Driving motors and handpieces Overview



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ENESKAmicro COMPACT series









jokeFlex Power











machines DIPROFIL®





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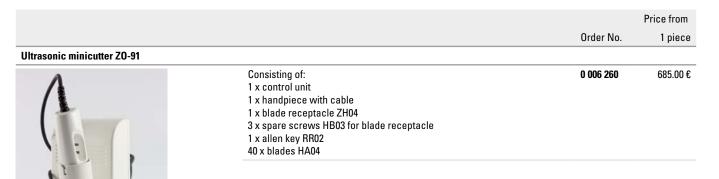
94 Tungsten carbide coating system

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Ultrasonic minicutter ZO-91 convenient for larger numbers of items



		Packing Price f		Price from	om	
		quantity	Order No.	1 pack	1 piece	1 set
Spare blades HA04						
		40 pieces	0 006 270	21.25 €		
Spare blade ZH03, round	ed R5					
	For all those who need to "go round corners".		0 006 276		70.35€	
Spare blade ZH10, 25 mm	long version					
	For all those who need to cut deeper.		0 006 274		32.80 €	
Spare blade ZH11, saw b	lade fine					
4	For all those who do more sawing than cutting.		0 006 275		44.70 €	
Blade receptacle ZH04						
			0 006 271		16.30 €	
Blade receptacle set ZH)4S					
	Set contents: 1x blade receptacle ZH04 1x spare screw HB03 1x allen key RR02		0 006 272			16.65€
Spare screw HB03						
			0 006 273		3.69 €	

ENESKAsonic

The most innovative advancement in the field of ultrasonics









Ultrasonic lapping and polishing system ENESKAsonic

The most innovative advancement in the field of ultrasonics ENESKAsonic – high-efficiency, leading-edge, latest generation for finest stock removal

We wish the newest member of the joke family a very warm welcome. As with the ENESKAmicro, the ENESKAsonic ultrasonic system is characterised by consistent advancements in every respect. An outstanding feature is the sophisticated design combined with convenient high-tech equipment.

Highlights:

- intuitive touch operation combined with a rotary controller on high-quality glass
- modern LED-assisted multifunctional display
- · Boost function for applications requiring greater power
- Idle timer detects unused handpieces and protects against wear
- USB charging connection enables for example optional addition of a workplace light without a further power source

The ENESKAsonic is used for polishing and lapping in the frequency range of between 20 and 30 kHz. The Auto Tune function determines the optimum frequency. The infinitely adjustable power control is suitable for fine, delicate work on narrow webs and edges as well as in boost mode for power-intensive, extra abrasive work with sintered diamond files. The LED-assisted display shows the widest range of operating parameters and settings. The 140 g lightweight handpiece with an M6 fine thread is comfortable to hold and enables fatigue-free work.

It was especially important to our development department that this addition to our family should also be "100% Made in Germany" and be reverse-compatible with ENESKA 2-1 handpieces. Guaranteeing this demand for particularly high quality is a major concern for us and protects your years of investment. Combine the ENESKAsonic with an ENESKAmicro and you will receive an unbeatable tandem fully specialised in their respective fields.

				Price from
			Order No.	1 piece
Control unit ENESKAsonic				
Pla	Technical Data: Output: Dimensions (w x h x d): Weight: Supply voltage:	max. 80 W 135 x 235 x 200 mm 2.7 kg 115/230 V, 50/60 Hz, 150 VA	0 012 001	1590.00 €



matching set

			Price from
		Order No.	1 piece
Jitrasonic lapping and p	oolishing system set ENESKAsonic		
	The set contains the following components: 1 x control unit ENESKAsonic (Order No. 0 012 001) 1 x ultrasonic handpiece JUS-45PB-ES (Order No. 0 012 003) 1 x handpiece support, standard, black (Order No. 0 011 110) 1 x screen protector made of tempered glass (Order No. 0 011 098-G) 1 x power cord set for Germany, Switzerland, England and Europe (Order No. 0 007 435-1) 2 x 4 A fuse for 110 V use (Order No. 1 711 407-1) 1 x allen key (Order No. 0 006 304) 2 x chuck key (Order No. 0 006 347) 1 x tool holder — Ø 3 mm bore (Order No. 0 006 310-E) 1 x tool holder — 1 mm slot width (Order No. 0 006 310-E)	0 012 000	2950.00€



Ultrasonic lapping and polishing system ENESKAsonic

* Accessories / spare parts

			Price from
		Order No.	1 piece
ENESKAmicro footpedal			
	for comfortable control by foot (start/stop, speed adjustment), cable length 2 m	0 011 002	163.00€
ENESKAmicro handpiece	e support standard, black		
		0 011 110	7.45 €

Ultrasonic lapping and polishing system ENESKAsonic • handpieces

				Price from
			Order No.	1 piece
Rapid-chuck handpiece JUS-45 PB-ES				
	Receptacle:	M6/fine	0 012 003	1560.00 €
	Frequency:	22.5 kHz (40 μm)		
INC. ISSUES AS TO ANNUAL	Dimensions:	Ø 28 x 134 mm		
The Control of the Co	Weight:	140 g (without cable)		
	Cable length:	2 m		
	Output:	50 W		

					Price from
	Tool support	Profile	Thread	Order No.	1 piece
Tool holder for receiving	round tools				
0 =	d = Ø 2 mm	round	M6/fine	0 006 305	29.15 €
	d = Ø 3 mm	squared	M6/fine	0 006 306-E	31.40 €
Tool holder for receiving	flat tools				
0 -	t = 0.5 mm	squared	M6/fine	0 006 308	39.40 €
	t = 0.8 mm	squared	M6/fine	0 006 309	29.15 €
	t = 1 mm	round	M6/fine	0 006 310	29.15 €
	t = 1 mm	squared	M6/fine	0 006 310-E	29.15 €
	t = 2 mm	squared	M6/fine	0 006 311	29.15 €
	t = 3 mm	squared	M6/fine	0 006 312	29.15 €
Adapters for receiving ul	trasonic tools				
	Thread M4			0 006 900	18.25 €
HIII CONTRACTOR OF THE PARTY OF					



































































Mobile polishing system MINI MONTOR mobile 1 P

MINI MONTOR mobile 1 P

The mobile system for grinding, milling and polishing. Maximum mobility in processing large workpieces, for this compact system can now be taken with you almost anywhere. The Ni-Mh storage battery is not only environment friendly; it is durable too: 90 minutes' working time at a stretch. If ever the juice dries up, you can also continue work with the mains cable (the storage battery is recharged in the meantime!).

The handpiece (with an integrated motor) can be rotated clockwise and anticlockwise, is infinitely adjustable in speed and is electrically protected against overload. The handpiece can be set in motion both by hand and using a foot switch. The speed can also be regulated in both ways.

The set consisting of control unit, handpiece and all accessories is supplied in a compact hard-shell aluminium case.

				Price from
			Order No.	1 piece
Mobile control unit MPC20-W				
1991		of the handpiece MPH 33. age battery (Ni-Mh) for mobile use.	0 006 713	183.00€
and a second sec	Dimensions (W x H x D): Weight:	300 g		
	Storage battery type: Charging time:	Ni-Mh 60 min.		
AND THE PERSON OF THE PERSON O	Working time:	90 min.		
On IND				



matching set

			Price from
		Order No.	1 piece
Set MINI MONTOR mo	bile 1 P		
	This set consists of: 1 x control unit MPC20-W (Order No. 0 006 713) 1 x handpiece with integrated micromotor (Order No. 0 006 711) (incl. 1 x collet Ø 3 mm Order No. 0 006 704) 1 x charging device ACP01 (Order No. 0 006 714) 1 x foot controller TPF30 (Order No. 0 006 701) 1 x handpiece rack TRC02 (Order No. 0 006 702) 1 x hard-shell aluminium case (Order No. 0 006 703)	0 006 700	419.00€



			Price from
		Order No.	1 piece
Foot controller TPF 30			
	For convenient foot-operated starting and stopping of the handpiece.	0 006 701	14.65€
Power supply unit/charg	ing device ACP01		
	The storage battery of the control unit can be recharged in a short time (1 h) using this power supply unit. The control unit can likewise be used in mains operation. 100 - 230 V, 50 - 60 Hz.	0 006 714	27.30 €



Mobile polishing system MINI MONTOR mobile 1 P

				Price from
			Order No.	1 piece
Handpiece MPH 33				
Diffus-	Speed: Output: Dimensions: Weight: Collet:	max. 30,000 rpm 20 W Ø 25 x 143 mm 180 g (incl. cable) Ø 3 mm (in scope of delivery)	0 006 711	139.40 €

				Price from
	Dimensions	Туре	Order No.	1 piece
Collets MINI MONTOR				
	Ø 3 mm	TPH65-117B	0 006 704	42.75 €
	Ø 2.35 mm	TPH65-117A	0 006 705	42.75€















































































ENESKAmobile

The handy ENESKAmobile cordless grinder is the ideal aid for dressers or toolmakers. Powerful, durable and extremely versatile through use of all current handpieces. With more than 10 hours' storage battery life, a torque of max. 6.5 N cm and 40,000 rpm, new possibilities have been created here in comparison to conventional devices.

Highlights:

- brushless direct-current (DC) motor
- modern high-output 14.8 V storage battery without memory effect
- clockwise/anticlockwise running
- charging and ready indicator
- digital control with safety cutoff
- high speed with max. 6.5 N cm at the motor shaft
- ME3 and ME4 micromotor connection for screw-fitting on all handpieces with (+) and (-) connection



A clip allows attachment to a belt.

				Price from
			Order No.	1 piece
ENESKAmobile control unit				
	Technical data: Speed: Charging time: Period of use:	1,000 to 40,000 rpm max. 2 hours up to 10 hours	0 006 860	596.00€



matching set

				Price from
		Design	Order No.	1 piece
Set ENESKAmobile				
-	This set consists of:	for handpieces with (+) connection	0 006 950	942.00 €
	1 x motor with motor cable 1 x control unit with storage battery 1 x charging device	for handpieces with (-) connection	0 006 850	942.00€















Mobile polishing system ENESKAmobile

* Accessories / spare parts

				Price from
			Order No.	1 piec
ENESKAmobile motorca	ble M			
			0 006 862	119.95 €
ENESKAmobile charging	g device PA-1			
	Voltage 100 - 230 V, 50 - 6	O Hz	0 006 861	64.60 €
ENESKAmobile plastic o	carry case with inlay			
	Dimensions (W x H x D): Weight:	340 x 70 x 280 mm 0.544 kg	0 006 851	33.65 €
ENESKAmobile replace	ment storage battery pack			
	High-performance Li-lon	battery 14.8 V	0 006 869	136.85 €

Mobile polishing system ENESKAmobile • micromotors

				Price from
			Order No.	1 piece
ENESKAmobile micromotor	ME3			
	Rotation speed: Torque: Supply without motor	max 40,000 rpm 6.5 N cm cable	0 006 863	260.00 €
				Price from
			Order No.	1 piece
ENESKAmobile micromotor	ME4			
+	Rotation speed: Torque: Supply without motor	max 40,000 rpm 6.5 N cm cable	0 006 963	260.00 €

ENESKAmicro

- 30% more efficiency
- based on IP 54
- enhanced handpieces
- extremely high true running accuracy
- 20% higher final speed
- highest clamping force in the world
- handpieces & motors universally compatible regardless of manufacturer
- PLC suitable
- idletimer
- operator menu in eight different languages
- updatable

100% Made in GERMANY





Handpieces for added requirements

New ENESKAmicro handpieces with integrated fan in combination with inlets and outlet.

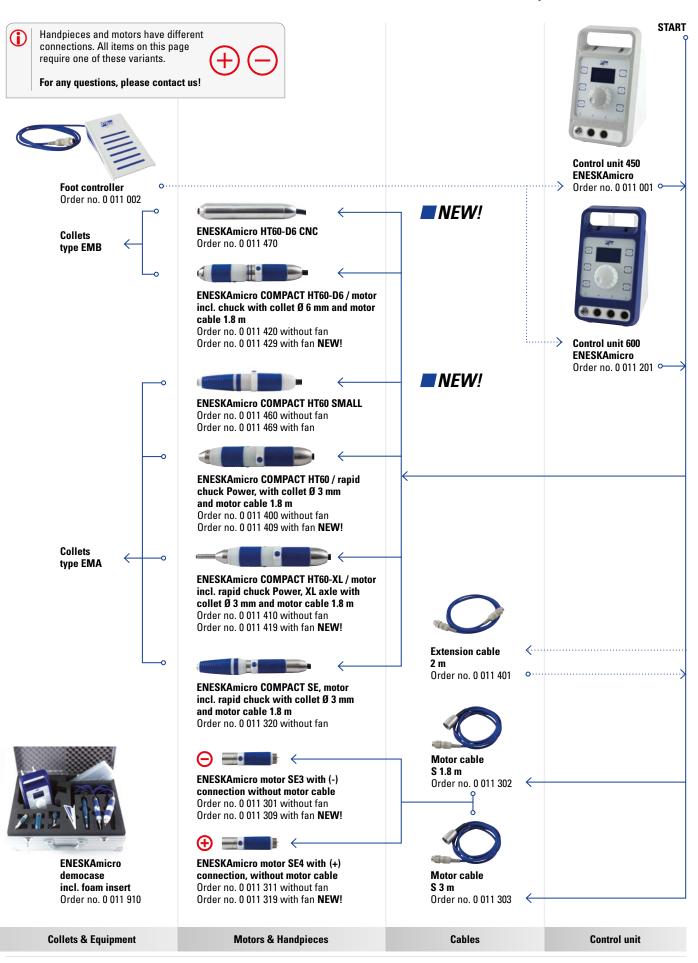
The optimized cooling makes the handpieces and motors ideal for longer periods of use.







ENESKAmicroSystem overview





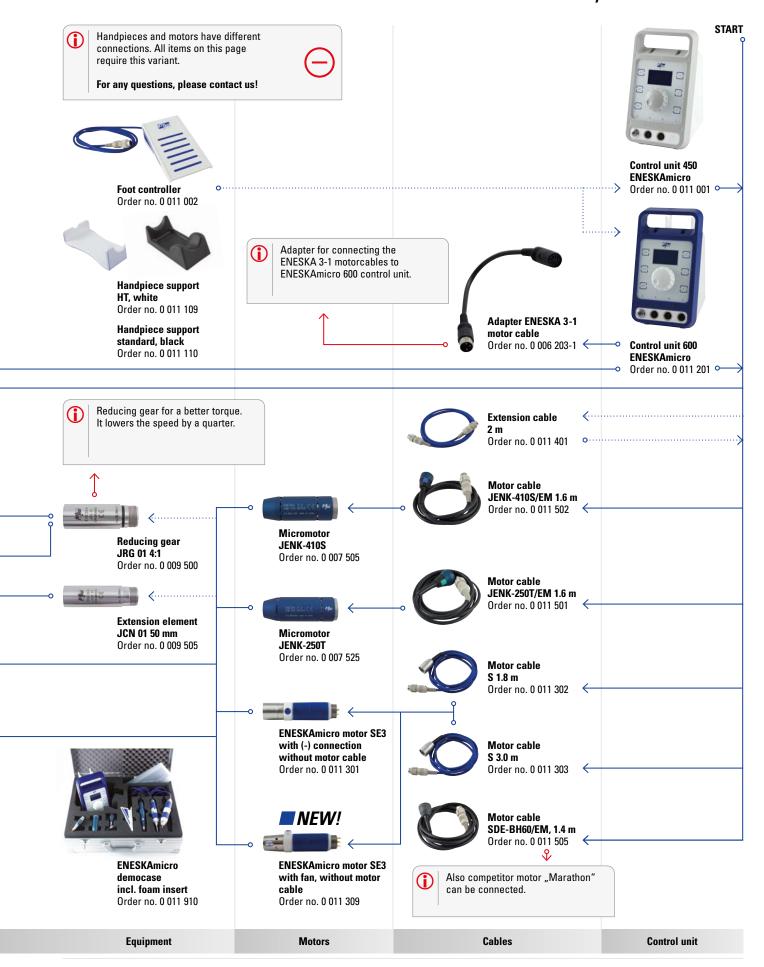
ENESKAmicro with (-) connection System overview







ENESKAmicro with (-) connectionSystem overview



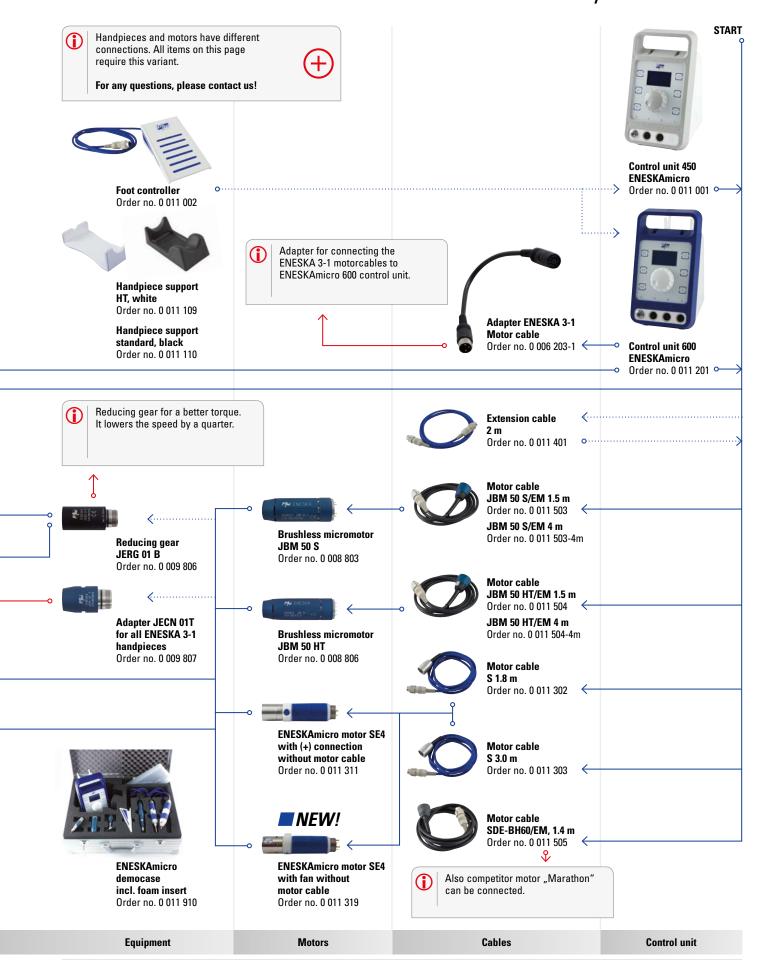


ENESKAmicro with (+) connection System overview



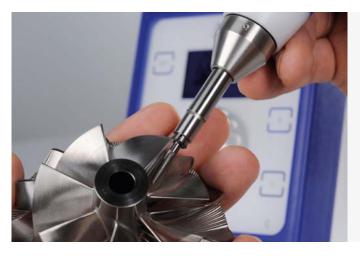


ENESKAmicro with (+) connection System overview











The new standard for grinding, polishing, milling and deburring ENESKAmicro - the unbeatable all-round talent

The in-house development by joke sets new standards for micromotor systems. What is unique about this series is its system-wide and downwards compatibility as well as extremely powerful.

20% higher final speed, 30% more power, 50% higher clamping force for the handpieces, 100% Made in Germany, touch display and high level of true running are just some of the highlights of this extraordinary system.

This not only enables its use in many new application areas, such as aerospace and 3D printing, but also in conventional toolmaking and mould building or in medical engineering.

Simple to operate with the touch display

The core component of the ENESKAmicro is the intelligent control unit. Intelligent because it automatically detects which micromotor is connected, whether from the joke family or a third-party manufacturer. The individual settings can be saved on the touch display with station keys. The speed input can be set via a finely adjusted rotary knob or optionally via a foot switch. The slim design and low centre of gravity make for high stability. The control unit dispenses with fans or slots – which means less noise pollution for the user and it is also dust-protected (according to IP 54).

The newly developed handpieces achieve a 50% higher clamping force than similar devices on the market. Created by a combination of spring and lever force that keeps the tool in position even at high speeds. The high-precision grinding of all axes and the installation of the latest-generation bearings enable a high level of true running to within less than 0.01 millimetres. Further advantages are the on/off switch directly on the motor and the toolless quick-clamping function. This saves time and guarantees precise, low-vibration and fatigue-free work. The joke team has developed handpieces with a longer XL axis for hard-to-reach areas in workpieces.

A special detail that was particularly important to us: the ENESKAmicro is completely "Made in Germany". This serves local business and sensible further use and protection of previously made investments as well as our own high requirements in terms of quality and delivery time can thus be guaranteed. The powerful micromotor system therefore meets the technical requirements in milling in particular – wherever hard materials are machined, such as high-grade steels, Inconel and titanium for implant production.

The ENESKAmicro offers a genuine alternative to many compressed-air systems.

The facts speak for themselves:

- Tremendously high cost advantage compared to expensive compressed-air
- Remarkably high-speed, variably adjustable
- Low-vibration work
- · Quick tool changes without external aids
- · Low noise pollution

			Price from
		Order No.	1 piece
ENESKAmicro 600 control unit			
	 Infinitely variable speed control up to max. 60,000 rpm 	0 011 201	1095.00 €



- Infinitely variable speed control up to max. 60,000 rpm
- Speed limited by potentiometer
- · Digital speed display
- Connection for 2 motors BLDC and 1 AC motor
- Motor recognition
- Speed Memory button
- · Clockwise, anticlockwise running
- Connection for foot control

Weight:

Dimensions (W x H x D): 135 x 235 x 200 mm Connection: 90-240 V. 50-60 Hz



ENESKAmicro Control units

			Price from
		Order No.	1 piece
ENESKAmicro 450 control unit			
	 Infinitely variable speed control up to max. 45,000 rpm 	0 011 001	921.00 €



- Speed limited by potentiometer
- Digital speed display
- Connection for 2 motors BLDC
- Motor recognition
- Speed Memory button
- Clockwise, anticlockwise running
- Connection for foot control

Weight: 2.4 kg

Dimensions (W x H x D): 135 x 235 x 200 mm Connection: 90-240 V, 50-60 Hz

Accessories	s / spare parts		
			Price from
		Order No.	1 piece
ENESKAmicro footpeda	al		
	for comfortable control by foot (start/stop, speed adjustment), cable length 2 m	0 011 002	163.00€
ENESKAmicro handpie	ce support HT, white		
		0 011 109	15.75€
N			
ENESKAmicro handpie	ce support standard, black		
-		0 011 110	7.45€
ENESKAmicro extension	on cable, 2 m		
0	suitable for all motor cables of the ENESKAmicro series	0 011 401	41.85€
ENESKAmicro display	protection sheet		
	suitable for control units 450 and 600	0 011 099	21.05€
ENESKAmicro storage	case, incl. foam inlay		
	Aluminium case with carrying handle and two lockable locks Dimensions (W x H x D): 502 x 150 x 370 mm Weight: 3.2 kg	0 011 910	210.00€



ENESKAmicro 600

Complete sets

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.1			
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor SE3 with (-) connection (order no. 0 011 301) 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302) 1 x ENESKAmicro handpiece support HT, white (order no. 0 011 109)	0 011 200	1536.00€

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.2			
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor SE3 with (-) connection (order no. 0 011 301) 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302) 1 x ENESKA rapid-chuck handpiece JIR 310 (order no. 0 007 515) 1 x ENESKAmicro handpiece support HT, white (order no. 0 011 109)	0 011 205	1807.00€

			Price from
		Order No.	1 piece
ENESKAmicro 600 Set 2.3			
+	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor SE4 with (+) connection (order no. 0 011 311) 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302)	0 011 210	1536.00€

1 x ENESKAmicro handpiece support HT, white (order no. 0 011 109)

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.4			
+	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor SE4 with (+) connection (order no. 0 011 311) 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302) 1 x ENESKA rapid-chuck handpiece JEHR 500 (order no. 0 008 810) 1 x ENESKAmicro handpiece support HT, white (order no. 0 011 109)	0 011 215	1965.00€

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.5			
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro COMPACT HT60, Motor incl. Handpiece Power, (Article-No. 0 011 400) 1 x ENESKAmicro Motorcable HT, 1.8 m (Article-No. 0 011 402) 1 x ENESKAmicro Collet Type EMA, Ø 3 mm (Article-No. 0 011 413) 1 x ENESKAmicro handpiece support HT, white (order no. 0 011 109)	0 011 220	1829.00€



ENESKAmicro 600 Complete sets

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.6			
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor HT60/rapid chuck Power, XL axle (order no. 0 011 410) 1 x ENESKAmicro motor cable HT. 1.8 m (order no. 0 011 402)	0 011 230	1881.00€



1 x ENESKAmicro collet type EMA, Ø 3 mm (order no. 0 011 413) 1 x ENESKAmicro handpiece support HT, white (order no. 0 011 109)

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.7			
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor JENK-410S with (-) connection (order no. 0 007 505) 1 x ENESKAmicro motor cable JENK-410S/EM, 1.6 m (order no. 0 011 502) 1 x ENESKAmicro handpiece support, black (order no. 0 011 110) 1 x ENESKA rapid-chuck handpiece JIR 310 (order no. 0 007 515) incl. collet type CHH, Ø 3 mm	0 011 240	1869.00€

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.8			
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor JENK-250T with (-) connection (order no. 0 007 525)	0 011 245	1924.00€



- 1 x ENESKAmicro motor cable JENK-250T/EM, 1.6 m (order no. 0 011 501)
- 1 x ENESKAmicro handpiece support, black (order no. 0 011 110) 1 x ENESKA rapid-chuck handpiece JIR 310 (order no. 0 007 515) incl. collet type CHH, Ø 3 mm

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.9			
+	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor JBM 50 S with (+) connection (order no. 0 008 803) 1 x ENESKAmicro motor cable JBM 50 S/EM, 1.6 m (order no. 0 011 503) 1 x ENESKAmicro handpiece support standard, black (order no. 0 011 110) 1 x ENESKA rapid-chuck handpiece JEHR 500 (order no. 0 008 810) incl. collet type CHH, Ø 3 mm	0 011 250	2112.00€

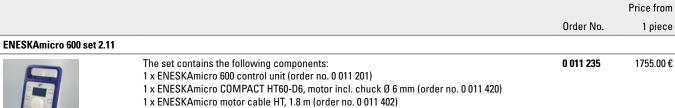
			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.10			
+	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro motor JBM 50 HT with (+) connection (order no. 0 008 806) 1 x ENESKAmicro motor cable JBM 50 HT/EM, 1.6 m (order no. 0 011 504) 1 x ENESKAmicro handpiece support standard, black (order no. 0 011 110) 1 x ENESKA rapid-chuck handpiece JEHR 500 (order no. 0 008 810) incl. collet type CHH, Ø 3 mm	0 011 255	2045.00€





ENESKAmicro 600

Complete sets





1 x ENESKAmicro collet type EMB, Ø 6 mm (order no. 0 011 426) 1 x ENESKAmicro handpiece support, white (order no. 0 011 109)

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.12			
	The set contains the following components:	0 011 260	1871.00€





- 1 x ENESKAmicro 600 control unit (order no. 0 011 201)
- 1 x ENESKAmicro motor JENK-410S with (-) connection (order no. 0 007 505)
- 1 x ENESKAmicro motor cable JENK-410S/EM, 1.6 m (order no. 0 011 502)
- 1 x ENESKAmicro handpiece support, black (order no. 0 011 110)
- 1 x ENESKA rapid-chuck handpiece JIH 300 (order no. 0 009 150) incl. collet type CHH, Ø 3 mm

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.13			
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro COMPACT SE, motor incl. rapid-chuck head	0 011 265	1834.00€



with collet Ø 3 mm and motor cable 1.8 m (order no. 0 011 320) 1 x ENESKAmicro handpiece support HT, white (order no. 0 011 109)

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.14		Oluci No.	1 piece
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro COMPACT HT60 SMALL, motor incl. rapid-chuck head (order no. 0 011 460) 1 x ENESKAmicro motor cable HT, 1.8 m (order no. 0 011 402) 1 x ENESKAmicro collet type EMA, Ø 3 mm (order no. 0 011 413) 1 x ENESKAmicro handniece support white (order no. 0 011 109)	0 011 270	1701.00 €

			Price from
		Order No.	1 piece
ENESKAmicro 600 set 2.15			
	The set contains the following components: 1 x ENESKAmicro 600 control unit (order no. 0 011 201) 1 x ENESKAmicro ENESKAmicro HT60-D6 CNC, motor spindle in stainless steel housing (order no. 0 011 470) 1 x ENESKAmicro motor cable HT-D6, 3 m (order no. 0 011 404-3M) 1 x ENESKAmicro collet type EMB, Ø 3 mm (order no. 0 011 423)	0 011 275	2234.00 €

1 x ENESKAmicro collet type EMB, Ø 6 mm (order no. 0 011 426)



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			Price from
		Order No.	1 piece
ENESKAmicro 450 Set 1.1			
	The set contains the following components: 1 x ENESKAmicro 450 control unit (order no. 0 011 001) 1 x ENESKAmicro motor SE3 with (-) connection (order no. 0 011 301) 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302)	0 011 000	1384.00 €

			Price from
		Order No.	1 piece
ENESKAmicro 450 set 1.2			
	The set contains the following components: 1 x ENESKAmicro 450 control unit (order no. 0 011 001) 1 x ENESKAmicro motor SE3 with (-) connection (order no. 0 011 301) 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302) 1 x ENESKA rapid-chuck handpiece JIR 310 (order no. 0 007 515)	0 011 005	1666.00 €

			D : (
			Price from
		Order No.	1 piece
ENESKAmicro 450 set 1.3			
+	The set contains the following components: 1 x ENESKAmicro 450 control unit (order no. 0 011 001) 1 x ENESKAmicro motor SE4 with (+) connection (order no. 0 011 311) 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302)	0 011 010	1384.00 €

			Price from
		Order No.	1 piece
ENESKAmicro 450 set 1.4			
+	The set contains the following components: 1 x ENESKAmicro 450 control unit (order no. 0 011 001) 1 x ENESKAmicro motor SE4 with (+) connection (order no. 0 011 311) 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302) 1 x ENESKA rapid-chuck handpiece JEHR 500 (order no. 0 008 810)	0 011 015	1767.00 €

			Price from
		Order No.	1 piece
ENESKAmicro 450 set 1.5			
	The set contains the following components: 1 x ENESKAmicro 450 control unit (order no. 0 011 001) 1 x ENESKAmicro motor JENK-410S with (-) connection (order no. 0 007 505) 1 x ENESKAmicro motor cable JENK-410S/EM, 1.6 m (order no. 0 011 502) 1 x ENESKAmicro handpiece support, black (order no. 0 011 110) 1 x ENESKA rapid-chuck handpiece JIR 310 (order no. 0 007 515) incl. collet type CHH, Ø 3 mm	0 011 020	1610.00€





ENESKAmicro 450

Complete sets

			Price from
		Order No.	1 piece
ENESKAmicro 450 set 1.6			
	The set contains the following components:	0 011 025	1666.00€





- 1 x ENESKAmicro 450 control unit (order no. 0 011 001)
- 1 x ENESKAmicro motor JENK-410S with (-) connection (order no. 0 007 505)
- 1 x ENESKAmicro motor cable JENK-410S/EM, 1.6 m (order no. 0 011 502)
- 1 x ENESKAmicro handpiece support, black (order no. 0 011 110)
- 1 x ENESKA rapid-chuck handpiece JIR 310 (order no. 0 007 515) incl. collet type CHH, Ø 3 mm

			Price from
		Order No.	1 piece
ENESKAmicro 450 set 1.7			
	The set contains the following components: 1 x ENESKAmicro 450 control unit (order no. 0 011 001) 1 x ENESKAmicro motor JENK-410S with (-) connection (order no. 0 007 505) 1 x ENESKAmicro motor cable JENK-410S/EM, 1.6 m (order no. 0 011 502) 1 x ENESKAmicro handpiece support, black (order no. 0 011 110) 1 x ENESKA rapid-chuck handpiece JIH 300 (order no. 0 009 150) incl. collet type CHH, Ø 3 mm	0 011 030	1610.00€

			Price from
		Order No.	1 piece
ENESKAmicro 450 set 1.8			
	The set contains the following components: 1 x ENESKAmicro 450 control unit (order no. 0 011 001) 1 x ENESKAmicro motor SE3 with (-) connection (order no. 0 011 301)	0 011 035	1651.00€



- 1 x ENESKAmicro motor cable S, 1.8 m (order no. 0 011 302)
- 1 x ENESKAmicro handpiece support, black (order no. 0 011 110)
- 1 x ENESKA rapid-chuck handpiece JIH 300 (order no. 0 009 150) incl. collet type CHH, Ø 3 mm

			Price from
		Order No.	1 piece
ENESKAmicro 450 set 1.9			
	The set contains the following components: 1 x ENESKAmicro 450 control unit (order no. 0 011 001) 1 x ENESKAmicro COMPACT SE, motor incl. rapid-chuck head	0 011 040	1672.00€



1 x ENESKAmicro COMPACT SE, motor incl. rapid-chuck head with collet Ø 3 mm and motor cable 1.8 m (order no. 0 011 320)



ENESKAmicro COMPACT series COMPACT HT60

					Price from
			Design	Order No.	1 piece
ENESKAmicro COMPACT HT60					
	• with collet Ø 3 mm		including motor cable 1.8 m	0 011 400	859.00 €
	 Brushless DC motor E On-off switch located 		including motor cable 3 m	0 011 400-3M	885.00 €
	• On-on switch located	i on the inicromotor	including motor cable 1.8 m and 0 011 409	0 011 409	1055.00 €
	Motor speed:	max. 60,000 rpm	fan		
	Output:	8.9 N cm at 280 W			
	Weight:	0.4 kg			
	Dimensions (D x L):	Ø 30 x 170 mm			
	Concentricity:	< +/- 0.01 mm			
	Collet type:	EMA			

				Price from
		Dimensions	Order No.	1 piece
Collet type EMA				
		Ø 1.6 mm	0 011 411	89.10 €
		Ø 2.35 mm	0 011 412	89.10 €
		Ø 3 mm	0 011 413	89.10 €
		Ø 1/8"	0 011 414	89.10 €
ENESKAmicro motor	cable HT, 1.8 m			
	for connecting the micromotors HT to the ENESKAmicro control units		0 011 402	163.00 €
ENESKAmicro motor	cable HT, 3 m			
	for connecting the micromotors HT to the ENESKAmicro control units		0 011 403	193.00 €





ENESKAmicro COMPACT series COMPACT HT60 SMALL

					Price from
			Design	Order No.	1 piece
ENESKAmicro COMPACT HT60 SMALL					
	• with collet Ø 3 mm		including motor cable 1.8 m	0 011 460	764.00 €
	 Brushless DC motor BL On-off switch located of 		including motor cable 3 m	0 011 460-3M	809.00 €
			including motor cable 1.8 m and	0 011 469	944.00 €
	Motor speed:	max. 60,000 rpm	fan		
	Output:	7.8 N cm at 260 W			
	Weight:	0.22 kg			
	Dimensions (D x L):	Ø 28 x 156 mm			
	Concentricity:	< +/- 0.01 mm			
	Collet type:	EMA			

				D: (
				Price from
		Dimensions	Order No.	1 piece
Collet type EMA				
		Ø 1.6 mm	0 011 411	89.10
		Ø 2.35 mm	0 011 412	89.10
		Ø 3 mm	0 011 413	89.10
		Ø 1/8"	0 011 414	89.10
ENESKAmicro motor ca	able HT, 1.8 m			
	for connecting the micromotors HT to the ENESKAmicro control units		0 011 402	163.00
ENESKAmicro motor ca	able HT, 3 m			
	for connecting the micromotors HT to the ENESKAmicro control units		0 011 403	193.00



ENESKAmicro COMPACT series COMPACT HT60-D6

					Price from
			Design	Order No.	1 piece
ENESKAmicro COMPACT HT60-D6					
	• with collet Ø 6 mm		including motor cable 1.8 m	0 011 420	782.00 €
110	Brushless DC motor BLDC On-off switch located on the micromotor		including motor cable 3 m	0 011 420-3M	809.00€
	• On-on switch located	on the inicioniotor	including motor cable 1.8 m and	0 011 429	968.00€
	Motor speed:	up to max. 50,000 rpm	fan		
	Output:	8.9 N cm at 280 W			
	Weight:	0.475 kg			
	Dimensions (D x L):	Ø 30 x 180 mm			
	Concentricity:	< +/- 0.01 mm			
	Collet type:	EMB			

ENESKAmicro COMPACT series COMPACT HT60-D6

NEW!

					Price from
			Design	Order No.	1 piece
ENESKAmicro HT60-D6 CNC					
0	 with collet Ø 3 and 6 Brushless DC motor I 		including motor cable 3 m, stainless steel case	0 011 470	1307.00 €
	Motor speed: Output: Weight: Dimensions (D x L): Concentricity: Collet type:	up to max. 50,000 rpm 8.9 N cm at 280 W 0.5 kg Ø 28 x 170 mm < +/- 0.01 mm EMB			

				Price from
		Dimensions	Order No.	1 piece
Collet type EMB				
		Ø 2.35 mm	0 011 422	71.35 €
		Ø 3 mm	0 011 423	71.35 €
		Ø 6 mm	0 011 426	71.35 €
		Ø 1/8"	0 011 424	71.35 €
ENESKAmicro motor ca	able HT-D6, 1.8 m			
	for connecting the micromotors HT-D6 to the ENESKAmicro control units		0 011 404	163.00 €
ENESKAmicro motor ca	able HT-D6, 3 m			
	for connecting the micromotors HT-D6 to the ENESKAmicro control units		0 011 404-3 M	193.00 €











ENESKAmicro COMPACT series COMPACT HT60-XL

					Price from
			Design	Order No.	1 piece
ENESKAmicro COMPACT HT60-XL					
	• with collet Ø 3 mm		including motor cable 1.8 m	0 011 410	893.00 €
	Brushless DC motor BLDC On-off switch located on the micromotor XL axle		including motor cable 3 m	0 011 410-3 M	921.00 €
			including motor cable 1.8 m and fan	0 011 419	1096.00 €
	Motor speed: Output: Weight: Dimensions (D x L): Collet axle: Concentricity: Collet type:	up to max. 60,000 rpm 8.9 N cm at 280 W 0.4 kg Ø 30 x 200 mm Ø 8 x 30 mm (outside the housing) < +/- 0.01 mm EMA			

				Price from
		Dimensions	Order No.	1 piece
Collet type EMA				
		Ø 1.6 mm	0 011 411	89.10 €
		Ø 2.35 mm	0 011 412	89.10€
-		Ø 3 mm	0 011 413	89.10€
		Ø 1/8"	0 011 414	89.10 €
ENESKAmicro motor cal	ble HT, 1.8 m			
	for connecting the micromotors HT to the ENESKAmicro control units		0 011 402	163.00 €
ENESKAmicro motor ca	ble HT, 3 m			
	for connecting the micromotors HT to the ENESKAmicro control units		0 011 403	193.00 €



ENESKAmicro COMPACT seriesCOMPACT SE

					Price from
			Design	Order No.	1 piece
ENESKAmicro COMPACT SE					
	• with collet Ø 3 mm		including motor cable 1.8 m	0 011 320	926.00 €
	Brushless DC motor B On-off switch located		including motor cable 3 m	0 011 320-3M	953.00 €
	Motor speed: Output:	up to max. 50.000 rpm 7.8 N cm at 280 W			
	Weight:	0.365 kg			
	Dimensions (D x L):	Ø 30 x 170 mm			
	Concentricity:	< +/- 0.01 mm			
	Collet type:	EMA			

				Price from
		Dimensions	Order No.	1 piece
Collet type EMA				
		Ø 1.6 mm	0 011 411	89.10 €
		Ø 2.35 mm	0 011 412	89.10 €
and the same of th		Ø 3 mm	0 011 413	89.10 €
		Ø 1/8"	0 011 414	89.10 €
ENESKAmicro motor	cable S, 1.8 m			
0	for connecting the micromotors SE to the ENESKAmicro control units		0 011 302	163.00 €
ENESKAmicro motor	cable S, 3 m			
	for connecting the micromotors SE to the ENESKAmicro control units		0 011 303	192.00 €

ENESKAmicro micromotors with (-) connection Micromotor JENK-250T

				Price from
			Order No.	1 piece
Micromotor JENK-250T				
ENESXA 3-2 ENESXA 3-2 ENESXA 3-2 ENESXA 3-2 ENESXA 3-2 ENESXA 3-2 ENESXA 3-2 ENESXA 3-2 ENESXA 3-2 ENESXA 3-2	Brushless alternating cu Power: Rotation speed range: Torque: Dimensions: Weight:	urrent motor 76 watts 1,000 – 25,000 rpm 4.8 N cm Ø 28.4 x 78.4 mm 147 g	0 007 525	579.00 €

	,			
				Price from
			Order No.	1 piece
Step-down gear JRG 01				
Section of the sectio	for connection to microm Reduces rotation speed: Rotation speed max.: Dimensions: Weight:	notors with (-) connection 4:1 30,000 rpm Ø 19 x 55 mm (Extension 42 mm) 68 g	0 009 500	388.00€
Extension element JCN	01			
3 3 5 V	for connection to microm Rotation speed max.: Dimensions: Weight:	notors with (-) connection 35,000 rpm Ø 19 x 63.5 mm (Extension 50 mm) 83 g	0 009 505	303.00€
Motor cable JENK-250T/	EM , 1.6 m			
	for connecting the micromotors JENK-250T to the ENESKAmicro control units		0 011 501	199.00€
ENESKAmicro extension	ı cable, 2 m			
	suitable for all motor cab	lles of the ENESKAmicro series	0 011 401	41.85€



ENESKAmicro micromotors with (-) connectionMicromotor JENK-410S

				Price from
			Order No.	1 piece
Micromotor JENK-410S				
ENESKA 3-2 JENK-410S 0007505 © © 5-74 00011256 MODE IN JUPAN	Brushless alternating cu Power: Rotation speed range: Torque: Dimensions: Weight:	orrent motor 73 watts 1,000 – 40,000 rpm 4.2 N cm Ø 24.5 x 67.1 mm 90 g	0 007 505	516.00€

				Price from
			Order No.	1 piece
Step-down gear JRG 01				
Section 1	for connection to microm Reduces rotation speed: Rotation speed max.: Dimensions: Weight:	• •	0 009 500	388.00 €
Extension element JCN	01			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	for connection to microm Rotation speed max.: Dimensions: Weight:	otors with (-) connection 35,000 rpm Ø 19 x 63.5 mm (Extension 50 mm) 83 g	0 009 505	303.00 €
Motor cable JENK-410S	/EM, 1.6 m			
6	for connecting the micro to the ENESKAmicro con		0 011 502	199.00 €
ENESKAmicro extensio	n cable, 2 m			
	suitable for all motor cab	les of the ENESKAmicro series	0 011 401	41.85 €



ENESKAmicro micromotors with (-) connection Micromotor SE3

			Design	Order No.	Price from
			Design	Order No.	1 piece
ENESKAmicro motor SE3					
	Brushless DC motor BLDCOn-off switch located on the micromotor		incl. motor cable 1.8 m	0 011 300	548.00€
			without motor cable	0 011 301	403.00€
	Motor speed:	up to max. 50.000 rpm			
	Output: Weight:	7.8 N cm at 280 W 0.14 kg	incl. fan and motor cable 1.8 m	0 011 308	655.00 €
	Dimensions (D x L):	Ø 24 x 115 mm	incl. fan, without motor cable	0 011 309	460.00 €

7.0003301103	,			
				Price from
			Order No.	1 piece
Step-down gear JRG 01				
See Sci.	for connection to microm Reduces rotation speed: Rotation speed max.: Dimensions: Weight:	• •	0 009 500	388.00€
Extension element JCN ()1			
\$ 350 W	for connection to microm Rotation speed max.: Dimensions: Weight:	otors with (-) connection 35,000 rpm Ø 19 x 63.5 mm (Extension 50 mm) 83 g	0 009 505	303.00€
ENESKAmicro motor cab	ole S, 3 m			
	for connecting the micromotors SE to the ENESKAmicro control units		0 011 303	192.00 €
ENESKAmicro extension	cable, 2 m			
	suitable for all motor cab	les of the ENESKAmicro series	0 011 401	41.85 €



ENESKAmicro micromotors with (+) connection Micromotor JBM 50 HT

						Price from
				Design	Order No.	1 piece
Micromotor JBM 50 HT						
			ormance three-phase motor	without motor cable	0 008 806	716.00 €
PIR ENESKA	$\overline{(+)}$	for operation of han	dpieces with (+) connection	including motor cable	0 008 805	825.00 €
0008806 JBM 50 T C € S/N 080X3121		Output:	200 W			
		Torque:	8.4 N cm			
		Speed range:	1,000 - 50,000 1/min			
		Sound level:	< 62 dB(A) at 30,000 rpm			
		Dimensions:	Ø 28.3 x 87.7 mm			
			(without cable)			
		Weight:	160 g			

				Price from
			Order No.	1 piece
Step-down gear JERG 01	В			
	For use with micromotors	s with (+) connection	0 009 806	359.00
De Zeew	Speed step-down ratio:	4:1		
Z SERVICE SERV	Speed max.:	30,000 rpm		
Land	Dimension:	Ø 22.4 x 40 mm (without thread)		
	Weight:	65 g		
Adapter JECN 01 T				
	To connect micromotors with (+) connection to handpieces		0 009 807	303.00 €
ra 5 - 98	with (-) connection			
N S S S S S S S S S S S S S S S S S S S	Speed max.:	30,000 rpm		
- www.s	Dimension:	Ø 22.4 x 29 mm (without thread)		
	Weight:	31 g		
Motor cable JBM 50 HT/E	EM, 1.5 m			
	for connecting the micro	motors JBM 50 HT	0 011 504	144.25 €
	to the ENESKAmicro con	trol units		
ENESKAmicro extension	cable, 2 m			
	suitable for all motor cab	les of the ENESKAmicro series	0 011 401	41.85 €



ENESKAmicro micromotors with (+) connection Micromotor JBM 50 S

						Price from
				Design	Order No.	1 piece
Micromotor JBM 50 S						
			se motor for operation of	without motor cable	0 008 803	678.00 €
Pike ENESKA 0008803 JRN 50 5 C 6 5/N 000020788	+	handpieces with (+) Torque: Speed range: Sound level: Dimensions: Weight:	5.6 N cm 1,000 – 50,000 1/min < 58 dB(A) at 30,000 rpm Ø 27.4 x 74.7 mm (without cable)	including motor cable	0 008 802	787.00€
		vveignt:	117 g			

				Price from
			Order No.	1 piece
Step-down gear JERG 01	В			
	For use with micromotor	s with (+) connection	0 009 806	359.00
19 1 5 5 5 W	Speed step-down ratio:	4:1		
2 28 0	Speed max.:	30,000 rpm		
Lin	Dimension:	Ø 22.4 x 40 mm (without thread)		
	Weight:	65 g		
Adapter JECN 01 T				
	To connect micromotors	0 009 807	303.00 €	
~ * + 8	with (-) connection	·		
2	Speed max.:	30,000 rpm		
- 58 S	Dimension:	Ø 22.4 x 29 mm (without thread)		
	Weight:	31 g		
Motor cable JBM 50 S/El	M, 1.5 m			
	for connecting the micro	motors JBM 50 S	0 011 503	144.25 €
	to the ENESKAmicro cor	itrol units		
ENESKAmicro extension	cable, 2 m			
	suitable for all motor cab	oles of the ENESKAmicro series	0 011 401	41.85 €





ENESKAmicro micromotors with (+) connectionMicromotor SE4

						Price from
				Design	Order No.	1 piece
ENESKAmicro motor SE4						
		Brushless DC motor B		incl. motor cable 1.8 m	0 011 310	548.00 €
	+	On-off switch located on the micromotor		without motor cable	0 011 311	403.00 €
		(+)	Motor speed: Output: Weight:	up to max. 50.000 rpm 7.8 N cm at 280 W 0.14 kg	incl. fan and motor cable 1.8 m	0 011 318
		Dimensions (D x L):	Ø 24 x 115 mm	incl. fan, without motor cable	0 011 319	460.00€

				Price from
			Order No.	1 piece
Step-down gear JERG 01	В			
Pales of the control	For use with micromotor Speed step-down ratio: Speed max.: Dimension: Weight:	, ,	0 009 806	359.00 €
Adapter JECN 01 T				
Police EN CONTENT STANDERSTAN	To connect micromotors with (-) connection Speed max.: Dimension: Weight:	with (+) connection to handpieces 30,000 rpm Ø 22.4 x 29 mm (without thread) 31 g	0 009 807	303.00€
ENESKAmicro motor cab	le S, 3 m			
0	for connecting the micro to the ENESKAmicro cor		0 011 303	192.00 €
ENESKAmicro extension	cable, 2 m			
	suitable for all motor cal	oles of the ENESKAmicro series	0 011 401	41.85 €



ENESKAmicro Hand-filing machines with (+) connection Hand-filing machine DIPROFIL® FPT/ER, Mark II

					Price from
				Order No.	1 piece
Hand-filing machine DIPROFIL® FPT/EI	R, Mark II				
	+	for connection to JBN Stroke length: No. of strokes: Tool receptacle: Insertion depth: Sound level: Vibration: Weight: Accessories:	M 50 S and JBM 50 HT 0 - 6 mm, continuously adjustable (0.5 - 3 mm recommended) 7,000 - 8,000 strokes/min (depending on control unit) (5,000 - 6,500 strokes/min recommended) Ø 2 - 6.4 mm 40 mm < 70 dB(A) at 7,000 strokes/min (acc. to ISO 15744) 5.79 - 13.37 m/s² 560 g (without micromotor) storage box, tool set, extension tube/finger protection bush, replacement friction bearing and felts, lubricating oil	0 005 204-N	997.00€

			D
	Shank	0 1 1	Price from
	dimensions	Urder No.	1 piece
y sticks			
head pivotable through 90°, for receiving tool up to 10 x 10 mm	Ø 3 x 35 mm	0 411 291	10.75€
for receiving tool up to 8 mm high	Ø 3.5 x 30 mm	0 411 292	9.50€
	Ø 6 x 30 mm	0 411 201	13.00€
98			
clamping height up to 11 mm	Ø 4 x 50 mm	0 401 959	46.90€
mini			
clamping range: height up to 8 mm, hardened finish, high-strength clamping plate	Ø 3 mm	0 401 951	43.00€
medium			
clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20€
ter-clamping			
sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20 €
ð 6 mm, length 50 mm			
		2 012 499	9.50€
	es clamping height up to 11 mm mini clamping range: height up to 8 mm, hardened finish, high-strength clamping plate medium clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clamping plate. With recess for 6 mm flat and round stones. ter-clamping sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply	### dimensions ### g sticks head pivotable through 90°, for receiving tool up to 10 x 10 mm for receiving tool up to 8 mm high	g sticks head pivotable through 90°, for receiving tool up to 10 x 10 mm for receiving tool up to 8 mm high for receiving tool up to 8 mm high 6 x 30 mm 7 411 291 es clamping height up to 11 mm 6 4 x 50 mm 7 401 959 mini clamping range: height up to 8 mm, hardened finish, high-strength clamping plate medium clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clamping plate. With recess for 6 mm flat and round stones. ter-clamping sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.



ENESKAmicro Hand-filing machines with (+) connectionHand-filing machine JFMM 4

				Price from
			Order No.	1 piece
Hand-filing machine JFMM 4				
+	For connection to m with step-down gea Stroke length: No. of strokes: Initial speed: Tool support: Weight: Accessories:	cromotors with (+) connection, r ratio 4:1 0 - 6 mm, continuously adjustable max. 7,800 strokes/min max. 30,000 1/min Ø 1 - 6.2 mm 750 g storage box, tool holder, tool set, oil	0 005 300	921.00€

		<u>.</u>		Price from
		Shank dimensions	Order No.	1 piece
Tool holder for lapping	g sticks			
-4	head pivotable through 90°, for receiving tool up to 10 x 10 mm $$	Ø 3 x 35 mm	0 411 291	10.75 €
T	for receiving tool up to 8 mm high	Ø 3.5 x 30 mm	0 411 292	9.50 €
-1-		Ø 6 x 30 mm	0 411 201	13.00 €
Holder for grinding file	es			
4	clamping height up to 11 mm	Ø 4 x 50 mm	0 401 959	46.90 €
Tool holder Premium,	mini			
_	clamping range: height up to 8 mm, hardened finish, high- strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium,	medium			
	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20€
Tool holder with coun	ter-clamping			
	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20€
VHM round rod head (Ø 6 mm, length 50 mm			
			2 012 499	9.50 €



ENESKAmicro Hand-filing machines with (-) connection Hand-filing machine DIPROFIL® FPT/NR, Mark II

					Price from
				Order No.	1 piece
For connection to micromotors JENK-410S and JENK-250T Stroke length: 0 - 6 mm, continuously adjustable (0.5 - 3 mm recommended) No. of strokes: 7,000 - 8,000 strokes/min (depending on control unit) (5,000 - 6,500 strokes/min recommended) Tool receptacle: 0 2 - 6.4 mm Insertion depth: 40 mm Noise level: < 70 dB(A) at 7,000 strokes/min (according to ISO 15744) Vibration: 5.79 - 13.37 m/s² Weight: 560 g (without micromotor)					
	\bigcirc	Stroke length: No. of strokes: Tool receptacle: Insertion depth: Noise level: Vibration:	0 - 6 mm, continuously adjustable (0.5 - 3 mm recommended) 7,000 - 8,000 strokes/min (depending on control unit) (5,000 - 6,500 strokes/min recommended) Ø 2 - 6.4 mm 40 mm < 70 dB(A) at 7,000 strokes/min (according to ISO 15744) 5.79 - 13.37 m/s²	0 005 203-N	1064.00 €

		Shank		Price from
		dimensions	Order No.	1 piece
Tool holder for lapping s	rticks			
	head pivotable through 90°, for receiving tool up to 10 x 10 mm	Ø 3 x 35 mm	0 411 291	10.75€
T	for receiving tool up to 8 mm high	Ø 3.5 x 30 mm	0 411 292	9.50 €
		Ø 6 x 30 mm	0 411 201	13.00€
Holder for grinding files				
4_	clamping height up to 11 mm	Ø 4 x 50 mm	0 401 959	46.90 €
Tool holder Premium, mi	ini			
	clamping range: height up to 8 mm, hardened finish, high- strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium, m	edium			
	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20 €
Tool holder with counte	r-clamping			
	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20€
VHM round rod head Ø 6	6 mm, length 50 mm			
			2 012 499	9.50 €



ENESKAmicro Hand-filing machines with (-) connectionHand-filing machine JFMM 3

					Price from
				Order No.	1 piece
Hand-filing machine JFMM 3					
	\ni	For connection to mic with integrated step- Stroke length: No. of strokes: Input speed: Tool receptacle: Weight: Scope of supply:	romotors with (-) connection, down gear 4:1 0.5 – 6 mm, continuously adjustable max. 7,800 strokes/min max. 30,000 rpm Ø 1 - 6.2 mm 750 g 2 tool holders, tool set, oil, storage box	0 005 400	921.00€

		Shank		Price from
		dimensions	Order No.	1 piece
Tool holder for lappin	g sticks			
	head pivotable through 90°, for receiving tool up to 10 x 10 mm	Ø 3 x 35 mm	0 411 291	10.75€
₹	for receiving tool up to 8 mm high	Ø 3.5 x 30 mm	0 411 292	9.50 €
-15		Ø 6 x 30 mm	0 411 201	13.00 €
Holder for grinding fil	es			
4	clamping height up to 11 mm	Ø 4 x 50 mm	0 401 959	46.90 €
Tool holder Premium,	mini			
_	clamping range: height up to 8 mm, hardened finish, high- strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium,	medium			
<u>-</u>	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20 €
Tool holder with cour	ter-clamping			
	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20€
VHM round rod head	Ø 6 mm, length 50 mm			
			2 012 499	9.50 €



ENESKAmicro transverse handpieces with (+) and (-) connection

Transverse handpiece DIPROFIL®

					Price from
				Order No.	1 piece
Transverse handpiece DIPROFIL® FMV/E					
	+	Transverse: No. of strokes: Tool receptacle: Sound level: Vibration: Dimensions: Weight:	0 - 4 mm, continuously adjustable max. 8,000 strokes/min Ø 3.5 mm < 75 dB(A) < 2.5 m/s² Ø 25 x 95 mm (without thread) 195 g	0 001 212	635.00€
Transverse handpiece DIPROFIL® FMV/N	ı				
	\bigcirc	Transverse stroke: No. of strokes: Tool receptacle: Sound level: Vibration: Dimensions: Weight: Scope of supply:	0 - 4 mm continuously adjustable max. 8,000 strokes/min Ø 3.5 mm < 75 dB(A) < 2.5 m/s² Ø 24 x 89 mm (without thread) 195 g handpiece, storage case, tools, oil	0 001 210	635.00 €

		Shank		Price from
		dimensions	Order No.	1 piece
Tool holder for lapping	sticks			
	head pivotable through 90°, for receiving tool up to 10 x 10 mm	Ø 3 x 35 mm	0 411 291	10.75€
Tool holder Premium, m	ini			
_	clamping range: height up to 8 mm, hardened finish, high-strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium, m	edium			
	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20 €
Tool holder with counte	er-clamping			
	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20€
VHM round rod head Ø	3 mm, length 50 mm			
			2 012 498	4.50 €









ENESKAmicro Hand-filing machines with integrated micromotor Hand-filing machine DIPROFIL® Di-Pro FXM-N, Mark II

Hand-filing machines with integrated micromotor

These hand-filing machines with a built-in micromotor can be directly connected to suitable ENESKAmicro 600 series control units. No additional micromotor is required.

·				Price from
			Order No.	1 piece
Hand-filing machine DIPROFIL® D	i-Pro FXM-N, Mark II			
	for direct connection	to ENESKAmicro control units 600	0 001 521-N	2286.00 €
	Stroke length:	of 0 – 6 mm, continuously adjustable (0.5 – 3 mm recommended)		
	No. of strokes:	max. 7,000 strokes/min (5,000 – 6,000 strokes/min recommended)		
	Tool receptacle: Insertion depth:	Ø 2 – 6.4 mm 40 mm		
N. C.	Vibration: Weight:	1.55 – 5.08 m/s² 860 g		
Y	Noise level:	< 75 dB (A) at 7,000 strokes/min		
+	Accessories:	Storage case, tool set, extension tube /finger protection bush, counterweights, replacement friction bearing and felts, lubricating oil		

		Shank		Price from
		dimensions	Order No.	1 piece
Tool holder for lappin	g sticks			
	head pivotable through 90°, for receiving tool up to 10 x 10 mm $$	Ø 3 x 35 mm	0 411 291	10.75€
T	for receiving tool up to 8 mm high	Ø 3.5 x 30 mm	0 411 292	9.50 €
-1-		Ø 6 x 30 mm	0 411 201	13.00 €
Holder for grinding fil	les			
	clamping height up to 11 mm	Ø 4 x 50 mm	0 401 959	46.90 €
Tool holder Premium,	mini			
	clamping range: height up to 8 mm, hardened finish, high-strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium,	medium			
	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20 €
Tool holder with cour	nter-clamping			
	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20 €
Adapter ENESKA 3-1	motor cable			
	Adapter for connecting the ENESKA 3-1 motor cables to ENESKAmicro / joke 226 / Urawa / Diprofil / Gesswein control units		0 006 203-1	25.25 €
VHM round rod head	Ø 6 mm, length 50 mm			
			2 012 499	9.50 €

0 005 201-N

1710.00€

ENESKAmicro Hand-filing machines with integrated micromotor

Hand-filing machine DIPROFIL® FPM/R, Mark II

Hand-filing machines with integrated micromotor

These hand-filing machines with a built-in micromotor can be directly connected to suitable ENESKAmicro 600, as well as DIPROFIL® DPU-3 series control units (via adapter). No additional micromotor is required.

		Price from
	Order No.	1 piece
Hand-filing machine DIPROFIL® FPM/R, Mark II		



for direct connection to ENESKAmicro control units 600

Stroke length: $0.5-6\ \text{mm}$, infinitely adjustable Number of strokes: 1000 - 7800 strokes/min. max. 30,000 rpm Initial speed: Tool receptacle: Ø 1 - 6.2 mm

Weight: 800 g $2\, tool\ holders,$ tool set, oil and storage case Scope of supply:



ACCESSUITES	/ Spare parts			
		Shank		Price from
		dimensions	Order No.	1 piece
Tool holder for lapping s	sticks			
_	head pivotable through 90°, for receiving tool up to 10 x 10 mm $$	Ø 3 x 35 mm	0 411 291	10.75€
T	for receiving tool up to 8 mm high	Ø 3.5 x 30 mm	0 411 292	9.50 €
		Ø 6 x 30 mm	0 411 201	13.00 €
Holder for grinding files				
<u> </u>	clamping height up to 11 mm	Ø 4 x 50 mm	0 401 959	46.90 €
Tool holder Premium, mi	ini			
_	clamping range: height up to 8 mm, hardened finish, high-strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium, m	edium			
	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20 €
Tool holder with counte	r-clamping			
	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20 €
Adapter ENESKA 3-1 mo	otor cable			
	Adapter for connecting the ENESKA 3-1 motor cables to ENESKAmicro / joke 226 / Urawa / Diprofil / Gesswein control units		0 006 203-1	25.25€
VHM round rod head Ø 6	6 mm, length 50 mm			
			2 012 499	9.50 €



ENESKAmicro Hand-filing machines with integrated micromotor Hand-filing machine FMD/3-2/EM

Hand-filing machines with integrated micromotor

These hand-filing machines with a built-in micromotor can be directly connected to suitable ENESKAmicro 600 series control units. No additional micromotor is required.

				Price from
			Order No.	1 piece
Hand-filing machine FMD/3-2/EM				
	for direct connection to	o ENESKAmicro control units 450 and 600	0 011 550	1420.00€
	Stroke length: Number of strokes:	0.5 – 6 mm, infinitely adjustable 1000 - 7800 strokes/min.		
	Initial speed:	max. 30,000 rpm		
	Tool receptacle:	Ø 1 - 6.2 mm		
	Weight: Scope of supply:	800 g 2 tool holders, tool set, oil and storage case		

				Price from
		Shank dimen- sions	Order No.	1 piece
Tool holder for lapping	g sticks			
	head pivotable through 90°, for receiving tool up to 10 x 10 mm	Ø 3 x 35 mm	0 411 291	10.75 €
-	for receiving tool up to 8 mm high	Ø 3.5 x 30 mm	0 411 292	9.50 €
		Ø 6 x 30 mm	0 411 201	13.00 €
Holder for grinding file	es .			
4	clamping height up to 11 mm	Ø 4 x 50 mm	0 401 959	46.90 €
Tool holder Premium,	mini			
	clamping range: height up to 8 mm, hardened finish, high-strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium,	medium			
	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20 €
Tool holder with coun	ter-clamping			
	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20 €
VHM round rod head (ð 6 mm, length 50 mm			
			2 012 499	9.50 €

ENESKAmicro Mini hand-filing machines with (+) connection Mini hand-filing machines DIPROFIL® FMR/E • JN 48

Mini hand-filing machine DIPROFIL® FM	IR/E	No. of strokes:	max. 8,000 strokes/min	Design stroke length 0.5 mm	Order No.	Price from 1 piece 607.00 €
		Tool receptacle:	Ø 3.5 mm	stroke length 1.0 mm	0 001 215	607.00€
	Sound level: Vibration: Dimensions: Weight: Scope of supply:	Vibration: Dimensions: Weight:	< 70 dB(A) < 2.5 m/s² Ø 24 x 90 mm (without thread) 120 g storage box, tools, oil, rubber covering (long)	stroke length 1.5 mm	0 001 209	607.00€
Mini hand-filing machine JN 48						
	+	with integrated step-dow No. of strokes: Tool receptacle: Dimensions: Weight: Scope of supply:	n gear 4:1 max. 12,500 strokes/min Ø 3.1 mm Ø 22.4 x 92 mm (without thread) 130 g storage box, tools	stroke length 0.8 mm	0 001 403	675.00€

		Shank		Price from
		dimensions	Order No.	1 piece
Tool holder for lapping s	sticks			
	head pivotable through 90°, for receiving tool up to 10 x 10 mm	Ø 3 x 35 mm	0 411 291	10.75 €
Tool holder Premium, mi	ini			
_	clamping range: height up to 8 mm, hardened finish, high-strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium, m	edium			
	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clam- ping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20 €
Tool holder with counte	r-clamping			
330	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20 €
VHM round rod head Ø 3	3 mm, length 50 mm			
			2 012 498	4.50 €



ENESKAmicro Mini hand-filing machines with (-) connection Mini hand-filing machines DIPROFIL® FMR/N • JN 38

					Price from
			Design	Order No.	1 piece
Mini hand-filing machine DIPROFIL® FMR/N					
	No. of stroke:	max. 8,000 strokes/min	stroke length 0.5 mm	0 001 203	607.00€
	Tool receptacle: Noise level:	Ø 3.5 mm	stroke length 1.0 mm	0 001 214	607.00€
	Noise level: Vibration: Dimensions: Weight: Scope of supply:	< 70 dB(A) < 2.5 m/s² Ø 24 x 83.5 mm (without thread) 120 g storage case, tools, oil, rubber collar long	stroke length 1.5 mm	0 001 218	607.00€
Mini hand-filing machine JN 38					
Francisco de la constantina della constantina de	With integrated step- No. of strokes:	down-gear 4 : 1 max. 10,000 strokes/min with the micromotor JNK 351	stroke length 0.8 mm	0 001 401	562.00€
	Tool receptacle: Dimensions:	Ø 3.1 mm Ø 21.4 x 93 mm (without thread)			
	Weight: Scope of supply:	130 g storage case, tools			

		Shank		Price from
		dimensions	Order No.	1 piece
Tool holder for lappi	ng sticks			
	head pivotable through 90°, for receiving tool up to 10 \times 10 mm	Ø 3 x 35 mm	0 411 291	10.75€
Tool holder Premium	, mini			
	clamping range: height up to 8 mm, hardened finish, high-strength clamping plate	Ø 3 mm	0 401 951	43.00 €
Tool holder Premium	, medium			
	clamping range: height 6 mm, hardened finish. Shank and body manufactured from a piece of high-strength clamping plate. With recess for 6 mm flat and round stones.	Ø 3 mm	0 401 972	50.20 €
Tool holder with cou	nter-clamping			
	sturdy holder for clamping round and flat tools up to max. 3 mm. All solid carbide (VHM) round rods (see articles: 2 012 498 and 2 012 499) are used as a clamping shank for handpieces and/or hand-filing machines and are simply clamped and screwed to the rear of the holder.		0 750 710	56.20 €
VHM round rod head	Ø 3 mm, length 50 mm			
			2 012 498	4.50 €



Hollow handle

for ergonomic handling of your handpieces

Hollow handle for ENESKAmicro

Perfect handling of the handpiece during polishing. The handle hemisphere fits perfectly into the hand, thereby providing full control with fatigue-free work. By simple conversion, the handle can be used by both right and left-handed individuals.

			Price from
		Order No.	1 piece
Hollow handle for	ENESKAmicro with (-) connection		
	Use with extension element JCN 01 (Order No. 0 009 505) or step-down gear JRG 01 (Order No. 0 009 500) Weight: 120 g	0 009 240	67.55€
Hollow handle for	ENESKAmicro with (+) connection		
	Use with step-down gear JERG 01B (Order No. 0 009 806) Weight: 100 g	0 009 245	67.55 €

Quick coupling system with (-) connection joke Rapid-Change

Rapid-Change with (-) connection for ENESKAmicro

The system for changing handpieces on the ENESKAmicro with (-) connection within seconds. Ingenious and simple: Remove the old handpiece, attach the new one and back to work. All is a matter of a few seconds. Retrofitting the handpiece and motor is child's play with just two components.

joke Rapid-Change lets you make the most of your working time, which is no longer spent on time-consuming changing of handpieces or collets.

			Price from			
			Order No.	1 piece	3 pieces	5 pieces
Rapid-Change coupling f	for micromotor with () connection				
	Weight: Dimensions:	ESKAmicro micromotors with (-) connection 30 g Ø 19 x 16 mm (without thread) wrench (Order No. 0 009 379) is included in the the handpieces!	0 007 050	69.20 €	64.10 €	60.50 €
Rapid-Change connectio	n plug for handpiece	s with (-) connection				
	(except JHG 200, Or Weight: Dimensions:	SKAmicro-handpieces with (-) connection der No. 0 009 650) 15 g Ø 19 x 14.7 mm (without thread) wrench (Order No. 0 007 052)	0 007 051	49.35 €	46.25 €	



Quick coupling system with (+) connection joke Rapid-Change

Rapid-Change with (+) connection for ENESKAmicro

The system for rapid handpiece change for our ENESKAmicro system with (+) connection.

Screw the coupling on to the micromotor and the desired handpieces and/or mini hand-filing machines can be simply push-fitted with the corresponding connector. Screw-fitting is a thing of the past!

The system is suitable for all ENESKAmicro handpieces with (+) connection, the DIPROFIL® mini hand-filing machines and all micromotors with (+) connection.

Switch to joke Rapid-Change saves you time, effort and hard cash.

			Price from			
			Order No.	1 piece	3 pieces	5 pieces
Rapid-Change couplin	g for micromotor with (+)	connection				
	for retrofitting of ENE Dimensions: Weight:	SKAmicro micromotors with (+) connection Ø 21.9 x 18 mm (without thread) 36 g	0 008 815	81.50 €	74.55 €	69.60 €
Rapid-Change connec	tion plug for handpieces	with (+) connection				
	suitable for all handp	0 008 816	64.60 €	60.50 €		

Ø 22 x 18 mm (without thread)

Weight: 37 g

Dimensions:



suitable for the DIPROFIL® FMR/E mini hand-filing machines Dimensions: Ø 21 x 18.2 mm (without thread)

Weight: 33 g

0 008 817 64.60 € 60.50 €













ENESKAmicro handpieces with (+) connection Rapid-chuck handpiece JEHR 500

					Price from
				Order No.	1 piece
Rapid-chuck handpiece JEHR 500					
SER SOO CE	+	Collet: Speed: Concentricity: Dimensions: Weight:	CHH (Ø 3 mm in scope of supply) max. 50,000 rpm, in continuous operation 40,000 rpm ± 0.01 mm Ø 22.4 x 58 mm (without thread) 95 g	0 008 810	476.00€

* Accessories / spare parts

			Price from
	Dimensions	Order No.	1 piece
Collet type CHH			
	Ø 1.0 mm	0 009 155	116.75 €
	Ø 1.6 mm	0 009 157	73.00 €
	Ø 2.5 mm	0 009 159	116.75 €
	Ø 3.0 mm	0 009 151	73.00 €
	Ø 1/8"	0 009 153	73.00 €

ENESKAmicro handpieces with (+) connection Angle handpiece JERA 270 S

					Price from
				Order No.	1 piece
Angle handpiece JERA 270 S					
	+	equipped from the Collet: Speed max.: Dimensions: Head dimensions: Weight:	outset with Rapid-Change connection! GH (Ø 6 mm included) 18,000 1/min, same rotation direction Ø 24 x 44 mm (without connector) Ø 24 x 44 mm 110 g	0 008 813	523.00 €

			Price from
	Dimensions	Order No.	1 piece
Collet type GH			
	Ø 2.35 mm - 3/32"	0 030 010	8.10 €
	Ø 3.0 mm	0 030 013	8.10 €
	Ø 6.0 mm	0 030 016	8.10 €



ENESKAmicro handpieces with (+) connection Handpiece JEHG 400

					Price from
				Order No.	1 piece
Handpiece JEHG 400					
Pales PRESING STOOD IN THE PROPERTY OF THE PRO	+	Collet: Speed: Concentricity: Dimensions: Weight:	CHG (Ø 6 mm included) max. 30,000 1/min ± 0.01 mm Ø 22.4 x 75 mm (without thread) 100 g	0 009 811	365.00 €

* Accessories / spare parts

				Price from	
	Dimensions	Order No.	1 piece	3 pieces	5 pieces
Collet type CHG					
	Ø 2.35 mm	0 009 653	85.60 €	71.25 €	67.80€
	Ø 3.0 mm	0 009 652	85.60 €	71.25 €	67.80 €
	Ø 6.0 mm	0 009 651	85.60 €	71.25€	67.80€

ENESKAmicro handpieces with (+) connection Angle handpiece JERA 270

					Price from
				Order No.	1 piece
Angle handpiece JERA 270					
And the state of t	+	Collet: Speed: Head gearing: Concentricity: Dimensions: Weight:	CHS (Ø 3 mm included) max. 20,000 1/min, reverse initial rotation 1:1,5 ± 0.01 mm Ø 22.4 x 71 mm (without thread) 100 g	0 009 812	487.00 €

			Price from
	Dimensions	Order No.	1 piece
Collet type CHS			
	Ø 1.6 mm	0 750 515	57.65€
	Ø 2.35 mm	0 750 511	57.65€
	Ø 3.0 mm	0 750 510	57.65€
	Ø 1/8"	0 750 520	57.65€



ENESKAmicro handpieces with (+) connection Angle handpiece JEKC 300

				Price from
			Order No.	1 piece
Angle handpiece JEKC 300				
+	Collet: Speed: Head gearing: Concentricity: Dimensions: Weight:	CHC (Ø 3 mm included) max. 20,000 1/min, same rotation direction 3:4 ± 0.01 mm Ø 22.5 x 69.5 mm (without thread) 60 g	0 009 813	406.00€

* Accessories / spare parts

			Price from
	Dimensions	Order No.	1 piece
Collet type CHC			
	Ø 1.6 mm	0 009 207	73.00 €
	Ø 2.35 mm	0 009 202	73.00 €
	Ø 3.0 mm	0 009 201	73.00 €

ENESKAmicro handpieces with (+) connection Angle handpiece WE4-90

					Price from
				Order No.	1 piece
ENESKAmicro Angle handpiece WE4-90)				
	+	Collet: Speed: Concentricity: Dimensions: Weight:	CHC (Ø 3 mm included) max. 30,000 rpm, reversal of direction of rotation < +/- 0.01 mm Ø 22 x 62 mm (without thread) 65 g	0 011 330	408.00 €

			Price from
	Dimensions	Order No.	1 piece
Collet type CHC			
10000	Ø 1.6 mm	0 009 207	73.00 €
	Ø 2.35 mm	0 009 202	73.00 €
	Ø 3.0 mm	0 009 201	73.00 €



ENESKAmicro handpieces with (+) connection Angle handpiece WE4-45

					Price from
				Order No.	1 piece
ENESKAmicro Angle handpiece WE4-	45				
	+	Collet: Speed: Concentricity: Dimensions: Weight:	CHC (Ø 3 mm included) max. 30,000 rpm, same direction of rotation < +/- 0.01 mm Ø 22 x 62 mm (without thread) 65 g	0 011 335	408.00 €

*Accessories / spare parts

			Price from
	Dimensions	Order No.	1 piece
Collet type CHC			
	Ø 1.6 mm	0 009 207	73.00 €
	Ø 2.35 mm	0 009 202	73.00 €
	Ø 3.0 mm	0 009 201	73.00 €

ENESKAmicro handpieces with (-) connection Rapid-chuck handpiece JIR-310

					Price from
				Order No.	1 piece
Rapid-chuck handpiece JIR-310					
MOE IN JPAN JVS BECZIJSKI C	Э	Collet: Speed: Concentricity: Dimensions: Weight:	CHH (Ø 3 mm included) max. 40,000 rpm ± 0.01 mm Ø 24 x 75 mm (without thread) 90 g	0 007 515	307.00 €

			Price from
	Dimensions	Order No.	1 piece
Collet type CHH			
	Ø 1.0 mm	0 009 155	116.75€
	Ø 1.6 mm	0 009 157	73.00 €
	Ø 2.0 mm	0 009 158	116.75€
	Ø 2.35 mm	0 009 152	73.00 €
	Ø 2.5 mm	0 009 159	116.75€
	Ø 3.0 mm	0 009 151	73.00 €
	Ø 1/8"	0 009 153	73.00 €



ENESKAmicro handpieces with (-) connection Handpiece JHG 210

				Price from
			Order No.	1 piece
Handpiece JHG 210				
	Collet: Speed: Concentricity: Dimensions: Weight:	CHG (Ø 6 mm included) max. 27,000 rpm ± 0.01 mm Ø 25 x 102 mm (without thread) 180 g	0 007 650	306.00€

* Accessories / spare parts

				Price from	
	Dimensions	Order No.	1 piece	3 pieces	5 pieces
Collet type CHG					
	Ø 2.35 mm	0 009 653	85.60 €	71.25€	67.80€
The state of the s	Ø 3.0 mm	0 009 652	85.60 €	71.25€	67.80 €
	Ø 6.0 mm	0 009 651	85.60 €	71.25€	67.80€

ENESKAmicro handpieces with (-) connection Handpiece JIH 300

				Price from
			Order No.	1 piece
Handpiece JIH 300				
ENERGY STATE OF THE STATE OF TH	Collet: Speed: Concentricity: Dimensions: Weight:	CHH (Ø 3 mm included) max. 40,000 rpm ± 0.01 mm Ø 23 x 60 mm (without thread) 60 g	0 009 150	309.00 €

			Price from
	Dimensions	Order No.	1 piece
Collet type CHH			
	Ø 1.0 mm	0 009 155	116.75€
	Ø 1.6 mm	0 009 157	73.00€
	Ø 2.0 mm	0 009 158	116.75€
	Ø 2.35 mm	0 009 152	73.00€
	Ø 2.5 mm	0 009 159	116.75€
	Ø 3.0 mm	0 009 151	73.00€
	Ø 1/8"	0 009 153	73.00 €























ENESKAmicro handpieces with (-) connectionAngle handpiece JKC 345

					Price from
				Order No.	1 piece
Angle handpiece JKC 345					
TO SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC.	\bigcirc	Collet: Speed: Concentricity: Dimensions: Weight:	CHC (Ø 3 mm included) max. 20,000 rpm, same rotation direction ± 0.01 mm Ø 22 x 62 mm (without thread) 60 g	0 009 200	347.00 €

* Accessories / spare parts

			Price from
	Dimensions	Order No.	1 piece
Collet type CHC			
Alluman	Ø 1.6 mm	0 009 207	73.00 €
	Ø 2.35 mm	0 009 202	73.00 €
	Ø 3.0 mm	0 009 201	73.00 €

ENESKAmicro handpieces with (-) connection Angle handpiece JIC 390

					Price from
				Order No.	1 piece
Angle handpiece JIC 390					
Market State of State	\bigcirc	Collet: Speed: Concentricity: Dimensions: Weight:	CHC (Ø 3 mm included) max. 20,000 rpm, reverse initial rotation ± 0.01 mm Ø 22 x 58 mm (without thread) 60 g	0 009 250	347.00 €

			Price from
	Dimensions	Order No.	1 piece
Collet type CHC			
- units	Ø 1.6 mm	0 009 207	73.00 €
	Ø 2.35 mm	0 009 202	73.00 €
	Ø 3.0 mm	0 009 201	73.00 €



ENESKAmicro handpieces with (-) connection Handpiece JBMH 300 N

					Price from
				Order No.	1 piece
Handpiece JBMH 300 N					
Eu Lu	\bigcirc	Collet: Speed: Dimensions: Concentricity: Weight:	CHM (Ø 3 mm included) max. 35,000 rpm Ø 19 x 128.5 mm (without thread) ± 0.01 mm 160 g	0 009 350	337.00 €

* Accessories / spare parts

			Price from
	Dimensions	Order No.	1 piece
Collet type CHM			
	Ø 2.35 mm	0 009 352	73.00 €
	Ø 3.0 mm	0 009 351	73.00 €

ENESKAmicro handpieces with (-) connection Miniature angle handpiece JMFC 300 M

					Price from
				Order No.	1 piece
Miniature angle handpiece JMFC 300 N	Л				
A SAR W	\bigcirc	Collet: Speed: Concentricity: Dimensions: Head-Ø: Weight:	K-253 (Ø 1.6 mm included) max. 15,000 rpm, reverse initial rotation ± 0.01 mm Ø 19 x 95 mm (without thread) 9.8 mm 47 g	0 009 511	347.00 €

			Price from
	Dimensions	Order No.	1 piece
Collet type K-253			
	Ø 1.6 mm	0 009 513	49.95 €



3

5



ENESKAmicro handpieces with (-) connectionMiniature angle handpiece JMFC 300 S

				Price from
			Order No.	1 piece
Miniature angle handpiece JMFC 300 S				
P. III	Collet: Speed: Concentricity: Dimensions: Head-Ø: Weight:	K-252 (Ø 1,6 mm included) max. 15,000 rpm, reverse initial rotation ± 0.01 mm Ø 19 x 95 mm (without thread) 14 mm 50 g	0 009 512	296.00 €

			Price from
	Dimensions	Order No.	1 piece
Collet type K-252			
	Ø 1.6 mm	0 009 514	49.95 €







ENESKAmicro Belt grinder with (-) and (+) connection J-BS 100 • J-BS 400

Belt grinder J-BS

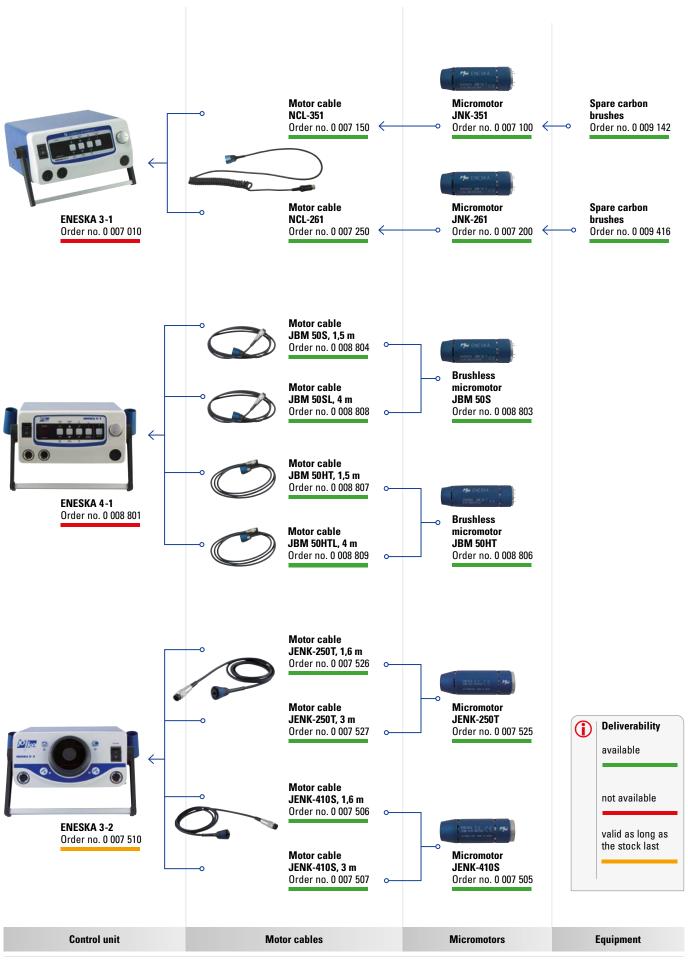
Compliments the ENESKAmicro system. This belt grinder is screwed onto the micromotors, just like a handpiece. It is small and easy to handle, fits nicely in your hand and can be used for delicate work. The head can be swivelled on its axis by approximately 90°. A hand rest is located above the grinding belts to enable the device to be used safely with both hands.

		Pri	ice from
		Order No.	1 piece
Belt grinder JBS 100 with (-) connection			
	For connection to micromotors with (-) connection, fits grinding belts 4, 6 and 8 mm wide. Gearing: 8:3 Input rotation speed: max. 35,000 rpm Output speed: max. 13,000 rpm Weight: 355 g Delivered with two grinding belts 6 x 300 mm respectively i 120 - 240 - 400.		589.00 €
Belt grinder JBS 400 with (+) connection			
+	For connection to micromotors with (+) connection, for grinding belts 4, 6 and 8 mm wide Gearing: 8:3 Input speed: max. 40,000 rpm Speed: max. 15,000 rpm Weight: 355 g Delivered with two grinding belts 6 x 300 mm respectively i 120 - 240 - 400.		636.00 €

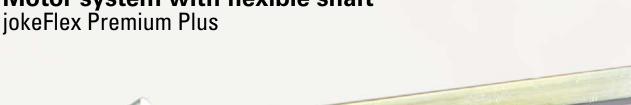
					Price f	rom
	Dimensions	Grit size	Packing quantity	Order No.	1 pack	10 packs
Grinding belts, corundur	n					
TARMAI TO	6 x 300 mm	120	10 pieces	0 401 540	11.95 €	10.95 €
		240	10 pieces	0 401 541	11.95 €	10.95 €
		320	10 pieces	0 401 545	12.30 €	11.55 €
		400	10 pieces	0 401 542	11.95 €	10.95 €
		500	10 pieces	0 401 549	14.05 €	12.80 €
		600	10 pieces	0 401 547	14.05 €	12.80 €
Grinding belts, zirconiun	n corundum					
6 x 300 n	6 x 300 mm	80	10 pieces	0 401 543	12.20 €	11.15€
		120	10 pieces	0 401 544	12.20 €	11.15€

Overview of old ENESKA systems

control units, micromotors, motor cables, carbon brushes



Motor system with flexible shaft





Premium **PLUS**

- Minimised noise emission
- The most powerful joke motor of all time
- Compatible with accessories from the previous generation
- Flexible shafts with silicon hose







jokeFlex Premium Plus motor system

Our flexible shaft system for today and the future. The core is the motor with an impressive 1,000 watts power. The noise level is reduced to a pleasant level in spite of increased power. The motor can be used in a hanging or lying position. Thanks to the robust construction of the suspension and shaft connection, it is optimally equipped for a hard day's work.

The matching joke Premium Plus handpieces fulfill all requirements which are expected of a modern handpiece. They lie comfortably and securely in the hand, muffle vibrations effectively and tire the worker's hand over long working periods. This is achieved by the uniformly narrow handle made of special rubber which is used in all handpieces. At least equally important: the inside. And also here high tech is the key. The handpieces are very robust and have a closed double bearing inside. The result is extremely quiet-running operation. Further advantages of the Premium Plus hand-pieces: changing the tool in seconds, without pinning.

The joke Premium Plus handpieces are available in a straight design or with a 90° angle head. The handpieces are of course also available in Rapid-Change design which connects to the motor system in a second. A closer look at the angle handpiece is worth-while: the slim, almost filigree head gives you the opportunity of reaching and processing even otherwise difficult to access areas of the workpiece.

jokeFlex Premium Plus

Motor system with flexible shaft





















































jokeFlex Premium Plus Order No. 0 016 550

Motor

Foot control **Premium**



Order No. 0 016 600 o





Handpiece joke Premium Plus Order No. 0 030 200 **Collet Typ GH**

Angle-handpiece joke Premium Plus Order No. 0 030 250 **Collet Typ WH**

Technical handpiece

Order No. 0 030 004 **Collet Typ GH**

Angle-handpiece VTN-N 90° Order No. 0 031 341

Collet Typ WH

Angle-handpiece VTN-S/N

Collet Typ GH

TH-M II

Order No. 0 031 540

Rapid-chuck handpiece

Order No. 0 030 640

Collet Typ TH

THSZ/N





Flexible shafts

Premium Plus

Spring clip 1.1 m Order No. 0 015 800

Rapid-Change 1.1 m

Order No. 0 015 900 Quick-change motor connection

Spring clip 1.1 m

Order No. 0 016 800

Rapid-Change 1.1 m

Order No. 0 016 900

Standard motor connection



Quick coupling system joke Rapid-Change Coupling piece Order No. 0 015 250 Connector plugs for handpieces see from page 64!



Suspension device, clamp-on Order No. 0 020 200 0



Hand-filing machines DIPROFIL® Di-Pro FXK-N, Mark II Order No. 0 001 503-N



Hand-filing machines DIPROFIL® FPK/R, Mark II Order No. 0 005 151-N

Handpiece & Hand-filing machines

Motor Connection & Coupling System

Motor system & Equipment









Motor system with flexible shaft jokeFlex Premium Plus

Premium Plus flexible shafts

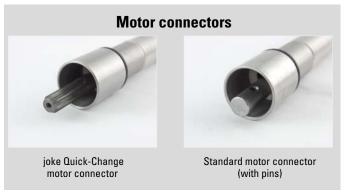
The Premium Plus flexible shafts are consistently optimised to suit everyday requirements in industry. The silicone hose offers many advantages:

- utmost flexibility and suppleness
- extremely smooth running (owing to minimised vibrations)
- very quiet
- no heat generation

For connecting the handpieces, our flexible shafts offer you a choice between a spring clip and the joke Rapid-Change quick coupling system. This innovative system allows safe handpiece change in a few seconds without any "fumbling around". Shafts with a hook spring are also available on request.

On the motor side, a choice of shafts with standard motor connection or the joke Quick-Change "premium connection" is available.





				Price from
	Motor connection	Dimensions	Order No.	1 piece
Flexible shaft with Rapid-Change coupling				
	Standard	1,100 mm	0 015 900	226.00 €
	Quick-Change	1,100 mm	0 016 900	232.00 €
Flexible shaft with spring clip				
	Standard	1,100 mm	0 015 800	197.00 €
	Quick-Change	1,100 mm	0 016 800	221.00 €



Motor system with flexible shaft jokeFlex Premium Plus

jokeFlex Premium Plus motor system

Our flexible shaft system for today and the future. The core is the motor with an impressive 1,000 watts power. The noise level is reduced to a pleasant level in spite of increased power. The motor can be used in a hanging or lying position. Thanks to the robust construction of the suspension and shaft connection, it is optimally equipped for a hard day's work.

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The joke Premium Plus handpieces are available in a straight design or with a 90° angle head. The handpieces are of course also available in Rapid-Change design which connects to the motor system in a second. A closer look at the angle handpiece is worthwhile: the slim, almost filigree head gives you the opportunity of reaching and processing even otherwise difficult to access areas of the workpiece.

			Price from
		Order No.	1 piece
Motor jokeFlex Premium Plus			
-Jee	ft connection and suspension) pleasant noise nd hanging, compatible with foot controller max. 22,000 1/min 1,000 W input, 700 W output 240 x 105 x 95 mm 2.1 kg 2.2 m Quick-Change	0 016 550	431.00€



				Price from
		Design	Order No.	1 piece
Advantage package jol	keFlex Premium Plus			
2	This advantage package for getting started straight away includes:	Rapid-Change	0 016 850R	849.00€
1 x foot cont 1 x flexible s	1 x motor Premium Plus (Order No. 0 016 550) 1 x foot controller Premium (Order No. 0 016 600) 1 x flexible shaft Premium Plus 1.1 m length (Order No. 0 016 800, for Rapid-Change Order No. 0 016 900)	Standard	0 016 850	839.00€

				Price	from
			Order No.	1 pack	1 piece
Foot control Premium,	Motor system with flex	cible shaft			
	To adjust motor spe	eed by foot action	0 016 600		279.00 €
	Speed range:	3,000 to 22,000 1/min			
	Speed restriction:	the potentiometer can be used to limit maximum speed to between 10,000 to 22,000 rpm			
	Dimensions:	Ø 190 (230 with pedal) x 200 mm			
	Weight:	2 kg			
	Supply voltage:	230 volts, 50 Hz			
	Cable length:	2.8 m			
Suspension device G2,	height adjustable				
		kbench; clamping range: max. 70 mm between 700 and 1,100 mm	0 020 200		170.00 €
	· ,	cantilever arm adjustable by max. 300 mm			
	Lockable in any d	, ,			
	• Colour: blue/silve	•			
Spring clip, Standard					
4	Proven steel design	n, pack contents: 20 pieces	0 015 201	15.10 €	

Handpieces joke Premium Plus

					Price from
			Туре	Order No.	1 piece
Handpiece joke Premium Plus					
	Rotational speed:	max. 22,000 1/min	Standard	0 030 200	214.00 €
	Collet: Dimensions: Weight:	GH (Ø 3 mm in scope of delivery) Ø 25 x 138 mm 160 g	Rapid-Change	0 030 200R	234.00 €
	Scope of delivery:	including tool set			

* Accessories / spare parts

			Price from	
	Dimensions	Order No.	1 piece	3 pieces
Collets, type GH				
	Ø 2.35 mm - 3/32"	0 030 010	8.10 €	
	Ø 3 mm	0 030 013	8.10 €	
	Ø 6 mm	0 030 016	8.10 €	
Driver				
•		0 030 205	33.75€	29.75 €
Connector plug				
(Tares		0 015 285	38.05€	34.65 €

					Price from
			Туре	Order No.	1 piece
Angle-Handpiece 90° joke Premium Pl	us				
•	Rotational speed:	max. 18,000 1/min, clockwise rotation WH (Ø 3 mm in scope of delivery) Ø 26 x 165 mm (head Ø 17 x 27 mm) 170 g including tool set	Standard	0 030 250	348.00 €
	Collet: Dimensions: Weight: Scope of delivery:		Rapid-Change	0 030 250R	367.00€

			Price from	
	Dimensions	Order No.	1 piece	3 pieces
Collets, type WH				
	Ø 2.35 mm - 3/32"	0 031 301	10.90€	
	Ø 3 mm	0 031 302	10.90€	
Driver				
•		0 030 205	33.75€	29.75 €
Connector plug				
		0 015 285	38.05€	34.65 €



Handpieces joke Classic-Line

					Price from
			Туре	Order No.	1 piece
Handpiece THSZ/N					
	Collet:	GH (Ø 3 mm in scope of delivery)	Standard	0 030 004	196.00 €
	Speed: Dimensions: Weight: Scope of delivery:	max. 18,000 1/min Ø 24 x 132 mm 120 g wrench, clamping pin	Rapid-Change	0 030 004R	216.00€

* Accessories / spare parts

			Price from	
	Dimensions	Order No.	1 piece	3 pieces
Collets, type GH				
	Ø 2.35 mm - 3/32"	0 030 010	8.10 €	
	Ø 3 mm	0 030 013	8.10€	
	Ø 6 mm	0 030 016	8.10€	
Driver			-	
		0 015 262	9.75€	8.75 €
Connector plug				
		0 015 261-1	33.05€	30.25 €

					Price from
			Туре	Order No.	1 piece
Angle-handpiece VTN-N 90°					
_	70 mm telescope-type extendable angle head with 90° head		Standard	0 031 341	421.00€
	adjustment, clockwise Collet: Speed: Dimensions: Weight: Scope of delivery:	e rotation WH (Ø 2.35 and Ø 3 mm in scope of delivery) max. 18,000 1/min Ø 24 x 175 mm (head Ø 17 x 30 mm) 185 g tool kit	Rapid-Change	0 031 341R	451.00 €

			Price from	
	Dimensions	Order No.	1 piece	3 pieces
Collets, type WH				
	Ø 2.35 mm - 3/32"	0 031 301	10.90€	
	Ø 3 mm	0 031 302	10.90€	
Driver				
		0 015 264	10.15€	9.15 €
Connector plug				
		0 015 263	31.70€	29.15 €



Handpieces joke Classic-Line

					Price from
			Туре	Order No.	1 piece
Angle-handpiece VTN-S/N					
	Collet:	GH (Ø 3 and Ø 6 mm in scope of delivery)	Standard	0 031 540	422.00 €
	Speed: Rotation: Dimensions: Weight: Scope of delivery:	max. 18,000 1/min clockwise Ø 24 x 171 mm (head Ø 24 x 40 mm) 240 g tool kit	Rapid-Change	0 031 540R	455.00 €

* Accessories / spare parts

			Price from	
	Dimensions	Order No.	1 piece	3 pieces
Collets, type GH				
	Ø 2.35 mm - 3/32"	0 030 010	8.10 €	
	Ø 3 mm	0 030 013	8.10 €	
	Ø 6 mm	0 030 016	8.10 €	
Driver				
		0 031 563	22.10€	19.05 €
Connector plug				
		0 015 265	32.80 €	30.05 €

Rapid-chuck handpiece TH-M II

This Rapid-chuck handpiece was designed for lighter jobs involving frequent tool changes. The selected tools are clamped in using the clamping lever fitted on the top.

					Price from
			Type	Order No.	1 piece
Rapid-chuck handpiece TH-M II					
	Collet:	TH (Ø 3 mm in scope of delivery)	Standard	0 030 640	143.30 €
	Speed: Dimensions: Weight:	max. 15,000 1/min Ø 21.9 x 139 mm 107 g	Rapid-Change	0 030 640R	173.00€

			Price from	
	Dimensions	Order No.	1 piece	3 pieces
Collets, type TH				
	Ø 2.35 mm	0 030 641	25.10€	
	Ø 3 mm	0 030 642	25.10 €	
Driver				
		0 030 666	4.52 €	3.78 €
Connector plug				
		0 015 273	32.95€	30.15 €



Hemisphere handpiece NHG-L



Easy change between right and left-handed use!

Our special recommendation for polishing jobs (for example, when using rings for finishing). The hemisphere attached to the handle provides a fatigue-free handrest and can be adapted for either right or left-handed users.

					Price from
			Туре	Order No.	1 piece
Hemisphere handpiece NHG-L					
<u> </u>		able angle head (70 mm), with 125° head	Standard	0 031 400	520.00€
	adjustment, anticlock Collet: Speed: Dimensions: Weight: Scope of delivery:	wise rotation WH max. 11,000 1/min Ø 18 x 190 mm (head Ø 18 x 30 mm) 250 g Collet Ø 3 mm, holder for ring Ø 12 mm, tool kit	Rapid-Change	0 031 400R	537.00€

			Price f	rom
	Dimensions	Order No.	1 piece	3 pieces
Collets, type WH				
	Ø 2.35 mm - 3/32"	0 031 301	10.90 €	
	Ø 3 mm	0 031 302	10.90 €	
Driver				
		0 015 256	9.45€	8.65 €
Connector plug				
		0 015 255	35.80 €	32.80 €



Hand-filing machinesDIPROFIL® Di-Pro • FXK-N • FPK/R

					Price from
			Туре	Order No.	1 piece
Hand-filing machine DIPROFIL® FPK	/R, Mark II				
	Stroke length:	0 - 6 mm, (recommended 0.5 - 3 mm)	Standard	0 005 151-N	930.00€
	No. of strokes:	max. 8,000 strokes/min (5,000 - 6,000 strokes/min recommended) Ø 2 - 6.4 mm	Rapid-Change	0 005 151R-N	976.00€
	Tool receptacle:				
	Insertion depth:	40 mm			
	Vibration:	5.79 - 13.37 m/s ²			
1112171	Sound level:	< 70 dB(A) at 7,000 strokes/min			
		(acc. to ISO 15744)			
	Weight:	575 g			
THE REAL PROPERTY.	Scope of delivery:	storage case, tool set, oil, extension tube/			
		finger protection bush, replacement friction			
		bearing and felts, lubricating oil			

* Accessories / spare parts

		Price from	
	Order No.	1 piece	3 pieces
Driver			
	0 015 252	33.35 €	30.55€
Connector plug			
	0 015 251	46.05 €	42.25€

					Price from
			Type	Order No.	1 piece
land-filing machine DIPROFIL® Di-P	ro FXK-N, Mark II				
	Stroke length:	0.5 - 6 mm	Standard	0 001 503-N	1591.00 €
	No. of strokes:	(recommended 0.5 - 3 mm) max. 7,000 strokes/min, (5,000 - 6,000 strokes/min recommended)	Rapid-Change	0 001 503R-N	1612.00 €
	Tool receptacle: Insertion depth:	Ø 2 - 6.4 mm 40 mm			
	Vibration:	1.55 - 5.08 m/s ²			
1900	Sound level:	< 75 dB(A) at 7,000 strokes/min			
	Weight: Scope of delivery:	700 g Storage case, tool set, extension tube,			
		finger protection bush, counterweights replacement friction bearing and felts,			
		lubricating oil			

		Price f	Price from	
	Order No.	1 piece	3 pieces	
Driver				
	0 015 252	33.35 €	30.55€	
Connector plug				
	0 015 251	46.05€	42.25€	



З

6



Reducing sleeves to allow use of a smaller shaft diameter in larger collets

				Price from	
	Length A	Dimensions	Order No.	1 piece	5 pieces
Reducing bush RHB					
	28 mm	B Ø 3.0 C Ø 2.35 mm	0 545 287	16.50 €	15.05 €
Reducing bush with collar					
	25 mm	B Ø 3.0 C Ø 1.6 mm	0 010 583	18.30 €	15.20 €
		B Ø 3.0 C Ø 2.35 mm	0 010 588	18.30 €	15.20 €
		B Ø 6.0 C Ø 3.0 mm	0 545 288	7.95€	7.35 €







More reducing bushes on request!

Other reducing bushes in 0.1 mm decrements are available!

Quick coupling system joke Rapid-Change

joke Rapid-Change

The revolution in secure, rapid handpiece changes. The joke Rapid-Change quick coupling system means you can change handpieces in just a few seconds: just pull out the old handpiece and push in the new one. Hey presto!

This system does not just optimise hand-piece changes however. It also means that you can work with joke Rapid-Change more safely and economically, because firstly, there is no longer any risk of injury from spring clips and secondly, repair costs are lower. A "Rapid-Change connection" between the hand-piece and the shaft simply lasts longer.

You can continue to use your existing hand-pieces. All you need is a conversion set and a coupling piece, which is simply fitted to the handpiece end of the flexible shaft.

When buying handpieces, you can choose between the standard design with spring clips and the version with the Rapid-Change connector.



			Price f	rom
		Order No.	1 piece	3 pieces
Rapid-Change coupling for jokeFlex Premium	n Plus			
	for mounting at the flexible shaft (handpiece end)	0 015 250	41.75€	38.75€





Handpiece conversion in just two steps:





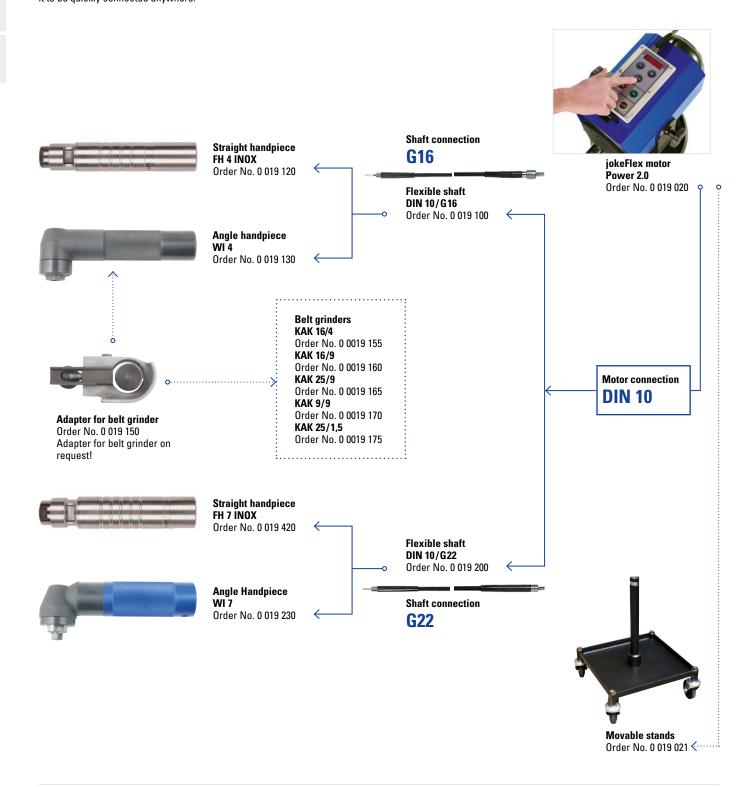
jokeFlex Power

Motor • Accessories • Flexible shafts

Motor system jokeFlex Power – The heavyweight champion

Our most powerful driving motor – for your coarse and large surface grinding needs. The jokeFlex Power motor system delivers up to 13,000 rpm – adjustable in 100 rpm steps. Everything is adjusted and controlled digitally. Soft start, stable speeds and an active brake are the decisive advantages of the unit's electronic control. Low speeds down to 500 rpm are also possible with this system – thanks to powerful torque with real pulling power! Force is not the same as mass. The high-output motor in the metal housing is robust, but thanks to its light and compact design. It is also suitable for portable use. Also: the jokeFlex Power system has a 230 V connection, enabling it to be quickly connected anywhere.

- Output max. 1,500 W (230 V supply voltage)
- High torque for stability at all speeds
- Digital control and monitoring
- Versatile operation thanks to large range of handpieces





jokeFlex Power Motor • Accessories • Flexible shafts

			Order No.	1 piece
Motor jokeFlex Power 2.0				
	Speed between:	500 and 13,000 1/min (adjustable in 100 rpm steps)	0 019 020	3630.00€
	Power output:	1,650 W		
	Power consumption:	2,000 W		
	Shaft connection:	DIN 10		
	Supply voltage:	230 V, 50/60Hz, 1 phase		
The second secon	Sound level:	63 dB(A)		
	Dimensions (W x H x D):	472 x 340 x 352 mm		
	Weight:	27 kg		

* Accessories / spare parts

				Price from
			Order No.	1 piece
Movable stands for jokeFlex Power 2.0				
i	Dimensions (W x L x H): Weight:	Ø 470 x 470 x 606 mm 23 kg	0 019 021	592.00€

	Shaft connection	Motor connection	Dimensions	Order No.	Price from 1 piece
Flexible shaft jokeFlex Power					
	G 16	DIN 10	Ø 4 x 1,250 mm	0 019 100	239.00 €
-	G 22	DIN 10	Ø 7 x 1,500 mm	0 019 200	266.00€

			Price from
	Dimensions	Order No.	1 piece
Flexible shaft core NA 4 / G 16 for jokeFlex Power			
	Ø 4 x 1,250 mm	0 019 101	66.95 €
Flexible shaft core NA 7 / G 22 for jokeFlex Power			
	Ø 7 x 1,500 mm	0 019 201	69.00€

jokeFlex Power Handpieces

				Price from
			Order No.	1 piece
Straight handpiece FH 4 INOX				
	Shaft connection: Speed: Dimensions: Weight:	G 16 max. 40,000 rpm Ø 20 x 107 mm 135 g	0 019 120	214.00 €
	Accessories:	Collet 6 mm, chuck key set		

* Accessories / spare parts

				Price from
	Dimensions	Туре	Order No.	1 piece
Collet for handpiece FH 4				
	Ø 3 mm	FH	0 019 111	24.45€
	Ø 6 mm	FH	0 019 112	24.45€

				Price from
			Order No.	1 piece
Straight handpiece FH 7 INOX				
	Shaft connection: Speed: Dimensions: Weight: Accessories:	G 22 max. 25,000 rpm Ø 27 x 128 mm 315 g Collet 6 mm, chuck key set	0 019 420	214.00 €

				Price from
	Dimensions	Type	Order No.	1 piece
Collets for handpieces FH 7, FH 10				
	Ø 3 mm	FH	0 019 211	28.35€
	Ø 6 mm	FH	0 019 212	28.35 €
	Ø 8 mm	FH	0 019 213	28.35 €



jokeFlex Power Handpieces

				Price from
			Order No.	1 piece
Angle handpiece WI 4				
	Shaft connection: Rotation speed: Dimensions: Weight: Accessories:	G 16 max. 20,000 rpm (1 : 1), clockwise Ø 23 x 111 x 43 mm 265 g Collet 3 mm, chuck key set	0 019 130	477.00 €

* Accessories / spare parts

				Price from
Collet for angle handpiece WI 4	Dimensions	Туре	Order No.	1 piece
Concern angle nanapiece WI4	Ø 3 mm	WI	0 019 131	28.35€
	Ø 6 mm	WI	0 019 132	28.35 €

				Price fron
			Order No.	1 piec
ingle handpiece WI 7				
	Shaft connection:	G 22	0 019 230	481.00
	Speed:	max. 17,000 rpm (1.3:1), clockwise		
	Dimensions:	Ø 36 x 156 x 61 mm		
	Weight:	610 g		
	Accessories:	Collet 6 mm, chuck key set		

			Price from
	Dimensions	Order No.	1 piece
Collets for angle handpieces WI 7, WI 10			
	Ø 3 mm	0 750 831	25.35€
	Ø 6 mm	0 750 832	25.35 €



jo _{ke}

PneumaticsSystem overview





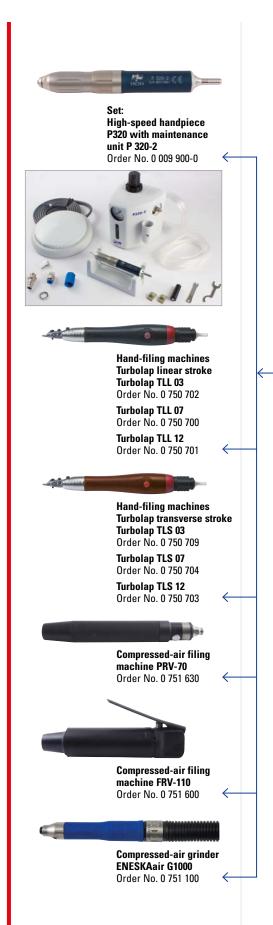
PneumaticsSystem overview





Tips for proper oiling

To ensure that the motors of the compressed-air devices are adequately lubricated during operation, the air processed by the maintenance unit joke Oiljet is impregnated with oil. Particularly with compressed-air grinders and DIPROFIL® hand-filing machines, less is often more: With these machines, the optimum injection quantity is approx. 2 – 3 drops per minute.





Maintenance unit joke Dryjet Order No. 0 004 080

Maintenance unit with oil

Hand-filing machines without oil

Maintenance unit without oil





Maintenance units

Maintenance unit for connection to all joke compressed-air equipment. Excellent compressed-air treatment with filter, manual water separator and a micro-oiler that is simple and precise to operate. The joke Oiljet Maintenance Unit is delivered preassembled with filter, manual water separator, pressure reducer, pressure gauge, micro-oiler and wall attachment. We recommend our prepared installation packs for connecting the individual compressed-air devices. Optimum results in conjunction with the two high-performance lubricants.

				Price from
			Order No.	1 piece
Maintenance unit joke Dryjet				
	Filter controller MD1-F	R0000-1/4:	0 004 080	122.00€
	Max. Working flow:	1,200 I / min		
	Max. Inlet pressure:	16 bar		
	Container capacity:	24 cm ³		
	Condensate drain:	semi-automatic-manual, automatic via pressure relief, drain via threaded connection G1 / 8		
	Air connection:	1/4 ,,		
	Medium:	compressed air		
	Scope of delivery:	25 µm filter, manual water separator, pressure reducer, pressure gauge and wall mounting		
umu				

			Price from
		Order No.	1 piece
Ball stop valve 1/4"			
	1x internal and 1x external thread 1/4"	0 004 053	6.60€
Double nipple 1/4"			
E Pin	Fits on connector for Turbolap handpieces, supplied with two O-rings	1 722 246	3.26 €



Maintenance units joke Oiljet • joke Dryjet

				Price from
			Order No.	1 piece
Maintenance unit joke Oiljet				
	Filter controller MD1-Fl	R0000-1/4:	0 004 070	205.00€
	Max. Working flow:	1,200 I / min		
	Max. Inlet pressure:	16 bar		
To have	Container capacity:	24 cm ³		
• •	Condensate drain:	semi-automatic-manual, automatic via pressure relief, drain via threaded connection G1 / 8		
	Air connection:	1/4 "		
THILL	Medium:	compressed air		
	Oiler MD1-L00-1/4:			
	Max. Inlet pressure:	16 bar		
	Container capacity:	40 cm ³		
C STATE OF THE STATE OF	Air connection:	1/4 "		
A STATE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS	Medium:	compressed air		
HTTTH.				
	Scope of delivery:	25 μm filter, manual water separator, micro oiler, pressure reducer, pressure gauge and wall mounting		

700000000000	, spare parts		
			Price from
		Order No.	1 piec
Installation pack DIPRO	FIL®		
	The package contains everything necessary for the direct connection of the maintenance unit to its air supply line (including 1.5 m hose) and for connection of the DIPROFIL® hand-filing machine with (3 m hose) rapid coupling HSI-M (including lubricant MFA-K in a 0.5 I container).	0 004 051	58.30 t
Installation pack Turbo	hand grinder		
	The package contains everything necessary for the direct connection of the maintenance unit to its air supply line (including 1.5 m hose) and for connection of the Turbo hand grinder including high- performance lubricant X 73012 in a 1 l container.	0 004 055	40.80
3all stop valve 1/4"			
	1x internal and 1x external thread 1/4"	0 004 053	6.60 €
Double nipple 1/4"			
A Car	Fits on connector for Turbolap handpieces, supplied with two O-rings	1 722 246	3.26 €



Lubricants

for compressed-air grinders and hand-filing machines

				Price from
		Content	Order No.	1 piece
High-performance lu	ıbricant X 73012			
-CT -	for all compressed-air grinders	0.1 litre	0 580 601	5.15 €
E 1940 AND TO SERVICE	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 litre	0 580 602	17.65 €
The second secon	The state of the s	5 litre	0 580 603	68.80 €
Lubricant MFA-K				
	for all DIPROFIL® hand-filing machines	0.5 litre	0 004 002	35.35 €



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Tips for proper oiling

To ensure that the motors of the compressed-air devices are adequately lubricated during operation, the air processed by the maintenance unit joke Oiljet is impregnated with oil. Particularly with compressed-air grinders and DIPROFIL® hand-filing machines, less is often more: With these machines, the optimum injection quantity is approx. 2 – 3 drops per minute.





High-speed handpiece ENESKA P 320-2

0 009 900-0

942.00€

High-speed handpiece ENESKA P 320-2



		Price from
	Order No.	1 piece

Set ENESKA P 320-2



Complete set incl. handpiece including collet \emptyset 1.6 mm, 2 m air line and connection, maintenance unit, foot switch and connecting accessories (3-part)

115 x 160 x 100 mm (Maintenance unit) Dimensions (W x H x D):

Ø 16 x 130 mm (handpiece) Weight handpieces: 71 g

max. 320,000 1/min Speed: approx. 10 W Power: Air pressure: 2.5 bar Air consumption: 40 l/min

75 dB(A) at 320,000 1/min Noise level:

		Price from
	Order No.	1 piece
Collet Ø 1.6 mm		
	0 009 909	45.00€
Head, complete (spare)		
	0 009 902	181.00€





Hand-grinders joke TURB0

Hand-grinders joke TURBO

Our own old favourites: thanks to a powerful blade motor, these air grinders deliver real power (70 watts) and yet run very quietly (70 dB(A)). Thanks to their sturdy design, they are virtually tireless workhorses. Ideal for coarse grinding as well as finer tasks. Little maintenance is required, thanks to permanent lubrication by the oil mist (optimum: 3 drops/min). The drive air is led out backwards via a tube and baffle.



	Hand grinders joke TURBO, G 180/60	Hand grinders joke TURBO, W 45/40	Hand grinders joke TURBO, W 45/23	Hand grinders joke TURBO, W 90/23
Rotation speed	max. 60,000 1/min	max. 40,000 1/min	max. 23,000 1/min	max. 23,000 1/min
Power	70 W	70 W	70 W	70 W
Air pressure	4 - 6 bar	4 - 6 bar	4 - 6 bar	4 - 6 bar
Air consumption	165 l/min	165 l/min	165 l/min	165 l/min
Exhaust air	backwards	backwards	backwards	backwards
Noise level	80 - 90 dB(A)	80 - 90 dB(A)	90 - 95 dB(A)	90 - 95 dB(A)
Vibration	< 0.32 m/s ²	< 0.32 m/s ²	< 0.56 m/s ²	< 0.56 m/s ²
Dimensions	Ø 24 x 146 mm	Ø 24 x 158 mm	Ø 51.5 x 159 mm	Ø 46.5 x 152 mm
Weight	200 g	230 g	230 g	230 g
Lubrication	continuously by oil mist	continuously by oil mist	continuously by oil mist	continuously by oil mist
Scope of delivery	Tube package (1.1 m) with coupling sleeve 1/4", collet Ø 3 mm (type CHS), tool set	Tube package (1.1 m) with coupling sleeve 1/4", collet Ø 3 mm (type CHS), tool set	1 x rubber holder, 2 x cup wheels, 1 x clamping shank, assortment of consumables, tool set, tube package 1.1 m withcoupling sleeve 1/4", collet Ø 3 mm (type CHS)	1 x rubber holder, 2 x cup wheels, 1 x clamping shank, assortment of consumables, tool set, tube package 1.1 m withcoupling sleeve 1/4", collet Ø 3 mm (type CHS)
Order No.	0 750 501	0 750 502	0 750 503	0 750 504
Price	508.00 €	600.00 €	636.00 €	636.00 €



Compressed-air grinder FX 3.0

Compressed-air grinder FX 3.0

High power – low air consumption. With the FX 3.0 air grinder, you can use tools with heads -Ø up to 10 mm. Ergonomic design means that even working for longer periods need no longer be "torture", as vibrations are absorbed efficiently.

				Price from
			Order No.	1 piece
Compressed-air grinder FX 3.0				
	Speed:	max. 65,000 rpm	0 750 705	294.00 €
CHINA	Air pressure:	max. 5 bar		
C PAR	Air consumption:	90 l/min		
	Exhaust air:	backwards		
Use with:	Noise level:	< 75 dB(A)		
joke Oiljet	Dimensions:	Ø 22.5 x 150 mm		
(page 77)	Weight:	78 g		
	Lubrication:	continuously by oil mist		
	Scope of delivery:	collet Ø 3 mm, wrench, air tube 1.5 m,		
	. ,	1/4" connecting sleeve including filter		

Compressed-air grinder ENESKAair G1000



				Price from
			Order No.	1 piece
ENESKAair G1000				
	Speed: Power: Air pressure: Air consumption: Exhaust air: Noise level: Vibration: Dimension:	max. 100.000 1/min 63 Watts max. 6.3 bars 170 I/min backwards 70 dB(A) < 2.5 m/s² Ø 21 x 129 mm	0 751 10 0	626.00€
	Weight: Lubrication: Scope of delivery:	150 g oilfree Tube package (2 m) with connection nipple		

R1/4", collet Ø 3 mm, tool set



Compressed-air grinder joke AirMAX

Compressed-air grinder joke AirMAX

The family of compressed-air grinders from joke. The name says it all, for these power tools make full use of air. Regardless of whether you need high speed or just solid performance - the joke AirMAX series has the right device for you. All these grinders are lubricated with oil in conjunction with the joke Oiljet.









	joke AirMAX 20	joke AirMAX 35	joke AirMAX 90/20
Rotation speed	max. 20,000 1/min	max. 35,000 1/min	max. 20,000 1/min
Power	270 W	220 W	220 W
Air pressure	6 bar	6 bar	6 bar
Air consumption	590 I/min	520 l/min	520 l/min
Exhaust air	forwards	forwards	forwards
Noise level	81 dB(A)	78 dB(A)	79 dB(A)
Vibration	< 6 m/s²	< 6 m/s²	< 6 m/s²
Dimensions	Ø 32 x 80 mm	Ø 31 x 143 mm	Ø 31 x 70 mm / 42 x 137 mm
Weight	420 g	290 g	370 g
Lubrication	continuously by oil mist	continuously by oil mist	continuously by oil mist
Scope of delivery	collet Ø 6 mm, clamping wrench, rotaryand lever valve	collet Ø 6 mm, clamping wrench, rotaryand lever valve	collet Ø 6 mm, clamping wrench, rotaryand lever valve
Order No.	0 750 830	0 750 840	0 750 860
Price	437.00 €	437.00 €	578.00 €

				Price from
		Dimensions	Order No.	1 piece
Supply air tube, for all m	odels			
(°)	Important: also remember the matching air supply hose when ordering!		0 750 813	37.95€
Collets for angle handpi	eces WI 7, WI 10			
		Ø 3 mm	0 750 831	25.35 €
		Ø 6 mm	0 750 832	25.35 €



Compressed-air hand-filing machines DIPROFIL® for operating on the joke Oiljet maintenance unit







	Compressed-air hand-filing machine DIPROFIL®, Di-Pro FXL-N, Mark II	Compressed-air hand-filing machine DIPROFIL®, FPL/R, Mark II
Stroke length	0 - 6 mm, continuously adjustable (0.5 - 3 mm recommended)	0 - 6 mm, continuously adjustable (0.5 - 3 mm recommended)
Max. no. of strokes	max. 7,000 strokes/min (5,000 - 6,000 strokes/min recommended)	max. 8,000 strokes/min (5,000 - 6,000 strokes/min recommended)
Tool support	Ø 2 - 6.4 mm	Ø 2 - 6.4 mm
Insertion depth	40 mm	40 mm
Air pressure	4 bar	4 bar
Air consumption	approx. 60 l/min at 7,000 strokes/min	approx. 65 l/min at 8,000 strokes/min
Exhaust air	through housing	through housing
Noise level	< 75 db(A) at 7,000 strokes/min	70 db(A) at 7,000 strokes/min (according to ISO 15744)
Vibration	< 1.55 - 5.08 m/s ²	5.79 - 13.37 m/s ²
Weight	900 g	740 g
Lubrication	continuously by oil mist	continuously by oil mist
Scope of delivery	storage case, tool set, extension tube/finger protection bush, counterweights, replacement friction bearing and felts, lubricating oil	storage case, tool set, extension tube/finger protection bush, replacement friction bearing and felts, lubricating oil
Order No.	0 001 504-N	0 002 251-N
Price	2,227.00 €	1,571.00 €

			Price from
		Order No.	1 piece
Rapid-release coupli	ng HSL-M		
	With "on/off" switch, for connection of hand-filing machines to maintenance unit	0 003 001	112.20€
	Important:		
	This rapid-release coupling is needed for using the DIPROFIL®		
	compressed-air hand-filing machines.		
	So be sure to include it in your initial order!		

Compressed-air filing machine LFC 11



				Price from
			Order No.	1 piece
Set Compressed-air filing machine LFC 11 with ca	se			
	No. of strokes:	6,000 - 12,000 strokes/min	0 750 960	1480.00 €



No. of strokes: 6,000 - 12,000 strokes/min Stroke length: 2 - 11 mm, continuously adjustable Output: 300 W 6.3 bar Air pressure: Air consumption: 230 l/min Noise level: 74 dB(A) Vibration: < 2,2 m/s² Dimensions: 280 x 60 mm 830 g Weight: Lubrication: continuously by oil mist

tool holder Ø 4 mm, 1 file, various different tools, Scope of supply: counter-holder, hose unit and case

		Price from
	Order No.	1 piece
Tool holder Ø 3 mm		
	0 750 751	61.95€
Tool holder Ø 4 mm		
	0 750 752	61.95€
Tool holder Ø 6 mm		
	0 750 753	61.95€



Compressed-air filing machines PRV-70 • FRV-110 "24/7"-use owing to minimal vibrations

Compressed-air filing machines PRV-70 • FRV-110

24/7, so around the clock, 7 days a week:

this is just how long you can work with these filing machines at a stretch, as the vibration values lie markedly below the limit value of 2.5 m/s².

Available with short (2 mm) and long (8 mm) stroke. The machines lie conveniently and securely in the user's hands and consume little air. Both machines can dispense with oiling and may therefore be directly connected to the joke Dryjet maintenance unit.

Highlights:

- use 24/7 possible
- extremely high degree of running smoothness
- 2 and 8 mm stroke length versions
- excellent service life
- use without oil, only a few drops a day are required
- low air consumption







	Compressed-air filing machine FRV-110	Compressed-air filing machine PRV-70
Stroke length	8 mm	2 mm
Max. no. of strokes	9,000	7,000
Tool support	max. 6 mm	max. 4 mm
Air pressure	6,5 bar	6,5 bar
Air consumption	78 l/min	30 l/min
Exhaust air	backwards	backwards
Noise level	< 77 dB(A)	<71 dB(A)
Vibration	2 m/s²	2 m/s ²
Dimensions	Ø 40 x 182 mm	Ø 28 x 190 mm
Weight	1,000 g	300 g
Lubrication	not necessary	not necessary
Scope of delivery	tool (without air hose)	tool, air hose
Order No.	0 751 600	0 751 630
Price	475.00 €	407.00 €





Compressed-air engraving pen LGS 30

Compressed-air engraving pen LGS 30

This little pen enables you to engrave metal, glass, plastics, etc. effortlessly. Thanks to the carbide needle, you can even make deep indentations in hardened steel. No harmful vibrations are transmitted to your hand, which protects your health and gives you maximum pen control.



			Order No.	Price from
Compressed-air engraving pen LGS 30, incl. en	graving needle		Order No.	1 piece
	No. of strokes: Air pressure: Air consumption: Dimensions: Weight:	30,000 strokes/min 6 bar 30 l/min Ø 17 x 154 mm 150 g	0 750 790	225.00€
	Vibration: Lubrication: Scope of supply:	< 2.5 m/s ² continuously by oil mist air tube 2 m, engraving needle type GN M, connection nipple 1/4"		

				Price from
	Shape	Туре	Order No.	1 piece
Engraving needle				
A	fine tipped	GN F	0 750 791	32.20€
1	medium tipped	GN M	0 750 792	32.20€
	coarse tipped	GN G	0 750 793	32.20€
Engraving chisel				
A	flat	GM F	0 751 930	32.20 €
	angled	GM S	0 751 931	32.20 €
Air hose, supply air, 2	? m			
			0 750 795	30.15€



Hand-filing machines Turbolap Linear and transverse stroke!

Turbolap hand-filing machines

High power in a small casing. These permanently lubricated handfiling machines connect directly to the joke Dryjet maintenance unit. With these devices, there is no need to worry about oiling, just about your hands, as they will prefer to no longer be without from these ergonomic high-tech handpieces...

Available with linear and transverse stroke (0.3, 0.7 with 1.2 mm stroke length).





Turbolap TLS: The tool works eliptically (oranged highlighted area) depending on the stroke length.

Turbolap TLL: The tool works linearly (oranged highlighted area) depending on the stroke length.







	Hand-filing machines Turbolap TLL 03 with linear stroke	Hand-filing machines Turbolap TLS 03 with transverse stroke	Hand-filing machines Turbolap TLL 07 with linear stroke	Hand-filing machines Turbolap TLS 07 with transverse stroke	Hand-filing machines Turbolap TLL 12 with linear stroke	Hand-filing machines Turbolap TLS 12 with transverse stroke
Stroke length	0.3 mm	0,3 mm	0.7 mm	0,7 mm	1.2 mm	1,2 mm
Max. no. of strokes	52,500 ¹/min	56,000 ¹/min	28,000 ¹/min	20,000 ¹/min	14,000 ¹/min	14,000 ¹/min
Tool support	Ø 3 mm / 4 mm high	Ø 3 mm / 4 mm high	Ø 3 mm / 4 mm high			
Air pressure	3 bar / max. 6 bar	1-2 bar / max. 6 bar	3 bar / max. 6 bar	1,5-2,5 bar / max. 6 bar	2-3 bar / max. 6 bar	6 bar
Air consumption	125 l/min	125 l/min	46 l/min	46 I/min	46 l/min	46 l/min
Exhaust air	backwards	backwards	backwards	backwards	backwards	backwards
Noise level	72 dB(A)	73 dB(A)	64 dB(A)	63 dB(A)	59 dB(A)	63 dB(A)
Vibration	8.69 m/s ²	4.58 m/s ²	9.79 m/s ²	3.37 m/s ²	7.86 m/s ²	4.90 m/s ²
Dimensions	Ø 28 x 216 mm	Ø 28 x 216 mm	Ø 28 x 216 mm			
Weight	180 g	180 g	180 g	180 g	180 g	180 g
Lubrication	not necessary	not necessary	not necessary	not necessary	not necessary	not necessary
Scope of delivery	tool holder, chuck key, supply air hose 1.5 m, ex- haust air tube,1/4" connecting sleeve incl. filter	tool holder, chuck key, supply air hose 1.5 m, ex- haust air tube,1/4" connecting sleeve incl. filter	tool holder, chuck key, supply air hose 1.5 m, ex- haust air tube,1/4" connecting sleeve incl. filter	tool holder, chuck key, supply air hose 1.5 m, ex- haust air tube, 1/4" connecting sleeve incl. filter	tool holder, chuck key, supply air hose 1.5 m, ex- haust air tube,1/4" connecting sleeve incl. filter	tool holder, chuck key, supply air hose 1.5 m, ex- haust air tube,1/4" connecting sleeve incl. filter
Order No.	0 750 702	0 750 709	0 750 700	0 750 704	0 750 701	0 750 703
Price	385.00 €	385.00 €	382.00 €	385.00 €	385.00 €	385.00 €



Polishing machine OPTI polish

Polishing machines OPTI polish

The workhorses for precision work. For grinding, polishing, deburring, matting, rounding... the possible uses of these grinding lathes are so to speak virtually unlimited.

Highlights:

- · Robust, heavy industrial design
- Long lasting with maintenance-free motor
- Casing made of cast aluminium
- Quiet running owing to balanced motor and quality ball bearings ...

For rapid deburring, we recommend a tandem of one brush with nylon bristles on one side of the polishing machine and a wrapped fleece disk on the other side.

For individual matching to your application please contact our Product Manager Younes Burger: Tel. +49 (0) 22 04 / 8 39-0 e-mail: y.burger@joke.de





	Polishing machine OPTI polish GU 20 P	Polishing machine OPTI polish GU 25 P
Polishing disc size Ø	200 x 20 mm	250 x 25 mm
Tool support	Ø 16 mm	Ø 20 mm
Max. tool width	20 mm	25 mm
Rotation speed	2,850 ¹/min	2,850 ¹/min
Power	600 W	1.500 W
Dimensions (W x H x D)	591 x 326 x 292 mm	591 x 326 x 292 mm
Supply voltage	230 V, AC, 1 PH, 50/60 Hz	400 V, AC, 3 PH, 50/60 Hz
Weight	10.6 kg	17.4 kg
Scope of delivery	1 x polishing disc soft Ø 200 x20 x 16 mm (Order No. 0 041 622) and 1 x polishing disc hard Ø 200 x 20 x 16 mm (Order-No. 0 041 623)	1 x polishing disc soft Ø 250 x25 x 20 mm (Order No. 0 041 632) and 1 x polishing disc hard Ø 250 x 25 x 20 mm (Order No. 0 041 633)
Order No.	0 041 620-0	0 041 630-0
Price	260.00 €	366.00 €

			Price from
		Order No.	1 piece
Machine substructur	e for polishing machines OPTI polish		
	Dimension: table 320 x 270 mm, height: 825 mm. The suitable substructure for the series OPTI PSM polishing machines. Please be aware that this must be fixed to the bottom and holes at the table need to be drilled. Drilling template inside but no fixing material.	0 041 621-1	164.95 €



Polishing machine Accessory

Convolute compact grinding discs

Wound, not pressed. These special grinding discs have been developed for the demanding preliminary and final processing of surfaces of the widest array of materials. They result from winding nylon fleece fabric around a hard core. The fabric is wetted with a special abrasive resin system beforehand. The winding results in a very uniform structure with which the direction of rotation must nevertheless be observed.

The discs are available in two abrasive finishes (corundum and SiC) and two diameters and grit sizes in addition to three hardnesses.







Further information on page 172.

Round brushes with nylon grinding bristles

The nylon fibres of these brushes are interspersed with silicon carbide. The latter is constantly released during work and a highly even grinding effect with a very uniform ground section is produced.

The nylon polishing bristles are extremely elastic and flexible and consequently absolutely unbreakable. The trimming area does not clog with work residues during deployment and the polishing effect remains constantly high throughout the entire working period. Suitable for wet and dry use.







Further information on page 173.

Polishing buffing discs OPTI

These discs are used on stationary polishing machines in conjunction with solid polishing compounds (Dialux).

Available in two versions:

- Cotton, soft
- Cotton, hard (quilted)







Further information on page 174.



Polishing lathe PB 2

System overview

Polishing lathe PB

The polishing lathes with high-performance motors. Three-stage or infinite speed adjustment possible. Ideal for all tough tasks that can be accomplished by turning: filing, sanding, polishing, deburring, scraping, brushing, winding, separating, chamfering, rounding, hand filing, coating, etc. ...

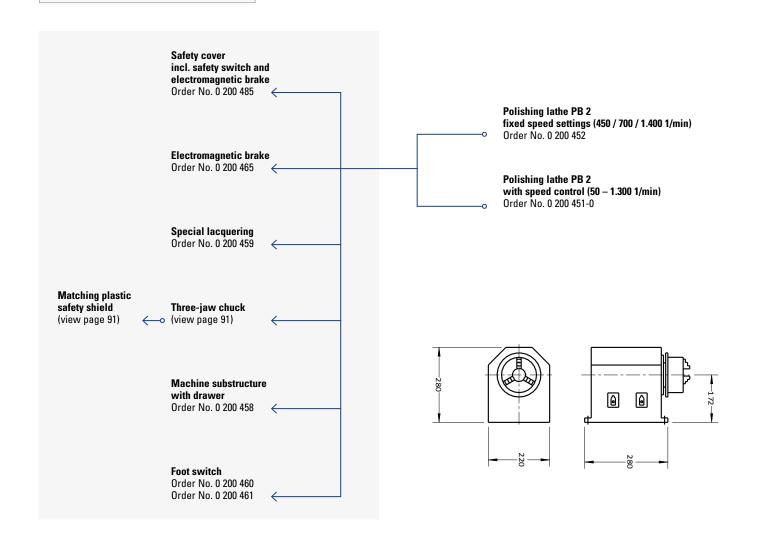
Highlights:

- Maintenance-free work
- Clamping of the workpieces by a three-jaw chuck
- Limited spatial requirements owing to compact construction
- Robust, interference-proof, extremely durable
- Comprehensive range of accessories and safety devices available
- Radial run-out of shaft ± 0,01 mm
- Shaft rotated and balanced in a clamping system



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Optional accessory to be determined before ordering, as no longer possible afterwards!





Polishing lathe PB 2





	Polishing lathe PB 2	Polishing lathe PB 2
Tool support	Ø 37 mm	Ø 37 mm
Rotation speed	50 - 1,300 rpm, infinitely adjustable	450 / 700 / 1,400 rpm, fixed speed settings
Power	max. 0.2 kW	0.2 / 0.5 / 0.6 kW
Centre height	172 mm	172 mm
Dimensions (W x H x D)	280 x 280 x 220 mm	280 x 280 x 220 mm
Supply voltage	400 V, 50/60 Hz, IP 54	400 V, 50/60 Hz, IP 54
Weight	38 kg	38 kg
Order No.	0 200 451-0	0 200 452
Price	5,993.00 €	3,171.00 €

				Price from
			Order No.	1 piece
Machine substructure	with drawer			
	Dimensions (W x D x H): 39	0 x 540 x 800 mm	0 200 458	540.00
Special lacquering				
			0 200 459	169.00 €
Foot switch type 1				
The second	Function: pr	ess = start • hold = work • release = stop	0 200 460	349.00 €
Electromagnetic brak	е			
			0 200 465	1172.00 €
matching three-jaw c	huck incl. chuck flange			
	Chuck Ø 125 mm • max. perm	. rpm 3,200 rpm	0 200 473	527.00 €
· //	Chuck Ø 160 mm • max. perm	. rpm 3,000 rpm	0 200 474	584.00 €
Plastic protective dis	c for three-jaw chuck			
	suitable for Ø 125 mm		0 200 481	203.00 €
	suitable for Ø 160 mm		0 200 482	251.00 €
Safety cover				
	including safety switch and e	electromagnetic brake	0 200 485	2441.00 €



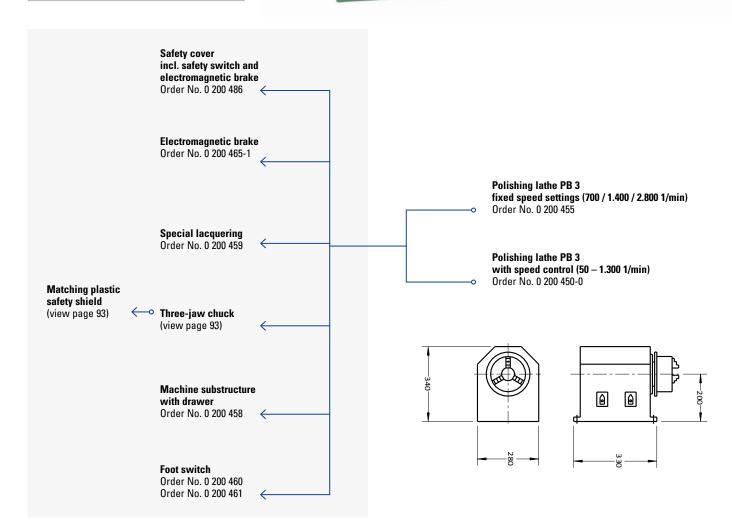
Polishing lathe PB 3System overview

Just bigger and stronger than his little brother PB 2!



1

Optional accessory to be determined before ordering, as no longer possible afterwards!





Polishing lathe PB 3





	Polishing lathe PB 3	Polishing lathe PB 3
Tool support	Ø 37 mm	Ø 37 mm
Rotation speed	50 - 1,300 rpm, infinitely adjustable	700 / 1,400 / 2,800 rpm., fixed speed settings
Power	max. 2.5 kW	1.1 / 1.9 / 2.4 kW
Centre height	200 mm	200 mm
Dimensions (W x H x D)	330 x 340 x 280 mm	330 x 340 x 280 mm
Supply voltage	400 V, 50/60 Hz, IP 54	400 V, 50/60 Hz, IP 54
Weight	85 kg	85 kg
Order No.	0 200 450-0	0 200 455
Price	5,639.83 €	4,342.00 €

* Accessories / spare parts

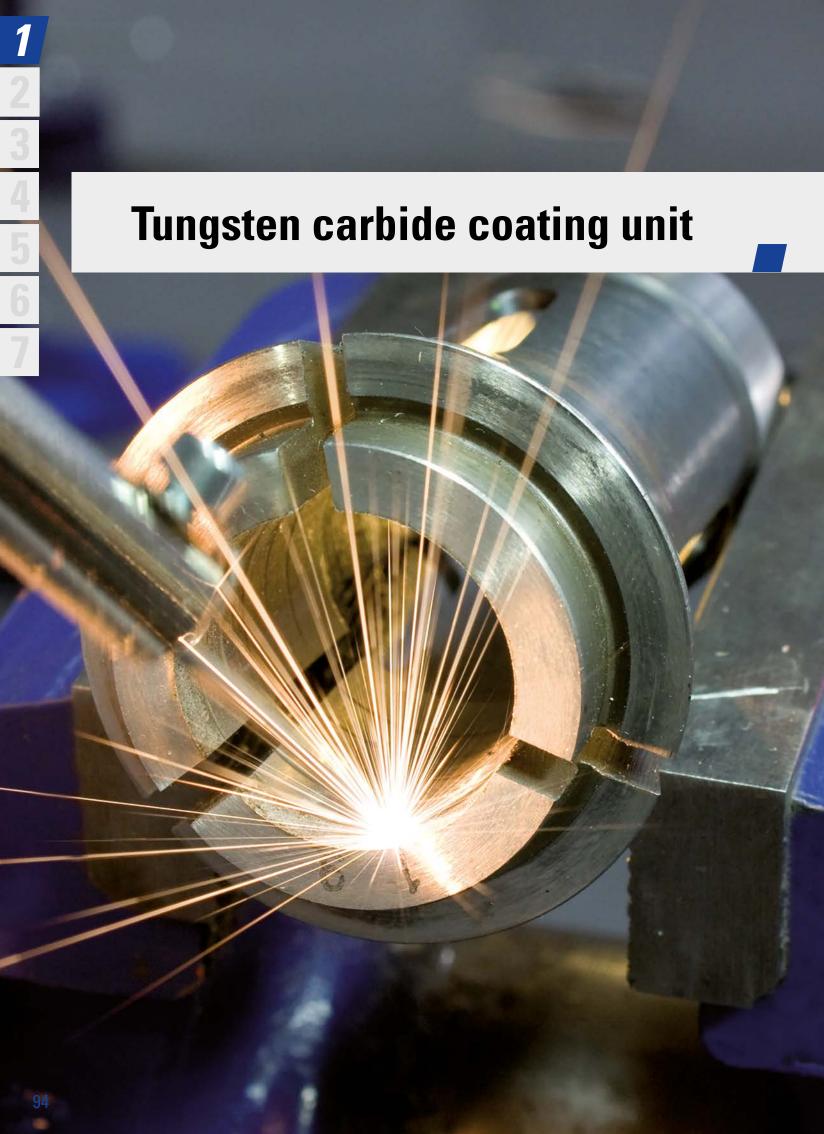
Safety cover

	. 1 1			
				Price from
			Order No.	1 piece
Machine substructure	with drawer			
	Dimensions (W x D x H):	390 x 540 x 800 mm	0 200 458	540.00€
Special lacquering				
			0 200 459	169.00€
Foot switch type 1				
M	Function:	press = start • hold = work • release = stop	0 200 460	349.00€
Electromagnetic brake				
			0 200 465-1	1172.00€
matching three-jaw ch	uck incl. chuck flange			
	Chuck Ø 125 mm • max. ¡	perm. rpm 3,200 rpm	0 200 473	527.00€
· Andre	Chuck Ø 160 mm • max.	perm. rpm 3,000 rpm	0 200 474	584.00€
	Chuck Ø 250 mm • max.	perm. rpm 2,000 rpm	0 200 477	883.00€
Plastic protective disc	for three-jaw chuck			
	suitable for Ø 125 mm		0 200 481	203.00€
	suitable for Ø 160 mm		0 200 482	251.00€
	suitable for Ø 250 mm		0 200 483	463.00 €

2311.00€

0 200 486

including safety switch and electromagnetic brake





Tungsten carbide coating unit tucadur® 2020

Methods

Nowadays, very high demands are made on the toughness, hardness and surface wear resistance of tools, equipment and machines. Either hardness or toughness can be determined by the normal hardening process; in practice therefore a middle course is selected. The following options came to light in seeking a tough material with a more wear-resistant coating:

- 1. Galvanic coating with hard layers,
- 2. Plasma gun spraying method,
- 3. Electroerosive tungsten carbide coating.

The adhesive strength of the coatings in methods 1 and 2 is unsatisfactory in the case of heavy stresses since the coatings are likely to scale off. With the third method, however, it is possible to apply tungsten carbide in a very wear-resistant surface on the heavily stressed points of a workpiece.

Properties of the tungsten carbide coat

The layer applied combines joins perfectly with the steel and adheres in such a way that it withstands almost any mechanical stress. Blows, bending, stretching or compressive strains are incapable of detaching the coating. This can only be done by grinding or special sand blasting; it can, however, be relapped with diamond or silicon carbide. The steel beneath is not softened by the coating but increases in hardness in the upper zone. In the case of certain steel alloys the tungsten carbide layer even penetrates into the base material. The coating produces a hardness of up to 82 HR 30N, without the workpiece undergoing any change or distortion since the depositing process is practically cold. The coating possesses a high degree of heat resistance. The surface is uniform and shows no directional texture. With good saturation, it achieves a mean roughness of 2-9 µm.

Examples of applications

- 1. Hardness coating of tools or wear parts to extend service life.
- 2. Adhesion: coating of smooth surfaces in order to achieve greater adhesion through the structure of the layer.
- 3. Lubricating film: coating of smooth surfaces in order to maintain a lubricating film, as the lubricant remains embedded in the structure and therefor is not immediately squeezed out again.
- 4. Cold welding: coating of sliding surfaces in order to avoid cold weldings as a result of the structure of the layer, i.e. sticking of material.

Materials and their pretreatment

Any soft, heat-treated and hardened unalloyed or alloyed steel is suitable as material for coating with tungsten carbide. The surface must be clean and metallically pure. Scale and oxide layers must be removed without fail. Ground, polished or brightly machined parts must be degreased. If the tungsten carbide coating is applied to an unclean surface, no satisfactory adhesive strength can be obtained and the coating becomes irregular and exhibits inclusions.

Principle of operation

The coating device functions in accordance with the principle of electro-erosion. A tungsten carbide electrode is attached to the positive pole in a d.c. circuit with electric current and voltage regulation to which condensers of varying capacities are connected. The vibrator (coating gun) causes oscillations in the electrode and this is brought into contact with the workpiece to be treated. The workpiece is connected to the negative pole. By contact of the electrode with the workpiece, an ionised field results, which ensures that oxide-free fusion of the tungsten carbide with the base material occurs. This field is constantly reconstituted with the aid of the vibrator. With uniform to-and-fro movement of the electrode a compact hard metal layer results. The predetermined layer thickness cannot be exceeded, since no more uptake of material occurs once saturation is reached. The selected layer thickness is so precise that it does not normally need any finishing operation. It can nevertheless be lapped and polished if necessary. Coating using the tucadur® 2020 is so easy that anyone can do it.

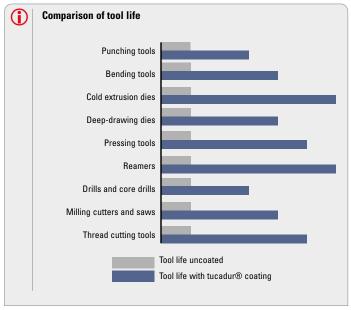


Micro-section magnified 250 times

Tungsten carbide layer up to 82 HR 30N hadness

Steel layer rehardened

Base material (steel) unaltered





Tungsten carbide coating unit tucadur® 2020

				Price from
			Order No.	1 piece
Tungsten carbide coating unit tucadur® 2020				
tucadar	Control unit Max. hardness of coating: Layer thickness adjustable: Vibration level: Power supply: Dimensions (W x T x H): Weight: Coating gun Vibration frequency:	82 HR 30N from 2-40 micron adjustable 230 V, 50 Hz 210 x 320 x 220 mm 11 kg	0 700 000	5235.00 €
		built-in cable, foot switch, contact magnet, 1 set electrodes, hexagon head screwdriver		

		Price from
	Order No.	1 piece
Coating gun		
	0 700 213	556.00 €





Tungsten carbide coating unit tucadur® 2020

				Price fr	rom		
	Shape	Dimensions	Order No.	1 piece	10 pieces		
Tungsten carbide electro	Tungsten carbide electrodes, for tucadur® 2020						
	round	Ø 1.0 x 50 mm	0 700 036	9.95 €	7.60 €		
		Ø 1.3 x 50 mm	0 700 046	8.35 €	6.50 €		
		Ø 1.8 x 50 mm	0 700 047	9.25 €	7.20 €		
		Ø 2.3 x 50 mm	0 700 048	10.50 €	7.90 €		
	square	1.1 x 50 mm	0 700 039	8.65€	6.70 €		
		1.6 x 50 mm	0 700 040	10.15€	7.60 €		
		2.1 x 50 mm	0 700 041	12.75€	9.85 €		
	triangulare	1.95 x 50 mm	0 700 042-0	10.50 €	7.80 €		



				Price from	
			Order No.	1 set	10 set
Set of t	tungsten carbide (electrodes (24 pieces)			
	MIL re	3 tungsten carbide electrodes respectively in each shape and size	0 700 034	204.00 €	157.00€