

UNIDRIVE® S III NEURO

Comprehensive Motor System for Neuro- and Spine Surgery



UNIDRIVE® S III NEURO

The Complete Solution for Neuro- and Spine Surgery

In developing the new UNIDRIVE® S III NEURO we had a clear objective in mind: to design a motor system that would not only meet, but even exceed, the high expectations of neuro- and spine surgeons.

Over 20 years' experience with medical motor systems coupled with years of development work has resulted in a total overhaul of the internal architecture as well as a completely new user interface design. Innovative new functions combined with straightforward and intuitive use present a motor system that sets new standards.

Not only is drilling and milling work faster while maintaining constant high precision, the use of this complex equipment is practically self-explanatory.

S III – Safety, Speed, Simplicity

Two factors are of particular importance in the operating room: safety and time. As safety is a top priority and is often only possible after considerable time and effort, the optimization of both factors is often not feasible. If the objective is to achieve a straightforward, efficient process, it seems questionable whether the competing goals of the magic triangle can be attained.

This is not the case for UNIDRIVE® S III NEURO. S III stands for Safety, Speed and Simplicity – as well as the fact that KARL STORZ has succeeded in fine-tuning all three parameters in order to create a perfect balance between safety, speed and simplicity:

Safety

The safety of the UNIDRIVE® S III NEURO system is due to the highly precise drilling performance, intuitive use and construction according to the “poka-yoke principle” (a Japanese term for the prevention of unintentional errors).

Speed

The UNIDRIVE® S III high-speed drills operate at speeds of up to 100,000 rpm. Not only does the high speed have a positive impact on the operating speed, it also ensures more precision.

Simplicity

The entire motor system was designed so that virtually no errors can occur during use or set-up. This means, for example, that a tube can only be inserted in one way: The right way.

When connecting a motor, the system automatically recognizes and then pre-selects the appropriate modes.

The completely revamped user menu has been designed so that even untrained staff should not have any problems with use. The user-friendly concept is rounded off with the most straightforward and intuitive user interface available: The touch screen.



Functions

The Complete Solution for Neuro- and Spine Surgery

One system – numerous possibilities. This guideline was followed during the product development process as is evident by the different handpieces that KARL STORZ offers for UNIDRIVE® S III NEURO. A perforator as well as a craniotome and drill handpieces are available for cranial neurosurgery. In skull base surgery, different shavers and handpieces with a small diameter can be used. Special handpieces were developed for dedicated spine procedures, such as the use of tubular systems or percutaneous endoscopic spine surgery.

Also in open or microsurgical approaches, the UNIDRIVE® S III NEURO is the solution of choice. The high-speed micro-motor forms the core of the system, onto which the various handpieces such as drills, perforators and craniotomes can be attached. High-speed drill handpieces with up to 60,000 or 100,000 rpm are available in all standard lengths, both straight and angled.

Craniotome and Perforator

Dura protectors for the craniotome handpiece are available in three different sizes for optimal protection of the dura. Consequently, craniotomes are available to suit all bone sizes. By default, the craniotome handpiece is delivered with a medium-sized dura protector. Speeds of up to 60,000 rpm enable craniotomy to be performed quickly and smoothly.



With its lightweight, slender design, the perforator handpiece provides optimal force transmission and drilling control. The slender shape of the perforator ensures work without fatigue. Thanks to the standard adaptor, the handpiece can be used with all available Hudson connectors.

Malleable Handpieces

The particularly long handpieces with speeds of up to 60,000 rpm not only feature a long operational range and quiet drilling performance but a flexibility that allows adjustment to any intervention. These malleable instruments can be used in skull base surgery as well as tubular systems for spine surgery, such as the EASYGO!® II. generation.



DRILLCUT-X® II Shaver Handpieces

Thanks to the two motor inputs a shaver can be used simultaneously to the drill.

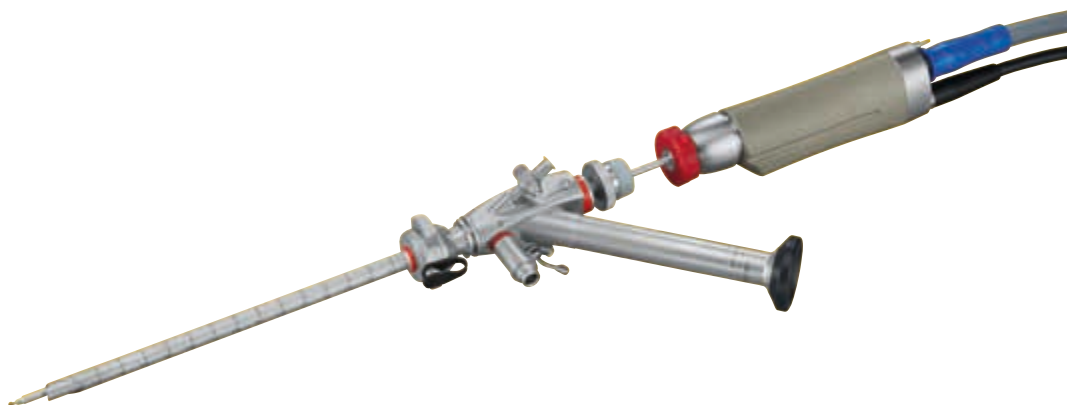
The DRILLCUT-X® II shaver handpiece has been designed to embody the powerful and silent running motor with reduced weight and enhanced ergonomics. The handpiece features an oscillation mode (for shaver blades) and a rotation mode (for sinus shavers). The variable handle allows individual adjustment and enables more comfortable work. The quick coupling mechanism facilitates a more rapid change of the blades.

Diverse suction burrs are used in sinus and/or skull base surgery. A selection of burrs can be found on the following pages. More detailed information is also available in the KARL STORZ product catalog.



Especially designed for percutaneous lumbar decompression, suction burrs have a length of 30 cm and can be utilized with the DRILLCUT-X® II SPINE shaver handpiece.

To treat spinal stenosis, the suction burr can be used through a telescope optimized for approach routes via the interlaminar window.



Functionality – The Console

Ease of use at the touch of a finger

During the course of development, we always had one main objective in mind: Clear and unambiguous use. The desire to design a console that every user can operate off the cuff led almost inevitably to the simplest and most natural way of operating: The touch screen. The touch screen also allows a more universal and clear presentation of the menu that guides users through intuitive and self-explanatory operation.

The user does most of the work itself: Automatic motor recognition enables appropriate program selection.

Further special features of the console:

Multitasking: The console is equipped with two motor outputs. Both outputs enable various handpieces to be connected simultaneously.

Homogenous processes: A micro-processor controls the irrigation rate throughout the entire irrigation range. The tubing set was designed according to the so-called “poka-yoke principle” (the Japanese term used to describe the prevention of unintentional errors). This means that the tube can only be properly inserted.



UNIDRIVE® S III NEURO SCB System Components



40701701-1

- 40701701-1 UNIDRIVE® S III NEURO SCB**, motor control unit with color display, touch screen, two motor outputs, integrated irrigation pump and integrated SCB module, power supply 100-240 VAC, 50/60 Hz including:
- Mains Cord**
 - Irrigator Rod**
 - Two-Pedal Footswitch**
 - SCB Connecting Cable**, length 100 cm
 - Single Use Tubing Set***, sterile, package of 3



20712033

- 20712033 High-Speed Micro-Motor**, max. speed 60,000 rpm, including connecting cable, for use with the UNIDRIVE® S III NEURO motor system

The UNIDRIVE® S III NEURO can also be combined with the High-Performance EC Micro-Motor II (Order No. **20 7110 33**).

Please refer to the ENT product catalog from KARL STORZ to receive detailed information.

Accessories:

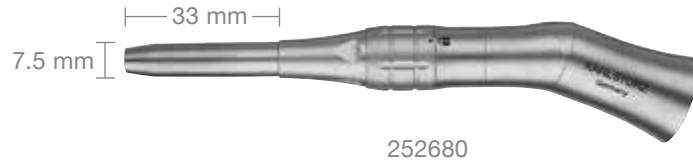
- 280053 Universal Spray**, 6x 500 ml bottles – HAZARDOUS GOODS – UN 1950 including:
- Spray Nozzle**

- 031131-10* Tubing Set**, for irrigation, sterile, for single use, package of 10



High-Speed Handpieces – 100,000 rpm

100,000 rpm
diameter 7.5 mm



252680 **High-Speed Handpiece**, short, angled, 100,000 rpm,
for use with High-Speed Micro-Motor **20712033**



252681 **High-Speed Handpiece**, medium, angled, 100,000 rpm,
for use with High-Speed Micro-Motor **20712033**

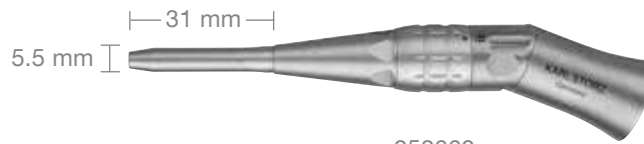


252682 **High-Speed Handpiece**, long, angled, 100,000 rpm,
for use with High-Speed Micro-Motor **20712033**

High-Speed Handpieces – 60,000 rpm

Angled

60,000 rpm
diameter 5.5 mm



252660

252660 **High-Speed Handpiece**, extra short, angled, 60,000 rpm,
for use with High-Speed Micro-Motor **20712033**



252661

252661 **High-Speed Handpiece**, short, angled, 60,000 rpm,
for use with High-Speed Micro-Motor **20712033**



252662

252662 **High-Speed Handpiece**, medium, angled, 60,000 rpm,
for use with High-Speed Micro-Motor **20712033**

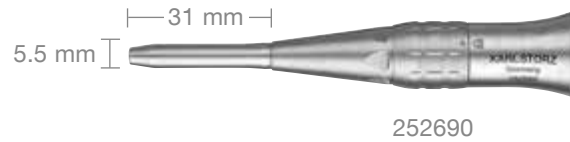


252663

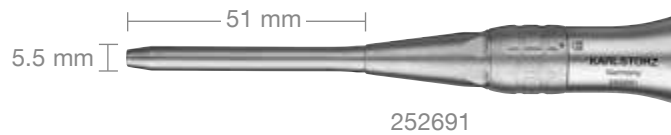
252663 **High-Speed Handpiece**, long, angled, 60,000 rpm,
for use with High-Speed Micro-Motor **20712033**

High-Speed Handpieces – 60,000 rpm Straight

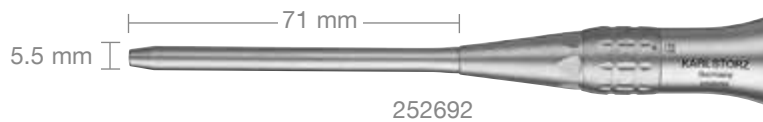
60,000 rpm
diameter 5.5 mm



- 252690 **High-Speed Handpiece**, extra short, straight, 60,000 rpm,
for use with High-Speed Micro-Motor **20712033**



- 252691 **High-Speed Handpiece**, short, straight, 60,000 rpm,
for use with High-Speed Micro-Motor **20712033**



- 252692 **High-Speed Handpiece**, medium, straight, 60,000 rpm,
for use with High-Speed Micro-Motor **20712033**

High-Speed Handpieces – 60,000 rpm

Slim and Malleable Handpieces

60,000 rpm
diameter 4.7 mm



252671 **High-Speed Handpiece**, extra long, malleable, slim, angled, 60,000 rpm, for use with High-Speed Micro-Motor **20 712033**



252672 **High-Speed Handpiece**, super long, malleable, slim, angled, 60,000 rpm, for use with High-Speed Micro-Motor **20 712033**

Cleaning Adaptor for High-Speed Handpieces

In order to ensure effective manual and machine cleaning, disinfection and drying, the handpiece must be connected to the washer/disinfector via the adaptor (art. no. 39130 AR).



39130 AR **Cleaning Adaptor**, Luer-Lock connector, for use with INTRA and High-Speed Handpieces 2525xx, 2526xx

A tube with a Luer-connector on one end of the adaptor enables connection to the washer/disinfector unit.

Perforator



252640

252640 **Perforator Handpiece**, max. speed 1200 rpm, without perforator blade, Hudson connector, for use with High-Speed Micro-Motor **20 7120 33**

Craniotome



252645

252645 **Craniotome Handpiece**, max. speed 60,000 rpm, **including medium dura protector**, for use with High-Speed Micro-Motor **20 7120 33** as well as 3.17 mm craniotome burs and suitable dura protector



252646

Pediatric Dura Protector, for use with Craniotome Handpiece 252645



252647

Medium Dura Protector, for use with Craniotome Handpiece 252645

Medium Dura Protector is delivered automatically with the Craniotome Handpiece.

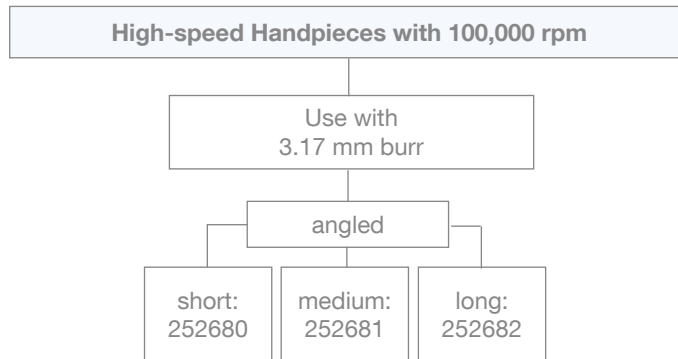








252648

Long Dura Protector, for use with Craniotome Handpiece 252645

Burrs

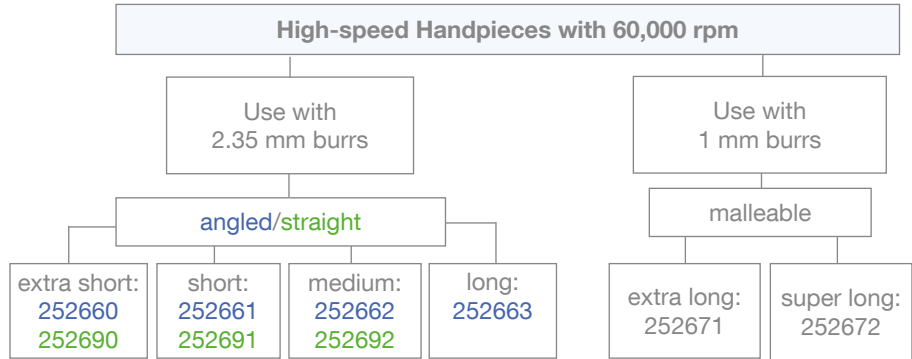
High-Speed Micro-Motor: 20712033



Standard Burrs				
1.0 mm	350110 S	350110 M	350120 L	
2.0 mm	350120 S	350120 M	350130 L	
3.0 mm	350130 S	350130 M	350140 L	
4.0 mm	350140 S	350140 M	350150 L	
5.0 mm	350150 S	350150 M	350160 L	
6.0 mm	350160 S	350160 M	350170 L	
7.0 mm	350170 S	350170 M	350170 L	
Diamond Burrs				
0.6 mm	350210 S	350210 M		
1.0 mm				
1.5 mm				
2.0 mm	350220 S	350220 M	350220 L	
3.0 mm	350230 S	350230 M	350230 L	
4.0 mm	350240 S	350240 M	350240 L	
5.0 mm	350250 S	350250 M	350250 L	
6.0 mm	350260 S	350260 M	350260 L	
7.0 mm	350270 S	350270 M	350270 L	
Diamond Burrs, coarse				
2.0 mm				
3.0 mm	350330 S	350330 M	350330 L	
4.0 mm	350340 S	350340 M	350340 L	
5.0 mm	350350 S	350350 M	350350 L	
6.0 mm	350360 S	350360 M	350360 L	
7.0 mm	350370 S	350370 M	350370 L	
Acorn				
7.5 mm	350675 S	350675 M		
9.5 mm	350690 S	350690 M		
Barrel Burrs				
6.0 mm	350960 S	350960 M		
9.1 mm	350991 S	350991 M		
NEURO Fluted Burrs				
1.8 mm	350718 S	350718 M	350718 L	
3.0 mm	350730 S	350730 M	350730 L	

Burrs

High-Speed Micro-Motor: 20712033



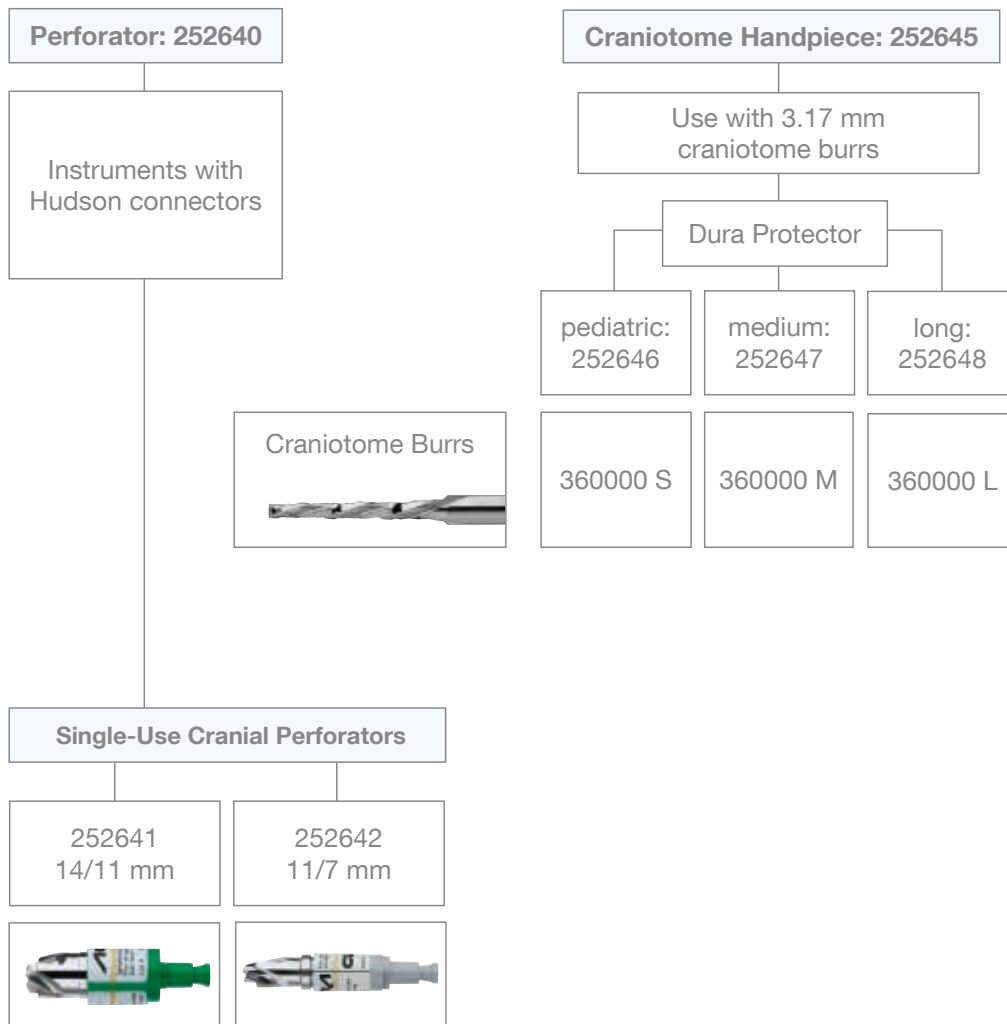
Standard Burrs					
1.0 mm	330110 ES	330110 S	330110 M		
2.0 mm	330120 ES	330120 S	330120 M	330120 L	
3.0 mm	330130 ES	330130 S	330130 M	330130 L	
4.0 mm	330140 ES	330140 S	330140 M	330140 L	
5.0 mm	330150 ES	330150 S	330150 M	330150 L	
6.0 mm	330160 ES	330160 S	330160 M	330160 L	
7.0 mm	330170 ES	330170 S	330170 M	330170 L	
Diamond Burrs					
0.6 mm	330206 ES	330206 S			
1.0 mm	330210 ES	330210 S	330210 M		
1.5 mm	330215 ES	330215 S			
2.0 mm	330220 ES	330220 S	330220 M	330220 L	
3.0 mm	330230 ES	330230 S	330230 M	330230 L	
4.0 mm	330240 ES	330240 S	330240 M	330240 L	
5.0 mm	330250 ES	330250 S	330250 M	330250 L	
6.0 mm	330260 ES	330260 S	330260 M	330260 L	
7.0 mm	330270 ES	330270 S	330270 M	330270 L	
Diamond Burrs, coarse					
2.0 mm					
3.0 mm	330330 ES	330330 S	330330 M	330330 L	
4.0 mm	330340 ES	330340 S	330340 M	330340 L	
5.0 mm	330350 ES	330350 S	330350 M	330350 L	
6.0 mm	330360 ES	330360 S	330360 M	330360 L	
7.0 mm	330370 ES	330370 S	330370 M	330370 L	
Cylinder Burrs					
4.0 mm	330440 ES	330440 S			
6.0 mm	330460 ES	330460 S			
LINDEMANN Fluted Burrs					
11 x 2.1	330511 ES	330511 S			
26 x 2.3	330526 ES	330526 S			

320220 EL	320220 SL
320230 EL	320230 SL
320240 EL	320240 SL
320320 EL	320320 SL
320330 EL	320330 SL
320340 EL	320340 SL



Burrs

High-Speed Micro-Motor: 20712033



All Burrs sterile, **for single use**, package of 5

Shaver Handpiece for Endonasal Surgery



40712050

40712050 **DRILLCUT-X® II Shaver Handpiece**, for use with UNIDRIVE® S III ECO/ENT/NEURO

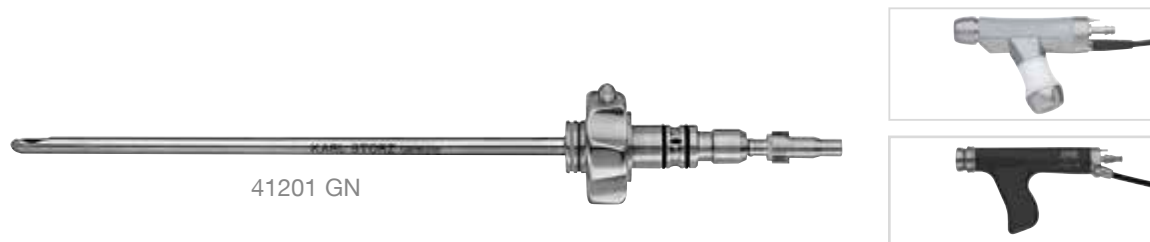


40712090

40712090 **Handle**, adjustable, for use with DRILLCUT-X® II **40712050** and DRILLCUT-X® II N **40712055** and DRILLCUT®-X II Spine **28712050**

Shaver Blades, straight for Nasal Sinuses and Skull Base Surgery

For use with DRILLCUT-X® II and DRILLCUT-X® shaver handpieces

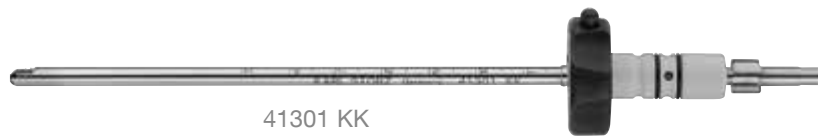


Shaver Blades, straight, sterilizable

Detail	for use with	Suction Burr, length 12 cm
	40711050 DRILLCUT-X® Handpiece 40712050 DRILLCUT-X® II Handpiece	
	41201 KN	serrated cutting edge, diameter 4 mm, color code: blue-red
	41201 KK	double serrated cutting edge, diameter 4 mm, color code: blue-yellow
	41201 GN	concave cutting edge, diameter 4 mm, color code: blue-green
	41201 LN	concave cutting edge, diameter 4 mm, color code: blue-black
	41201 SN	straight cutting edge, diameter 4 mm, color code: blue-blue
	41201 KSA	serrated cutting edge, diameter 3 mm, color code: blue-red
	41201 KKSA	double serrated cutting edge, diameter 3 mm, color code: blue-yellow
	41201 LSA	concave cutting edge, diameter 3 mm, color code: blue-black

Shaver Blades, straight for Nasal Sinuses and Skull Base Surgery

For use with DRILLCUT-X® II and DRILLCUT-X® shaver handpieces




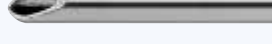






41301 KK



for single use

Shaver Blades, straight, sterile, package of 5

Detail	for use with	Suction Burr, length 12 cm
	40711050 DRILLCUT-X® Handpiece 40712050 DRILLCUT-X® II Handpiece	
	41301 KN	serrated cutting edge, diameter 4 mm, color code: blue-red
	41301 KK	double serrated cutting edge, diameter 4 mm, color code: blue-yellow
	41301 GN	concave cutting edge, diameter 4 mm, color code: blue-green
	41301 LN	concave cutting edge, diameter 4 mm, color code: blue-black
	41301 SN	straight cutting edge, diameter 4 mm, color code: blue-blue
	41301 KSA	serrated cutting edge, diameter 3 mm, color code: blue-red
	41301 KKSA	double serrated cutting edge, diameter 3 mm, color code: blue-yellow
	41301 LSA	concave cutting edge, diameter 3 mm, color code: blue-black

Shaver Blades, curved for Nasal Sinuses and Skull Base Surgery

For use with DRILLCUT-X® II and DRILLCUT-X® shaver handpieces



for single use

Sinus Burrs, curved 70°/55°/40°/15°, sterile, package of 5

Detail	for use with	Suction Burr, length 12 cm
	40711050 DRILLCUT-X® Handpiece 40712050 DRILLCUT-X® II Handpiece	
	41304 W	curved 40°, cylindric, drill diameter 3 mm, shaft diameter 4 mm, color code: red-blue
	41303 WN	curved 55°, cylindric, drill diameter 3.6 mm, shaft diameter 4 mm, color code: red-blue
	41305 RN	curved 15°, bud drill, drill diameter 4 mm, shaft diameter 4 mm, color code: red-black
	41305 DN	curved 15°, diamond head, drill diameter 3 mm, shaft diameter 4 mm, color code: red-yellow
	41305 D	curved 15°, diamond head, drill diameter 5 mm, shaft diameter 4 mm, color code: red-yellow
	41305 DW	curved 40°, diamond head, drill diameter 5 mm, shaft diameter 4 mm, color code: red-yellow
	41303 DT	curved 70°, diamond head, drill diameter 3.6 mm, shaft diameter 4 mm, color code: red-yellow

Shaver Handpiece and Burrs for Percutaneous Spinal Surgery



28 7120 50

28712050 **DRILLCUT-X® II Spine Handpiece**, for use with UNIDRIVE® S III NEURO



41201 FD



41201 FD

Suction Burr, with integrated irrigation, straight, sterilizable, cylindrical cutter head with lateral and distal protection, shaft diameter 3.5 mm, length 30 cm, for use with DRILLCUT-X® II Spine Handpiece **28 7120 50**



for single use



41301 FD



41301 FD

Suction Burr, with integrated irrigation, straight, for single use, sterile, package of 5, cylindrical cutter head with lateral and distal protection, shaft diameter 3.5 mm, length 30 cm, for use with DRILLCUT-X® II Spine Handpiece **28 7120 50**



41301 D

Diamond Burr, with integrated irrigation, straight, for single use, sterile, package of 5, diamond head, shaft diameter 3.5 mm, length 30 cm, for use with DRILLCUT-X® II Spine Handpiece **28 7120 50**

KARL STORZ UNIDRIVE® S III NEURO

Recommended KARL STORZ Standard Set Configurations

Craniotomy

- 40701701-1 **UNIDRIVE® S III NEURO SCB**, motor control unit with color display, touch screen, two motor outputs, integrated irrigation pump and integrated SCB module, power supply 100-240 VAC, 50/60 Hz

- 20712033 **High-Speed Micro-Motor**, max. speed 60,000 rpm, including connecting cable
 - 252640 **Perforator Handpiece**, max. speed 1200 rpm
 - 252645 **Craniotome Handpiece**, max. speed 60,000 rpm, including medium dura protector
 - 252646 **Pediatric Dura Protector**
 - 252647 **Medium Dura Protector**
(By ordering a craniotome handpiece the medium dura protector is delivered automatically)
 - 252648 **Long Dura Protector**
 - 252690 **High-Speed Handpiece**, extra short, straight, 60,000 rpm
 - 252691 **High-Speed Handpiece**, short, straight, 60,000 rpm
 - 252680 **High-Speed Handpiece**, short, angled, 100,000 rpm
 - 252681 **High-Speed Handpiece**, medium, angled, 100,000 rpm
 - 252660 **High-Speed Handpiece**, extra short, angled, 60,000 rpm
 - 252661 **High-Speed Handpiece**, short, angled, 60,000 rpm
 - 39552 A **Wire Tray**, provides safe storage of accessories for KARL STORZ drilling/grinding systems during cleaning and sterilization, includes tray for small parts, for use with Rack 280030, rack not included for storage of:
 - **Up to 6 drill handpieces**
 - **Connecting cable**
 - **EC Micro-Motor**
 - **Small parts**

Note: Burrs must be ordered separately.

Endonasal

- 40701701-1 **UNIDRIVE® S III NEURO SCB**, motor control unit with color display, touch screen, two motor outputs, integrated irrigation pump and integrated SCB module, power supply 100-240 VAC, 50/60 Hz

- 20712033 **High-Speed Micro-Motor**, max. speed 60,000 rpm, including connecting cable
 - 252671 **High-Speed Handpiece**, extra long, malleable, slim, angled, 60,000 rpm
 - 252672 **High-Speed Handpiece**, super long, malleable, slim, angled, 60,000 rpm
 - 252682 **High-Speed Handpiece**, long, angled, 100,000 rpm
 - 252662 **High-Speed Handpiece**, medium, angled, 60,000 rpm
 - 252663 **High-Speed Handpiece**, long, angled, 60,000 rpm

- 40712050 **DRILLCUT-X® II Shaver Handpiece**
 - 39552 A **Wire Tray**, provides safe storage of accessories for KARL STORZ drilling/grinding systems during cleaning and sterilization, includes tray for small parts, for use with Rack 280030, rack not included for storage of:
 - **Up to 6 drill handpieces**
 - **Connecting cable**
 - **EC Micro-Motor**
 - **Small parts**

Note: Burrs and shavers must be ordered separately.

General Spine Surgery

- 40701701-1 **UNIDRIVE® S III NEURO SCB**, motor control unit with color display, touch screen, two motor outputs, integrated irrigation pump and integrated SCB module, power supply 100-240 VAC, 50/60 Hz
- 20712033 **High-Speed Micro-Motor**, max. speed 60,000 rpm, including connecting cable
 - 252671 **High-Speed Handpiece**, extra long, malleable, slim, angled, 60,000 rpm
 - 252672 **High-Speed Handpiece**, super long, malleable, slim, angled, 60,000 rpm
 - 252663 **High-Speed Handpiece**, long, angled, 60,000 rpm
 - 252681 **High-Speed Handpiece**, medium, angled, 100,000 rpm
 - 252682 **High-Speed Handpiece**, long, angled, 100,000 rpm
 - 39552 A **Wire Tray**, provides safe storage of accessories for KARL STORZ drilling/grinding systems during cleaning and sterilization, includes tray for small parts, for use with Rack 280030, rack not included for storage of:
 - **Up to 6 drill handpieces**
 - **Connecting cable**
 - **EC Micro-Motor**
 - **Small parts**

Note: Burrs must be ordered separately.

Percutaneous Spinal Endoscopy

- 40701701-1 **UNIDRIVE® S III NEURO SCB**, motor control unit with color display, touch screen, two motor outputs, integrated irrigation pump and integrated SCB module, power supply 100-240 VAC, 50/60 Hz

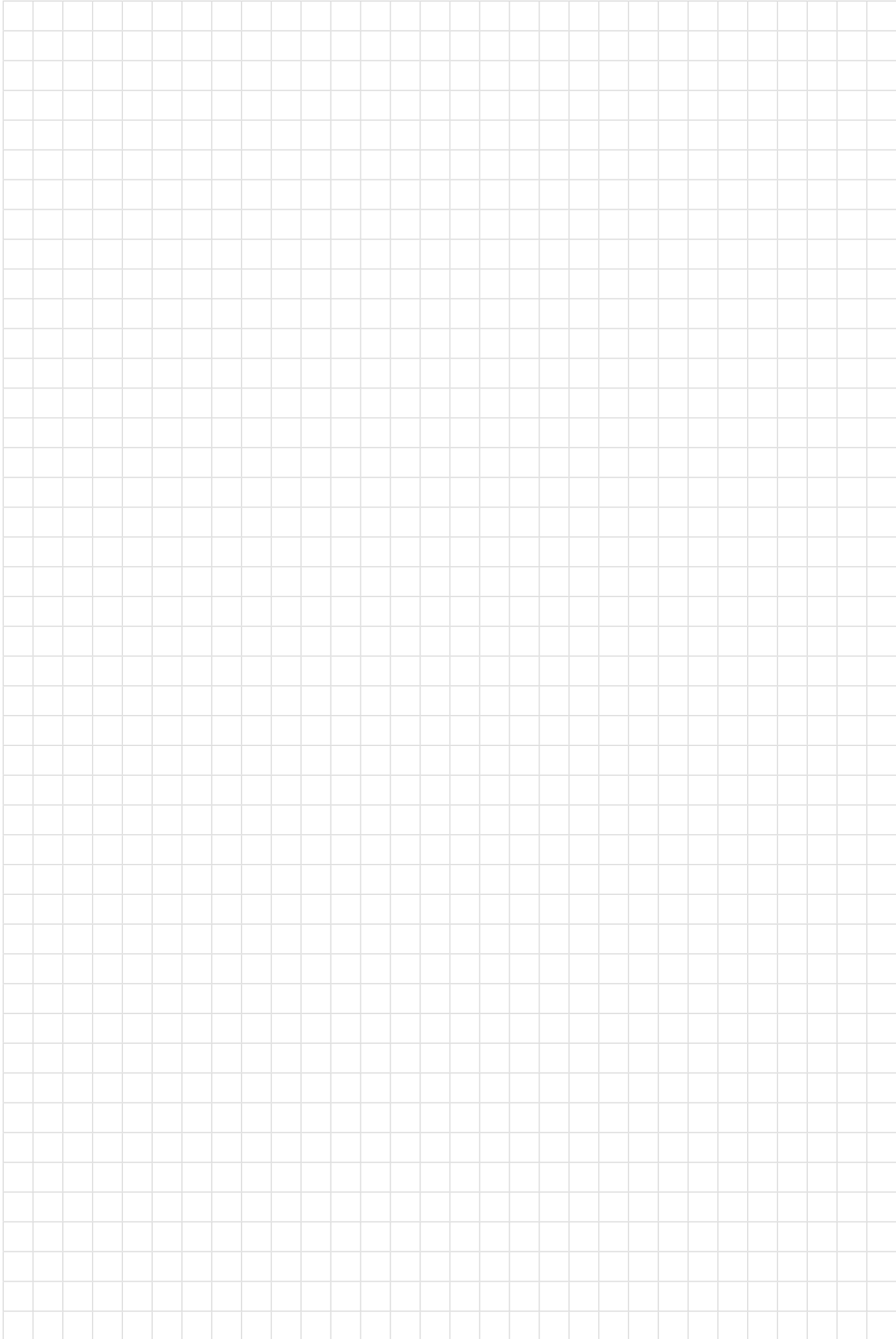
- 28712050 **DRILLCUT-X® II Spine Handpiece**, for use with UNIDRIVE® S III NEURO
 - 41301 FD **Suction Burr**, with integrated irrigation, straight, for single use, sterile, package of 5, cylindrical cutter head with lateral and distal protection, shaft diameter 3.5 mm, length 30 cm, for use with DRILLCUT-X® II Spine Handpiece 28712050

 - 41301 D **Diamond Burr**, with integrated irrigation, straight, sterile, for single use, package of 5, diamond head, shaft diameter 3.5 mm, length 30 cm, for use with DRILLCUT-X® II Spine Handpiece 28712050

 - 39550 A **Wire Tray**, provides safe storage of accessories for KARL STORZ paranasal sinus shaver systems during cleaning and sterilization for storage of:
 - **Up to 7 shaver attachments**
 - **Connecting cable**

Note: Burrs must be ordered separately.

Notes



STORZ
KARL STORZ—ENDOSKOPE

THE DIAMOND STANDARD

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