

Assembly/Disassembly and Operational check

Preservation in motion

# A Assembly / Disassembly

- Knee instruments
- Hip instruments
- Shoulder instruments
- Finger instruments

## **B** Operational check

Intramedullary tibial aiming device 71.02.3041 Intramedullary tibial rod 71.02.3042 Foot holder for tibial aiming device 71.02.3034 Silicone band 71.02.1005 Setscrew for fork 77.02.0043 Shackle for foot holder 71.02.3035 Fork for foot holder 71.02.3036 Tibial cutting block 71.02.4018 Hand screw 77.02.0019 Spring screw for foot holder 77.02.0041 Extramedullary tibial aiming device 71.02.3032

**ASSEMBLY:** Insert the fork in the foot holder and tighten the screw. Telescope the shackle and the fork for foot holder. Screw-on the setscrew for fork. **Fig. 1c–1a** 

Insert the tibial cutting block in the extramedullary aiming device. Telescope the extramedullary tibial aiming device and the the intramedullary one and tighten the hand screw. **Fig. 2c–2a** 

Telescope the two parts and fix them with the spring screw for foot holder.

**DISASSEMBLY:** Unscrew the spring screw. Extricate the foot holder from the extramedullary tibial aiming device. Now the instrument consists of two parts.

Unscrew the hand screw and separate the extramedullary tibial aiming device from the intramedullary one. Remove the tibial cutting block from the aiming device. **Fig. 2a–2c** 

Hold the shackle and the fork and unscrew the setscrew. Remove the shackle from the fork. Unscrew the screw of the foot holder and detach the fork. **Fig. 1a–1c** 











Intramedullary tibial aiming device 71.02.3041 Intramedullary tibial rod 71.02.3042 Foot holder for tibial aiming device 71.02.3034 Silicone band 71.02.1005 Setscrew for fork 77.02.0043 Shackle for foot holder 71.02.3035 Fork for foot holder 71.02.3036 Tibial cutting block 71.02.4018 Hand screw 77.02.0019 Spring screw for foot holder 77.02.0041 Extramedullary tibial aiming device 71.02.3032







# Handle for intramedullary tibial rod 71.02.3043

**ASSEMBLY:** Push the cone in the sleeve and engage it.

**DISASSEMBLY:** Press the cone out of the sleeve.

**NOTE:** Follow the directions on the surface of the sleeve.

Α



Alignment rod tube, short 70.04.0110 Alignment rod tube, long 70.04.0111 Alignment rod 70.04.0109

**ASSEMBLY:** Telescope the alignment rod and the alignment rod tube.

**DISASSEMBLY:** Remove the alignment rod from the tube.

**NOTE:** Carry out the insertion and removal in a horizontal position to avoid damaging the instruments.

Guide for trochlear reamer 71.02.3024 Trochlear reamer 71.02.3023

**ASSEMBLY:** Pull the reamer from the guide.

**DISASSEMBLY:** Push the reamer in the guide.

NOTE: Do not drop the reamer.



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Intramedullary rod 71.02.2106 Handle for intramedullary rod 71.02.2110

ASSEMBLY: Push the rod in the handle.

**DISASSEMBLY:** Pull the rod from the handle.

Α

# Knee instruments / balanSys basic instruments



Spacer-block insert 71.02.1018 Spacer-block base plate 71.02.1017

**ASSEMBLY:** Attach the insert to the base plate.

**DISASSEMBLY:** Detach the insert from the base plate.

Intramedullary rod 71.02.2104 Handle for tibial sizers 71.02.1030 Glider for F2 angle guide 71.02.3058 Angle guide F2 71.02.3050

**ASSEMBLY:** Attach the glider to the angle guide. Attach the handle for tibial sizers to the glider. Insert the intramedullary rod in the angle guide.

**DISASSEMBLY:** Detach the handle for tibial sizers. Remove the intramedullary rod from the angle guide.

**Stylus 3°, left** 71.02.3052 **Stylus 3°, right** 71.02.3053 **Dorsal cutting block, 1.3mm** 71.02.2131 **Ventral cutting block F1, 1.3mm** 71.02.2130

**ASSEMBLY:** Press the spring button. Attach the dorsal cutting block to the ventral one. Attach the stylus.

**DISASSEMBLY:** Remove the stylus. Press the spring button. Detach the dorsal cutting block from the ventral one.









Patella cementing clamp 71.02.3067

**ASSEMBLY:** Screw in the screw. Attach the clamp protection.

**DISASSEMBLY:** Detach the clamp protection. Unscrew the screw.



**Tibial cutting punch** 71.02.1032 **Handle with thread** 71.02.3013

**ASSEMBLY:** Screw the cutting punch to the handle.

**DISASSEMBLY:** Unscrew the cutting punch from the handle.

**NOTE:** The cutting punch has sharp edges.



Silicone band 71.02.1005 Fork for foot holder 77.02.0044 Setscrew for fork 77.02.0043 T-bolt for foot holder 77.02.0042 Foot holder 77.02.0002 Tibial aiming device 77.02.0001 Spring screw for foot holder 77.02.0041 Tuberosity bearing 77.02.0004 LM/RL Tuberosity bearing 77.02.0003 LL/RM Tibial cutting guide 77.02.0005 Hand screw 77.02.0019

**ASSEMBLY:** Hold the tuberosity bearing, LM/RL or LL/RM as required, and the tibial aiming device. Screw on the hand screw. **Fig. 5 & 6** 

Insert the T-bolt for foot holder into the foot holder. Tighten the screw for foot holder. Attach the fork to the T-bolt and keep them together. Screw on the setscrew. **Fig. 3 & 4** 

Telescope the two parts and fix them together with the spring screw for foot holder. Fig. 1 & 2

**DISASSEMBLY:** Unscrew the spring screw for foot holder. **Fig. 1 & 2** 

Hold the foot holder and the T-bolt. Unscrew the setscrew for fork. Remove the foot holder. Unscrew the screw for foot holder. Remove the T-bolt. Fig. 3 & 4

Hold the tuberosity bearing and the tibial aiming device. Remove the hand screw. **Fig. 5 & 6** 

**NOTE:** We mention the tibial cutting guide for the sake of completeness.





**DISASSEMBLY:** Remove the drill guide. The ligament tensor cannot be dismantled further.

Femoral drill guide 77.02.0010 Ligament tensor 77.02.0006





Alignment rod 70.04.0109 Alignment rod tube, short 70.04.0110 Alignment rod tube, long 70.04.0111

**ASSEMBLY:** Telescope the rod and the tube.

**DISASSEMBLY:** Telescope the rod from the tube.



Mobile trial tibial metal back, size 1, LM RL 77.02.0066 Handle for trial prostheses 77.02.0030

**ASSEMBLY:** Open the scissors of the handle. Attach the mobile trial tibial metal back. Close the scissors.

**DISASSEMBLY:** Open the scissors of the handle. Remove the mobile trial tibial metal back.







**ASSEMBLY:** Insert the glider into the F2 angle guide. Press the lever of the drill guide and attach the drill guide to the glider.

**DISASSEMBLY:** Press the lever of the drill guide and remove the drill guide from the glider. Remove the glider from the angle guide.

**NOTE:** We mention the intramedullary rod for the sake of completeness.







Screw for distal cutting block 71.02.4011 Distal cutting block, 1.3mm 71.02.4017

**ASSEMBLY:** Screw in the screw.

DISASSEMBLY: Unscrew the screw.



Distal cutting block, 1.3mm 71.02.4017 Screw for distal cutting block 71.02.4011

**ASSEMBLY:** Screw the screw in the distal cutting block.

**DISASSEMBLY:** Unscrew the screw from the distal cutting block.



Angle guide 71.02.4010 Intramedullary rod 71.02.2104

**ASSEMBLY:** Telescope the rod and the angle guide.

**DISASSEMBLY:** Remove the rod from the angle guide.





Drill guide, one-piece 71.02.4015 Femoral guide 71.02.4016

**ASSEMBLY:** Telescope the femoral guide and the drill guide.

**DISASSEMBLY:** Remove the femoral guide from the drill guide.





Ligament tensor 71.02.3018 PE height adjustment 71.02.4013 Drill guide 71.02.4014

**ASSEMBLY:** Telescope the height adjustment and the drill guide. Attach the height adjustment and the drill guide to the ligament tensor.

**DISASSEMBLY:** Remove the height adjustment and the drill guide from the ligament tensor and dismantle the latter.



Handle for tibial cutting chisel 71.02.3013

**ASSEMBLY:** Screw the fin chisel onto the handle.

**DISASSEMBLY:** Unscrew the fin chisel from the handle.

**NOTE:** The tibia-cutting chisel has sharp edges.

Machine coupling for reamer 79.02.0021

ASSEMBLY: Fit the reamer onto the adapter. Pull the coupling in the direction of the reamer in order to connect the cutter.

**DISASSEMBLY:** Pull the coupling in the direction of the reamer. Remove the adapter for the reamer carefuly.



Cup impactor, curved 3.14.547 Combination bolt 54.02.4101

**ASSEMBLY**: Screw the combination bolt on the cup impactor.

**DISASSEMBLY:** Unscrew the combined bolt from the cup impactor.





**Flexible shaft** 3.14.545 **T-handle with quick coupling** 3.40.502 **Tap, 3.5mm** 3.14.253

**ASSEMBLY**: Insert the flexible shaft in the T-handle. Insert the tap in the flexible shaft.

**DISASSEMBLY:** Remove the tap from the flexible shaft. Remove the flexible shaft from the T-handle.

Flexible shaft 3.14.545 Drill bit, 3.1mm OD 3.14.254

**ASSEMBLY**: Insert the drill bit in the flexible shaft.

**DISASSEMBLY:** Remove the drill bit from the flexible shaft.





### Drill bit for anchoring holes 3.14.299 Coupling for AO-ASIF air machine 3.40.535

**ASSEMBLY:** Put the plastic envelope over the drill bit. Insert the drill bit in the coupling.

**DISASSEMBLY:** Remove the coupling and the plastic envelope from the drill bit.



Shaft for acetabular reamer 3.14.556 Acetabular reamer 3.14.266

**ASSEMBLY:** Put the plastic envelope over the shaft. Attach the acetabular reamer to the shaft.

**DISASSEMBLY:** Remove the acetabular reamer and the plastic envelope from the shaft.



**CCN Cup impactor** 55.02.4001 **CCN Trial cup** 55.02.0540–55.02.0560

**ASSEMBLY:** Screw the appropriate trial cup on the cup impactor.

**DISASSEMBLY:** Unscrew the trial cup from the cup impactor.



**CCN Cup impactor** 55.02.4001 **CCN Impactor top** 55.02.4022

**ASSEMBLY:** Screw the impactor top on the cup impactor.

**DISASSEMBLY**: Unscrew the impactor top from the cup impactor.





Coupling handle 55.02.4205 Seating heads 55.02.0310–55.02.0314 Centring heads 55.02.0316–55.02.0319

**ASSEMBLY:** Screw the appropriate seating head on the coupling handle. Attach the corresponding centring head to the seating head.

**DISASSEMBLY:** Detach the centring head from the seating head. Unscrew the seating head from the coupling head.



Handle with gripping head 55.02.0521–55.02.0522 Rod with impact plate 55.02.0532 Centring heads 55.02.0316–55.02.0319

**ASSEMBLY:** Insert the rod with impact plate in the handle with gripping head until it engages. Attach the corresponding centring head.

**DISASSEMBLY:** Detach the centring head. Activate the disengaging button on the handle and pull out the rod with impact plate.





Coupling handle 55.02.4205 Shell expanders 55.02.4346–55.02.4370

**ASSEMBLY:** Screw the appropriate shell expander on the coupling handle.

**DISASSEMBLY:** Unscrew the shell expander and remove it from the coupling handle.





**Positioner** 55.02.4201 **Threaded wheel** 55.02.4204 **Shell positioners** 55.02.4246–55.02.4270 **Spacing sleeve** 55.02.4202 **Locking sleeve** 55.02.4200

**ASSEMBLY**: Screw the threaded wheel on the positioner and attach the spacing sleeve. Attach the appropriate shell positioner to the positioner. Attach the locking sleeve.

**DISASSEMBLY**: Remove the shell positione, the spacing sleeve as well as the locking sleeve. Unscrew the threaded wheel.



### Positioning guide 45° 55.02.5531 Rod for positioning guide 55.02.0109

**ASSEMBLY**: Screw the rod on the positioning guide.

**DISASSEMBLY**: Unscrew the rod from the positioning guide.







Adaptor for acetabular reamers 5244.00.4 Handle with quick coupling 58.02.4008 Acetabular reamers 5442.00.4 to 5472.00.4

**ASSEMBLY**: Insert the acetabular reamer. Pull the coupling towards the end of the handle. Attach the adaptor.

**DISASSEMBLY**: Pull the coupling towards the handle. Remove the adaptor and the acetabilar reamer.

# Adaptor for acetabular reamers 5244.00.4

**ASSEMBLY**: Remove the white plastic cover from the adaptor. Disassemble the spring fixture according to the inscription on the adaptor.

**DISASSEMBLY**: Assemble the spring fixture. Put the plastic cover over the adaptor.

**NOTE:** Observe the instructions on the instrument.











**New instruments** 

Chana Z adaptor 58.02.0000

**ASSEMBLY**: Assemble the instrument. **Fig. 1a – 1b**. Press the ring and turn it. Telescope the two parts of the instruments. Press the ring and turn it. **Fig. 0**.

DISASSEMBLY: Press the back end of the ring and turn it. Fig. 0.Pull out the front part of the instrument.The instrument now consists of two parts.Press the ring, turn and disassemble the instrument. Fig. 1a – 1b.

**NOTE:** Follow the instructions on the instrument.



Flexible shaft 3.14.545 Drill bit, 3.1mm OD 3.14.254

**ASSEMBLY**: Attach the drill bit to the flexible shaft.

**DISASSEMBLY**: Detach the drill bit from the flexible shaft.





Flexible shaft 3.14.545 T-handle with quick coupling 3.40.502 Tap, 3.5mm 3.14.253

**ASSEMBLY**: Attach the flexible shaft to the T-handle. Attach the tap to the flexible shaft.

**DISASSEMBLY**: Detach the tap from the flexible shaft and the latter from the T-handle.





Hexagonal screwdriver 58.02.4005

**ASSEMBLY:** Attach the attachment.

**DISASSEMBLY**: Detach the attachment.





All of or a part of the instruments are optional

Handle with gripping head 55.02.0520 Rod with impact plate 55.02.0532 Centring heads 55.02.0335 (28 OD), 55.02.0308 (32 OD), 55.02.0309 (36 OD)

**ASSEMBLY**: Insert the rod with impact plate in the handle. Attach the centring head.

**DISASSEMBLY:** Remove the centring head as well as the rod with impact plate.



All of or a part of the instruments are optional

Aiming device, straight 55.02.0703 or Aiming device, curved 55.02.0600 Drill guide / trial cup 55.02.0601 to 55.02.0615 Positioning guide 55.02.0000 Rod 55.02.0109

**ASSEMBLY**: Attach the trial cup. Screw the positioning guide on the aiming device. Screw the rod on the aiming device.

**DISASSEMBLY:** Unscrew the rod. Unscrew the aiming device. Remove the trial cup.





All of or a part of the instruments are optional

Cup impactor, curved 55.02.0702 Top for impactor 55.02.4101 (28 OD), 55.02.4102 (32 OD)

**ASSEMBLY**: Screw the top on the cup impactor.

**DISASSEMBLY:** Unscrew the top of the cup impactor.

**NOTE:** The cup impactor is optional.





T-handle with quick coupling 3.40.502 Flexible shaft 3.14.545 Tap, 3.5mm OD 3.14.253

**ASSEMBLY**: Insert the flexible shaft in the T-handle. Attach the tap to the flexible shaft.

**DISASSEMBLY:** Remove the tap from the flexible shaft. Remove the flexible shaft from the T-handle.



**ASSEMBLY**: Push the gauge in the holder.

**DISASSEMBLY:** Remove the gauge from the holder.







### Hexagonal screwdriver 58.02.4005

**ASSEMBLY**: Attach the top.

**DISASSEMBLY**: Detach the top.





**Positioning guide** 55.02.5531 **Rod** 55.02.0109

**ASSEMBLY**: Screw the rod to the positioning guide.

**DISASSEMBLY:** Unscrew the rod from the positioning guide.









**Breastplate** 5255.00.1 **Ratchet wrench** 5251.00 **Introducer** 5720.00.2

**ASSEMBLY** of the introducer: Screw onto the threaded peg in the floor of the cup. Attach the sleeve. Take care to lock the two pegs on the front side in the recesses of the cup.

Screw the threaded rod in the instrument. Mount the ratchet wrench (2) and the breastplate (1).

**DISASSEMBLY:** Remove the breastplate (1). Remove the ratchet wrench for Rotacup (2).

Introducer: Remove the threaded rod and the sleeve. Remove the threaded peg from the implanted shell (4).





Handle for inlay impactor 5234.00 Top for inlay impactor 5236.00 (28 OD), 5235.00 (32 OD), 5253.00 (36 OD)

**ASSEMBLY**: Screw the top to the handle.

**DISASSEMBLY:** Unscrew the top from the handle.





Flexible shaft 5502.00.2 Drill bit, 3.2mm OD, long 5501.00.2

**ASSEMBLY**: Attach the drill bit to the flexible shaft.

**DISASSEMBLY:** Detach the drill bit from the flexible shaft.







Impactor 501.04.04.00.1 Aiming device 501.04.03.00.1 Threaded bolt, length 130mm 501.04.03.03.0 Threaded bolt, length 42mm 501.04.03.06.0

**ASSEMBLY**: Screw the threaded bolt to the aiming device. Attach the aiming device to the impactor.

**DISASSEMBLY:** Remove the aiming device from the impactor. Unscrew the threaded bolt from the aiming device.





**New instruments** 

### seleXys Cup impactor for MIS 58.02.0030

**ASSEMBLY**: Screw the head to the front end of the instrument. Insert the screw with hinges in the aperture at the front end of the instrument. Snapin the screw in the middle of the instrument and engage it in the back end of the instrument.

**DISASSEMBLY:** Disengage the snap-in locking device from the back end of the instrument. Disengage the screw from the middle of the instrument and pull it out from the aperture at the front end of the instrument. Unscrew the head on the front end of the instrument.

**NOTE:** Observe the instructions on the instrument.





**CBC-T rasps / trial prostheses** 3.30.336T–3.30.348T **Trial heads, standard** 3.30.100–3.30.105 **CBC trial heads, lateral** 3.30.170–3.30.175

**ASSEMBLY**: Attach the desired trial head to the rasp / trial prosthesis.

**DISASSEMBLY:** Remove the trial head from the rasp / trial prosthesis.





The instruments or a part of them are optional

Impact handle for modular rasps 51.02.4122 CBC-T rasps / trial prostheses 3.30.336T–3.30.348T Crossbar, long 3.30.552

**ASSEMBLY**: Press the lever at the impact handle. Attach the rasp / trial prosthesis to the handle.

**DISASSEMBLY:** Press the lever at the impact handle. Detach the rasp / trial prosthesis from the handle.

**NOTE:** The long crossbar is optional.



### Threaded rod for positioner 56.02.4011 Guide sleeve for positioner 56.02.4012 Handle for positioner 56.02.4013

**ASSEMBLY**: Screw the handle to the guide sleeve. Telescope the threaded rod and the guide sleeve.

**DISASSEMBLY:** Unscrew the handle from the guide sleeve. Remove the threaded rod from the guide sleeve.







### Impactor / extractor 3.30.548 Ball top for impactor / extractor 56.02.4014

**ASSEMBLY**: Attach the ball top to the impactor / extractor.

**DISASSEMBLY:** Detach the ball top from the impactor / extractor.





CBH rasp / trial prosthesis 56.02.2100 Slide hammer 56.02.4001 Adapter with rocker 56.02.4002

**ASSEMBLY**: Press the rocker. Insert the rasp / trial prosthesis. Attach the adapter to the slide hammer.

**DISASSEMBLY:** Press the rocker. Remove the rasp / trial prosthesis. Detach the adapter from the slide hammer.

**NOTE:** The edges of the rasp are sharp.




CBH rasp / trial prosthesis 56.02.2101 Trial cone, standard 56.02.2213 Trial cone, lateral 56.02.2214 Trial head 3.30.100

**ASSEMBLY**: Insert the trial cone in the rasp / trial prosthesis. Attach the trial head to the trial cone.

**DISASSEMBLY:** Remove the trial cone from the rasp / trial prosthesis. Detach the trial head from the trial cone.

**NOTE:** The grates of the rasp are sharp-edged.





The instruments or a part of them are optional

CBH rasp / trial prosthesis 56.02.2100 Adapter with rocker 56.02.4002 Crossbar, long 3.30.552

**ASSEMBLY**: Press the rocker of the adapter. Attach the rasp / trial prosthesis to the adapter.

**DISASSEMBLY:** Press the rocker of the adapter. Detach the rasp / trial prosthesis from the adapter.

**NOTE:** The grates of the rasp are sharp-edged. The long crossbar is optional.



Cleaning of CBH rasp / trial prosthesis

CBH rasp / trial prosthesis 56.02.2100

**NOTE:** The raps as well as the drainage hole have to be free from tissues, bone chips and blood. It has to be possible to look through the drainage hole. If necessary, push a wire of up to 1.5mm OD through the hole.



Inserter / extractor 56.02.4006 Ram 56.02.4005 Crossbar, long 3.30.552

**ASSEMBLY**: Press the button on the ram. Attach the ram to the inserter / extractor.

**DISASSEMBLY:** Press the button on the ram. Detach the ram from the inserter / extractor.



Head impactor 3.30.535 Plastic top for head impactor 3.30.536

**ASSEMBLY**: Screw the plastic top on the head impactor.

**DISASSEMBLY:** Unscrew the plastic top from the head impactor.



Handle with quick coupling 3.40.550 Conical reamer 56.02.2314

**ASSEMBLY**: Pull the quick coupling towards the handle. Insert the conical reamer in the handle.

**DISASSEMBLY:** Pull the quick coupling towards the handle. Remove the conical reamer from the handle.





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Impact handle for modular rasps 51.02.4122 Modular CCA rasp 3.30.353

**ASSEMBLY**: Press the lever at the handle. Attach the rasp to the handle.

**DISASSEMBLY:** Press the lever at the handle. Detach the rasp from the handle.

Measuring impactor 52.02.4000 Threaded rod for measuring impactor 52.02.4001 Measuring star 52.02.0012

**ASSEMBLY**: Telescope the measuring impactor and the threaded rod. Screw the measuring star to the threaded rod.

**DISASSEMBLY:** Unscrew the measuring star from the threaded rod. Pull out the threaded rod.



CCA rasp, modular 3.30.353 Trial head, lateral (CCA, Cemira) 54.02.1201

**ASSEMBLY**: Attach the trial head to the rasp.

**DISASSEMBLY:** Detach the trial head from the rasp.





Head impactor 3.30.535 Plastic top for the head impactor 3.30.536

**ASSEMBLY**: Screw the plastic top to the head impactor.

**DISASSEMBLY:** Unscrew the plastic top from the head impactor.





The instruments or a part of them are optional

Handle with quick coupling 58.02.4008 or 3.40.550 Conical bone plug cutter 3.30.321

**ASSEMBLY**: Pull the quick coupling towards the handle. Attach the conical bone plug cutter to the handle.

**DISASSEMBLY:** Pull the quick coupling towards the handle. Detach the conical bone plug cutter from the handle.

**NOTE:** The conical bone plug cutter is optional.



CCM trial prosthesis, lateral 56.02.2514 Trial head 3.30.100

**ASSEMBLY**: Attach the trial head to the trial prosthesis.

**DISASSEMBLY:** Detach the trial head from the trial prosthesis.



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## Cemira rasp / trial prosthesis, standard 56.02.2506 Trial head, lateral (CCA, Cemira) 54.02.1201

**ASSEMBLY**: Attach the trial head to the rasp / trial prosthesis.

**DISASSEMBLY:** Detach the trial head from the rasp / trial prosthesis.





Head impactor 3.30.535 Plastic top for head impactor 3.30.536

**ASSEMBLY**: Screw the plastic top to the head impactor.

**DISASSEMBLY:** Unscrew the plastic top from the head impactor.





The instruments or a part of them are optional

Impact handle for modular rasps 51.02.4122 Cemira rasp / trial prosthesis, dysplasia 56.02.2501 Crossbar, long 3.30.552

**ASSEMBLY**: Press the lever at the handle. Insert the rasp / trial prosthesis in the handle.

**DISASSEMBLY:** Press the lever at the handle. Remove the rasp / trial prosthesis from the handle.

**NOTE:** The long crossbar is optional.





The instruments or a part of them are optional

Handle with quick coupling 3.40.550 or 58.02.4008 Conical bone plug cutter 3.30.321

**ASSEMBLY**: Pull the quick coupling towards the handle Attach the handle to the conical bone plug cutter.

**DISASSEMBLY:** Pull the quick coupling towards the handle. Detach the handle from the conical bone plug cutter.

**NOTE:** The conocal bone plug cutter and the handle with quick coupling are optional.



**Flexible reamers** 56.02.6184–56.02.6194 **T-handle with quick coupling** 56.02.6182

**ASSEMBLY**: Attach the flexible reamer to the T-handle.

**DISASSEMBLY:** Detach the flexible reamer from the T-handle.



Impactor 56.02.6035

**ASSEMBLY**: Screw the stem fixation to the handle.

**DISASSEMBLY:** Unscrew the stem fixation from the handle.







## Impact handle for modular Centris rasps 56.02.6001 Modular Centris rasps 56.02.6130–56.02.6141

**ASSEMBLY**: Open the lever of the impactor. Attach the rasp to the impactor. Close the lever.

**DISASSEMBLY:** Open the lever of the impactor. Detach the rasp from the impactor. Close the lever.





Head impactor 56.02.6030 Tops for head impactor 56.02.6031–56.02.6032

**ASSEMBLY**: Screw the top for head impactor to the head impactor.

**DISASSEMBLY:** Unscrew the top of the head impactor.



**Centris cancellous bone reamer** 56.02.6110–56.02.6115 **Teflon holder for cancellous bone reamer** 56.02.6116

**ASSEMBLY**: Pull the teflon holder over the rod of the cancellous bone reamer.

DISASSEMBLY: Remove the teflon holder.





Fullfix rasp / trial prosthesis 52.02.2002 Fullfix trial head, standard 52.02.0328

**ASSEMBLY**: Attach the trial head to the rasp / trial prosthesis.

**DISASSEMBLY:** Remove the trial head.





Fullfix rasp / trial prosthesis 52.02.2002 Impact handle for modular rasps 51.02.4122 Crossbar, long 3.30.552

**ASSEMBLY**: Press the lever at the handle. Attach the rasp / trial prosthesis to the handle.

**DISASSEMBLY:** Press the lever at the handle. Detach the rasp / trial prosthesis from the handle.



Head impactor 3.30.535 Plastic top for head impactor 3.30.536

**ASSEMBLY**: Screw the plastic top to the head impactor.

**DISASSEMBLY:** Unscrew the plastic top from the head impactor.



Measuring star 52.02.0005 Measuring impactor 52.02.4000 Threaded rod for measuring impactor 52.02.4001

**ASSEMBLY**: Push the threaded rod onto the measuring impactor. Screw the measuring star and the threaded rod onto the measuring impactor.

**DISASSEMBLY:** Unscrew the measuring star from the measuring impactor. Remove the threaded rod.





The instruments or a part of them are optional

Handle with quick coupling 3.40.550 or 58.02.4008 Conical bone plug cutter 3.30.321

**ASSEMBLY**: Pull the quick coupling towards the handle. Insert the conical bone plug cutter in the handle.

**DISASSEMBLY:** Pull the quick coupling towards the handle. Remove the conical bone plug cutter from the handle.

**NOTE:** The conical bone plug cutter and the handle with quick coupling are optional.





Stem extractor / slide hammer 5220.00.51

**ASSEMBLY**: Screw the handle to the stem extractor.

**DISASSEMBLY:** Unscrew the handle from the stem extractor.



# Stem extractor / counter-sleeve 5220.00.52 Stem extractor / M6 threaded rod 5220.00.53

**ASSEMBLY**: Telescope the counter-sleeve and the threaded M6 rod.

**DISASSEMBLY:** Remove the threaded M6 rod from the countersleeve.



**GSS-CL, GSS-CO, GSS rasp** 5170.00 **Trial heads** 1163.12.4 - 1179.12.3

**ASSEMBLY**: Attach the respective trial head to the rasp.

DISASSEMBLY: Remove the trial head.



**Stem impactor** 5217.00.2

**ASSEMBLY**: Press the plastic insert in the hole. Screw the stem impactor to the guide.

**DISASSEMBLY:** Unscrew the stem impactor. Compress the plastic insert and pull it out.





Handle for impactor 5223.00 Impactor top 5229.00

**ASSEMBLY**: Screw the impactor top to the handle.

**DISASSEMBLY:** Unscrew the impactor top from the handle.





Impact handle for modular twinSys rasp 56.02.6201 Modular twinSys rasps 56.02.6209–56.02.6216

**ASSEMBLY**: Open the lever on the impact handle. Attach the modular rasp to the handle. Close the lever.

**DISASSEMBLY:** Open the lever on the impact handle. Detach the modular rasp from the handle. Close the lever.

Modular twinSys rasps 56.02.6209–56.02.6216 Trial cones 56.02.6206–56.02.6027 Trial heads 56.02.6019–56.02.6021 Alternative trial heads 3.30.100–3.30.105

**ASSEMBLY**: Attach the trial cone to the modular rasp. Attach the trial head to the trial cone.

**DISASSEMBLY:** Detach the trial head from the trial cone and the trial cone from the modular rasp.







Head impactor 56.02.6030 Top for head impactor 56.02.6031–56.02.6032

**ASSEMBLY**: Screw the top to the head impactor.

**DISASSEMBLY:** Unscrew the top from the head impactor.





MIS modular twinSys impactor 58.02.1062

ASSEMBLY: Open the lever. Insert the rasp. Close the lever.DISASSEMBLY: Open the lever. Remove the rasp. Close the lever.NOTE: Follow the instructions on the instrument.







## Stem positioner with screw holder 56.02.6204

**ASSEMBLY**: Fasten the screw (2) in the screw holder (3) of the stem positioner.

Fit the rod (1) into the sleeve. Fit the white synthetic ring (4) and the screw holder (3) onto the rod, one after the other.

**DISASSEMBLY:** Use the hexagonal-head screwdriver (size: 2mm) to unscrew the screw from the stem positioner. Pull the rod out of the white synthetic ring, wheel and sleeve.



Hexagonal screwdriver 504.99.04.00.0 Push-on sleeve for trial head 60.02.0001

**ASSEMBLY:** Attach the push-on sleeve to the hexagonal screwdriver.

**DISASSEMBLY:** Detach the push-on sleeve from the hexagonal screwdriver.

Medullary reamer 502.06.10.06.0; 502.06.10.09.0; 502.06.10.12.0 Holder for resection guide 502.06.01.10.1 Alignment rod 502.06.02.07.0 Cutting block 502.06.01.05.0 Glider for resection guide 502.06.01.03.0 Screw for resection guide 502.06.01.06.0

**ASSEMBLY:** Use the screw for resection guide to screw the glider to the cutting block. **Fig. 2a–2b** 

Attach the holder for resection guide to the medullary reamer and fix it with the alignment rod. **Fig. 1a–1b** 

Attach the glider with the cutting block to the holder.

**DISASSEMBLY:** Detach the glider from the holder.

Unscrew the alignment rod and remove the holder from the medullary reamer. **Fig. 1a–1b** 

Unscrew the screw and detach the glider from the cutting block. Fig. 2a–2b















Rasp 502.06.05.06.0; 502.06.05.07.0; 502.06.05.09.0; 502.06.05.10.0; 502.06.05.12.0; 502.06.05.13.0; 502.06.05.15.0 Sleeve for postioner 502.06.02.11.1 Rod for postioner 502.06.02.12.1 Alignment rod 502.06.02.07

**ASSEMBLY:** Introduce the rod into the sleeve. Mount the rasp and screw it in with the rod. Screw the alignment rod into the thread.

**DISASSEMBLY:** Remove the alignment rod. Unscrew the rasp from the sleeve. Remove the rod from the sleeve.



Assembly device 502.06.15.01.0 Screw for assembly device 504.09.01.08.0

**ASSEMBLY:** Screw the screw to the assembly device.

**DISASSEMBLY:** Unscrew the screw from the assembly device.





**Glenoid drill bit** 502.08.02.00.0 **Sleeve handle** 502.08.09.00.0

ASSEMBLY: Attach the sleeve handle to the glenoid drill bit.

**DISASSEMBLY:** Detach the sleeve handle from the drill bit.



Rasp 502.06.05.06.0; 502.06.05.07.0; 502.06.05.09.0; 502.06.05.10.0; 502.06.05.12.0; 502.06.05.13.0; 502.06.05.15.0 Rasp cone 502.06.06.01.0 Rasp screw 502.06.06.02.0

**ASSEMBLY:** Attach the cone to the rasp. Fix the cone with the screw.

**DISASSEMBLY:** Unscrew the screw. Detach the cone from the rasp.





**Gleniod reamer** 502.08.01.36.0 **Sleeve handle** 502.08.09.00.0

**ASSEMBLY:** Attach the sleeve handle to the glenoid reamer.

**DISASSEMBLY:** Detach the sleeve handle from the glenoid reamer.









Handle 5241.00.3 Medullary reamer 502.06.10.06.0; 502.06.10.09.0; 502.06.10.12.0

**ASSEMBLY:** Click the medullary reamer into place.

**DISASSEMBLY:** Pull the quick coupling towards the handle. Remove the medullary reamer.





## Cutting block 502.06.01.05.0 Alignment rod 502.06.02.07.0

**ASSEMBLY:** Secure the alignment rod to the cutting block.

**DISASSEMBLY:** Remove the alignment rod.



Fracture Inverse trial body 61.34.0029 Articula Fracture Inverse trial body 61.34.0030 Holding/rotation rod 60.02.2034

**ASSEMBLY:** Screw the holding/rotation rod onto the trial body.

**DISASSEMBLY:** Remove the holding/rotation rod from the trial body.



**Drill-guide locking screw** 61.34.0014 **Core-hole drill bit, 2.5** 61.34.0022 **Drill-guide lag screws** 61.34.0020 **Core-hole drill bit, 3.2** 61.34.0021

**ASSEMBLY:** Push the drill bit through the appropriate drill guide.

DISASSEMBLY: Pull the drill bit out of the drill guide.



**Rasp** 60.02.2003 – 60.02.2009 **Cover disc** 61.34.0008

**ASSEMBLY:** Screw the cover disc onto the rasp.

**DISASSEMBLY:** Remove the cover disc from the rasp.





Metaglene drill guide 61.34.0001 Holding/rotation rod 60.02.2034

**ASSEMBLY:** Screw the rotation rod into the thread.

**DISASSEMBLY:** Remove the rotation rod from the drill guide.





Impactor 5223.00 Inlay impactor 60.02.2026 – 60.02.2028 Metaglene impactor 61.34.0009 Inlay revision adaptor 61.34.0017

**ASSEMBLY:** Screw the various components onto the impactor.

**DISASSEMBLY:** Remove the components from the impactor.









## Depth gauge 61.34.0019

**ASSEMBLY:** Push the measuring rod through the sleeve (Fig. 1b). Position the spacer sleeve on the round end (Fig. 1a). Tighten the fixing ring by turning it.

**DISASSEMBLY:** Remove the fixing ring (Fig. 1a). Remove the spacer sleeve (Fig. 1b). Pull the measuring rod through the sleeve (Fig. 1c).



Positioner 60.02.2010 Screw for positioner 60.02.2011 Alignment rod 502.06.02.07.0 Rasp 60.02.2003 – 60.02.2009

**ASSEMBLY:** Place the positioner on the rasp. Tighten with the screw (Fig. 1a). Screw the alignment rod to the preferred angular thread.

**DISASSEMBLY:** Detach the alignment rod from the positioner (Fig. 1a).

Unscrew the screw from the positioner and remove the rasp (Fig. 1b). Remove the screw from the positioner (Fig. 1c).







**Positioner** 61.34.0097 **Impactor** 61.34.0091 – 61.34.0096

**ASSEMBLY:** Screw the impactor onto the positioner.

**DISASSEMBLY:** Remove the impactor from the positioner.



**Impactor** 61.34.0091 – 61.34.0096 **Trial cone** 61.34.0123

**ASSEMBLY:** Screw the trial cone onto the impactor.

**DISASSEMBLY:** Remove the trial cone from the impactor.







Handle with quick coupling 3.40.503 Cup positioner 3.25.501

**ASSEMBLY:** Activate the quick coupling. Insert the cup positioner in the handle.

**DISASSEMBLY:** Activate the quick coupling. Remove the cup positioner from the handle.





Handle with quick coupling 3.40.503 Drill bit, 3.2mm OD 3.40.279

**ASSEMBLY:** Activate the quick coupling. Insert the drill bit in the handle.

**DISASSEMBLY:** Activate the quick coupling. Remove the drill bit from the handle.





Handle with quick coupling 3.40.503 Conical reamer 3.25.250

**ASSEMBLY:** Activate the quick coupling. Insert the conical reamer in the handle.

**DISASSEMBLY:** Activate the quick coupling. Remove the conical reamer from the handle.





Handle with quick coupling 3.40.503 Countersink reamer 3.25.270

**ASSEMBLY:** Activate the quick coupling. Insert the countersink reamer in the handle.

**DISASSEMBLY:** Activate the quick coupling. Remove the countersink reamer from the handle.









Handle with quick coupling 3.40.503 Chuck with dental coupling 3.40.505 Screwdriver shaft for dental coupling 3.25.515 (fig. 1) Conical straight-edged burr, 2mm OD 3.40.331 (fig. 2) Drill bit, 1.7mm OD 3.25.282 (fig. 3)

**ASSEMBLY:** Activate the quick coupling. Attach the chuck. Draw the dental coupling in direction of the handle. Insert the drill bit in the chuck.

**DISASSEMBLY:** Draw the dental coupling in direction of the handle. Remove the drill bit from the chuck. Activate the quick coupling. Remove the chuck from the handle.

**NOTE:** We used the drill bit as an example to describe the assembly and the disassembly. The assembly and the disassembly are the same for the screwdriver shaft, the conical straight-egged burr and the drill bit.





**Trial prosthesis, proximal standard, long** 3.25.057 **Trial prosthesis, distal standard** 3.25.062

**ASSEMBLY:** Insert the proximal trial prosthesis in the distal one.

**DISASSEMBLY:** Remove the proximal trial prosthesis from the distal one.

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## General procedure for the adjustment and calibration of Mathys instruments

Only Mathys Ltd Bettlach may repair, adjust and calibrate the Mathys instruments. In case of unauthorised interventions by third persons, we will decline any guarantee claims.



## **Drill bits**

#### POSSIBLE DAMAGES:

• The drill bit is blunt, bent or broken and rotates off-centre. It can knock against the sides of the guide and possibly break.

#### PREVENTIVE MEASURES:

- Avoid drilling into metal.
- Always use a drill guide.
- Always ensure that the machine is stationary when inserting or removing a drill bit.
- Never tilt the machine while drilling.
- Handle and store the drill bits carefully.
- Always remove the drill bit from the machine when not in use.

#### **RECOMMENDATIONS:**

- Replace the broken drill bits. Do not resharpen them.
- It is advisable to replace the blunt drill bits.
- Replace the bent drill bits. Do not attempt to redress them.



## Medullary reaming heads

## POSSIBLE DAMAGES:

- Damaged cutting edges.
- The corners of the cutting edge are broken.
- The reamer is blunt, bent or broken and rotates off-centre. It can knock against the sides of the guide and possibly break.

#### PREVENTIVE MEASURES:

- Avoid drilling into instruments or implants.
- Use the reaming heads only with the correct flexible shaft. Check the diameter.
- Ream in 0.5mm increments.
- Position the reaming heads carefully.

## **RECOMMENDATIONS**:

• Replace the damaged or blunt reaming heads. Resharpening is not possible as it reduces the diameter.





## Reamers

#### POSSIBLE DAMAGES:

- The conical cutting edge is damaged or blunt.
- The centring pin is damaged.

#### PREVENTIVE MEASURES:

- Handle the instruments carefully, i.e. place them down carefully; do not throw them down.
- Do not guide the instrument concentrically during use.

#### **RECOMMENDATIONS:**

- Resharpening is sometimes possible. Consult your Mathys representative.
- Repairs are sometimes possible. Consult your Mathys representative. Replace the badly damaged instruments.



## **Hollow reamers**

#### POSSIBLE DAMAGES:

- The conical cutting edge is damaged or blunt.
- The centring pin is damaged.

#### PREVENTIVE MEASURES:

- Handle the instruments carefully, i.e. place them down carefully; do not throw them down.
- Do not guide the instrument concentrically during use.

#### **RECOMMENDATIONS:**

- Resharpening is sometimes possible. Consult your Mathys representative.
- Repairs are sometimes possible. Consult your Mathys representative. Replace the badly damaged instruments.







## Taps

## POSSIBLE DAMAGES:

- The thread is damaged. The teeth are broken or blunt.
- The tap is bent or twisted.
- The (quick) coupling end is damaged.

## PREVENTIVE MEASURES:

- Always use a tissue-protecting sleeve.
- Avoid forced turning of the tap in the bone.
- Remove the bone chips from the hole: two turns clockwise, one half-turn anticlockwise.
- After each application, remove the bone chips from the grooves of the tap with a sharp instrument.
- Place a protective cap over the tap when it is not in use.
- Use only well fitting (quick) coupling ends.

## **RECOMMENDATIONS**:

- Replace the damaged instrument. Resharpening is not possible.
- Replace the damaged instrument.



# Drill guides

## POSSIBLE DAMAGES:

- The teeth are damaged or worn.
- The guide sleeve or the cylinder is bent and blocked.

## PREVENTIVE MEASURES:

- Do not use the sleeve on metal (plates).
- Avoid a forced insertion of the instrument into hard bone.
- Handle the instrument carefully.
- Avoid drilling into the instrument. Insert the drill bit until it contacts the bone when the machine is stationary. Do not tilt.
- Do not use forceps to hold the instrument
- Thoroughly clean the cylinder and the guide sleeve.

## **RECOMMENDATIONS**:

- Replace the instrument.
- Slightly deformed sleeves can be repaired. Consult your Mathys representative. Replace a badly damaged sleeve.



## **Quick coupling**

#### POSSIBLE DAMAGES:

- The mobility of the coupling piece is impaired or restricted.
- The instrument cannot be fitted.

## PREVENTIVE MEASURES:

- Carefully clean and rinse the quick coupling pieces externally and internally.
- Blow out the instrument with the air jet and compressed air.
- Use a lubricant.

## **RECOMMENDATIONS**:

• Consult your Mathys representative if the mobility is still impaired after the lubrication.



## Instruments with spring-loaded bearing

## POSSIBLE DAMAGES:

- The ball is jammed.
- The ball is lost.

## PREVENTIVE MEASURES:

- Clean and rinse the instrument thoroughly.
- Dismantle the instrument for cleaning.
- Lubricate it after each cleaning process.
- Take care of the individual components during cleaning.

#### **RECOMMENDATIONS:**

- Push in the jammed ball and apply a lubricant. If unsuccessful, replace the instrument.
- Fit a new ball.



## **Hexagonal screwdriver**

#### POSSIBLE DAMAGES:

• The hexagon is damaged.

#### PREVENTIVE MEASURES:

- Always push the hexagonal or cruciform end of the screwdriver fully into the screw head.
- Use only screwdrivers that fit the screw heads exactly.
- Avoid using excessive force (e.g. tightening instead of undoing).
- Clean the drive thoroughly.

## **RECOMMENDATIONS:**

• Replace the damaged screwdriver. Otherwise, tightening or undoing is hampered or impossible.



## Instruments with cams

## POSSIBLE DAMAGES:

• The cams are bent, twisted or broken.

## PREVENTIVE MEASURES:

- Insert the cams accurately into the grooves.
- Do not subject the instrument to excessive force.
- Only turn the instrument when the cams have been fitted properly in the grooves.

## **RECOMMENDATIONS**:

• Replace a badly damaged instrument.



## Sleeves

## POSSIBLE DAMAGES:

• The sleeve is bent or blocked.

#### PREVENTIVE MEASURES:

- Do not subject the instrument to excessive force.
- Do not use the instrument for purposes other than those intended, e.g. impacting.
- Thoroughly clean the inside of the sleeve or shaft.

## **RECOMMENDATIONS:**

• Consult your Mathys representative in case of slightly bent instruments. Replace badly damaged instruments.





# Flexible reaming shaft

## POSSIBLE DAMAGES:

- The spirals or the shaft are irregular or kinked.
- The connector ends are worn.
- The soldering point is damaged.
- The shaft is twisted and coiled.
- The shaft is contaminated with drilling chips.

## PREVENTIVE MEASURES:

- Never reverse a flexible shaft when reaming.
- Do not use excessive force while reaming.
- Ream in increments of 0.5mm. Change the shaft, as required.
- Always use a guide rod for reaming.
- Do not apply excessive force to the reaming shaft.
- During surgery, flush the shaft directly after use with a Ringer-lactate solution or a physiological saline one. Never leave the shaft submerged in the solution.
- At the conclusion of the surgery, clean the shaft by hand under water with a water jet, nozzle and detergent. Close the distal opening with a finger to force the solution through the wire walls. During cleaning, bend the shaft to and fro. Then dry with the air jet.

#### **RECOMMENDATIONS**:

- Some repairs are possible. Consult your Mathys representative. Replace the damaged instruments.
- Dissolve the incrustations with a suitable agent. Clean the instrument thoroughly (see preventive measures).



# Threaded instruments

#### POSSIBLE DAMAGES:

- Difficulty in tightening and unscrewing.
- The threads are damaged.

#### PREVENTIVE MEASURES:

- Lubricate regularly.
- Clean the threads carefully. Always fully unscrew the screws.
- Do not use excessive force on the screws.

## **RECOMMENDATIONS:**

- Remove any incrustations with a suitable detergent, carefully clean the instrument and apply a lubricant.
- Consult your Mathys representative in case of jammed screws.







## Instruments with threaded connections

## POSSIBLE DAMAGES:

- The threads are damaged, stripped or destroyed by hammer blows.
- Difficulty in tightening and unscrewing.

#### PREVENTIVE MEASURES:

- Always tighten the threaded connections fully before using the instrument.
- Do not use excessive force.
- Do not grasp at the thread with forceps.
- Clean the threads carefully and apply a lubricant.
- Do not grasp at the thread with forceps.

## **RECOMMENDATIONS:**

- Repair is sometimes possible. Consult your Mathys representative. Replace the instruments with damaged threads.
- Remove any incrustations with a suitable detergent. Then carefully clean the instrument and apply a lubricant.





## Instruments with plastic parts

## POSSIBLE DAMAGES:

- Cracks or broken-off fragments.
- The surface is brittle, soft or has a burnt appearance.
- The handle sits loosely on the shaft.

#### PREVENTIVE MEASURES:

- Do not sterilize the instrument in hot air.
- Avoid using strong concentrations of disinfectants or detergents.
- Do not drop the instrument.

## RECOMMENDATIONS:

- Replace the damaged parts, consult your Mathys representative.
- Replace the damaged handles, consult your Mathys representative.


# **Rubber band**

## POSSIBLE DAMAGES:

- Cracks, broken-off parts
- The surface is brittle.

#### PREVENTIVE MEASURES:

- Do not sterilize the rubber band in hot air.
- Avoid using strong concentrations of disinfectants or detergents.

## **RECOMMENDATIONS**:

• Replace the damaged rubber bands. Consult your Mathys representative.



## Instruments with holding arms

## POSSIBLE DAMAGES:

- The holding arms are twisted or buckled.
- The ends are damaged.

#### PREVENTIVE MEASURES:

- Do not overstrain the instruments.
- Do not use the instrument until it is properly assembled.

## **RECOMMENDATIONS:**

• Replace the damaged instrument.





# Soft tissue rectractors

#### POSSIBLE DAMAGES:

• The retractor has been accidentally pierced, bent or has a sharp burr.

#### PREVENTIVE MEASURES:

• Do not overstrain the soft tissue retractor, do not drill into it.

#### **RECOMMENDATIONS:**

• Some repairs are possible. Consult your Mathys representative.



#### **Bone retractors**

#### POSSIBLE DAMAGES:

• The retractor has been accidentally drilled into, bent, or has a sharp burr.

#### PREVENTIVE MEASURES:

• Do not overstrain the bone retractor, do not drill into it.

#### **RECOMMENDATIONS**:

• Some repairs are possible. Consult your Mathys representative.



## Bone hooks

#### POSSIBLE DAMAGES:

• The tips are deformed or broken off.

#### PREVENTIVE MEASURES:

• Do not overstrain the bone hooks.

#### **RECOMMENDATIONS:**

• Some repairs are possible. Consult your Mathys representative.





# Scissors

#### POSSIBLE DAMAGES:

- Some scissors are scratched, worn or blunt.
- The scissors are difficult to open or to close.

#### PREVENTIVE MEASURES:

- Do not apply excessive force to the scissors. A certain wear has to be expected in the course of time.
- Do not apply excessive force to the scissors.
- Lubricate the hinge.

## **RECOMMENDATIONS**:

- Repair is possible provided the scissors are not too badly damaged.
- Consult your Mathys representative.



# **Toothed curettes**

#### POSSIBLE DAMAGES:

• The teeth are broken.

## PREVENTIVE MEASURES:

• Do not apply excessive force to the curette.

#### **RECOMMENDATIONS**:

• Consult your Mathys representative.







# **Chisels and gouges**

## POSSIBLE DAMAGES:

• The edges are blunt, chipped or have burrs.

#### PREVENTIVE MEASURES:

- Do not drop the instrument.
- Do not apply excessive force to the instruments.

## **RECOMMENDATIONS:**

• Consult your Mathys representative.



## Forceps

## POSSIBLE DAMAGES:

• The forceps are broken.

## PREVENTIVE MEASURES:

- Do not apply excessive force to the forceps.
- Use the hammer only on the surfaces designed for it.
- Lubricate the joints.

## **RECOMMENDATIONS:**

• Consult your Mathys representative.





# Sharp edges

#### POSSIBLE DAMAGES:

• The edges are broken or blunt.

#### PREVENTIVE MEASURES:

- Use the instrument properly and do not overstrain it.
- Do not drop the instrument.
- Insert the instrument manually into the guide before impacting it with the hammer.

## **RECOMMENDATIONS**:

• Replace the damaged instruments. Resharpening is not possible. Consult your Mathys representative.



# **Engaging device**

#### POSSIBLE DAMAGES:

• The teeth are broken, damaged or blunt.

## PREVENTIVE MEASURES:

• Use the instrument properly.

## **RECOMMENDATIONS:**

• Replace the badly damaged instruments.



# Gripper

#### POSSIBLE DAMAGES:

- The teeth are broken, blunt or damaged.
- The surface of the gripper is damaged from drilling or sawing.

#### PREVENTIVE MEASURES:

- Use the instrument properly and do not overstrain it.
- Do not drop the instrument.
- Take care when sawing close to the instrument.

## **RECOMMENDATIONS**:

- Consult your Mathys representative in case of slightly damaged instruments.
- Replace the badly damaged instruments.

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