<table>
<thead>
<tr>
<th>Chapter</th>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BASIC SETS</td>
<td>SET-ART 1-26</td>
</tr>
<tr>
<td>2</td>
<td>HOPKINS® TELESCOPES AND SHEATHS</td>
<td>ART-TEL, ART-S 27-42</td>
</tr>
<tr>
<td>3</td>
<td>HOSPITAL INSTRUMENTS</td>
<td>ART-INST 43-52</td>
</tr>
<tr>
<td>4</td>
<td>PUNCHES, FORCEPS AND SCISSORS</td>
<td>ART-ST 53-72</td>
</tr>
<tr>
<td>5</td>
<td>JOINT AND BONE RECONSTRUCTION</td>
<td>ART-CL 73-80</td>
</tr>
<tr>
<td>6</td>
<td>INSTRUMENTS FOR THE KNEE</td>
<td>ART-K 81-126</td>
</tr>
<tr>
<td>7</td>
<td>INSTRUMENTS FOR THE SHOULDER</td>
<td>ART-S 127-152</td>
</tr>
<tr>
<td>8</td>
<td>INSTRUMENTS FOR THE HIP</td>
<td>ART-H 153-162</td>
</tr>
<tr>
<td>9</td>
<td>INSTRUMENTS FOR SMALL AND MEDIUM JOINTS</td>
<td>ART-KG 163-180</td>
</tr>
<tr>
<td>10</td>
<td>INSTRUMENTS FOR RHEUMATOLOGY</td>
<td>ART-SM 181-186</td>
</tr>
<tr>
<td>11</td>
<td>SPINE SURGERY</td>
<td>see NEUROSURGERY catalog</td>
</tr>
<tr>
<td>12</td>
<td>VISUALIZATION SYSTEMS FOR OPEN SURGERY AND MICRO-SURGERY</td>
<td>ART-VITOM 187-208</td>
</tr>
<tr>
<td>13</td>
<td>FULL HD IMAGING FOR OPERATING MICROSCOPES</td>
<td>ART-MICRO 209-216</td>
</tr>
<tr>
<td>14</td>
<td>HOLDING SYSTEMS FOR ARTHROSCOPY</td>
<td>ART-HS 217-220</td>
</tr>
<tr>
<td>15</td>
<td>TRAINING MODELS FOR ARTHROSCOPY</td>
<td>ART-TM 221-234</td>
</tr>
<tr>
<td>16</td>
<td>EXTRACORPOREAL SHOCK WAVE THERAPY (ESWT) IN ORTHOPEDICS</td>
<td>ART-ESWT 235-240</td>
</tr>
<tr>
<td>17</td>
<td>UNITS AND ACCESSORIES</td>
<td>ART-UNITS-INTRO, ART-UNITS U 1-36</td>
</tr>
<tr>
<td>18</td>
<td>COMPONENTS, SPARE PARTS</td>
<td>ART-SP SP 1-36</td>
</tr>
<tr>
<td>19</td>
<td>KARL STORZ OR1 NEO®, TELEPRESENCE HUMAN MEDICINE, PROTECTION 1®</td>
<td></td>
</tr>
</tbody>
</table>
Information on events is available on the KARL STORZ website
www.karlstorz.com
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.

© All pictures, photos and product descriptions are the intellectual property of KARL STORZ SE & Co. KG. Utilisation and copies by third parties have to be authorized. All rights reserved.
KARL STORZ Items Not Available in the U.S.

January, 2018

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

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Description</th>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>287023 B</td>
<td>MEGA FIX® B</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>28729 FT</td>
<td>FLIPPTACK</td>
<td>ART-K 35, ART-S 22 B</td>
<td>115, 148</td>
</tr>
<tr>
<td>28729 FC</td>
<td>Catgut Polyester-S white</td>
<td>ART-K 35, ART-S 22 B</td>
<td>115, 148</td>
</tr>
<tr>
<td>28729 TT</td>
<td>ENDOTACK®</td>
<td>ART-K 35</td>
<td>115</td>
</tr>
<tr>
<td>28729 MT</td>
<td>Mini ENDOTACK®</td>
<td>ART-K 35</td>
<td>115</td>
</tr>
<tr>
<td>2870310 BP</td>
<td>BioPlug</td>
<td>ART-S 25</td>
<td>151</td>
</tr>
<tr>
<td>2870514 BP</td>
<td>BioPlug</td>
<td>ART-S 25</td>
<td>151</td>
</tr>
<tr>
<td>2870619 B</td>
<td>MEGA FIX® B</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870923 B</td>
<td>MEGA FIX® B</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870926 B</td>
<td>MEGA FIX® B</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870823 B</td>
<td>MEGA FIX® B</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870826 B</td>
<td>MEGA FIX® B</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870923 P</td>
<td>MEGA FIX® P</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870926 P</td>
<td>MEGA FIX® P</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870929 P</td>
<td>MEGA FIX® P</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870935 P</td>
<td>MEGA FIX® P</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2871028 P</td>
<td>MEGA FIX® P</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2871035 P</td>
<td>MEGA FIX® P</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2871123 P</td>
<td>MEGA FIX® P</td>
<td>ART-K 38</td>
<td>118</td>
</tr>
<tr>
<td>2870619 C</td>
<td>MEGA FIX® C</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2870623 C</td>
<td>MEGA FIX® C</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2870923 C</td>
<td>MEGA FIX® C</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2870928 C</td>
<td>MEGA FIX® C</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2870823 CP</td>
<td>MEGA FIX® CP</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2870828 CP</td>
<td>MEGA FIX® CP</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2870923 CP</td>
<td>MEGA FIX® CP</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2870928 CP</td>
<td>MEGA FIX® CP</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2871028 CP</td>
<td>MEGA FIX® CP</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2871035 CP</td>
<td>MEGA FIX® CP</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>2871123 CP</td>
<td>MEGA FIX® CP</td>
<td>ART-K 39</td>
<td>119</td>
</tr>
<tr>
<td>287023 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>287025 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>287020 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Model</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>2870825 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870920 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870925 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870723 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870728 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870823 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870828 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870923 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870928 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2871023 T</td>
<td>MEGA FIX® T</td>
<td>ART-K 41</td>
<td>121</td>
</tr>
<tr>
<td>2870620 MSP</td>
<td>MEGASHIM</td>
<td>ART-K 44</td>
<td>124</td>
</tr>
<tr>
<td>2870720 MSP</td>
<td>MEGASHIM</td>
<td>ART-K 44</td>
<td>124</td>
</tr>
<tr>
<td>2870820 MSP</td>
<td>MEGASHIM</td>
<td>ART-K 44</td>
<td>124</td>
</tr>
<tr>
<td>2870920 MSP</td>
<td>MEGASHIM</td>
<td>ART-K 44</td>
<td>124</td>
</tr>
<tr>
<td>28180 GT-6</td>
<td>Cannula</td>
<td>ART-S 3</td>
<td>129</td>
</tr>
<tr>
<td>28180 GDS</td>
<td>Seal Set</td>
<td>ART-S 3</td>
<td>129</td>
</tr>
<tr>
<td>2870309 ST</td>
<td>Titanium Suture Anchor</td>
<td>ART-S 24 A</td>
<td>150</td>
</tr>
<tr>
<td>2870514 Ti</td>
<td>Titanium Suture Anchor</td>
<td>ART-S 24 A</td>
<td>150</td>
</tr>
<tr>
<td>2870614 Ti</td>
<td>Titanium Suture Anchor</td>
<td>ART-S 24 A</td>
<td>150</td>
</tr>
<tr>
<td>MP50</td>
<td>MASTERPULS® »ultra«</td>
<td>ART-ESWT 5</td>
<td>239</td>
</tr>
<tr>
<td>MP100</td>
<td>MASTERPULS® »ultra«</td>
<td>ART-ESWT 5</td>
<td>239</td>
</tr>
<tr>
<td>MP200</td>
<td>MASTERPULS® »ultra«</td>
<td>ART-ESWT 5</td>
<td>239</td>
</tr>
</tbody>
</table>

**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 purchase order 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 repossessions 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 by customer to secure the 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 provide 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 prepaid 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 and/or suppliers; (d) use of products which are not available from KARL STORZ; (e) in any manner other than those for which such products were 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 WARRANTIES, EXPRESS, IMPLIED AND/OR STATUTORY, INCLUDING, BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO ALL KARL STORZ PRODUCTS AND/OR SERVICES, WITHOUT LIMITATION TO THE FOLLOWING: PERFORMANCE, QUALITY, WORKMANSHIP, PERFORMANCE, MERCHANTABILITY, FITNESS, AND/OR OF SUITABILITY FOR A PARTICULAR PURPOSE. UNDER NO CIRCUMSTANCES WILL KARL STORZ BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY OR OTHER DAMAGES ARISING FROM OR IN CONNECTION WITH THE USE OF OR RELIANCE UPON ANY PRODUCT OR SERVICE, EVEN IF KARL STORZ HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.**

**10. SOFTWARE OWNERSHIP AND LICENSING.** 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 in 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-compose 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 changes in, the Software, shall remain the sole and exclusive property of KARL STORZ and its licensors. Customer shall not, without a separate written license agreement, license, assign, sell, lease, loan, distribute, provide or otherwise transfer to any third party or otherwise disclose 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. Customer agrees to defend, indemnify and hold harmless KARL STORZ and its distributors, from any and all claims, actions, suits, proceedings, or liability for violation of any federal, state or local law, statute or ordinance arising out of any violation of the terms and conditions of the license agreement for the Software or any software which is embedded in or distributed with KARL STORZ products.

**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, as applicable, set forth in applicable license fees, as applicable, set forth in applicable license agreements; (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. 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 in 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-compose 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 changes in, the Software, shall remain the sole and exclusive property of KARL STORZ and its licensors. Customer shall not, without a separate written license agreement, license, assign, sell, lease, loan, distribute, provide or otherwise transfer to any third party or otherwise disclose 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. Customer agrees to defend, indemnify and hold harmless KARL STORZ and its distributors, from any and all claims, actions, suits, proceedings, or liability for violation of any federal, state or local law, statute or ordinance arising out of any violation of the terms and conditions of the license agreement for the Software or any software which is embedded in or distributed with KARL STORZ products.
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

US 663671
2870823 P, CP
2870828 P, CP
2870923 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
Basic Set for Units for Arthroscopy continued on next page
Imaging

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

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

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/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

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

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

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

optional

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

Recommended Handpieces and Accessories for UNIDRIVE® S III ARTHRO

DRILLCUT-X® ARTHRO Shaver Handpiece, up to 8000 rpm, for use with UNIDRIVE® S III ARTHRO SCB, as of software status 1.10.
Multifunction Handpiece, for use with UNIDRIVE® S III ARTHRO SCB
Jacobs Chuck, up to diameter 6.5 mm
Sagittal Saw Attachment, keyless, with tilt lever, for use with Multifunction Handpiece 28 7210 36 and Saw Blades 28 207 SLA – SLH
Pin Driver, for drilling wires diameter 1.5 – 3 mm
Pin Driver, for Synthes attachments

Basic Set for Units for Arthroscopy continued on next page
Basic Sets

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

<table>
<thead>
<tr>
<th>Working length 180 mm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28208 BKS</td>
<td>Aggressive Cutter, diameter 4.5 mm, color code: green</td>
</tr>
<tr>
<td>28208 EHS</td>
<td>Curved Aggressive Full Radius Resector, diameter 4.5 mm, color code: light green</td>
</tr>
<tr>
<td>28208 IDS</td>
<td>Semi Hooded Barrel Burr, diameter 5.5 mm, color code: pink</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working length 120 mm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28205 DKS</td>
<td>Aggressive Full Radius Resector, diameter 4.5 mm, color code: blue</td>
</tr>
<tr>
<td>28205 FDS</td>
<td>Round Burr, diameter 5.5 mm, color code: orange</td>
</tr>
<tr>
<td>28205 GES</td>
<td>Finish Barrel Burr, diameter 5.5 mm, color code: purple</td>
</tr>
<tr>
<td>28205 HDS</td>
<td>Aggressive Barrel Burr, diameter 5.5 mm, color code: pink</td>
</tr>
<tr>
<td>28205 MKS</td>
<td>Pro Line Shaver Blade, diameter 4.5 mm, color code: pink</td>
</tr>
<tr>
<td>28205 NKS</td>
<td>Aggressive Pro Line Shaver Blade, diameter 4.5 mm, color code: light blue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working length 70 mm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28206 CAS</td>
<td>Full Radius Resector, diameter 2.5 mm, color code: yellow</td>
</tr>
<tr>
<td>28206 FAS</td>
<td>Small Joint Burr, diameter 2.5 mm, color code: orange</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>optional</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5x 28205 SAA</td>
<td>Irrigation Adaptor, for validated cleaning of outer blades</td>
</tr>
<tr>
<td>5x 28205 SAI</td>
<td>Irrigation Adaptor, for validated cleaning of outer blades</td>
</tr>
</tbody>
</table>

**ARTHROPUMP® Power Suction and Irrigation System**

<table>
<thead>
<tr>
<th>28 3407 01-1</th>
<th>ARTHROPUMP® Power, power supply 100 – 240 VAC, 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>including: Connecting Cable, to UNIDRIVE® S III ARTHRO SCB</td>
</tr>
<tr>
<td></td>
<td>SCB Connecting Cable, length 100 cm</td>
</tr>
<tr>
<td></td>
<td>Four-Pedal Footswitch</td>
</tr>
<tr>
<td></td>
<td>Tubing Set Irrigation, sterile, for single use, package of 3</td>
</tr>
<tr>
<td></td>
<td>Tubing Set Suction, sterile, for single use, package of 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>optional</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UP 210</td>
<td>ENDOMAT® SELECT</td>
</tr>
</tbody>
</table>

**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 |

<table>
<thead>
<tr>
<th>optional</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UG 606</td>
<td>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</td>
</tr>
</tbody>
</table>

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 $A = 500 \text{ cm}^2$, 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
265200 45  High Frequency Cable, for Electrode Handle 265200 43, length 400 cm
265200 43  Electrode Handle, with 2 buttons for activating the unipolar generator, yellow button: unipolar cutting, blue button: unipolar coagulation, High Frequency Cord 265200 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 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 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**

Cold Light Fountain Power LED 300, with KARL STORZ-SCB and high-performance LED

**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

**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
<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>28731 BWA</td>
<td>HOPKINS® Wide Angle Forward-Oblique Telescope 30°</td>
<td>Enlarged view, diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated, color code: red</td>
</tr>
<tr>
<td>28136 CR</td>
<td>High-Flow Arthroscope Sheath</td>
<td>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</td>
</tr>
<tr>
<td>28126 BT</td>
<td>Obturator</td>
<td>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</td>
</tr>
<tr>
<td>28145 LH</td>
<td>Probe</td>
<td>Graduated, blunt, length of hook 5.5 mm, diameter 1.5 mm, working length 13 cm</td>
</tr>
<tr>
<td>28571 BB</td>
<td>SILCUT® PRO Punch</td>
<td>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</td>
</tr>
<tr>
<td>28571 AG</td>
<td>SILGRASP® PRO Alligator Grasping Forceps</td>
<td>Straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28571 BBL</td>
<td>SILCUT® PRO Upbiter</td>
<td>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</td>
</tr>
<tr>
<td>28571 BBR</td>
<td>SILCUT® PRO Upbiter</td>
<td>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</td>
</tr>
<tr>
<td>Optional for 28731 BWA and 28136 CR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28731 AE</td>
<td>ENDOCAMELEON® ARTHRO HOPKINS® Telescope</td>
<td>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</td>
</tr>
<tr>
<td>28136 EC</td>
<td>Arthroscope Sheath ENDOCAMELEON®, with snap-in coupling mechanism</td>
<td>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</td>
</tr>
<tr>
<td>Pediatric Interventions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28719 BA</td>
<td>HOPKINS® Forward-Oblique Telescope 30°</td>
<td>Diameter 2.7 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated, color code: red</td>
</tr>
<tr>
<td>28132 CR</td>
<td>Arthroscope Sheath</td>
<td>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</td>
</tr>
<tr>
<td>28132 BC</td>
<td>Obturator</td>
<td>Blunt, for use with Arthroscope Sheath 28132 CR</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 SB</td>
<td><strong>Tendon Board</strong>, including FLIPPTACK Retainer 28729 SC</td>
<td></td>
</tr>
<tr>
<td>28729 FK</td>
<td><strong>Thread Clip</strong></td>
<td></td>
</tr>
<tr>
<td>28729 P</td>
<td><strong>Tissue Forceps</strong>, 1 x 2 teeth, medium, distal curved to left, length 14.5 cm</td>
<td></td>
</tr>
<tr>
<td>2x 28729 D-6</td>
<td><strong>Drilling Wire</strong>, 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</td>
<td></td>
</tr>
<tr>
<td>28729 E</td>
<td><strong>Larding Wire</strong>, 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</td>
<td></td>
</tr>
<tr>
<td>28729 BA</td>
<td><strong>Undercut Drill</strong>, cannulated, diameter 4.5 mm, for use with Drilling Wire 28729 D and Larding Wire 28729 E</td>
<td></td>
</tr>
<tr>
<td>28729 BB</td>
<td><em>Same</em>, diameter 5 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BI</td>
<td><em>Same</em>, diameter 5.5 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BC</td>
<td><em>Same</em>, diameter 6 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BK</td>
<td><em>Same</em>, diameter 6.5 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BD</td>
<td><em>Same</em>, diameter 7 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BL</td>
<td><em>Same</em>, diameter 7.5 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BE</td>
<td><em>Same</em>, diameter 8 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BM</td>
<td><em>Same</em>, diameter 8.5 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BF</td>
<td><em>Same</em>, diameter 9 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BN</td>
<td><em>Same</em>, diameter 9.5 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BG</td>
<td><em>Same</em>, diameter 10 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BO</td>
<td><em>Same</em>, diameter 10.5 mm</td>
<td></td>
</tr>
<tr>
<td>28729 BH</td>
<td><em>Same</em>, diameter 11 mm</td>
<td></td>
</tr>
<tr>
<td>28729 L</td>
<td><strong>Length Gauge</strong>, for cruciate ligament reconstruction, graduated, working length 23 cm</td>
<td></td>
</tr>
<tr>
<td>28729 TL</td>
<td><strong>Depth Gauge</strong>, for cruciate ligament reconstruction, working length 22.5 cm, for use with Larding Wire 28729 E</td>
<td></td>
</tr>
<tr>
<td>28729 NO</td>
<td><strong>Notch Chisel</strong>, curved, 15° downwards, working length 13 cm</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>28179 HG</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>28179 HR</td>
<td>Wheel Attachment, for use with monofilament threads size USP 2-0 to 2, for use with Handle 28179 HG and Wheel 28179 R</td>
<td></td>
</tr>
<tr>
<td>28179 R</td>
<td>Wheel, for use with monofilament threads size USP 2-0 to 2, for use with Wheel Attachment 28179 HR</td>
<td></td>
</tr>
<tr>
<td>28728 NA</td>
<td>Suture Attachment, straight, working length 13 cm, for use with Handle 28179 HG</td>
<td></td>
</tr>
<tr>
<td>28728 NB</td>
<td>Suture Attachment, distal angled 180° to the right, straight, working length 13 cm, for use with Handle 28179 HG</td>
<td></td>
</tr>
<tr>
<td>28728 NC</td>
<td>Suture Attachment, distal angled 180° to the left, straight, working length 13 cm, for use with Handle 28179 HG</td>
<td></td>
</tr>
<tr>
<td>28728 ND</td>
<td>Suture Attachment, distal angled 360° to the right, straight, working length 13 cm, for use with Handle 28179 HG</td>
<td></td>
</tr>
<tr>
<td>28728 NE</td>
<td>Suture Attachment, distal angled 360° to the left, straight, working length 13 cm, for use with Handle 28179 HG</td>
<td></td>
</tr>
<tr>
<td>28728 NF</td>
<td>Suture Attachment, distal angled 20° upwards, straight, working length 13 cm, for use with Handle 28179 HG</td>
<td></td>
</tr>
<tr>
<td>28728 NG</td>
<td>Suture Attachment, distal angled 20° upwards, straight, working length 14 cm, for use with Handle 28179 HG</td>
<td></td>
</tr>
<tr>
<td>28728 NJ</td>
<td>Suture Grasper, dismantling, jaw length 5.5 mm, straight jaws, straight sheath, working length 8 cm</td>
<td></td>
</tr>
</tbody>
</table>

### Meniscus Root Refixation

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 ZRF</td>
<td>Target Guide Root Refixation, for refixation of the meniscus</td>
</tr>
<tr>
<td>28728 MH</td>
<td>HALF PIPE®, without handle, small, working length 95 mm</td>
</tr>
<tr>
<td>28572 NJ</td>
<td>SILGRASP® PRO Suture Grasper, straight jaws, sheath diameter 2.8 mm, straight, handle with cleaning connector, working length 8.5 cm</td>
</tr>
</tbody>
</table>

Container for the Sterilization and Storage of Instruments see HYGIENE catalog
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 Inserter, 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 Inserter 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 498400 COTTLE Retractor, narrow (standard model), length 14 cm

MPFL Reconstruction with the Quadriceps 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 FC** 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
Knee Joint
Basic Sets

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
28729 ZB  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
Knee Joint

Basic Sets

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**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28960 B</td>
<td><strong>Blade Dilator</strong>, 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</td>
</tr>
<tr>
<td>28960 BB</td>
<td><strong>Same</strong>, diameter 6.5 mm</td>
</tr>
<tr>
<td>28960 C</td>
<td><strong>Same</strong>, diameter 7 mm</td>
</tr>
<tr>
<td>28960 CC</td>
<td><strong>Same</strong>, diameter 7.5 mm</td>
</tr>
<tr>
<td>28960 D</td>
<td><strong>Same</strong>, diameter 8 mm</td>
</tr>
<tr>
<td>28960 DD</td>
<td><strong>Same</strong>, diameter 8.5 mm</td>
</tr>
<tr>
<td>28960 E</td>
<td><strong>Same</strong>, diameter 9 mm</td>
</tr>
<tr>
<td>28960 EE</td>
<td><strong>Same</strong>, diameter 9.5 mm</td>
</tr>
<tr>
<td>28960 F</td>
<td><strong>Same</strong>, diameter 10 mm</td>
</tr>
<tr>
<td>28960 FF</td>
<td><strong>Same</strong>, diameter 10.5 mm</td>
</tr>
<tr>
<td>28960 G</td>
<td><strong>Same</strong>, diameter 11 mm</td>
</tr>
<tr>
<td>28900 CP</td>
<td><strong>Center Punch</strong>, straight, with pyramidal tip, working length 14.5 cm, for use with Handle 28900 H</td>
</tr>
<tr>
<td>28900 H</td>
<td><strong>Handle</strong>, 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</td>
</tr>
<tr>
<td>28729 N</td>
<td><strong>Notcher</strong>, with fin-like blade to assist screw insertion, working length 15 cm</td>
</tr>
<tr>
<td>28729 NM</td>
<td><strong>Chisel</strong>, for creating a bone wedge, working length 13 cm</td>
</tr>
<tr>
<td>28729 NN</td>
<td><strong>Chisel</strong>, for creating a bone wedge, with wide handle, working length 13 cm</td>
</tr>
</tbody>
</table>

**optional Dilators with Fin**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 DFM</td>
<td><strong>Dilator with Fin</strong>, for dilating the femoral drill channel to diameter 4 mm and simultaneous placement of a notch 17 mm in length</td>
</tr>
<tr>
<td>28729 DFO</td>
<td><strong>Dilator with Fin</strong>, cannulated, for dilating the femoral drill channel to diameter 6 mm and simultaneous placement of a notch 25 mm in length</td>
</tr>
<tr>
<td>28729 DFP</td>
<td><strong>Same</strong>, for dilating the femoral drill channel to diameter 6.5 mm</td>
</tr>
<tr>
<td>28729 DFQ</td>
<td><strong>Same</strong>, for dilating the femoral drill channel to diameter 7 mm</td>
</tr>
<tr>
<td>28729 DFR</td>
<td><strong>Same</strong>, for dilating the femoral drill channel to diameter 7.5 mm</td>
</tr>
<tr>
<td>28729 DFS</td>
<td><strong>Same</strong>, for dilating the femoral drill channel to diameter 8 mm</td>
</tr>
<tr>
<td>28729 DFT</td>
<td><strong>Same</strong>, for dilating the femoral drill channel to diameter 8.5 mm</td>
</tr>
<tr>
<td>28729 DFU</td>
<td><strong>Same</strong>, for dilating the femoral drill channel to diameter 9 mm</td>
</tr>
<tr>
<td>28729 DFV</td>
<td><strong>Same</strong>, for dilating the femoral drill channel to diameter 9.5 mm</td>
</tr>
</tbody>
</table>
Knee Joint

Basic Sets

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 FW-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, cannulated, distinct 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, distinct 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, distinct 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, distinct 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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28731 BWA</td>
<td><strong>HOPKINS® Wide Angle Forward-Oblique Telescope 30°</strong>, enlarged view, diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated, color code: red</td>
</tr>
<tr>
<td>28130 CR</td>
<td><strong>High-Flow Arthroscopy Sheath</strong>, with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, two stopcocks, rotatable, for use with HOPKINS® teleopes 0°, 30°, 70° and Obturators 28130 BC/BD, 28140 O, color code: red</td>
</tr>
<tr>
<td>28130 BC</td>
<td><strong>Obturater</strong>, blunt</td>
</tr>
<tr>
<td>28130 BT</td>
<td><strong>Obturater</strong>, semisharp</td>
</tr>
<tr>
<td>28140 O</td>
<td><strong>Obturater</strong>, cannulated, with handle, diameter 4.8 mm</td>
</tr>
<tr>
<td>28270 T</td>
<td><strong>Probe</strong>, graduated, length of hook 2 mm, diameter 1.5 mm, working length 18 cm</td>
</tr>
<tr>
<td>28270 W</td>
<td><strong>Changing Rod</strong>, length 35 cm, for use with arthroscope sheaths with inner diameter 4 mm</td>
</tr>
<tr>
<td>28171 KPN</td>
<td><strong>SILCUT® Punch</strong>, 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</td>
</tr>
<tr>
<td>28171 KGN</td>
<td><strong>SILGRASP® Foreign Body Grasper</strong>, aggressive, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 19 cm</td>
</tr>
<tr>
<td>28171 SGN</td>
<td><strong>SILGRASP® Suture Grasper</strong>, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 14 cm</td>
</tr>
</tbody>
</table>

**Optional for 28171 SGN**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28171 SGL</td>
<td><strong>SILGRASP® Suture Grasper</strong>, curved jaws, 45° left, sheath diameter 3.5 mm, 5° curved to left, handle with cleaning connector, working length 16 cm</td>
</tr>
<tr>
<td>28171 SGR</td>
<td><strong>Same</strong>, 45° right, 5° curved to right</td>
</tr>
</tbody>
</table>

**Optional for 28731 BWA**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28731 AE</td>
<td><strong>ENDOCAMELEON® ARTHRO HOPKINS® Telescope</strong>, 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</td>
</tr>
<tr>
<td>28136 EC</td>
<td><strong>Arthroscopy Sheath ENDOCAMELEON®,</strong> 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/BD</td>
</tr>
<tr>
<td>28126 BT</td>
<td><strong>Obturater</strong>, semisharp, for use with Arthroscopy Sheaths 28229 DR, 28129 CR, 28126 CR/R/B, 28136 CR, 28135 CR and 28136 EC, color code: green-red-yellow</td>
</tr>
</tbody>
</table>

#### Portal Management System

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

**Container for the Sterilization and Storage of Telescopes** see HYGIENE catalog
Reconstruction of the Shoulder Joint

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28270 H</td>
<td><strong>Mallet</strong>, ergonomic handle, two plane faces, length 17 cm, color code: blue</td>
</tr>
<tr>
<td>28179 KS</td>
<td><strong>Bone Punch</strong>, for use with Titanium Suture Anchors 2870514 TI, 2870614 TI and 2870309 ST</td>
</tr>
<tr>
<td>28179 I</td>
<td><strong>Thread Catcher</strong>, working length 15 cm</td>
</tr>
<tr>
<td>28179 KP</td>
<td><strong>Knot Pusher</strong>, for sutures up to size USP 2, working length 18 cm or</td>
</tr>
<tr>
<td>2870356 KP</td>
<td><strong>Knot Pusher and Suture Cutter</strong>, for cutting sutures up to size USP 2, working length 15 cm</td>
</tr>
<tr>
<td>2870356 SC</td>
<td><strong>Suture Cutter</strong>, for cutting sutures up to size USP 2, working length 15 cm</td>
</tr>
<tr>
<td>28180 CB</td>
<td><strong>Elevator</strong>, width 4 mm, curved 15° downwards, also curved downwards in sheath, working length 15 cm, for use with cannulas inner diameter 8.25 mm</td>
</tr>
<tr>
<td>28180 CC</td>
<td><strong>Same</strong>, curved 30° downwards</td>
</tr>
<tr>
<td>28180 CF</td>
<td><strong>Elevator</strong>, 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</td>
</tr>
<tr>
<td>28180 CJ</td>
<td><strong>Same</strong>, curved 30° downwards</td>
</tr>
<tr>
<td>28180 CL</td>
<td><strong>Rasp</strong>, 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</td>
</tr>
</tbody>
</table>

Optional Rasps for 28180 CL

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28180 CE</td>
<td>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</td>
</tr>
<tr>
<td>28180 DC</td>
<td>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</td>
</tr>
<tr>
<td>28180 GCN</td>
<td><strong>SNAPPER® SHOULDER PRO® Suture Forceps</strong>, 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</td>
</tr>
<tr>
<td>28180 GLN</td>
<td><strong>SNAPPER® SHOULDER PRO® Suture Forceps</strong>, 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</td>
</tr>
<tr>
<td>28180 GRN</td>
<td><strong>SNAPPER® SHOULDER PRO® Suture Forceps</strong>, 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</td>
</tr>
</tbody>
</table>

Optional SNAPPER® SHOULDER PRO® Suture Forceps

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28180 GAN</td>
<td><strong>SNAPPER® SHOULDER PRO® Suture Forceps</strong>, 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</td>
</tr>
<tr>
<td>28180 GRGN</td>
<td><strong>SNAPPER® SHOULDER PRO® Suture Forceps</strong>, 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</td>
</tr>
<tr>
<td>33136 P</td>
<td><strong>CLICKline Handle</strong>, with thumb release, with 4 locking positions, for use with Suture Attachments 28180 LA/LC/LL/LR/LRG</td>
</tr>
</tbody>
</table>
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
Shoulder Joint

Basic Sets

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

2x 28130 BC  Obturator, blunt, for use with Arthroscopy Sheaths 28131 CR/R, 28130 CR/R, color code: green-red-yellow

28130 CR  High-Flow Arthroscopy 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 Arthroscopy 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 Arthroscopy 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 Arthroscopy Sheaths 28130 CR/R and 28131 CR/R as well as Nitonol 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  ENDOCAMÉLEON® 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  Arthroscopy Sheath ENDOCAMÉLEON®, with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, distal tapered, with irrigation holes, two stopcocks, rotatable, for use with ENDOCAMÉLEON® ARTHRO HOPKINS® Telescope 28731 AE and Obturator 28134 O with cannulated handle or Obturators 28126 BC/BT

28126 BT  Obturator, semisharp, for use with Arthroscopy 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 ENDOCAMÉLEON®, cannulated, diameter 3.8 mm, working length 31 cm, for use with Arthroscopy Sheath ENDOCAMÉLEON® 28136 EC and Nitinol Guide Wire 28140 GW

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog
## Portal Management System

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28140 EB</td>
<td>Dilator, with integrated handle, short, diameter 6 mm, for use with Threaded Cannula 28140 SA and Obturator 28140 EO</td>
</tr>
<tr>
<td>28140 EO</td>
<td>Obturator, cannulated, inner diameter 1.6 mm, for use with Guide Wire 28140 GW</td>
</tr>
<tr>
<td>28140 FC</td>
<td>Dilator, with integrated handle, long, diameter 8.1 mm, for use with Threaded Cannula 28140 SD and Obturator 28140 FP</td>
</tr>
<tr>
<td>28140 FP</td>
<td>Obturator, cannulated, inner diameter 1.6 mm, for use with Guide Wire 28140 GW</td>
</tr>
<tr>
<td>3x 28179 DG</td>
<td>Valve Housing, with LUER-Lock, for use with Cannulas and Set of Gaskets 28179 GS</td>
</tr>
<tr>
<td>28140 SA-6</td>
<td>Cannula, with thread, transparent, unsterile, for single use, package of 6</td>
</tr>
<tr>
<td>28140 SD-6</td>
<td>Cannula, with thread, transparent, unsterile, for single use, package of 6</td>
</tr>
</tbody>
</table>

## Recommended Shaver Blades, Hip Arthroscopy

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28208 BKS</td>
<td>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</td>
</tr>
<tr>
<td>28208 EHS</td>
<td>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</td>
</tr>
<tr>
<td>28208 IDS</td>
<td>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</td>
</tr>
</tbody>
</table>
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° and Obturators 28306 BA and 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
Small Joints
Basic Sets

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
Small Joints
Basic Sets

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
Medium Joints

Basic Sets

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

ENOCAMELEON® 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
ENOCAMELEON® ARTHRO
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.

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

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.

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

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

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

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

<table>
<thead>
<tr>
<th>Color Code</th>
<th>Direction of View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>0°</td>
</tr>
<tr>
<td>Red</td>
<td>30°</td>
</tr>
<tr>
<td>Yellow</td>
<td>70°</td>
</tr>
</tbody>
</table>

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog
HOPKINS® Telescopes

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.

Components/Spare Parts see chapter 18

*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.
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  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
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*

**Arthroscope Sheaths**

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

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

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

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
Obturators and Changing Rods

For use with Arthroscope Sheaths 28136 DS/S

28136 BT
28136 BC 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 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 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
HOPKINS® Telescope and Arthroscope Sheath with Standard Coupling Mechanism

Diameter 2.7 mm, length 18 cm

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

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

Obturato r, 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

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

**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

**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
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.

*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 Standard Coupling Mechanism

Diameter 1.9 mm, length 6.5 cm

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

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, sharp, for use with Arthroscope Sheath 28306 BN

Obturator, 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
Retractors

801810 Langenbeck Retractor, size 43 x 13 mm, length 21 cm

786003 Retractor, sharp, 3 prongs, length 17 cm

498400 Cottle Retractor, narrow (standard model), length 14 cm
Probes

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

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

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
28140 LM  Knife, round, straight, working length 11.5 cm
28140 BM  Knife, round, angled 20°, working length 11.5 cm

Working length 18 cm

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

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

**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
Mirrors

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

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

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

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.

**Rasps**

| 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.
Cannulas

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

Irrigation Cannula, diameter 5 mm, length 14.5 cm

28728 DC

Irrigation Cannula, diameter 6 mm, length 14.5 cm
Cannulas

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  Obturator, sharp, for use with Cannula 28146 T

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  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
- 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 SILCUT® PRO premium line offers further decisive advantages for your applications:
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**
SILCUT® PRO Punches

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  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  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
SILCUT® PRO Punches

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  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  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  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
### SILCUT® PRO Punches

#### 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)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 E</td>
<td><strong>SILCUT® PRO Giga Punch</strong>, 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</td>
</tr>
<tr>
<td>28571 EU</td>
<td><strong>SILCUT® PRO Giga Punch</strong>, 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</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 S</td>
<td><strong>SILCUT® PRO Square Punch</strong>, 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</td>
</tr>
<tr>
<td>28571 SU</td>
<td><strong>SILCUT® PRO Square Punch</strong>, 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</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 CL</td>
<td><strong>SILCUT® PRO Side Punch</strong>, 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</td>
</tr>
<tr>
<td>28571 CLU</td>
<td><strong>SILCUT® PRO Side Punch</strong>, 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</td>
</tr>
<tr>
<td>28571 CR</td>
<td><strong>SILCUT® PRO Side Punch</strong>, 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</td>
</tr>
<tr>
<td>28571 CRU</td>
<td><strong>SILCUT® PRO Side Punch</strong>, 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</td>
</tr>
</tbody>
</table>

### Scissors

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 SP</td>
<td><strong>SILCUT® PRO Scissors</strong>, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 14 cm</td>
</tr>
</tbody>
</table>

### Container for Sterilization and Storage of Instruments

See HYGIENE catalog

**Components/Spare Parts** see chapter 18
SILCUT® Punches

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
## SILCUT® Punches

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Silcut® Punch Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>28171 ACN</td>
<td>through-cutting, cross-toothed, cutting width 2.7 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28171 BCN</td>
<td>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</td>
</tr>
<tr>
<td>28171 CCN</td>
<td>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</td>
</tr>
<tr>
<td>28171 DCN</td>
<td>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</td>
</tr>
<tr>
<td>28171 ECN</td>
<td>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</td>
</tr>
<tr>
<td>28171 FCN</td>
<td>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</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Silcut® Punch Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>28171 ADN</td>
<td>through-cutting, cross-toothed, cutting width 1.5 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28171 BDN</td>
<td>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</td>
</tr>
</tbody>
</table>

### Cutting width 0.5 mm, sheath diameter 3 mm, working length 12 cm (recommended for the knee)

<table>
<thead>
<tr>
<th>Code</th>
<th>Silcut® Punch Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>28171 SPN</td>
<td>through-cutting, cutting width 0.5 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28171 SLN</td>
<td>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</td>
</tr>
<tr>
<td>28171 SRN</td>
<td>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</td>
</tr>
</tbody>
</table>

### Container for Sterilization and Storage of Instruments
- See HYGIENE catalog

### Components/Spare Parts
- See chapter 18
SILCUT® Punches

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
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
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**
SILGRASP® PRO Grasping Forceps

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
<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 FG</td>
<td><strong>SILGRASP® PRO Foreign Body Grasper</strong>, aggressive, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28571 CG</td>
<td><strong>SILGRASP® PRO Cartilage Grasping Forceps</strong>, spoon-shaped jaws, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28571 CGU</td>
<td><strong>SILGRASP® PRO Cartilage Grasping Forceps</strong>, spoon-shaped jaws, jaws curved, 30° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28571 G</td>
<td><strong>SILGRASP® PRO Grasping Forceps</strong>, spoon-shaped jaws, serrated, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28571 GU</td>
<td><strong>SILGRASP® PRO Grasping Forceps</strong>, spoon-shaped jaws, serrated, jaws curved, 30° upwards, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
<tr>
<td>28571 AG</td>
<td><strong>SILGRASP® PRO Alligator Grasping Forceps</strong>, straight jaws, sheath diameter 3.5 mm, straight, handle with cleaning connector, working length 12 cm</td>
</tr>
</tbody>
</table>

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

**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 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)

![Grasping Forceps](image1)

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)

![Grasping Forceps](image2)

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

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

28146 UD

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

28157 K

Meniscus Retractor, with serrated jaws, with teeth and ratchet, straight jaws, straight sheath, working length 13 cm
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.

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

**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
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  **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
Instruments for Bone Reconstruction

Bone Block Harvesting

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
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 ENOCAMELEON®

**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  **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

**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.

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

Special Features:
- Practical
- Easy to use
- Reproducible results
- Exact measurements

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

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 FLIPPTACK
- User-friendly

28729 SB

28729 SB Tendon Board, including FLIPPTACK Retainer 28729 SC

28729 SC

28729 SC FLIPPTACK 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 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
Knee
Basic Instruments

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

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

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  
**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

**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.

![Image of surgical instruments](image)

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

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

**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
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

For use with:

28185 MH
Handle, working length 10 cm

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

28185 FB
Same, width 12 mm

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

28185 EB
Same, height 3 mm

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
MPFL Reconstruction with the Gracilis Tendon and the BIOPLUG

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

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  **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
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
Knee
Anterior Cruciate Ligament Reconstruction with Hamstrings

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

28729 A
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

213008
PLESTER Raspatory, width 8 mm, length 18 cm

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  **Tibial Target Guide**, for ACL reconstruction

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

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

28729 SBD

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

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 WW

28729 WW **Same**, with 9 mm offset

28729 WV

28729 WV **Same**, with 10 mm offset

28729 ZG

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

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
Anterior Cruciate Ligament Reconstruction with the Quadriceps Tendon

For use with:

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

- **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

- **28185 FD**
  - Same, width 9 mm

- **28185 FE**
  - Same, width 10 mm

- **28185 FF**
  - Same, width 12 mm

- **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

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

- **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
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 reconstruction 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

**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  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)

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 PD</td>
<td><strong>Patellar Saw Template</strong>, for harvesting a bone block with tendon (BTB), width 7 mm</td>
</tr>
<tr>
<td>28729 PC</td>
<td><strong>Same</strong>, width 8 mm</td>
</tr>
<tr>
<td>28729 PD</td>
<td><strong>Same</strong>, width 9 mm</td>
</tr>
<tr>
<td>28729 PE</td>
<td><strong>Same</strong>, width 10 mm</td>
</tr>
<tr>
<td>28729 PF</td>
<td><strong>Same</strong>, width 11 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 PA</td>
<td><strong>Chisel</strong>, width 8 mm</td>
</tr>
<tr>
<td>28729 PB</td>
<td><strong>Tendon Knife</strong>, blunt</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 PH</td>
<td><strong>Measuring Block</strong>, to determine the size of a bone block</td>
</tr>
<tr>
<td>28729 PJ</td>
<td><strong>Bone Block Holder</strong>, for use with Tendon Board 28729 SB</td>
</tr>
<tr>
<td>28729 PK</td>
<td><strong>Bone Forceps</strong>, for use with Measuring Block 28729 PH</td>
</tr>
</tbody>
</table>

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

28729 PL  Coring Reamer, for harvesting a bone block with tendon (BTT), 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

Components/Spare Parts see chapter 18
Knee
Posterior Cruciate Ligament Reconstruction

Special Features:
- Precise, reproducible tunneling

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

28729 WB
Same, for drill diameter 8 mm

28729 WC
Same, for drill diameter 9 mm

28729 WD
Same, for drill diameter 10 mm

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

28729 MH
Femoral Target Guide, for PCL reconstruction, graduated, working length 14.5 cm

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

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

**Posterior Cruciate Ligament Reconstruction**

**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

**Components/Spare Parts** see chapter 18

- 28729 ZB  **Tibial Target Guide**, for PCL reconstruction
- 28729 ZL  **Same**, curved to left
- 28729 ZR  **Same**, curved to right
- 28729 ZBB  **Tibial Target Guide**, large, for PCL reconstruction
Knee
Posterior Cruciate Ligament Reconstruction

Cannulated Drill Sleeves for use with cannulated Drills 28729 GA – GE

Special Features:
- Safe due to self-centering drills
- Easy to use

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
Knee
Posterior Cruciate Ligament Reconstruction

28729 AH

Awi, for PCL reconstruction, working length 20 cm

28729 WH

Elevator, for PCL reconstruction, working length 15.5 cm

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Size</th>
<th>Working Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>28728 TA</td>
<td>Revision Screwdriver Blade</td>
<td>1.9 mm</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28728 TB</td>
<td>Revision Screwdriver Blade</td>
<td>2.3 mm</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28728 TC</td>
<td>Revision Screwdriver Blade</td>
<td>2.4 mm</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28728 TD</td>
<td>Revision Screwdriver Blade</td>
<td>2.7 mm</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28728 TE</td>
<td>Revision Screwdriver Blade</td>
<td>3.4 mm</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28728 TF</td>
<td>Large Fragment Screwdriver Blade</td>
<td>3.5 mm</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28728 TG</td>
<td>Small Fragment Screwdriver Blade</td>
<td>2.5 mm</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28728 TH</td>
<td>Microfracture Chisel</td>
<td>straight</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28728 TI</td>
<td>Microfracture Chisel</td>
<td>curved 30°</td>
<td>12.5 cm</td>
</tr>
<tr>
<td>28729 PQ</td>
<td>Handle</td>
<td>T-shaped</td>
<td>For use with 28728 TA – TI</td>
</tr>
</tbody>
</table>
Knee
Cruciate Ligament Revision Surgery

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 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 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 HHC 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 HHJ Sleeve, inner diameter 10 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HPJ, color code: white-yellow

28729 HHI Sleeve, inner diameter 11 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HHI, color code: white-green

28729 HHG Sleeve, inner diameter 12 mm, working length 70 mm, for use with Handle 28729 HH, Tap 28729 HP and Tappet 28729 HHG, color code: white-blue

28729 HHA 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 HHB 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 HHD 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 HHE 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
Knee
Cruciate Ligament Revision Surgery

**Components/Spare Parts** see chapter 18

---

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 HPA</td>
<td>Tappet, diameter 5 mm, for use with Handle 28729 HH and Sleeve 28729 HGA, color code: green</td>
</tr>
<tr>
<td>28729 HPB</td>
<td>Tappet, diameter 6 mm, for use with Handle 28729 HH and Sleeve 28729 HGB, color code: black</td>
</tr>
<tr>
<td>28729 HPC</td>
<td>Tappet, diameter 7 mm, for use with Handle 28729 HH and Sleeve 28729 HGC, color code: blue</td>
</tr>
<tr>
<td>28729 HPD</td>
<td>Tappet, diameter 8 mm, for use with Handle 28729 HH and Sleeve 28729 HGD, color code: red</td>
</tr>
<tr>
<td>28729 HPE</td>
<td>Tappet, diameter 9 mm, for use with Handle 28729 HH and Sleeve 28729 HGE, color code: yellow</td>
</tr>
<tr>
<td>28729 HPF</td>
<td>Tappet, diameter 10 mm, for use with Handle 28729 HH and Sleeve 28729 HGF, color code: white-yellow</td>
</tr>
<tr>
<td>28729 HPG</td>
<td>Tappet, diameter 11 mm, for use with Handle 28729 HH and Sleeve 28729 HGG, color code: white-green</td>
</tr>
<tr>
<td>28729 HPH</td>
<td>Tappet, diameter 12 mm, for use with Handle 28729 HH and Sleeve 28729 HGH, color code: white-blue</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>174800</td>
<td>Metal Mallet, with plastic replacement head, length 22.5 cm</td>
</tr>
</tbody>
</table>
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 ENOCAMELEON®

*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*
Knee
Cruciate Ligament Revision Surgery

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

Components/Spare Parts see chapter 18
Knee
Fine Tunnel Preparation

Special Features:
- Dilation of the drill channel and notching in one step
- Cancellous bone compression through tunnel dilation

- The direction of the interference screw is pre-determined → no migration of the screw during insertion

28729 DFO

28729 DFM  Dilator with Fin, for dilating the femoral drill channel to diameter 4 mm and simultaneous placement of a notch 17 mm in length

28729 DFO  Dilator with Fin, cannulated, for dilating the femoral drill channel 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  **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  **Center Punch**, straight, with pyramidal tip, working length 14.5 cm, for use with Handle 28900 H
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
Knee
Fine Tunnel Preparation

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
FLIPPTACK and ENDOTACK® – Titanium

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

**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

**FLIPPTACK**
from Titanium Ti-6AL-4V ELI

**ENDOTACK®**
from titanium Ti-6AL-4V ELI
FLIPPTACK and ENDOTACK® – Fixation Buttons

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 MT  Mini ENDOTACK®, tibial fixation button, 8 x 12 mm, sterile, for single use
Knee
Implants
Fixation Buttons

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
Button Wrench, for use with ENDOTACK® 28729 TT

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

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

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**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2870619 B</td>
<td>MEGA FIX® B, bioresorbable interference screw, diameter 6 mm, length 19 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870623 B</td>
<td>Same, length 23 mm</td>
</tr>
<tr>
<td>2870719 B</td>
<td>MEGA FIX® B, bioresorbable interference screw, diameter 7 mm, length 19 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870723 B</td>
<td>Same, length 23 mm</td>
</tr>
<tr>
<td>2870728 B</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870819 B</td>
<td>MEGA FIX® B, bioresorbable interference screw, diameter 8 mm, length 19 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870823 B</td>
<td>Same, length 23 mm</td>
</tr>
<tr>
<td>2870828 B</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870923 B</td>
<td>MEGA FIX® B, bioresorbable interference screw, diameter 9 mm, length 23 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870928 B</td>
<td>Same, length 28 mm</td>
</tr>
</tbody>
</table>

**MEGA FIX® P**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2870823 P</td>
<td>MEGA FIX® P, bioresorbable interference screw, perforated, diameter 8 mm, length 23 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870828 P</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870923 P</td>
<td>MEGA FIX® P, bioresorbable interference screw, perforated, diameter 9 mm, length 23 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870928 P</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870935 P</td>
<td>Same, length 35 mm</td>
</tr>
<tr>
<td>2871028 P</td>
<td>MEGA FIX® P, bioresorbable interference screw, perforated, diameter 10 mm, length 28 mm, sterile, for single use</td>
</tr>
<tr>
<td>2871035 P</td>
<td>Same, length 35 mm</td>
</tr>
<tr>
<td>2871135 P</td>
<td>MEGA FIX® P, bioresorbable interference screw, perforated, diameter 11 mm, length 35 mm, sterile, for single use</td>
</tr>
</tbody>
</table>
# Knee Implants

## Interference Screws

### MEGA FIX® C

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2870619 C</td>
<td>MEGA FIX® C, bioresorbable composite interference screw, diameter 6 mm, length 19 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870623 C</td>
<td>Same, length 23 mm</td>
</tr>
<tr>
<td>2870719 C</td>
<td>MEGA FIX® C, bioresorbable composite interference screw, diameter 7 mm, length 19 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870723 C</td>
<td>Same, length 23 mm</td>
</tr>
<tr>
<td>2870728 C</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870819 C</td>
<td>MEGA FIX® C, bioresorbable composite interference screw, diameter 8 mm, length 19 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870823 C</td>
<td>Same, length 23 mm</td>
</tr>
<tr>
<td>2870828 C</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870923 C</td>
<td>MEGA FIX® C, bioresorbable composite interference screw, diameter 9 mm, length 23 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870928 C</td>
<td>Same, length 28 mm</td>
</tr>
</tbody>
</table>

### MEGA FIX® CP

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2870823 CP</td>
<td>MEGA FIX® CP, bioresorbable composite interference screw, perforated, diameter 8 mm, length 23 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870828 CP</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870923 CP</td>
<td>MEGA FIX® CP, bioresorbable composite interference screw, perforated, diameter 9 mm, length 23 mm, sterile, for single use</td>
</tr>
<tr>
<td>2870928 CP</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870935 CP</td>
<td>Same, length 35 mm</td>
</tr>
<tr>
<td>2871028 CP</td>
<td>MEGA FIX® CP, bioresorbable composite interference screw, perforated, diameter 10 mm, length 28 mm, sterile, for single use</td>
</tr>
<tr>
<td>2871035 CP</td>
<td>Same, length 35 mm</td>
</tr>
<tr>
<td>2871135 CP</td>
<td>MEGA FIX® CP, bioresorbable composite interference screw, perforated, diameter 11 mm, length 35 mm, sterile, for single use</td>
</tr>
</tbody>
</table>
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 for the Hamstring Technique
- Blunt thread protects the transplant
- Diameter 7 – 10 mm, lengths 23 and 28 mm
# Knee Implants
## Interference Screws

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2870720 T</td>
<td>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</td>
</tr>
<tr>
<td>2870725 T</td>
<td>Same, length 25 mm</td>
</tr>
<tr>
<td>2870820 T</td>
<td>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</td>
</tr>
<tr>
<td>2870825 T</td>
<td>Same, length 25 mm</td>
</tr>
<tr>
<td>2870920 T</td>
<td>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</td>
</tr>
<tr>
<td>2870925 T</td>
<td>Same, length 25 mm</td>
</tr>
<tr>
<td>2870720 T</td>
<td>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</td>
</tr>
<tr>
<td>2870725 T</td>
<td>Same, length 25 mm</td>
</tr>
<tr>
<td>2870820 T</td>
<td>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</td>
</tr>
<tr>
<td>2870825 T</td>
<td>Same, length 25 mm</td>
</tr>
<tr>
<td>2870920 T</td>
<td>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</td>
</tr>
<tr>
<td>2870925 T</td>
<td>Same, length 25 mm</td>
</tr>
</tbody>
</table>

### MEGA FIX® T for the Hamstring Technique

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2870723 T</td>
<td>MEGA FIX® T, titanium interference screw, diameter 7 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile, for single use</td>
</tr>
<tr>
<td>2870728 T</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870823 T</td>
<td>MEGA FIX® T, titanium interference screw, diameter 8 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile, for single use</td>
</tr>
<tr>
<td>2870828 T</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2870923 T</td>
<td>MEGA FIX® T, titanium interference screw, diameter 9 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile, for single use</td>
</tr>
<tr>
<td>2870928 T</td>
<td>Same, length 28 mm</td>
</tr>
<tr>
<td>2871023 T</td>
<td>MEGA FIX® T, titanium interference screw, diameter 10 mm, length 23 mm, for Cruciate Ligament Reconstruction with Semitendinosus Transplant, sterile, for single use</td>
</tr>
</tbody>
</table>
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)
### Knee Implants

#### Hybrid Fixation

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Size (width x length)</th>
<th>Height</th>
<th>Instrumentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2870620 MSP</td>
<td>6x20 mm</td>
<td>4 mm</td>
<td>Dilator 28728 DS Applicator 28767 E Pusher 28767 C HALF PIPE® 28728 SH</td>
</tr>
<tr>
<td>2870720 MSP</td>
<td>7x20 mm</td>
<td>4.5 mm</td>
<td>Dilator 28728 DL Applicator 28789 EK Pusher 28789 C HALF PIPE® 28728 SH</td>
</tr>
<tr>
<td>2870820 MSP</td>
<td>8x20 mm</td>
<td>5 mm</td>
<td></td>
</tr>
<tr>
<td>2870920 MSP</td>
<td>9x20 mm</td>
<td>5.5 mm</td>
<td></td>
</tr>
</tbody>
</table>
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 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  **HALF PIPE®,** without handle, short, working length 85 mm

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

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

**Components/Spare Parts** see chapter 18
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  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  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  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.

- 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.
- 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

Fig. 1

Fig. 2
Shoulder Portal Systems for Shoulder Arthroscopy

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

- 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.

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

HALF PIPE®

Benefits:
- Insertion through the soft tissue into the joint is not limited by the diameter of the cannula
- High flexibility of the 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

Maintenance of the portal

Removal of the instrument

Insertion of a given instrument along the HALF PIPE®
Shoulder
Portal Systems for Shoulder Arthroscopy

HALF PIPE®

HALF PIPE®, long, working length 95 mm, for use with Obturator 28179 OB

HALF PIPE®, short, working length 80 mm, for use with Obturator 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 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/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
SHOULDER PRO® Suture System

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  
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 WH  **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
Shoulder
Instruments for Shoulder Arthroscopy

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 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 PRO® Suture Forceps Attachments

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

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

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

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

Components/Spare Parts see chapter 18
Shoulder
Instruments for Shoulder Arthroscopy

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

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

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

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  **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  **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  **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

28171 SHN  **SILGRASP® Suture Grasper**, straight jaws, sheath diameter 3.5 mm, handle with cleaning connector, working length 14 cm

Components/Spare Parts see chapter 18
Instruments for Shoulder Arthroscopy

Shoulder

Components/Spare Parts see chapter 18
Shoulder
Instruments for Shoulder Arthroscopy

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
- **Elevator**, width 4 mm, curved 30° downwards, 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
- **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
- **Elevator**, width 4 mm, 15° curved upwards, working length 15 cm
- **Elevator**, width 4 mm, 30° curved upwards, working length 15 cm
- **Glenoid Rasp**, width 5.5 mm, 30° curved upwards, working length 15 cm
Shoulder
Biceps Tenodesis

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®
Shoulder
Biceps Tenodesis

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

28184 MSL

BITER®, for the right shoulder

28184 MSR

Same, for the right shoulder
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

- 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

* Each intervention requires two FLIPPTACK fixation buttons.
Shoulder
AC Joint Reconstruction

A workable instrument set requires the following instruments:

- **28379 SA** Target Guide, for AC joint reconstruction
- **28379 SB** Bullet, working length 9.5 cm, for use with Aimer 28379 SA
- **28379 SC** FLIPPTACK Inserter, working length 19.5 cm
- **28379 SD** FLIPPTACK Inserter Rod, working length 24.5 cm, for use with FLIPPTACK Inserter 28379 SC
- **28379 SE** Suture Awl, working length 15 cm
- **28379 SF** Repositioner, for AC joint reconstruction, working length 20 cm

**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
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

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2870309 ST</td>
<td>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</td>
</tr>
<tr>
<td>2870514 TI</td>
<td>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</td>
</tr>
<tr>
<td>2870614 TI</td>
<td>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</td>
</tr>
<tr>
<td>28179 KS</td>
<td>Bone Punch, for use with Titanium Suture Anchors 2870514 TI, 2870614 TI and 2870309 ST</td>
</tr>
</tbody>
</table>
Shoulder Implants for Shoulder Arthroscopy

**BIOPUG – 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

---

**2870310 BP**  
**BIOPUG, 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**  
**BIOPUG, 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**  
**BIOPUG, bioresorbable suture anchor**, diameter 5.2 mm, length 14 mm, sterile, for single use, for use with Inserter 28179 TI

---

**28179 GG**  
**Glenoid Guide**, working length 12.5 cm, for use with BIOPUG 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
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
Hip Portal Systems for Hip Arthroscopy

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  Aimer Attachment, for use with Aimer 28140 ZAA
Hip
Portal Systems for Hip Arthroscopy

28140 DB

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

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

28140 W

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

28140 S

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

- **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
Hip
Instruments for Hip Arthroscopy

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

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

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

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

Curettes see page 47
Instruments for Hip Arthroscopy

Components/Spare Parts see chapter 18
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

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

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

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**

**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**

**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**

**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**

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

**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
Diameter 2.7 mm, length 11 cm

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

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

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

- **215010** Retractor, 2 x 3 teeth, blunt, length 10 cm
- **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
- **499207** JOSEPH Double Hook, sharp, width 7 mm, length 15 cm
- **474006** Double Elevator, size 18 cm
- **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
- **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

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

28145 SN  Probe, graduated, length of hook 2 mm, diameter 1 mm, working length 4 cm

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

28124 BZ  Changing Rod, diameter 2.7, length 23 cm, for use with Arthroscope Sheath 28132 CR

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

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

28728 CG

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

28728 CH

**Same**, angled 70°
**Small and Medium Joints**

Instruments

---

**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**  
  *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**  
  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

---

[Image]
Small and Medium Joints Instruments

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.

**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

**GILBERT Operating Sheath**, continuously slotted, diameter 5.5 mm, working length 9 cm, for use with Obturator 28147 CO and HOPKINS® Telescope 28731 BVA

**Obturato**,r blunt, with attached segment, for use with Operating Sheath 28147 C

**GILBERT Telescope Sheath**, with attached segment, for linear shifting with Operating Sheath 28147 C, working length 16 cm, for use with HOPKINS® Telescope 28731 BVA

Container for Sterilization and Storage of Telescopes see HYGIENE catalog

Components/Spare Parts see chapter 18
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
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

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

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

**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
Small and Medium Joints
Endoscopic Treatment of the Cubital Tunnel Syndrome

404055 H  COTTLE Speculum, with fiber optic light carrier, without set screw, special matt finish, blade length 55 mm, length 13 cm
404090 S  Speculum, with fiber optic light carrier, with set screw, blade length 90 mm, length 13.5 cm
404092 S  Same, blade length 110 mm
748220  DUPLAY Dressing and Sponge Holding Forceps, curved, with ratchet, length 21 cm
748221  Same, straight
752918  METZENBAUM Scissors, curved, length 18 cm
752923  Same, length 23 cm
752928  Same, length 28 cm
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
Instruments for Rheumatology

Needle Arthroscopes

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
Diameter 1 mm, length 6 cm

Miniature Straight Forward Telescope 0°

diameter 1 mm, length 6 cm, fiber optic light transmission incorporated, eyepiece and light connection separate from the instrument

Arthroscopy Sheath

diameter 1.3 mm, working length 4 cm, for use with Miniature Straight Forward Telescope 0° 11508 and Obturators 28117 RS/RB

Obturators

sharp, for use with Arthroscopy Sheath 28117 R

blunt

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.

---

**Components/Spare Parts** see chapter 18
SPINE SURGERY

see NEUROSURGERY catalog
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).
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
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 prothesis
- 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
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
## Accessories for VITOM® 2D Telescopes

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>VITOM® Scope 0°</th>
<th>VITOM® Scope 90°</th>
</tr>
</thead>
<tbody>
<tr>
<td>495 TIP</td>
<td><strong>Fiber Optic Light Cable</strong>, with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 300 cm</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>495 NVC</td>
<td><strong>Fiber Optic Light Cable</strong>, with 90° deflection to the instrument, very narrow radius of curvature, diameter 4.8 mm, length 300 cm</td>
<td>●</td>
<td>–</td>
</tr>
<tr>
<td>39501 A2</td>
<td><strong>Wire Tray for Cleaning, Sterilization and Storage</strong> 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</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
VITOM® 2D

Overview

VITOM® Telescope 0° with Integrated Illuminator
28272 UGK
28272 HC
28172 HR

VITOM® Telescope 90° with Integrated Illuminator
20916025 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

IMAGE1 S™ Camera System
TC 200EN
TC 300

Cold Light Fountain Power LED 300 SCB
TL 300

26” FULL HD Monitor
9826 NB
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

20916025 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 condenser 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

Overview

VITOM® II NIR/ICG Telescope with integrated illuminator

20916025 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
### Specifications

**Working distance:** 25 – 75 cm

<table>
<thead>
<tr>
<th>Depth of view at working distance of:</th>
<th>25 cm</th>
<th>50 cm</th>
<th>75 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depth of view:</strong></td>
<td>approx. 3.5 cm</td>
<td>approx. 7 cm</td>
<td>approx. 10 cm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field of view at working distance of:</th>
<th>25 cm</th>
<th>50 cm</th>
<th>75 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMAGE1 S™ H3-Z camera zoom 1x</td>
<td>5 cm</td>
<td>10 cm</td>
<td>15 cm</td>
</tr>
<tr>
<td>IMAGE1 S™ H3-Z camera zoom 2x</td>
<td>3.5 cm</td>
<td>7 cm</td>
<td>10.5 cm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reproduction scale at working distance of:</th>
<th>25 cm</th>
<th>50 cm</th>
<th>75 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>26&quot; Monitor:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3-Z camera zoom 1x</td>
<td>approx. 8x</td>
<td>approx. 4x</td>
<td>approx. 3x</td>
</tr>
<tr>
<td>H3-Z camera zoom 2x</td>
<td>approx. 16x</td>
<td>approx. 8x</td>
<td>approx. 6x</td>
</tr>
<tr>
<td><strong>42&quot; Monitor:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3-Z camera zoom 1x</td>
<td>approx. 14x</td>
<td>approx. 7x</td>
<td>approx. 5x</td>
</tr>
<tr>
<td>H3-Z camera zoom 2x</td>
<td>approx. 28x</td>
<td>approx. 14x</td>
<td>approx. 10.5x</td>
</tr>
<tr>
<td><strong>52&quot; Monitor:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3-Z camera zoom 1x</td>
<td>approx. 17x</td>
<td>approx. 8x</td>
<td>approx. 6x</td>
</tr>
<tr>
<td>H3-Z camera zoom 2x</td>
<td>approx. 34x</td>
<td>approx. 16x</td>
<td>approx. 12x</td>
</tr>
</tbody>
</table>

**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.
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
3D Visualization for Microsurgery and Open Surgery

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

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.

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:

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

IMAGE1 PILOT is required for the use of VITOM® 3D.

TC 014

For use with:
● IMAGE1 PILOT, input unit
VERSACRANE™ Holding System – for the convenient positioning of VITOM®

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

VERSACRANE™ Holding System – for the convenient positioning of VITOM® Clamping Jaws and Accessories for VITOM® 3D

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

Note: The 550 cm long Light Cable 495 VIT is required for VERSACRANE™.

Components/Spare Parts see chapter 18
### VITOM® 3D Accessories

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

*Please note: The instruments displayed are not included in the wire tray.*
### IMAGE1 PILOT with holding system for fixation to the operating table

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC 014</td>
<td><strong>IMAGE1 PILOT</strong>, 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</td>
</tr>
<tr>
<td>28172 HR</td>
<td><strong>Rotation Socket</strong>, 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</td>
</tr>
<tr>
<td>28272 HB</td>
<td><strong>Articulated Stand</strong>, 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)</td>
</tr>
<tr>
<td>041150-20*</td>
<td><strong>Cover</strong>, elasticated, 42 x 164 cm, sterile, for single use, package of 20, for use with KARL STORZ holding systems and IMAGE1 PILOT</td>
</tr>
</tbody>
</table>

### Monitor

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM 323</td>
<td><strong>32&quot; 3D Monitor</strong> including:</td>
</tr>
<tr>
<td></td>
<td><strong>Mains Cord</strong></td>
</tr>
<tr>
<td></td>
<td><strong>External 24 VDC Power Supply</strong></td>
</tr>
<tr>
<td></td>
<td>3x <strong>3D Polarization Glasses</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Cable Cover</strong></td>
</tr>
<tr>
<td>9832 SFH</td>
<td><strong>Monitor Stand</strong>, for professional use, height-adjustable, tiltable, rotation +/-30°, disinfectable, color white, with VESA 200 adaptor, for use with 32&quot; 3D Monitor TM 323</td>
</tr>
<tr>
<td>9800 GF</td>
<td><strong>3D Polarization Glasses</strong>, fogless, passive, package of 2, for use with 3D monitors</td>
</tr>
<tr>
<td>9800 C</td>
<td><strong>3D Clip-on Glasses</strong>, circularly polarized</td>
</tr>
</tbody>
</table>

*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
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

ZeroWire Transmission Set (optional)
- 9500 ZW

IMAGE1 S™ Camera System
- TC 200EN
- TC 300

KARL STORZ AIDA® Documentation System
- WD 200
- WD 250

26" FULL HD Monitor
- 9826 NB

TV Adaptors

Operating Microscope
- Operating microscopes from Carl Zeiss, LEICA Microsystems and Möller-Wedel are supported
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
- Camera head buttons: freely programmable
- Grasping mechanism: C-MOUNT connection
- Reprocessing: wipe disinfection
- S-Technologies: CLARA, CHROMA, SPECTRA
- Protection class: CF-Defib

With C-MOUNT thread for coupling to microscopes

TH 106
IMAGE1 S™ H3-M COVIEW® Three-Chip FULL HD C-MOUNT Camera Head
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 helps 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 \( f = 43 – 86 \text{ mm} \). 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 \( f = 55 \text{ mm} \) 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.
### TV Adaptors

<table>
<thead>
<tr>
<th>QUINTUS® TV Adaptor for operating microscopes from CARL ZEISS MEDITEC with fixed focal length</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>20 9230 55</strong> QUINTUS Z 55 TV Adaptor, for CARL ZEISS MEDITEC operating microscopes, ( f = 55 , \text{mm} ), recommended for IMAGE1 HD H3-M/H3-M COVIEW®, H3, H3-Z as well as S1 and S3 camera heads</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QUINTUS® Zoom TV Adaptor for operating microscopes from CARL ZEISS MEDITEC with variable focal length</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>20 9230 00 Z</strong> QUINTUS® Zoom TV Adaptor, for CARL ZEISS MEDITEC operating microscopes, with variable focal length ( f = 43 – 86 , \text{mm} ), for use with all KARL STORZ cameras (SD and HD)</td>
</tr>
</tbody>
</table>

### 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**

![Image](Image1.png)

**20 9330 55** QUINTUS® L 55 TV Adaptor, for LEICA Microsystems operating microscopes, \( f = 55 \text{ mm} \), 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**

![Image](Image2.png)

**20 9330 00 Z** QUINTUS® Zoom TV Adaptor, for LEICA Microsystems operating microscopes, with variable focal length \( f = 43 – 86 \text{ mm} \), for use with all KARL STORZ cameras (SD and HD)

**QUINTUS® TV Adaptor for operating microscopes from Möller-Wedel with fixed focal length**

![Image](Image3.png)

**20 9530 55** QUINTUS® M 55 TV Adaptor, for Möller-Wedel operating microscopes, \( f = 55 \text{ mm} \), 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

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: 0º, 30º and 70º
- 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.
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

Same, in single use packaging
Basic Instruments – included in the ARTHROTRAINER Tool Set:

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

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

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

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

5733103  
**Refurbishment of Anatomical Knee Model**, replacement of worn components (incidents), refurbishment, calibration and function control

5733104  
**Skin Cover for Anatomical Knee Model**, customized cover with access points to the knee joint

Optional Accessories:

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.
573612  **Stationary ARTHROTAINER**, 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 ARTHROTAINER Tool Set:

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

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

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

5733003  **Shaver**, adapted original instrument with sensors, for use with ARTHROTAINER
Services:

5733106  **Refurbishment of Anatomical Shoulder Model**, replacement of worn components (incidental), refurbishment, calibration and function control

5733107  **Skin Cover for Anatomical Shoulder Model**, customized cover with access points to the shoulder joint

Optional Accessories:

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

**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 lesions
- Safely handle the instruments to avoid collisions with the tissue
- Safety in systematic examination; inspection of all important features
573610  Stationary ARTHROTAINER, 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  **Arthroscope**, adapted original instrument with sensors, for use with ARTHROTRAINER

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

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

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 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«
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 bar\textsuperscript{eff},
  - Frequency: 1 – 17 Hz (depending on pressure)
- »FALCON« radial handpiece with integrated display for rapid treatment
- Vibration therapy (optional), V-ACTOR\textsuperscript{®}: 1 – 21 Hz
- 10“ touch screen (optional)

**MASTERPULS® MP100 »ultra«**
- Pressure: 0.3 – 5.0 bar\textsuperscript{eff},
  - 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\textsuperscript{®}: 1 – 31 Hz
- 10“ touch screen (optional)

**MASTERPULS® MP200 »ultra«**
- Radial shock wave:
  - Pressure: 0.3 – 5.0 bar\textsuperscript{eff},
  - Frequency: 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\textsuperscript{®}: 1 – 35 Hz
- VACU-ACTOR\textsuperscript{®} technology (optional)
- 10“ touch screen (optional)
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

- 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: Rapid bleeding control by activating the red footswitch (indicated by an acoustic signal)
- Lavage mode: Rapid joint irrigation for a continuously clear view by activating the blue footswitch
- Consistently good view: Optimized control software enables constant comparison and adjustment of inflow and outflow parameters to ensure constant joint distension
- No image pulsation: Special control software and pump bed design provide a homogenous and constant irrigation inflow
- Tubing sets available for single use or as day sets
- Easy connection of the tubing set – computer animation displayed on the pump screen enables smooth installation of the tubing sets during pump start-up
- Color coding of the pump bed and tubing set facilitates identification:
  - Blue: Irrigation
  - Red: Suction
- Display and adjustment of parameters via touchscreen display: Enables both pressure and flow parameters as well as hemostasis phase values and fluid bag size to be set.
- One footswitch for UNIDRIVE® S III ARTHRO SCB and ARTHROPUMP® Power: Efficient arthroscopic work due to unique synergy between shaver system and pump
- Integrated acoustic warning signal indicates impending fluid exchange
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

*Optional Accessories for ARTHROPUMP® Power see pages U 9-10
Components/Spare Parts see chapter 18

**Specifications:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Power supply 100-240 VAC, 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure-regulated</td>
<td>Normal: 20-200 mmHg</td>
<td>447 x 155 x 313 mm</td>
</tr>
<tr>
<td></td>
<td>Hemostasis: +20% - +90%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shaver: +0% - +80%</td>
<td>8.8 kg</td>
</tr>
<tr>
<td>Flow-regulated</td>
<td>Normal: 10-200 ml/min</td>
<td>IEC 601-1, CE acc. to MDD</td>
</tr>
<tr>
<td></td>
<td>Shaver: 50-500 ml/min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lavage: 150-500 ml/min</td>
<td></td>
</tr>
</tbody>
</table>
**ARTHROPUMP® Power**

**System Components**

**UNIDRIVE® S III ARTHRO SCB**

**Four-Pedal Footswitch**

**Day Set**

**Pump Tubing**

**Day Set**

**for single use**

**Patient Tube**

**for single use**

**Tubing Set Suction**

**Tubing Set Irrigation**

**for single use**

**DRILLCUT-X® ARTHRO Shaver Handpiece**

**High-Flow Arthroscope Sheath**

**UNIT SIDE**

**PATIENT SIDE**
# SUCTION AND IRRIGATION SYSTEMS

**ARTHROPUMP® Power**

## Optional Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 0168 34</td>
<td>Four-Pedal Footswitch</td>
</tr>
<tr>
<td>28 3407 70</td>
<td><strong>Connecting Cable</strong>, to transmit the footswitch signal from ARTHROPUMP® Power to UNIDRIVE® S III ARTHRO SCB, length 200 cm</td>
</tr>
<tr>
<td>28 3407 71</td>
<td><strong>Extension Cable</strong>, between ARTHROPUMP® Power and Four-Pedal Footswitch 20 0128 34</td>
</tr>
</tbody>
</table>

### For single use

**Continuous-Flow – Irrigation and Suction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>031328-10*</td>
<td><strong>Tubing Set Irrigation</strong>, with two puncture needles, sterile, for single use, package of 10</td>
</tr>
</tbody>
</table>

**Single-Flow – Irrigation**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>031228-10*</td>
<td><strong>Tubing Set Suction</strong>, with two suction tubes, sterile, for single use, package of 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>031328-10*</td>
<td><strong>Tubing Set Irrigation</strong>, with two puncture needles, sterile, for single use, package of 10</td>
</tr>
</tbody>
</table>
## Day Set
### Continuous-Flow – Irrigation and Suction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>031261-10*</td>
<td><strong>Pump Tubing Day Set</strong>, with two puncture needles, for day use, sterile,</td>
<td>for single use, package of 10, for use with Patient Tubes 031162-01 or</td>
</tr>
<tr>
<td></td>
<td>for day use, sterile, for single use, package of 10, for use with Patient</td>
<td>031162-10</td>
</tr>
<tr>
<td></td>
<td>Tubes 031162-01 or 031162-10</td>
<td></td>
</tr>
<tr>
<td>031162-10*</td>
<td><strong>Patient Tube</strong>**, sterile, for single use, package of 10, for use with</td>
<td>Pump Tubing Day Set 031261-01 or 031162-10</td>
</tr>
<tr>
<td></td>
<td>Pump Tubing Day Set 031261-01 or 031162-10</td>
<td></td>
</tr>
<tr>
<td>031228-10*</td>
<td><strong>Tubing Set Suction</strong>, with two suction tubes, sterile, for single use,</td>
<td>package of 10</td>
</tr>
<tr>
<td></td>
<td>package of 10</td>
<td></td>
</tr>
</tbody>
</table>

## Single-Flow – Irrigation

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>031261-10*</td>
<td><strong>Pump Tubing Day Set</strong>, with two puncture needles, for day use, sterile,</td>
<td>for single use, package of 10, for use with Patient Tubes 031162-01 or</td>
</tr>
<tr>
<td></td>
<td>for single use, package of 10, for use with Patient Tubes 031162-01 or</td>
<td>031162-10</td>
</tr>
<tr>
<td></td>
<td>031162-10</td>
<td></td>
</tr>
<tr>
<td>031162-10*</td>
<td><strong>Patient Tube</strong>**, sterile, for single use, package of 10, for use with</td>
<td>Pump Tubing Day Set 031261-01 or 031162-10</td>
</tr>
<tr>
<td></td>
<td>Pump Tubing Day Set 031261-01 or 031162-10</td>
<td></td>
</tr>
</tbody>
</table>

* Also in combination with 031161-10, 031167-10, 031168-10
ENDOMAT® SELECT NEW
Roller pump for the irrigation of fluids

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**

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:**

<table>
<thead>
<tr>
<th>Software package</th>
<th>Arthroscopy</th>
<th>Operating mode</th>
<th>Irrigation, pressure-controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure max.</td>
<td>150 mmHg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>100-240 VAC, 50/60 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>4.7 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter display</td>
<td>- Set pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Actual pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Percentage pressure increase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions w x h x d</td>
<td>305 x 110 x 260 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certified to</td>
<td>IEC 601-1, CE acc. to MDD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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
**Optional:** Independent activation of the boost modus via One-Pedal Footswitch (20014130).
## Optional Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>031523-10*</td>
<td><strong>Tubing Set</strong>, irrigation, PC, sterile, for single use, package of 10, for use with HAMOU ENDOMAT® 26 3311 20 and ENDOMAT® SELECT UP 210</td>
</tr>
<tr>
<td>UP 610</td>
<td><strong>ADVANCED Package, Software, License</strong>, extends functions of installed software packages, for use with ENDOMAT® SELECT UP 210</td>
</tr>
<tr>
<td>20 0900 70</td>
<td><strong>SCB Connecting Cable</strong>, length 30 cm</td>
</tr>
<tr>
<td>UP 006</td>
<td><strong>Control Cable</strong>, 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</td>
</tr>
<tr>
<td>20 0141 30</td>
<td><strong>One-Pedal Footswitch</strong>, digital, one-stage, for irrigation</td>
</tr>
</tbody>
</table>

*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
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
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
| Connections    | - DRILLCUT-X® ARTHRO handpiece
|                | - multifunction handpiece
|                | - footswitch
|                | - KARL STORZ-SCB
| Power supply   | 100-120/230-240 VAC, 50/60 Hz
| Dimensions     | w x h x d
| 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
Handpieces

<table>
<thead>
<tr>
<th>Handpiece</th>
<th>KARL STORZ Quick Coupling</th>
<th>for use with Reusable Blades</th>
<th>Rotation (rpm)</th>
<th>Oscillation (rpm)</th>
<th>Connecting Cable (m)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>287210.36 Multifunction Handpiece</td>
<td>●</td>
<td>–</td>
<td>0 to 1700</td>
<td>–</td>
<td>3.5</td>
<td>0.88</td>
</tr>
<tr>
<td>28200 DX DRILLCUT-X® ARTHRO Shaver Handpiece</td>
<td>●</td>
<td>●</td>
<td>1000 to 8000</td>
<td>500 to 3000</td>
<td>3.0</td>
<td>0.31</td>
</tr>
</tbody>
</table>

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
UNIDRIVE® S III ARTHRO SCB

Handpieces

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
UNIDRIVE® S III ARTHRO SCB
System Components

- Two-Pedal Footswitch
  - 20 0168 31
- Three-Pedal Footswitch
  - 20 0128 32
- Multifunction Handpiece, with Cable 28 7210 79
  - 28 7210 36
- Sagittal Saw Attachment
  - 28 7210 34
- Pin Driver, for Synthes attachments
  - 28 7210 33
- Jacobs Chuck, up to dia. 4 mm
  - 28 7210 31
- Jacobs Chuck, up to dia. 6.5 mm
  - 28 7210 37
- Jacobs Chuck, up to dia. 7.4 mm
  - 28 7210 38
- Shaver Handpiece, 8000 rpm
  - 28 7200 DX
- Pin Driver, for drilling wires diameter 1.5-3 mm
  - 28 7210 30

U 20
ART-UNITS 16 G
## Optional Accessories

### For Multifunction Handpiece 28 7210 36

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 7210 31</td>
<td><strong>Jacobs Chuck</strong>, up to diameter 4 mm</td>
</tr>
<tr>
<td>28 7210 37</td>
<td><strong>Jacobs Chuck</strong>, up to diameter 6.5 mm</td>
</tr>
<tr>
<td>28 7210 33</td>
<td><strong>Pin Driver</strong>, for drilling wires diameter 1.5 – 3 mm</td>
</tr>
<tr>
<td>28 7210 38</td>
<td><strong>Jacobs Chuck</strong>, keyless, up to diameter 7.4 mm, for use with Multifunction Handpiece 28 7210 36</td>
</tr>
<tr>
<td>28 7210 39</td>
<td><strong>Sagittal Saw Attachment</strong>, keyless, with tilt lever, for use with Multifunction Handpiece 28 7210 36 and Saw Blades 28207 SLA – SLH</td>
</tr>
<tr>
<td>28 7210 34</td>
<td><strong>Pin Driver</strong>, for Synthes attachments</td>
</tr>
<tr>
<td>28 7210 71</td>
<td><strong>Connecting Cable</strong>, for FMS pump</td>
</tr>
</tbody>
</table>

### For UNIDRIVE® S III ARTHRO SCB Shaver Blades

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28205 SAA</td>
<td><strong>Irrigation Adaptor</strong>, for validated cleaning of outer blades</td>
</tr>
<tr>
<td>28205 SAI</td>
<td><strong>Irrigation Adaptor</strong>, for validated cleaning of inner blades</td>
</tr>
</tbody>
</table>
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

Shaver Blades, reusable
single-packaged

For use with Shaver Handpiece 28200 DX DRILLCUT-X® ARTHRO in conjunction with UNIDRIVE® S III ARTHRO SCB
Shaver Blades
for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

<table>
<thead>
<tr>
<th>Type</th>
<th>For single use package of 6</th>
<th>Reusable single-packaged</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive Cutter</td>
<td>28208 BKS</td>
<td>diameter 4.5 mm</td>
<td>green</td>
</tr>
<tr>
<td>Aggressive Full Radius Resector</td>
<td>28208 DCS</td>
<td>diameter 4.5 mm</td>
<td>blue</td>
</tr>
<tr>
<td>Curved Aggressive Full Radius Resector</td>
<td>28208 EHS</td>
<td>diameter 4.5 mm</td>
<td>light green</td>
</tr>
</tbody>
</table>

**Working length 180 mm** (recommended for soft tissue)

**Working length 180 mm** (recommended for bone)

<table>
<thead>
<tr>
<th>Type</th>
<th>For single use package of 6</th>
<th>Reusable single-packaged</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi Hooded Barrel Burr</td>
<td>28208 IDS</td>
<td>diameter 5.5 mm</td>
<td>pink</td>
</tr>
</tbody>
</table>

Height 180 mm (recommended for soft tissue)
### Shaver Blades
for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

**Working length 120 mm** (recommended for soft tissue)

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

*Reusable single-packaged*
### Shaver Blades
for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

#### Working length 120 mm
(recommended for soft tissue)

<table>
<thead>
<tr>
<th>Type</th>
<th>For single use</th>
<th>Reusable single-packaged</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>package of 6</td>
<td></td>
<td>Sterile</td>
</tr>
<tr>
<td>Aggressive Full Radius Resector</td>
<td>28205 DBS</td>
<td>Diameter 3.5 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28205 DCS</td>
<td>Diameter 4.2 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28205 DDS</td>
<td>Diameter 5.5 mm</td>
<td></td>
</tr>
<tr>
<td>Aggressive Full Radius Resector</td>
<td>28205 DKS</td>
<td>Diameter 4.5 mm</td>
<td>blue</td>
</tr>
<tr>
<td></td>
<td>28205 EGS</td>
<td>Diameter 4.2 mm</td>
<td>light blue</td>
</tr>
<tr>
<td></td>
<td>28205 EHS</td>
<td>Diameter 4.2 mm</td>
<td>light green</td>
</tr>
</tbody>
</table>

#### Nutzlänge 120 mm
(recommended for soft tissue and bone)

<table>
<thead>
<tr>
<th>Type</th>
<th>For single use</th>
<th>Reusable single-packaged</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>package of 6</td>
<td></td>
<td>Sterile</td>
</tr>
<tr>
<td>Pro Line Shaver Blades</td>
<td>28205 MKS</td>
<td>Diameter 4.5 mm</td>
<td>pink</td>
</tr>
<tr>
<td></td>
<td>28205 MDS</td>
<td>Diameter 5.5 mm</td>
<td></td>
</tr>
<tr>
<td>Aggressive Pro Line Shaver Blades</td>
<td>28205 NKS</td>
<td>Diameter 4.5 mm</td>
<td>light blue</td>
</tr>
<tr>
<td></td>
<td>28205 NDS</td>
<td>Diameter 5.5 mm</td>
<td></td>
</tr>
</tbody>
</table>
### Shaver Blades

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

**Working length 120 mm** *(recommended for bone)*

<table>
<thead>
<tr>
<th>Type</th>
<th>For single use package of 6</th>
<th>Reusable single-packaged</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Round Burr</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28205 FCS</td>
<td>Diameter 4.2 mm</td>
<td>28205 FC</td>
<td>orange</td>
</tr>
<tr>
<td>28205 FDS</td>
<td>Diameter 5.5 mm</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td><strong>Finish Barrel Burr</strong></td>
<td>28205 GDS</td>
<td>Diameter 4.2 mm</td>
<td>purple</td>
</tr>
<tr>
<td></td>
<td>Diameter 5.5 mm</td>
<td>28205 GE</td>
<td></td>
</tr>
<tr>
<td><strong>Aggressive Barrel Burr</strong></td>
<td>28205 HCS</td>
<td>Diameter 4.2 mm</td>
<td>pink</td>
</tr>
<tr>
<td></td>
<td>Diameter 5.5 mm</td>
<td>28205 HD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diameter 6.5 mm</td>
<td>28205 HE</td>
<td></td>
</tr>
</tbody>
</table>
Shaver Blades
for use with UNIDRIVE® S III ARTHRO SCB
for cutting and grinding

Working length 70 mm (recommended for soft tissue)

<table>
<thead>
<tr>
<th>Type</th>
<th>For single use package of 6</th>
<th>Reusable single-packaged</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive Cutter</td>
<td>28206 AAS Diameter 2.5 mm</td>
<td>–</td>
<td>green</td>
</tr>
<tr>
<td></td>
<td>28206 ABS Diameter 3.5 mm</td>
<td>–</td>
<td>green</td>
</tr>
<tr>
<td>Full Radius Resector</td>
<td>28206 CAS Diameter 2.5 mm</td>
<td>–</td>
<td>yellow</td>
</tr>
<tr>
<td></td>
<td>28206 CBS Diameter 3.5 mm</td>
<td>–</td>
<td>yellow</td>
</tr>
<tr>
<td>Aggressive Full Radius Resector</td>
<td>28206 DAS Diameter 2.5 mm</td>
<td>28206 DA Diameter 2.5 mm</td>
<td>blue</td>
</tr>
<tr>
<td></td>
<td>28206 DBS Diameter 3.5 mm</td>
<td>28206 DB Diameter 3.5 mm</td>
<td>blue</td>
</tr>
</tbody>
</table>

Working length 70 mm (recommended for bone)

<table>
<thead>
<tr>
<th>Type</th>
<th>For single use package of 6</th>
<th>Reusable single-packaged</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Joint Burr</td>
<td>28206 FAS Diameter 2.5 mm</td>
<td>–</td>
<td>orange</td>
</tr>
<tr>
<td></td>
<td>28206 FBS Diameter 3.5 mm</td>
<td>–</td>
<td>orange</td>
</tr>
</tbody>
</table>
Accessories

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

**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** | Same, blade width 14 mm

**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** | Same, blade width 6 mm

**28207 SLE** | Same, blade width 8 mm

**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** | 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** | Same, blade width 10 mm
High Frequency Surgery Units

HIGH FREQUENCY SURGERY UNITS

NEW AUTOCON® III 400
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**

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:**

<table>
<thead>
<tr>
<th></th>
<th>Unipolar: 400 Watt (at 200 Ohm)</th>
<th>Bipolar: 400 Watt (at 75 Ohm)</th>
<th>Output frequency</th>
<th>Dimensions w x h x d</th>
<th>Certified to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. power</td>
<td></td>
<td></td>
<td>350 kHz/1 MHz</td>
<td>447 x 177 x 457 mm</td>
<td>IEC 601-1, CE acc. to MDD.</td>
</tr>
<tr>
<td>Power supply</td>
<td>230 VAC, 50/60 Hz (UH 400)</td>
<td>110 VAC, 50/60 Hz (UH 400U)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>12.5 kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sockets</td>
<td>Unipolar sockets: 2</td>
<td>Bipolar sockets: 2 (can be expanded to 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Optional Accessories for AUTOCON® III 400 High-End** see pages U 34-36

**Components/Spare Parts** see chapter 18
AUTOCON® III 400 High-End
System Components

UNIT SIDE

PATIENT SIDE

One-Pedal Footswitch
Two-Pedal Footswitch

Connecting Cable
Neutral Electrode

Unipolar High Frequency Cord
Handle

Arthroscopy HF Hook Electrode
Arthroscopy HF Ball Electrode

Bipolar High Frequency Cord

ROBI® KELLY Grasping Forceps

System Components

Connecting Cable 27806 UR
Neutral Electrode 27805
Unipolar High Frequency Cord 265200 45
Handle 265200 43
Arthroscopy HF Hook Electrode 28801 EF/EG/EH
Arthroscopy HF Ball Electrode 28801 EA/EB/EC/ED
Bipolar High Frequency Cord 26176 LE
ROBI® KELLY Grasping Forceps 38851 MD
# AUTOCON® III 400 High-End

Optional Accessories

## Footswitches

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UF 901</td>
<td><strong>One-Pedal Footswitch</strong>, with button for switchover function, for use with HF generators</td>
</tr>
<tr>
<td>UF 902</td>
<td><strong>Two-Pedal Footswitch</strong>, with button for switchover function, for use with HF generators</td>
</tr>
</tbody>
</table>

## Neutral Electrodes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>27805</td>
<td><strong>Neutral Electrode</strong>, of conductive silicone with 2 rubber ties for fastening, contact surface $A = 500 \text{ cm}^2$, for use with Connecting Cable 27806</td>
</tr>
<tr>
<td>27806 UR</td>
<td><strong>Neutral Electrode Connecting Cable</strong>, for Neutral Electrode 27805</td>
</tr>
<tr>
<td>27806 US</td>
<td><strong>Neutral Electrode Connecting Cable</strong>, for Neutral Electrode 27802</td>
</tr>
<tr>
<td>27802</td>
<td><strong>Neutral Electrode</strong>, for single use, contact surface divided into two, $A = 169 \text{ cm}^2$, package of 50, Connecting Cable 27801 required</td>
</tr>
</tbody>
</table>
## AUTOCON® III 400 High-End

Optional Accessories

### HF Instruments unipolar – Electrodes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 5200 45</td>
<td><strong>High Frequency Cable</strong>, for Electrode Handle 26 5200 43, length 400 cm</td>
</tr>
<tr>
<td>26 5200 43</td>
<td><strong>Electrode Handle</strong>, with 2 buttons for activating the unipolar generator, yellow button: unipolar cutting, blue button: unipolar coagulation (Cable 26 5200 45 required)</td>
</tr>
<tr>
<td>26 5200 46</td>
<td><strong>Electrode Handle</strong>, without buttons, with integrated connecting cable, length 300 cm</td>
</tr>
</tbody>
</table>

### For use with

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28801 EA</td>
<td><strong>Arthroscopy HF Ball Electrode</strong>, diameter 2.6 mm, ball diameter 2.5 mm, working length 6 cm, sterile, for single use, package of 5</td>
</tr>
<tr>
<td>28801 EB</td>
<td><strong>Same</strong>, working length 11 cm</td>
</tr>
<tr>
<td>28801 EC</td>
<td><strong>Arthroscopy HF Ball Electrode</strong>, diameter 2.6 mm, ball diameter 3.5 mm, working length 6 cm, sterile, for single use, package of 5</td>
</tr>
<tr>
<td>28801 ED</td>
<td><strong>Same</strong>, working length 11 cm</td>
</tr>
<tr>
<td>28801 EF</td>
<td><strong>Arthroscopy HF Hook Electrode</strong>, diameter 2.6 mm, electrode length 2.8 mm, working length 6 cm, sterile, for single use, package of 5</td>
</tr>
<tr>
<td>28801 EG</td>
<td><strong>Same</strong>, working length 11 cm</td>
</tr>
<tr>
<td>28801 EH</td>
<td><strong>Arthroscopy HF Hook Electrode</strong>, diameter 2.6 mm, electrode length 4 mm, working length 11 cm, sterile, for single use, package of 5</td>
</tr>
</tbody>
</table>

**STERILE**
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.

**Example:**

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>11508 Miniature Straight Forward Telescope 0°</td>
<td>183</td>
</tr>
</tbody>
</table>

**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

**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.

**Components/spare parts with corresponding order number of the instrument and reference to catalog page**
## Table of Contents

### COMPONENTS / SPARE PARTS

#### HOPKINS® TELESCOPES AND SHEATHS
- **ENDOCAMELEON® ARTHRO HOPKINS® Telescope** SP 4
- Arthroscope Sheath **ENDOCAMELEON®** SP 4
- Miniature Straight Forward Telescope SP 5
- **HOPKINS®** Telescopes SP 5
- Arthroscope Sheaths, with standard coupling mechanism, fixed stopcocks SP 6
- Arthroscope Sheaths, with standard coupling mechanism, rotating stopcocks SP 7-8
- Arthroscope Sheath, with lock-in coupling mechanism, rotating stopcocks SP 9
- Arthroscope Sheaths, with snap-in coupling mechanism, fixed and rotating stopcocks SP 10
- Arthroscope Sheaths, with snap-in coupling mechanism, rotating stopcocks SP 11
- Arthroscope Sheaths, Accessories SP 12

#### HOSPITAL INSTRUMENTS
- Cannulas SP 13

#### PUNCHES, FORCEPS AND SCISSORS
- **SILCUT® PRO and SILCUT® Punches** SP 14
- **SILGRASP® PRO and SILGRASP® Grasping Forceps** SP 15
- **RETOFORCE®** Biopsy Punch SP 15

#### JOINT AND BONE RECONSTRUCTION
- Biopsy Set SP 16
- Obturator SP 16
- Cancellous Bone Applicators SP 16-17

#### INSTRUMENTS FOR THE KNEE
- Tendon Boards SP 18
- Metal Mallets SP 18
- Target Guides SP 19-20
- Dilators with Fin SP 21
- **CROSSDRIVE®** Screwdrivers SP 21

#### INSTRUMENTS FOR THE HIP
- Evacuation Cannula SP 25
- **SILCUT®** Punches SP 25
- **SILGRASP®** Foreign Body Graspers SP 25
- **SILGRASP®** Suture Graspers SP 25
- Suture Forceps SP 25

#### INSTRUMENTS FOR SMALL AND MEDIUM JOINTS
- **SILCUT® PRO** Punches SP 26
- **SILGRASP® PRO** Grasping Forceps SP 26
- Dilator Set SP 27
- Optical Dissectors SP 27
- **ROBI® KELLY** Grasping Forceps SP 27

#### RHEUMATOLOGY
- Holding System SP 28

#### VISUALIZATION SYSTEMS FOR OPEN SURGERY AND MICRO SURGERY
- **VITOM®** Telescopes SP 29
- Rotation Socket, Articulated Stand SP 29
- **VERSACRANE™** Holding System, 32” 3D Monitor SP 30

#### HOLDING SYSTEMS
- Leg Holder SP 31

#### UNITS AND ACCESSORIES
- Suction and Irrigation Systems
  - **ARTHROPUMP®** Power SP 32
  - **ENDOMAT® SELECT** SP 33
- **Motor System**
  - **UNIDRIVE® S III ARTHRO SCB** SP 34
- **High Frequency Surgery Unit**
  - **AUTOCON® III 400 High-End** SP 35
<table>
<thead>
<tr>
<th>Product</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>030647-10</td>
<td>SP 33</td>
</tr>
<tr>
<td>031228-03</td>
<td>SP 32</td>
</tr>
<tr>
<td>031328-03</td>
<td>SP 32</td>
</tr>
<tr>
<td>031523-10</td>
<td>SP 33</td>
</tr>
<tr>
<td>031524-10</td>
<td>SP 33</td>
</tr>
<tr>
<td>031529-10</td>
<td>SP 33</td>
</tr>
<tr>
<td>031647-10</td>
<td>SP 33</td>
</tr>
<tr>
<td>1059700</td>
<td>SP 34</td>
</tr>
<tr>
<td>1069500</td>
<td>SP 32</td>
</tr>
<tr>
<td>11508</td>
<td>SP 5</td>
</tr>
<tr>
<td>1222890</td>
<td>SP 35</td>
</tr>
<tr>
<td>1432095</td>
<td>SP 35</td>
</tr>
<tr>
<td>174701</td>
<td>SP 24</td>
</tr>
<tr>
<td>174800</td>
<td>SP 18</td>
</tr>
<tr>
<td>174801</td>
<td>SP 18</td>
</tr>
<tr>
<td>20016834</td>
<td>SP 32</td>
</tr>
<tr>
<td>20090170</td>
<td>SP 32, SP 34</td>
</tr>
<tr>
<td>2027690</td>
<td>SP 34</td>
</tr>
<tr>
<td>20916025 AA</td>
<td>SP 29</td>
</tr>
<tr>
<td>20916025 AGA</td>
<td>SP 29</td>
</tr>
<tr>
<td>20916025 DA</td>
<td>SP 29</td>
</tr>
<tr>
<td>28126 B</td>
<td>SP 6</td>
</tr>
<tr>
<td>28126 CR</td>
<td>SP 7</td>
</tr>
<tr>
<td>28126 R</td>
<td>SP 7</td>
</tr>
<tr>
<td>28129 CR</td>
<td>SP 9</td>
</tr>
<tr>
<td>28130 CR</td>
<td>SP 11</td>
</tr>
<tr>
<td>28130 R</td>
<td>SP 10</td>
</tr>
<tr>
<td>28131 CR</td>
<td>SP 11</td>
</tr>
<tr>
<td>28131 R</td>
<td>SP 10</td>
</tr>
<tr>
<td>28132 CR</td>
<td>SP 8</td>
</tr>
<tr>
<td>28133 DS</td>
<td>SP 12</td>
</tr>
<tr>
<td>28135 CR</td>
<td>SP 11</td>
</tr>
<tr>
<td>28136 CR</td>
<td>SP 11</td>
</tr>
<tr>
<td>28136 DS</td>
<td>SP 11</td>
</tr>
<tr>
<td>28136 EC</td>
<td>SP 4</td>
</tr>
<tr>
<td>28136 S</td>
<td>SP 10</td>
</tr>
<tr>
<td>28140 D</td>
<td>SP 12</td>
</tr>
<tr>
<td>28140 GA</td>
<td>SP 25</td>
</tr>
<tr>
<td>28140 S</td>
<td>SP 25</td>
</tr>
<tr>
<td>28146 T</td>
<td>SP 13</td>
</tr>
<tr>
<td>28146 TT</td>
<td>SP 13</td>
</tr>
<tr>
<td>28147 S</td>
<td>SP 27</td>
</tr>
<tr>
<td>28147 SA</td>
<td>SP 27</td>
</tr>
<tr>
<td>28147 SB</td>
<td>SP 27</td>
</tr>
<tr>
<td>28147 SC</td>
<td>SP 27</td>
</tr>
<tr>
<td>28147 SD</td>
<td>SP 27</td>
</tr>
<tr>
<td>28171 ABN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 ACN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 ADN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 AGN</td>
<td>SP 15</td>
</tr>
<tr>
<td>28171 AGSN</td>
<td>SP 15</td>
</tr>
<tr>
<td>28171 BBN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 BCN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 BDN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 CBN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 CCN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 DBN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 DCN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 EBN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 ECN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 FBN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 FCN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 GBN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 GCN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 HAN</td>
<td>SP 15</td>
</tr>
<tr>
<td>28171 HBN</td>
<td>SP 15</td>
</tr>
<tr>
<td>28171 HCN</td>
<td>SP 15</td>
</tr>
<tr>
<td>28171 KBN</td>
<td>SP 15</td>
</tr>
<tr>
<td>28171 KGN</td>
<td>SP 15, SP 23, SP 25</td>
</tr>
<tr>
<td>28171 KGNSN</td>
<td>SP 15, SP 23, SP 25</td>
</tr>
<tr>
<td>28171 KPN</td>
<td>SP 14, SP 23, SP 25</td>
</tr>
<tr>
<td>28171 KUN</td>
<td>SP 14, SP 23, SP 25</td>
</tr>
<tr>
<td>28171 OAN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 OUN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 PGN</td>
<td>SP 15</td>
</tr>
<tr>
<td>28171 PGSN</td>
<td>SP 15</td>
</tr>
<tr>
<td>28171 SBN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 SGD</td>
<td>SP 25</td>
</tr>
<tr>
<td>28171 SGL</td>
<td>SP 15, SP 23</td>
</tr>
<tr>
<td>28171 SGN</td>
<td>SP 15, SP 23</td>
</tr>
<tr>
<td>28171 SGR</td>
<td>SP 15, SP 23</td>
</tr>
<tr>
<td>28171 SHN</td>
<td>SP 23</td>
</tr>
<tr>
<td>28171 SLN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 SPN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28171 SRN</td>
<td>SP 14</td>
</tr>
<tr>
<td>28172 HK</td>
<td>SP 28</td>
</tr>
<tr>
<td>28172 HR</td>
<td>SP 29, SP 31</td>
</tr>
<tr>
<td>28172 HRS</td>
<td>SP 29, SP 31</td>
</tr>
<tr>
<td>28172 HZ</td>
<td>SP 28, SP 29</td>
</tr>
<tr>
<td>28180 GD</td>
<td>SP 22</td>
</tr>
<tr>
<td>28180 GAN</td>
<td>SP 22</td>
</tr>
<tr>
<td>28180 GCN</td>
<td>SP 22</td>
</tr>
<tr>
<td>28180 GDS</td>
<td>SP 22</td>
</tr>
<tr>
<td>28180 GLN</td>
<td>SP 22</td>
</tr>
<tr>
<td>28180 GRN</td>
<td>SP 22</td>
</tr>
<tr>
<td>28180 GRGN</td>
<td>SP 22</td>
</tr>
<tr>
<td>28180 GFN</td>
<td>SP 24</td>
</tr>
<tr>
<td>28180 HC</td>
<td>SP 24</td>
</tr>
<tr>
<td>28180 HL</td>
<td>SP 24</td>
</tr>
<tr>
<td>28180 HR</td>
<td>SP 24</td>
</tr>
<tr>
<td>28180 LA</td>
<td>SP 23</td>
</tr>
<tr>
<td>28180 LC</td>
<td>SP 23</td>
</tr>
<tr>
<td>28180 LL</td>
<td>SP 23</td>
</tr>
<tr>
<td>28180 LR</td>
<td>SP 23</td>
</tr>
<tr>
<td>28184 HG</td>
<td>SP 22</td>
</tr>
<tr>
<td>28184 HS</td>
<td>SP 22</td>
</tr>
<tr>
<td>28184 KF</td>
<td>SP 22</td>
</tr>
<tr>
<td>28184 RG</td>
<td>SP 22</td>
</tr>
<tr>
<td>28184 RK</td>
<td>SP 22</td>
</tr>
<tr>
<td>28184 WH</td>
<td>SP 22</td>
</tr>
<tr>
<td>28188 D</td>
<td>SP 31</td>
</tr>
<tr>
<td>28188 DP</td>
<td>SP 31</td>
</tr>
<tr>
<td>28188 FH</td>
<td>SP 31</td>
</tr>
<tr>
<td>28188 FK</td>
<td>SP 31</td>
</tr>
<tr>
<td>28188 FS</td>
<td>SP 31</td>
</tr>
<tr>
<td>28188 HR</td>
<td>SP 31</td>
</tr>
<tr>
<td>28188 PN</td>
<td>SP 31</td>
</tr>
<tr>
<td>28188 SE</td>
<td>SP 31</td>
</tr>
<tr>
<td>28200 DA</td>
<td>SP 34</td>
</tr>
<tr>
<td>28200 DB</td>
<td>SP 34</td>
</tr>
<tr>
<td>28200 DX</td>
<td>SP 34</td>
</tr>
<tr>
<td>28208 BA</td>
<td>SP 5</td>
</tr>
<tr>
<td>28229 DR</td>
<td>SP 7</td>
</tr>
<tr>
<td>28270 H</td>
<td>SP 24</td>
</tr>
<tr>
<td>28272 HA</td>
<td>SP 28</td>
</tr>
<tr>
<td>28272 HB</td>
<td>SP 29</td>
</tr>
<tr>
<td>28272 HC</td>
<td>SP 29</td>
</tr>
<tr>
<td>28272 HP</td>
<td>SP 30</td>
</tr>
<tr>
<td>28272 HS</td>
<td>SP 30</td>
</tr>
<tr>
<td>28272 HSP</td>
<td>SP 30</td>
</tr>
<tr>
<td>28272 KLA</td>
<td>SP 28</td>
</tr>
<tr>
<td>28272 UL</td>
<td>SP 28</td>
</tr>
<tr>
<td>28300 BA</td>
<td>SP 5</td>
</tr>
<tr>
<td>28303 BS</td>
<td>SP 10</td>
</tr>
<tr>
<td>28303 DS</td>
<td>SP 12</td>
</tr>
<tr>
<td>28305 BA</td>
<td>SP 5</td>
</tr>
<tr>
<td>28306 BN</td>
<td>SP 6</td>
</tr>
<tr>
<td>28307-0701</td>
<td>SP 32</td>
</tr>
<tr>
<td>28307-0720</td>
<td>SP 32</td>
</tr>
<tr>
<td>28340770</td>
<td>SP 32</td>
</tr>
<tr>
<td>28571 AB</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 AC</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 AG</td>
<td>SP 15</td>
</tr>
<tr>
<td>28571 BB</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 BBL</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 BBR</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 BC</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 CG</td>
<td>SP 15</td>
</tr>
<tr>
<td>28571 CGU</td>
<td>SP 15</td>
</tr>
<tr>
<td>28571 CL</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 CLU</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 CR</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 CRU</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 E</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 EU</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 FG</td>
<td>SP 15</td>
</tr>
<tr>
<td>28571 G</td>
<td>SP 15</td>
</tr>
<tr>
<td>28571 GU</td>
<td>SP 15</td>
</tr>
<tr>
<td>28571 HK</td>
<td>SP 15, SP 22, SP 23, SP 24, SP 25, SP 26</td>
</tr>
<tr>
<td>28571 O</td>
<td>SP 14, SP 26</td>
</tr>
</tbody>
</table>
### Numerical Index

**COMPONENTS / SPARE PARTS**

<table>
<thead>
<tr>
<th>Product</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 OA</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 OAC</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 OC</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 ODC</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 S</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 SP</td>
<td>SP 14</td>
</tr>
<tr>
<td>28571 SU</td>
<td>SP 14</td>
</tr>
<tr>
<td>28572 AD</td>
<td>SP 14, SP 26</td>
</tr>
<tr>
<td>28572 ADL</td>
<td>SP 14, SP 26</td>
</tr>
<tr>
<td>28572 AE</td>
<td>SP 14, SP 26</td>
</tr>
<tr>
<td>28572 AG</td>
<td>SP 15, SP 26</td>
</tr>
<tr>
<td>28572 CG</td>
<td>SP 15, SP 26</td>
</tr>
<tr>
<td>28572 CGU</td>
<td>SP 15, SP 26</td>
</tr>
<tr>
<td>28572 G</td>
<td>SP 15, SP 26</td>
</tr>
<tr>
<td>28572 GU</td>
<td>SP 15, SP 26</td>
</tr>
<tr>
<td>28572 NJ</td>
<td>SP 15, SP 26</td>
</tr>
<tr>
<td>28572 O</td>
<td>SP 14</td>
</tr>
<tr>
<td>28573 FD</td>
<td>SP 15, SP 23, SP 25</td>
</tr>
<tr>
<td>2870356 HG</td>
<td>SP 23</td>
</tr>
<tr>
<td>2870356 I</td>
<td>SP 23</td>
</tr>
<tr>
<td>2870356 KP</td>
<td>SP 23</td>
</tr>
<tr>
<td>28719 BA</td>
<td>SP 5</td>
</tr>
<tr>
<td>28723001-1</td>
<td>SP 34</td>
</tr>
<tr>
<td>28723020-1</td>
<td>SP 34</td>
</tr>
<tr>
<td>28729 CF</td>
<td>SP 20</td>
</tr>
<tr>
<td>28729 DFM</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 DFO</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 DFP</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 DFQ</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 DFR</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 DFS</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 DFT</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 DFU</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 DFV</td>
<td>SP 21</td>
</tr>
<tr>
<td>28729 SB</td>
<td>SP 18</td>
</tr>
<tr>
<td>28729 SBD</td>
<td>SP 18</td>
</tr>
<tr>
<td>28729 SC</td>
<td>SP 18</td>
</tr>
<tr>
<td>28729 WT</td>
<td>SP 19</td>
</tr>
<tr>
<td>28729 ZA</td>
<td>SP 19</td>
</tr>
<tr>
<td>28729 ZB</td>
<td>SP 19</td>
</tr>
<tr>
<td>28729 ZBB</td>
<td>SP 20</td>
</tr>
<tr>
<td>28729 ZF</td>
<td>SP 20</td>
</tr>
<tr>
<td>28729 ZFH</td>
<td>SP 20</td>
</tr>
<tr>
<td>28729 ZL</td>
<td>SP 19</td>
</tr>
<tr>
<td>28729 ZR</td>
<td>SP 19</td>
</tr>
<tr>
<td>28729 ZRF</td>
<td>SP 19</td>
</tr>
<tr>
<td>28731 AE</td>
<td>SP 4</td>
</tr>
<tr>
<td>28731 AWA</td>
<td>SP 5</td>
</tr>
<tr>
<td>28731 BVA</td>
<td>SP 5</td>
</tr>
<tr>
<td>28731 BWA</td>
<td>SP 5</td>
</tr>
<tr>
<td>28731 CWA</td>
<td>SP 5</td>
</tr>
<tr>
<td>28760 SK</td>
<td>SP 21</td>
</tr>
<tr>
<td>28770 SK</td>
<td>SP 21</td>
</tr>
<tr>
<td>28789 CD</td>
<td>SP 21</td>
</tr>
<tr>
<td>28789 SK</td>
<td>SP 21</td>
</tr>
<tr>
<td>28902 HG</td>
<td>SP 15</td>
</tr>
<tr>
<td>28902 RF</td>
<td>SP 15</td>
</tr>
<tr>
<td>28902 RFA</td>
<td>SP 15</td>
</tr>
<tr>
<td>28902 RFI</td>
<td>SP 15</td>
</tr>
<tr>
<td>28904 S</td>
<td>SP 16</td>
</tr>
<tr>
<td>28904 SA</td>
<td>SP 16</td>
</tr>
<tr>
<td>28904 SO</td>
<td>SP 16</td>
</tr>
<tr>
<td>28906 CB</td>
<td>SP 16</td>
</tr>
<tr>
<td>28906 CBA</td>
<td>SP 16</td>
</tr>
<tr>
<td>28906 CBC</td>
<td>SP 16</td>
</tr>
<tr>
<td>28906 CBP</td>
<td>SP 16</td>
</tr>
<tr>
<td>28906 CBS</td>
<td>SP 16</td>
</tr>
<tr>
<td>28907 CB</td>
<td>SP 16</td>
</tr>
<tr>
<td>28907 CBA</td>
<td>SP 16</td>
</tr>
<tr>
<td>28907 CBC</td>
<td>SP 16</td>
</tr>
<tr>
<td>28907 CBP</td>
<td>SP 16</td>
</tr>
<tr>
<td>28907 CBS</td>
<td>SP 16</td>
</tr>
<tr>
<td>28908 CB</td>
<td>SP 17</td>
</tr>
<tr>
<td>28908 CBA</td>
<td>SP 17</td>
</tr>
<tr>
<td>28908 CBC</td>
<td>SP 17</td>
</tr>
<tr>
<td>28908 CBP</td>
<td>SP 17</td>
</tr>
<tr>
<td>28908 CBS</td>
<td>SP 17</td>
</tr>
<tr>
<td>28909 CB</td>
<td>SP 17</td>
</tr>
<tr>
<td>28909 CBA</td>
<td>SP 17</td>
</tr>
<tr>
<td>28909 CBC</td>
<td>SP 17</td>
</tr>
<tr>
<td>28909 CBP</td>
<td>SP 17</td>
</tr>
<tr>
<td>28909 CBS</td>
<td>SP 17</td>
</tr>
<tr>
<td>28910 CB</td>
<td>SP 17</td>
</tr>
<tr>
<td>28910 CBA</td>
<td>SP 17</td>
</tr>
<tr>
<td>28910 CBC</td>
<td>SP 17</td>
</tr>
<tr>
<td>28910 CBP</td>
<td>SP 17</td>
</tr>
<tr>
<td>28910 CBS</td>
<td>SP 17</td>
</tr>
<tr>
<td>29100</td>
<td>SP 23, SP 27</td>
</tr>
<tr>
<td>38151</td>
<td>SP 27</td>
</tr>
<tr>
<td>38810 MD</td>
<td>SP 27</td>
</tr>
<tr>
<td>38851 MD</td>
<td>SP 27</td>
</tr>
<tr>
<td>39107 Z</td>
<td>SP 19, SP 20, SP 21</td>
</tr>
<tr>
<td>400 A</td>
<td>SP 30, SP 33, SP 34, SP 35</td>
</tr>
<tr>
<td>400 B</td>
<td>SP 35</td>
</tr>
<tr>
<td>495 F</td>
<td>SP 4, SP 5, SP 29</td>
</tr>
<tr>
<td>495 G</td>
<td>SP 4, SP 5, SP 29</td>
</tr>
<tr>
<td>50200 ES</td>
<td>SP 27</td>
</tr>
<tr>
<td>50300 ES</td>
<td>SP 27</td>
</tr>
<tr>
<td>5900800</td>
<td>SP 12</td>
</tr>
<tr>
<td>5916000-10</td>
<td>SP 16</td>
</tr>
<tr>
<td>5916100</td>
<td>SP 4, SP 7, SP 8, SP 9, SP 10, SP 11, SP 12, SP 13, SP 25, SP 27</td>
</tr>
<tr>
<td>5917100-10</td>
<td>SP 16</td>
</tr>
<tr>
<td>5919000-10</td>
<td>SP 16</td>
</tr>
<tr>
<td>5941400-10</td>
<td>SP 17</td>
</tr>
<tr>
<td>5941500-10</td>
<td>SP 17</td>
</tr>
<tr>
<td>5941600-10</td>
<td>SP 17</td>
</tr>
<tr>
<td>6052191</td>
<td>SP 6, SP 27</td>
</tr>
<tr>
<td>6104291</td>
<td>SP 6, SP 7</td>
</tr>
<tr>
<td>6104391</td>
<td>SP 8</td>
</tr>
<tr>
<td>6829991</td>
<td>SP 19</td>
</tr>
<tr>
<td>6833091</td>
<td>SP 18</td>
</tr>
<tr>
<td>6833191</td>
<td>SP 18</td>
</tr>
<tr>
<td>6833291</td>
<td>SP 18</td>
</tr>
<tr>
<td>6985691</td>
<td>SP 4, SP 6, SP 7, SP 8, SP 9, SP 10, SP 11, SP 12, SP 13, SP 25, SP 27</td>
</tr>
<tr>
<td>6988891</td>
<td>SP 7, SP 9</td>
</tr>
<tr>
<td>6995291</td>
<td>SP 7</td>
</tr>
<tr>
<td>7701691</td>
<td>SP 12</td>
</tr>
<tr>
<td>7725991</td>
<td>SP 10</td>
</tr>
<tr>
<td>7725991</td>
<td>SP 8, SP 11</td>
</tr>
<tr>
<td>7957291</td>
<td>SP 4, SP 11</td>
</tr>
<tr>
<td>7957391</td>
<td>SP 12</td>
</tr>
<tr>
<td>7971891</td>
<td>SP 18</td>
</tr>
<tr>
<td>8029491</td>
<td>SP 14, SP 15, SP 22, SP 23, SP 24, SP 25, SP 26</td>
</tr>
<tr>
<td>8044890</td>
<td>SP 18</td>
</tr>
<tr>
<td>8064391</td>
<td>SP 20</td>
</tr>
<tr>
<td>8069491</td>
<td>SP 10, SP 27</td>
</tr>
<tr>
<td>8105491</td>
<td>SP 20</td>
</tr>
<tr>
<td>8458190</td>
<td>SP 4, SP 6, SP 7, SP 8, SP 9, SP 10, SP 11, SP 13, SP 27</td>
</tr>
<tr>
<td>8484290</td>
<td>SP 4, SP 7, SP 8, SP 9, SP 10, SP 11, SP 27</td>
</tr>
<tr>
<td>8515090</td>
<td>SP 6, SP 10, SP 12</td>
</tr>
<tr>
<td>8541890</td>
<td>SP 13, SP 25</td>
</tr>
<tr>
<td>9020490</td>
<td>SP 12</td>
</tr>
<tr>
<td>96156013D</td>
<td>SP 34</td>
</tr>
<tr>
<td>9800 GF</td>
<td>SP 30</td>
</tr>
<tr>
<td>9826 PS</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-022869</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-202688</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-202877</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-202878</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-202880</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-202880</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-4-6-25-00176</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-4-6-25-00183</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-4-6-25-00184</td>
<td>SP 30</td>
</tr>
<tr>
<td>ET52-4-6-25-00206</td>
<td>SP 30</td>
</tr>
<tr>
<td>TM 323</td>
<td>SP 30</td>
</tr>
<tr>
<td>UH 400</td>
<td>SP 35</td>
</tr>
<tr>
<td>UH 400U</td>
<td>SP 35</td>
</tr>
<tr>
<td>UP 007</td>
<td>SP 33</td>
</tr>
<tr>
<td>UP 008</td>
<td>SP 33</td>
</tr>
<tr>
<td>UP 009</td>
<td>SP 33</td>
</tr>
<tr>
<td>UP 010</td>
<td>SP 33</td>
</tr>
<tr>
<td>UP 210</td>
<td>SP 33</td>
</tr>
</tbody>
</table>
## Components / Spare Parts

### 28731 AE  ENDOCAMELEON® ARTHRO HOPKINS® Telescope

<table>
<thead>
<tr>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
</tr>
</tbody>
</table>

#### 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

### 28136 EC  Arthroscope Sheath ENDOCAMELEON®

<table>
<thead>
<tr>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
</tr>
</tbody>
</table>

#### Spare Parts

- **7957291**
  - Outer Part, with 2 stopcocks
- **8458190**
  - Stopcock
- **5916100**
  - O-Ring
- **6985691**
  - Spring Cap
- **8484290**
  - Nut
### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>11508</td>
<td>Miniature Straight Forward Telescope 0°</td>
<td>183</td>
</tr>
</tbody>
</table>

#### 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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28305 BA</td>
<td>HOPKINS® Forward-Oblique Telescope 30°</td>
<td>41, 165</td>
</tr>
<tr>
<td>28300 BA</td>
<td>HOPKINS® Wide Angle Forward-Oblique Telescope 30°</td>
<td>40, 166</td>
</tr>
<tr>
<td>28719 BA</td>
<td>HOPKINS® Forward-Oblique Telescope 30°</td>
<td>38</td>
</tr>
<tr>
<td>28719 BA</td>
<td>HOPKINS® Wide Angle Forward-Oblique Telescope 30°</td>
<td>31</td>
</tr>
<tr>
<td>28719 BA</td>
<td>HOPKINS® Forward-Oblique Telescope 30°</td>
<td>31</td>
</tr>
<tr>
<td>28719 BWA</td>
<td>HOPKINS® Wide Angle Forward-Oblique Telescope 30°, enlarged view</td>
<td>174</td>
</tr>
</tbody>
</table>

#### 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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28306 BN</td>
<td>High-Flow Arthroscope Sheath</td>
<td>41, 165</td>
</tr>
</tbody>
</table>

#### Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6052191</td>
<td>Locking Lever, red</td>
</tr>
<tr>
<td>6986591</td>
<td>Spring Cap</td>
</tr>
<tr>
<td>8515090</td>
<td>Stopcock</td>
</tr>
</tbody>
</table>

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28126 B</td>
<td>Arthroscope Sheath</td>
<td>32</td>
</tr>
</tbody>
</table>

#### Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6104291</td>
<td>Locking Lever, green-red-yellow</td>
</tr>
<tr>
<td>8458190</td>
<td>Stopcock</td>
</tr>
<tr>
<td>6986591</td>
<td>Spring Cap</td>
</tr>
</tbody>
</table>
# HOPKINS® Telescopes and Sheaths

Arthroscope Sheaths, with standard coupling mechanism, rotating stopcocks

## Components / Spare Parts

<table>
<thead>
<tr>
<th>Catalog page</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Arthroscope Sheath</td>
<td>28126 R</td>
</tr>
</tbody>
</table>

### Spare Parts

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-Ring</td>
<td>5916100</td>
</tr>
<tr>
<td>Outer Part, with stopcock</td>
<td>6995291</td>
</tr>
<tr>
<td>Locking Lever, green-red-yellow</td>
<td>6104291</td>
</tr>
<tr>
<td>Stopcock</td>
<td>8458190</td>
</tr>
<tr>
<td>Spring Cap</td>
<td>6985691</td>
</tr>
<tr>
<td>Nut</td>
<td>8484290</td>
</tr>
</tbody>
</table>

## Components / Spare Parts

<table>
<thead>
<tr>
<th>Catalog page</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Arthroscope Sheath</td>
<td>28229 DR</td>
</tr>
<tr>
<td>33</td>
<td>Arthroscope Sheath</td>
<td>28126 CR</td>
</tr>
</tbody>
</table>

### Spare Parts

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-Ring</td>
<td>5916100</td>
</tr>
<tr>
<td>Outer Part, with 2 stopcocks</td>
<td>6988891</td>
</tr>
<tr>
<td>Locking Lever, green-red-yellow</td>
<td>6104291</td>
</tr>
<tr>
<td>Stopcock</td>
<td>8458190</td>
</tr>
<tr>
<td>Spring Cap</td>
<td>6985691</td>
</tr>
<tr>
<td>Nut</td>
<td>8484290</td>
</tr>
</tbody>
</table>
## Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28132 CR</td>
<td>Arthroscope Sheath</td>
<td>38</td>
</tr>
<tr>
<td>5916100</td>
<td>O-Ring</td>
<td></td>
</tr>
<tr>
<td>6104391</td>
<td>Locking Lever, red-yellow</td>
<td></td>
</tr>
<tr>
<td>6985691</td>
<td>Spring Cap</td>
<td></td>
</tr>
<tr>
<td>7725991</td>
<td>Outer Part, with 2 stopcocks</td>
<td></td>
</tr>
<tr>
<td>8458190</td>
<td>Stopcock</td>
<td></td>
</tr>
<tr>
<td>8484290</td>
<td>Nut</td>
<td></td>
</tr>
</tbody>
</table>
## Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28129 CR</td>
<td>STROBEL Arthroscope Sheath</td>
<td>36</td>
</tr>
</tbody>
</table>

### Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5916100</td>
<td>O-Ring</td>
</tr>
<tr>
<td>6985691</td>
<td>Spring Cap</td>
</tr>
<tr>
<td>6988891</td>
<td>Outer Part, with 2 stopcocks</td>
</tr>
</tbody>
</table>

```
8458190
6988891
8484290
8458190
```

```
8458190
Stopcock
8484290
Nut
```
### Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28303 BS</td>
<td>High-Flow Arthroscope Sheath</td>
<td>40, 166</td>
</tr>
</tbody>
</table>

#### Spare Parts

- **Spring Cap**: 6985691
- **Stopcock**: 8515090

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28136 S</td>
<td>High-Flow Arthroscope Sheath</td>
<td>34</td>
</tr>
<tr>
<td>28130 R</td>
<td>High-Flow Arthroscope Sheath</td>
<td>34</td>
</tr>
<tr>
<td>28131 R</td>
<td>High-Flow Arthroscope Sheath</td>
<td>35</td>
</tr>
</tbody>
</table>

#### Spare Parts

- **O-Ring**: 5916100
- **Spring Cap**: 6985691
- **Nut**: 8484290
- **Stopcock**: 8458190
- **Outer Part, with stopcock**: 7725891
- **Outer Part, with stopcock**: 8069491

Spare part for 28130 R and 28131 R:

- **Stopcock**: 8458190

Spare part for 28136 S:

- **Outer Part, with stopcock**: 8069491

Spare part for 28130 R and 28131 R:

- **Outer Part, with stopcock**: 7725891

---

**HOPKINS® Telescopes and Sheaths**

Arthroscope Sheaths, with snap-in coupling mechanism

fixed and rotating stopcocks
### Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28136 DS</td>
<td>High-Flow Arthroscope Sheath</td>
<td>34</td>
</tr>
<tr>
<td>28130 CR</td>
<td>High-Flow Arthroscope Sheath</td>
<td>34</td>
</tr>
<tr>
<td>28131 CR</td>
<td>High-Flow Arthroscope Sheath</td>
<td>35</td>
</tr>
<tr>
<td>28136 CR</td>
<td>High-Flow Arthroscope Sheath</td>
<td>34</td>
</tr>
<tr>
<td>28135 CR</td>
<td>High-Flow Arthroscope Sheath</td>
<td>35</td>
</tr>
</tbody>
</table>

### Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Illustration</th>
</tr>
</thead>
<tbody>
<tr>
<td>5916100</td>
<td>O-Ring</td>
<td>8458190</td>
</tr>
<tr>
<td>6985691</td>
<td>Spring Cap</td>
<td>8484290</td>
</tr>
<tr>
<td>7725991</td>
<td>Outer Part, with 2 stopcocks</td>
<td>7957291</td>
</tr>
<tr>
<td>7957291</td>
<td>Outer Part, with 2 stopcocks</td>
<td>7725991</td>
</tr>
</tbody>
</table>

Spare part for 28130 CR and 28131 CR:
- O-Ring (8458190)
- Stopcock (8484290)

Spare part for 28136 DS/CR and 28135 CR:
- Spring Cap (6985691)

Spare part for 28130 CR and 28131 CR:
- Outer Part, with 2 stopcocks (7957291)
- Outer Part, with 2 stopcocks (7725991)
# Components / Spare Parts

<table>
<thead>
<tr>
<th>Component</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28133 DS Arthroscope Sheath</td>
<td>39, 167</td>
</tr>
<tr>
<td>28303 DS High-Flow Sheath</td>
<td>40, 166</td>
</tr>
<tr>
<td>5900800 O-Ring</td>
<td></td>
</tr>
<tr>
<td>6985691 Spring Cap</td>
<td></td>
</tr>
<tr>
<td>7957391 Outer Part, with 2 stopcocks</td>
<td></td>
</tr>
<tr>
<td>8515090 Stopcock</td>
<td></td>
</tr>
<tr>
<td>9020490 Knurled Ring</td>
<td></td>
</tr>
<tr>
<td>9020490 Stopcock</td>
<td></td>
</tr>
<tr>
<td>7701691 Swivel Nut</td>
<td>161</td>
</tr>
</tbody>
</table>

### Spare Parts

<table>
<thead>
<tr>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>161</td>
</tr>
</tbody>
</table>
### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28146 T</td>
<td>Cannula, for irrigation</td>
<td>52</td>
</tr>
<tr>
<td>28146 TT</td>
<td>Cannula, for irrigation</td>
<td>52</td>
</tr>
</tbody>
</table>

#### Spare Parts

**Spare part for 28146 T:**

- **6985691**  
  *Spring Cap*

**Spare part for 28146 TT:**

- **8541890**  
  *Stopcock*
- **8458190**  
  *Stopcock*
## Punches, Forceps and Scissors

**SILCUT® PRO and SILCUT® Punches**

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 AB</td>
<td>SILCUT® PRO Punch</td>
<td>56</td>
</tr>
<tr>
<td>28571 BB</td>
<td>SILCUT® PRO Punch</td>
<td>56</td>
</tr>
<tr>
<td>28571 BBL</td>
<td>SILCUT® PRO Upbiter</td>
<td>56</td>
</tr>
<tr>
<td>28571 BBR</td>
<td>SILCUT® PRO Upbiter</td>
<td>56</td>
</tr>
<tr>
<td>28571 AC</td>
<td>SILCUT® PRO Punch</td>
<td>56</td>
</tr>
<tr>
<td>28571 BC</td>
<td>SILCUT® PRO Punch</td>
<td>56</td>
</tr>
<tr>
<td>28572 AD</td>
<td>SILCUT® PRO Punch</td>
<td>57</td>
</tr>
<tr>
<td>28572 ADL</td>
<td>SILCUT® PRO Punch</td>
<td>57</td>
</tr>
<tr>
<td>28572 ADR</td>
<td>SILCUT® PRO Punch</td>
<td>57</td>
</tr>
<tr>
<td>28572 AE</td>
<td>SILCUT® PRO Punch</td>
<td>57</td>
</tr>
<tr>
<td>28571 O</td>
<td>SILCUT® PRO Oval Biter</td>
<td>57</td>
</tr>
<tr>
<td>28571 OA</td>
<td>SILCUT® PRO Oval Upbiter</td>
<td>57</td>
</tr>
<tr>
<td>28572 O</td>
<td>SILCUT® PRO Oval Biter</td>
<td>57</td>
</tr>
<tr>
<td>28571 OC</td>
<td>SILCUT® PRO Oval Biter</td>
<td>57</td>
</tr>
<tr>
<td>28571 OAC</td>
<td>SILCUT® PRO Oval Upbiter</td>
<td>57</td>
</tr>
<tr>
<td>28571 ODC</td>
<td>SILCUT® PRO Oval Downbiter</td>
<td>57</td>
</tr>
<tr>
<td>28571 E</td>
<td>SILCUT® PRO Giga Punch</td>
<td>58</td>
</tr>
<tr>
<td>28571 EU</td>
<td>SILCUT® PRO Giga Punch</td>
<td>58</td>
</tr>
<tr>
<td>28571 S</td>
<td>SILCUT® PRO Square Punch</td>
<td>58</td>
</tr>
<tr>
<td>28571 SU</td>
<td>SILCUT® PRO Square Punch</td>
<td>58</td>
</tr>
<tr>
<td>28571 CL</td>
<td>SILCUT® PRO Side Punch</td>
<td>58</td>
</tr>
<tr>
<td>28571 CLU</td>
<td>SILCUT® PRO Side Punch</td>
<td>58</td>
</tr>
<tr>
<td>28571 CR</td>
<td>SILCUT® PRO Side Punch</td>
<td>58</td>
</tr>
<tr>
<td>28571 CRU</td>
<td>SILCUT® PRO Side Punch</td>
<td>58</td>
</tr>
<tr>
<td>28571 SP</td>
<td>SILCUT® PRO Scissors</td>
<td>58</td>
</tr>
<tr>
<td>28171 KPN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 KUN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 ABN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 BBN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 CBN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 DBN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 EBN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 FBN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 GBN</td>
<td>SILCUT® Punch</td>
<td>59</td>
</tr>
<tr>
<td>28171 ACN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 BCN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 CCN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 DCN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 ECN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 FCN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 GCN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 ADN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 BDN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 SPN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 SLN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 SRN</td>
<td>SILCUT® Punch</td>
<td>60</td>
</tr>
<tr>
<td>28171 OAN</td>
<td>SILCUT® Oval Upbiter</td>
<td>61</td>
</tr>
<tr>
<td>28171 OUN</td>
<td>SILCUT® Oval Upbiter</td>
<td>61</td>
</tr>
<tr>
<td>28171 SBN</td>
<td>SILCUT® Backbiter</td>
<td>61</td>
</tr>
</tbody>
</table>

### Spare Parts

- **28571 LK**  
  **Set of LUER Caps**, silicone, reusable, unsterile, package of 10

- **8029491**  
  **LUER Cap**, metal, reusable, unsterile
Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28572 NJ</td>
<td>SILGRASP® PRO Suture Grasper</td>
<td>64</td>
</tr>
<tr>
<td>28572 CG</td>
<td>SILGRASP® PRO Cartilage Grasping Forceps</td>
<td>64</td>
</tr>
<tr>
<td>28572 CGU</td>
<td>SILGRASP® PRO Cartilage Grasping Forceps</td>
<td>64</td>
</tr>
<tr>
<td>28572 G</td>
<td>SILGRASP® PRO Grasping Forceps</td>
<td>64</td>
</tr>
<tr>
<td>28572 GU</td>
<td>SILGRASP® PRO Grasping Forceps</td>
<td>64</td>
</tr>
<tr>
<td>28572 AG</td>
<td>SILGRASP® PRO Alligator Grasping Forceps</td>
<td>64</td>
</tr>
<tr>
<td>28571 FG</td>
<td>SILGRASP® PRO Foreign Body Grasper</td>
<td>65</td>
</tr>
<tr>
<td>28571 CG</td>
<td>SILGRASP® PRO Cartilage Grasping Forceps</td>
<td>65</td>
</tr>
<tr>
<td>28571 CGU</td>
<td>SILGRASP® PRO Cartilage Grasping Forceps</td>
<td>65</td>
</tr>
<tr>
<td>28571 G</td>
<td>SILGRASP® PRO Grasping Forceps</td>
<td>65</td>
</tr>
<tr>
<td>28571 GU</td>
<td>SILGRASP® PRO Grasping Forceps</td>
<td>65</td>
</tr>
<tr>
<td>28571 AG</td>
<td>SILGRASP® PRO Alligator Grasping Forceps</td>
<td>65</td>
</tr>
<tr>
<td>28171 HAN</td>
<td>SILGRASP® Grasping Forceps</td>
<td>66</td>
</tr>
<tr>
<td>28171 HBN</td>
<td>SILGRASP® Grasping Forceps</td>
<td>66</td>
</tr>
<tr>
<td>28171 HCN</td>
<td>SILGRASP® Grasping Forceps</td>
<td>66</td>
</tr>
<tr>
<td>28171 KBN</td>
<td>SILGRASP® Grasping Forceps</td>
<td>66</td>
</tr>
<tr>
<td>28171 AGN</td>
<td>SILGRASP® Alligator Grasping Forceps</td>
<td>66</td>
</tr>
<tr>
<td>28171 AGSN</td>
<td>SILGRASP® Alligator Grasping Forceps</td>
<td>66</td>
</tr>
<tr>
<td>28171 PGN</td>
<td>SILGRASP® Foreign Body Grasper</td>
<td>67</td>
</tr>
<tr>
<td>28171 PGSN</td>
<td>SILGRASP® Foreign Body Grasper</td>
<td>67</td>
</tr>
<tr>
<td>28171 SGN</td>
<td>SILGRASP® Suture Grasper</td>
<td>67, 85</td>
</tr>
<tr>
<td>28171 SGL</td>
<td>SILGRASP® Suture Grasper</td>
<td>67</td>
</tr>
<tr>
<td>28171 SGR</td>
<td>SILGRASP® Suture Grasper</td>
<td>67</td>
</tr>
<tr>
<td>28171 KGN</td>
<td>SILGRASP® Foreign Body Grasper</td>
<td>67</td>
</tr>
<tr>
<td>28171 KGSN</td>
<td>SILGRASP® Foreign Body Grasper</td>
<td>67</td>
</tr>
<tr>
<td>28573 FD</td>
<td>SILGRASP® Foreign Body Grasper</td>
<td>67</td>
</tr>
</tbody>
</table>

Spare Parts

- **28571 LK**
  - Set of Luer Caps
  - Silicone, reusable, unsterile, package of 10

- **8029491**
  - Luer Cap, metal, reusable, unsterile

Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28902 RF</td>
<td>RETROFORCE® Biopsy Punch</td>
<td>71, 185</td>
</tr>
<tr>
<td>28902 RFA</td>
<td>Outer Sheath, with Luer-Lock connector</td>
<td></td>
</tr>
<tr>
<td>28902 RFI</td>
<td>Inner Sheath, with retrograde cutting punch</td>
<td></td>
</tr>
<tr>
<td>28902 HG</td>
<td>Handle, without ratchet</td>
<td></td>
</tr>
</tbody>
</table>
# Joint and Bone Reconstruction

## Biopsy Set, Obturator, Cancellous Bone Applicators

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28904 S</td>
<td>Biopsy Set</td>
<td>75</td>
</tr>
<tr>
<td>28904 SA</td>
<td>Biopsy Punch, with cutting tooth, to extract cartilage cells for ACT</td>
<td></td>
</tr>
<tr>
<td>28904 SO</td>
<td>Obturator, to penetrate connective tissue without extracting tissue and to extrude excised biopsy sample</td>
<td></td>
</tr>
<tr>
<td>5919000-10</td>
<td>O-Ring, package of 10</td>
<td></td>
</tr>
</tbody>
</table>

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28904 SO</td>
<td>Obturator</td>
<td>75</td>
</tr>
</tbody>
</table>

#### Spare Part

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5919000-10</td>
<td>O-Ring</td>
</tr>
</tbody>
</table>

### Components / Spare Parts

#### Cancellous Bone Applicator Set, diameter 6 mm

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28906 CB</td>
<td>Cancellous Bone Applicator Set</td>
<td>79, 109</td>
</tr>
<tr>
<td>28906 CBA</td>
<td>Cancellous Bone Applicator</td>
<td></td>
</tr>
<tr>
<td>28906 CBP</td>
<td>Tappet</td>
<td></td>
</tr>
<tr>
<td>28906 CBC</td>
<td>Sealing Cap</td>
<td></td>
</tr>
<tr>
<td>28906 CBS</td>
<td>Plug</td>
<td></td>
</tr>
</tbody>
</table>

#### Spare Part

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5917100-10</td>
<td>O-Ring</td>
</tr>
</tbody>
</table>

### Components / Spare Parts

#### Cancellous Bone Applicator Set, diameter 7 mm

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28907 CB</td>
<td>Cancellous Bone Applicator Set</td>
<td>79, 109</td>
</tr>
<tr>
<td>28907 CBA</td>
<td>Cancellous Bone Applicator</td>
<td></td>
</tr>
<tr>
<td>28907 CBP</td>
<td>Tappet</td>
<td></td>
</tr>
<tr>
<td>28907 CBC</td>
<td>Sealing Cap</td>
<td></td>
</tr>
<tr>
<td>28907 CBS</td>
<td>Plug</td>
<td></td>
</tr>
</tbody>
</table>

#### Spare Part

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5916000-10</td>
<td>O-Ring</td>
</tr>
</tbody>
</table>
## Joint and Bone Reconstruction

### Cancellous Bone Applicators

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28908 CB</td>
<td></td>
</tr>
<tr>
<td>28908 CBA</td>
<td></td>
</tr>
<tr>
<td>28908 CBP</td>
<td></td>
</tr>
<tr>
<td>28908 CBC</td>
<td></td>
</tr>
<tr>
<td>28908 CBS</td>
<td></td>
</tr>
<tr>
<td><strong>Spare Part</strong></td>
<td></td>
</tr>
<tr>
<td>5941400-10 O-Ring</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28909 CB</td>
<td></td>
</tr>
<tr>
<td>28909 CBA</td>
<td></td>
</tr>
<tr>
<td>28909 CBP</td>
<td></td>
</tr>
<tr>
<td>28909 CBC</td>
<td></td>
</tr>
<tr>
<td>28909 CBS</td>
<td></td>
</tr>
<tr>
<td><strong>Spare Part</strong></td>
<td></td>
</tr>
<tr>
<td>5941500-10 O-Ring</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28910 CB</td>
<td></td>
</tr>
<tr>
<td>28910 CBA</td>
<td></td>
</tr>
<tr>
<td>28910 CBP</td>
<td></td>
</tr>
<tr>
<td>28910 CBC</td>
<td></td>
</tr>
<tr>
<td>28910 CBS</td>
<td></td>
</tr>
<tr>
<td><strong>Spare Part</strong></td>
<td></td>
</tr>
<tr>
<td>5941600-10 O-Ring</td>
<td></td>
</tr>
</tbody>
</table>
## Instruments for the Knee

**Tendon Boards, Metal Mallet**

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 SB</td>
<td>Tendon Board</td>
<td>83</td>
</tr>
<tr>
<td>28729 SBD</td>
<td>Tendon Board Add-on</td>
<td>95</td>
</tr>
</tbody>
</table>

### Spare Parts

- **28729 SC**
  - FLIPPTACK Retainer

- **6833091**
  - Clamp

- **6833191**
  - Tension Slider

- **83**
  - Measuring Slider

- **7971891**
  - Tendon Board, without preparation plate

- **8044890**
  - Preparation Plate

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>174800</td>
<td>Metal Mallet</td>
<td>97</td>
</tr>
</tbody>
</table>

### Spare Part

- **174801**
  - Plastic Replacement
### Instruments for the Knee

#### Target Guides

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 ZRF</td>
<td>Target Guide Root Refixation</td>
</tr>
</tbody>
</table>

**Spare Parts**

- **Sliding Tube**: 6829991
- **Cleaning Adaptor**: 39107 Z

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 ZA</td>
<td>Tibial Target Guide, for ACL reconstruction</td>
</tr>
<tr>
<td>28729 WT</td>
<td>Tibial Target Guide, for ACL reconstruction</td>
</tr>
<tr>
<td>28729 ZB</td>
<td>Tibial Target Guide, for PCL reconstruction</td>
</tr>
<tr>
<td>28729 ZL</td>
<td>Tibial Target Guide, for PCL reconstruction</td>
</tr>
<tr>
<td>28729 ZR</td>
<td>Tibial Target Guide, for PCL reconstruction</td>
</tr>
</tbody>
</table>

**Spare Parts**

- **Sliding Tube**: 6829991
- **Cleaning Adaptor**: 39107 Z
Instruments for the Knee
Target Guides

Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 CF</td>
<td>Tibial Target Guide</td>
<td>98</td>
</tr>
</tbody>
</table>

Spare Parts

- 8064391 Sliding Tube
- 39107 Z Cleaning Adaptor

Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 ZF</td>
<td>CHANNEL-LOCK® Tibial Target Guide</td>
<td>100</td>
</tr>
</tbody>
</table>

Spare Part

- 28729 ZFH Bullet

Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 ZBB</td>
<td>Tibial Target Guide, for PCL reconstruction</td>
<td>102</td>
</tr>
</tbody>
</table>

Spare Parts

- 8105491 Sliding Tube
- 39107 Z Cleaning Adaptor
## Instruments for the Knee

Dilators with Fin, CROSSDRIVE® Screwdrivers

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28729 DFM</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
<tr>
<td>28729 DFO</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
<tr>
<td>28729 DFP</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
<tr>
<td>28729 DFQ</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
<tr>
<td>28729 DFR</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
<tr>
<td>28729 DFS</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
<tr>
<td>28729 DFT</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
<tr>
<td>28729 DFU</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
<tr>
<td>28729 DFV</td>
<td>Dilator with Fin</td>
<td>110</td>
</tr>
</tbody>
</table>

### Spare Part

- **39107 Z**
  - **Cleaning Adaptor**

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28789 SK</td>
<td>CROSSDRIVE® Screwdriver</td>
<td>122</td>
</tr>
<tr>
<td>28770 SK</td>
<td>CROSSDRIVE® Screwdriver</td>
<td>122</td>
</tr>
<tr>
<td>28760 SK</td>
<td>CROSSDRIVE® Screwdriver</td>
<td>122</td>
</tr>
<tr>
<td>28789 CD</td>
<td>CROSSDRIVE® Plus Screwdriver</td>
<td>122</td>
</tr>
</tbody>
</table>

### Spare Part

- **39107 Z**
  - **Cleaning Adaptor**
Instruments for the Shoulder

Seal Set, Handle, Transport Cassette, SNAPPER® SHOULDER PRO® Suture Forceps

Components / Spare Parts

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28180 GDS</td>
<td>Seal Set, package of 5</td>
<td>129</td>
</tr>
</tbody>
</table>

**Spare Part**

28180 GD
Gasket, non-sterile, for single use, with sealing cap

Components / Spare Parts

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28180 WH</td>
<td>WONDERHOOK® Handle</td>
<td>138</td>
</tr>
<tr>
<td>28184 HG</td>
<td>WONDERHOOK® Handle</td>
<td>138</td>
</tr>
<tr>
<td>28184 KF</td>
<td>Transport Cassette</td>
<td>138</td>
</tr>
</tbody>
</table>

Components / Spare Parts

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28184 KF</td>
<td>Transport Cassette</td>
<td>138</td>
</tr>
<tr>
<td>28184 HS</td>
<td>Half-shell Set</td>
<td>138</td>
</tr>
<tr>
<td>28184 RG</td>
<td>Wheel, large</td>
<td>138</td>
</tr>
<tr>
<td>28184 RK</td>
<td>Wheel, small</td>
<td>138</td>
</tr>
</tbody>
</table>

Components / Spare Parts

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28180 GAN</td>
<td>SNAPPER® SHOULDER PRO® Suture Forceps</td>
<td>140</td>
</tr>
<tr>
<td>28180 GCN</td>
<td>SNAPPER® SHOULDER PRO® Suture Forceps</td>
<td>140</td>
</tr>
<tr>
<td>28180 GLN</td>
<td>SNAPPER® SHOULDER PRO® Suture Forceps</td>
<td>140</td>
</tr>
<tr>
<td>28180 GRN</td>
<td>SNAPPER® SHOULDER PRO® Suture Forceps</td>
<td>140</td>
</tr>
<tr>
<td>28180 GRGN</td>
<td>SNAPPER® SHOULDER PRO® Suture Forceps</td>
<td>140</td>
</tr>
</tbody>
</table>

**Spare Parts**

28571 LK
Set of LUER Caps, silicone, reusable, unsterile, package of 10

8029491
LUER Cap, metal, reusable, unsterile
**Spare Part**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>29100</td>
<td>Plug, for LUER-Lock irrigation connector for cleaning, black, autoclavable, package of 10</td>
<td>141</td>
</tr>
</tbody>
</table>

**Components / Spare Parts**

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28171 KPN</td>
<td>SILCUT® Punch</td>
<td>143</td>
</tr>
<tr>
<td>28171 KUN</td>
<td>SILCUT® Punch</td>
<td>143</td>
</tr>
<tr>
<td>28171 KGN</td>
<td>SILGRASP® Foreign Body Grasper</td>
<td>143</td>
</tr>
<tr>
<td>28171 KGSN</td>
<td>SILGRASP® Foreign Body Grasper</td>
<td>143</td>
</tr>
<tr>
<td>28171 SGN</td>
<td>SILGRASP® Suture Grasper</td>
<td>143</td>
</tr>
<tr>
<td>28171 SGL</td>
<td>SILGRASP® Suture Grasper</td>
<td>143</td>
</tr>
<tr>
<td>28171 SGR</td>
<td>SILGRASP® Suture Grasper</td>
<td>143</td>
</tr>
<tr>
<td>28171 SHN</td>
<td>SILGRASP® Suture Grasper</td>
<td>143</td>
</tr>
</tbody>
</table>

**Spare Parts**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 LK</td>
<td>Set of LUER Caps, silicone, reusable, unsterile, package of 10</td>
<td>141</td>
</tr>
<tr>
<td>8029491</td>
<td>LUER Cap, metal, reusable, unsterile</td>
<td>141</td>
</tr>
</tbody>
</table>
### Instruments for the Shoulder

**SHOULDER PRO® Suture Forceps, Mallet**

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28180 GFN TARPUN SHOULDER PRO® Suture Forceps</td>
<td>144</td>
</tr>
<tr>
<td>28180 HC FETCHER SHOULDER PRO® Suture Forceps</td>
<td>144</td>
</tr>
<tr>
<td>28180 HL FETCHER SHOULDER PRO® Suture Forceps</td>
<td>144</td>
</tr>
<tr>
<td>28180 HR FETCHER SHOULDER PRO® Suture Forceps</td>
<td>144</td>
</tr>
</tbody>
</table>

**Spare Parts**

| 28571 LK Set of LUER Caps, silicone, reusable, unsterile, package of 10 |

| 8029491 LUER Cap, metal, reusable, unsterile |

**Components / Spare Parts**

| 28270 H Mallet |

**Spare Part**

| 174701 Plastic Mallet Head |
## Instruments for the Hip

Evacuation Cannula, SILCUT® Punches, SILGRASP® Foreign Body Graspers, SILGRASP® Suture Grasper, Suture Forceps

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28140 S Evacuation Cannula</td>
<td>8541890 156</td>
</tr>
</tbody>
</table>

### Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6985691</td>
<td>Spring Cap</td>
</tr>
<tr>
<td>8541890</td>
<td>Stopcock</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28171 KPN SILCUT® Punch</td>
<td>160</td>
</tr>
<tr>
<td>28171 KUN SILCUT® Punch</td>
<td>160</td>
</tr>
<tr>
<td>28171 KGN SILGRASP® Foreign Body Grasper</td>
<td>160</td>
</tr>
<tr>
<td>28171 KGSN SILGRASP® Foreign Body Grasper</td>
<td>160</td>
</tr>
<tr>
<td>28573 FD SILGRASP® Foreign Body Grasper</td>
<td>160</td>
</tr>
<tr>
<td>28140 GA Suture Forceps</td>
<td>160</td>
</tr>
<tr>
<td>28171 SGD SILGRASP® Suture Grasper</td>
<td>160</td>
</tr>
</tbody>
</table>

### Spare Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 LK</td>
<td>Set of Luer Caps, silicone, reusable, unsterile, package of 10</td>
</tr>
<tr>
<td>8029491</td>
<td>Luer Cap, metal, reusable, unsterile</td>
</tr>
</tbody>
</table>
### Instruments for Small and Medium Joints

**SILCUT® PRO Punches, SILGRASP® PRO Grasping Forceps**

#### Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28572 AD</td>
<td>SILCUT® PRO Punch</td>
<td>172</td>
</tr>
<tr>
<td>28572 ADL</td>
<td>SILCUT® PRO Punch</td>
<td>172</td>
</tr>
<tr>
<td>28572 ADR</td>
<td>SILCUT® PRO Punch</td>
<td>172</td>
</tr>
<tr>
<td>28572 AE</td>
<td>SILCUT® PRO Punch</td>
<td>172</td>
</tr>
<tr>
<td>28571 O</td>
<td>SILCUT® PRO Oval Biter</td>
<td>172</td>
</tr>
</tbody>
</table>

#### Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 LK</td>
<td>Set of Luer Caps, silicone, reusable, unsterile, package of 10</td>
</tr>
<tr>
<td>8029491</td>
<td>Luer Cap, metal, reusable, unsterile</td>
</tr>
</tbody>
</table>

#### Components / Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28572 NJ</td>
<td>SILGRASP® PRO Suture Grasper</td>
<td>173</td>
</tr>
<tr>
<td>28572 CG</td>
<td>SILGRASP® PRO Cartilage Grasping Forceps</td>
<td>173</td>
</tr>
<tr>
<td>28572 CGU</td>
<td>SILGRASP® PRO Cartilage Grasping Forceps</td>
<td>173</td>
</tr>
<tr>
<td>28572 G</td>
<td>SILGRASP® PRO Grasping Forceps</td>
<td>173</td>
</tr>
<tr>
<td>28572 GU</td>
<td>SILGRASP® PRO Grasping Forceps</td>
<td>173</td>
</tr>
<tr>
<td>28572 AG</td>
<td>SILGRASP® PRO Alligator Grasping Forceps</td>
<td>173</td>
</tr>
</tbody>
</table>

#### Spare Parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28571 LK</td>
<td>Set of Luer Caps, silicone, reusable, unsterile, package of 10</td>
</tr>
<tr>
<td>8029491</td>
<td>Luer Cap, metal, reusable, unsterile</td>
</tr>
</tbody>
</table>
## Instruments for Small and Medium Joints

**Dilator Set, Optical Dissectors, ROBI® KELLY Grasping Forceps**

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28147 S</td>
<td>Dilator Set</td>
<td>175</td>
</tr>
<tr>
<td>28147 SA</td>
<td>Dilator, diameter 4 mm</td>
<td></td>
</tr>
<tr>
<td>28147 SB</td>
<td>Dilator, diameter 5 mm</td>
<td></td>
</tr>
<tr>
<td>28147 SC</td>
<td>Dilator, diameter 6 mm</td>
<td></td>
</tr>
<tr>
<td>28147 SD</td>
<td>Dilator, diameter 7 mm</td>
<td></td>
</tr>
</tbody>
</table>

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Description</th>
<th>Catalog Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>50200 ES</td>
<td>Optical Dissector</td>
<td>177</td>
</tr>
<tr>
<td>50300 ES</td>
<td>Optical Dissector</td>
<td>177</td>
</tr>
</tbody>
</table>

### Spare Parts

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5916100</td>
<td>O-Ring</td>
</tr>
<tr>
<td>8458190</td>
<td>Stopcock</td>
</tr>
<tr>
<td>6052191</td>
<td>Locking Lever, red</td>
</tr>
<tr>
<td>8484290</td>
<td>Nut</td>
</tr>
<tr>
<td>6985691</td>
<td>Spring Cap</td>
</tr>
<tr>
<td>8069491</td>
<td>Outer Part, with stopcock</td>
</tr>
</tbody>
</table>

### Components / Spare Parts

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>38851 MD</td>
<td>ROBI® KELLY Grasping Forceps, CLERMONT-FERRAND model</td>
</tr>
<tr>
<td>38151</td>
<td>ROBI® Plastic Handle</td>
</tr>
<tr>
<td>38810 MD</td>
<td>ROBI® Outer Sheath with Forceps Insert</td>
</tr>
</tbody>
</table>

### Spare Part

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>29100</td>
<td>Plug, for Luer-Lock irrigation connector for cleaning, black, autoclavable, package of 10</td>
</tr>
</tbody>
</table>
Rheumathology
Holding System

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28272 KLA</td>
<td>Holding System</td>
</tr>
<tr>
<td>28172 HK</td>
<td>Socket</td>
</tr>
<tr>
<td>28272 HA</td>
<td>Articulated Stand</td>
</tr>
<tr>
<td>28272 UL</td>
<td>Clamping Jaw</td>
</tr>
</tbody>
</table>

Spare Part

28172 HZ
Set Screw, for articulated stands
Visualization Systems for Open Surgery and Microsurgery
VITOM® Telescopes, Rotation Socket, Articulated Stand

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>20916025 AA VITOM® Telescope 0° with Integrated Illuminator</td>
<td>193</td>
</tr>
<tr>
<td>20916025 DA VITOM® Telescope 90° with Integrated Illuminator</td>
<td>193</td>
</tr>
<tr>
<td>20916025 AGA VITOM® II NIR/ICG Telescope 0°, with integrated illuminator</td>
<td>197</td>
</tr>
</tbody>
</table>

Spare Parts

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

Components / Spare Parts

<table>
<thead>
<tr>
<th>Spare Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>28172 HR Rotation Socket, to clamp to the operating table</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Spare Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>28272 HC Articulated Stand</td>
</tr>
<tr>
<td>28272 HB Articulated Stand</td>
</tr>
</tbody>
</table>

Spare Part

- **28172 HZ** Set Screw, for articulated stands
### Components / Spare Parts

<table>
<thead>
<tr>
<th>28272 HSP</th>
<th>VERSACRANE™ Holding Arm</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28272 HS</td>
<td>VERSACRANE™ Holding Arm</td>
<td></td>
</tr>
<tr>
<td>28272 HP</td>
<td>Mobile Stand</td>
<td></td>
</tr>
</tbody>
</table>

#### 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

<table>
<thead>
<tr>
<th>TM 323</th>
<th>32&quot; 3D Monitor</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 A</td>
<td>Mains Cord</td>
<td></td>
</tr>
<tr>
<td>9826 PS</td>
<td>External Power Supply</td>
<td></td>
</tr>
<tr>
<td>9800 GF</td>
<td>3D Polarization Glasses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cable Cover</td>
<td></td>
</tr>
</tbody>
</table>

---

*VITOM® VERSACRANE™ Holding System, 32" 3D Monitor*

*STORZ KARL STORZ — ENDSKOPE*
## Holding Systems

### Leg Holder

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>28188 D</strong> Arthroscopy Leg Holder</td>
<td>218</td>
</tr>
<tr>
<td><strong>28188 SE</strong> Release Clamp, 25 mm</td>
<td></td>
</tr>
<tr>
<td><strong>28188 DP</strong> Neoprene Cushion, 600 x 140 x 20 mm</td>
<td></td>
</tr>
<tr>
<td><strong>28188 PN</strong> Closure Stripe, perforated, Vulkollan 450 x 90 mm</td>
<td></td>
</tr>
</tbody>
</table>

### Spare Parts

| **28188 FH** Fixation Device | |
| **28188 HR** Hand Wheel | |

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>28188 SE</strong> Release Clamp</td>
<td>218</td>
</tr>
</tbody>
</table>

### Spare Parts

| **28188 FS** Locking Wheel | |
| **28188 FK** “Small Wheel” | |

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>28172 HR</strong> Rotation Socket, to clamp to the operating table</td>
<td>219</td>
</tr>
</tbody>
</table>

### Spare Part

| **28172 HRS** Butterfly Nut, to clamp Socket 28172 HR to the operating table, one already mounted on Socket 28172 HR | |
# Suction and Irrigation Systems

## ARTHROPUMP® Power

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28340701-1 ARTHROPUMP® Power</td>
<td>U 7</td>
</tr>
<tr>
<td>28340720-1 ARTHROPUMP® Power,</td>
<td></td>
</tr>
<tr>
<td>power supply 100 – 240 VAC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>28340770 Connecting Cable, to UNIDRIVE® S III</td>
<td></td>
</tr>
<tr>
<td>ARTHRO SCB</td>
<td></td>
</tr>
<tr>
<td>20090170 SCB Connecting Cable, length 100 cm</td>
<td></td>
</tr>
<tr>
<td>20016834 Four-Pedal Footswitch</td>
<td></td>
</tr>
<tr>
<td>031328-03* Tubing Set Irrigation, sterile, for</td>
<td></td>
</tr>
<tr>
<td>single use, package of 3</td>
<td></td>
</tr>
<tr>
<td>031228-03* Tubing Set Suction, sterile, for</td>
<td></td>
</tr>
<tr>
<td>single use, package of 3</td>
<td></td>
</tr>
<tr>
<td>031228-03* Tubing Set Suction, sterile, for</td>
<td></td>
</tr>
<tr>
<td>single use, package of 3</td>
<td></td>
</tr>
</tbody>
</table>

### Spare Part

<table>
<thead>
<tr>
<th>Spare Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>1069500 Fuse, T 1.6 A, L 250 V</td>
</tr>
</tbody>
</table>

* mtp
### Suction and Irrigation Systems

**ENDOMAT® SELECT**

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP 210</td>
<td>ENDOMAT® SELECT</td>
</tr>
<tr>
<td>400 A</td>
<td>Mains Cord, length 300 cm</td>
</tr>
</tbody>
</table>

#### Spare Parts

**for single use**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>031523-10*</td>
<td>Tubing Set, irrigation, PC, sterile, for single use, package of 10</td>
</tr>
<tr>
<td>031647-10*</td>
<td>Tubing Set, suction, BS, sterile, for single use, package of 10</td>
</tr>
<tr>
<td>031524-10*</td>
<td>Tubing Set, irrigation, FC, sterile, for single use, package of 10</td>
</tr>
<tr>
<td>031529-10*</td>
<td>Tubing Set, irrigation, CV, sterile, for single use, package of 10</td>
</tr>
</tbody>
</table>

**reusable**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP 007</td>
<td>Tubing Set, irrigation, FC, sterilizable</td>
</tr>
<tr>
<td>UP 008</td>
<td>Tubing Set, irrigation, PC, sterilizable</td>
</tr>
<tr>
<td>UP 009</td>
<td>Tubing Set, irrigation, DS, sterilizable</td>
</tr>
<tr>
<td>UP 010</td>
<td>Tubing Set, irrigation, BS, sterilizable</td>
</tr>
</tbody>
</table>
Motor System
UNIDRIVE® S III ARTHRO SCB

Components / Spare Parts

<table>
<thead>
<tr>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>U 17</td>
</tr>
</tbody>
</table>

28723001-1 UNIDRIVE® S III ARTHRO SCB
28723020-1 UNIDRIVE® S III ARTHRO SCB
20090170 SCB Connecting Cable, length 100 cm
96156018D Instruction Manual

28723020-1

Spare Parts

<table>
<thead>
<tr>
<th>2027690</th>
<th>1059700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains Fuse, 220 – 240 VAC, T 4.0 AH, package of 10</td>
<td>Mains Fuse, 100 – 127 VAC, T 2.5 A, package of 10</td>
</tr>
</tbody>
</table>

Components / Spare Parts

<table>
<thead>
<tr>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td>U 18</td>
</tr>
</tbody>
</table>

28200 DX DRILLCUT-X® ARTHRO Shaver Handpiece

Spare Parts

<table>
<thead>
<tr>
<th>28200 DA</th>
<th>28200 DB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve Body, without valve lock</td>
<td>Valve Lock, for Valve Body 28200 DC</td>
</tr>
</tbody>
</table>
### High Frequency Surgery Unit

**AUTOCON® III 400 High-End**

<table>
<thead>
<tr>
<th>Components / Spare Parts</th>
<th>Catalog page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UH 400</strong> AUTOCON® III 400 High-End, power supply 220 – 240 VAC, 50/60 Hz</td>
<td>U 32</td>
</tr>
<tr>
<td>400 A Mains Cord, length 300 cm</td>
<td></td>
</tr>
<tr>
<td><strong>UH 400U</strong> AUTOCON® III 400 High-End, power supply 100-127 VAC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>400 B Mains Cable, US version, length 200 cm</td>
<td></td>
</tr>
</tbody>
</table>

**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**

The KARL STORZ OR1 NEO® objective is to provide an optimal operating room design for performing minimally invasive and conventional surgeries. Customized to meet disciplinary and interdisciplinary needs, the OR1 NEO® operating room concept offers the optimal solution to each requirement for an integrated OR workstation design. The system's modular design allows all components and functionalities to be integrated in the OR1 NEO® operating room solution and, therefore, become part of the workstation system. Once again, KARL STORZ sets new standards in ergonomics, safety and efficiency in the OR.

- **System integration**
- **Data management and documentation**
- **Telemedicine**

The OR1 NEO® components provide a customized system and compatible applications. Each component offers a reliable solution on its own; the sum of all components forms a complete multifunctional system.

---

**TELEPRESENCE**

- **Imaging systems**
- **Illumination**

**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. Existing IMAGE1 can be updated to enable HD images to be displayed and HD camera heads to be utilized.

KARL STORZ WIDEVIEW monitors deliver **optimal image display**. Using the 16:10 aspect provides a larger display window and improves the viewing ergonomics.

---

**HUMAN MEDICINE DVD**

The KARL STORZ Product Line encompasses Endoscopes, Instruments, Accessories, Units and Imaging Systems for the full range of Human Medicine Specialties:

- Neurosurgery
- Oral and Maxillofacial Surgery
- Endoscopes and Instruments for ENT, Esophagoscopy & Bronchoscopy
- Plastic Surgery
- Endoscopes for Anesthesiology and Emergency Medicine
- Endoscopes and Instruments for Cardiovascular Surgery
- Thorax
- Gastroenterology
- Laparoscopy
- Gynecology
- Urology
- Proctology
- Arthroscopy, Sports Medicine & Spine Surgery
- Pediatric Surgery
- KARL STORZ OR1 NEO®
- Telepresence

---

**PROTECTION 1®**

- **Field Service Technician Program**
- **On-Site Services Program**
- **No-Fault Service Plans**
- **Custom Service Solutions**
- **Platform for Staff Training – Academy of Clinical Education**

PROTECTION 1® Services delivers comprehensive solutions to assist you in ensuring optimum surgical performance, asset management, and cost savings. Choose KARL STORZ as your Service Partner and focus on what really matters – patient care.
Request per Business Reply Card
or per FAX
+1 424 218-8526 or one of KARL STORZ distribution companies
check selections - fill in your address on back - send

If you need additional reply cards available, KARL STORZ
also offers this service using the Internet:
www.karlstorz.com

Please send us detailed information: (please check):

☐ KARL STORZ OR1 NEO®
ERGONOMICS, SAFETY
AND EFFICIENCY IN THE OR
We are particularly interested in:
☐ System integration
☐ Data management and
documentation
☐ Telemedicine

☐ TELEPRESENCE
We are particularly interested in:
☐ FULL HD – New vision in medicine
☐ Camera systems
☐ Monitors and video printers
☐ Light sources

☐ HUMAN MEDICINE DVD
The KARL STORZ Product Line
encompasses Endoscopes,
Instruments, Accessories, Units
and Imaging Systems for the full
range of Human Medicine
Specialties

☐ PROTECTION 1®
We are particularly interested in:
☐ Field Service Technician Program
☐ On-Site Services Program
☐ No-Fault Service Plans
☐ Custom Service Solutions
☐ Platform for Staff Training –
Academy of Clinical Education

☐ We would like a non-binding consultancy meeting.
Request an appointment with your KARL STORZ Representative – 800-421-0837

Address:

Hospital/Office

Contact
Street
Postal Code
Town/City
Tel.
E-Mail

REPLY

KARL STORZ ENDOSCOPY-AMERICA, INC.
2151 East Grand Avenue
El Segundo, CA 90245-5017, USA

Postage paid
Request per Business Reply Card
or per FAX
+1 424 218-8526 or one of KARL STORZ distribution companies
check selections - fill in your address on back - send

If you need additional reply cards available, KARL STORZ
also offers this service using the Internet:
www.karlstorz.com

Please cut out reply card!

Address:

Hospital/Office

Contact

Street

Postal Code

Town/City

Tel.

E-Mail

KARL STORZ ENDOSCOPY-AMERICA, INC.
2151 East Grand Avenue
El Segundo, CA 90245-5017, USA

Postage paid

REPLY

Please send us detailed information: (please check):

❑ KARL STORZ OR1 NEO®
ERGONOMICS, SAFETY AND EFFICIENCY IN THE OR
We are particularly interested in:
❑ System integration
❑ Data management and documentation
❑ Telemedicine

❑ TELEPRESENCE
We are particularly interested in:
❑ FULL HD – New vision in medicine
❑ Camera systems
❑ Monitors and video printers
❑ Light sources

❑ HUMAN MEDICINE DVD
The KARL STORZ Product Line encompasses Endoscopes, Instruments, Accessories, Units and Imaging Systems for the full range of Human Medicine Specialties

❑ PROTECTION 1®
We are particularly interested in:
❑ Field Service Technician Program
❑ On-Site Services Program
❑ No-Fault Service Plans
❑ Custom Service Solutions
❑ Platform for Staff Training – Academy of Clinical Education

❑ We would like a non-binding consultancy meeting.
Request an appointment with your KARL STORZ Representative – 800-421-0837
Catalogs, Catalog excerpts

<table>
<thead>
<tr>
<th>I prefer:</th>
<th>□ Print Version</th>
<th>□ Digital Version (CD, DVD)</th>
<th>(please check)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurosurgery</td>
<td></td>
<td></td>
<td>Thorax</td>
</tr>
<tr>
<td>Oral and Maxillofacial Surgery</td>
<td></td>
<td></td>
<td>Systems for Gastroenterology</td>
</tr>
<tr>
<td>Endoscopes and Instruments for ENT, Esophagoscopy – Bronchoscopy</td>
<td></td>
<td></td>
<td>Laparoscopy in Surgery, Gynecology, Urology</td>
</tr>
<tr>
<td>- Standard Instruments</td>
<td></td>
<td></td>
<td>- Pediatric Laparoscopy</td>
</tr>
<tr>
<td>- Laryngology</td>
<td></td>
<td></td>
<td>- Minilaparoscopy</td>
</tr>
<tr>
<td>- Otology</td>
<td></td>
<td></td>
<td>Gynecology</td>
</tr>
<tr>
<td>- Rhinology and Rhinoplasty</td>
<td></td>
<td></td>
<td>Urology</td>
</tr>
<tr>
<td>- Sinoscopy, Rhinoscopy, Postrhinoscopy</td>
<td></td>
<td></td>
<td>Proctology</td>
</tr>
<tr>
<td>- UNIDRIVE® S III ECO</td>
<td></td>
<td></td>
<td>Arthroscopy and Sports Medicine</td>
</tr>
<tr>
<td>- UNIDRIVE® S III ENT</td>
<td></td>
<td></td>
<td>Pediatric Surgery</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td></td>
<td></td>
<td>MTP Single-Use Products</td>
</tr>
<tr>
<td>Endoscopes for Anesthesiology and Emergency Medicine</td>
<td></td>
<td></td>
<td>KARL STORZ OR1 NEO®</td>
</tr>
<tr>
<td>Endoscopes and Instruments for Cardiovascular Surgery</td>
<td></td>
<td></td>
<td>Telepresence</td>
</tr>
</tbody>
</table>

Please tear off postcard here!

Address:

Hospital/Office

Contact

Street

Postal Code

Town/City

Tel.

E-mail

REPLY

KARL STORZ ENDOSCOPE-AMERICA, INC.
2151 East Grand Avenue
El Segundo, CA 90245-5017, USA
Request per Business Reply Card or per FAX
+1 424 218-8526 or one of KARL STORZ distribution companies check selections – fill in your address on back – send

Please tear off postcard here!

Address:

Hospital/OFFice

Contact

Street

Postal Code

Town/City

Tel.

E-mail

Catalogs, Catalog excerpts

I prefer:  □ Print Version □ Digital Version (CD, DVD)  (please check)

Neurosurgery □

Oral and Maxillofacial Surgery □

Endoscopes and Instruments for ENT, Esophagoscopy – Bronchoscopy □

- Standard Instruments □

- Laryngology □

- Otology □

- Rhinology and Rhinoplasty □

- Sinoscopy, Rhinoscopy, Postrhinoscopy □

- UNIDRIVE® S III ECO □

- UNIDRIVE® S III ENT □

Plastic Surgery □

Endoscopes for Anesthesiology and Emergency Medicine □

Endoscopes and Instruments for Cardiovascular Surgery □

Thorax □

Systems for Gastroenterology □

Laparoscopy in Surgery, Gynecology, Urology □

- Pediatric Laparoscopy □

- Minilaparoscopy □

Gynecology □

Urology □

Proctology □

Arthroscopy and Sports Medicine □

Pediatric Surgery □

MTP Single-Use Products □

KARL STORZ OR1 NEO® □

Telepresence □

Hygiene □