**, width 12 mm



28185 EC

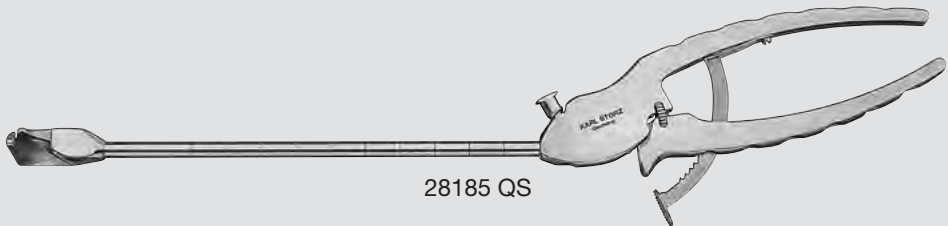
28185 EC **Tendon Separator**, for removal of the quadriceps tendon for cruciate ligament reconstruction, horizontal parallel cutting, height 5 mm, sterile, for single use, for use with Handle 28185 MH

STERILE



28185 MB

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



28185 QS

28185 QS **Quadriceps Tendon Cutter**, for subcutaneous terminal cutting of the quadriceps tendon, working length 15 cm

A workable set requires the use of additional implants see pages 114-125

Knee

Anterior Cruciate Ligament Reconstruction with the Quadriceps Tendon

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 channel 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 smooth, width 8 mm, height 5 mm, working length 15 cm
- 28185 GB **Same**, width 10 mm



28185 HA

- 28185 HA **Dilator**, rectangular, femoral, cannulated, 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



174800

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

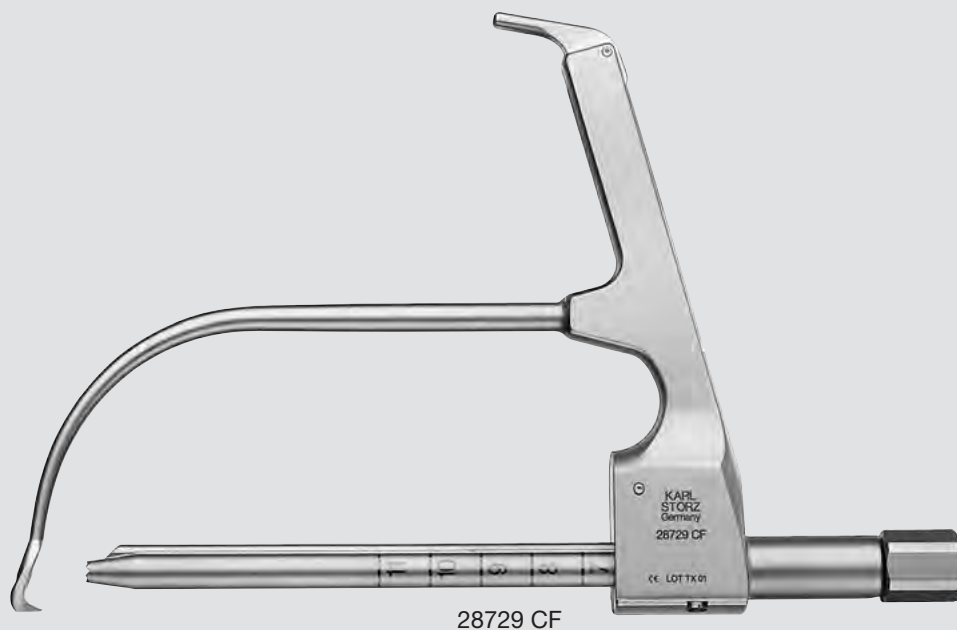
Components/Spare Parts see chapter 18

Knee

Anterior Cruciate Ligament Reconstruction with the Quadriceps Tendon

Special Features:

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



28729 CF

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



28185 IA

28185 IA	Dilator , rectangular, tibial, cannulated, 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

Components/Spare Parts see chapter 18

Knee

Anterior Cruciate Ligament Reconstruction with the Patellar Tendon (Bone-Tendon-Bone)



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 PA

28729 PA	Chisel , width 8 mm



28729 PB

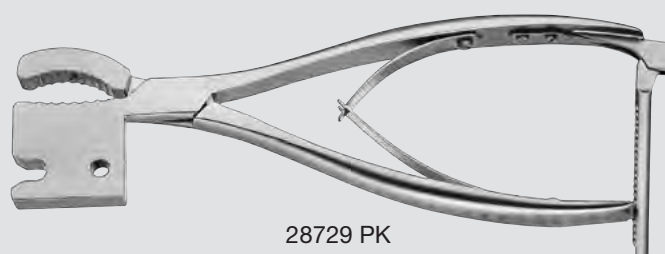
28729 PB	Tendon Knife , blunt



28729 PH



28729 PJ



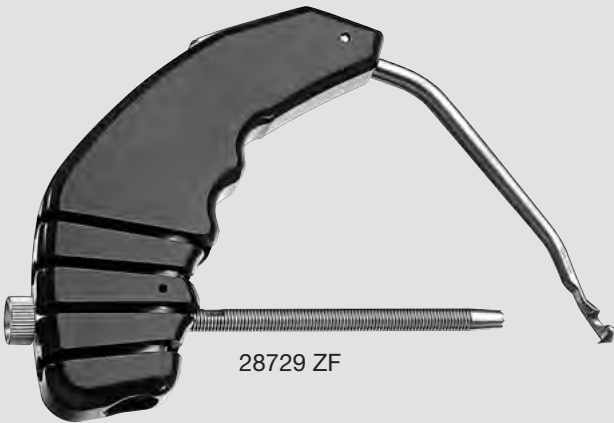
28729 PK

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

A workable set requires the use of Tendon Board 28729 SB see page 83
A workable set requires the use of additional implants see pages 114-125
Basic Instruments see page 83

Knee

Anterior Cruciate Ligament Reconstruction with the Patellar Tendon
(Bone-Tendon-Bone)



28729 ZF

28729 ZF **CHANNEL-LOCK® Tibial Target Guide**, for ACL reconstruction, tunnel angle between 40° and 55°, adjustable in 5° increments



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

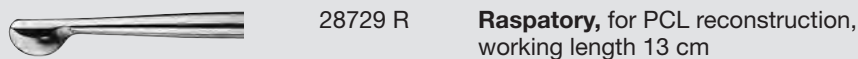
Components/Spare Parts see chapter 18

Knee

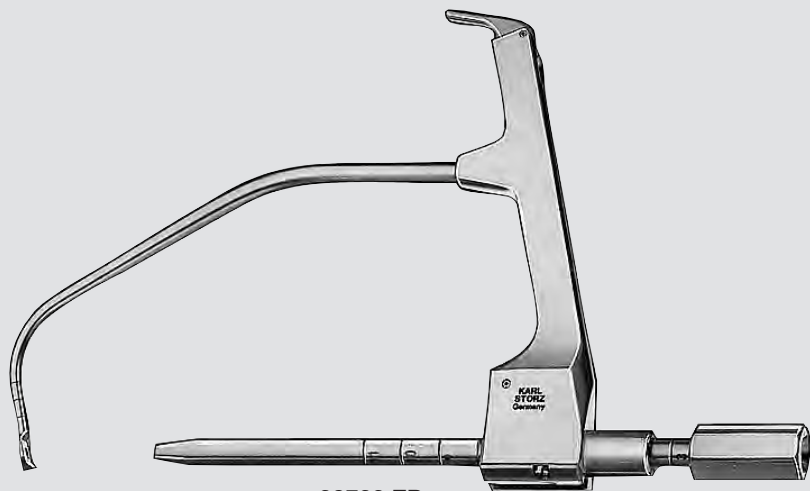
Posterior Cruciate Ligament Reconstruction

Special Features:

- Precise, reproducible tunneling



A workable set requires the use of additional implants see pages 114-125



28729 ZB

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

Special Features:

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



28729 ZBB

28729 ZBB	Tibial Target Guide , large, for PCL reconstruction

Components/Spare Parts see chapter 18



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 cannulated Drills 28729 GA – GE

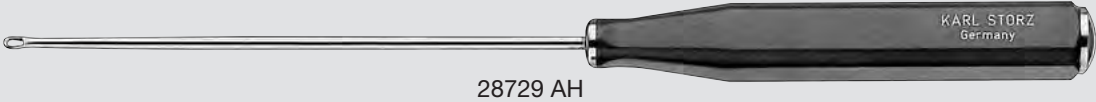
Special Features:

- 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



28729 AH



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



28729 EH



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



28729 WH



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



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

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:

- 28728 TA **Revision Screwdriver Blade**, size 1.9 mm, working length 12.5 cm
- 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 TD **Revision Screwdriver Blade**, size 2.7 mm, working length 12.5 cm
- 28728 TE **Revision Screwdriver Blade**, size 3.4 mm, working length 12.5 cm
- 28728 TF **Large Fragment Screwdriver Blade**, size 3.5 mm, working length 12.5 cm
- 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



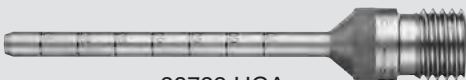
Handle

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, Tap 28729 HP and Tappet 28729 HPA, color code: green
- 28729 HGB **Sleeve**, inner diameter 6 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPB, color code: black
- 28729 HGC **Sleeve**, inner diameter 7 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPC, color code: blue
- 28729 HGD **Sleeve**, inner diameter 8 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPD, color code: red
- 28729 HGE **Sleeve**, inner diameter 9 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPE, color code: yellow
- 28729 HGF **Sleeve**, inner diameter 10 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPF, color code: white-yellow
- 28729 HGG **Sleeve**, inner diameter 11 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPG, color code: white-green
- 28729 HGH **Sleeve**, inner diameter 12 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPH, color code: white-blue



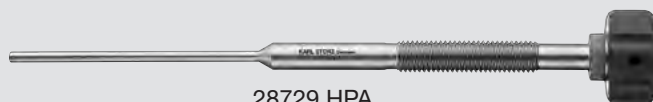
28729 HH

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



28729 HP

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



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



174800

174800

Metal Mallet, with plastic replacement head, length 22.5 cm

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
- For use with ENDOCAMELEON®



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

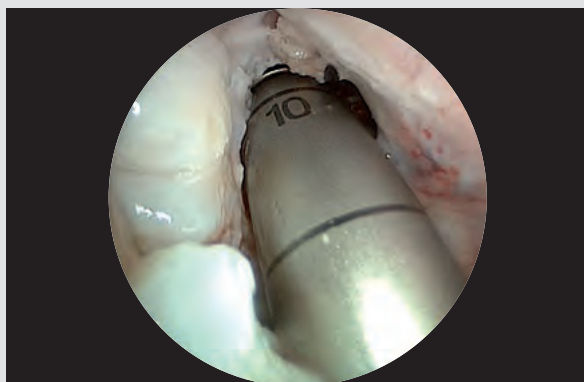


Fig. 2: Insertion and application of the filling material



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



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

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 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
28729 DFV	Same , for dilating the femoral drill channel to diameter 9.5 mm



Dilating a PL canal using a dilator with fin

Components/Spare Parts see chapter 18



28900 H

28900 H **Handle**, T-shaped, with quick coupling system, for use with Blade Dilators 28960 B/BB/C/CC/D/DD/E/EE/F/FF/G and Center Punch 28900 CP



28900 CP

28900 CP **Center Punch**, straight, with pyramidal tip, working length 14.5 cm, for use with Handle 28900 H



28960 B



28960 F

- 28960 B **Blade Dilator**, cannulated, diameter 6 mm, working length 14.5 cm, scaled to 70 mm, for compression of the tibial and femoral cancellous bone, for use with Handle 28900 H
- 28960 BB **Same**, diameter 6.5 mm
- 28960 C **Same**, diameter 7 mm
- 28960 CC **Same**, diameter 7.5 mm
- 28960 D **Same**, diameter 8 mm
- 28960 DD **Same**, diameter 8.5 mm
- 28960 E **Same**, diameter 9 mm
- 28960 EE **Same**, diameter 9.5 mm
- 28960 F **Same**, diameter 10 mm
- 28960 FF **Same**, diameter 10.5 mm
- 28960 G **Same**, diameter 11 mm

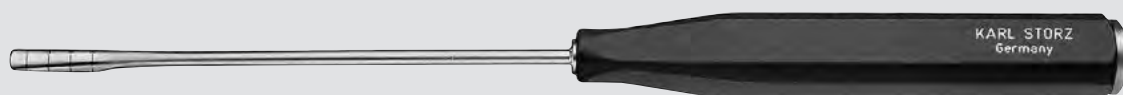


28729 N



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, working length 13 cm



28729 NN



28729 NN

Chisel, for creating a bone wedge, with wide handle, working length 13 cm

FLIPPTACK and ENDOTACK® – Titanium

FLIPPTACK

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



FLIPPTACK
from Titanium Ti-6AL-4V ELI

ENDOTACK®

- 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



ENDOTACK®
from titanium Ti-6AL-4V ELI

FLIPPTACK and ENDOTACK® – Fixation Buttons

STERILE 



28729 FT

28729 FT	FLIPPTACK , extracortical fixation button, 4 x 12 mm, sterile, for single use
28729 FC	Catgut Polyester-S white , 3 x 75 cm, USP 7, sterile, for single use, package of 24, for use with FLIPPTACK, extracortical fixation button



28729 TT



28729 MT

28729 TT	ENDOTACK® , tibial fixation button, 10 x 16 mm, sterile, for single use
28729 MT	Mini ENDOTACK® , tibial fixation button, 8 x 12 mm, sterile, for single use

Knee

Implants

Fixation Buttons



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



28729 KK

28729 KK

Knot Holder, small, 1 x 1 mm, working length 14.5 cm

MEGA FIX® – Bioresorbable

MEGA FIX® B, P, C and CP

- Extreme torsional stability
- Three-dimensional bony ingrowth in perforated MEGA FIX® screws (MEGA FIX® P and CP)
- Optimal connection between the MEGA FIX® screw and screwdriver (CROSSDRIVE®)
- Minimized risk of graft damage thanks to optimal thread design
- High fixation strength
- Wide range of indications
- Complete absorption
- Osseous replacement following absorption



MEGA FIX® B and P

from the bioresorbable material Poly(L-lactide-co-D,L-lactide)



MEGA FIX® C and CP

from an optimal mixing ratio of 80:20 between the bioresorbable material Poly(L-lactide-co-D,L-lactide) and the ceramic material beta-tricalcium phosphate (β -TCP)

MEGA FIX® B

STERILE 



2870823 B

- 2870619 B **MEGA FIX® B**, bioresorbable interference screw, diameter 6 mm, length 19 mm, sterile, for single use
- 2870623 B **Same**, length 23 mm
- 2870719 B **MEGA FIX® B**, bioresorbable interference screw, diameter 7 mm, length 19 mm, sterile, for single use
- 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, for single use
- 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, for single use
- 2870928 B **Same**, length 28 mm

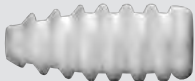
MEGA FIX® P



2870828 P

- 2870823 P **MEGA FIX® P**, bioresorbable interference screw, perforated, diameter 8 mm, length 23 mm, sterile, for single use
- 2870828 P **Same**, length 28 mm
- 2870923 P **MEGA FIX® P**, bioresorbable interference screw, perforated, diameter 9 mm, length 23 mm, sterile, for single use
- 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, for single use
- 2871035 P **Same**, length 35 mm
- 2871135 P **MEGA FIX® P**, bioresorbable interference screw, perforated, diameter 11 mm, length 35 mm, sterile, for single use

MEGA FIX® C



2870819 C

- 2870619 C **MEGA FIX® C**, bioresorbable composite interference screw,
diameter 6 mm, length 19 mm, sterile, for single use
- 2870623 C **Same**, length 23 mm

- 2870719 C **MEGA FIX® C**, bioresorbable composite interference screw,
diameter 7 mm, length 19 mm, sterile, for single use
- 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, for single use
- 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, for single use
- 2870928 C **Same**, length 28 mm

MEGA FIX® CP



2870923 CP

- 2870823 CP **MEGA FIX® CP**, bioresorbable composite interference screw,
perforated, diameter 8 mm, length 23 mm, sterile, for single use
- 2870828 CP **Same**, length 28 mm

- 2870923 CP **MEGA FIX® CP**, bioresorbable composite interference screw,
perforated, diameter 9 mm, length 23 mm, sterile, for single use
- 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, for single use
- 2871035 CP **Same**, length 35 mm

- 2871135 CP **MEGA FIX® CP**, bioresorbable composite interference screw,
perforated, diameter 11 mm, length 35 mm, sterile, for single use

MEGA FIX® – Titanium

MEGA FIX® T for Bone-Tendon-Bone Technique

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



MEGA FIX® T
from titanium Ti-6AL-4V ELI

MEGA FIX® T for the Hamstring Technique

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



MEGA FIX® T for the Bone-Tendon-Bone Technique



2870720 T

2870720 T	MEGA FIX® T , titanium interference screw, diameter 7 mm, length 20 mm, for Cruciate Ligament Reconstruction with Bone-Tendon-Bone Transplant, sterile, for single use
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, for single use
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, for single use
2870925 T	Same , length 25 mm

MEGA FIX® T for the Hamstring Technique



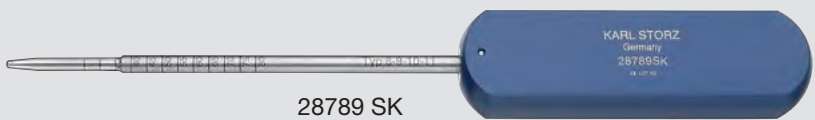
2870723 T

2870723 T	MEGA FIX® T , titanium interference screw, diameter 7 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile, for single use
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, for single use
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, for single use
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, for single use

Screwdriver for Interference Screws

CROSSDRIVE®

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

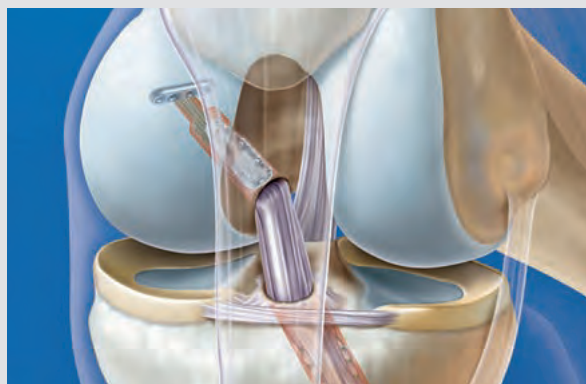


28789 SK	CROSSDRIVE® Screwdriver , cannulated, size 8 – 11, for use with bioresorbable MEGA FIX® screws diameter 8 – 11 mm and Nitinol Guide Wires 28789 GW/KW	
28770 SK	CROSSDRIVE® Screwdriver , cannulated, size 7, for use with bioresorbable MEGA FIX® screws diameter 7 mm and Nitinol Guide Wires 28789 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-6	Nitinol Guide Wire , diameter 1.1 mm, length 38.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® Screwdrivers 28789 SK, 28770 SK and 28760 SK	
28789 KW-6	Nitinol Guide Wire , diameter 1.1 mm, length 25.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® Screwdrivers 28789 SK, 28770 SK and 28760 SK	
28789 FW-6	Nitinol Guide Wire , diameter 2 mm, length 38.5 cm, unsterile, for single use, package of 6, for use with CROSSDRIVE® Plus Screwdriver 28789 CD	

Components/Spare Parts see chapter 18

MEGASHIM Implants

- For hybrid fixation
- Optimized implant volume
- Prevention of graft lesions
- Anatomical femoral insertion
- Simplified application
- Enhanced implant stability
- Complete degradation
- Osseous replacement



MEGASHIM Implants
from the bioresorbable material Poly(L-lactide-co-D,L-lactide)

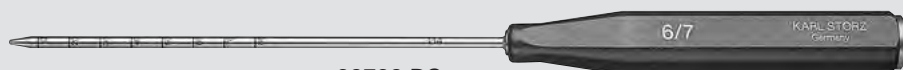
STERILE



2870620 MSP

- 2870620 MSP **MEGASHIM**, bioresorbable oval wedge, perforated, 6x20 mm, sterile, for single use
- 2870720 MSP **MEGASHIM**, bioresorbable oval wedge, perforated, 7x20 mm, sterile, for single use
- 2870820 MSP **MEGASHIM**, bioresorbable oval wedge, perforated, 8x20 mm, sterile, for single use
- 2870920 MSP **MEGASHIM**, bioresorbable oval wedge, perforated, 9x20 mm, sterile, for single use

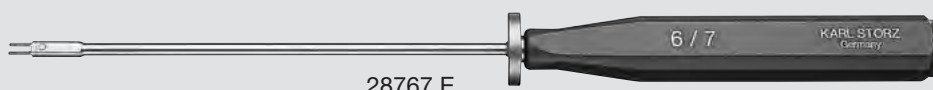
Order No.	Size (width x length)	Height	Instrumentation
2870620 MSP	6x20 mm	4 mm	Dilator 28728 DS Applicator 28767 E Pusher 28767 C HALF PIPE® 28728 SH
2870720 MSP	7x20 mm	4.5 mm	
2870820 MSP	8x20 mm	5 mm	Dilator 28728 DL Applicator 28789 EK Pusher 28789 C HALF PIPE® 28728 SH
2870920 MSP	9x20 mm	5.5 mm	



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 **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



28728 SH

28728 SH **HALF PIPE®**, without handle, short, working length 85 mm

28728 LH **HALF PIPE®**, without handle, long, working length 95 mm



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





INSTRUMENTS FOR THE SHOULDER

PORTAL SYSTEMS
SHOULDER ARTHROSCOPY 129-135

INSTRUMENTS FOR
SHOULDER ARTHROSCOPY 136-145

BICEPS TENDONESESIS 146-147

AC JOINT RECONSTRUCTION
MINAR® 148-149

IMPLANTS 150-152

Shoulder

Portal Systems for Shoulder Arthroscopy

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, outer diameter 8 mm, inner diameter 1.6 mm, for use with Cannula 28180 GT and Nitinol Guide Wire 28140 GW



28180 GT-6

28180 GT-6 **Cannula**, with thread, unsterile, for single use, package of 6, for Gasket 28180 GD, inner diameter 8.25 mm, working length 7 cm, for use with Dilator 28180 GO



28180 GDS

28180 GDS **Seal Set**, unsterile, for single use, with sealing cap, package of 5, for use with Cannula 28180 GT



Components/Spare Parts see chapter 18

SPS – Secure Portal System

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 puncture needle makes it possible to introduce both the subsequent dilation 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 puncture needle, whereby it is also possible to confirm the correct position of the trocar sheath to be inserted. If the puncture 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.

The SPS – Secure Portal System is recommended for shoulder portals.

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



Fig. 1

- The puncture needle with a diameter of 1.4 mm is introduced transcutaneously into the joint. The position must be corrected until the puncture needle penetrates the capsule at the desired point in the correct direction.
- The obturator is removed from the puncture needle.

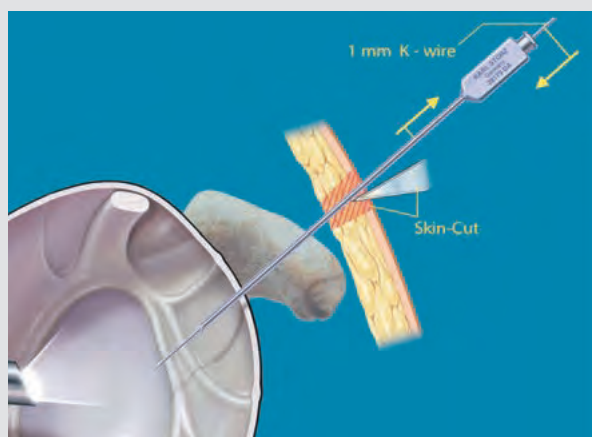


Fig. 2

- A guide wire with a diameter of 0.9 mm is introduced through the puncture needle into the joint.
- The puncture needle is removed from the joint while the guide wire is left in position.
- Skin incision along the guide wire corresponding to cannula size

Shoulder

Portal Systems for Shoulder Arthroscopy

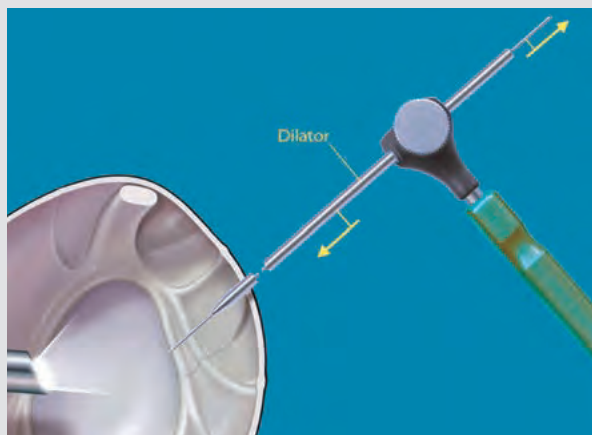


Fig. 3

- A cannulated dilator is pushed along the guide wire into the joint with the help of a handle.
- The guide wire is removed.

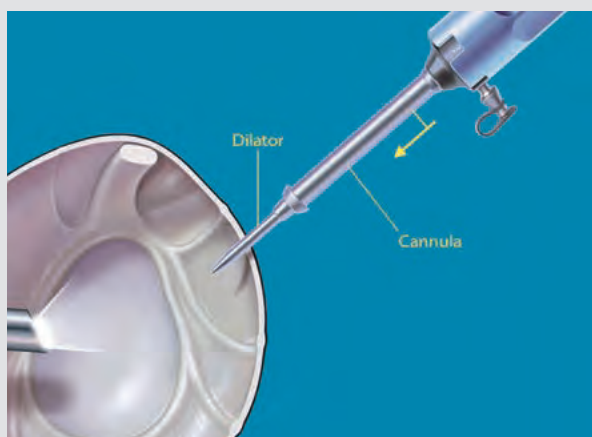


Fig. 4

- 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

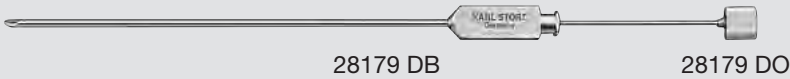
- Then the handle can be pulled off the trocar sheath. The trocar sheath then is ready for use and remains safely in the joint.

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.

Shoulder

Portal Systems for Shoulder Arthroscopy



- 28179 DB

Puncture Needle, outer diameter 1.4 mm, inner diameter 1 mm, working length 12 cm, for single use, for use with Guide Wire 28179 DW and Obturator 28179 DO


- 28179 DO

Obturator



- 28179 DW

Guide Wire, diameter 0.9 mm, length 30 cm, for single use, package of 6





- 28179 DL

Dilator, cannulated, outer diameter 3.8 mm, inner diameter 1.2 mm, length 30 cm



- 28179 DF

Handle, for use with Dilator 28179 DL

Shoulder

Portal Systems for Shoulder Arthroscopy

A workable instrument set requires the following supplementary sets:



For inner diameter 6.1 mm, working length 7 cm

28179 EB	Dilator , with integrated handle, short, diameter 6 mm, for use with threaded Cannula 28179 SA and Obturator 28179 EO, color code: dark blue	
28179 EO	Obturator , diameter 4 mm, color code: dark blue	
28179 SA-6	Cannula , with thread, transparent, unsterile, for single use, package of 6	

For inner diameter 6.1 mm, working length 8.5 cm

28179 EC	Dilator , with integrated handle, long, diameter 6 mm, for use with threaded Cannula 28179 SB and Obturator 28179 EP, color code: light blue	
28179 EP	Obturator , diameter 4 mm, color code: light blue	
28179 SB-6	Cannula , with thread, transparent, unsterile, for single use, package of 6	

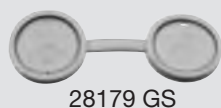
For inner diameter 8.25 mm, working length 7 cm

28179 FB	Dilator , with integrated handle, short, diameter 8.1 mm, for use with threaded Cannula 28179 SC and Obturator 28179 FO, color code: dark red	
28179 FO	Obturator , diameter 4 mm, color code: dark red	
28179 SC-6	Cannula , with thread, transparent, unsterile, for single use, package of 6	

For inner diameter 8.25 mm, working length 8.5 cm

28179 FC	Dilator , with integrated handle, long, diameter 8.1 mm, for use with threaded Cannula 28179 SD and Obturator 28179 FP, color code: light red	
28179 FP	Obturator , diameter 4 mm, color code: light red	
28179 SD-6	Cannula , with thread, transparent, unsterile, for single use, package of 6	

Also required for each combination:



28179 GS



28179 DG 28179 OG

28179 GS	Seal Set , sterile, for single use, package of 10, for use with Valve Housing 28179 DG/OG	

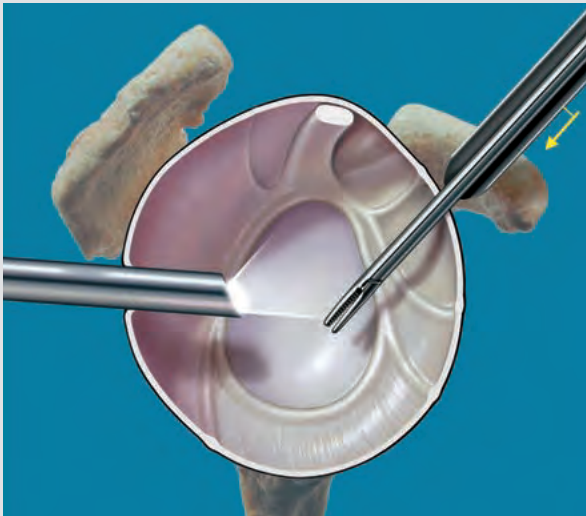
28179 DG	Valve Housing , with LUER-Lock, for use with Cannulas and Set of Gaskets 28179 GS	
	or	

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

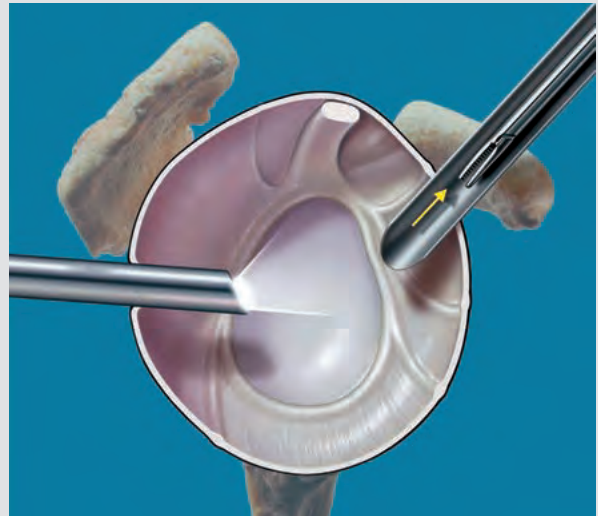
HALF PIPE®

Benefits:

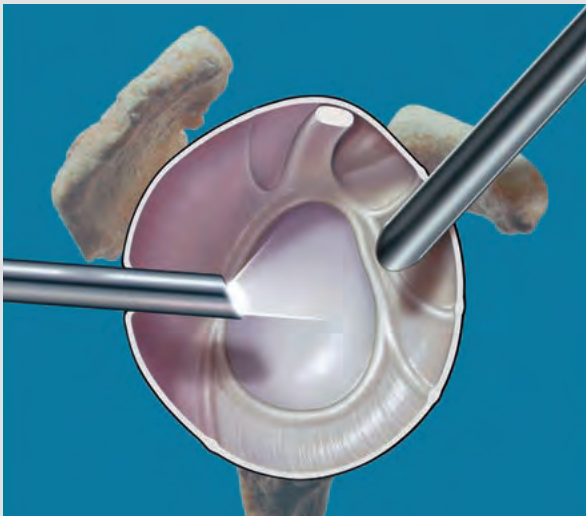
- Insertion through the soft tissue into the joint is not limited by the diameter of the cannula
- High flexibility of the operating instruments as the HALF PIPE® is removed again after the instrument changeover
- Safe exchange of instruments in joints in which no cannulas can be used (such as elbow,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



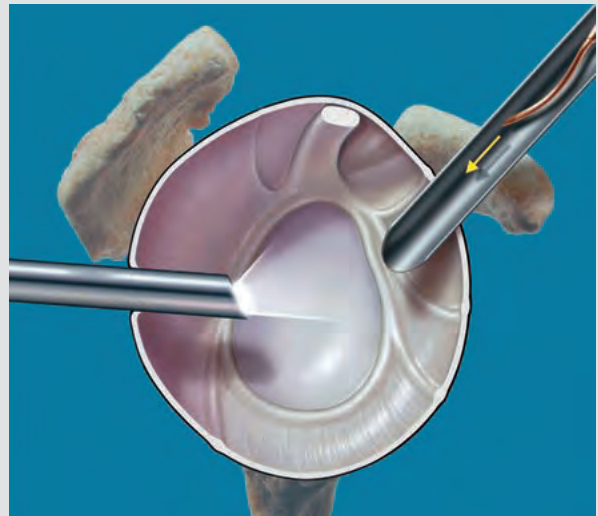
Insertion of the HALF PIPE® along an instrument



Removal of the instrument



Maintenance of the portal

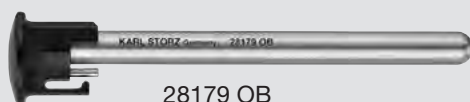


Insertion of a given instrument along the HALF PIPE®

Shoulder

Portal Systems for Shoulder Arthroscopy

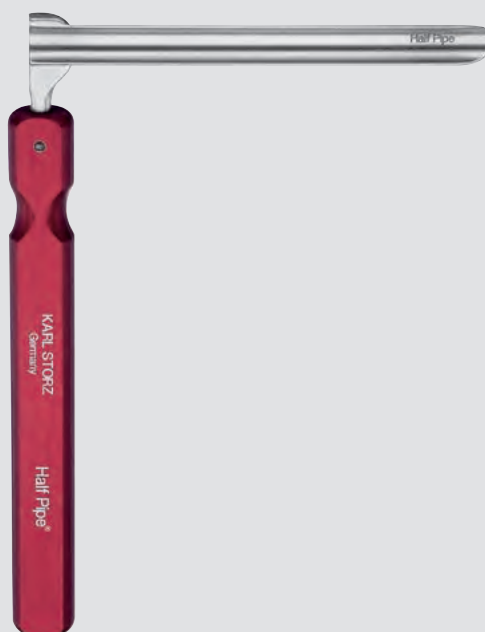
HALF PIPE®



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

HALF PIPE® for Hip Arthroscopy see page 158 and for **Knee Arthroscopy** see pages 88 and 125

Shoulder

Instruments for Shoulder Arthroscopy

SHOULDER PRO® Suture System



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, Wheel Attachment 28179 HR and Wheel 28179 R



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, for single use, package of 10, for use with Suture Attachments 28179 PA – PH and Handle 28179 HG

STERILE



Shoulder

Instruments for Shoulder Arthroscopy

SHOULDER PRO® Suture System



28179 PA



28179 PA

SHOULDER PRO® 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

SHOULDER PRO® 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

SHOULDER PRO® 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



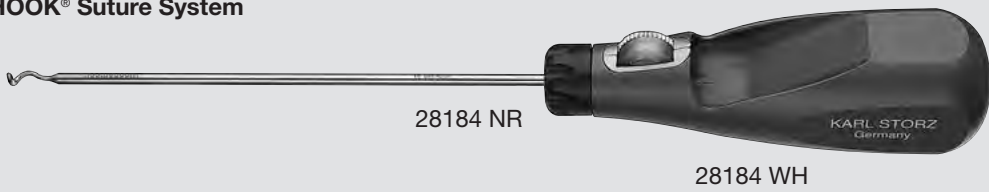
28179 R2

Cleaning Adaptor, for use with Handle 28179 HG

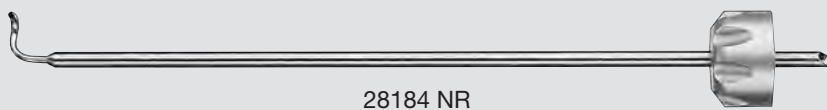
Shoulder

Instruments for Shoulder Arthroscopy

WONDERHOOK® Suture System



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



28184 NG **WONDERHOOK® Suture Attachment**, for use with monofilament threads up to size USP 1, straight, length of distal end 3.5 cm, working length 15 cm, for use with Handle 28184 WH, color code: blue



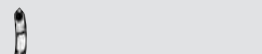
28184 NGL **Same**, length of distal end 5 cm, long



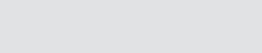
28184 NA **WONDERHOOK® Suture Attachment**, for use with monofilament threads up to size USP 1, distal tip slightly curved upwards, working length 15 cm, for use with Handle 28184 WH, color code: gold



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

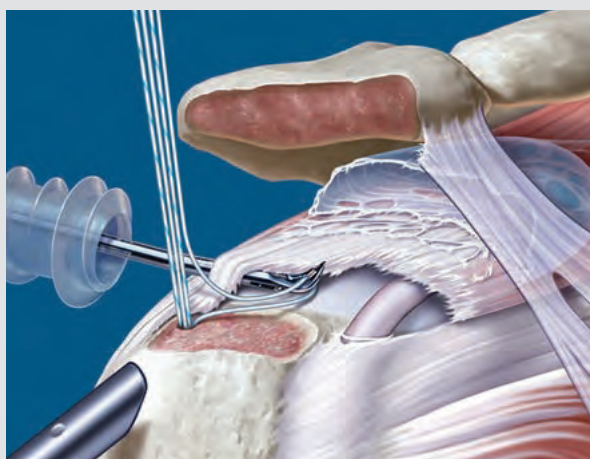
Components/Spare Parts see chapter 18



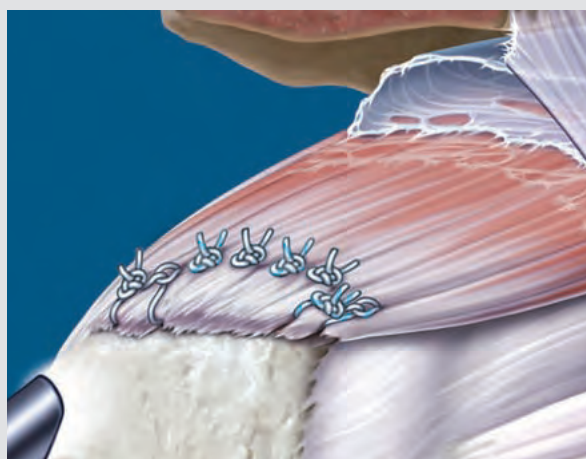
SNAPPER® SHOULDER PRO® Suture Forceps

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®



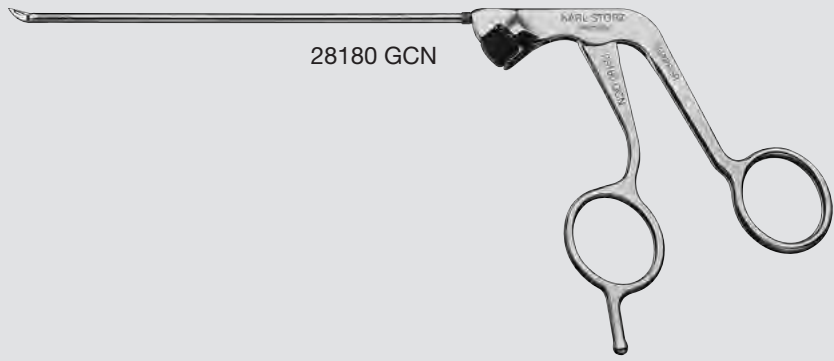
Reconstructed rotator cuff

Shoulder

Instruments for Shoulder Arthroscopy



SNAPPER® SHOULDER PRO® Suture Forceps



28180 GCN



28180 GAN **SNAPPER® SHOULDER PRO® Suture Forceps**, for punching soft tissue and suture management in shoulder arthroscopy, sheath diameter 3.5 mm, curved upwards, handle with cleaning connector, working length 15 cm, color code: black



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



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



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



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

Container for Sterilization and Storage of Instruments see HYGIENE catalog
Components/Spare Parts see chapter 18

Shoulder

Instruments for Shoulder Arthroscopy

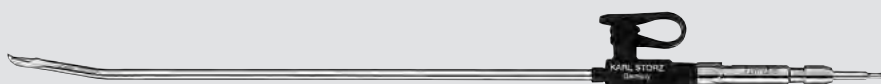
SHOULDER PRO® Suture Forceps Attachments



33136 P

33136 P

CLICKline® Handle, with thumb release, with 4 locking positions, for use with Suture Forceps Attachments 28180 LA/LC/LL/LR/LRG



28180 LA



28180 LA

SHOULDER PRO® Suture Forceps Attachment, for punching soft tissue and suture management in shoulder arthroscopy, sheath diameter 3.5 mm, 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



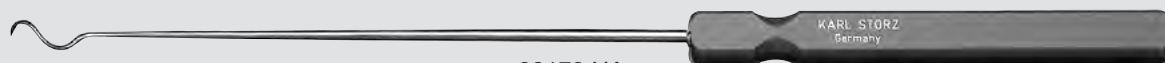
28180 LR

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



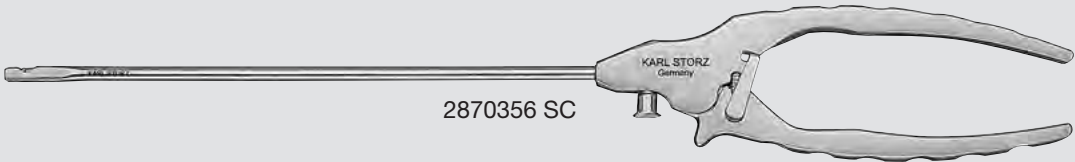
28179 HD

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

Components/Spare Parts see chapter 18

Shoulder

Instruments for Shoulder Arthroscopy



2870356 SC



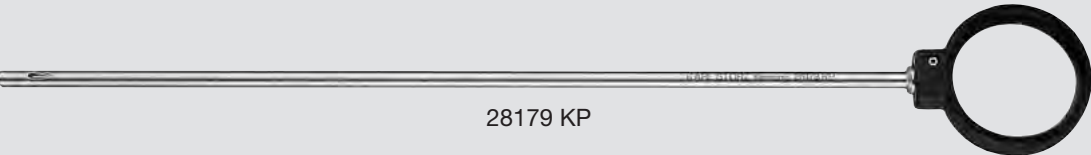
2870356 SC **Suture Cutter**, for cutting sutures up to size USP 2, working length 15 cm



28179 I



28179 I **Thread Catcher**, working length 15 cm



28179 KP



28179 KP **Knot Pusher**, for sutures up to size USP 2, working length 18 cm



2870356 KP

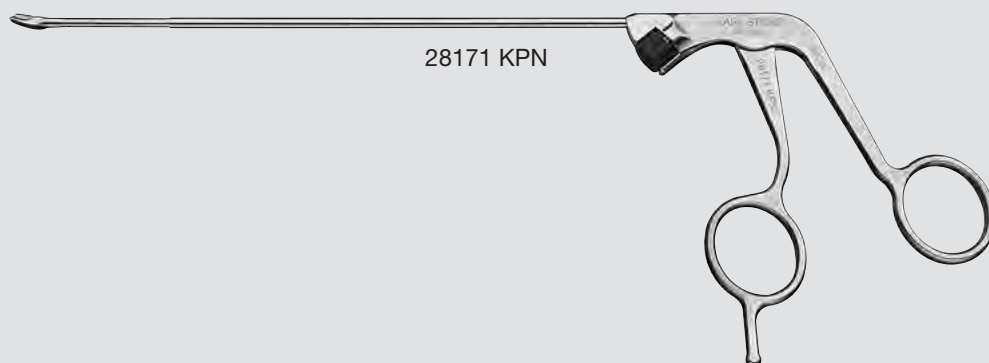


2870356 KP **Knot Pusher and Suture Cutter**, for cutting sutures up to size USP 2, working length 15 cm
including:
Insert and Blade
Handle

Components/Spare Parts see chapter 18

Shoulder

Instruments for Shoulder Arthroscopy



28171 KPN



28171 KPN

SILCUT® Punch, through-cutting, cross-toothed, cutting width 3.4 mm, jaws curved, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 19 cm



28171 KUN

SILCUT® Punch, through-cutting, cross-toothed, 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



28573 FD
NEW

SILGRASP® Foreign Body Grasper, aggressive, sheath diameter 4 mm, straight, handle with cleaning connector and ratchet, working length 22 cm



28171 SGN

SILGRASP® Suture Grasper, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 14 cm



28171 SGL
NEW

SILGRASP® Suture Grasper, curved jaws, 45° left, sheath diameter 3.5 mm, 5° curved to left, handle with cleaning connector, working length 16 cm

28171 SGR
NEW

Same, 45° right, 5° curved to right



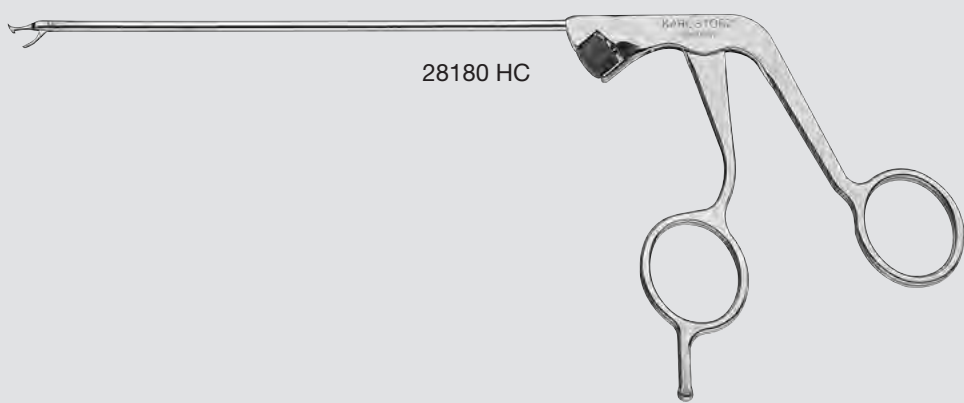
28171 SHN
NEW

SILGRASP® Suture Grasper, straight jaws, sheath diameter 3.5 mm, handle with cleaning connector, working length 14 cm

Components/Spare Parts see chapter 18

Shoulder

Instruments for Shoulder Arthroscopy



28180 GFN
NEW

TARPUN SHOULDER PRO® Suture Forceps,
for punching soft tissue and suture management
in shoulder arthroscopy, curved, 47° upwards,
sheath diameter 3.5 mm, handle with cleaning
connector, working length 14 cm



28180 HC
NEW

FETCHER SHOULDER PRO® Suture Forceps,
for punching soft tissue and suture management
in shoulder arthroscopy, straight jaws, sheath
diameter 3.5 mm, handle with cleaning
connector, working length 14 cm



28180 HL
NEW

FETCHER SHOULDER PRO® Suture Forceps,
for punching soft tissue and suture management
in shoulder arthroscopy, curved jaws, 43° left,
sheath diameter 3.5 mm, handle with cleaning
connector, working length 14 cm

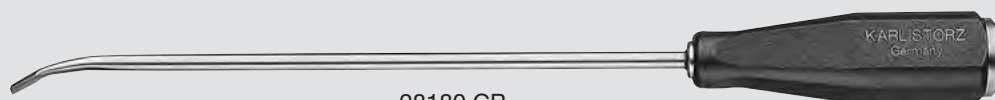
28180 HR
NEW

Same, curved jaws, 43° right

Components/Spare Parts see chapter 18

Shoulder

Instruments for Shoulder Arthroscopy



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 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 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 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



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

BITER®



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

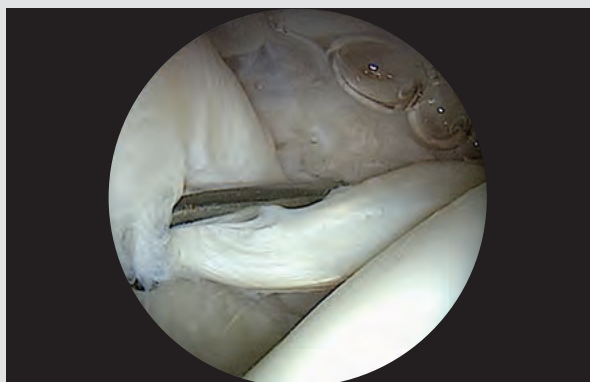


Fig. 1: Exposure of the biceps tendon

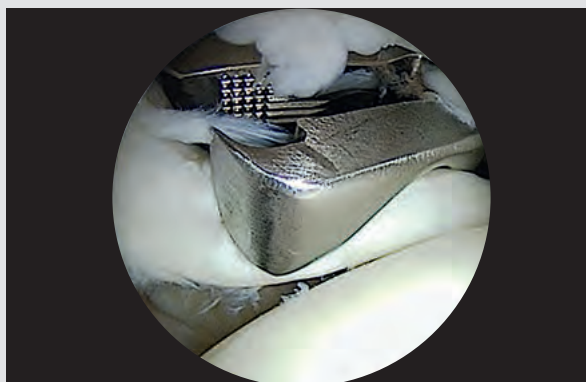
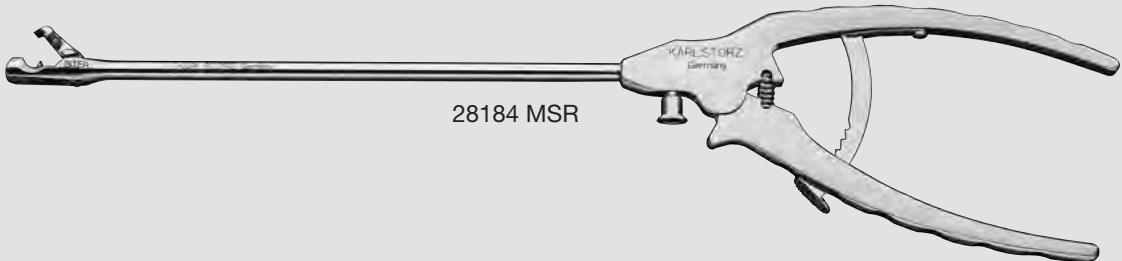


Fig. 2: Introducing the BITER® instrument and grasping the biceps tendon



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

BITER®



28184 MSR



28184 MSL **BITER®**, for the arthroscopic, terminal cutting of the biceps tendon, for the left shoulder, working length 15 cm

28184 MSR **Same**, for the right shoulder

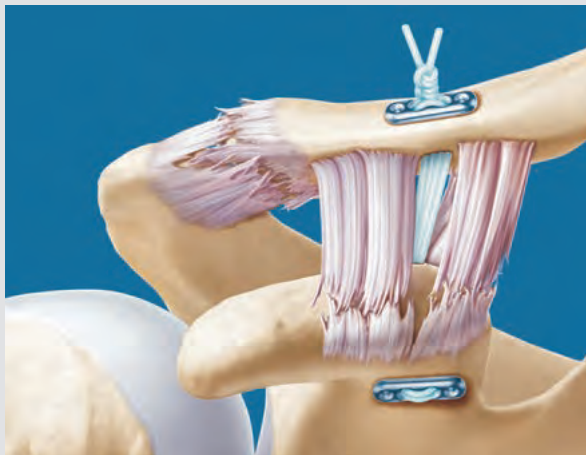
Shoulder

AC Joint Reconstruction

MINAR®

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



AC joint reconstruction with MINAR®



28729 FT

28729 FT * **FLIPPTACK**, extracortical fixation button, 4 x 12 mm, sterile, for single use

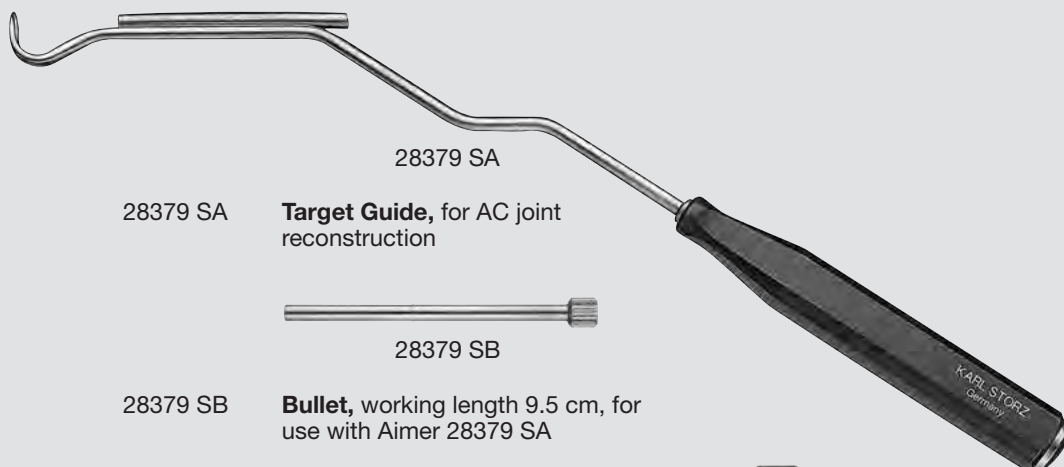
STERILE

28729 FC **Catgut Polyester-S white**, 3 x 75 cm, USP 7, sterile, for single use, package of 24, for use with FLIPPTACK, extracortical fixation button

STERILE

* Each intervention requires two FLIPPTACK fixation buttons.

MINAR®



28379 SA

28379 SA

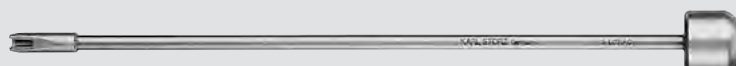
Target Guide, for AC joint reconstruction



28379 SB

28379 SB

Bullet, working length 9.5 cm, for use with Aimer 28379 SA



28379 SC

28379 SC

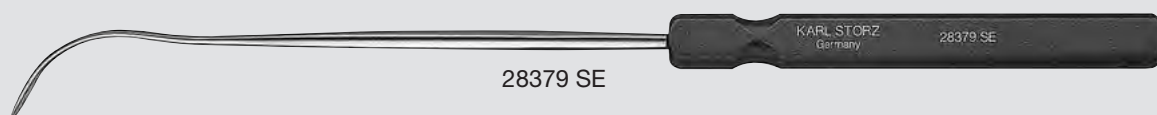
FLIPTACK Inserter, working length 19.5 cm



28379 SD

28379 SD

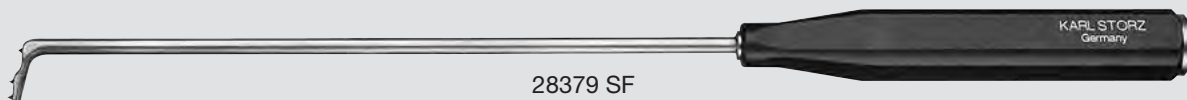
FLIPTACK Inserter Rod, working length 24.5 cm, for use with FLIPTACK Inserter 28379 SC



28379 SE

28379 SE

Suture Awl, working length 15 cm



28379 SF

28379 SF

Repositioner, for AC joint reconstruction, working length 20 cm

A workable instrument set requires the following instruments:



28729 E

28729 E

Larding Wire, pyramidal tip, diameter 2.4 mm, length 32 cm, unsterile, for single use, package of 10, for use with Undercut Drills 28729 BA – BH, Collar Burrs BLC – BLF and Drills 28729 GA – GE



28729 BA

28729 BA

Undercut Drill, cannulated, diameter 4.5 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E

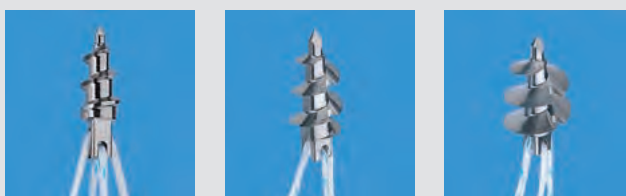
Shoulder

Implants for Shoulder Arthroscopy

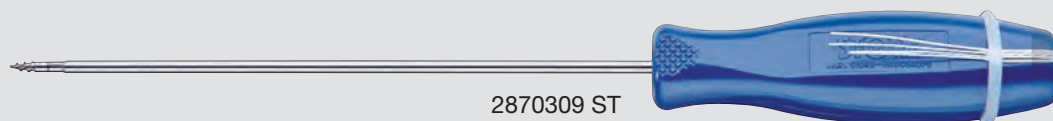
Suture Anchors – Titanium

Special Features:

- Implants are made of titanium Ti-6AL-4V
- 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



STERILE

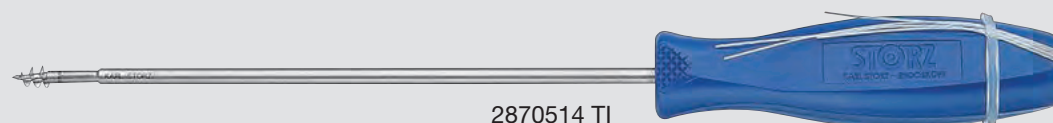


2870309 ST



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

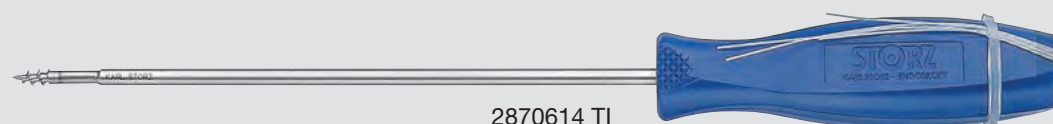


2870514 TI



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

Shoulder

Implants for Shoulder Arthroscopy

BIOPLUG – Bioresorbable

Special Features:

- The implants consist of a bioresorbable material Poly(L-lactide-co-D,L-lactide)
- Suture Anchor 2870310 BP is pre-loaded with MEGAFIBRE® threads USP 2
- The use of suture material size USP 2 is recommended for Suture Anchors 2870411 BP and 2870514 BP
- Very good degradation behavior



STERILE

2870310 BP **BIOPLUG, bioresorbable suture anchor**, diameter 3.5 mm, length 10 mm, with one MEGAFIBRE® USP 2 suture preloaded, 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

2870514 BP **BIOPLUG, bioresorbable suture anchor**, diameter 5.2 mm, length 14 mm, sterile, for single use, for use with Inserters 28179 TI



28179 GG



28179 GG

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



Shoulder

Implants for Shoulder Arthroscopy



28179 TB



28179 TD

Drill, for preparation of the tunnel for BIOPLUG 2870310 BP, with laser marking for the depth of the drill hole, length 15 cm



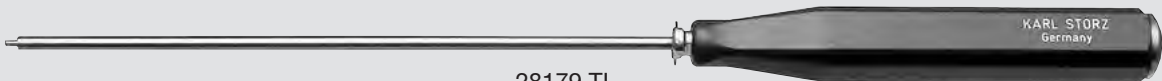
28179 TB

Drill, for preparation of the tunnel for BIOPLUG 2870411 BP, with laser marking for the depth of the drill hole, length 15 cm



28179 TC

Drill, for preparation of the tunnel for BIOPLUG 2870514 BP, with laser marking for the depth of the drill hole, length 18 cm



28179 TI

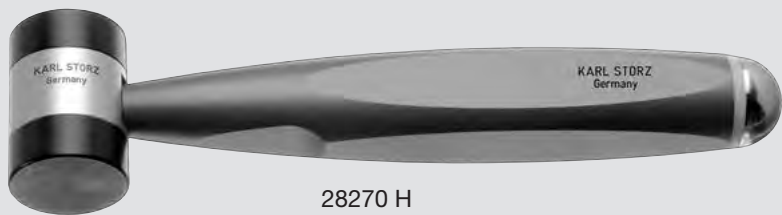


28179 TK

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

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



28270 H

28270 H

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

Components/Spare Parts see chapter 18



INSTRUMENTS FOR THE HIP

PORTAL SYSTEMS FOR
HIP ARTHROSCOPY 154-158

INSTRUMENTS FOR
HIP ARTHROSCOPY 159-160

ACCESSORIES FOR
HIP ARTHROSCOPY 161

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

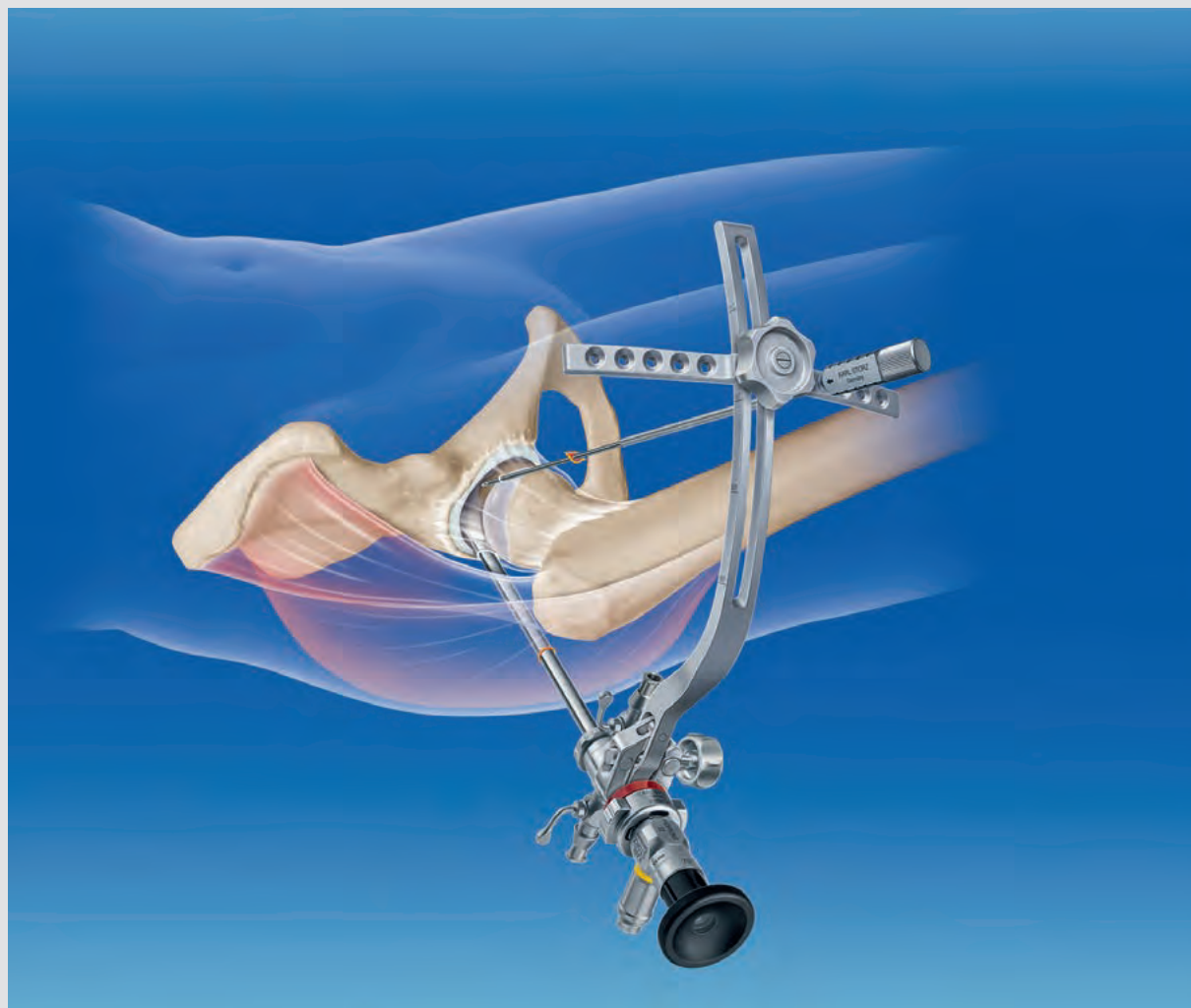
surgeon a complete instrument set for safe portal placement as well as diagnostic and therapeutic hip arthroscopy.

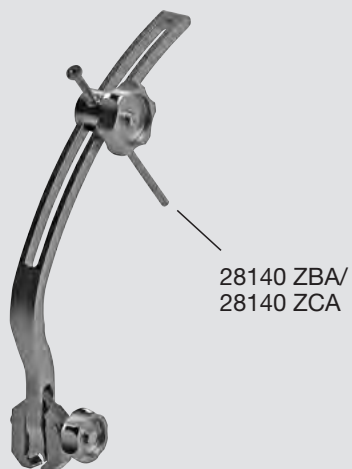
Benefits:

- 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®, specially designed for the hip, for fast instrument changeover and greater flexibility of operating instruments





28140 ZBA/
28140 ZCA

28140 ZAA

28140 ZAA	Aimer , for use with Guide Sleeves 28140 ZBA/ZCA
28140 ZBA	Guide Sleeve , short, working length 10.5 cm, for use with Aimer 28140 ZAA
28140 ZCA	Guide Sleeve , long, working length 14.5 cm, for use with Aimer 28140 ZAA

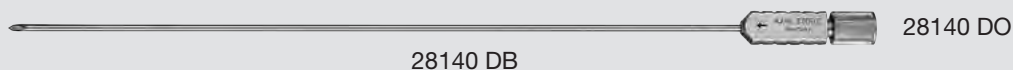
Optional:

Attachment for triangulation



28140 ZDA

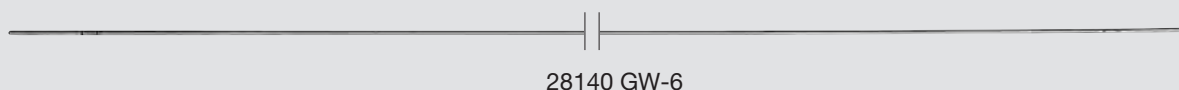
28140 ZDA	Aimer Attachment , for use with Aimer 28140 ZAA



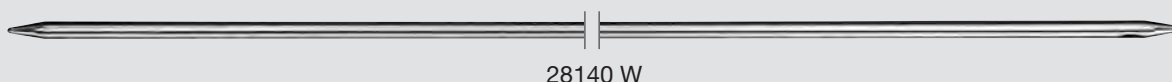
28140 DB **Puncture Needle**, outer diameter 2.1 mm, inner diameter 1.6 mm, working length 21.3 cm, for single use, for use with Nitinol Guide Wire 28140 GW and Obturator 28140 DO



28140 DO **Obturator**



28140 GW-6 **Nitinol Guide Wire**, diameter 1.5 mm, length 40 cm, unsterile, for single use, package of 6



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

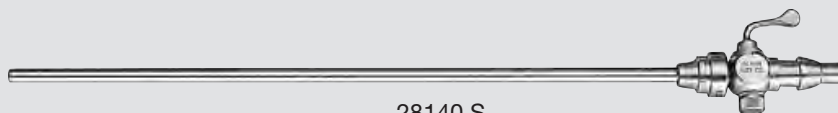


28140 WK **Changing Rod**, cannulated, diameter 4.8 mm, length 31 cm, for use with Arthroscope Sheaths 28130 CR/R and 28131 CR/R as well as Nitinol Guide Wire 28140 GW



28140 EWK **Changing Rod ENDOCAMELEON®**, cannulated, diameter 3.8 mm, length 31 cm, for use with Arthroscope Sheath ENDOCAMELEON® 28136 EC and Nitinol Guide Wire 28140 GW

NEW



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

Components/Spare Parts see chapter 18

A workable instrument set requires the following supplementary sets:



For inner diameter 6.1 mm, working length 9 cm

28140 EB	Dilator , with integrated handle, short, diameter 6 mm, for use with Threaded Cannula 28140 SA and Obturator 28140 EO, color code: dark blue
28140 EO	Obturator , cannulated, inner diameter 1.6 mm, for use with Guide Wire 28140 GW, color code: dark blue
28140 SA-6	Cannula , with thread, transparent, unsterile, for single use, package of 6 

For inner diameter 6.1 mm, working length 12 cm

28140 EC	Dilator , with integrated handle, long, diameter 6 mm, for use with Threaded Cannula 28140 SB and Obturator 28140 EP, color code: light blue
28140 EP	Obturator , cannulated, inner diameter 1.6 mm, for use with Guide Wire 28140 GW, color code: light blue
28140 SB-6	Cannula , with thread, transparent, unsterile, for single use, package of 6 

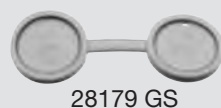
For inner diameter 8.25 mm, working length 9 cm

28140 FB	Dilator , with integrated handle, short, diameter 8.1 mm, for use with Threaded Cannula 28140 SC and Obturator 28140 FO, color code: dark red
28140 FO	Obturator , cannulated, inner diameter 1.6 mm, for use with Guide Wire 28140 GW, color code: dark red
28140 SC-6	Cannula , with thread, transparent, unsterile, for single use, package of 6 

For inner diameter 8.25 mm, working length 12 cm

28140 FC	Dilator , with integrated handle, long, diameter 8.1 mm, for use with Threaded Cannula 28140 SD and Obturator 28140 FP, color code: light red
28140 FP	Obturator , cannulated, inner diameter 1.6 mm, for use with Guide Wire 28140 GW, color code: light red
28140 SD-6	Cannula , with thread, transparent, unsterile, for single use, package of 6 

Also required for each combination:



28179 GS



28179 DG 28179 OG

28179 GS	Seal Set , sterile, for single use, package of 10, for use with Valve Housing 28179 DG/OG

STERILE 

28179 DG	Valve Housing , with LUER-Lock, for use with Cannulas and Set of Gaskets 28179 GS

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

HALF PIPE®



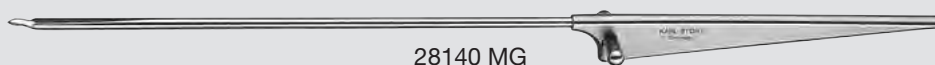
28140 HD

28140 HC

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

HALF PIPE® for Shoulder Arthroscopy see page 135 and for **Knee Arthroscopy** see pages 88 and 125



28140 MG



28140 MG

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



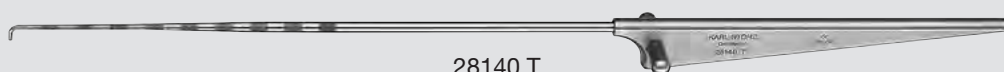
28140 LM
NEW

Knife, round, straight, working length 11.5 cm



28140 BM
NEW

Knife, round, angled 20°, working length 11.5 cm



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

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



28140 CD



28140 CD

Microfracture Chisel, curved 30°, working length 18 cm



28140 CE

Microfracture Chisel, curved 70°, working length 18 cm



28140 CF



28140 CF
NEW

Microfracture Chisel, curved 90°, working length 16 cm



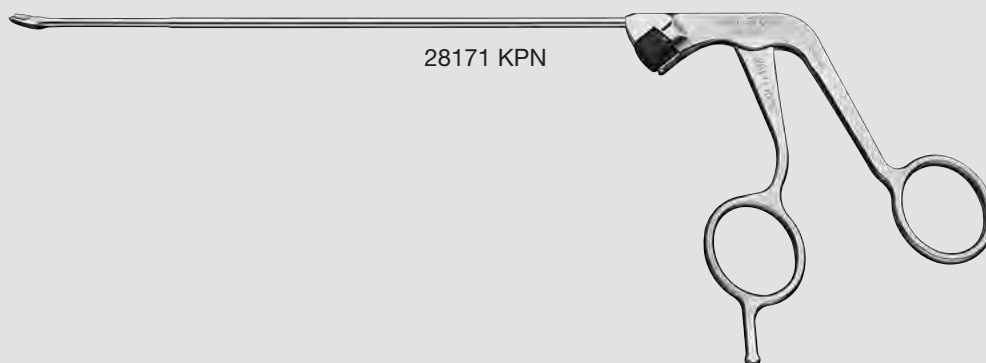
28140 KE



28140 KE

Curette, oval, small, both sides cutting, curved, 20° upwards, working length 18 cm

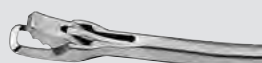
Curettes see page 47



28171 KPN



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



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



28140 GA **Suture Forceps**, for punching soft tissue and suture management in hip arthroscopy, curved upwards, working length 19 cm

NEW



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 SGD **SILGRASP® Suture Grasper**, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 19 cm

NEW



28573 FD **SILGRASP® Foreign Body Grasper**, aggressive, sheath diameter 4 mm, straight, handle with cleaning connector and ratchet, working length 22 cm

NEW

Components/Spare Parts see chapter 18



28140 D

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



28140 GU

28140 GU **Gasket**, unsterile, for single use, package of 10, single-packaged, for use with Gasket Attachment 28140 D



533 TVA

533 TVA **Adaptor, autoclavable**, permits telescope changing under sterile conditions

Components/Spare Parts see chapter 18





INSTRUMENTS FOR SMALL AND MEDIUM JOINTS

HOPKINS® TELESCOPES
AND SHEATHS 165-167

INSTRUMENTS FOR
SMALL AND MEDIUM JOINTS 168-173

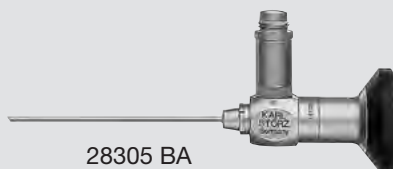
ENDOSCOPIC TREATMENT OF THE
CARPAL TUNNEL SYNDROME 174-175

ENDOSCOPIC TREATMENT OF THE
CUBITAL TUNNEL SYNDROME 176-179

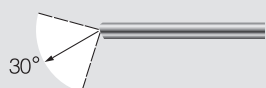
Small and Medium Joints

HOPKINS® Telescopes and 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

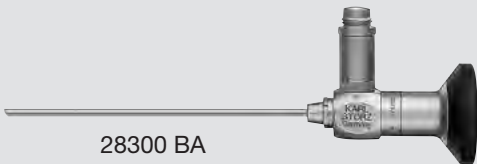
Same, blunt

***Note:** For an overview of color codes for HOPKINS® Telescopes see page 30
Container for Sterilization and Storage of Telescopes see HYGIENE catalog
Components/Spare Parts see chapter 18

Small Joints

HOPKINS® Telescopes and Sheaths

Diameter 2.4 mm, length 10 cm



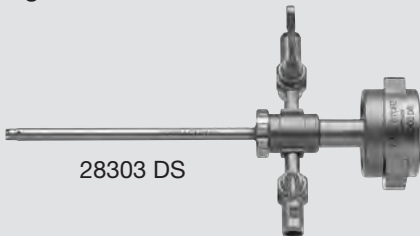
28300 BA



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

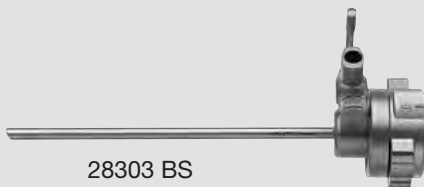


28303 DS



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

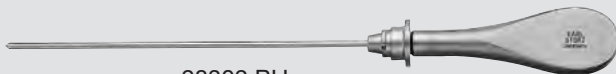


28303 BS



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

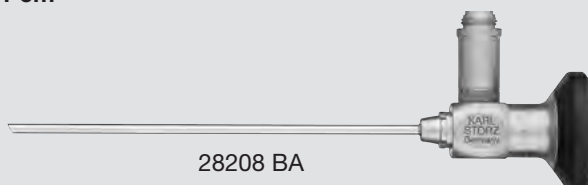
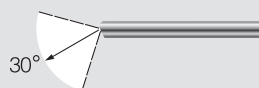
Same, blunt

***Note:** For an overview of color codes for HOPKINS® Telescopes see page 30
Container for Sterilization and Storage of Telescopes see catalog HYGIENE
Components/Spare Parts see chapter 18

Small and Medium Joints

HOPKINS® Telescopes and Sheaths

Diameter 2.7 mm, length 11 cm

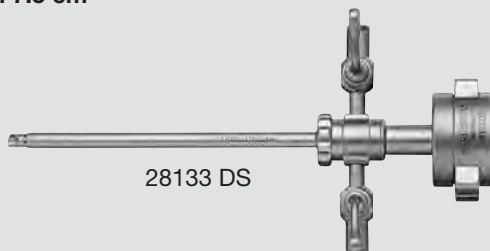


28208 BA

28208 BA

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

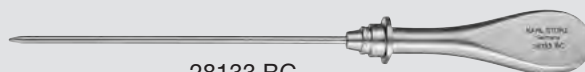
Diameter 4 mm, working length 7.5 cm



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

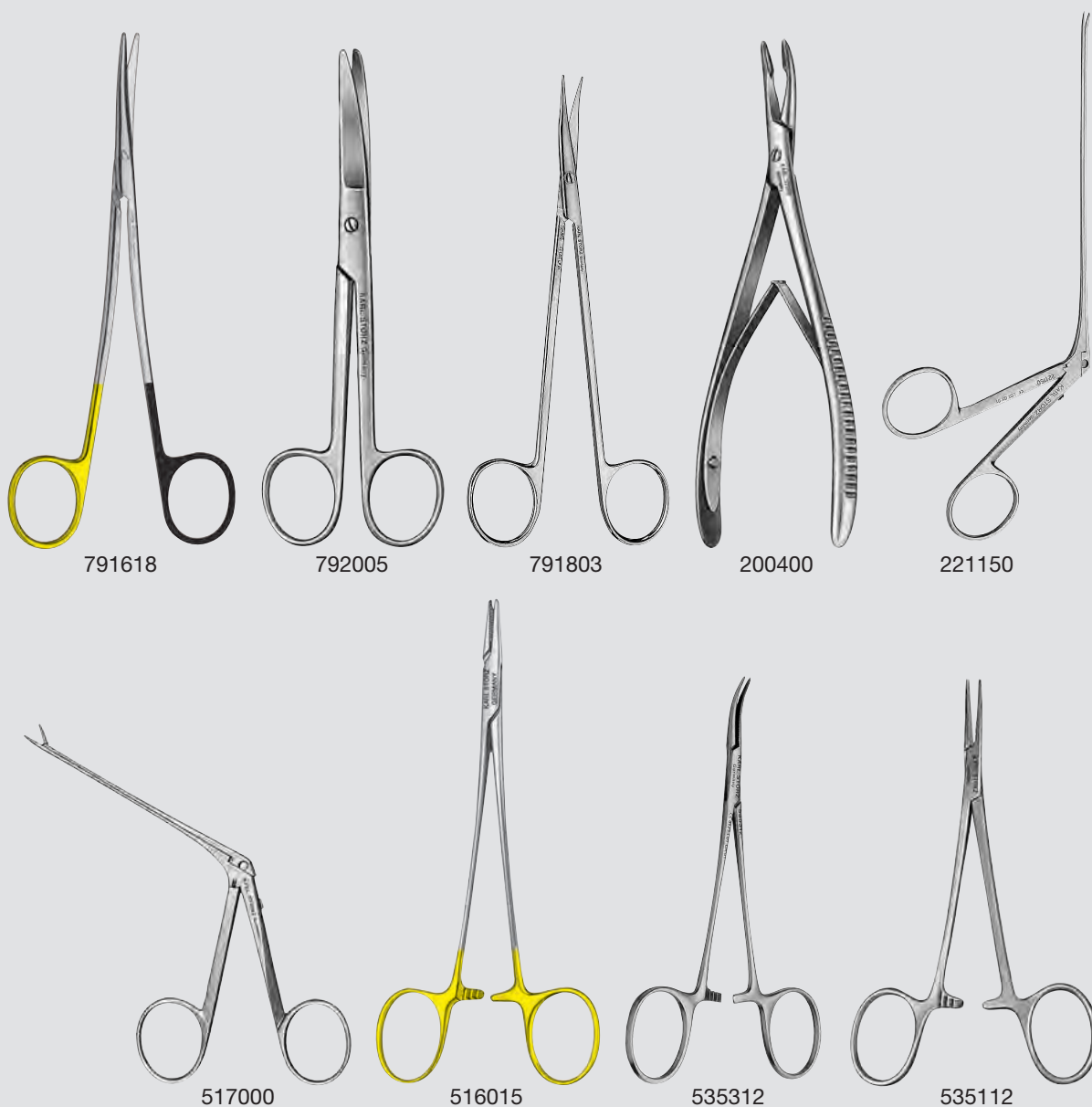
28133 BC

Obturator, blunt, for use with Arthroscope Sheath 28133 DS

Container for Sterilization and Storage of Telescopes see HYGIENE catalog
Components/Spare Parts see chapter 18

Small and Medium Joints

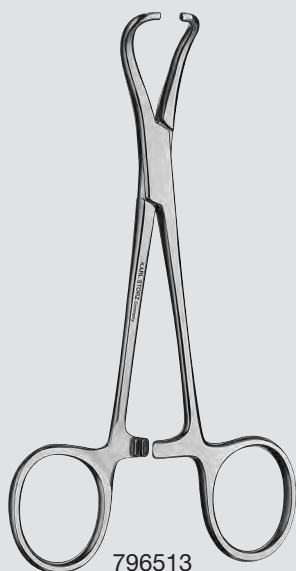
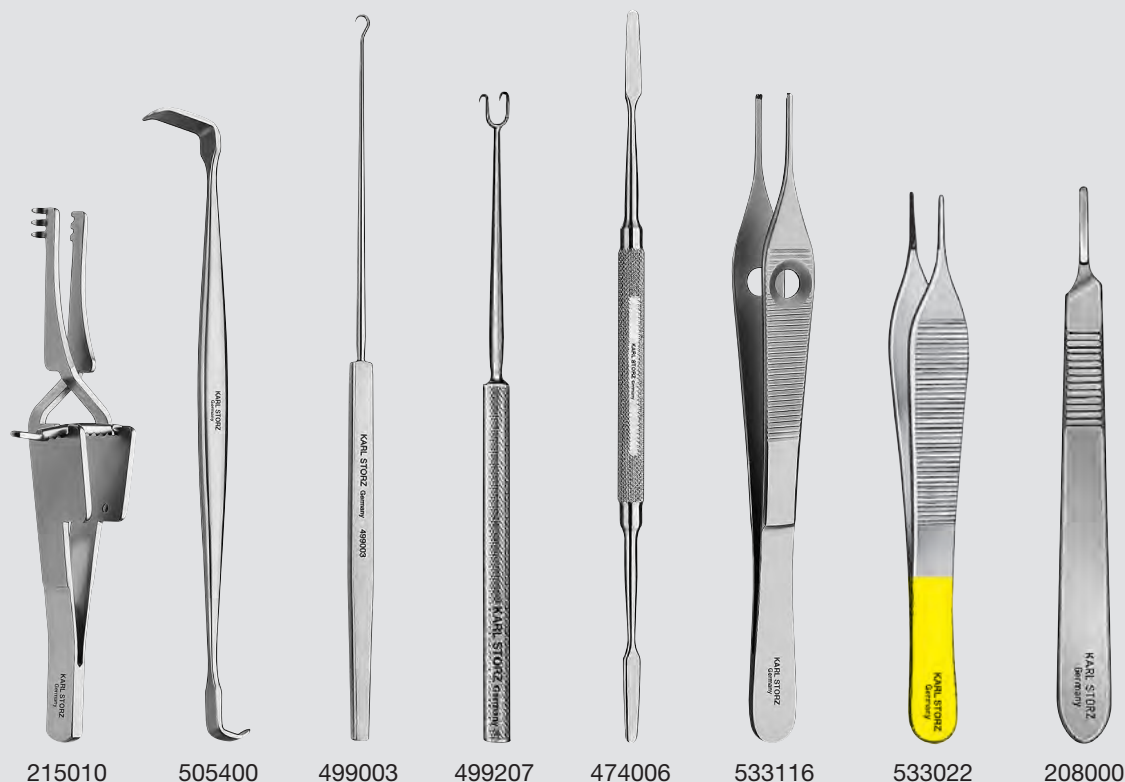
Instruments



- 791618 **Ligature Scissors**, with tungsten carbide blades, curved, lower blade serrated, length 18 cm, color code: one black handle ring, one gold-plated handle ring
- 792005 **MAYO Scissors**, curved, length 17 cm
- 791803 **JAMESON Scissors**, curved, pointed, delicate tips, length 15.5 cm
- 200400 **BEYER Rongeur**, slender, curved, length 17 cm
- 221150 **HARTMANN Forceps**, extra delicate, serrated, 1 x 4.5 mm, working length 12.5 cm
- 517000 **MASING Needle Holder**, smooth jaws, working length 8 cm
- 516015 **Needle Holder**, tungsten carbide inserts, length 15 cm
- 535312 **HALSTEAD "Mosquito" Artery Forceps**, micro-model, curved, length 12.5 cm
- 535112 **HALSTEAD "Mosquito" Artery Forceps**, micro-model, straight, length 12.5 cm

Small and Medium Joints

Instruments



- NEW** 215010 **Retractor**, 2 x 3 teeth, blunt, length 10 cm
- NEW** 505400 **Retractor**, double-ended, size 6 x 20 mm and 5 x 10 mm, length 14.5 cm
- 499003 **Hook**, one prong, large curve, length 18 cm
- NEW** 499207 **JOSEPH Double Hook**, sharp, width 7 mm, length 15 cm
- NEW** 474006 **Double Elevator**, size 18 cm
- NEW** 533116 **ADSON Tissue Forceps**, 1 x 2 teeth, length 15 cm
- 533022 **ADSON Dressing Forceps**, serrated, tungsten carbide inserts, length 12 cm
- 208000 **Surgical Handle**, Fig. 3, length 12.5 cm, for Blades 208010 – 15, 208210 – 15
- NEW** 796513 **Towel Forceps**, with serrated inserts, length 13 cm, for paper cover sheets
- 810810 **Medicine Cup**, 100 cm³, diameter 80 mm, height 30 mm

Small and Medium Joints

Instruments



28302 S



28302 S

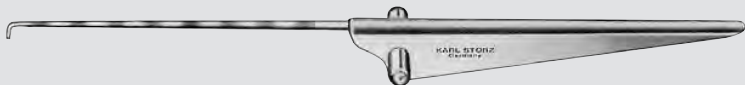
Probe, graduated, length of hook 1 mm, diameter 1 mm, working length 7.5 cm



28145 SN

28145 SN

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



28145 S

28145 S

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



28124 BZ

28124 BZ

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



28302 W

28302 W

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

Small and Medium Joints

Instruments

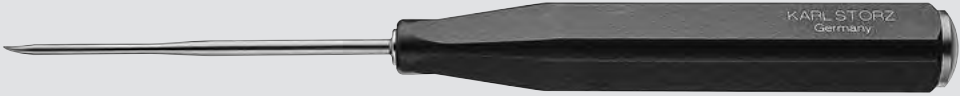


28302 M



28302 M

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



28728 CG



28728 CG

Microfracture Chisel, angled 30°, working length 9 cm



28728 CH

Same, angled 70°



28572 AD

Square jaws

Cross-toothed, cutting width 2 mm, sheath diameter 2.5 mm, working length 8.5 cm



28572 AD

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 2 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 ADL
NEW

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 2 mm, jaws curved to left 45°, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 ADR
NEW

Same, jaws curved to right 45°

Cross-toothed, cutting width 1 mm, sheath diameter 25 mm, working length 8.5 cm



28572 AE

SILCUT® PRO Punch, through-cutting, cross-toothed, cutting width 1 mm, straight jaws, sheath diameter 2.5 mm, straight, handle with cleaning connector, working length 8.5 cm

Oval jaws

Cross-toothed, cutting width 4,1 mm, sheath diameter 3.5 mm, working length 12 cm



28571 O

SILCUT® PRO Oval Biter, through-cutting, cross-toothed, cutting width 4.1 mm, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm

Components/Spare Parts see chapter 18

Small and Medium Joints

Instruments

NEW



28572 NJ

Sheath diameter 2.8 mm, working length 8.5 cm



28572 NJ

SILGRASP® PRO Suture Grasper, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 CG

SILGRASP® PRO Cartilage Grasping Forceps, spoon-shaped jaws, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 CGU

SILGRASP® PRO Cartilage Grasping Forceps, spoon-shaped jaws, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 G

SILGRASP® PRO Grasping Forceps, spoon-shaped jaws, serrated, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 GU

SILGRASP® PRO Grasping Forceps, spoon-shaped jaws, serrated, jaws curved, 30° upwards, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm



28572 AG

SILGRASP® PRO Alligator Grasping Forceps, serrated, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm

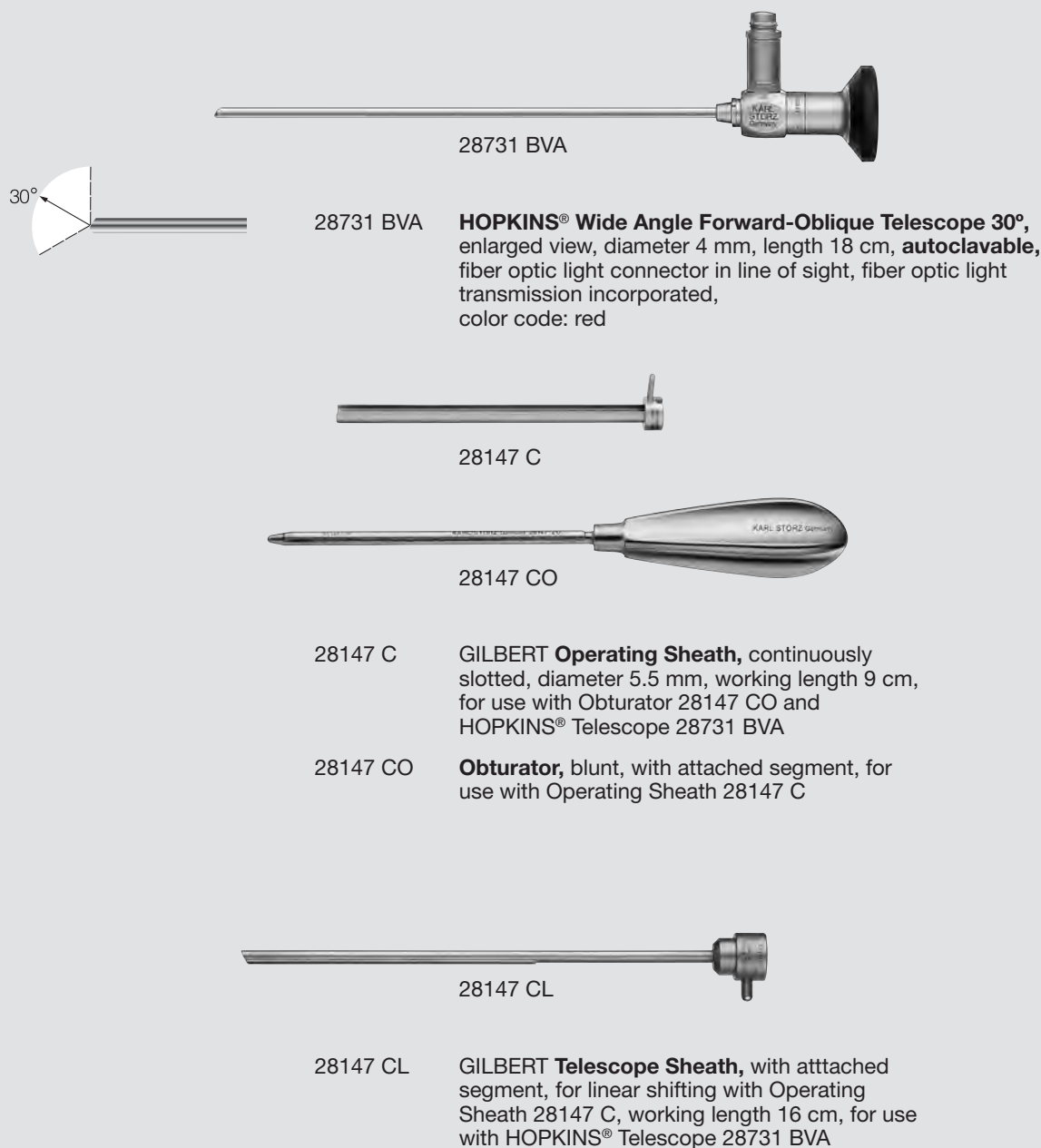
Components/Spare Parts see chapter 18

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.



Container for Sterilization and Storage of Telescopes see HYGIENE catalog
Components/Spare Parts see chapter 18

Small and Medium Joints

Endoscopic Treatment of the Carpal Tunnel Syndrome



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 E

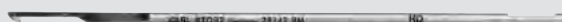


28147 E

GILBERT Rasp, for preparation of the carpal ligament



28147 R



28147 RM



28147 R

Knife, retractable, backward cutting, with exchangeable Knife Attachment 28147 RM, 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

Small and Medium Joints

Endoscopic Treatment of the 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*

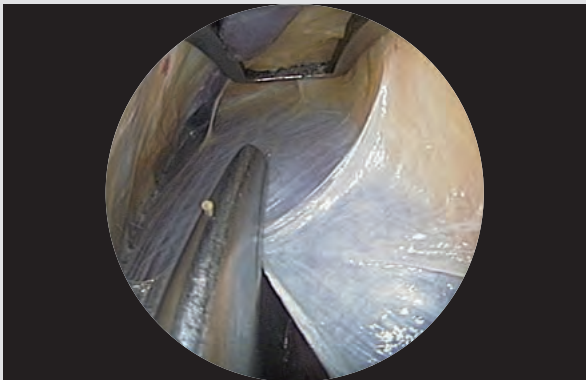


Fig. 1: Endoscopic division of the forearm fascia

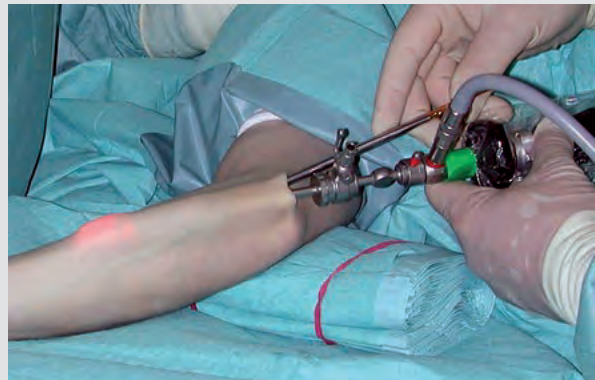
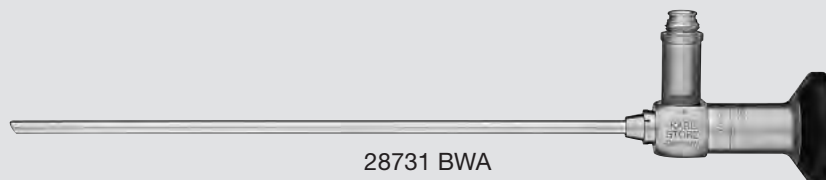


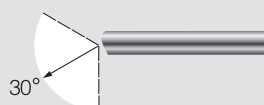
Fig. 2: "Long-distance" decompression (15 cm) towards the distal end

Small and Medium Joints

Endoscopic Treatment of the Cubital Tunnel Syndrome

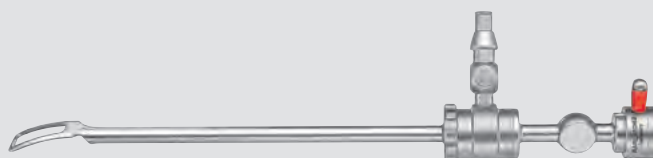


28731 BWA



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

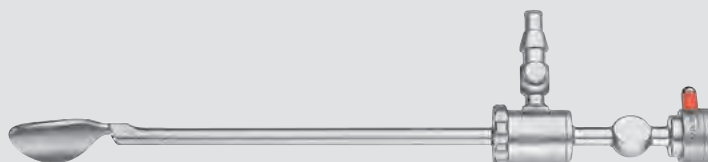


50200 ES



50200 ES

Optical Dissector, with distal spatula, fenestrated, sharp, working length 14.5 cm, for use with HOPKINS® telescopes 30°



50300 ES



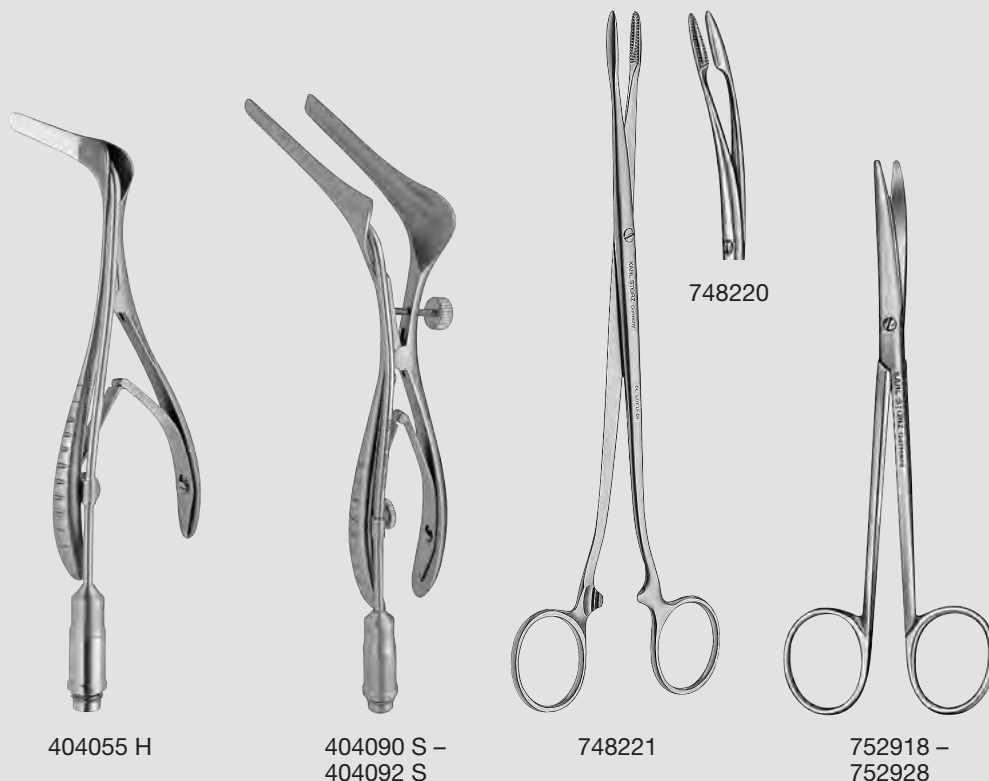
50300 ES

NEW

Optical Dissector, with distal spatula, working length 14.5 cm, for use with HOPKINS® telescopes 30°

Container for Sterilization and Storage of Telescopes see HYGIENE catalog

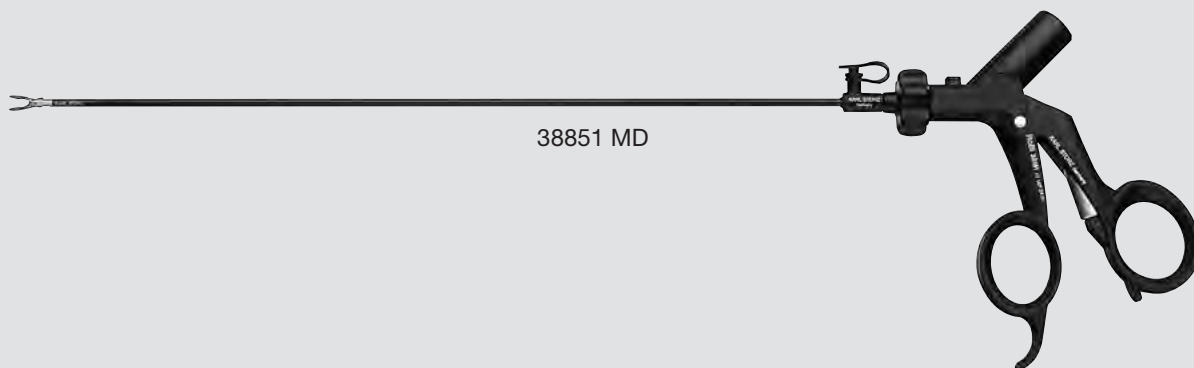
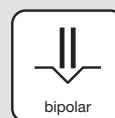
Components/Spare Parts see chapter 18



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

Small and Medium Joints

Endoscopic Treatment of the Cubital Tunnel Syndrome



38851 MD



38851 MD

ROBI® KELLY Grasping Forceps, CLERMONT-FERRAND model, rotating, dismantling, with connector pin for bipolar coagulation, especially suitable for dissection, double action jaws, size 3.5 mm, length 20 cm, color code: light blue

including:

ROBI® Plastic Handle

ROBI® Outer Sheath with Forceps Insert

Components/Spare Parts see chapter 18





INSTRUMENTS FOR RHEUMATOLOGY

NEEDLE ARTHROSCOPES 182-183

RETROFORCE® BIOPSY PUNCH 184-185

Special Features:

- Small diameter of 1 mm
- Eyepiece and light connection are remote from the instrument
- Fiber optic system in proven quality
- Elimination of any obtrusive eyepiece/camera head combination in 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.

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 small and medium-sized joints, and in particular 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.

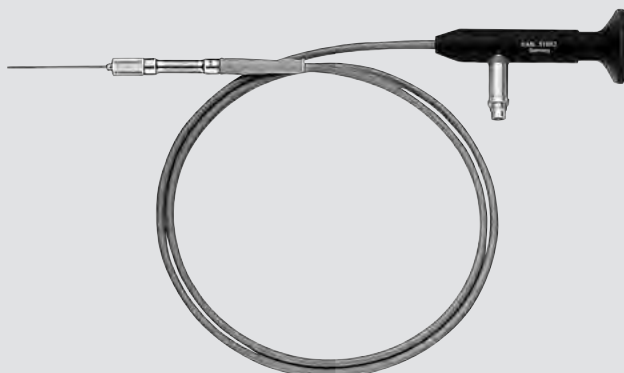
*P. BRÜHLMANN, M. D.,
Rheumaklinik Universitätsspital
Zurich, Switzerland*



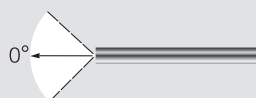
Instruments for Rheumatology

Needle Arthroscopes

Diameter 1 mm, length 6 cm



11508



11508

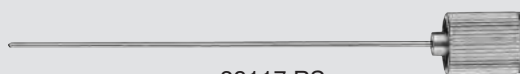
Miniature Straight Forward Telescope 0°, diameter 1 mm, length 6 cm, fiber optic light transmission incorporated, eyepiece and light connection separate from the instrument



28117 R

28117 R

Arthroscope Sheath, with lateral LUER-Lock connector, diameter 1.3 mm, working length 4 cm, for use with Miniature Straight Forward Telescope 0° 11508 and Obturators 28117 RS/RB



28117 RS



28117 RS

Obturator, sharp, for use with Arthroscope Sheath 28117 R



28117 RB

Same, blunt

28272 KLA

Holding System, autoclavable, with quick release coupling KSLOCK including:

Socket

Articulated Stand

Clamping Jaw

Components/Spare Parts see chapter 18

For native joints

There are a number of indications for synovial biopsy. Joint inflammation of unknown origin (e.g., sarcoidosis), the accumulation of crystals or proteins (amyloidosis) or synovial tumors (e.g. PVNS) cannot be detected in the blood or through radiological assessments. The

RETROFORCE® allows safe and fast synovial biopsies, particularly in large joints such as the shoulder, hip or knee. Thanks to this retrograde technique, biopsies can be performed without simultaneous imaging.



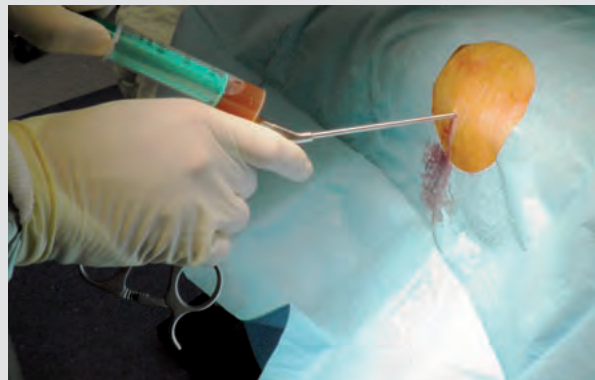
Fig. 1: The open RETROFORCE® biopsy punch after insertion via the suprapatellar recess; the correct position is confirmed by the aspiration of synovial fluid.



Fig 2: The biopsy punch is retracted until contact with the synovial tissue is obtained.



Fig. 3: The punch is closed in a retrograde manner in order to obtain the synovial biopsy.



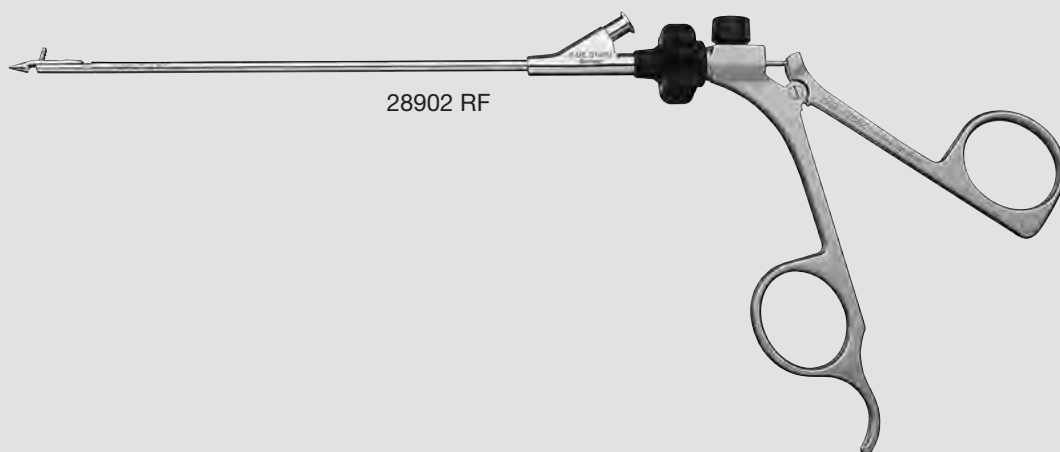
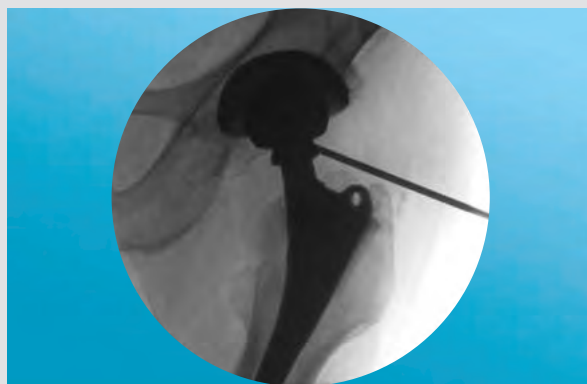
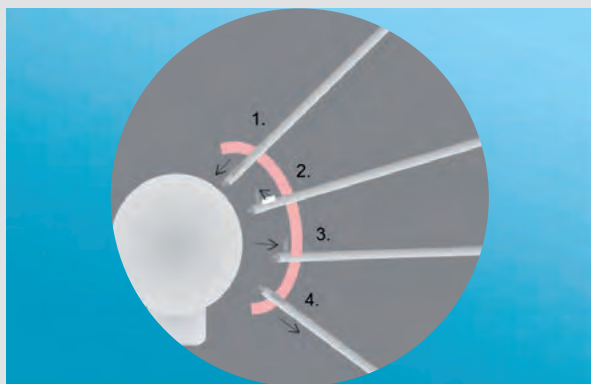
Scan the DataMatrix code to view a video on the application of the RETROFORCE® biopsy punch.



For the safe diagnosis of implant failures

Painful or loose prosthetic joints may have various causes. Infection associated with the implant, a common cause, must first be ruled out but symptoms may also arise from an allergic reaction to the implant or metal/plastic abrasion. In the case of infection in particular, synovial biopsy is far more effective than arthrocentesis alone according to available data. Furthermore, it can detect an allergic cellular reaction or

abrasion particles in the synovial membrane. RETROFORCE® allows a synovial biopsy to be safely performed under local anesthesia in a matter of minutes, e.g., in the hip, knee or shoulder joint. The robust instrument can easily pass through the tough joint capsule and provide a thorough diagnostic evaluation of possible reasons for implant failure within a short period of time.



28902 RF

RETROFORCE® Biopsy Punch, for biopsy of the joints, backward cutting, pointed, diameter 4 mm, working length 13 cm, with suction channel for the aspiration of synovial fluid, suitable for use under local anesthesia or arthroscopy

including:

Outer Sheath, with LUER-Lock connector

Inner Sheath, with backward cutting punch

Handle, without ratchet

optional:

28902 HGR

Handle, with ratchet

Components/Spare Parts see chapter 18





SPINE SURGERY

see NEUROSURGERY catalog



VISUALIZATION SYSTEMS FOR OPEN SURGERY AND MICROSURGERY

VITOM® 2D

2D VISUALIZATION FOR OPEN SURGERY WITH MINIMAL ACCESS	188-194

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VITOM® 3D

3D VISUALIZATION FOR OPEN SURGERY WITH MINIMAL ACCESS	202

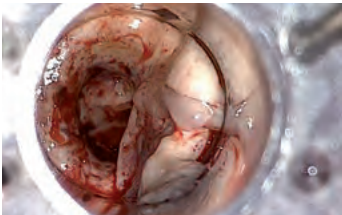
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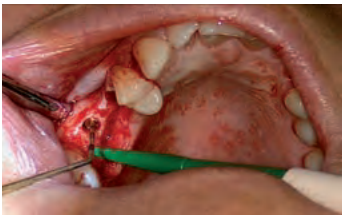
HOLDING SYSTEMS AND ACCESSORIES	205-207

VITOM® 2D
Potential Applications

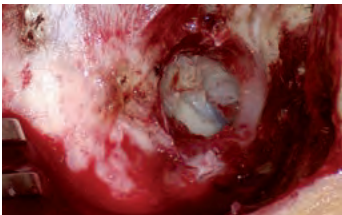
The VITOM® can be used for many specialties in open surgery. In addition to visualization under white light, the VITOM® system also supports the option for fluorescence imaging (ICG and PDD).



Port-based interventions
see NEUROSURGERY catalog



Dysgnathia surgery, flap preparation
see ORAL AND MAXILLOFACIAL SURGERY catalog



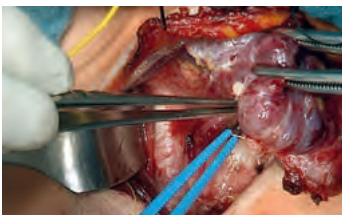
Open rhinoplasty, septoplasty, adenotomy
see ENDOSCOPES AND INSTRUMENTS
FOR ENT, ESOPHAGOSCOPY –
BRONCHOSCOPY catalog



**Mitral valve surgery,
pediatric heart surgery**
see ENDOSCOPES AND INSTRUMENTS
FOR CARDIOVASCULAR SURGERY catalog



Mini-thoracotomy
see THORAX catalog



Open thyroidectomy
see LAPAROSCOPY IN SURGERY,
GYNECOLOGY, UROLOGY catalog



Loop conization, colposcopy
see GYNECOLOGY catalog

 **Urethral reconstruction, hypospadias/epispadias correction, artificial sphincter implantation, open prostatectomy**
see UROLOGY catalog

 **Male sling implantation, artificial sphincter**
see PROCTOLOGY catalog

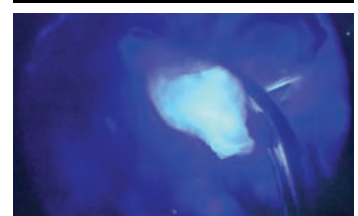
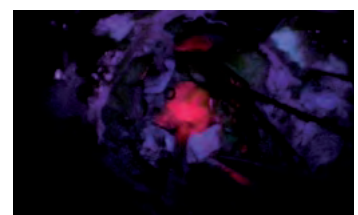
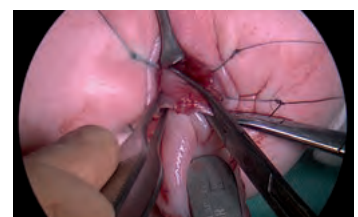
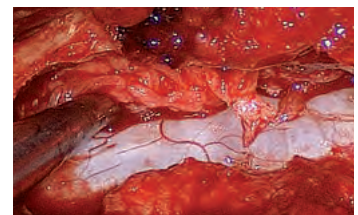
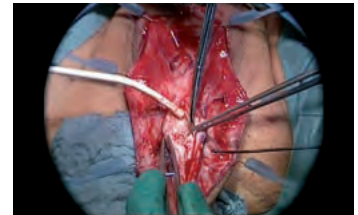
 **Dupuytren's contracture, ulnar shortening osteotomy, arthroplasty**
see ARTHROSCOPY AND SPORTS MEDICINE catalog

 **Herniated discs, spinal stenosis, spondylodesis**
see SPINE SURGERY catalog

 **Anorectal malformation, hypospadias correction, epispadias correction, ambiguous genitalia**
see PEDIATRIC SURGERY catalog

 **Display of glioblastoma in neurosurgery**
see FLUORESCENCE IMAGING WITH PDD

 **Perfusion assessment of anastomoses or free flaps, visualization of sentinel lymph nodes (in trial phase)**
see FLUORESCENCE IMAGING WITH NIR/ICG



VITOM® 2D

2D Visualization for Open Surgery with Minimal Access

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. VITOM® is based on the renowned HOPKINS® rod lens system from KARL STORZ.

Unlike an arthroscope, the VITOM® system 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 image quality
- Great depth of view
- Large working distance
- High flexibility thanks to VITOM® 0° and 90° versions
- Optimal illumination due to integrated lighting
- Compact design requiring minimal space in the OR
- Use of existing KARL STORZ endoscopy system possible



Using the VITOM® system in hand surgery

OR photographs courtesy of: Prof. Dr. Christophe Mathoulin, Institut le la Main, Clinique Jouvenet, Paris, France

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

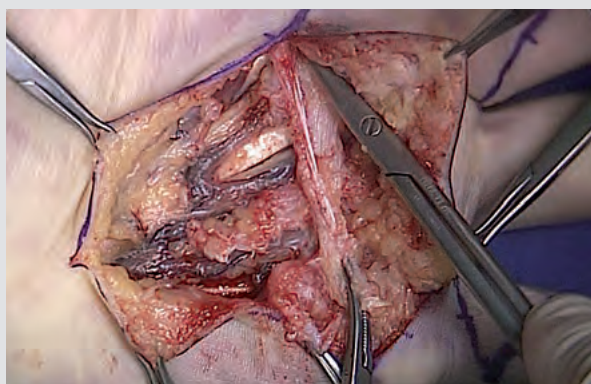


Fig. 1: Fasciectomy, visualized with the VITOM® system



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

VITOM® 2D

2D Visualization for Open Surgery with Minimal Access

Brilliant Visualization

The IMAGE1 S™ camera system provides optimal support for all interventions in minimally invasive and open surgery.

VITOM® provides excellent depth of field, optimal magnification as well as good contrast and excellent color reproduction, which are the ideal prerequisites for the best possible visualization of interventions in open surgery.

Documentation

The VITOM® system is perfectly suited for the documentation of interventions in open surgery with minimal access.

Ergonomic Work

Enhanced images of the open surgical procedure can be observed via a monitor from a convenient distance by the surgeon, the assistant as well as the entire OR team. The system offers everyone present in the OR an optimal view of the surgical field.

Teaching and Training

The VITOM® system is an excellent tool for teaching and training purposes as the system offers an unrestricted and magnified view of the surgical site both inside and outside the OR.



VITOM® Telescope 0°

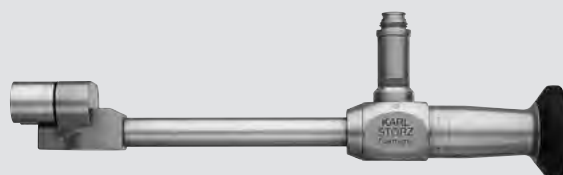
The VITOM® telescope 0° is particularly suitable for brilliant documentation of open surgeries. Thanks to its

design and 0° direction of view, it can be easily positioned by an assistant.



20916025 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



VITOM® Telescope 90°

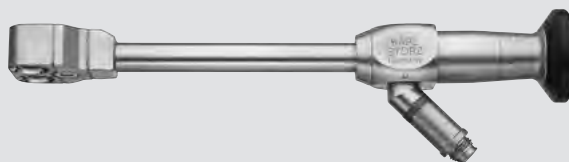
The VITOM® telescope with a 90° direction of view is recommended for the visualization of an intervention as it allows flexible and ergonomic positioning above the surgical site. This is a particular advantage for

operating surgeons who wish to benefit from a clear and enlarged view on the monitor during the procedure.



20916025 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

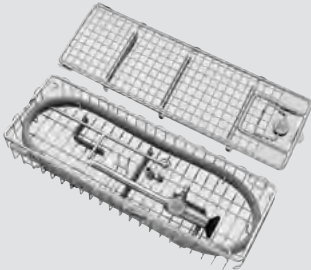


Note: VITOM® is always used with a holding system.

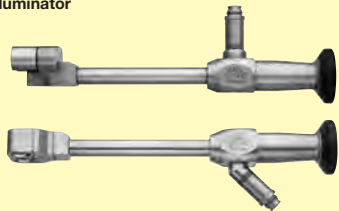
Specifications see page 199

Recommended Set see page 195

Components/Spare Parts see chapter 18

		VITOM® Scope 0° with Integrated Illuminator	VITOM® Scope 90° with Integrated Illuminator
		20 9160 25 AA	20 9160 25 DA
495 TIP	 Fiber Optic Light Cable , with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 300 cm	●	●
495 NVC	 Fiber Optic Light Cable , with 90° deflection to the instrument, very narrow radius of curvature, 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	●	●

VITOM® Telescope 0° with Integrated Illuminator
VITOM® Telescope 90° with Integrated Illuminator



20 9160 25 AA/DA

Clamping Cylinder



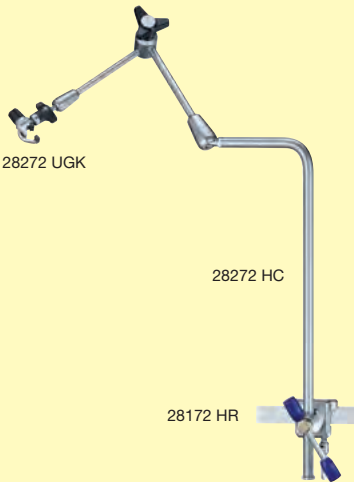
28272 CN

Fiber Optic Light Cable



495 TIP

Mechanical Holding Arm



28272 UGK

28272 HC

28172 HR

IMAGE1 S™ Three-Chip FULL HD Camera Head



TH 100

Cold Light Fountain Power LED 300 SCB



TL 300

IMAGE1 S™ Camera System



TC 200EN
TC 300

26" FULL HD Monitor



9826 NB

VITOM® II NIR/ICG

for Near Infrared (NIR/ICG) Fluorescence Imaging in Open Surgery

OPAL1™ NIR/ICG – Fluorescence imaging based on the IMAGE1 S™ camera platform



With the OPAL1™ technology for NIR/ICG fluorescence imaging based on the IMAGE1 S™ camera platform, KARL STORZ is able to offer better visualization of anatomical structures that are hidden to the naked eye under white light in minimally invasive and open surgery. The fluorescent dye indocyanine green (ICG) is used for this purpose.

NIR/ICG fluorescence imaging allows the assessment of organ and tissue perfusion, e.g., when setting and controlling anastomoses or during tissue transplantations in plastic and reconstructive surgery.

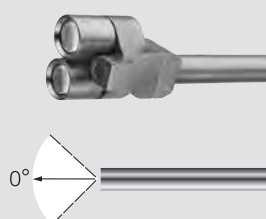
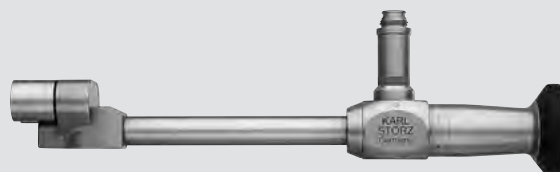
The VITOM® II NIR/ICG telescope can be easily and quickly adapted to the S-Technologies for NIR/ICG and can therefore be ideally integrated into the modular structure from KARL STORZ.



***The respective national regulations with regard to the approval of fluorescence markers and their applications must be observed.**

VITOM® II NIR/ICG

for Near Infrared (NIR/ICG) Fluorescence Imaging in Open Surgery



20 9160 25 AGA VITOM® II NIR/ICG Telescope 0°, with integrated illuminator and observation filter for fluorescence diagnostics with ICG, HOPKINS®, working distance 25 – 75 cm for white light, 20 – 30 cm for fluorescence applications, length 11 cm, **autoclavable**, with fiber optic light transmission incorporated and condensor lenses, color code: green



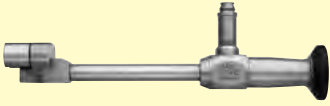
495 NCSC Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 250 cm

The IMAGE1 S™ platform is recommended for NIR/ICG applications.

Components/Spare Parts see chapter 18

Suitable Light Sources for NIR/ICG Applications see TELEPRESENCE catalog

VITOM® II NIR/ICG Telescope
with integrated illuminator



20 9160 25 AGA

Clamping Cylinder



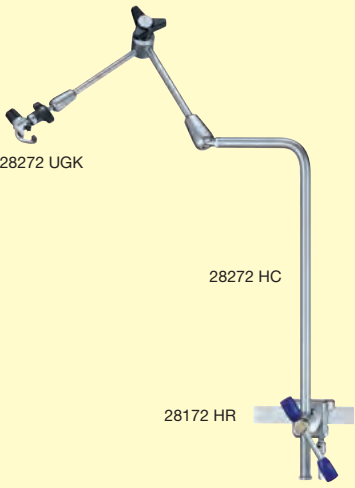
28272 CN

Fluid or Fiber Optic Light Cable



495 FR
495 NCSC

Mechanical Holding Arm



28272 UGK
28272 HC
28172 HR

IMAGE1 S™ H3-Z FI Three-Chip FULL HD
Camera Head



TH 102

Cold Light Fountain D-LIGHT P SCB



20 1337 01-1

IMAGE1 S™ Camera System



TC 200EN
TC 300

One-Pedal Footswitch



20 0 141 30

26" FULL HD Monitor



9826 NB

Working distance:	25 – 75 cm		
Depth of view at working distance of:	25 cm	50 cm	75 cm
Depth of view:	approx. 3.5 cm	approx. 7 cm	approx. 10 cm
Field of view at working distance of:	25 cm	50 cm	75 cm
IMAGE1 S™ H3-Z camera zoom 1x	5 cm	10 cm	15 cm
IMAGE1 S™ H3-Z camera zoom 2x	3.5 cm	7 cm	10.5 cm
Reproduction scale at working distance of:	25 cm	50 cm	75 cm
26" Monitor:			
H3-Z camera zoom 1x	approx. 8x	approx. 4x	approx. 3x
H3-Z camera zoom 2x	approx. 16x	approx. 8x	approx. 6x
42" Monitor:			
H3-Z camera zoom 1x	approx. 14x	approx. 7x	approx. 5x
H3-Z camera zoom 2x	approx. 28x	approx. 14x	approx. 10.5x
52" Monitor:			
H3-Z camera zoom 1x	approx. 17x	approx. 8x	approx. 6x
H3-Z camera zoom 2x	approx. 34x	approx. 16x	approx. 12x

Note:

To obtain a good signal for fluorescence applications with VITOM® ICG, a shorter working distance of max. 30 cm is recommended.

Technical specifications are subject to change.



The mechanical holding systems from KARL STORZ offer a versatile, convenient and cost-effective possibility for the secure positioning of instruments and telescopes.

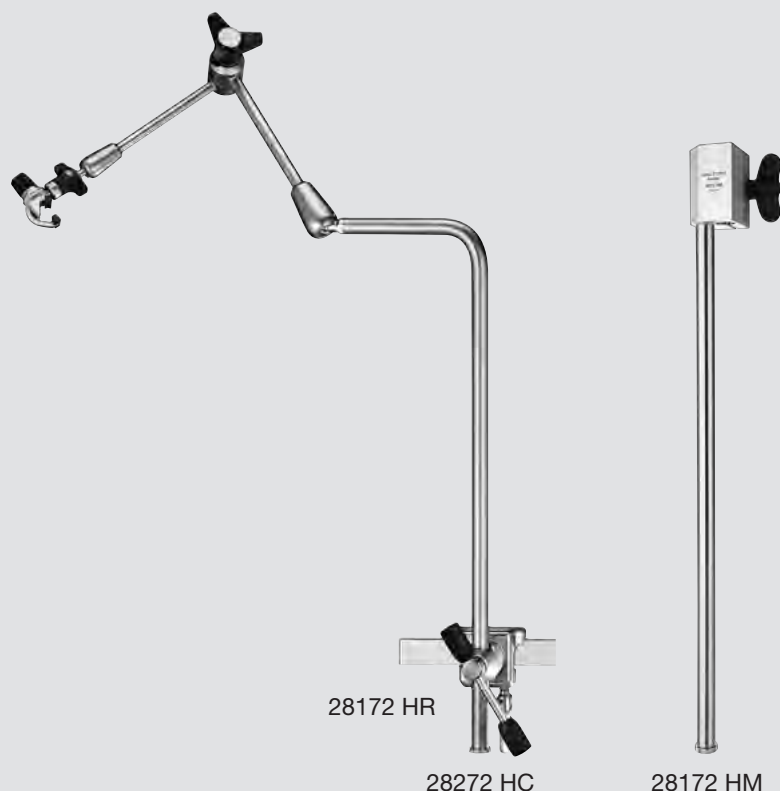
A wide range of accessories enables the systems to be configured for any desired fields of application. The robust construction ensures reliable positioning without oscillation.

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, 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



Further Mechanical Articulated Stands and Accessories can be found in the TELEPRESENCE catalog, chapter 11 HOLDING SYSTEMS, page 185 ff.



- 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 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

Accessories

- 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.
- 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

Further Mechanical Articulated Stands and Accessories can be found in the TELEPRESENCE catalog, chapter 11 HOLDING SYSTEMS, page 185 ff.

VITOM® 3D

3D Visualization for Microsurgery and Open Surgery

The application possibilities of the VITOM® 3D are similar to that of the operating microscope. The surgeon can work comfortably with VITOM® 3D via a 3D monitor which allows for a relatively free choice of working positions. The most important functions are controlled via the IMAGE1 PILOT, which is mounted on the OR table in the direct vicinity of the surgeon. The VITOM® 3D system provides many surgical disciplines with a revolutionary solution for the visualization of microsurgical and open surgical interventions.

The VITOM® 3D fits seamlessly into the IMAGE1 S™ platform and can be used with this system. The visualization and documentation of surgeries can therefore be carried out with an existing endoscopy tower. This ideally supports combined work with endoscopes as in, for example, endoscopically assisted microsurgery (EAM).

Benefits at a glance:

- Ergonomic work – the user is not confined to the eyepiece
- Improved workflow – the entire OR team can view the procedure in the same image quality as the surgeon
- Flexible, diverse application possibilities – from visualization and documentation to education and training
- Beneficial for endoscopically assisted microsurgery as it is possible to combine VITOM® 3D with endoscopes
- Small, lightweight and portable system
- Economic synergetic effects from 3D visualization for microsurgery and open surgery as well as endoscopy based on the IMAGE1 S™ platform



VITOM® 3D, with integrated illumination
Cover, for VITOM® 3D, sterile



TH 200
TH 001*

Holding Arm for VITOM® 3D



28272 HSP

Fiber Optic Light Cable



495 TIP
495 VIT

IMAGE1 PILOT
IMAGE1 PILOT Sterile Cover



TC 014
041150-20*

IMAGE1 S™ Camera System



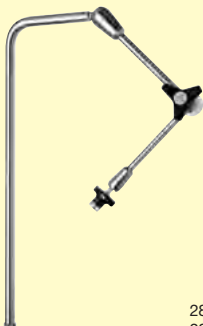
TC 200EN
TC 302

Cold Light Fountain POWER LED 300 SCB



TL 300

Holding Arm for IMAGE1 PILOT



28272 HB
28172 HR

3D Monitors



TM 323, 9826 NB-3D

3D Polarization Glasses
3D Clip-on Glasses

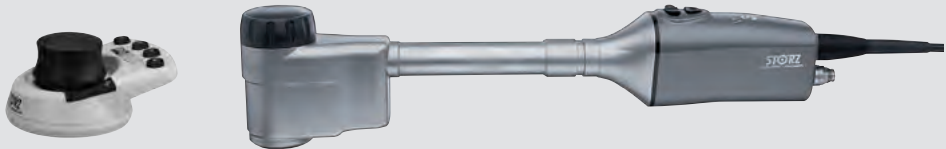


9800 GF
9800 C



VITOM® 3D

3D Visualization for Microsurgery and Open Surgery



	TH 200 VITOM® 3D
	with zoom and focus function, integrated illumination and horizontal alignment, working distance 20 – 50 cm, fiber optic light transmission incorporated, suitable for wipe disinfection
For use with:	● IMAGE1 S CONNECT™, basic module ● IMAGE1 S D3-LINK™, module for 3D endoscopy ● IMAGE1 PILOT, input unit

TC 014 **IMAGE1 PILOT**, control unit with 3D wheel, 4 programmable function keys and USB port, for intuitive control of camera systems and connected units, for use with IMAGE1 S™ and VITOM® 3D TH 200

Specifications:

Frame rate	50/60 Hz
Image sensor	2 chip, 4K
Image display	3D, 2D
Scanning method	progressive scan
Zoom	infinitely variable
Working distance (WD)	20 – 50 cm
Magnification (WD 30 cm with 32" 3D Monitor)	approx. 8 – 30 x
Cable length	500 cm
Cable routing	straight
Cleaning	wipe disinfection
Sterilization concept	single-use covers
Control concept	IMAGE1 PILOT for intuitive control of all relevant functions (zoom, focus, menu, navigation), 4 buttons for rapid access, 3D wheel
Camera head buttons	freely programmable
S-Technologies	CLARA, CHROMA, SPECTRA
Safety class	CF-defib

IMAGE1 PILOT is required for the use of VITOM® 3D.
VITOM® 3D and IMAGE1 PILOT are always used with a holding system.
Please note that special clamping jaws are available for mounting VITOM® 3D to the holding system.
Holding Systems and Accessories see TELEPRESENCE catalog, chapter 11 HOLDING SYSTEMS

VERSACRANE™ Holding System – for the convenient positioning of VITOM®



28272 HC

28272 HSP **VERSACRANE™ Holding Arm**, high, mobile, spring-supported, with quick release coupling KSLOCK, for use with KARL STORZ clamping jaws. The VERSACRANE™ holding arm is intended for use with VITOM® scopes.

including:

VERSACRANE™ Holding Arm

Mobile Stand, with height adjustment

WARNING: The VERSACRANE™ holding arm cannot be used with rigid endoscopes!

Clamping Jaws and Accessories for VITOM® 3D

28272 VTK **VITOM® 3D Clamping Jaw**, with ball joint and quick release coupling KSLOCK (male), for use with VITOM® 3D and KARL STORZ holding systems with quick release coupling KSLOCK

TH 001* **Cover**, for VITOM® 3D, sterile, for single use, package of 10

STERILE



Note: The 550 cm long Light Cable 495 VIT is required for VERSACRANE™.
Components/Spare Parts see chapter 18

	28272 VTK	VITOM® 3D Clamping Jaw , with ball joint and quick release coupling KSLOCK (male), for use with VITOM® 3D and KARL STORZ holding systems with quick release coupling KSLOCK
	28272 VTP	VITOM® 3D Clamping Jaw , for POINT SETTER, with dovetail connector, for use with VITOM® 3D and POINT SETTER holding system
	495 TIP	Fiber Optic Light Cable , with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 300 cm
	495 VIT	Fiber Optic Light Cable , with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 550 cm
	TH 001*	Cover , for VITOM® 3D, sterile, for single use, package of 10
	TH 002	VITOM® 3D Illuminator , additional lighting for VITOM® 3D, with 1 adjustable lens, autoclavable , for use with VITOM® 3D and light cable
	TH 003	Protective Cover , high-grade protective cover, padded imitation leather, for protecting the VITOM® 3D during storage and transport, for use with VITOM® 3D and holding arm
	Set 2B	
	39502 ZH	Wire Tray , stackable, with hole plates
	39502 LH	Lid
	39100 SH	Silicone Insert
	39100 PS	Fixation Pins , package of 12
	39360 AS	Silicone Tie-Downs , package of 12



Please note: The instruments displayed are not included in the wire tray.

IMAGE1 PILOT with holding system for fixation to the operating table

	TC 014	IMAGE1 PILOT , control unit with 3D wheel, 4 programmable function keys and USB port, for intuitive control of camera systems and connected units, for use with IMAGE1 S™ and VITOM® 3D TH 200
	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 HB	Articulated Stand , reinforced version, L-shaped, with one central clamp for all five joint functions, height 48 cm, operating range 52 cm, with quick release coupling KSLOCK (female)
	041150-20*	Cover , elasticated, 42 x 164 cm, sterile, for single use, package of 20, for use with KARL STORZ holding systems and IMAGE1 PILOT

Monitor

	TM 323	32" 3D Monitor including: Mains Cord External 24 VDC Power Supply 3x 3D Polarization Glasses Cable Cover
	9832 SFH	Monitor Stand , for professional use, height-adjustable, tiltable, rotation +/-30°, disinfectable, color white, with VESA 200 adaptor, for use with 32" 3D Monitor TM 323
	9800 GF	3D Polarization Glasses , fogless, passive, package of 2, for use with 3D monitors
	9800 C	3D Clip-on Glasses , circularly polarized



Holding Systems and Accessories see TELEPRESENCE catalog, chapter 11 HOLDING SYSTEMS



FULL HD IMAGING FOR OPERATING MICROSCOPES

INTRODUCTION	211

OVERVIEW	212

IMAGE1 S™ THREE-CHIP FULL HD C-MOUNT CAMERA HEAD	213

TV ADAPTORS	214-216

Accessories for Operating Microscopes

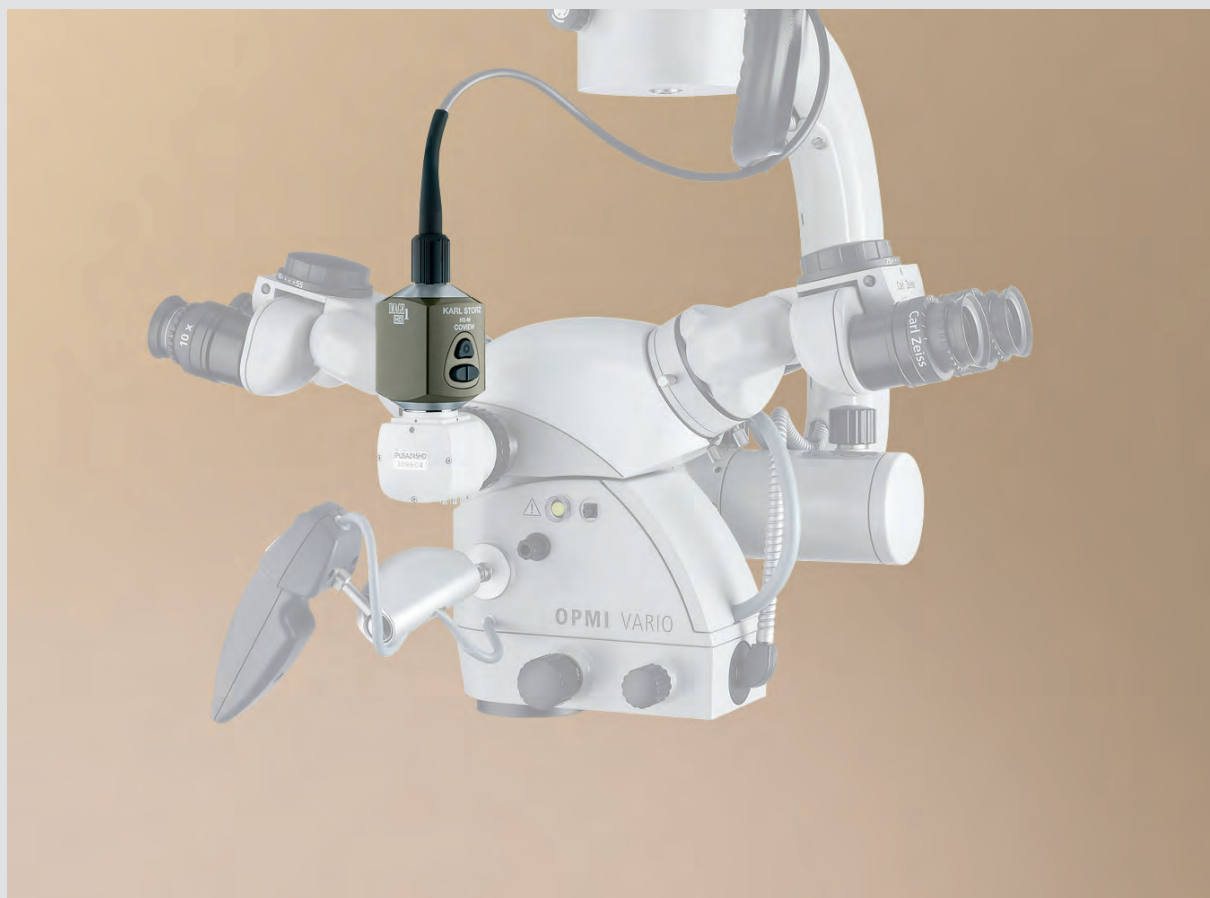
IMAGE1 S™

With the operating microscope, the surgeon always has a perfect view of the operating field. Assistants, OR nurses and students, however, often experience poor visualization of the microscope image. This is especially true if brilliant visualization is not available. KARL STORZ offers solutions from one source that are specially designed to equip operating microscopes from leading manufacturers with state-of-the-art technology. To achieve optimal results, all components in the video chain – from the camera 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 IMAGE1 S™ H3-M COVIEW® microscope camera and the corresponding QUINTUS® TV adaptor are directly connected to the microscope via the C-MOUNT connection.

The microscope camera head is part of the IMAGE1 S™ camera platform and is equipped with the S-Technologies CLARA, CHROMA and SPECTRA.



Accessories for Operating Microscopes

Overview

26" FULL HD Monitor



9826 NB

ZeroWire Transmission Set (optional)



9500 ZW

KARL STORZ AIDA® Documentation System



WD 200
WD 250

IMAGE1 S™ Camera System



TC 200EN
TC 300

IMAGE1 S™ H3-M COVIEW® Three-Chip
FULL HD C-MOUNT Camera Head



TH 106

TV Adaptors



Operating Microscope



Operating microscopes
from Carl Zeiss, LEICA Microsystems
and Möller-Wedel are supported

CLARA

CHROMA

SPECTRA



With C-MOUNT thread for coupling to microscopes

	TH 106 IMAGE1 S™ H3-M COVIEW® Three-Chip FULL HD C-MOUNT Camera Head
For use with:	● IMAGE1 S CONNECT™ + IMAGE1 S™ H3-LINK

Specifications:

Frame rate	50/60 Hz
Image sensor	3-chip
Resolution	1920 x 1080
Scanning method	progressive scan
Dimensions w x h x l	45 x 50 x 60 mm
Weight	240 g
Cable length	900 cm, video cable detachable at the camera head
Cable guide	straight
Camera head buttons	freely programmable
Grasping mechanism	C-MOUNT connection
Reprocessing	wipe disinfection
S-Technologies	CLARA, CHROMA, SPECTRA
Protection class	CF-Defib

Accessories for Operating Microscopes

TV Adaptors

QUINTUS® – High-Performance TV Adaptor for Operating Microscopes

Unleash the full performance of your operating microscope with 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® 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.

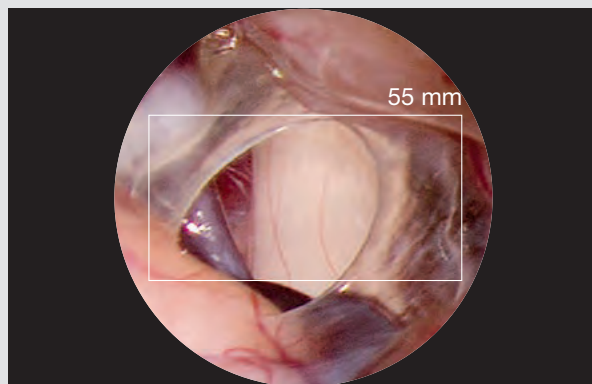


Product Features:

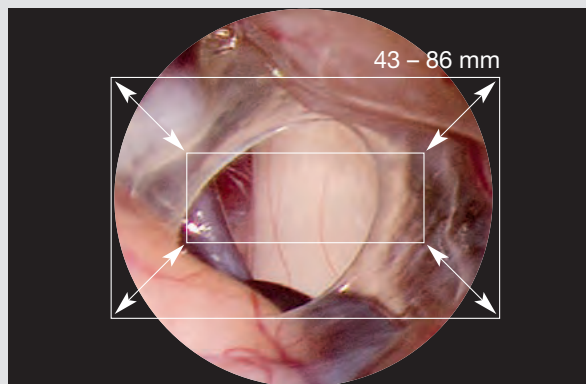
- A rotating C-MOUNT connection at the QUINTUS® TV adaptor allows immediate adaption of the camera orientation during mounting.
- The focus control makes it possible to easily achieve parfocality (perfectly sharp camera and microscope images).
- The iris control provides convenient and optimal adjustment of the depth of field.
- Pan (X) function enables adjustment of the horizontal position of the camera image.
- Tilt (Y) function enables adjustment of the vertical position of the camera image. The pan and tilt functions help the surgeon to adjust the position of the camera image according to his individual needs.
- The QUINTUS® ZOOM model also features a variable focal length $f = 43 - 86$ mm. This allows the surgeon greater flexibility in choosing the exact zone required for documentation.

Focal length of the QUINTUS® TV adaptor:

The QUINTUS® TV adaptor is available in the fixed focal length $f = 55$ mm or as a zoom model with variable focal length $43 - 86$ mm. This provides an optimal image in 16:9 in conjunction with the H3-M COVIEW® microscope camera head.



Focal lengths: H3-M COVIEW® camera image detail using a QUINTUS® TV adaptor with a fixed focal length of 55 mm.



Variable focal length: Adjustable H3-M COVIEW® camera image detail using a QUINTUS® zoom adaptor with variable focal length of 43 – 86 mm.

Accessories for Operating Microscopes

TV Adaptors

QUINTUS® TV Adaptor for operating microscopes from CARL ZEISS MEDITEC with fixed focal length



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

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

Iris, for ZEISS Pentero®, iris as a necessary extension between the QUINTUS® TV adaptor and the operating microscope ZEISS Pentero®



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.

Accessories for Operating Microscopes

TV Adaptors

QUINTUS® TV Adaptor for operating microscopes from LEICA Microsystems with fixed focal length



20 9330 55 **QUINTUS® L 55 TV Adaptor**, for LEICA Microsystems 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® TV Adaptor for operating microscopes from LEICA Microsystems with variable focal length



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 55 **QUINTUS® M 55 TV Adaptor**, for Möller-Wedel 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

Note: Optical beamsplitters for other operating microscopes (i.e. LEICA or Möller-Wedel) are available directly from the manufacturers.



HOLDING SYSTEMS FOR ARTHROSCOPY

LEG HOLDER 218

SHOULDER SUPPORT 219

Holding Systems

Leg Holder

STORZ
KARL STORZ — ENDOSKOPE



*adjustable jaws,
all-round padding*



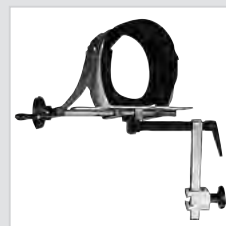
pivots 360°



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

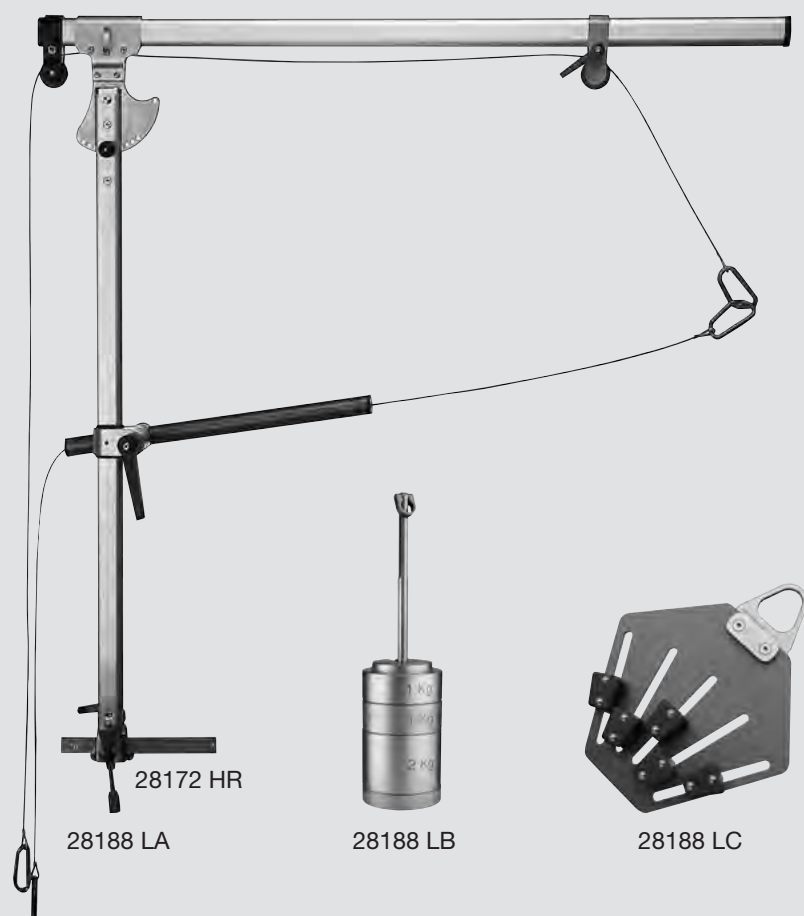
Components/Spare Parts see chapter 18

Holding Systems

Shoulder Traction System

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, Hand Fixation 28188 LC and Rotation Socket 28172 HR

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

Components/Spare Parts see chapter 18





TRAINING MODELS FOR ARTHROSCOPY

HIGH-END SIMULATORS	
KNEE	.222-225

HIGH-END SIMULATORS	
SHOULDER	.226-229

HIGH-END SIMULATORS	
KNEE AND SHOULDER	.230-233



The KARL STORZ simulator for arthroscopy provides orthopedic surgeons with a training model for teaching and training the practical skills and know-how required for minimally invasive techniques.

Guided training enables trainees to enhance their surgical skills in a virtual environment and to manage complications with no risk for live patients. The simulator offers objective, comparable and reproducible performance feedback to complete the learning process. An arthroscope equipped with sensors and specially adapted to the simulation trainer makes it

possible to follow steps and movements on the monitor. The modified KARL STORZ arthroscope as well as other adapted original instruments helps trainees become familiar with instruments in a straightforward and highly realistic manner.

The anatomical knee model delivers realistic, tactile feedback in a highly realistic training environment using these instruments. Furthermore, the simulation software provides a wide range of intraoperative scenarios.

Original operating instruments provide a highly realistic simulation experience and facilitate familiarization with instruments.

Similar to the operating room, the high-end simulators feature:

- 3 virtual telescopes: 0°, 30° and 70°
- High-end PC and 23" multi touch screen, mouse and keyboard
- Mobile cart with height-adjustable monitor

Basic Module

8* guided training courses enable basic skills to be acquired that are integrated into a realistic simulation. Mastering these basic tasks enables surgeons to perform a complete arthroscopy in a more straightforward, efficient, and professional manner.

Diagnostics

Perform a guided arthroscopy tour through different portals.

“Catch the Stars”

Find and remove all the stars concealed below the meniscus and between ligaments or bones.

Meniscus resection

Visually guided meniscus resection including helpful resection map.

Learning objectives:

- Understand the concept of triangulation
- Learn the correct way to perform a diagnostic tour
- Correctly handle the instruments without causing cartilage damage
- Detect and eliminate lesions and malformations in a safe and efficient manner

Diagnostic Module

8* virtual patient cases with varying level of difficulty offer the surgeon the opportunity to perform complete diagnostic arthroscopic interventions. Virtual patient cases include various meniscus lesions, unhappy triad and arthrosis grade I-III.

Learning objectives:

- Safety in systematic examination; inspection of all important features
- Inspect the knee completely and describe visible lesions
- Safely handle the instruments to avoid collisions with the tissue

Therapeutic Module

Virtual patients with lesions in various locations provide optimal training for first steps in operative arthroscopy – with real operating instruments. Patient cases include meniscus lesions, synovial membrane inflammation and loose body removal.

Learning objectives:

- Inspect the knee completely and describe visible pathologies
- Treat the diagnosed pathologies
- Loose body removal; analysis and review of the intervention

Expert-defined metrics provide objective feedback for all modules and thus offer the best learning outcomes.

* The number of patient cases may change due to further development of the product.



573614

573611

Stationary ARTHROTRAINER, with anatomical knee model, in a reusable transport case, ideal for use at conferences, workshops and training centers including:

Integrated Learning Management System

High-end PC and 23" Multi Touch Screen

Mobile Cart, with height-adjustable monitor

Tool Set, with arthroscope, grasping forceps/punch, shaver and palpation hook

Software

Wireless Keyboard

Mains Cord

Cleaning Box

Transport Case

573614

Same, in single use packaging

Basic Instruments – included in the ARTHROTRAINER Tool Set:



5733101

5733101 **Arthroscope**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733002

5733002 **Grasping Forceps/Punch**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733004

5733004 **Palpation Hook**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733003

5733003 **Shaver**, adapted original instrument with sensors, for use with ARTHROTRAINER

Services:



- 5733103 **Refurbishment of Anatomical Knee Model,**
replacement of worn components (incidentals),
refurbishment, calibration and function control
- 5733104 **Skin Cover for Anatomical Knee Model,**
customized cover with access points to the
knee joint

Optional Accessories:



5733001

- 5733001 **Transport Case,** for all stationary trainers, reusable,
recommended for frequent shipment



The KARL STORZ simulator for arthroscopy provides orthopedic surgeons with a training model for teaching and training the practical skills and know-how required for minimally invasive techniques.

Guided training enables trainees to enhance their surgical skills in a virtual environment and to manage complications with no risk for live patients. The simulator offers objective, comparable and reproducible performance feedback to complete the learning process. An arthroscope equipped with sensors and specially adapted to the simulation trainer makes it

possible to follow steps and movements on the monitor. The modified KARL STORZ arthroscope as well as other adapted original instruments helps trainees become familiar with instruments in a straightforward and highly realistic manner.

The anatomical shoulder model delivers realistic, tactile feedback in a highly realistic training environment using these instruments. Furthermore, the simulation software provides a wide range of intraoperative scenarios.

Original operating instruments provide a highly realistic simulation experience and facilitate familiarization with instruments.

Similar to the operating room, the high-end simulators feature:

- 3 virtual telescopes: 0°, 30° and 70°
- High-end PC and 23" multi touch screen, mouse and keyboard
- Mobile cart with height-adjustable monitor

Basic Module

8* guided training courses enable basic skills to be acquired that are integrated into a realistic simulation. Mastering these basic tasks enables surgeons to perform a complete arthroscopy in a more straightforward, efficient, and professional manner.

Diagnostics

Guided diagnostic arthroscopic tour of the glenohumeral joint and the subacromial space.

Triangulation

Efficient utilization of arthroscopic instruments in order to reach difficult-to-access areas in the glenohumeral joint and the subacromial space.

“Catch the Stars”

Find and remove all the stars in the glenohumeral joint and the subacromial space that are concealed between ligaments and behind bones.

Learning objectives:

- Learn the correct way to perform a diagnostic tour
- Correctly handle the instruments without causing cartilage damage
- Detect and eliminate foreign bodies in a safe and efficient manner

Diagnostic Module

4* virtual patient cases with varying level of difficulty offer the surgeon the opportunity to perform complete diagnostic arthroscopic interventions. Virtual patient cases include different lesions in the rotator cuff as well as impingement syndrome.

Learning objectives:

- Inspect the shoulder completely in both joint spaces and describe visible lesions
- Safely handle the instruments to avoid collisions with the tissue

Therapeutic Module

8* virtual patients with lesions in different locations provide optimal training for first steps in operative arthroscopy – with real operating instruments. Patient cases include loose body removal, subacromial debridement and decompression.

Learning objectives:

- Inspect the shoulder completely and describe visible pathologies
- Treat the diagnosed pathologies
- Loose body removal; analysis and review of the intervention

Expert-defined metrics provide objective feedback for all modules and thus offer the best learning outcomes.

* The number of patient cases may change due to further development of the product.



573615

573612

Stationary ARTHROTRAINER, with anatomical shoulder model (for beach chair and lateral positioning), in a reusable transport case, ideal for use at conferences, workshops and training centers

including:

Integrated Learning Management System

High-end PC and 23" Multi Touch Screen

Mobile Cart, with height-adjustable monitor

Tool Set, with arthroscope, grasping forceps/punch, shaver and palpation hook

Software

Wireless Keyboard

Mains Cord

Cleaning Box

Transport Case

573615

Same, in single use packaging

Basic Instruments – included in the ARTHROTRAINER Tool Set:



5733101

5733101 **Arthroscope**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733002

5733002 **Grasping Forceps/Punch**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733004

5733004 **Palpation Hook**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733003

5733003 **Shaver**, adapted original instrument with sensors, for use with ARTHROTRAINER

Services:



- 5733106 **Refurbishment of Anatomical Shoulder Model,**
replacement of worn components (incidentals),
refurbishment, calibration and function control
- 5733107 **Skin Cover for Anatomical Shoulder Model,**
customized cover with access points to the
shoulder joint

Optional Accessories:



5733001

- 5733001 **Transport Case,** for all stationary trainers, reusable,
recommended for frequent shipment



The KARL STORZ simulator for arthroscopy provides orthopedic surgeons with a training model for teaching and training the practical skills and know-how required for minimally invasive techniques.

Guided training enables trainees to enhance their surgical skills in a virtual environment and to manage complications with no risk for live patients. The simulator offers objective, comparable and reproducible performance feedback to complete the learning process. An arthroscope equipped with sensors and specially adapted to the simulation trainer makes it

possible to follow steps and movements on the monitor. The modified KARL STORZ arthroscope as well as other adapted original instruments helps trainees become familiar with instruments in a straightforward and highly realistic manner.

The anatomical knee and shoulder models deliver realistic, tactile feedback in a highly realistic training environment using these instruments. Furthermore, the simulation software provides a wide range of intra-operative scenarios.

Basic Module for the Shoulder and Knee

Guided training courses enable basic skills to be mastered, fully integrated into a realistic simulation.

Learning objectives:

- Learn the correct way to perform a diagnostic tour
- Correctly handle the instruments without causing cartilage damage
- Detect and eliminate lesions and malformations in a safe and efficient manner
- Understand the concept of triangulation

Diagnostic Module for the Shoulder and Knee

Virtual patient cases with varying level of difficulty offer the surgeon the chance to perform complete diagnostic arthroscopic interventions.

For the **knee**, virtual patients include different meniscus lesions, unhappy triad and arthrosis grade I-III.

For the **shoulder**, virtual patients include different lesions in rotator cuff and impingement syndrome.

Learning objectives:

- Inspect the knee completely and describe visible lesions
- Safely handle the instruments to avoid collisions with the tissue
- Safety in systematic examination; inspection of all important features

Therapeutic Module for the Shoulder and Knee

Virtual patients with various lesions in different locations provide training for the first steps in operative arthroscopy – using real operating equipment.

Interventions on the **knee** include different meniscus lesions, synovial membrane inflammations and loose body removal.

Interventions on the **shoulder** include loose body removal, subacromial debridement and decompression.

Learning objectives:

- Inspect the knee and shoulder completely and describe visible pathologies
- Treating the diagnosed pathologies
- Grasp and remove the chips; analyze and review the operation



573613

573610

Stationary ARTHROTRAINER, with anatomical knee and shoulder models (for beach chair and lateral positioning), in a reusable transport case, ideal for use at conferences, workshops and training centers including:

Integrated Learning Management System

High-end PC and 23" Multi Touch Screen

Mobile Cart, with height-adjustable monitor

Tool Set, with arthroscope, grasping forceps/punch, shaver and palpation hook

Software

Wireless Keyboard

Mains Cord

Cleaning Box

Transport Case

573613

Same, in single use packaging

Basic Instruments – included in the ARTHROTRAINER Tool Set:



5733101

5733101 **Arthroscope**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733002

5733002 **Grasping Forceps/Punch**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733004

5733004 **Palpation Hook**, adapted original instrument with sensors, for use with ARTHROTRAINER



5733003

5733003 **Shaver**, adapted original instrument with sensors, for use with ARTHROTRAINER

Services Knee:



- 5733103 **Refurbishment of Anatomical Knee Model,** replacement of worn components (incidentals), refurbishment, calibration and function control
- 5733104 **Skin Cover for Anatomical Knee Model,** customized cover with access points to the knee joint

Services Shoulder:



- 5733106 **Refurbishment of Anatomical Shoulder Model,** replacement of worn components (incidentals), refurbishment, calibration and function control
- 5733107 **Skin Cover for Anatomical Shoulder Model,** customized cover with access points to the shoulder joint

Optional Accessories:



5733001

- 5733001 **Transport Case,** for all stationary trainers, reusable, recommended for frequent shipment





EXTRACORPOREAL SHOCK WAVE THERAPY (ESWT) IN ORTHOPEDICS

STORZ MEDICAL 236

STORZ MEDICAL
DUOLITH® SD1 TOWER »ULTRA« 237

STORZ MEDICAL
DUOLITH® SD1 T-TOP »F-SW ultra« 238

STORZ MEDICAL
MASTERPULS® »ultra« 239

Established in 1987, STORZ MEDICAL AG is a Swiss member company of the KARL STORZ Group. With its state-of-the-art technological innovations, STORZ MEDICAL is setting new standards for shock wave therapy in urology, cardiology, orthopedics, aesthetic medicine and dermatology.

Applications for Shock Wave Therapy

Orthopedics (focused and radial shock wave therapy):

- Achillodynia, calcified tendinitis, patellar tendonitis, plantar fasciitis, radial and ulnar humeral epicondylitis, tibial stress syndrome, trochanteric tendinopathy
- Myofascial pain syndrome, trigger points, fascia treatment, paravertebral treatments
- Pseudarthrosis (focused only)

Urology (focused shock wave therapy):

- ED: Erectile Dysfunction
- CPPS: Chronic Pelvic Pain Syndrome
- IPP: Peyronie's disease (Induratio Penis Plastica)

Dermatology (focused shock wave therapy):

- Wound healing
- Ulcers, diabetic foot, decubitus ulcers
- Burns
- Cellulite (combined radial and focused shock wave therapy)
- Lipedema/lymphedema

Neurology (focused shock wave therapy):

- Spastic muscle paralysis (e.g., caused by infantile cerebral palsy or a stroke)



Fig. 1: Focused shock wave therapy for epicondylitis



Fig. 2: Radial shock wave therapy for patellar tendonitis



Fig. 3: Treatment of the muscles in the lumbar spine



Fig. 4: Treatment of the fascia lata

The DUOLITH® SD1 TOWER »ultra« shock wave system represents a clear modular concept that meets the growing therapeutic and diagnostic needs of a medical practice. It benefits both newcomers to extracorporeal shock wave therapy and experienced users. The DUOLITH® SD1 TOWER »ultra« can be customized according to individual needs or expanded as desired and is centrally controlled via a 15.4" touch screen. All modular elements in the entire system are

interconnected in the equipment cart. The DUOLITH® SD1 TOWER »ultra« combines radial and focused shock wave therapies*, complementary vibration and vacuum therapies as well as the integrated diagnostic ultrasound imaging in one system.

*Specifications correspond to the DUOLITH® T-TOP »F-SW ultra« and the MASTERPULS® MP200 »ultra«



Fig. 1: DUOLITH® SD1 TOWER »ultra«



Fig. 2: Handpieces can be combined as required

STORZ MEDICAL DUOLITH® SD1 T-TOP »F-SW ultra«

Focused Shock Wave Therapy

STORZ
KARL STORZ — ENDOSKOPE

STORZ MEDICAL

High-quality workmanship and optimal ergonomics mark the design of the new focused shock wave generation with the »SEPIA« handpiece. The special flexibility of the handpiece cable supports fatigue-free and, thus, easier treatment always directly at the patient – an important factor in the day-to-day routine.

All the important control elements have been integrated into the handpiece. Frequency and energy level can be adjusted directly at the handpiece. Users benefit from reduced revision costs thanks to the easy change of the coil.



DUOLITH® SD1 T-TOP »F-SW ultra«

- Focused shock wave, standard energy level:
0.01 – 0.55 mJ/mm²
- Focused shock wave, enhanced energy level:
0.03 – 1.24 mJ/mm²
- Focused »SEPIA« handpiece with integrated display for rapid treatment
- 10" touch screen (optional)

The radial shock wave systems of the MASTERPULS® »ultra« line are characterized by their compact dimensions, high reliability, low maintenance costs and silent on-board »Air Power« drive.

All important control elements are integrated into the »FALCON« handpiece display and, thus, facilitate uninterrupted and quick treatment directly at the patient.



MASTERPULS® MP50 »ultra«

- Radial shock wave:
Pressure: 0.3 – 4.0 bareff,
Frequency: 1 – 17 Hz (depending on pressure)
- »FALCON« radial handpiece with integrated display for rapid treatment
- Vibration therapy (optional), V-ACTOR®: 1 – 21 Hz
- 10" touch screen (optional)



MASTERPULS® MP100 »ultra«

- Pressure: 0.3 – 5.0 bareff,
Frequency: 1 – 21 Hz (depending on pressure)
- »FALCON« radial handpiece with integrated display and »Skin Touch« function for rapid treatment
- Vibration therapy (optional), V-ACTOR®: 1 – 31 Hz
- 10" touch screen (optional)



MASTERPULS® MP200 »ultra«

- Radial shock wave:
Pressure: 0.3 – 5.0 bareff,
Frequenz: 1 – 21 Hz
- »FALCON« radial handpiece with integrated display and »Skin Touch« function for rapid treatment
- Two R-SW connectors
- Vibration therapy (optional), V-ACTOR®: 1 – 35 Hz
- VACU-ACTOR® technology (optional)
- 10" touch screen (optional)





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

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

NEW ENDOMAT® SELECT

Special Features:

- Can be used as both single- and double-roller pump (single or continuous flow)
- Hemostasis mode: Short-term 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





- 28 3407 01-1

ARTHROPUMP® Power,

power supply 100 – 240 VAC, 50/60 Hz

including:

Connecting Cable, to UNIDRIVE® S III ARTHRO SCB

SCB Connecting Cable, length 100 cm

Four-Pedal Footswitch

Tubing Set Irrigation*, sterile, for single use, package of 3

Tubing Set Suction*, sterile, for single use, package of 3

STERILE

⌘

STERILE

⌘

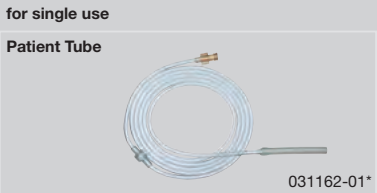
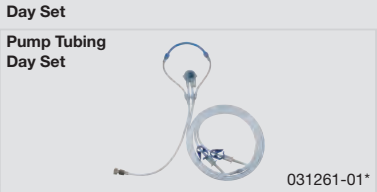
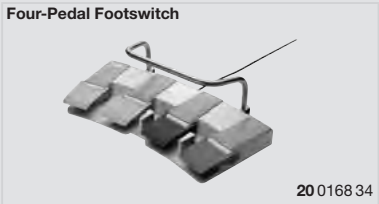
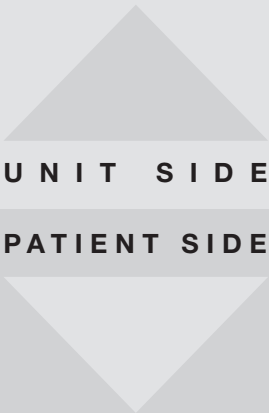
Specifications:

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



Optional Accessories for ARTHROPUMP® Power see pages U 9-10

Components/Spare Parts see chapter 18



ARTHROPUMP® Power

Optional Accessories

	20 0168 34	Four-Pedal Footswitch
	28 3407 70	Connecting Cable , to transmit the footswitch signal from ARTHROPUMP® Power to 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

STERILE 

	031328-10*	Tubing Set Irrigation , with two puncture needles, sterile, for single use, package of 10
	031228-10*	Tubing Set Suction , with two suction tubes, sterile, for single use, package of 10

Single-Flow – Irrigation

	031328-10*	Tubing Set Irrigation , with two puncture needles, sterile, for single use, package of 10

6-121



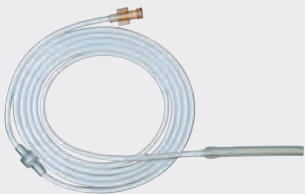
Day Set

Continuous-Flow – Irrigation and Suction

STERILE



031261-10* **Pump Tubing Day Set**, with two puncture needles, for day use, sterile, for single use, package of 10, for use with Patient Tubes 031162-01 or 031162-10



031162-10* **Patient Tube****, sterile, for single use, package of 10, for use with Pump Tubing Day Set 031261-01 or 031261-10



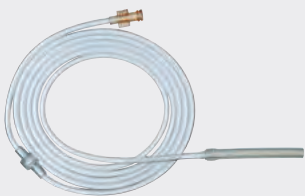
031228-10* **Tubing Set Suction**, with two suction tubes, sterile, for single use, package of 10

Single-Flow – Irrigation

STERILE



031261-10* **Pump Tubing Day Set**, with two puncture needles, for day use, sterile, for single use, package of 10, for use with Patient Tubes 031162-01 or 031162-10



031162-10* **Patient Tube****, sterile, for single use, package of 10, for use with Pump Tubing Day Set 031261-01 or 031261-10



** Also in combination with 031161-10, 031167-10, 031168-10

ENDOMAT® SELECT ^{NEW}

Roller pump for the irrigation of fluids

STORZ
KARL STORZ — ENDOSKOPE

SUCTION AND IRRIGATION SYSTEMS

Special Features:

- Roller pump system for pressure-controlled irrigation
- Max. pressure setting: 150 mmHg
- Interface and communication with UNIDRIVE® S III ARTHRO SCB supports reliable joint distension
- Unit and accessories extremely easy to use
- Multidisciplinary use
- With connection option for KARL STORZ Communication Bus (KARL STORZ-SCB)
- Boost mode: For stabilization of the cavity when shaver is activated or for hemostasis by activating an additional one-pedal footswitch



ENDOMAT® SELECT ^{NEW}

Roller Pumps – Suction or Irrigation System
Recommended Standard Set Configuration



Basic Unit:

UP 210 **ENDOMAT® SELECT**, suction or irrigation pump,
incl. mains cord, power supply 100 – 240 VAC,
50/60 Hz

Software Module for Arthroscopy:

UP 605 **Arthroscopy, Software, License**, allows selection of the
procedures “KNEE”, “HIP”, “SHOULDER” and “Small Joints”,
for use with ENDOMAT® SELECT UP 210

Specifications:

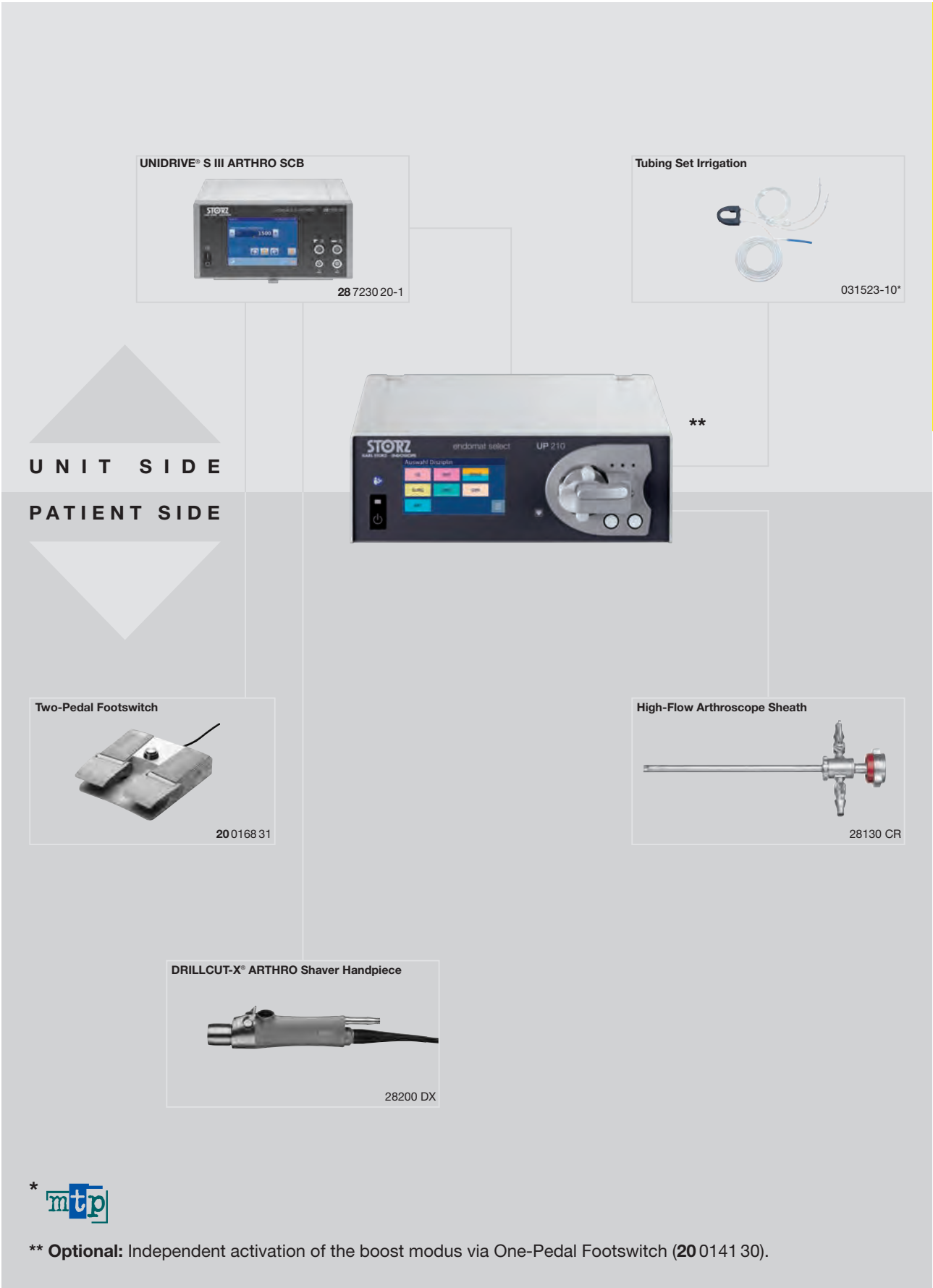
Software package	Arthroscopy
Pressure max.	150 mmHg
Power supply	100-240 VAC, 50/60 Hz
Weight	4.7 kg
Parameter display	- Set pressure - Actual pressure - Percentage pressure increase

Operating mode	Irrigation, pressure-controlled
Dimensions w x h x d	305 x 110 x 260 mm
Certified to	IEC 601-1, CE acc. to MDD



Note:
The ENDOMAT® SELECT only functions after uploading a software module (e.g. UP 605). When placing an order for this system, please consult Configuration Flyer 96311002.

Optional Accessories for ENDOMAT® SELECT see page U 14
Components/Spare Parts see chapter 18



* **mtp**

** **Optional:** Independent activation of the boost modus via One-Pedal Footswitch (20 0141 30).

ENDOMAT® SELECT

Optional Accessories

	031523-10*	Tubing Set , irrigation, PC, sterile, for single use, package of 10, for use with HAMOU® ENDOMAT® 26 3311 20 and ENDOMAT® SELECT UP 210	STERILE 
	UP 610	ADVANCED Package, Software, License , extends functions of installed software packages, for use with ENDOMAT® SELECT UP 210	
	20 0900 70	SCB Connecting Cable , length 30 cm	
	UP 006	Control Cable , 1x LEMO 5-pin 0° and 1x LEMO 12-pin 0° connector, length 100 cm, for transmission of the footswitch signal between UNIDRIVE® S III ARTHRO SCB 28 7230 20-1 and ENDOMAT® SELECT UP 210	
	20 0141 30	One-Pedal Footswitch , digital, one-stage, for irrigation	



Note:
Further information on additional software modules and accessories for ENDOMAT® SELECT is available in Product Highlight 96311003.



■ 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
- Comprehensive portfolio of single-use and reusable blades
- Communication with ARTHROPUMP® Power



UNIDRIVE® S III ARTHRO SCB

Recommended Standard Set Configuration

Special Features:

- Arthroscopic motor system for all joints
- Stable torque throughout entire speed range
- Motors with speed of max. 8000 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
- Handle with detachable valve assembly for optimal reprocessing



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	- DRILLCUT-X® ARTHRO 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

Handpiece	KARL STORZ Quick Coupling	for use with Reusable Blades	Rotation (rpm)	Oscillation (rpm)	Connecting Cable (m)	Weight (kg)
28 7210 36 Multifunction Handpiece	●	—	0 to 1700	—	3.5	0.88
28200 DX DRILLCUT-X® ARTHRO Shaver Handpiece	●	●	1000 to 8000	500 to 3000	3.0	0.31



28200 DX

NEW

28200 DX

DRILLCUT-X® ARTHRO Shaver Handpiece, up to 8000 rpm,
for use with UNIDRIVE® S III ARTHRO SCB

Optional Accessories for UNIDRIVE® S III ARTHRO SCB Shaver Blades

- 28205 SAA

Irrigation Adaptor, for validated cleaning of outer blades
- 28205 SAI

Irrigation Adaptor, for validated cleaning of inner blades

Please note: The shaver handpieces should not be treated with universal spray.
Optional Accessories for UNIDRIVE® S III ARTHRO SCB see page U 21
Shaver Blades see pages U 22-27



28 7210 36

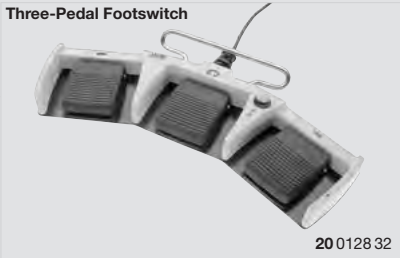
28 7210 36 Multifunction Handpiece, for use with UNIDRIVE® S II ARTHRO SCB

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 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 SLA – SLH
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

Saw Blades for Sagittal Saw Attachment see page U 28

Drills see pages 84, 90, 91, 103, 149 and 152



UNIT SIDE
PATIENT SIDE



UNIDRIVE® S III ARTHRO SCB

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 SLA – SLH
	28 7210 34	Pin Driver , for Synthes attachments
	28 7210 71	Connecting Cable , for FMS pump

For UNIDRIVE® S III ARTHRO SCB Shaver Blades

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

6-12

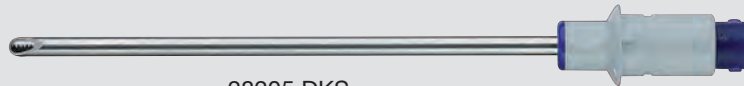
Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

Special Features:

- Shaver blades for single use and reusable shaver blades
- Optimal cutting window for fast and efficient cutting as well as suction of tissue and bone
- Diameters ranging from 2.5 to 6.5 mm
- Working lengths ranging from 70 mm to 180 mm
- Shaver blades with up to 6 cutting edges
- Curved shaver blades
- Shaver blades with distal keyhole

Shaver Blades, for single use package of 6



28205 DKS

Shaver Blades, reusable single-packaged



28205 DD

For use with Shaver Handpiece 28200 DX DRILLCUT-X® ARTHRO in conjunction with
UNIDRIVE® S III ARTHRO SCB



28200 DX

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

Working length 180 mm (recommended for soft tissue)

Type		For single use package of 6 STERILE		Reusable single-packaged	Color Code
	Aggressive Cutter	28208 BKS	diameter 4.5 mm	–	green
	Aggressive Full Radius Resector	28208 DCS	diameter 4.5 mm	–	blue
	Curved Aggressive Full Radius Resector	28208 EHS	diameter 4.5 mm	–	light green

Working length 180 mm (recommended for bone)

	Semi Hooded Barrel Burr	28208 IDS	diameter 5.5 mm	–	pink

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

Working length 120 mm (recommended for soft tissue)

Type		For single use package of 6 STERILE 		Reusable single-packaged		Color Code
	Aggressive Cutter	28205 ABS	Diameter 3.5 mm	28205 AB	Diameter 3.5 mm	green
		28205 ACS	Diameter 4.2 mm	28205 AC	Diameter 4.2 mm	
		28205 ADS	Diameter 5.5 mm	28205 AD	Diameter 5.5 mm	
	Aggressive Cutter	28205 AKS	Diameter 4.5 mm	28205 AK	Diameter 4.5 mm	green
	End Cutter	28205 BCS	Diameter 4.2 mm	28205 BC	Diameter 4.2 mm	red
	Full Radius Resector	28205 CBS	Diameter 3.5 mm	–	–	yellow
		28205 CCS	Diameter 4.2 mm	28205 CC	Diameter 4.2 mm	
		28205 CDS	Diameter 5.5 mm	–	–	
	Full Radius Resector	28205 CKS	Diameter 4.5 mm	28205 CK	Diameter 4.5 mm	yellow

MOTOR SYSTEMS

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

Working length 120 mm (recommended for soft tissue)

Type		For single use package of 6 STERILE		Reusable single-packaged		Color Code
	Aggressive Full Radius Resector	28205 DBS	Diameter 3.5 mm	28205 DB	Diameter 3.5 mm	blue
		28205 DCS	Diameter 4.2 mm	28205 DC	Diameter 4.2 mm	
		28205 DDS	Diameter 5.5 mm	28205 DD	Diameter 5.5 mm	
	Aggressive Full Radius Resector	28205 DKS	Diameter 4.5 mm	28205 DK	Diameter 4.5 mm	blue
	Curved Full Radius Resector	28205 EGS	Diameter 4.2 mm	–	–	light blue
	Curved Aggressive Full Radius Resector	28205 EHS	Diameter 4.2 mm	–	–	light green

Nutzlänge 120 mm (recommended for soft tissue and bone)

	Pro Line Shaver Blades	28205 MKS	Diameter 4.5 mm	28205 MK	Diameter 4.5 mm	pink
		28205 MDS	Diameter 5.5 mm	–	–	
	Aggressive Pro Line Shaver Blades	28205 NKS	Diameter 4.5 mm	28205 NK	Diameter 4.5 mm	light blue
		28205 NDS	Diameter 5.5 mm	–	–	

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

Working length 120 mm (recommended for bone)

Type		For single use package of 6 STERILE 		Reusable single-packaged		Color Code
	Round Burr	28205 FCS	Diameter 4.2 mm	28205 FC	Diameter 4.2 mm	orange
		28205 FDS	Diameter 5.5 mm	–	–	
	Finish Barrel Burr	28205 GDS	Diameter 4.2 mm	–	–	purple
		28205 GES	Diameter 5.5 mm	28205 GE	Diameter 5.5 mm	
	Aggressive Barrel Burr	28205 HCS	Diameter 4.2 mm	28205 HC	Diameter 4.2 mm	pink
		28205 HDS	Diameter 5.5 mm	28205 HD	Diameter 5.5 mm	
		28205 HES	Diameter 6.5 mm	28205 HE	Diameter 6.5 mm	

MOTOR SYSTEMS

Shaver Blades

for use with UNIDRIVE® S III ARTHRO SCB

for cutting and grinding

Working length 70 mm (recommended for soft tissue)

Type		For single use package of 6		Reusable single-packaged		Color Code
		STERILE 				
	Aggressive Cutter	28206 AAS	Diameter 2.5 mm	–	–	green
		28206 ABS	Diameter 3.5 mm	–	–	
	Full Radius Resector	28206 CAS	Diameter 2.5 mm	–	–	yellow
		28206 CBS	Diameter 3.5 mm	–	–	
	Aggressive Full Radius Resector	28206 DAS	Diameter 2.5 mm	28206 DA	Diameter 2.5 mm	blue
		28206 DBS	Diameter 3.5 mm	28206 DB	Diameter 3.5 mm	

Working length 70 mm (recommended for bone)

	Small Joint Burr	28206 FAS	Diameter 2.5 mm	–	–	orange
		28206 FBS	Diameter 3.5 mm	–	–	

Accessories

Saw Blades for use with Multifunction Handpiece 28 7210 36 in conjunction with UNIDRIVE® S III ARTHRO SCB



28207 SLA

28207 SLA

Saw Blade, blade width 10 mm, blade thickness 0.4 mm, cutting thickness 0.6 mm, working length 50 mm, unsterile, for single use



28207 SLB

28207 SLB

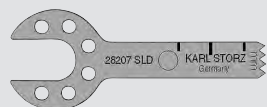
Same, blade width 14 mm



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, unsterile, for single use



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, unsterile, for single use



28207 SLG

28207 SLG

Saw Blade, blade width 6 mm, blade thickness 0.4 mm, cutting thickness 0.6 mm, working length 31 mm, unsterile, for single use



28207 SLH

28207 SLH

Same, blade width 10 mm



■ HIGH FREQUENCY SURGERY UNITS

NEW AUTOCON® III 400

AUTOCON® III 400 High-End ^{NEW}

High Frequency Surgery Unit

The high-end HF unit from KARL STORZ provides the highest level of user comfort and ease of use. The 9" color touch displays procedures for all areas of application according to the needs of the user.

A footswitch allows settings to be changed during surgery directly from the sterile area. Alternatively, two sockets with separate instruments can be controlled via a footswitch.

The maximum power of 400 Watt (unipolar and bipolar) is precisely regulated by a generator. Only the amount of energy required for the desired tissue effect is emitted. Consequently, this unit delivers the best possible performance combined with the highest patient safety.

Benefits at a glance:

- Extremely easy handling thanks to 9" color touch screen
- Predefined procedures for each speciality
- For interdisciplinary use
- 400 W unipolar and bipolar performance
- Neutral electrode monitoring for highest patient safety
- Automatic smoke evacuation with the S-PILOT™ from KARL STORZ
- Best hygiene conditions thanks to smooth surface
- Can be integrated into the KARL STORZ OR1™



AUTOCON® III 400 High-End ^{NEW}

High Frequency Surgery Unit,
Recommended Standard Set Configuration



UH 400

AUTOCON® III 400 High-End, power supply 220 – 240 VAC, 50/60 Hz
including:

Mains Cord

HF connecting sockets unipolar:

- 2x 3-pin US type
- 5 mm connector KARL STORZ/Erbe VIO
- 2x 4 mm connector (via footswitch)
- BOVIE (via footswitch)

bipolar:

- 2x 2-pin US type (28.58)
- 3x KARL STORZ/Erbe VIO
- neutral electrode 2-pol.

System requirements:

- SCB R-UI Software
- Release 20090001-46 or higher
- Can be integrated into OR1™ with KARL STORZ-SCB control NEO.

UH 400U

Same, power supply 100 – 127 VAC, 50/60 Hz

Specifications:

Max. power	unipolar: 400 Watt (at 200 Ohm) bipolar: 400 Watt (at 75 Ohm)
Power supply	230 VAC, 50/60 Hz (UH 400) 110 VAC, 50/60 Hz (UH 400U)
Weight	12.5 kg
Sockets	Unipolar sockets: 2 Bipolar sockets: 2 (can be expanded to 3)

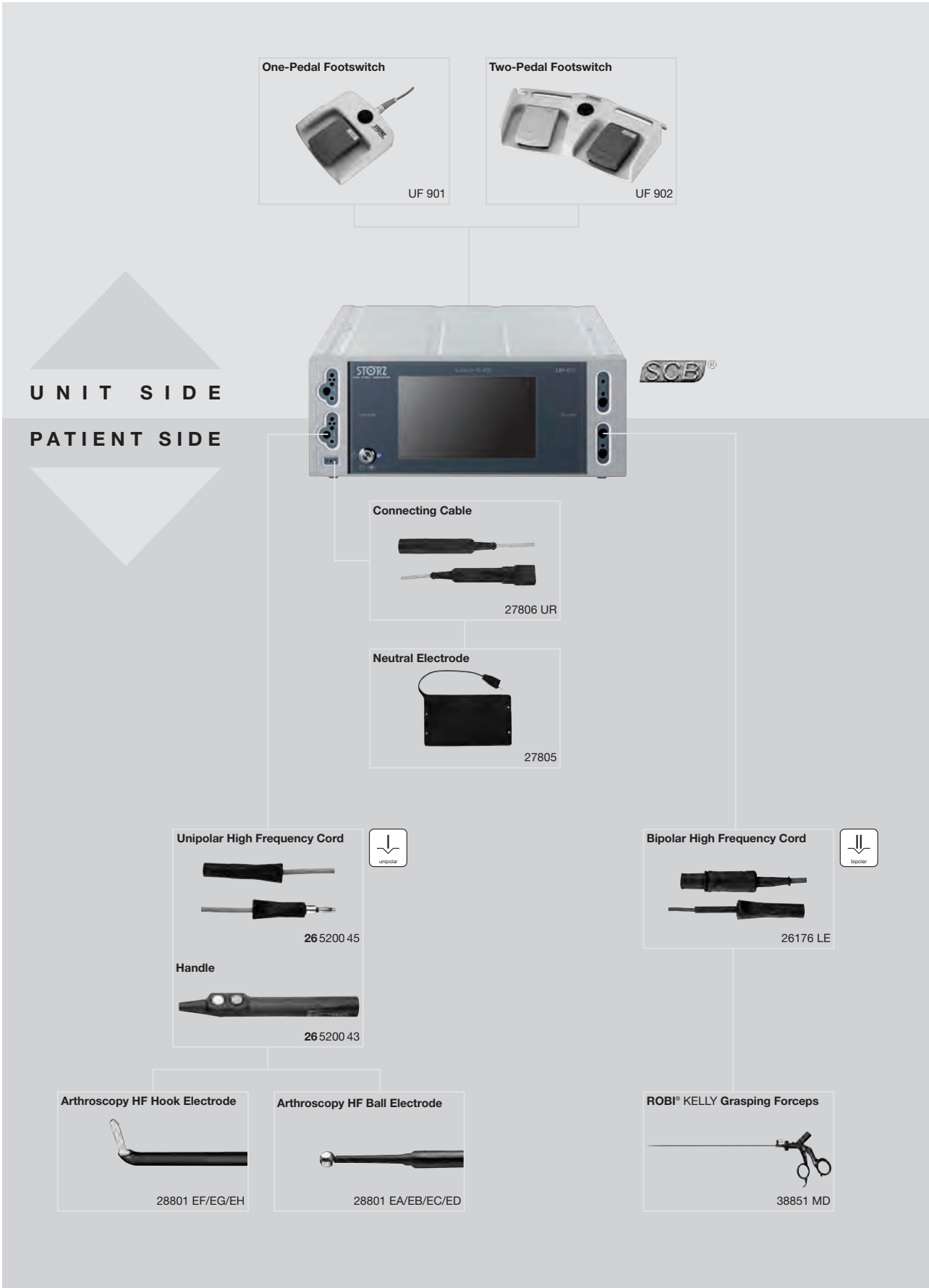
Output frequency	350 kHz/1 MHz
Dimensions w x h x d	447 x 177 x 457 mm
Certified to	IEC 601-1, CE acc. to MDD.



Optional Accessories for AUTOCON® III 400 High-End see pages U 34-36
Components/Spare Parts see chapter 18

AUTOCON® III 400 High-End ^{NEW}

System Components



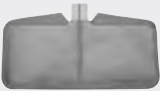
HIGH FREQUENCY
SURGERY UNITS

Footswitches

	UF 901	One-Pedal Footswitch , with button for switchover function, for use with HF generators
	UF 902	Two-Pedal Footswitch , with button for switchover function, for use with HF generators

Neutral Electrodes



	27805	Neutral Electrode , of conductive silicone with 2 rubber ties for fastening, contact surface A = 500 cm², for use with Connecting Cable 27806
	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 cm², package of 50, Connecting Cable 27801 required



AUTOCON® III 400 High-End

Optional Accessories



HF Instruments unipolar – Electrodes

	26 5200 45	High Frequency Cable , for Electrode Handle 26 5200 43 , length 400 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 46	Electrode Handle , without buttons, with integrated connecting cable, length 300 cm

For use with

	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	STERILE 
	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	STERILE 
	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	STERILE 
	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	

AUTOCON® III 400 High-End

Optional Accessories



HF Instruments bipolar – Forceps



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

For use with



38851 MD

ROBI® KELLY Grasping Forceps, CLERMONT-FERRAND model, rotating, dismantling, with connector pin for bipolar coagulation, especially suitable for dissection, double action jaws, size 3.5 mm, length 20 cm, color code: light blue

**COMPONENTS /
SPARE PARTS**



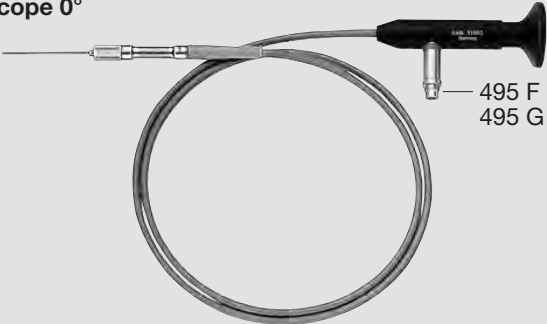
The chapter “Components / Spare Parts” contains detailed information on KARL STORZ instruments.

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 Technical Support: 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°	183
		
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 with corresponding order number of the instrument and reference to catalog page

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High Frequency Surgery Unit

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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

29



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base, for
KARL STORZ fiber optic
light cables and Olympus
Corporation

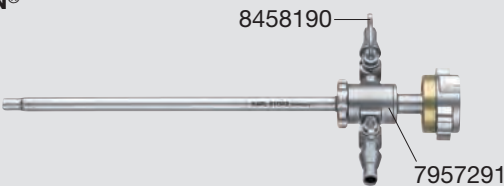
Components / Spare Parts

Catalog page

28136 EC

Arthroscope Sheath ENDOCAMELEON®

29



Spare Parts



7957291
Outer Part,
with 2 stopcocks



8458190
Stopcock



5916100
O-Ring



8484290
Nut

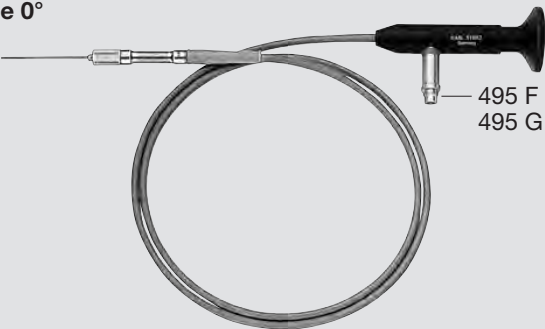


6985691
Spring Cap

HOPKINS® Telescopes and Sheaths

Miniature-Straight Forward Telescope, HOPKINS® Telescopes

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Spare Parts

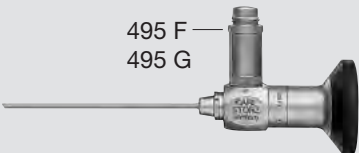


495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base, for
KARL STORZ fiber optic
light cables and Olympus
Corporation

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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 cables and Olympus
Corporation

HOPKINS® Telescopes and Sheaths

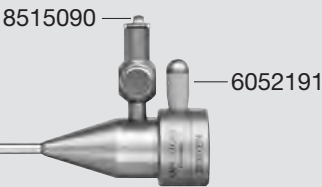
Arthroscope Sheaths, with standard coupling mechanism, fixed stopcocks

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



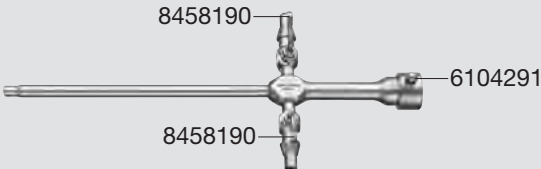
6985691
Spring Cap

Components / Spare Parts

Catalog page

28126 B Arthroscope Sheath

32



Spare Parts



6104291
Locking Lever,
green-red-yellow



8458190
Stopcock



6985691
Spring Cap

HOPKINS® Telescopes and Sheaths

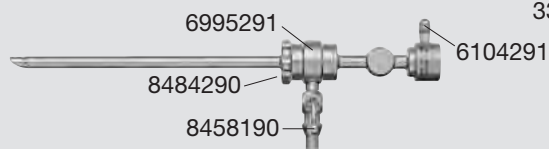
Arthroscope Sheaths, with standard coupling mechanism, rotating stopcocks

Components / Spare Parts

Catalog page

28126 R Arthroscope Sheath

33



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

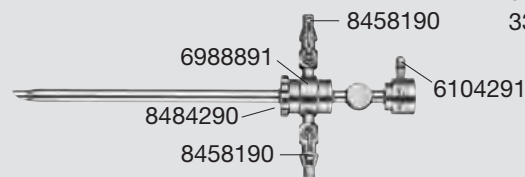
Catalog page

28229 DR High-Flow Arthroscope Sheath

32

28126 CR Arthroscope Sheath

33



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

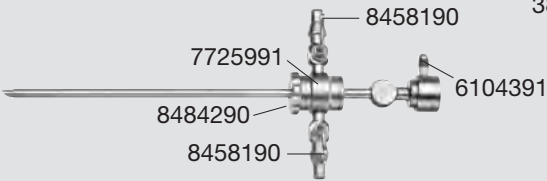
Arthroscope Sheaths, with standard coupling mechanism, rotating stopcocks

Components / Spare Parts

Catalog page

28132 CR Arthroscope Sheath

38



Spare Parts



5916100
O-Ring



7725991
Outer Part,
with 2 stopcocks



6104391
Locking Lever, red-yellow



8458190
Stopcock



6985691
Spring Cap



8484290
Nut

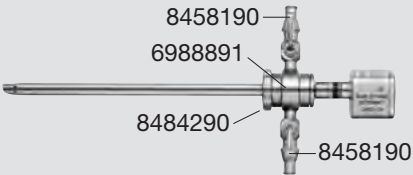
HOPKINS® Telescopes and Sheaths
Arthroscope Sheath, with lock-in coupling mechanism, rotating stopcocks

Components / Spare Parts

Catalog page

28129 CR STROBEL Arthroscope Sheath

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Spare Parts



5916100
O-Ring



8458190
Stopcock



6985691
Spring Cap



8484290
Nut

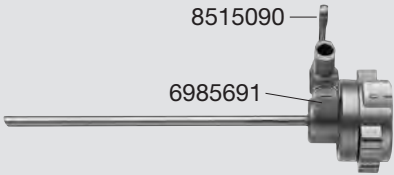


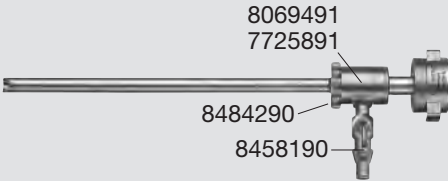
6988891
Outer Part,
with 2 stopcocks

HOPKINS® Telescopes and Sheaths

Arthroscope Sheaths, with snap-in coupling mechanism
fixed and rotating stopcocks



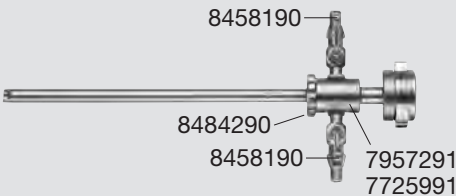
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	8515090 Stopcock	

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	8458190 Stopcock	
Spare part for 28136 S:		
	8069491 Outer Part, with stopcock	
Spare part for 28130 R and 28131 R:		
	7725891 Outer Part, with stopcock	

HOPKINS® Telescopes and Sheaths

Arthroscope Sheaths, with snap-in coupling mechanism, rotating stopcocks

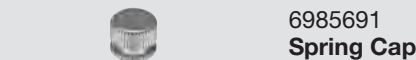
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28136 CR	High-Flow Arthroscope Sheath	34
28135 CR	High-Flow Arthroscope Sheath	35



Spare Parts



5916100
O-Ring



6985691
Spring Cap



8484290
Nut

Spare part for 28130 CR and 28131 CR:



8458190
Stopcock

Spare part for 28136 DS/CR and 28135 CR:



7957291
Outer Part,
with 2 stopcocks

Spare part for 28130 CR and 28131 CR:

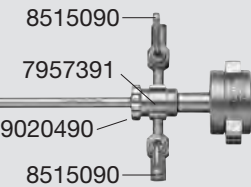


7725991
Outer Part,
with 2 stopcocks

HOPKINS® Telescopes and Sheaths

Arthroscope Sheaths, Accessories

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Spare Parts



5900800
O-Ring



8515090
Stopcock



6985691
Spring Cap



9020490
Knurled Ring



7957391
Outer Part,
with 2 stopcocks

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Spare Part



7701691
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Spare Parts



6985691
Spring Cap

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8541890
Stopcock

Spare part for 28146 T:



8458190
Stopcock

Punches, Forceps and Scissors

SILCUT® PRO and SILCUT® Punches

Components / Spare Parts

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28572 ADR	SILCUT® PRO Punch	57
28572 AE	SILCUT® PRO Punch	57
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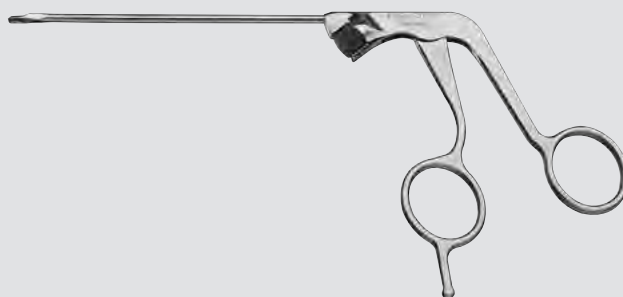
Spare Parts



28571 LK
Set of LUER Caps,
silicone, reusable,
unsterile, package of 10



8029491
LUER Cap, metal,
reusable, unsterile



Punches, Forceps and Scissors

SILGRASP® PRO and SILGRASP® Grasping Forceps
RETROFORCE® Biopsy Forceps

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28572 GU	SILGRASP® PRO Grasping Forceps	64
28572 AG	SILGRASP® PRO Alligator Grasping Forceps	64
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28571 CGU	SILGRASP® PRO Cartilage Grasping Forceps	65
28571 G	SILGRASP® PRO Grasping Forceps	65
28571 GU	SILGRASP® PRO Grasping Forceps	65
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28171 HCN	SILGRASP® Grasping Forceps	66
28171 KBN	SILGRASP® Grasping Forceps	66
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Spare Parts

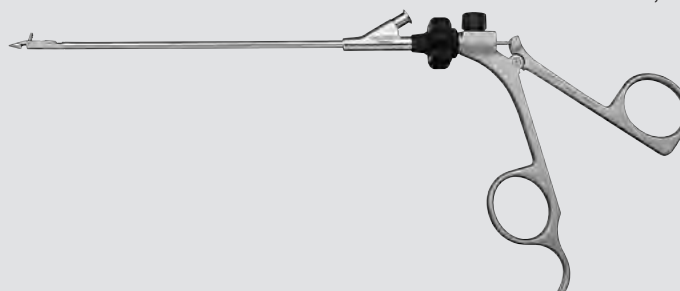


28571 LK
Set of LUER Caps,
silicone, reusable,
unsterile, package of 10



8029491
LUER Cap, metal,
reusable, unsterile

Components / Spare Parts		Catalog page
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28902 RFI	Inner Sheath, with retrograde cutting punch	
28902 HG	Handle, without ratchet	



Joint and Bone Reconstruction

Biopsy Set, Obturator, Cancellous Bone Applicators

Components / Spare Parts

Catalog page

28904 S Biopsy Set

75

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

5919000-10 **O-Ring**, package of 10



Components / Spare Parts

Catalog page

28904 SO Obturator

75

Spare Part



5919000-10
O-Ring



Components / Spare Parts

Catalog page

28906 CB Cancellous Bone Applicator Set, diameter 6 mm

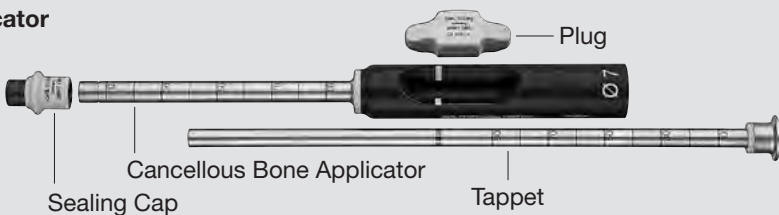
79, 109

28906 CBA **Cancellous Bone Applicator**

28906 CBP **Tappet**

28906 CBC **Sealing Cap**

28906 CBS **Plug**



Spare Part



5917100-10
O-Ring

Components / Spare Parts

Catalog page

28907 CB Cancellous Bone Applicator Set, diameter 7 mm

79, 109

28907 CBA **Cancellous Bone Applicator**

28907 CBP **Tappet**

28907 CBC **Sealing Cap**

28907 CBS **Plug**

Spare Part



5916000-10
O-Ring

Joint and Bone Reconstruction

Cancellous Bone Applicators

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28908 CBA	Cancellous Bone Applicator	
28908 CBP	Tappet	
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28908 CBS	Plug	

Spare Part

	5941400-10 O-Ring

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28909 CBA	Cancellous Bone Applicator	
28909 CBP	Tappet	
28909 CBC	Sealing Cap	
28909 CBS	Plug	

Spare Part

	5941500-10 O-Ring

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28910 CBP	Tappet	
28910 CBC	Sealing Cap	
28910 CBS	Plug	

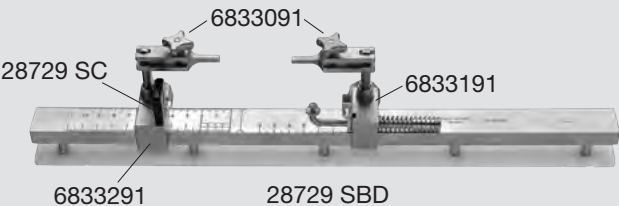
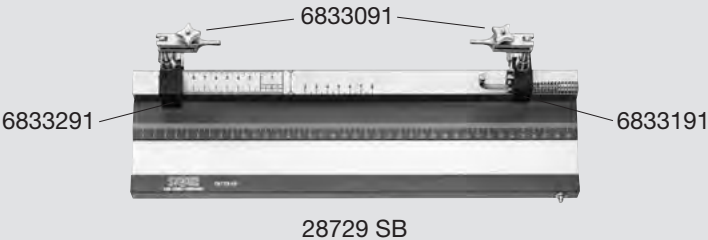
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	5941600-10 O-Ring

Instruments for the Knee

Tendon Boards, Metal Mallet

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Spare Parts



28729 SC
FLIPTACK Retainer



6833291
Measuring Slider



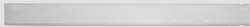
6833091
Clamp



7971891
Tendon Board, without
preparation plate

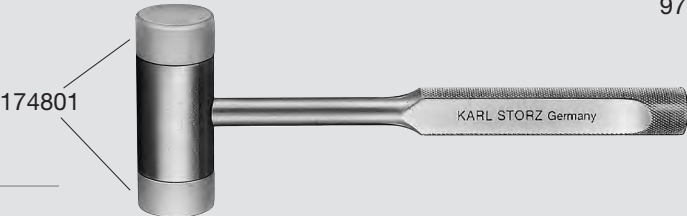


6833191
Tension Slider



8044890
Preparation Plate

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174800	Metal Mallet	97



Spare Part

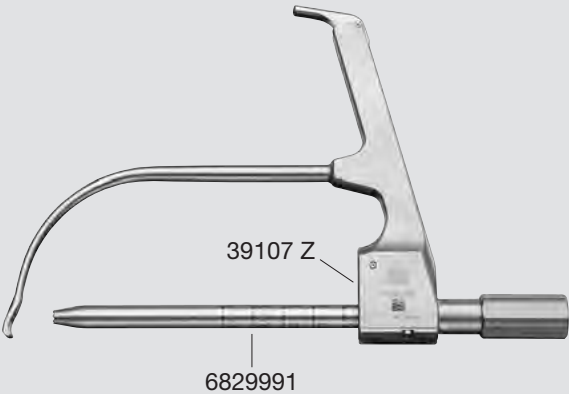


174801
Plastic Replacement

Instruments for the Knee

Target Guides

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Spare Parts

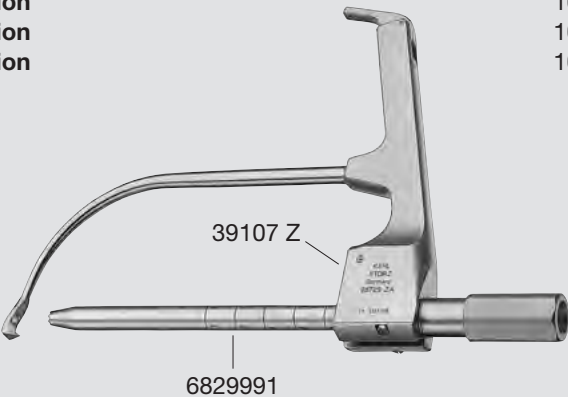


6829991
Sliding Tube



39107 Z
Cleaning Adaptor

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28729 ZL	Tibial Target Guide, for PCL reconstruction	102
28729 ZR	Tibial Target Guide, for PCL reconstruction	102



Spare Parts



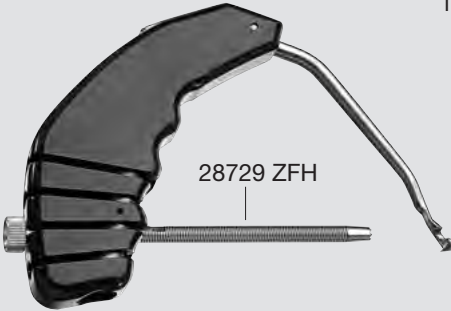
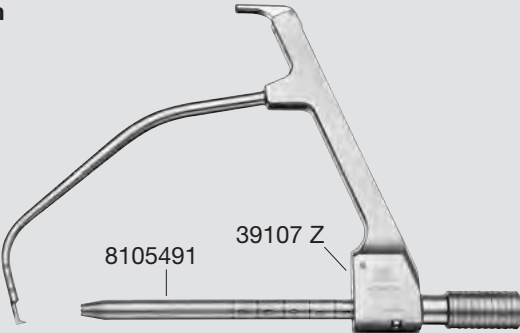
6829991
Sliding Tube



39107 Z
Cleaning Adaptor

Instruments for the Knee

Target Guides

Components / Spare Parts		Catalog page
28729 CF	Tibial Target Guide	98
		
Spare Parts		
	8064391 Sliding Tube	
	39107 Z Cleaning Adaptor	
Components / Spare Parts		Catalog page
28729 ZF	CHANNEL-LOCK® Tibial Target Guide	100
		
Spare Part		
	28729 ZFH Bullet	
Components / Spare Parts		Catalog page
28729 ZBB	Tibial Target Guide, for PCL reconstruction	102
		
Spare Parts		
	8105491 Sliding Tube	
	39107 Z Cleaning Adaptor	

Components / Spare Parts		Catalog page
28729 DFM	Dilator with Fin	110
28729 DFO	Dilator with Fin	110
28729 DFP	Dilator with Fin	110
28729 DFQ	Dilator with Fin	110
28729 DFR	Dilator with Fin	110
28729 DFS	Dilator with Fin	110
28729 DFT	Dilator with Fin	110
28729 DFU	Dilator with Fin	110
28729 DFV	Dilator with Fin	110



Spare Part



39107 Z
Cleaning Adaptor

Components / Spare Parts		Catalog page
28789 SK	CROSSDRIVE® Screwdriver	122
28770 SK	CROSSDRIVE® Screwdriver	122
28760 SK	CROSSDRIVE® Screwdriver	122
28789 CD	CROSSDRIVE® Plus Screwdriver	122



Spare Part



39107 Z
Cleaning Adaptor

Instruments for the Shoulder

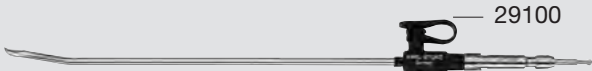
Seal Set, Handle, Transport Cassette,
SNAPPER® SHOULDER PRO® Suture Forceps

Components / Spare Parts		Catalog page
28180 GDS	Seal Set, package of 5	129
		
Spare Part		
	28180 GD Gasket , non-sterile, for single use, with sealing cap	
Components / Spare Parts		Catalog page
28184 WH	WONDERHOOK® Handle	138
28184 HG	WONDERHOOK® Handle	
28184 KF	Transport Cassette	
		
28184 WH		
		
28184 HG		
		
28184 KF		
Components / Spare Parts		Catalog page
28184 KF	Transport Cassette	138
28184 HS	Half-shell Set	
28184 RG	Wheel, large	
28184 RK	Wheel, small	
		
28184 KF		
		
28184 HS		
		
28184 RG		
		
28184 RK		
Components / Spare Parts		Catalog page
28180 GAN	SNAPPER® SHOULDER PRO® Suture Forceps	140
28180 GCN	SNAPPER® SHOULDER PRO® Suture Forceps	140
28180 GLN	SNAPPER® SHOULDER PRO® Suture Forceps	140
28180 GRN	SNAPPER® SHOULDER PRO® Suture Forceps	140
28180 GRGN	SNAPPER® SHOULDER PRO® Suture Forceps	140
		
Spare Parts		
	28571 LK Set of LUER Caps , silicone, reusable, unsterile, package of 10	
	8029491 LUER Cap , metal, reusable, unsterile	

Instruments for the Shoulder

SHOULDER PRO® Suture Forceps Attachments,
Knot Pusher and Suture Cutter, SILCUT® Punches,
SILGRASP® Foreign Body Graspers and Suture Graspers

Components / Spare Parts		Catalog page
28180 LA	SHOULDER PRO® Suture Forceps Attachment	141
28180 LC	SHOULDER PRO® Suture Forceps Attachment	141
28180 LL	SHOULDER PRO® Suture Forceps Attachment	141
28180 LR	SHOULDER PRO® Suture Forceps Attachment	141
28180 LRG	SHOULDER PRO® Suture Forceps Attachment	141

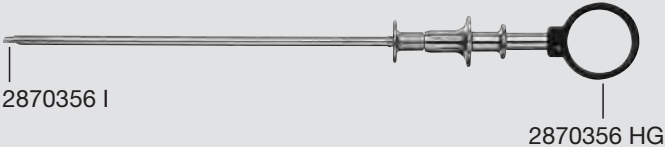


Spare Part

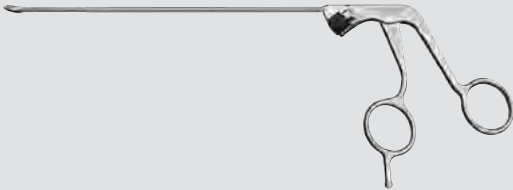


29100
Plug, for LUER-Lock irrigation
connector for cleaning, black,
autoclavable,
package of 10

Components / Spare Parts		Catalog page
2870356 KP	Knot Pusher and Suture Cutter	142
2870356 I	Insert and Blade	
2870356 HG	Handle	



Components / Spare Parts		Catalog page
28171 KPN	SILCUT® Punch	143
28171 KUN	SILCUT® Punch	143
28171 KGN	SILGRASP® Foreign Body Grasper	143
28171 KGSN	SILGRASP® Foreign Body Grasper	143
28573 FD	SILGRASP® Foreign Body Grasper	143
28171 SGN	SILGRASP® Suture Grasper	143
28171 SGL	SILGRASP® Suture Grasper	143
28171 SGR	SILGRASP® Suture Grasper	143
28171 SHN	SILGRASP® Suture Grasper	143



Spare Parts



28571 LK
Set of LUER Caps, silicone,
reusable, unsterile, package
of 10

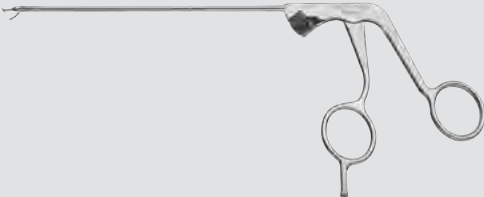


8029491
LUER Cap, metal,
reusable, unsterile

Instruments for the Shoulder

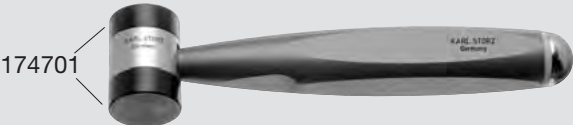
SHOULDER PRO® Suture Forceps, Mallet

Components / Spare Parts		Catalog page
28180 GFN	TARPUN SHOULDER PRO® Suture Forceps	144
28180 HC	FETCHER SHOULDER PRO® Suture Forceps	144
28180 HL	FETCHER SHOULDER PRO® Suture Forceps	144
28180 HR	FETCHER SHOULDER PRO® Suture Forceps	144



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
28270 H	Mallet	152



Spare Part	
	174701 Plastic Mallet Head

Instruments for the Hip

Evacuation Cannula, SILCUT® Punches, SILGRASP® Foreign Body Graspers, SILGRASP® Suture Grasper, Suture Forceps

Components / Spare Parts

Catalog page

28140 S Evacuation Cannula



8541890 156

6985691

Spare Parts



6985691
Spring Cap



8541890
Stopcock

Components / Spare Parts

Catalog page

28171 KPN SILCUT® Punch

28171 KUN SILCUT® Punch

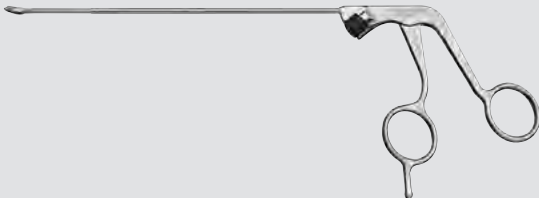
28171 KGN SILGRASP® Foreign Body Grasper

28171 KGSN SILGRASP® Foreign Body Grasper

28573 FD SILGRASP® Foreign Body Grasper

28140 GA Suture Forceps

28171 SGD SILGRASP® Suture Grasper



160

160

160

160

160

160

160

Spare Parts



28571 LK
Set of LUER Caps, silicone,
reusable, unsterile, package
of 10



8029491
LUER Cap, metal,
reusable, unsterile

Instruments for Small and Medium Joints

SILCUT® PRO Punches, SILGRASP® PRO Grasping Forceps

Components / Spare Parts		Catalog page
28572 AD	SILCUT® PRO Punch	172
28572 ADL	SILCUT® PRO Punch	172
28572 ADR	SILCUT® PRO Punch	172
28572 AE	SILCUT® PRO Punch	172
28571 O	SILCUT® PRO Oval Biter	172



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
28572 NJ	SILGRASP® PRO Suture Grasper	173
28572 CG	SILGRASP® PRO Cartilage Grasping Forceps	173
28572 CGU	SILGRASP® PRO Cartilage Grasping Forceps	173
28572 G	SILGRASP® PRO Grasping Forceps	173
28572 GU	SILGRASP® PRO Grasping Forceps	173
28572 AG	SILGRASP® PRO Alligator Grasping Forceps	173



Spare Parts



28571 LK
Set of LUER Caps,
silicone, reusable,
unsterile, package of 10



8029491
LUER Cap, metal,
reusable, unsterile

Instruments for Small and Medium Joints

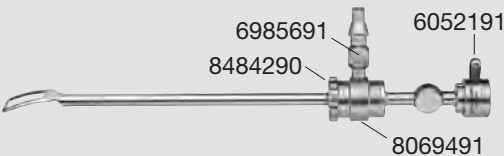
Dilator Set, Optical Dissectors, ROBI® KELLY Grasping Forceps

Components / Spare Parts		Catalog page
28147 S	Dilator Set	175

28147 SA	Dilator , diameter 4 mm
28147 SB	Dilator , diameter 5 mm
28147 SC	Dilator , diameter 6 mm
28147 SD	Dilator , diameter 7 mm



Components / Spare Parts		Catalog page
50200 ES	Optical Dissector	177
50300 ES	Optical Dissector	177



Spare Parts



5916100
O-Ring



8458190
Stopcock



6052191
Locking Lever, red



8484290
Nut



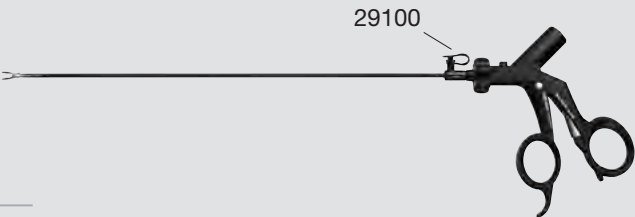
6985691
Spring Cap



8069491
Outer Part, with stopcock

Components / Spare Parts		Catalog page
38851 MD	ROBI® KELLY Grasping Forceps , CLERMONT-FERRAND model	179

38151	ROBI® Plastic Handle
38810 MD	ROBI® Outer Sheath with Forceps Insert



Spare Part



29100
Plug, for LUER-Lock irrigation connector for cleaning, black, autoclavable, package of 10

Components / Spare Parts

Catalog page

28272 KLA **Holding System**

183

28172 HK **Socket**

28272 HA **Articulated Stand**

28272 UL **Clamping Jaw**



Spare Part

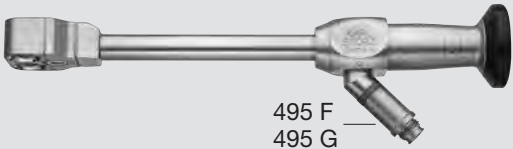
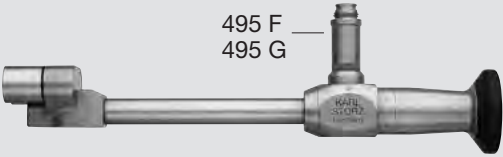


28172 HZ
Set Screw,
for articulated stands

Visualization Systems for Open Surgery and Microsurgery

VITOM® Telescopes, Rotation Socket, Articulated Stand

Components / Spare Parts	Catalog page
20916025 AA VITOM® Telescope 0° with Integrated Illuminator	193
20916025 DA VITOM® Telescope 90° with Integrated Illuminator	193
20916025 AGA VITOM® II NIR/ICG Telescope 0°, with integrated illuminator	197



Spare Parts



495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base, for
KARL STORZ fiber optic
light cables and Olympus
Corporation

Components / Spare Parts	Catalog page
28172 HR Rotation Socket, to clamp to the operating table	201, 207, 219

Spare Part

28172 HRS
Butterfly Nut, to clamp
Socket 28172 HR to the
operating table, one
already mounted on
Socket 28172 HR

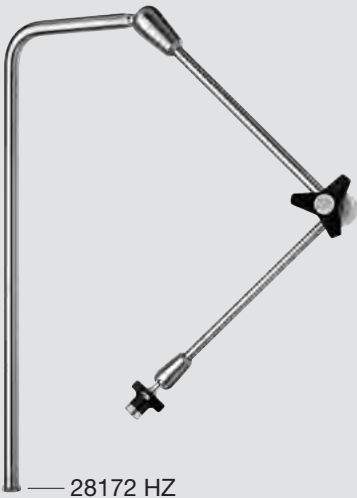


Components / Spare Parts	Catalog page
28272 HC Articulated Stand	201
28272 HB Articulated Stand	207

Spare Part

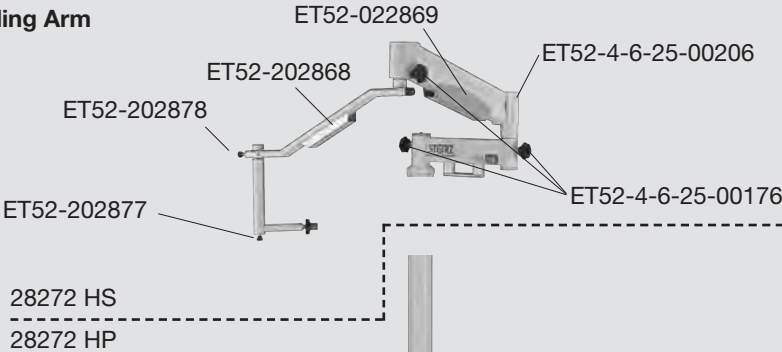


28172 HZ
Set Screw,
for articulated stands



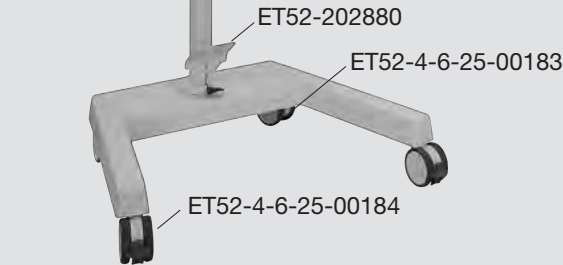
Components / Spare Parts		Catalog page
28272 HSP	VERSACRANE™ Holding Arm	205

28272 HS	VERSACRANE™ Holding Arm
28272 HP	Mobile Stand



Spare Parts for 28272 HS

ET52-202881 Cable Support, for fixation under Cable Covers ET52-022869 and ET52-202868
ET52-202877 Knurled Screw, M6x16
ET52-202878 Knurled Screw, M6x25
ET52-202868 Cable Cover, 150 mm
ET52-022869 Cable Cover, 250 mm
ET52-4-6-25-00176 Handwheel Brake, M6x0.5
ET52-4-6-25-00206 Window Cap Lift 20



Spare Parts for 28272 HP

ET52-202880 Footswitch Protection Cap
ET52-4-6-25-00183 Guide Roll, braked
ET52-4-6-25-00184 Guide Roll, unbraked

Components / Spare Parts		Catalog page
TM 323	32" 3D Monitor	207

400 A	Mains Cord
9826 PS	External Power Supply
9800 GF	3D Polarization Glasses
	Cable Cover



Holding Systems

Leg Holder

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

218



Spare Parts



28188 FH
Fixation Device



28188 HR
Hand Wheel

Components / Spare Parts

Catalog page

- 28188 SE** **Release Clamp**

218



Spare Parts



28188 FS
Locking Wheel



28188 FK
"Small Wheel"

Components / Spare Parts

Catalog page

- 28172 HR** **Rotation Socket**, to clamp to the operating table

219

Spare Part

28172 HRS
Butterfly Nut, to clamp
Socket 28172 HR to the
operating table, one
already mounted on
Socket 28172 HR



— 28172 HRS

Suction and Irrigation Systems

ARTHROPUMP® Power

Components / Spare Parts

Catalog page

- 28340701-1

ARTHROPUMP® Power
- 28340720-1

ARTHROPUMP® Power,
power supply 100 – 240 VAC, 50/60 Hz
- 28340770

Connecting Cable, to UNIDRIVE® S III ARTHRO 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
Fuse, T 1.6 A, L 250 V



Suction and Irrigation Systems

ENDOMAT® SELECT

Components / Spare Parts

Catalog page

UP 210

ENDOMAT® SELECT

U 12

400 A

Mains Cord, length 300 cm



UP 210

Spare Parts

for single use



031523-10*
Tubing Set, irrigation, PC,
sterile, for single use,
package of 10



031647-10*
Tubing Set, suction, BS,
sterile, for single use,
package of 10



031524-10*
Tubing Set, irrigation, FC,
sterile, for single use,
package of 10



030647-10*
Tubing Set, suction, DS,
sterile, for single use,
package of 10



031529-10*
Tubing Set, irrigation, CV,
sterile, for single use,
package of 10

reusable

UP 007
Tubing Set, irrigation, FC,
sterilizable

UP 009
Tubing Set, irrigation, DS,
sterilizable

UP 008
Tubing Set, irrigation, PC,
sterilizable

UP 010
Tubing Set, irrigation,
BS, sterilizable



Components / Spare Parts

Catalog page

- 28723001-1 UNIDRIVE® S III ARTHRO SCB
- 28723020-1 UNIDRIVE® S III ARTHRO SCB
- 20090170 SCB Connecting Cable, length 100 cm
- 400 A Mains Cord
- 96156018D Instruction Manual



U 17

28723020-1

Spare Parts



- 2027690
Mains Fuse,
220 – 240 VAC, T 4.0 AH,
package of 10



- 1059700
Mains Fuse,
100 – 127 VAC, T 2.5 A,
package of 10

Components / Spare Parts

Catalog page

- 28200 DX DRILLCUT-X® ARTHRO Shaver Handpiece

U 18



Spare Parts



- 28200 DA
Valve Body, without valve
lock



- 28200 DB
Valve Lock, for Valve Body
28200 DC

High Frequency Surgery Unit

AUTOCON® III 400 High-End

Components / Spare Parts

Catalog page

UH 400 **AUTOCON® III 400 High-End,**
power supply 220 – 240 VAC, 50/60 Hz

400 A **Mains Cord,** length 300 cm

UH 400U **AUTOCON® III 400 High-End,**
power supply 100-127 VAC, 50/60 Hz

400 B **Mains Cable,** US version, length 200 cm



UH 400

U 32

Spare Part for use at 220-240 V:



1222890
Fuse,
100 – 127 VAC, T 5.0 A,
package of 10

Spare Part for use at 100-127 V:

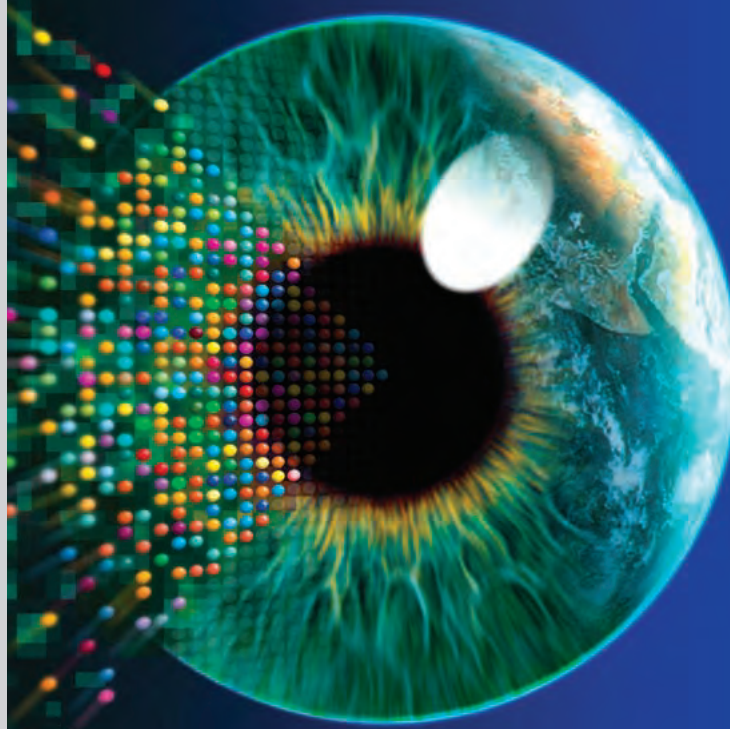


1432095
Line Fuse,
2x 10 AH, package of 10

KARL STORZ OR1 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



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- **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**



FULL HD – New Vision in Medicine

IMAGE 1 HUB™ HD offers the user the highest image quality for the precise display of even the finest tissue and vascular structures.

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 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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- **On-Site Services Program**
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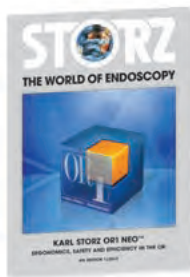


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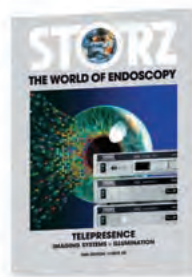


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ERGONOMICS, SAFETY
AND EFFICIENCY IN THE OR

We are particularly interested in:

- ☐ System integration
- ☐ Data management and documentation
- ☐ Telemedicine



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- ☐ Camera systems
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- ☐ Light sources



☐ HUMAN MEDICINE DVD

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encompasses Endoscopes,
Instruments, Accessories, Units
and Imaging Systems for the full
range of Human Medicine
Specialties



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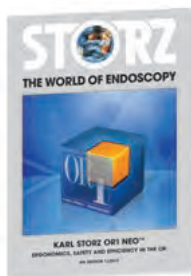
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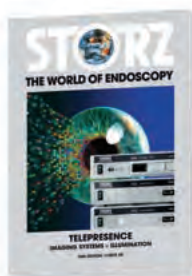


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- ☐ Data management and documentation
- ☐ Telemedicine



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Neurosurgery	☐	Thorax	☐
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- Standard Instruments	☐	- Pediatric Laparoscopy	☐
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- Otology	☐	Gynecology	☐
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