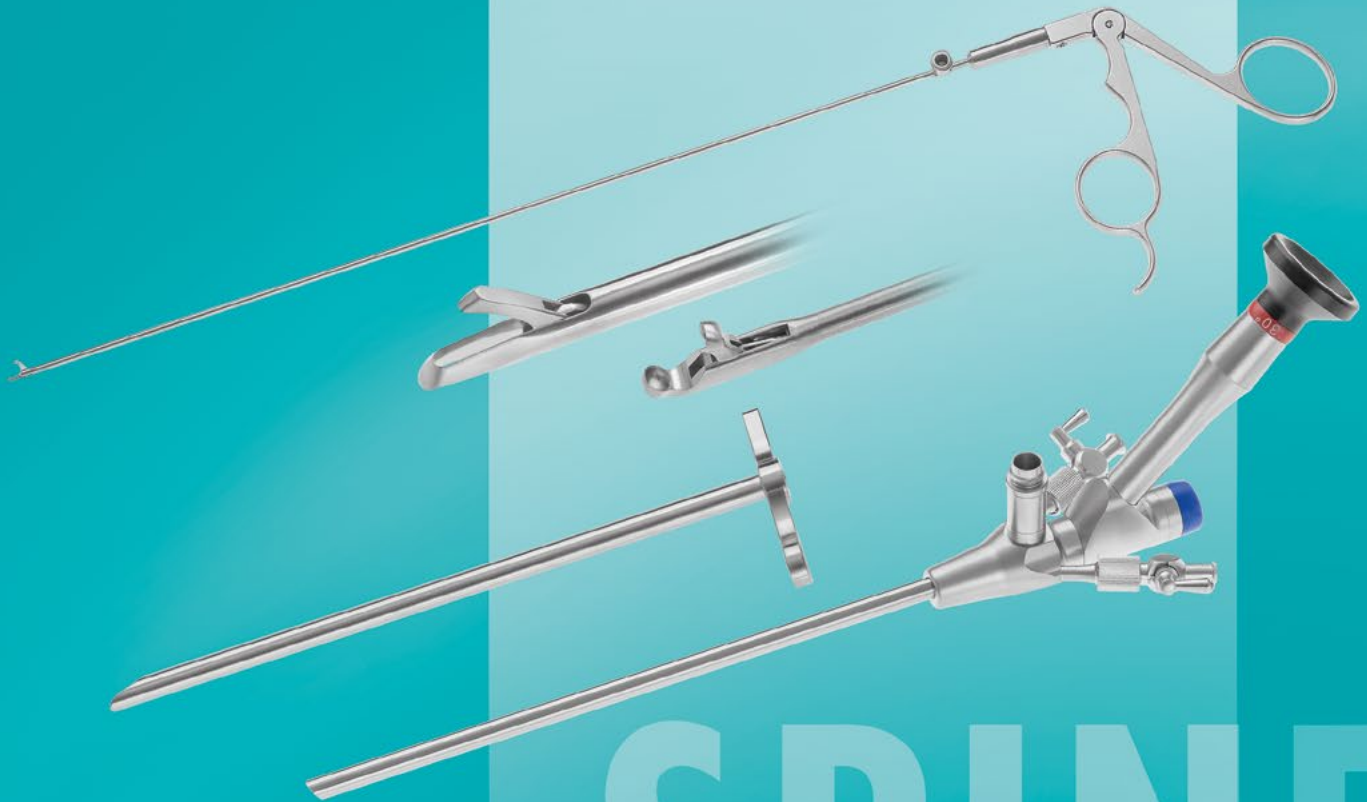




*progress in surgery*

# ENDOSCOPIC SPINAL SURGERY



# SPINE

## RECOMMENDED SET

# ∅ 6.3mm 259-900-901

Set advice for use with Spinal Endoscope ∅ 6.3mm		Page		Page	
259-375-181	∅ 6.3mm Spinal Endoscope	4	259-330-001	Micro Cup Forceps	10
259-080-200	Spinal Cannula, ∅ 0.8mm	5	259-330-013	Cupped Grasper	11
259-080-400	Guiding wire, ∅ 0.8mm	5	259-330-017	Cup Forceps, ∅ 2.5mm	11
259-120-400	Guiding wire, ∅ 1.2mm	5	259-330-018	Cup Forceps, ∅ 3.5mm	11
259-225-310	Raspatory, ∅ 2.5mm	5	259-330-029	Scissors Punch	10
259-125-310	Hook Probe, ∅ 2.5mm	5	259-000-700	Endoscopic Kerrison Handle	12
259-030-240	Metal Hammer	6	259-350-360	Endoscopic Kerrison 40°	12
259-900-300	Steel Ruler	6	259-351-360	Endoscopic Kerrison 90°	12
259-900-100	Trephine and Rasp Handle	7	259-350-310	Suction Punch	12
259-510-225	Trephine, ∅ 4.1mm / ∅ 5.1mm	7	259-695-000	Flexible Probe	13
259-660-225	Trephine, ∅ 5.6mm / ∅ 6.6mm	7			
259-160-560	Protection Tube, ∅ 6.0mm / ∅ 5.2mm	7			
259-160-710	Protection Tube, ∅ 7.5mm / ∅ 6.7mm	7			
259-510-260	Rasp, ∅ 5.1mm	8			
259-660-260	Rasp, ∅ 6.6mm	8			
259-410-185	Dilator, ∅ 2.8mm / ∅ 4.1mm	8			
259-510-170	Dilator, ∅ 4.2mm / ∅ 5.1mm	8			
259-600-160	Dilator, ∅ 5.2mm / ∅ 6.0mm	8			
259-251-230	Dilator, conical, ∅ 1.0mm / ∅ 2.5mm	8			
259-401-230	Dilator, conical, ∅ 1.5mm / ∅ 4.0mm	8			
259-501-230	Dilator, conical, ∅ 2.0mm / ∅ 5.0mm	8			
259-750-178	Working Tube, oblique window	9			
259-751-178	Working Tube, elevator tip	9			

# SPINE SURGERY

## RECOMMENDED SET

### ∅7.0mm 259-900-902

Set advice for use with Spinal Endoscope ∅ 7.0mm		Page
259-430-181	∅ 7.0mm Spinal Endoscope	4
259-080-200	Spinal Cannula, ∅ 0.8mm	5
259-080-400	Guiding wire, ∅ 0.8mm	5
259-120-400	Guiding wire, ∅ 1.2mm	5
259-700-225	Dilator, 2-Channel, ∅ 7.0mm	5
259-225-310	Raspatory, ∅ 2.5mm	5
259-125-310	Hook Probe, ∅ 2.5mm	5
259-030-240	Metal Hammer	6
259-900-300	Steel Ruler	6
259-900-100	Trephine and Rasp Handle	7
259-760-225	Trephine, ∅ 6.6mm / ∅ 7.6mm	7
259-160-810	Protection Tube, ∅ 8.5mm / ∅ 7.7mm	7
259-660-260	Rasp, ∅ 6.6mm	8
259-760-260	Rasp, ∅ 7.6mm	8
259-410-185	Dilator, ∅ 2.8mm / ∅ 4.1mm	8
259-510-170	Dilator, ∅ 4.2mm / ∅ 5.1mm	8
259-600-160	Dilator, ∅ 5.2mm / ∅ 6.0mm	8
259-251-230	Dilator, conical, ∅ 1.0mm / ∅ 2.5mm	8
259-401-230	Dilator, conical, ∅ 1.5mm / ∅ 4.0mm	8
259-501-230	Dilator, conical, ∅ 2.0mm / ∅ 5.0mm	8
259-800-178	Working Tube, oblique window	9
259-801-178	Working Tube, elevator tip	9
259-330-002	Micro Cup Forceps	10

		Page
259-330-013	Cupped Grasper	11
259-330-017	Cup Forceps, ∅ 2.5mm	11
259-330-018	Cup Forceps, ∅ 3.5mm	11
259-330-029	Scissors Punch	10
259-000-700	Endoscopic Kerrison Handle	12
259-350-360	Endoscopic Kerrison 40°, ∅ 3.5mm	12
259-400-360	Endoscopic Kerrison 40°, ∅ 4.0mm	12
259-351-360	Endoscopic Kerrison 90°, ∅ 3.5mm	12
259-401-360	Endoscopic Kerrison 90°, ∅ 4.0mm	12
259-350-310	Suction Punch	12
259-695-000	Flexible Probe	13

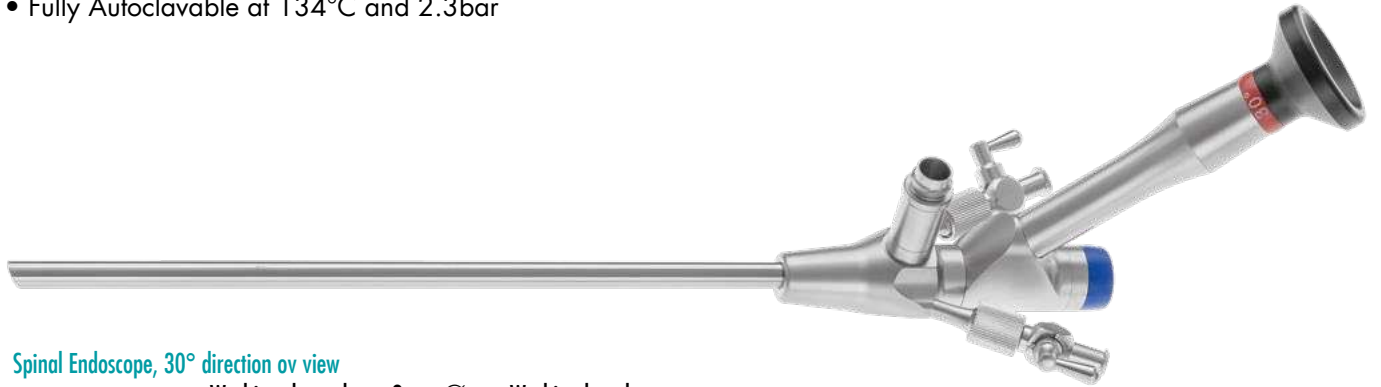
## RECOMMENDED SET TOWER



Set advice endoscopic equipment and devices		Page
300-001-840	UHD 4K Camera	20
300-900-180	Lumen LED1	20
300-001-031	4K Medical Display	21
300-001-999	Trolley	21

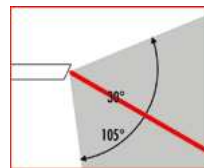
## RZ SPINAL ENDOSCOPES

- Eyepiece for C-mount connection
- 3-step light post adapters to connect the most common light cables directly to the endoscope
- Sapphire glasses ensure highest stability against damages on the lens system
- Optimized glass fibre arrangements ensure an uniform image brightness of highest quality
- High definition pictures with increased detail-resolution through newest CAD-designed rod-lens systems
- Fully Autoclavable at 134°C and 2.3bar

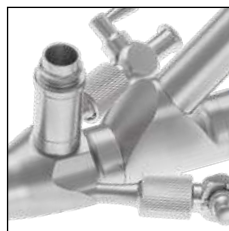


Spinal Endoscope, 30° direction of view

	Working channel	Outer-∅	Working length
259-375-181	3.75mm	6.3mm	181mm
259-375-130			130mm
259-430-181	4.3mm	7.0mm	181mm
259-430-130			130mm



Optimized glass fiber arrangements



2 lateral suction-irrigation channels with detachable stopcock



Universal light guide connection



Straight working channel



Spare Cap

259-900-008 For endoscope

# SPINE SURGERY

## Spinal Cannulas

	∅	Working length
259-125-180	1.25mm	180mm
259-125-280	1.25mm	280mm
259-160-150	1.60mm	150mm
259-080-200	0.8mm	200mm
259-080-230	0.8mm	230mm



## Guiding wires

	∅	Working length
259-070-400	0.7mm	400mm
259-080-400 (made of nitinol)	0.8mm	400mm
259-120-400 (made of nitinol)	1.2mm	400mm



## Dilator 2-channel

	∅	Working length
259-530-225	5.3mm	225mm
259-616-400	6.3mm	225mm
259-700-225	7.0mm	225mm



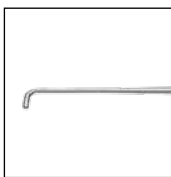
## Elevator, 310mm working length

259-225-310 ∅ 2.5mm



## Hook Probe, 310mm working length

259-125-310 ∅ 2.5mm



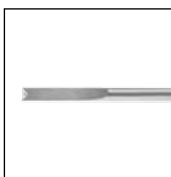
## Bone Chisel, 310mm working length

259-230-310 ∅ 3.0mm



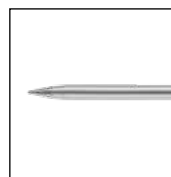
## Bone Chisel, v-notch, 310mm working length

259-330-310 ∅ 3.0mm



## Bone awl, 310mm working length

259-430-310 ∅ 3.0mm



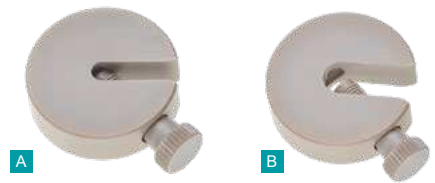
## Metal Hammer

259-030-240 30mm outer-Ø, 240mm working length



## Extracting Forceps

259-900-185 Extracting Forceps



## Distance Holder for Instruments

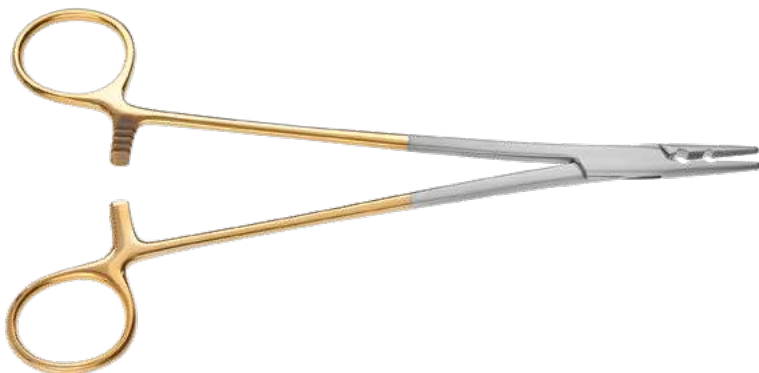
259-200-400 HTP (2.0 - 4.0mm) **A**

259-530-700 HTP (5.3 - 7.0mm) **B**



## Steel Ruler

259-900-300 300mm length



## Rod Forceps

259-204-200 2mm / 4mm, 200mm length

# SPINE SURGERY



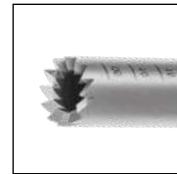
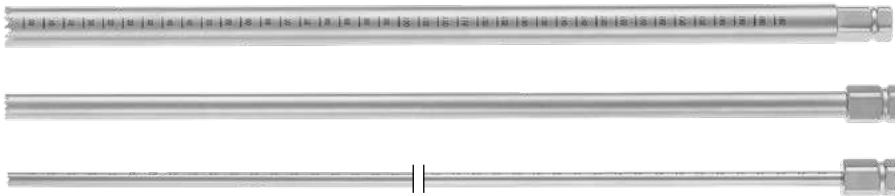
Trephine and Rasp Handle

259-900-100 With quick lock mechanism for all blades

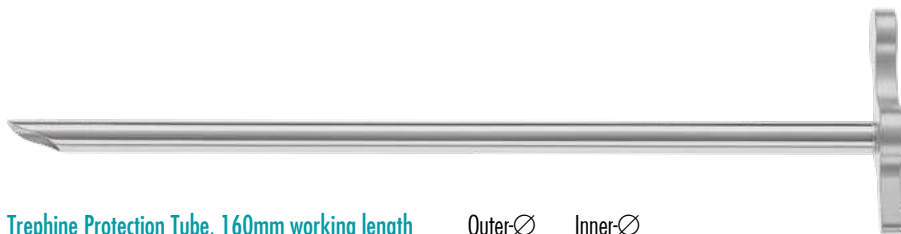


Trephine and Rasp Handle

259-900-101 With quick lock mechanism for all blades and locking mechanism

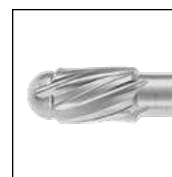
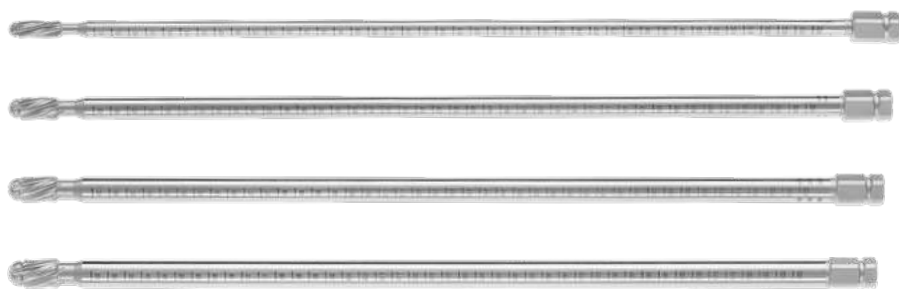


Trephine	Inner-Ø	Outer-Ø	Length
259-510-225	4.1mm	5.1mm	225mm
259-660-225	5.6mm	6.6mm	225mm
259-760-225	6.6mm	7.6mm	225mm
259-350-350	2.5mm	3.5mm	350mm
259-410-350	3.1mm	4.1mm	350mm
259-980-225	8.8mm	9.8mm	225mm



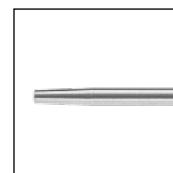
Trephine Protection Tube, 160mm working length	Outer-Ø	Inner-Ø
259-160-560	6.0mm	5.2mm
259-160-710	7.5mm	6.7mm
259-160-810	8.5mm	7.7mm

# ENDOSCOPIC SPINAL SURGERY

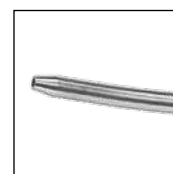


## Rasp, retrograde, 260mm working length

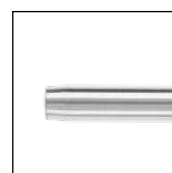
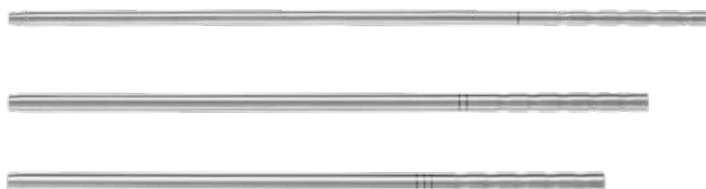
259-510-260	∅ 5.1mm
259-660-260	∅ 6.6mm
259-760-260	∅ 7.6mm
259-880-260	∅ 8.8mm



Dilator, conical, 230mm length	Inner-∅	Outer-∅
259-251-230	1.0mm	2.5mm
259-401-230	1.5mm	4.0mm
259-501-230	2.0mm	5.0mm



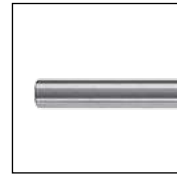
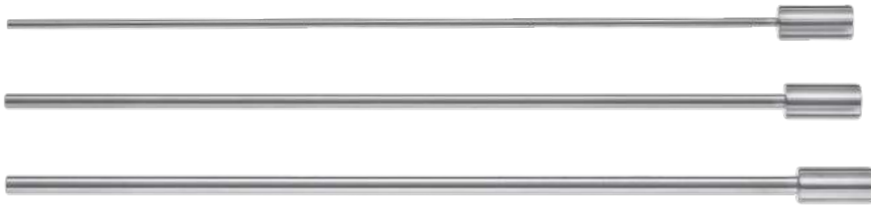
Dilator, curved, 230mm length	Inner-∅	Outer-∅
259-252-230	1.0mm	2.5mm



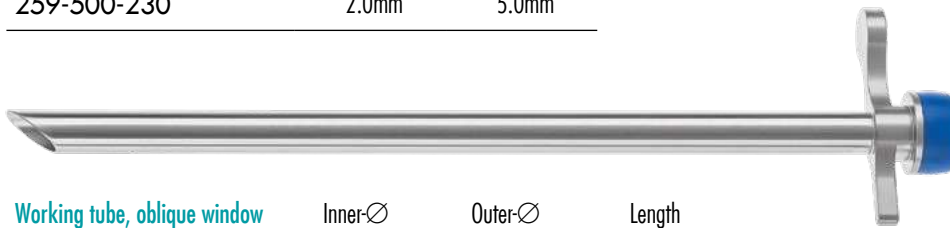
Dilator, conical tube	Inner-∅	Outer-∅	length
259-410-185	2.8mm	4.1mm	185mm
259-510-170	4.2mm	5.1mm	170mm
259-600-160	5.2mm	6.0mm	160mm



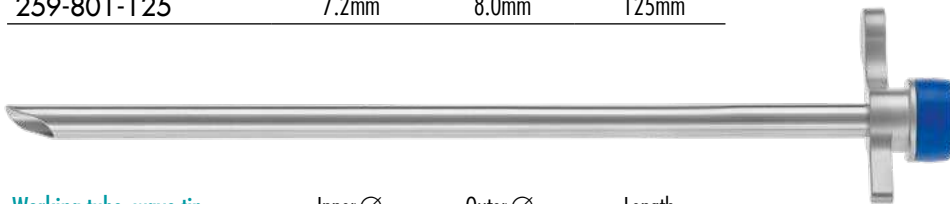
# SPINE SURGERY



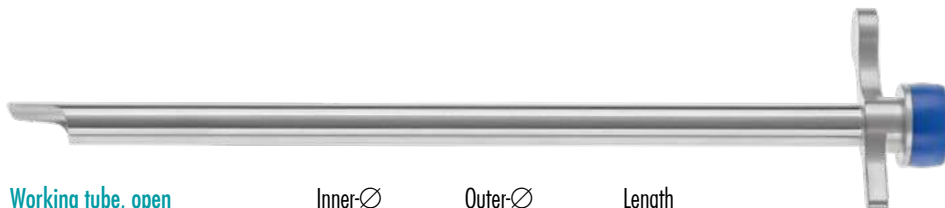
Rod pusher, 230mm length	Inner-∅	Outer-∅
259-250-230	1.0mm	2.5mm
259-400-230	1.5mm	4.0mm
259-500-230	2.0mm	5.0mm



Working tube, oblique window	Inner-∅	Outer-∅	Length
259-750-178	6.5mm	7.5mm	178mm
259-800-178	7.2mm	8.0mm	178mm
259-801-125	7.2mm	8.0mm	125mm

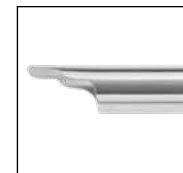


Working tube, wave tip	Inner-∅	Outer-∅	Length
259-750-125	6.5mm	7.5mm	125mm
259-751-178	6.5mm	7.5mm	178mm
259-801-178	7.2mm	8.0mm	178mm
259-650-178	5.5mm	6.5mm	178mm
259-800-125	7.2mm	8.0mm	125mm



Working tube, open	Inner-∅	Outer-∅	Length
259-753-178	6.5mm	7.5mm	178mm
259-803-178	7.2mm	8.0mm	178mm

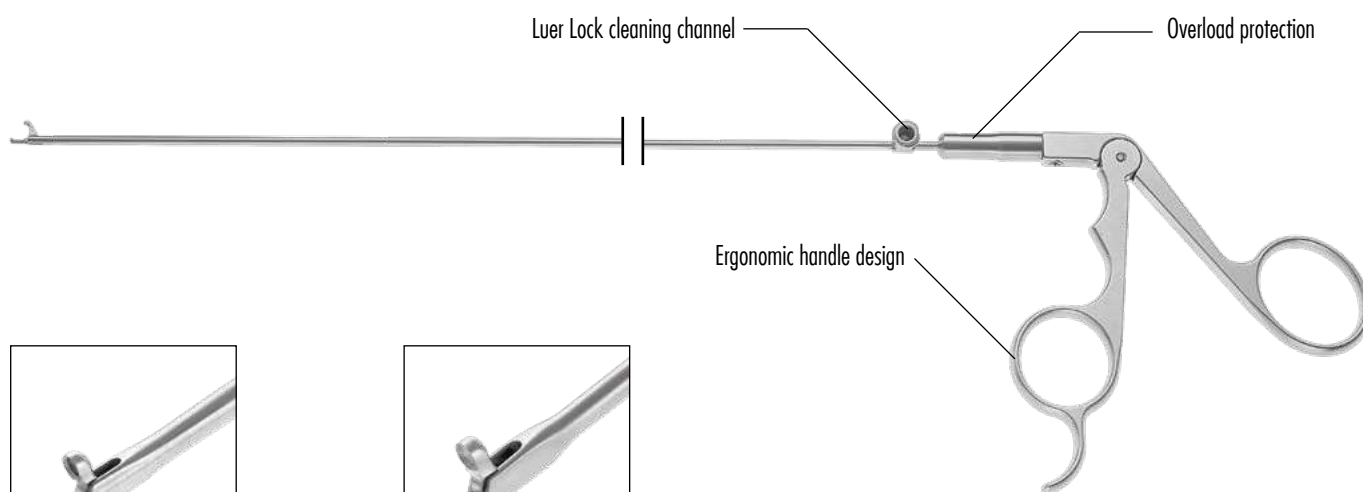
Working tube, elevator tip	Inner-∅	Outer-∅	Length
259-752-178	6.5mm	7.5mm	178mm
259-802-178	7.2mm	8.0mm	178mm



Spare Cap

259-900-009 For tube

## SPINAL INSTRUMENTS



**Micro Cup Forceps**  
259-330-001  
Upward angled jaw,  
length: 330mm, Ø2.0mm



**Micro Cup Forceps**  
259-330-002  
Upward angled jaw,  
length: 330mm, Ø2.5mm



**Duckling Punch**  
259-330-003  
Short jaw, straight,  
length: 330mm, Ø2.5mm



**Duckling Punch**  
259-330-004  
Upwards angled,  
length: 330mm, Ø3.5mm



**Hook Scissors**  
259-330-005 length: 260mm  
259-330-041 length: 330mm  
Straight jaw, Ø2.5mm



**Scissors Punch, straight jaw**  
259-330-006  
Ø2.0mm, length: 260mm  
259-330-029  
Ø2.5mm, length: 330mm  
259-330-028  
Ø2.5mm, length: 260mm



**Scissors Punch, upwards angled**  
259-330-030  
length: 330mm, Ø2.5mm



**Cupped Grasper**  
259-330-007  
Atraumatic serrations, straight  
jaw  
length: 330mm, Ø2.0mm

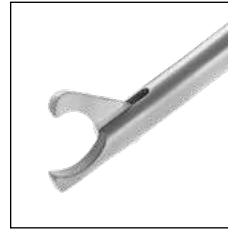
# SPINE SURGERY



**Grasping Forceps**  
259-330-008  
Left jaw,  
length: 330mm, Ø2.0mm



**Grasping Forceps**  
259-330-009  
Right jaw,  
length: 330mm, Ø2.0mm



**Hook Scissors**  
259-330-041  
Straight jaw,  
length: 330mm, Ø2.5mm



**Grasping Forceps**  
259-330-040  
Straight jaw,  
length: 330mm, Ø2.5mm



**Cupped Grasper**  
259-330-012  
Atraumatic serrations, straight  
jaw, length: 260mm,  
Ø3.5mm



**Cupped Grasper**  
259-330-013  
Atraumatic serrations,  
straight jaw, length: 330mm,  
Ø3.5mm



**Cupped Grasper**  
259-330-014  
Atraumatic serrations,  
straight jaw, length: 260mm,  
Ø4.0mm



**Cupped Grasper**  
259-330-015  
Atraumatic serrations,  
straight jaw, length: 330mm,  
Ø4.0mm



**Cup Forceps**  
259-330-016  
Straight jaw, length:  
330mm, Ø2.0mm



**Cup Forceps**  
259-330-017  
Straight jaw, length:  
330mm, Ø2.5mm



**Cup Forceps**  
259-330-018  
Straight jaw, length:  
330mm, Ø3.5mm



**Cup Forceps**  
259-330-019  
Straight jaw, length:  
330mm, Ø4.0mm



**Cup Forceps**  
259-330-020  
Straight jaw, length:  
260mm, Ø2.5mm



**Cup Forceps**  
259-330-021  
Straight jaw, length:  
260mm, Ø3.5mm

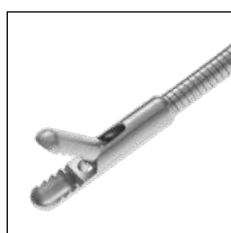
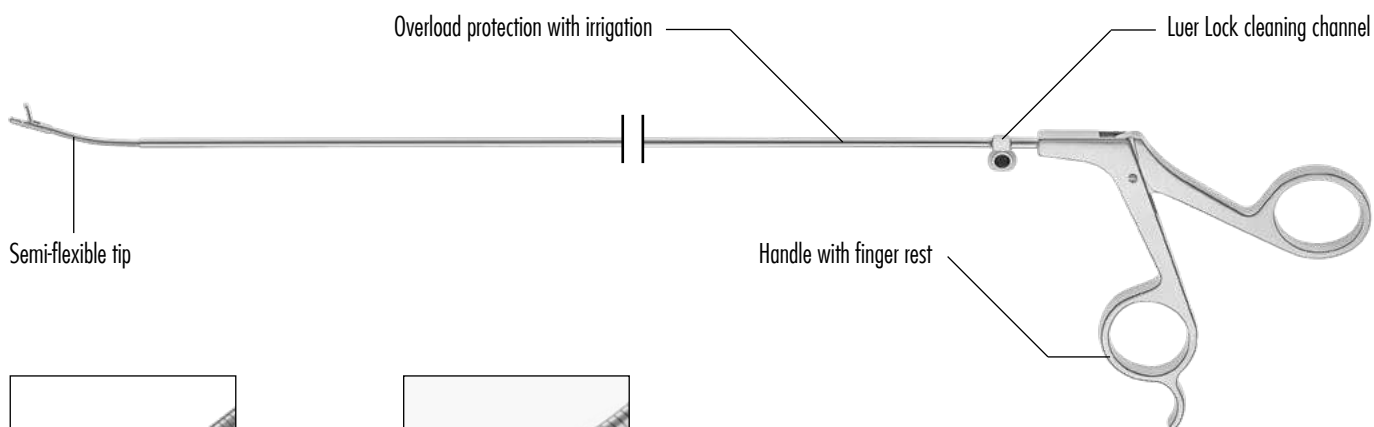


**Cup Forceps**  
259-330-022  
Straight jaw, length:  
260mm, Ø4.0mm



**Cup Forceps**  
259-330-023  
Straight jaw, length:  
330mm, Ø3.0mm

## SEMI-FLEXIBLE SPINAL INSTRUMENTS



**Grasper**  
259-330-031  
Semi-Flexible, upward jaw  
length: 330mm,  $\varnothing$ 2.5mm



**Grasper**  
259-330-032  
Semi-Flexible, downward jaw  
length: 330mm,  $\varnothing$ 2.5mm



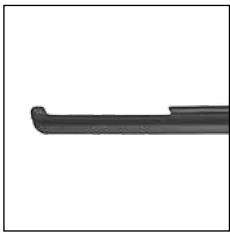
**Grasper**  
259-330-027 length: 330mm  
259-330-026 length: 260mm  
Semi-Flexible, straight jaw  
double action,  $\varnothing$ 3.0mm

# SPINE SURGERY



## Endoscopic Kerrison Handle

259-000-700 Detachable



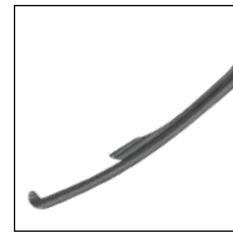
### Endoscopic Kerrison, ceramic coated, 40°

	∅	Working length
259-350-360	3.5mm	360mm
259-350-260	3.5mm	260mm
259-400-360	4.0mm	360mm
259-400-260	4.0mm	260mm
259-250-360	2.5mm	360mm



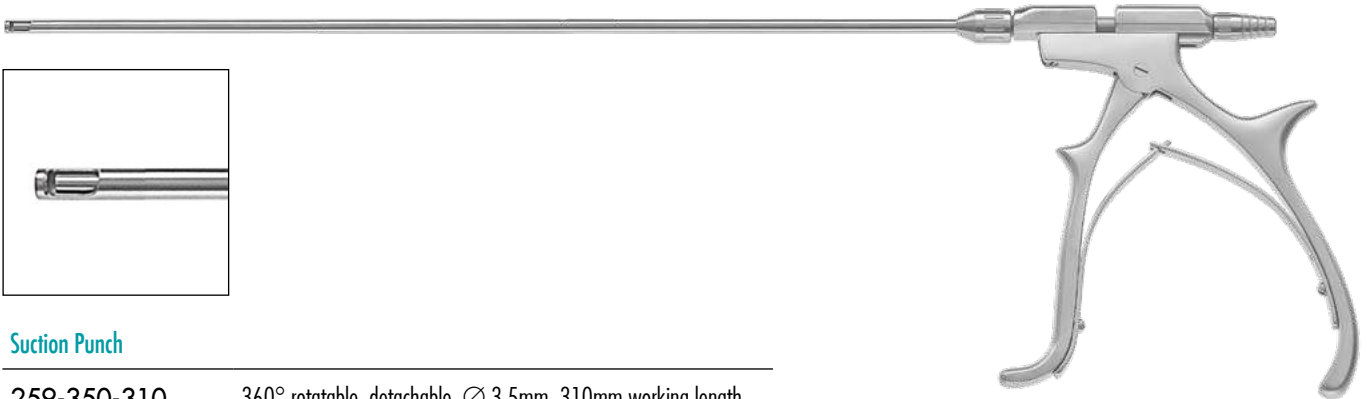
### Endoscopic Kerrison, ceramic coated, 90°

	∅	Working length
259-351-360	3.5mm	360mm
259-401-360	4.0mm	360mm
259-401-260	4.0mm	260mm



### Endoscopic Kerrison, ceramic coated, bent upwards, 40°, 2.2mm foot

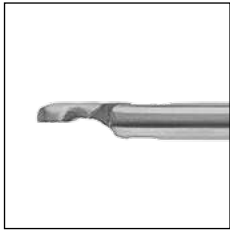
	∅	Working length
259-252-310	2.5mm	310mm



## Suction Punch

259-350-310 360° rotatable, detachable, ∅ 3.5mm, 310mm working length

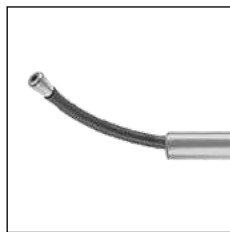
# ENDOSCOPIC SPINAL SURGERY



## Bone Curette

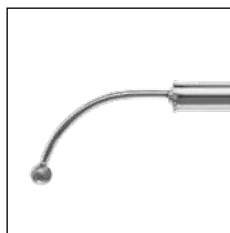
259-690-035     $\varnothing$  3.5mm, 330mm working length

259-690-020     $\varnothing$  2.0mm, 260mm working length



## Flexible Probe with channel, nitinol

259-695-000     $\varnothing$  3.5mm, 300mm working length



## Ball Tip Probe, nitinol

259-380-000    380mm working length



## Nerve Probe

259-695-001     $\varnothing$  3.0mm, 330mm working length

## STENOSIS SET

### RECOMMENDED SET

 **10mm** 259-900-903

Set advice for use with Spinal Endoscope $\varnothing$ 10mm	Page
259-710-139 $\varnothing$ 10mm Spinal Endoscope	16
259-100-185 Dilator, $\varnothing$ 10mm	16
259-112-134 Working Tube	16
259-113-134 Working Sleeve	16
259-030-260 Probe	17
259-125-260 Hook Probe	17
259-330-021 Cup Forceps, $\varnothing$ 3.5mm	17
259-330-022 Cup Forceps, $\varnothing$ 4.0mm	17
259-330-533 Punch, tubular shaft, $\varnothing$ 4.0mm	18
259-330-534 Punch, tubular shaft, $\varnothing$ 3.5mm	18
259-400-260 Kerrison, 40°, $\varnothing$ 4.0mm	19
259-500-260 Kerrison, 40°, $\varnothing$ 5.0mm	19
259-600-260 Kerrison, 40°, $\varnothing$ 6.0mm	19
259-401-260 Kerrison, 90°, $\varnothing$ 4.0mm	19
259-501-260 Kerrison, 90°, $\varnothing$ 5.0mm	19
259-601-260 Kerrison, 90°, $\varnothing$ 6.0mm	19
259-402-260 Kerrison, 40°, 2.2mm foot, $\varnothing$ 4.0mm	19
259-000-700 Handle	19

## STENOSIS SET



Spinal Endoscope

259-710-139       $\varnothing$  10mm, working channel: 7.1mm  
139mm working length, 15°



Spare Cap

259-900-008      For endoscope



Dilator, single hole       $\varnothing$       Working length

259-100-185      10mm      185mm



Working tube, oblique window      Inner- $\varnothing$       Outer- $\varnothing$       Length

259-112-134      10.2mm      11.2mm      134mm



Working sleeve      Inner- $\varnothing$       Outer- $\varnothing$       Length

259-113-134      10.2mm      11.0mm      134mm



Spare Cap

259-900-009      For tube

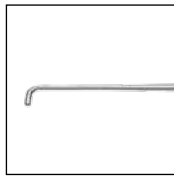


# SPINE SURGERY



Raspatory, 260mm working length

259-030-260    Ø 3.0mm



Hook Probe, 260mm working length

259-125-260    Ø 2.5mm



Cup Forceps

259-330-021

Sharp, 260mm, Ø3.5mm

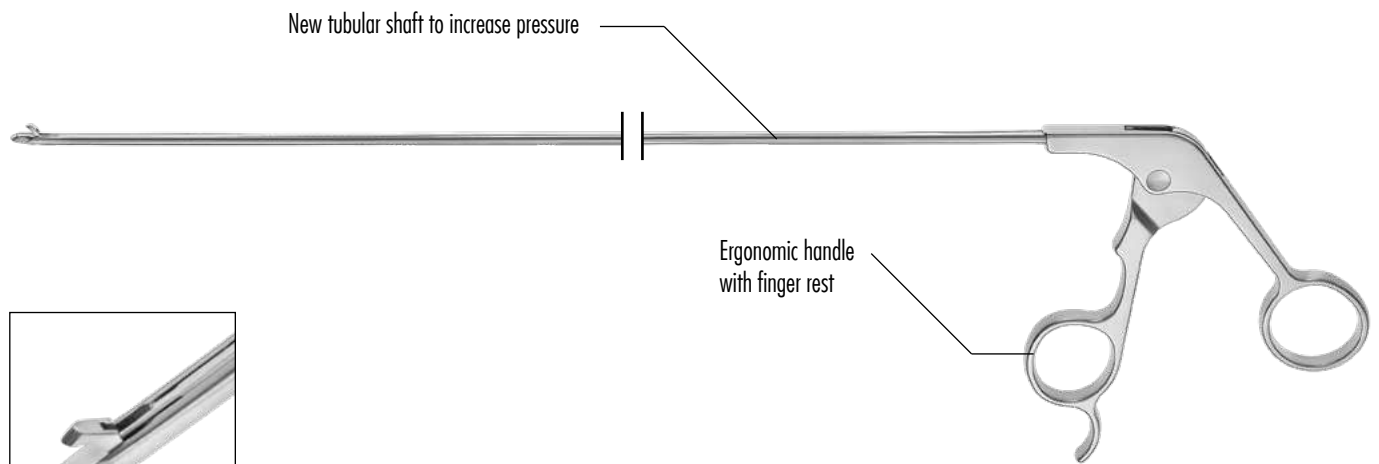


Cup Forceps

259-330-022

Straight jaw, 260mm,  
Ø4.0mm

## SPINAL INSTRUMENTS WITH ADVANCED TUBULAR SHAFT



**Punch**  
259-330-533  
Ø4.0mm, straight, length: 260mm



**Punch**  
259-330-534  
Ø3.5mm, upward angled, length: 260mm

# SPINE SURGERY



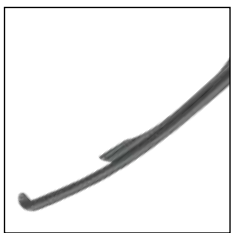
Endoscopic Kerrison, ceramic coated, 40° Ø Working length

259-400-260	4.0mm	260mm
259-500-260	5.0mm	260mm
259-600-260	6.0mm	260mm



Endoscopic Kerrison, ceramic coated, 90° Ø Working length

259-401-260	4.0mm	260mm
259-501-260	5.0mm	260mm
259-601-260	6.0mm	260mm



Endoscopic Kerrison, ceramic coated,  
bent upwards, 40°, 2.2mm foot Ø Working length

259-402-260	4.0mm	260mm
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Endoscopic Kerrison Handle

259-000-700	Detachable
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# ENDOSCOPIC SPINAL SURGERY

## 4K 3 Chip UHD-Camera K4000

300-001-840      4K UHD Camera

# 4K



### Features:

- 4K UHD resolution with 3-Chip technology
- Image algorithms enhancement of color and structure
- True natural colours for excellent live surgery imaging
- Recording function (video and picture)
- Camera head with 4 push buttons
- Boost function
- Zoom, freeze, fog reduction
- 10 USER modes configurations
- Multilingual menu
- SDI 4K Output

## Lumen LED1

300-900-180      LED Light Source, 180W



### Features:

- More than 20.000h lamp lifetime
- 180 Watt Daylight Quality
- Manual or automatic light control
- Waterproof touch control panel
- Low heat conduction by improved LED technology
- Daylight color temperature 6000 – 6500° K for accurate color representation

# SPINE SURGERY



## 4K UHD Medical Display

300-001-031 31" UHD Monitor

### Technical data

Screen size	31" diagonal
Resolution	4096 x 2160
Video Inputs	1 x HDMI 2.0
	1 x DP 1.2 (SST) & 1 x DP 1.2 (MST)
	1 x DVI (single link)
	4 x SDI (3G)
Video Outputs	1 x DP 1.2 (SST)
	1 x DVI (single link)
	4 x SDI (3G)
Weight	10.5kg

## RZ Basic Trolley

300-001-999

### Features:

- Optional doors and rear panel in order to protect valuable equipment
- Optional main on/off switch
- Power columns for cables
- Endoscope Holder
- Variable height support arms
- Conductive rolls





*progress in surgery*

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