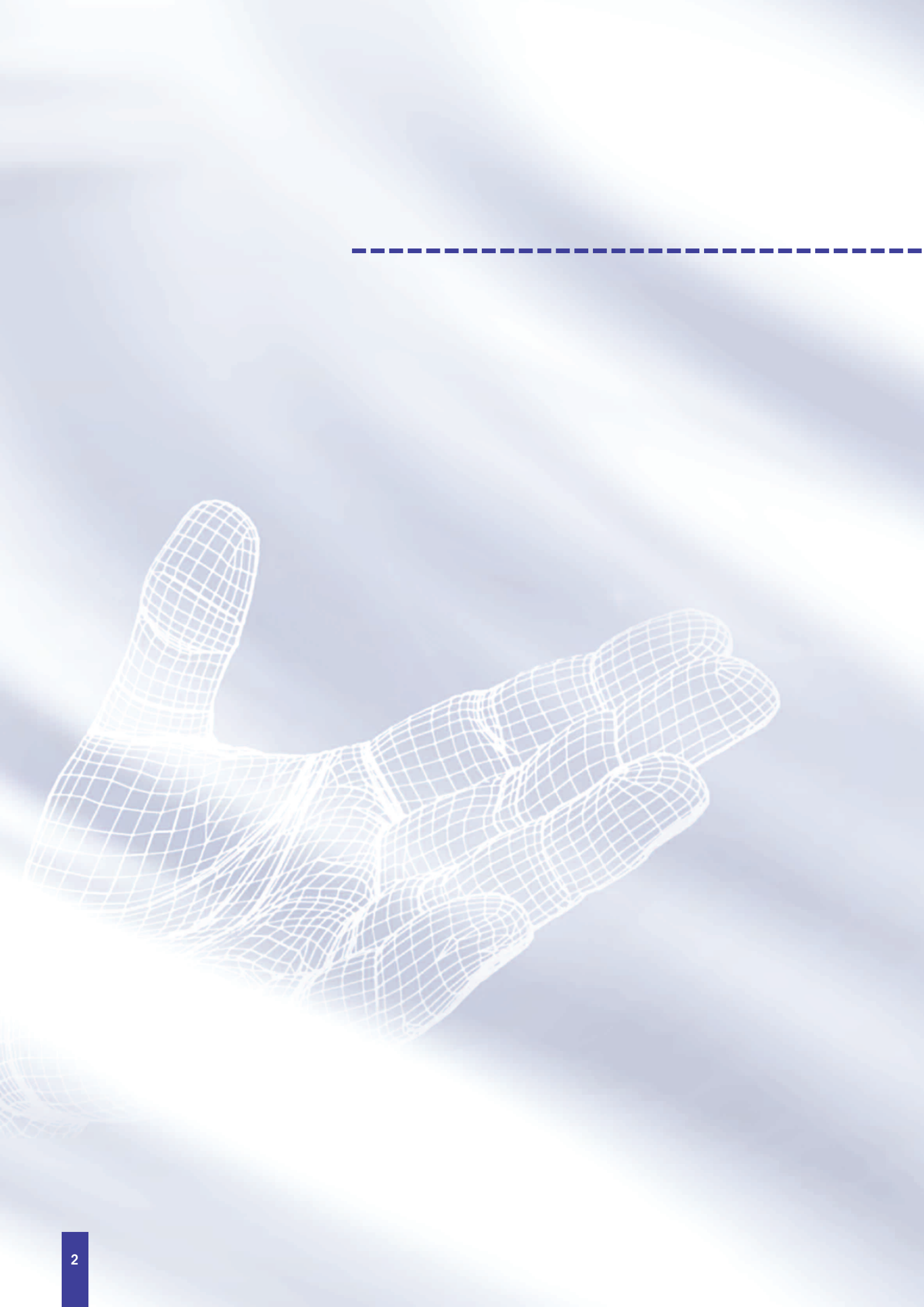




COMBIDRIVE EN

The universal drive system for microsurgery
and endoscopy



COMBIDRIVE EN

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COMBIDRIVE EN

The universal system for microsurgery



COMBIDRIVE EN drive system

COMBIDRIVE EN is a universal, multidisciplinary drive system for microsurgical and endoscopic interventions. The micro-processor-controlled control unit allows the use of various high-speed motors and shaver handpieces for arthroscopic interventions (rotational speed can be set between 500 and 40,000 rpm). The torque or power generated in the instrument can be preset and is also controlled to keep it constant.

The operating and tool parameters can be set, preset and programmed using an easy-to-clean touch-screen display. The control unit has an adjustable roller pump to cool and irrigate the operating area. The system can be activated and the parameters set using a waterproof foot pedal.

COMBIDRIVE EN set	20951.0000
consisting of:	Types
Control unit	20951.0201
Power cable, 1.8 m	20950.0301
Foot pedal, vario	20951.0401
Electronic motor, medium	80951.0002
Cable for electronic motor, medium 80951.0002	80951.0202
Tube set, sterile, disposable	40900.0002
Clip set, 12-piece	40900.0201
Motor handpiece rest	40900.0401
Spray attachment for handpieces	40900.1201
Spray attachment for motors	40900.1202
Stand for irrigation containers	80900.0000

Technical Data:

Speed range:	500 - 40,000 rpm
Torque:	1 - 10 Ncm
Pump:	100 ml/min
Motor power:	200 W
Dimensions:	290 x 110 x 260 mm
Weight:	4.5 kg
Power supply (switchable):	230 / 115 V a.c.

Shaver applications

for arthroscopy of small joints

In terms of ergonomics and performance, the Micro Stick S1 miniature shaver handpiece is ideal for arthroscopy of small joints.







The miniature handpiece allows speeds of 3000 rpm and attachment of various shaver tools from Ø 2 mm to Ø 4.5 mm.



Micro Stick S1

	Ø for shaver tools	Type
Micro Stick S1	2 - 4.5 mm	89951.0001

Accessories for Micro Stick S1 89951.0001 for arthroscopy of small joints

		Reusable			Disposable (pack of 5)		
		2 mm Ø	3.5 mm Ø	4.5 mm Ø	2 mm Ø	3.5 mm Ø	4.5 mm Ø
	Resector	89971.0032	89971.0033	89971.0034	49971.0032	49971.0033	49971.0034
	Resector, oval		89971.0113	89971.0114		49971.0113	49971.0114
	Resector, curved convex			89971.0254			49971.0254
	Resector, curved concave			89971.0264			49971.0264
	Ball burr with guard		89971.0503			49971.0503	
	Burr oval, acromionizer					49971.0553	

Shaver applications

for endoscopic spine surgery







Power Stick M4

Designation	Max. revs/min	Types
Power Stick M4	6000	8564.021
Universal connecting cable		8564.851



Power Stick M5

Designation	Max. revs/min	Types
Power Stick M5/0	8000	89955.0000
Universal connecting cable		8564.851

Accessories for Power Stick for endoscopic spine surgery					
		Working length	Ø	Power Stick M4	Power Stick M5
	Ball burr	350 mm	2.5 mm	–	899751302
			3.0 mm	–	899751303
			4.0 mm	–	899751304
	Nucleus resector, laterally hooded	350 mm	2.5 mm	8792.313	–
		160 mm	3.0 mm	89970.4003	–
		350 mm	3.0 mm	89970.1003	899751003
			4.0 mm	89970.1004	899751004
		220 mm	4.5 mm	8792.321	–
	Oval burr, laterally hooded	350 mm	2.5 mm	8792.312	899751502
			3.0 mm	89970.1503	899751503
			4.0 mm	89970.1504	899751504
		220 mm	4.5 mm	8792.323	–
	Oval burr, laterally and distally hooded	350 mm	2.5 mm	–	899751512
			3.0 mm	89970.1513	899751513
			4.0 mm	89970.1514	899751514

High-speed applications

Brushless electronic motors with INTRA coupling

The motors used in the **COMBIDRIVE EN** system are state of the art. All the motors provide high performance, are extremely reliable and simple to maintain. This is due, among other things, to the sophisticated brushless design. The motors also have the internationally standardised INTRA interface that allows considerable flexibility in terms of user peripherals. Power is supplied to the motors over special, highly flexible and autoclavable cables.

Electronic motor, standard
intended primarily for non-rotating instruments (saws, dermatomes)



Electronic motor, medium
for longer drill inserts

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	Ø	Types
Electronic motor, standard	26 mm	80951.0003
Electronic motor, medium	21 mm	80951.0002

	Length	Types
Cable for electronic motor, standard	3 m	80951.0203
Cable for electronic motor, medium		80951.0202

High-speed applications

Angled handpiece for endoscopic spine burrs with INTRA coupling



Angled handpiece

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	Max. revs/min	Gearing	Length	Ø	Type
Endoscopic angles handpiece	40,000 rpm	1:1	110 mm	2.35 mm	82950.1301

Hard metal and diamond burrs
with distal guard, Ø 4 mm



Diamond burrs
without guard, Ø 4 mm



	Types
Ball burr for 82970.1330, pack of 3	82960.3730
Ball burr diamond for 82970.1330, pack of 3	82960.3930
Outer tube with distal guard, Ø 4 mm	82970.1330

	Types
Ball burr diamond for 82970.1340, pack of 3	82960.3940
Outer tube open, Ø 4 mm	82970.1340

High-speed applications

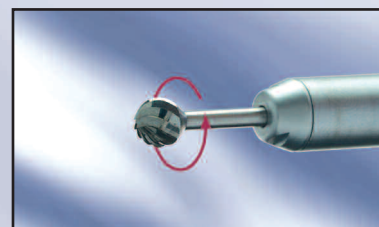
Handpieces and angled handpieces for microsurgery with INTRA coupling

To be able to satisfy the demands of the widely differing applications, we have developed an extensive variety of straight and angled handpieces.

The various handpieces differ in shape, gearing, dimensions and according to the intended application.

The **gearing** decides the factor by which the tool slows down as the torque is increased.

The **length** of the handpiece decides the depth that can be reached: In general, it is advisable to keep the handpiece as short as possible, however deeper operating sites or endoscopic applications may require longer handpieces.



Suitable tools are described on pages 10-12



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	Max. revs/min	Gearing	Length	For tools		Types
				Shaft Ø	Length from	
Handpiece, short	40,000 rpm	1:1	90 mm	2.35 mm	44 mm	82950.1001
Handpiece, medium			104 mm		70 - 95 mm	82950.1002
Handpiece, long			127 mm		90 - 125 mm	82950.1003



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	Max. revs/min	Gearing	Length	For tools		Types
				Shaft Ø	Length from	
Angled handpiece	40,000 rpm	1:1	130 mm	2.35 mm	70 - 95 mm	82950.1201
					90 - 125 mm	82950.1202

High-speed applications

Tungsten carbide burs for straight and angled handpieces

The straight and angled handpieces (page 9) are used to drive a burr, drill or diamond tool etc.

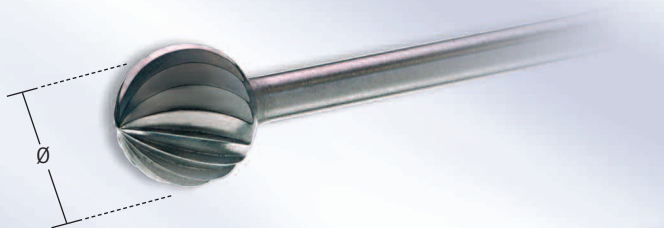
The standardised tool holder (2.35 mm) allows extremely flexible use.

We offer a large selection of tools with various shapes and cutting geometries for extremely varied requirements and applications.

Ball-shaped instruments are the classic shape. They are extremely universal and a large selection is available.

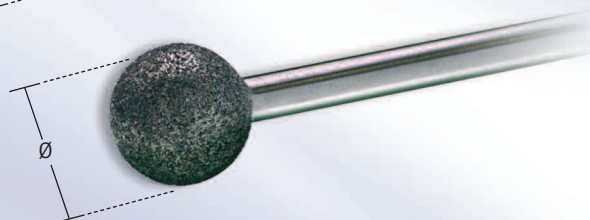
Tungsten carbide burs

Ø from 0.6 to 7.0 mm



Diamond burs

Ø from 0.6 to 7.0 mm



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	Ø	Shaft Ø	Total length	Types
Tungsten carbide burr set, consisting of: 14 burs and burr stand	0.6 - 7.0 mm	2.35 mm	70 mm	82960.3400
Tungsten carbide burs, pack of 10	0.6 mm	2.35 mm	70 mm	82960.3406
	0.8 mm			82960.3408
	1.0 mm			82960.3410
	1.4 mm			82960.3414
	1.8 mm			82960.3418
	2.3 mm			82960.3423
	2.7 mm			82960.3427
	3.1 mm			82960.3431
	3.5 mm			82960.3435
	4.0 mm			82960.3440
	4.5 mm			82960.3445
	5.0 mm			82960.3450
	6.0 mm			82960.3460
	7.0 mm			82960.3470

High-speed applications

Diamond burrs for straight and angled handpieces

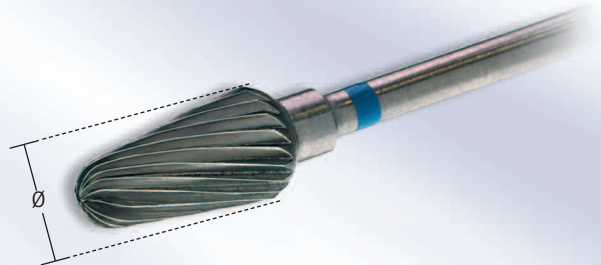
	Ø	Shaft Ø	Total length		Types
			70 mm	95 mm	
Diamond burr set consisting of: 15 burrs and drill stand	0.6 - 7.0 mm	2.35 mm	•		82960.3600
Diamond burr set consisting of: 10 burrs and drill stand	1.4 - 7.0 mm			•	82960.3800
Diamond burr, pack of 10	0.6 mm	2.35 mm	•		82960.3606
	0.7 mm		•		82960.3607
	0.8 mm		•		82960.3608
	1.0 mm		•		82960.3610
	1.4 mm		•		82960.3614
				•	82960.3814
	1.8 mm		•		82960.3618
				•	82960.3818
	2.3 mm		•		82960.3623
				•	82960.3823
	2.7 mm		•		82960.3627
				•	82960.3827
	3.1 mm		•		82960.3631
				•	82960.3831
	3.5 mm		•		82960.3635
				•	82960.3835
	4.0 mm		•		82960.3640
				•	82960.3840
	4.5 mm		•		82960.3645
				•	82960.3845
	5.0 mm		•		82960.3650
				•	82960.3850
	6.0 mm		•		82960.3660
	7.0 mm		•		82960.3670
				•	82960.3870

High-speed applications

Further burs and drills for straight and angled handpieces

Roller shapes are useful when removing flat surfaces tangentially in an anterior direction as opposed to punctiform operation.

Burr, roller-shaped
Ø from 5.0 to 7.0 mm



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	Ø	Shaft Ø	Total length	Types
Burr, roller-shaped pack of 10	5.0 mm	2.35 mm	70 mm	82960.4450
	6.0 mm			82960.4460
	7.0 mm			82960.4470

The drills by Lindemann are intended for drilling precise cylindrical holes.

Drill by Lindemann
Ø from 1.8 to 2.3 mm



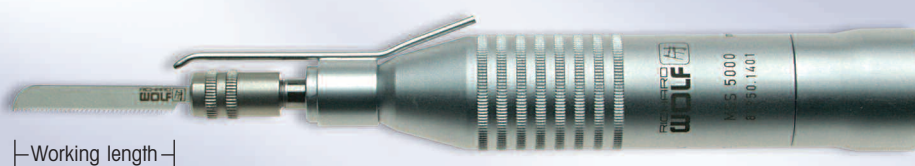
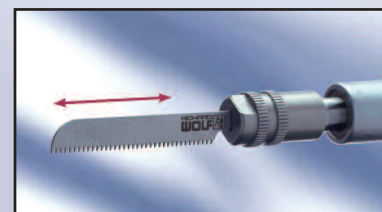
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	Ø	Shaft Ø	Total length	Types
Drill by Lindemann, pack of 10	1.8 mm	2.35 mm	70 mm	82960.4618
	2.1 mm			82960.4621
	2.3 mm			82960.4623

High-speed applications

Micro jig saw with INTRA coupling

Saw attachments for cutting and preparing bony structures.



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	Max. revs/min	Gearing	Type
Micro jig saw with spray nozzle (without saw blades)	15,000 rpm	1:1	82950.1401

	Working length	Types
Saw blade, blade thickness 0.4 mm, pack of 6	10 mm	82960.0210
	17 mm	82960.0217
	25 mm	82960.0225

	Shape	Type
Tungsten carbide rasp attachment	0	82960.0000

For preparation and modelling of bone.

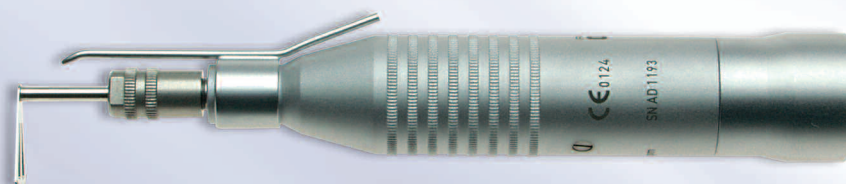
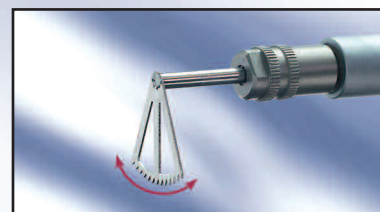


Tungsten carbide rasp attachment

High-speed applications

Micro saw, oscillating with INTRA coupling

For dividing and modelling with a more lateral portal.



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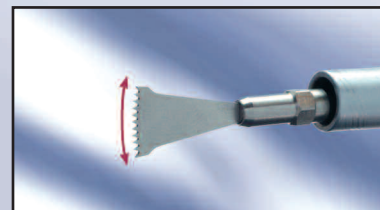
	Max. revs/min	Gearing	Oscillation angle	Type
Micro saw, oscillating with spray nozzle (without saw blades)	15,000 rpm	1:1	25°	82950.1601

	Height	Width	Types
Saw blade, with short shaft, blade thickness 0.4 mm	14 mm	6 mm	82960.1006
	14 mm	10 mm	82960.1010
	14 mm	15 mm	82960.1015

High-speed applications

Osseo scalpel with sagittal cutting edge with INTRA coupling

For dividing and modelling with a more pro-grade portal.



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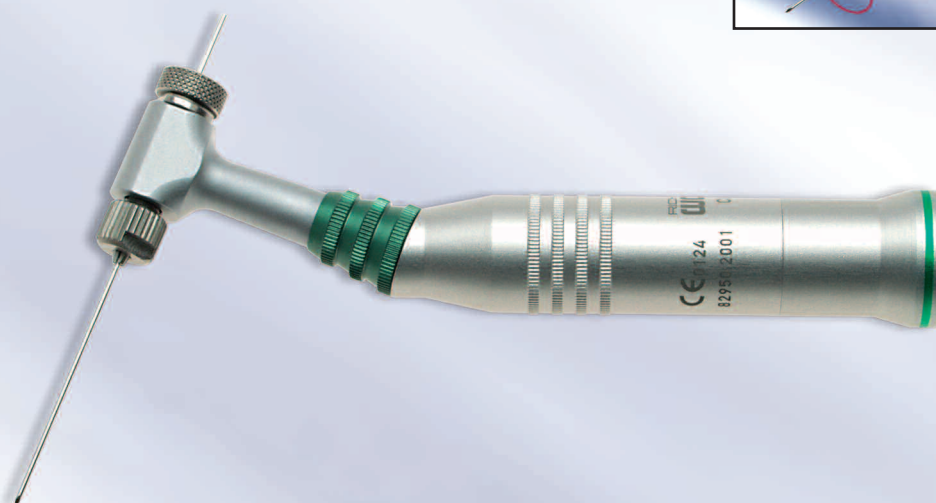
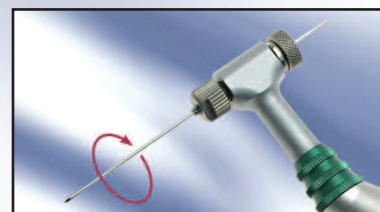
	Max. revs/min	Gearing	Type
Osseo scalpel with sagittal cutting edge and spray nozzle (without saw blades)	15,000 rpm	1:1	82950.1801

	Height	Width	Types
Saw blade, blade thickness 0.4 mm, pack of 6	10 mm	9 mm	82960.0409
	15 mm	6 mm	82960.0606
	15 mm	10 mm	82960.0610

High-speed applications

Angled handpiece for surgical wires with INTRA coupling

This handpiece is used, in particular, in osteosynthesis of small bones, for example OMF, small joints and similar drilling applications (for example, plates, implants).



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	Max. revs/min	Gearing	Length	Types
Angled handpiece for surgical wires with Ø 0.5 to 1.6 mm (without wires)	2,500 rpm	16:1	105 mm	82950.2001
Spare angled handpiece head				82950.2101

	Length	Ø	Types
Surgical wire, pack of 10	70 mm	0.8 mm	82960.2208
	70 mm	1.0 mm	82960.2210
	150 mm	0.8 mm	82960.2408
	150 mm	1.0 mm	82960.2410
	150 mm	1.2 mm	82960.2412
	150 mm	1.5 mm	82960.2415

High-speed applications

Dermatomes with INTRA coupling

Our dermatomes were developed primarily for plastic reconstruction surgery. They are available with blade widths from 12 to 75 mm.

We recommend that they are used with the standard motor 82950.0003.



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	Blade width	Max. revs/min	Types
Dermatome	12 mm	8,000 rpm	82950.2612
	25 mm		82950.2625
	50 mm		82950.2650
	75 mm		82950.2675

	Width	Types
Spare blades for dermatome, pack of 10	12 mm	42960.1412
	25 mm	42960.1425
	50 mm	42960.1450
	75 mm	42960.1475

	Reduction from 75 mm to	Types
Reducing insert for dermatome base plate	50 mm	82960.1501
	25 mm	82960.1502

Accessories



The autoclavable drill stand provides space for up to 16 tools with normal shafts (Ø 2.35 mm) such as drills and burs.



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	Type
Drill stand for 16 handpiece instruments	82900.0023

	Types
Spare union nut	82900.0800
Spare spanner	82900.1000
Spray tube attachment	82900.0400

Cleaning and instrument care

	Content	Type
Cleaning spray for care of the handpieces	500 ml	40900.1000

	Shape	Types
Spray attachment		40900.1201
		40900.1202



M E D I C A L

V E T E R I N A R Y

I N D U S T R I A L