

## One System – A Wealth of Options



graft *line*

Instrument System for  
Arthroscopic Cruciate Ligament Surgery

**Graftline**, the newly designed instrument and implant system from Richard Wolf provides the versatile, medical platform for successful reconstruction of anterior and posterior cruciate ligaments.

### Modular structure

The high performance of the system is provided by unsurpassed diversity and universality. **Graftline** offers highly specialized, partly patented technology for an enormous range of surgical opportunities.

- **Efficiency hand in hand.** A few movements of the hand with intuitive connectivity for all instruments save weight and space.
- **ACL and PCL in one grip.** **Graftline** provides the instrument set for reconstruction of the anterior and posterior cruciate ligaments in an intelligent combination.
- **All clear for a good comfortable hand position.** The surgeon is ideally prepared with **Graftline** instruments and grafts to deal with all eventualities, e.g. if reruptures occur.

### Convincing technology

A new instrument solution supplied only by Richard Wolf to meet all the requirements of the surgeon and provide an exceptionally complete system.

### Fixation with choice

**Graftline** provides a choice of the ideal fixation method for the cruciate ligament graft without having to spend time carrying out adjustments or modifications. A tried-and-tested selection of fixing implants is available for fixation.

### Unique perspectives



**Graftline** gives surgeons access to all methodological channels – from standard techniques to innovative specific solutions. BTB, BT grafts, hamstrings or allografts, oval tunnel technique and hollow-burr technique: One System – A Wealth of Possibilities



## Removal of an autologous tendon






### Semitendinosus tendon and / or gracilis tendon

In addition to the standard tendon stripper, another variant is available for the harvesting hamstring grafts. Thanks to its innovative mechanism, the "universal" tendon stripper can be opened at the distal end and makes it easier to thread the tendon.

	<b>Tendon stripper, universal</b> 300 mm, sz. 8.0 mm.....8866.951	<ul style="list-style-type: none"> <li>• Universal open/lockable/cutting function</li> <li>• Blunt distal end</li> <li>• Detachable</li> </ul>
	<b>Tendon stripper, standard</b> Ø 7.0 mm, WL 300 mm.....891610070	<ul style="list-style-type: none"> <li>• Closed</li> <li>• Sharp distal end</li> </ul>

### Quadriceps or patellar tendon

**Graftline** offers a unique removal technique for patellar and quadriceps tendon grafts with the oscillating hollow-burr system: The surgeon benefits from a faster and standardized removal (cylindrical shape) which requires virtually no reworking.

	<b>bee-system II oscillating ream machine,</b> for orthopedics/trauma surgery ..... F-31-700-00	<ul style="list-style-type: none"> <li>• Battery-powered</li> <li>• For precise graft harvesting with cylindrical bone plug via an oscillating hollow burr</li> <li>• Time-saving</li> <li>• Preventing unwanted patella fractures when harvesting a graft</li> <li>• For more information, see brochure B 826 "Battery-powered tools bee-system II"</li> </ul>
	<b>Hollow burr</b> sz. 8 (ID 8.4 mm) ..... 8869.841 sz. 9 (ID 9.4 mm) ..... 8869.843 sz. 10 (ID 10.5 mm) ..... 8869.844	<ul style="list-style-type: none"> <li>• Serration on only 2/3 of the burr circumference, reducing the risk of plunging too deeply into the patella</li> <li>• Hollow burs in different diameters enable the harvesting of a graft diameter which suits the anatomy of the patient in question</li> </ul>
	<b>Hollow drill bit</b> sz. 8 (OD 8.5 mm) ..... 8869849 sz. 9 (OD 9.5 mm) ..... 8869.851 sz. 10 (OD 10.5 mm) ..... 8869.853	<ul style="list-style-type: none"> <li>• When harvesting a BTB patellar tendon graft, the hollow drills are used to harvest the patellar bone plug</li> </ul>
	<b>Bone elevator</b> sz. 8 (inside 8.4 mm) ..... 8868.921 sz. 9 (inside 9.4 mm) ..... 8868.922 sz. 10 (inside 10.4 mm) ..... 8868.923	<ul style="list-style-type: none"> <li>• Harvesting the bone blocks from the patella after using hollow burs</li> </ul>
	<b>Suture puller</b> WL 350 mm ..... 8869.921	<ul style="list-style-type: none"> <li>• Passing the sutures through and pulling the graft into the hollow burr</li> </ul>

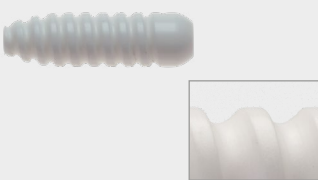

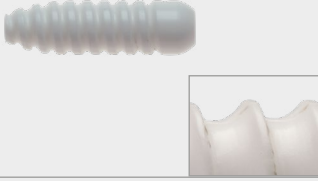


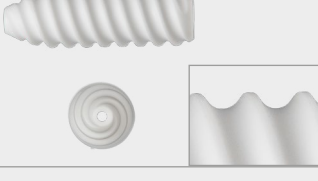


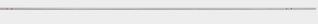
### Reimplantation of BT or BTB grafts (press-fit fixation)

	<b>Pusher straight</b> WL 110 mm ..... 8869993	<ul style="list-style-type: none"> <li>• For introducing the cylindrical bone plug into the femoral tunnel</li> <li>• Straight version for use via the anteromedial portal</li> <li>• Curved version for use via the transtibial portal</li> </ul>
	<b>Curved plunger</b> WL 110 mm ..... 8869.991	

## Fixation of grafts

### Implants and accessories



The tendon grafts provided with pulling sutures are initially drawn into the joint through the tunnels and either fixed with special implants or using implant-free press-fit techniques. Richard Wolf offers a range of high-quality implants for fixation of cruciate ligaments. The composite material OSTEOTRANS plays an outstanding role and sets new benchmarks among resorbable implants.

BioactIF OSTEOTRANS		
	<b>BioactIF OSTEOTRANS, steril, OK-Series</b> 7 x 25 ..... OK0725A 7 x 30 ..... OK0730A 8 x 25 ..... OK0825 8 x 30 ..... OK0830 9 x 25 ..... OK0925 9 x 30 ..... OK0930	Bioresorbable and bioactive interference screws for ACL and PCL reconstruction.
	<b>Thread cutter for OK screws</b> sz. 7 mm ..... 891800700 sz. 8 mm ..... 891800800 sz. 9 mm ..... 891800900	For application with BioactIF OSTEOTRANS interference screws of the "OK Series", in particular with BT and BTB grafts.
	<b>BioactIF OSTEOTRANS, steril, BK-Series</b> 6 x 20 ..... BK0620 7 x 20 ..... BK0720 7 x 25 ..... BK0725 7 x 30 ..... BK0730 8 x 20 ..... BK0820 8 x 25 ..... BK0825 8 x 30 ..... BK0830 9 x 20 ..... BK0920 9 x 25 ..... BK0925 9 x 30 ..... BK0930 10 x 25 ..... BK1025 10 x 30 ..... BK1030	
	<b>Screwdriver OK/BK</b> sz. 7-11 mm ..... 891800030	Cannulated screwdriver for BioactIF OSTEOTRANS interference screws of the OK and BK series, sz. 7-11 mm
	<b>Screwdriver BK</b> sz. 6 mm ..... 891800020	Cannulated screwdriver for BioactIF OSTEOTRANS interference screws of the BK series, sz. 6 mm
	<b>BioactIF OSTEOTRANS, steril, RK-Series with TRIPLE THREAD technology</b> 6 x 20 ..... RK0620 7 x 20 ..... RK0720 7 x 25 ..... RK0725 7 x 30 ..... RK0730 8 x 30 ..... RK0830 9 x 20 ..... RK0920 9 x 25 ..... RK0925 9 x 30 ..... RK0930 10 x 25 ..... RK1025	
	<b>Screwdriver RK</b> sz. 7-11 mm ..... 891800031	Cannulated screwdriver for BioactIF OSTEOTRANS interference screws of the RK series, sz. 7-11 mm
	<b>Screwdriver RK</b> sz. 5-6 mm ..... 891800021	Screwdriver for BioactIF OSTEOTRANS interference screws of the RK series, sz. 5-6 mm
	<b>Nitinol guide wire Ø 1.2 mm</b> TL 350 mm ..... 89120.2012	Guides screw and screwdriver into the tunnel, prevents the screw from deviating into the cancellous bone (spongy bone).

## Creation of the femoral tunnel

### Modular handles





**Graftline** includes high-quality handles with intuitive connecting point to different instruments. Not many handles have this universal capability to meet all the requirements of surgeon and technology. The robust construction features ergonomic design, superlative quality and precise working.

	<p><b>Modular handle, impact / deflection plate,</b> with coupler, cannulated, ID 3.5 mm ..... 893011136</p>
	<p><b>Modular handle, T-shaped</b> with coupling, cannulated ..... 893011137</p>



## Femoral alignment devices

Wire guides for anteromedial and for transtibial access are supplied for reconstruction of the anterior cruciate ligament. The various offsets can easily be differentiated by the colored markings. **Graftline** also provides the opportunity to create an oval-shaped channel on the joint side. This means that the femoral insertion area of the anterior cruciate ligament can be anatomically replicated in a similar way to the two-bundle reconstruction. Special wire guides also guarantee optimum positioning of the tunnel in this technique. All wire guides, including the guides for PCL reconstruction, can be combined with the modular handles thanks to their innovative interface.

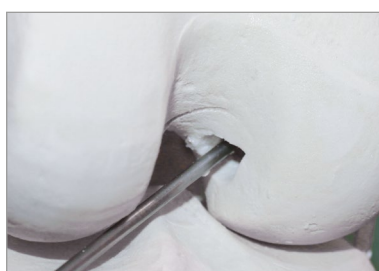
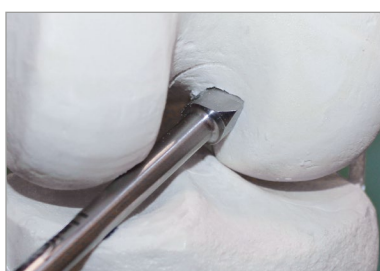
ACL		
	<p><b>ACL aiming device</b> femoral anteromedial, cannulated Ø 2.5 mm, WL 120 mm color coding</p> <p>blue, sz. 5 mm ..... 891013050 green, sz. 6 mm ..... 891013060 red, sz. 7 mm ..... 891013070 blank, sz. 8 mm ..... 891013080</p>	<ul style="list-style-type: none"> <li>• For anteromedial access</li> <li>• Optimized distal head shape</li> <li>• Different offsets</li> <li>• For use with the modular handles</li> </ul>
	<p><b>ACL aiming device AT</b> femoral transtibial, cannulated Ø 2.5 mm, WL 120 mm color coding</p> <p>blue, sz. 5 mm ..... 891015050 green, sz. 6 mm ..... 891015060 red, sz. 7 mm ..... 891015070</p>	<ul style="list-style-type: none"> <li>• For transtibial access</li> <li>• Different offsets</li> <li>• For use with the modular handles</li> </ul>
	<p><b>ACL aiming device</b> femoral, cannulated Ø 2.5 mm, WL 120 mm color coding</p> <p>blue, sz. 5 x 10 mm, ..... 891013510 green, sz. 6 x 12 mm, ..... 891013612 red, sz. 7 x 14 mm, ..... 891013714</p>	<ul style="list-style-type: none"> <li>• For different oval tunnels</li> <li>• Application with oval tunnel rasp</li> <li>• For use with the modular handles</li> </ul>
PCL		
	<p><b>PCL aiming device AL</b> femoral, cannulated Ø 2.5 mm WL 120 mm color coding, red, sz. 7 mm ..... 891014070 blank, sz. 8 mm ..... 891014080 yellow, sz. 9 mm ..... 891014090 white, sz. 10 mm ..... 891014100</p>	<ul style="list-style-type: none"> <li>• For anterolateral port</li> <li>• Different offsets</li> <li>• Open alignment plate for improved vision</li> <li>• For use with modular handles</li> </ul>


## Variants for creating a femoral tunnel

### UniCracker

#### Universal tunnel notcher

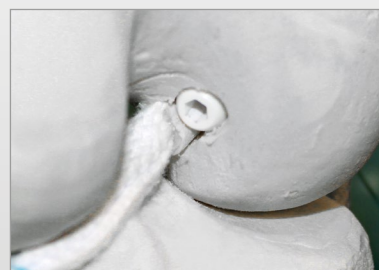
Notching the femoral tunnel allows the interference screw to be guided better when it is screwed in and prevents rotation of the graft around the screw. At the same time, the bone can be impacted.




	<p><b>Univ. tunnel notcher, Ø 4-9 mm, WL 130 mm, UNICRACKER, impacting chisel for indentation of the drill channel, cannulated 2.5 mm.....891611110</b></p>	<ul style="list-style-type: none"> <li>• The stepped design permits universal application for all standard graft diameters</li> <li>• For use with modular handles</li> </ul>
---	---	---

#### Notch rongeur

For detaching a bone flake in the femoral tunnel. The screw is positioned between bone flake and bone so as to prevent damage to the graft by the screw thread.

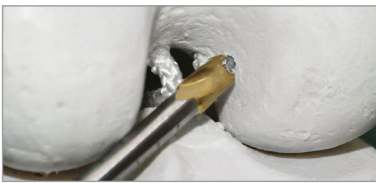



	<p><b>Notch chisel, WL 130 mm length of chisel 30 mm .....891511000</b></p>	<ul style="list-style-type: none"> <li>• Graft protecting fixation when using interference screws</li> <li>• For use with modular handles</li> </ul>
---	---	--




## Instruments for creating oval tunnels

**Graftline** has a complete instrument set for creating an oval shape for the femoral part of the tunnel on the joint side in order to achieve a more anatomical replication of the insertion surface. A range of different rasps is supplied to match the diameter of the graft.



	<p><b>Tunnel rasp, NL 130 mm</b> oval, cannulated Ø 2.5 mm</p> <p>blue, Ø 5 x 10 mm ..... 891611101</p> <p>green, Ø 6 x 12 mm ..... 891611102</p> <p>red, Ø 7 x 14 mm ..... 891611103</p>	<ul style="list-style-type: none"> <li>• For creating an oval shape on the joint side of the femoral tunnel</li> <li>• Matching wire guide, see page 7</li> <li>• For use with modular handles</li> </ul>
---	---	---

## Compactors

	<p><b>Compactor, WL 290 mm</b> cannulated Ø 2.5 mm, graduated</p> <p>sz. 8 mm ..... 891511708</p> <p>sz. 9 mm ..... 891511709</p> <p>sz. 10 mm ..... 891511710</p>	<ul style="list-style-type: none"> <li>• compactor head flattened at the side is used to compress the spongy bone while creating an asymmetrical shape for the femoral tunnel.</li> <li>• Serves for positioning and press-fit anchoring of bone blocks for the BT and BTB grafts.</li> <li>• For use with modular handles</li> </ul>
---	--	---






## Creation of the tibial tunnel

### Tibial Alignment Devices

The Richard Wolf alignment devices for creating the tibial tunnel were developed to meet the very highest specifications. The unique mechanical stability of our tibial alignment devices always permits very precise positioning of the tunnel, also at an adjustable entry angle.

Alongside the two versions of the standard alignment device for ACL reconstruction, special alignment bows are supplied for ACL double-bundle reconstruction, as well as an alignment spoon for PCL reconstruction.






The **Graftline** hollow drill set can be used to remove cylindrical bone blocks when creating the tibial tunnel. The autologous bone material harvested in this way is ideal for filling removal defects.

ACL single-bundle reconstruction		
	<p><b>Adjustable alignment device bndl ..... 8874.013</b> Comprising: Base section for standard tibial ..... 8874.113 Aiming hook tibial ACL ..... 8874.121 Alignment wire guide standard sz. 2.5 ..... 8874.131</p> <p><b>Adjustable alignment device bndl ..... 8874.014</b> Comprising: Base section for standard tibial ..... 8874.113 Aiming spoon tibial ACL ..... 8874.123 Alignment wire guide standard sz. 2.5 ..... 8874.131</p>	<ul style="list-style-type: none"> <li>• The standard for anteromedial port in very stable design.</li> <li>• Range of different alignment hooks adaptable</li> </ul>
	<p><b>Aiming hook tibial ACL ..... 8874.121</b></p> <p><b>Aiming spoon tibial ACL ..... 8874.123</b></p>	<ul style="list-style-type: none"> <li>• Compatible with base section 8874.113</li> </ul>
ACL double-bundle reconstruction		
	<p><b>Alignment arc ZG tibial ACL right for ACL double-bundle reconstruction on the right knee ..... 8874130</b></p>	<ul style="list-style-type: none"> <li>• The special shape of the relevant alignment device takes account of the anatomical structures of the right and left knee.</li> <li>• Two target guide wires are drilled in succession. After the first drill has been carried out, the distal fork is created at the first guide wire → Drilling the second guide wire at a defined distance.</li> </ul>
	<p><b>Alignment arc ZG tibial ACL left for ACL double-bundle reconstruction on the left knee ..... 88741301</b></p>	
PCL reconstruction		
	<p><b>Aiming spoon ZG tibial for PCL reconstruction ..... 8874129</b></p>	<ul style="list-style-type: none"> <li>• The alignment spoon protects the dorsal structures when the guide wire is drilled</li> <li>• The pull wire can be snagged at the distal end and drawn through the joint</li> </ul>



### Hollow drill extension set for harvesting cylindrical bone plugs

Hollow drills can be used to harvest bone plugs when the tibial tunnel is created, for example to fill harvesting defects and for implant-free fixation of the ACL reconstruction. For this purpose, the standard alignment hooks (8874.123 or 8874.121) are combined with corresponding drill guides for hollow drills so that the precise positioning of the tibial tunnel is guaranteed.



	<p><b>Hollow drill bit and ejector</b></p> <p>sz. 8 (OD 8,5 mm) ..... 8869849 + 8869850            sz. 9 (OD 9,5 mm) ..... 8869.851 + 8869.852            sz. 10 (OD 10,5 mm) ..... 8869.853 + 8869.854</p>	<ul style="list-style-type: none"> <li>• Application of the hollow drill with bee-system II oscillating reaming machine F-31-700-00</li> <li>• Hollow drills are simultaneously guided via the drill guide and, using cannulated ejectors, aligned using the alignment wire – safe tunnel positioning</li> </ul>
	<p><b>Base section for tibial drill</b> ..... 8874.111</p>	<ul style="list-style-type: none"> <li>• For holding the drill guides for hollow drill and alignment wire</li> <li>• Compatible with standard alignment hooks 8874.123 and 8874.121</li> </ul>
	<p><b>Aiming hook tibial ACL</b> ..... 8874.121</p> <p><b>Aiming spoon tibial ACL</b> ..... 8874.123</p>	<ul style="list-style-type: none"> <li>• Compatible with base section 8874.111</li> </ul>
	<p><b>Alignment wire guide hollow drill</b></p> <p>sz. 2,5 ..... 8874.151</p>	<ul style="list-style-type: none"> <li>• For guiding the alignment wire when creating the tibial tunnel</li> <li>• Compatible with base section 8874.111</li> </ul>
	<p><b>Drill guide for hollow drill bit</b></p> <p>sz. 8 ..... 8874150            sz. 9 ..... 8874.152            sz. 10 ..... 8874.153</p>	<ul style="list-style-type: none"> <li>• For guiding the hollow drill when harvesting a tibial bone plug</li> <li>• Compatible with base section 8874.111</li> </ul>

## Preparing the tunnels

### ACL/PCL impactors


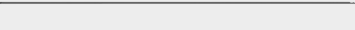
Impactors are used to impact the soft bony part of the tunnels. Impacting becomes increasingly important here as the bone gets softer, in particular for the fibial tunnel.

The tunnel is initially drilled small to allow adequate impacting and is then dilated to the graft diameter using the appropriate impactor. The specially shaped tip with recesses makes it easier to impact into the tunnel. Rotating the impacted instrument in the tunnel then ensures complete, circular impacting.

	<p><b>Cross impactor, WL 150 mm,</b> cannulated Ø 2,5 mm,</p> <p>Ø 5,0 mm ..... 891511005            Ø 5,5 mm ..... 891511055            Ø 6,0 mm ..... 891511006            Ø 6,5 mm ..... 891511065            Ø 7,0 mm ..... 891511007            Ø 7,5 mm ..... 891511075            Ø 8,0 mm ..... 891511008            Ø 8,5 mm ..... 891511085            Ø 9,0 mm ..... 891511009            Ø 9,5 mm ..... 891511095            Ø 10,0 mm ..... 891511010            Ø 10,5 mm ..... 891511105            Ø 11,0 mm ..... 891511011</p>	<ul style="list-style-type: none"> <li>• Standard impactors, cannulated, for alignment wire / Kirschner wire Ø 2.5 mm</li> <li>• For gradual dilatation of the tunnels using the corresponding cross impactors with increasing outer diameters</li> <li>• Impacting the bone substance in the tunnel creates a tighter graft fit and promotes healing</li> </ul>
	<p><b>Modular handle</b> T-shaped ..... 893011137</p>	<ul style="list-style-type: none"> <li>• For use with instruments intended for use with modular handle</li> <li>• Ergonomic, stable, and torsion-resistant</li> </ul>



## Cannulated drills

	<p><b>Head drill</b> cannulated Ø 2.65 mm, WL 145 mm,</p> <p>Ø 4.5 mm ..... 899601045            Ø 5.0 mm ..... 899601050            Ø 5.5 mm ..... 899601055            Ø 6.0 mm ..... 89960.1060            Ø 6.5 mm ..... 89960.1065            Ø 7.0 mm ..... 89960.1070            Ø 7.5 mm ..... 89960.1075            Ø 8.0 mm ..... 89960.1080            Ø 8.5 mm ..... 89960.1085            Ø 9.0 mm ..... 89960.1090            Ø 9.5 mm ..... 89960.1095            Ø 10.0 mm ..... 89960.1010            Ø 10.5 mm ..... 89960.1910            Ø 11.0 mm ..... 89960.1011            Ø 11.5 mm ..... 89960.1911            Ø 12.0 mm ..... 89960.1012            Ø 12.5 mm ..... 89960.1912            Ø 13.0 mm ..... 89960.1013</p>	<p>Drill, cannulated for guide wire / Kirschner wire 2.5 mm</p>
	<p><b>Kirschner alignment wire</b> Ø 2.5 mm, TL 300 mm ..... 89120.3025</p> <p><b>Kirschner alignment wire</b> Ø 2.5 mm, TL 310 mm ..... 89960.1025</p> <p><b>AKirschner alignment wire</b> Ø 2.5 mm, TL 430 mm ..... 89960.1125</p>	<p>without thread eyelet</p> <p>with thread eyelet</p> <p>with thread eyelet</p>

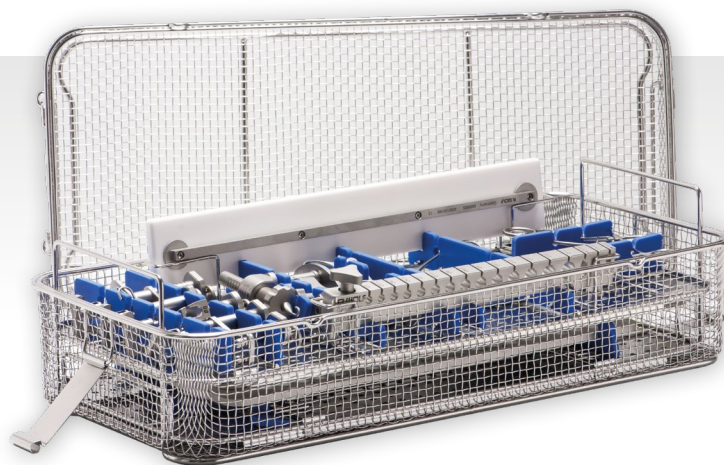


## Additional equipment

### Sterilization and storage

Four sterilization baskets with logical allocation of instruments facilitate safe reprocessing of the valuable **Graftline** instrument set as well as always providing the necessary overview and orderly access.

Two stages, marked with the contours of the individual instruments, simplify configuration while also providing adequate scope for instrument allocation according to individual requirements.



	<p><b>Perf. basket – knee arthrosc. Basic set</b> ..... 33007</p>	<p>Holds: knee arthroscopy basic set, for sterilization (steam and low-temperature), storage and transport, with instrument holders</p>
	<p><b>Perf. basket – knee arthrosc. ACL/PCL 1</b> ..... 33008</p>	<p>Holds: instrument set for knee arthroscopy ACL/PCL 1, for sterilization (steam and low-temperature), storage and transport, with instrument holders</p>
	<p><b>Perf. basket – knee arthrosc. ACL/PCL 2</b> ..... 33009</p>	<p>Holds: instrument set for knee arthroscopy ACL/PCL 2, for sterilization (steam and low-temperature), storage and transport, with instrument holders</p>
	<p><b>Perf. basket For knee arthrosc. prep tab</b> ..... 33010</p>	<p>Holds: knee arthroscopy preparation table, for sterilization (steam and low-temperature), storage and transport, with instrument holders</p>

The instrument baskets shown above are supplied without instruments. You are very welcome to ask us about complete sets for specific applications.



