

Surface Finishing Devices

2



EOC Normalien

A **D-M-E** COMPANY





Ultraform

Info	3
Ultrasonic Lapp & Polishing Machines.....	4
Accessories.....	6

Ultramax®

Ultrasonic Polisher	7
---------------------------	---

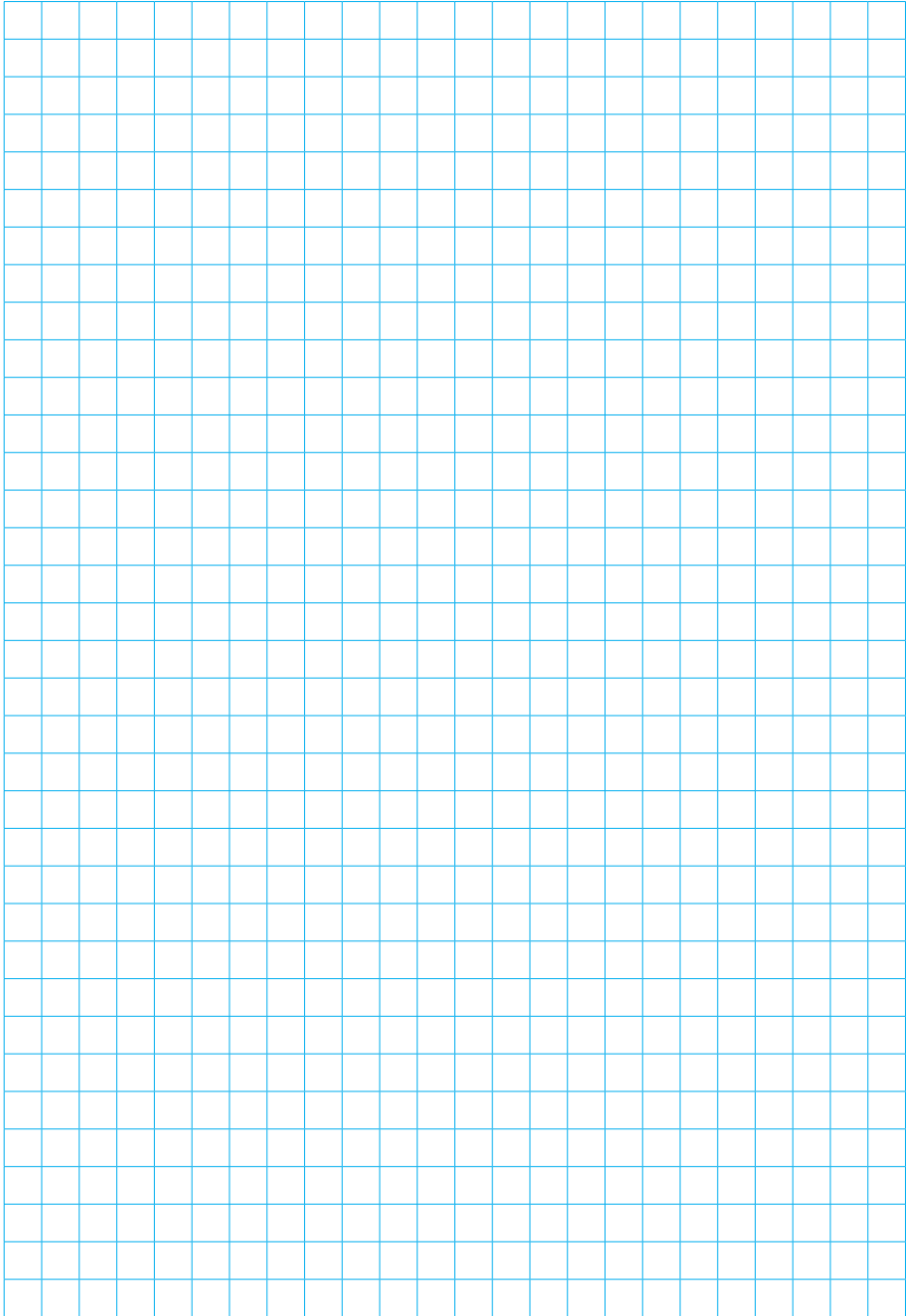
Argofile

Powerpack.....	9
Hand Pieces	12
Motors.....	15
Heads.....	16
Accessories.....	20
Grande	22
Maxima.....	24

Surface Finishing Devices

Motors.....	26
Hand Pieces	32
Hand Grinders & Filing Machines.....	35
Multi-purpose Machines	41
Microtec.....	42
Wax Guns.....	51
Ultrasonic Cleaning Units	52
Tools.....	57
Abrasive Agents	68







Ultraform UF 5600 - UF 2600

Info

Ultrasonic lapp- and polishing machines

The use of ultrasonic energy in combination with conventional machining tools for the finishing of very small areas of molds and tools makes it possible to achieve a high-quality surface finish and to save time compared with conventional polishing methods.

The consistent development of the Ultraform systems as regards performance, efficiency and handling is bringing decisive improvements in the machining of spark-eroded gates, slots, cavities and complicated contours.

- 50 % increase in performance compared with previous models.
- New control electronics ensure a constant work output even when there is a variation in cutting pressures.
- The amplitude/stroke length is in the range 4-40 μm for optimum finishing.
- New, expanded tool range including ceramic stones and synthetic resin-bonded diamond stones.
- Universal hand piece UF 9700 enables the employment of the complete tool programme. Standard tools with M4 connecting thread for machining of small molds and tools with M6 connecting thread for large machining depths are available to the user. Special adaptors also ensure that customised tools can be used.
- Model UF 5600 also permits the use of Argofile AF-Series electromechanical hand pieces. Modern transformer electronics achieve a constant torque and increased operational reliability of the hand pieces.



2



UF 5600

Ultrasonic lapp and polishing machines

**Includes:**

- 1 ultrasonic hand piece UF 9700
- 1 wooden case for Ultrasonic hand piece
- 1 ultrasonic hand piece PHP 35
- 1 toolbox
- assembly spanner
- ear (plugs) protection
- fuses
- 1 adaptor MS 0064
- 1 protection cap UF 7025
- 1 diamond file SE 8851, SE 8751, SE 5845, SE 5745
- 1 diamond stone SD 5831, SD 5851, MD 8862
- 1 diamond stone MD 4872, MD 4772
- 1 ceramic stone SC 4548, SC 4448, SC 4561,
- SC 4461, SC 1530, SC 1430
- 1 polishing wood SO 1103, SO 4163
- 1 tool clamp MX 4008, MX 4020, MX 4010, MX 4030, MX 1030, UF 7023
- The model enables the use of Argofile AF-series electromechanical hand pieces.

Description	UF 5600
Supply voltage	220 V~ ± 10%, 50 Hz
Power output	45 W max.
Output adjustment	continuously variable
Power consumption	200 W
Frequency of vibration	20,0 - 30,0 kHz
Frequency adaption	auto. comp.
Amplitude (stroke)	4 - 40 µm
Fuse	1,5 A (REF UF 7031)
Dimensions	162 x 280 x 210 mm
Weight	3,700 kg

REF	€
UF 5600	4961,85

• upon request

26/07/2012



Ultrasonic lapp and polishing machines

UF 2600

Includes:

- 1 ultrasonic hand piece UF 9700
- assembly spanner
- ear (plugs) protection



2

Description	UF 2600
Supply voltage	220 V~ ± 10%, 50 Hz
Power output	45 W max.
Output adjustment	continuously variable
Power consumption	100 W
Frequency of vibration	20,0 - 30,0 kHz
Frequency adaption	auto. comp.
Amplitude (stroke)	4 - 40 µm
Fuse	1,5 A (REF UF 7031)
Dimensions	178 x 210 x 154 mm
Weight	2.400 kg

REF	€
UF 2600	4157,91



UF 9700

Hand piece



Description	UF 9700
Cable length	2 m
Connecting thread	M6 or M4 with adaptors
Dimensions	Ø 15 x Ø 28 x 154 mm
Weight	0,130 kg

REF	€
UF 9700	1483,54

UF 7503

Foot switch



REF	€
UF 7503	158,90

UF 7504

Foot switch



REF	€
UF 7504	86,28



Ultrasonic polisher

UM 1200

The small, compact, entry-level model as an inexpensive alternative to our UF 2600 and UF 5600 ultrasonic polishers. The UM 1200 is a high-performance ultrasonic polisher which is very easy to operate.

UM 1200 acoustic polishers are used for finishing very small moulds and tools, such as eroded bars, slots and other recesses with complex outlines. The vibration-free Ultraform hand piece is connected to the unit via a flexible cable. The stroke range of the tool is continuously adjustable between 10 and 35 μm at a frequency of 18 - 25 Hz.

Finishing particularly deep outlines is carried out just as effectively as that of tiny mold inserts with special tools. The high frequency and short stroke yield outstanding results, whilst being much faster than conventional methods.

Includes:

- 1 powerpack
- 1 UM 1201 ultrasonic hand piece
- 1 handpiece support
- 1 mains cable
- 1 tool set comprising:
 - 1 wrench
 - 2 tool holders UM 1205, UM 1206
 - 2 adapters UM 1203, UM 1204
 - 1 UM 1202 On/Off foot switch
 - 2 sintered diamond files
 - 6 diamond files
 - 2 ceramic stones

A wide range of finishing tools is available



2



UM 1200

Ultrasonic polisher



REF	€
UM 1200	1877,97
UM 1201	535,77
UM 1202	64,70

Description	UM 1200
Supply voltage	240 V~, 50/60 Hz
Power output	36 W
Output adjustment	two levels
Power consumption	46 W
Frequency of vibration	18 - 25 kHz
Frequency adaption	auto. comp.
Amplitude (stroke)	10 - 35 µm
Fuse	1,5 A
Dimensions	190 x 140 x 89 mm
Weight	0,700 kg

UM 1203

Adapters



REF		€
UM 1203	adaptor M4	24,59
UM 1204	adaptor M6	24,59
UM 1205	adaptor dia. 3mm	37,81
UM 1206	tool holder	37,81

• upon request

26/07/2012



Powerpack

PA 480



2

Description	PA 480
Supply voltage	230 V~ ± 10%, 50 Hz
Output voltage	0 - 30 V = (DC)
Power output	max. 2 x 70 W
Outputs	2, individually controlled
Fuse	2,0 A
Dimensions	259 x 240 x 81 mm
Weight	3,900 kg

The completely re-designed power pack PA 480 offers improved engineering paired with modern outlook.

The well arranged foil control panel protects the unit from acidic substances. Power output depending on utilisation factor is controlled by integrated micro control conductors.

By using modern MOFSET-technology a minimum amount of power dissipation is obtained, which also results in low heating of the power pack.

The sturdy metal housing is shock-proof and dirt resistant. Appropriate hand pieces are available to suit the various applications. The Argofile units have been designed in accordance with the latest state-of-the-art and ergonomic requirements.

By all means a fatigue-free operation is ensured since the power pack is running in a silent and low vibration manner. The hand pieces are connected to the unit via flexible cables.

REF	€
PA 480	711,90



PS 220 PP

Maxima power pack



Features:

- powerful single powerpack system from MAXIMA starter kit
- compact size, continual variable speed-control
- automatic stop with alarm beep & red light
- resets when overloaded
- 1 connection for LA micro motor

REF	€
PS 220 PP	299,66

TPF-77

Foot control for PS 220 PP



VC 10

Foot switch for PA 480



Foot switch for continuously variable power control

REF	€
VC 10	106,03

FS 18

Foot switch for PA 480



On-/ Off- Foot switch

REF	€
FS 18	55,30

• upon request

26/07/2012



Standard hand pieces

LA ... / JA 15

Hand operated quick release collet mechanism for rapid tool change.

Includes:

Replacement carbon brushes, assembly wrench for changing collet chucks and collet chucks SP 001 (Ø 2.35 mm) and SP 002 (Ø 3.0 mm).



2

Description	LA 051 (one piece)	LA 211	LA 231
Standard head		JA 15	
Rated input volt.		0 - 30 V =	
Motor	LA 05	LA 21	LA 23
Rotation speed	0 - 55.000 min ⁻¹	0 - 15.000 min ⁻¹	0 - 30.000 min ⁻¹
Max. shaft output	40 W	60 W	70 W
Max. shaft torque	0,031 Nm	0,088 Nm	0,065 Nm
Dimensions	Ø 27x150 mm	Ø 32x170 mm	Ø 32x170 mm
Weight	0,190 kg	0,270 kg	0,270 kg

REF						
LA 051	LA 211	LA 231	LA 05	LA 21	LA 23	JA 15
664,51	630,67	684,60	•	317,61	•	307,48

Extension cord

EC 30

REF	€
EC 30	42,64





LA 216/JR 21 90/LA 21 — Angle hand piece 90°



Hand operated quick release collet mechanism for rapid tool change.

Description	LA 216
Head model	JR 21 90
Motor	LA 21
Rated input volt.	0-30 V =
Rotation speed	0 - 15.000 min ⁻¹
Dimensions	Ø 31,6 x 166 x 53 mm
Weight	0,200 kg

REF	€	REF	€	REF	€
LA 216	682,94	JR 21 90	345,43	LA 21	317,61

LA 217/JS 21 120/LA 21 — Angle hand piece 120°



Hand operated quick release collet mechanism for rapid tool change.

Description	LA 217
Head model	JS 21 120
Motor	LA 21
Rated input volt.	0-30 V =
Rotation speed	0 - 15.000 min ⁻¹
Dimensions	Ø 31,6 x 166 x 53 mm
Weight	0,200 kg

REF	€	REF	€	REF	€
LA 217	718,19	JS 21 120	404,75	LA 21	317,61

• upon request

26/07/2012



Polishing hand piece

LA 208/LA 20/JP11

Features:

Swing stroke (0 - 1,6 mm) and stroke frequency (0 - 8.000 min⁻¹) can be adjusted freely.
Tool holding fixture to max. 4 mm.



Description	LA 208
Head model	JP 11
Motor	LA 20
Rated input volt.	0-30 V =
Stroke frequency	0 - 8.000 min ⁻¹
Motor torque	0,073 Nm
Dimensions	Ø 31,6 x 166 x 53 mm
Weight	0,290 kg

REF	€	REF	€	REF	€
LA 208	806,07	LA 20	329,13	JP 11	492,71

Diprofil, Miniature hand-filing machine

JA 60/JA 65

For motor LA 20



Description	JA 60	JA 65
Linear Stroke	0,5 mm	1,8 mm
Stroke frequency	0 - 7.000 min ⁻¹	0 - 7.000 min ⁻¹
Toolholder	Ø maxi. 3,5 mm	Ø maxi. 3,5 mm
Dimensions	Ø 24 mm	Ø 24 mm
Weight	0,120 kg	0,120 kg

REF	€	REF	€
JA 60	.	JA 65	.



RE ...

Filing hand piece



Description	RE 35	RE 55
Rated input volt	0 - 30 V =	0 - 30 V =
Stroke	0 - 6 mm	0 - 2 mm
Stroke frequency	max 4.200 min ⁻¹	max 7.000 min ⁻¹
Toolholder	≥ 6,5 mm	≥ 6,5 mm
Dimensions	140x40x128 mm	140x40x128 mm
Weight	0,675 kg	0,675 kg

REF	€
RE 35	881,82
RE 55	881,82

BS 33

Belt sander hand piece

**Includes:**

- Straight sanding belt arm: BS 1-100-2 (for 6 and 8 mm sanding belts).
- Triangular sanding belt arm: BS 1-100-3 (for 8 mm sanding belts).
- Set of sanding belts

Description	BS 33
Rated input volt	0 - 30 V =
Belt speed	5 - 12 m/s
Dimensions	160 x 119 x 39 mm
Weight	0,400 kg

REF	€
BS 33	951,55



Motor

LA 20

Description	LA 20
Rated input volt	0 - 30 V =
Max. shaft output	58 W
Max. shaft torque	0,088 Nm
Rotation speed	0 - 8.000 min ⁻¹
Dimensions	Ø 32 mm x 99 mm
Weight	0,170 kg
REF	€
LA 20	329,13



Motor

LA 21

Description	LA 21
Rated input volt	0 - 30 V =
Max. shaft output	60 W
Max. shaft torque	0,088 Nm
Rotation speed	0 - 15.000 min ⁻¹
Dimensions	Ø 32 mm x 99 mm
Weight	0,170 kg
REF	€
LA 21	317,61



Motor

LA 23

Description	LA 23
Rated input volt	0 - 30 V =
Max. shaft output	70 W
Max. shaft torque	0,065 Nm
Rotation speed	0 - 30.000 min ⁻¹
Dimensions	Ø 32 mm x 99 mm
Weight	0,170 kg
REF	€
LA 23	.





JA 15

Standard head



Includes:

- Collet chucks 2,35 + 3,0 mm suitable for motors LA 20, LA 21, LA 23.
- Suitable collet chucks SP ... of sizes 0,5 to 3 mm

REF	€
JA 15	307,48

JA 33

High performance head



Includes:

- Collet chuck 6,0 mm suitable for motors LA 20, LA 21, LA 23.
- Suitable collet chucks SP ... of sizes 2.35 to 6.35 mm

REF	€
JA 33	417,07



Special head

JA 45

Includes:

- Collet chuck 3,0 mm suitable for motors LA 20, LA 21, LA 23.
- Suitable collet chucks SP ... of sizes 2.0 to 3.2 mm



REF	€
JA 15	307,48

2

Angle head 90°

JR 21 90

Includes:

- Collet chucks 2,35 + 3,0 mm, suitable for motor LA 20, LA 21.
- Suitable collet chucks SP ... of sizes 2.0 to 3.2 mm



REF	€
JR 21 90	345,43



JS 21 120

Angle head 120°



Includes:

- Collet chucks 2,35 + 3,0 mm, suitable for motor LA 20, LA 21.
- Suitable collet chucks SP ... of sizes 2.0 to 3.2 mm

REF	€
JS 21 120	404,75

JP 11

Swivel head



Features:

- Suitable for motor LA 20, LA 21.
- Swing stroke (0-1,6 mm) and stroke frequency (0-8.000 min⁻¹) can be adjusted freely.
- Tool holding fixture to max. 4 mm.

REF	€
JP 11	492,71



Angle head

SAE 90

Features:

- Special head model for deburring of bores suitable for motors LA 20, LA 21.

Includes:

- Collet chuck JRS 90 / 1,6
- Custom made deburring tools with shaft \varnothing 1,6 mm upon request



2

REF	€
SAE 90	314,15

Step-down gear

UT 15

Features:

- Speed reduction 1:4
- four times increase in torque
- ball-closing coupling between motor and head
- Suitable for motors LA 20, LA 21, LA 23



REF	€
UT 15	203,88



SP ...

Collet chucks



REF	d	for heads	€
SP 001	2,35	JA 15, JA 45, JR 21, JS 21	•
SP 002	3,00		•
SP 003	3,20		•

REF	d	for heads	€
SP 061	2,35	JA 33	•
SP 062	3,00		•
SP 063	3,20		•
SP 060	6,00		•

JRS 90

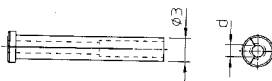
Collet chucks



REF	d	for heads	€
JRS 90	1,6	SAE 90 SA 90, SA 120	87,30
JRS 90	2,35		87,30
JRS 90	3,0		87,30

RSP ...

Reducing collet chucks (for SP 002)



REF	d	€	REF	d	€	REF	d	€
RSP 050	0,5	12,06	RSP 110	1,1	12,06	RSP 170	1,7	12,06
RSP 060	0,6	12,06	RSP 120	1,2	12,06	RSP 180	1,8	12,06
RSP 070	0,7	12,06	RSP 130	1,3	12,06	RSP 190	1,9	12,06
RSP 080	0,8	12,06	RSP 140	1,4	12,06	RSP 200	2,0	12,06
RSP 090	0,9	12,06	RSP 150	1,5	12,06	RSP 235	2,35	•
RSP 100	1,0	12,06	RSP 160	1,6	12,06			

• upon request

26/07/2012



Hand piece resting stand

RM 01

REF	€
RM 01	5,88



2

Tool box

AF 5001

REF	€
AF 5001	.



BLH 600 ST

Grande hybrid micromotor system

**Features:**

- Super high speed 50000 rpm
- Silent Construction
- Auto Cruise system
- RPM Digital Display
- Long Time operation
- Ego diagnostic System with Alarm
- Easy Collet change - standard 3mm installed
- 2 possible connections: 1 conventional/1 brushless

Includes:

- 1x Super high speed brushless handpiece (BLH600)
- 1x Hybrid controller (GRC2000)
- 1x Speed control foot pedal (GRF60)
- 2x Hand piece holder (GRC02)
- 1x Diamond points set (DBS30)
- 1x Collet changing jig set (BLH6070)

REF	€
BLH 600 ST	1007,00

BLH 600

Super high speed brushless handpiece

**Features:**

- Super high speed Max. 50000 rpm
- Silent Construction
- High torque 230 Watt
- Weight: 230 gr

REF	€
BLH 600	706,26

• upon request

26/07/2012



High torque adaptor

BLH ADA

Features:

- More than double the torque of your system
- For Grande hand piece BLH600 only
- For various heads: JA15, JA33, JA11, JA45, JR21, JS21, JA60 & JA 65

Remark: Adjust lower rpm on your system to avoid unnecessary high speed.



REF	€
BLH ADA	143,10

Super high speed brushless handpiece

BLS 500

Features:

- Light-weight
- smaller body
- Super high speed Max. 50000 rpm
- Silent Construction
- High torque 230 Watt
- Weight: 167 gr



REF	€
BLS 500	1114,35

Grande hybrid micromotor system

BLS 500 ST

Features:

- idem as BLH 600 ST

Includes:

- 1x Super high speed brushless hand-piece (BLS500)
- 1x Hybrid controller (GRC2000)
- 1x Speed control foot pedal (GRF60)
- 2x Hand piece holder (GRC02)
- 1x Diamond points set (DBS30)
- 1x Collet changing jig set (BLH6070)



REF	€
BLS 500 ST	1114,35



MAX 35 ST

Maxima 80 high torque set

**Features:**

- Rotation speed 0-35000 rpm max
- Adjustable torque, max 6.5 Ncm
- Input voltage controller:
AC100, 120, 220 V
50/60 Hz single phase
- Output voltage controller:
DC3 - 30 V, 0.4 A

Includes:

- 1x Micromotor handpiece (PHP35)
- 1x Controller (PSC80)
- 1x Speed control foot pedal (TPF70)
- 1x Hand piece cradle (TRC02)
- 1 pair of carbon brushes
- 1x Collet chuck wrenches

REF	€
MAX 35 ST	479,12

• upon request

26/07/2012



Hand piece

PHP 35

Features:

- Suitable for motor Maxima & Grande
- Rotation speed: 0 - 35000 rpm max
- Dimensions: Ø26mm x 150 L mm
- Weight: 200 gr
- Standard collet chuck mounted: 3mm



2

REF	€
PHP 35	•

Mobile micro grinder system set

MMP 33 ST

Includes:

- 1 Micromotor handpiece:
Rotation speed: 0-33000 rpm max.
Dimensions: Ø25mm x 143 L mm
- Controller:
Battery type: Ni-Mh
Charger time: 3 hrs
Continuous working time: 140 mins
Input voltage: AC 100V - 240V, 50/60 Hz
- On/off foot pedal
- Handpiece cradle
- AC power adaptor
- Power cord



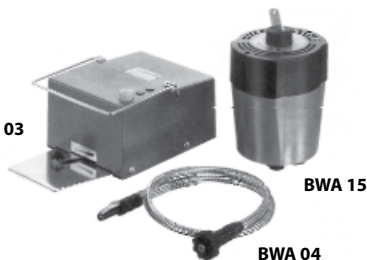
REF	€
MMP 33 ST	313,76



BWA 150

Motor with flexible drive

BWA 03



Includes:

- Motor BWA 15
- Flexible shaft BWA 04
- Foot switch BWA 03

REF	€
BWA 150	849,48

BWA 15

Motor



Description	BWA 15
Supply Voltage	220 V~ ± 10%, 50 Hz
Power	300 W max.
Rotation speed	300 - 15.000 min ⁻¹ continuous
Weight	2,100 kg

REF	€
BWA 15	433,40

BWA 04

Flexible shaft



Description	BWA 04
Rotation speed	max. 22.000 min ⁻¹
Shaft-Ø	5 mm
Length	1.000 mm

REF	€
BWA 04	212,49

BWA 03

Foot switch



Features:

- Continuously variable controller

REF	€
BWA 03	.

• upon request

26/07/2012



Flexible shaft arrangements

Includes:

- Motor BWA 22
- Flexible shaft BWA 04
- Foot switch BWA 05

REF	€
BWA 220	758,41

Motor

Description	BWA 22
Supply Voltage	220 V~ ± 10%, 50 Hz
Power	300 W max.
Rotation speed	8.000 - 22.000 min ⁻¹ continuous
Weight	2,100 kg

REF	€
BWA 22	400,11

Flexible shaft

Description	BWA 04
Rotation speed	max. 22.000 min ⁻¹
Shaft-Ø	5 mm
Length	1.000 mm

REF	€
BWA 04	212,49

Foot switch

Features:

- Continuously variable controller

REF	€
BWA 05	186,24

BWA 220



BWA 05

2

BWA 22



BWA 04



BWA 05





SP ...

Collet chucks for BWA



REF	d	for handpiece	€
SP 1423	2,35	BWA 35 - BWA 45	52,97
SP 1430	3,0	BWA 35 - BWA 45 - BWA 50	52,97
SP 1460	6,0	BWA 35 - BWA 50	52,97

HM PRE 24 J

Suspended Motor Premium



Features:

- continuous speed regulation up to 24000 rpm
- power 800 W
- high performance at low speed
- safe soft start-up
- to use with electronic speed control, also available with speed limitation control

REF	€
HM PRE 24 J	414,17

HM PRE FC 24 0...

Controller



01



02



03

1. electronic foot control (pedal) up to 24000 min⁻¹; continuous speed regulation
2. electronic foot control (round) up to 24000 min⁻¹; continuous speed regulation
3. desk control up to 24000 min⁻¹; continuous speed regulation

REF	€
HM PRE FC 24 01	167,07
HM PRE FC 24 02	275,22
HM PRE FC 24 03	284,32

• upon request

26/07/2012



Flexible shaft

HM FLEX J-P

Features:

- connection type "J"
- with expanding spring or duplex spring
- 6 x 1100 mm
- motor side connection: Quick-change (universal fit)



"P-type": Quick-change motor connection (fits all)

REF	€
HM FLEX J-P DUP	172,36
HM FLEX J-P EXP	164,50

Flexible shaft

HM FLEX J

Features:

- connection type "J"
- with expanding spring or duplex spring
- 6 x 1100 mm
- motor side connection: Standard connection type



"J-type": Standard motor connection

REF	€
HM FLEX J DUP	172,36
HM FLEX J EXP	164,50



HM PRE 24 JP SET — Premium Series Set



Includes:

- Suspended motor Premium (HM PRE 24 J)
 - electronic foot control (HM PRE FC 24 02)
 - Quick-change flexible shaft (HM FLEX J-P DUP)
- handpiece not included*

REF	€
HM PRE 24 JP SET	782,14

HM ACC 0... — Accessories



1. movable telescopic stand with tool deposit
2. telescopic table stand
3. toolholder

REF	€
HM ACC 01	551,73
HM ACC 02	128,69
HM ACC 03	61,33

01

02

03

• upon request

26/07/2012



Universal suspended/stationary motor

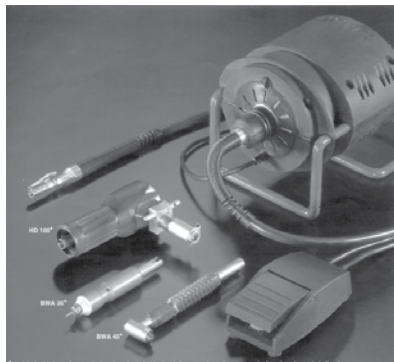
MO 900

Includes:

- Motor with foot/hand switch
- MO 901
- Flexible shaft MO 902

Features:

- Handpieces HD 50, HD 100, BWA 35, BWA 45 for rotating and linear motions
- Replaceable air filter
- Load-dependable power adaption via the electronic control system
- Distinctive reduction of the common heat development



REF	€
MO 900	737,06

Motor with foot/hand switch

MO 901

Description	Mo 901
Supply Voltage	220 V~ ± 10%, 50 Hz
Power	900 W max.
Rotation speed	7.500 - 25.000 min ⁻¹ continuous
Weight	3,100 kg
Revolution limit set in 5 steps	max 25000 min ⁻¹ 18000 min ⁻¹ 14000 min ⁻¹ 11000 min ⁻¹ 7500 min ⁻¹

REF	€
MO 901	566,67





MO 902

Flexible shaft with rotating clip-lock



Description	MO 902
Rotation	max. 25.000 min ⁻¹
Shaft-Ø	5 mm
Length	1.200 mm

REF	€
MO 902	188,99

FF 496

Table stand



Features:

- Height 680 - 1.150 mm

REF	€
FF 496	146,91

HD 50

Diprofil, Filing hand piece



Features:

- For light and medium duty filing operations

Description	HD 50
Tool holder	max. 3.5 mm
Dimensions	124 x 33 x 135 mm
Stroke length	0,2/6,0 mm
Weight	0,45 kg
Stroke ratio	max. 10.000/min

REF	€
HD 50	954,00



Diprofil, Filing hand piece

HD 100

Features:

- For heavy duty and medium filing operations

Description	HD 100
Tool holder	max. 6,4 mm
Dimensions	124 x 33 x 135 mm
Stroke length	0,5/6,0 mm
Weight	0,60 kg
Stroke ratio	max. 10.000/min

REF	€
HD 100	1008,05



2

Handpiece

BWA 35

Includes:

- Collet chuck SP 1423 (Ø2,35)
- Collet chuck SP 1430 (Ø3,0)
- Others upon request

Description	BWA 35
Collet chuck	2,35 - 3 mm
Length	max. 240 mm
Rotation speed	max. 24.000 min ⁻¹

REF	€
BWA 35	317,25



Hand piece

BWA 35i

- straight handpiece with collet 6 mm
- cylindrical grip
- clamping range: 1 - 6.35 mm

REF	€
BWA 35i	.





BWA 45

Telescopic angle hand piece

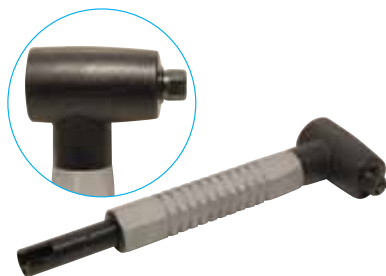


Description	BWA 45
Collet chuck	2,35 - 3 mm
Length	max. 240 mm
Rotation speed	max. 24.000 min ⁻¹

REF	€
BWA 45	363,46

BWA 50

Angle hand piece 90°



Description	BWA 50
Collet chuck	3 - 6 mm
Length	170 mm
Rotation speed	max. 24.000 min ⁻¹

REF	€
BWA 50	490,38

BWA 55

Hand piece



- small angle handpiece 135° with telescope
- left turning only;
- collets 2.35 - and 3 mm
- hexagon grip
- clamping range: 1 - 3.17 mm

REF	€
BWA 55	477,17

• upon request

26/07/2012



Hand piece

- straight handpiece with collet 3 mm
- hexagon grip
- clamping range: 1 - 6.35 mm

REF	€
BWA 65	193,67

BWA 65



2

Diprofil, Miniature hand filing machines for BWA & MO 900

Description	HDW 1
Tool holder	max. 3,5 mm
Dimensions	124 x 33 x 135 mm
Stroke length	0,5 mm
Weight	0,130 kg
Stroke ratio	max. 10.000/min

REF	€
HDW 1	539,42

HDW 1



Diprofil, Miniature hand filing machines for BWA & MO 900

Description	HDW 1
Tool holder	max. 3,5 mm
Dimensions	124 x 33 x 135 mm
Stroke length	1.8 mm
Weight	0,130 kg
Stroke ratio	max. 10.000/min

REF	€
HDW 2	539,42

HDW 2





LSA 81

Pneumatic straight grinders

Includes:

- Collet chuck Ø 3,0 mm



Description	LSA 81
Power	75 W
Length	212 mm
Idling speed	80.000 min ⁻¹
Weight	0,160 kg
Air connection	R 1/8"

REF	€
LSA 81	625,95

LWC 21

Pneumatic angle grinders

Includes:

- Collet chuck Ø 6,0 mm
- Set of open end spanners
- Input and output hose



Description	LWC 21
Power	370 W
Length	210 mm
Idling speed	21.000 min ⁻¹
Weight	0,660 kg

REF	€
LWC 21	986,41

• upon request

26/07/2012



Pneumatic angle grinders

LWA 80

Includes:

- Collet chuck \varnothing 3,0 mm

Description	LWA 80
Power	75 W
Length	182 mm
Idling speed	80.000 min ⁻¹
Weight	0,115 kg
Air connection	R 1/8"



REF	€
LWA 80	613,64

2

Pneumatic straight grinders

GT-MG 55SR

Includes:

- Collet chuck \varnothing 3,0 mm
- Set of open end spanners
- Input and output hose

Description	GT-MG 55SR
Length	180 mm
Idling speed	55.000 min ⁻¹
Weight	0,220 kg



REF	€
GT-MG 55SR	390,83



GT-MG 75SR



Pneumatic straight grinders

Includes:

- Collet chuck Ø 3,0 mm
- Set of open end spanners
- Input and output hose

Description	GT-MG 75SR
Length	170 mm
Idling speed	75.000 min ⁻¹
Weight	0,190 kg

REF	€
GT-MG 75SR	•

HDL 50



Pneumatic hand filing machines

Features:

- For light and medium duty filing operations
- With rotary piston motor

Description	HDL 50
Tool holder	max. 3,5 mm
Operating pressure	4 bar
Air consumption	5 - 65 l/min
Stroke length	0,5/6,0 mm
Weight	0,600 kg
Stroke ratio	1.000 - 10.000/min

REF	€
HDL 50	1647,25

• upon request

26/07/2012



Pneumatic hand filing machines

HDL 100

Features:

- For medium and heavy duty filing operations
- With rotary piston motor



Description	HDL 100
Tool holder	max. 6 mm
Operating pressure	4 - 5 bar
Air consumption	5 - 65 l/min
Stroke length	0,5/6,0 mm
Weight	0,700 kg
Stroke ratio	1.000 - 10.000/min

REF	€
HDL 100	1797,60

Pneumatic hand filing machines, Quick action coupling

HDL

Features:

- For connection to the service unit with on/off valve



REF	€
HDL	121,73

Pneumatic miniature filing machine

HDL 1

Description	HDL 100
Tool holder	max. 3.6 mm
Operating pressure	4 - 5 bar
Air consumption	max 100 l/min
Stroke length	0.25 mm
Weight	0,190 kg
Stroke ratio	20.000/min

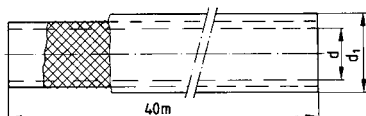


REF	€
HDL 1	696,02



LS 1060

Compressed-air hoses



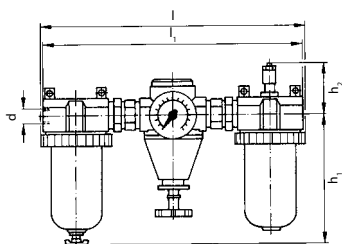
Features:

- Material: Rubber with fabric reinforcement

REF	d	d1	Air pressure	€
LS 1060	6 - 13		5	•
LS 1060	9 - 16		8	•
LS 1060	13 - 23		15	•

W 10

Pneumatic maintenance equipment



Features:

- P_{max} : 16 bar
- T: -100 C -> 50°C
- W 10 R 3/8" incl. R 1/4" reducing nipple

REF	d	l	h ₁	h ₂	€	
W 10 R 3/8"		195	194	135	48	•
W 10 R 1/2"		275	268	168	57	•

MFB - MFA-K

Lubrication



REF	Description	€
MFB	Dipro-fog	•
MFA-K	Lubrication oil (0.5 l)	•

The Dipro-fog (MFB) package consists of air filter, regulator, manometer, and fog lubrication device, all in one, with tubing and Dipro-fog oil (MFA-K).

Technical data

Max primary pressure:	16 bar
Max capacity at 7 bar:	1200 l/min
Hose connection:	7 mm
Secondary pressure:	0,5 - 10 bar



Multi-purpose machines

UVM ...

Features:

- 3-jaw self-centering chuck made of cast iron or steel, Ø 100- 300 mm
- Quick-action chuck for collet chucks up to Ø 40 mm
- Special collet chucks on request
- Changeover switch
- Expanding brake with hand lever
- Electromagnetic brake
- Guard with «Emergency Off»
- Stand, with integrated footbrake in option
- Further special models, incl. with continuously variable speed control, available on request



2

Description	UVM 200	UVM 300
Output power	max 0,6 KW 400V 50 Hz	max 2.4 KW 400V 50 Hz
Rotation speed	950/700/1.400	700/1.400/2.800
Weight	46 kg	58 kg
Dimensions	220 x 280 x 280 mm	280 x 330 x 340 mm
Three-jaw chuck (cast iron)	Ø125 mm	Ø160 mm
Inside shoe break	✓	✓

Options	
Electric magnet break	REF + EM
Changeover switch	REF + CS

REF	€	Options	
UVM 200	4159,26	EM	CS
UVM 300	5273,99	EM	CS

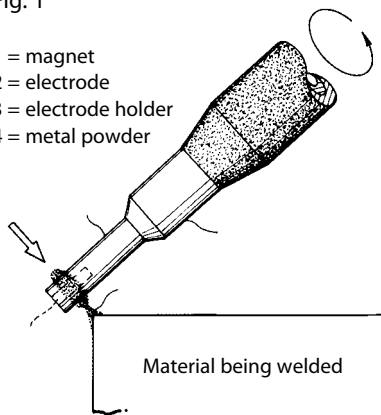


Info

Microtec MT 1500 S, MT 2500

Fig. 1

- 1 = magnet
- 2 = electrode
- 3 = electrode holder
- 4 = metal powder



In 1990, the pulsed-arc welding method was first used for repair jobs in the tool and mold-making industry and has since proved its value for a wide field of applications. High-quality repairs of tiny mold areas were achieved for the first time using this microwelding technique without the negative side effects of conventional welding methods. The service life of a mold component after repair is also increased considerably and a constant quality and functional operation is thus guaranteed. Repair costs can be reduced by up to 85% by the use of special metal powder alloys which have been developed for all common types of steel. The generator and the most modern control electronics ensure a homogeneous welding pattern even under the most difficult working conditions.

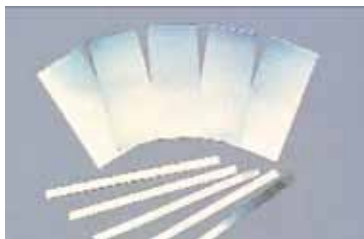
Fig. 2



Welding process

With the aid of a rotatable electrode and gentle manual pressure metal powder, sheet metal strips etc. are joined homogeneously with the cavity contour by applying electrical pulses (Fig.1). The use of powder materials is made possible by a magnetic electrode, the powder being arranged radially along the electrode. Metal powders (Fig.2), sheet metal strips (Fig.3) etc., which contain alloying constituents of the parent material being welded, are melted short-term and bonded to the parent metal by means of a systematic and controlled supply of energy. This produces a clean weld seam (Figs.4 and 5) which can also be improved by various adjustment parameters of the control unit (e. g. clock frequency of the electrical pulses, the output current etc.). Special training is not needed to carry out this welding process.

Fig. 3



Fields of application

Injection molds for the processing of plastics and rubber, blow molds, diecasting dies, compression moulds and stamping tools.

• upon request

26/07/2012



Microtec MT 1500 S, MT 2500

Info

Advantages of the micro-welding process

- repaired areas can be reworked by hand or by machine.
- no damage to the parent metal or deformations due to the influence of heat.
- no sink marks of the edge zones in the welded area.
- prevention of the formation of blow holes or pores by the exertion of gentle pressure by the welding electrodes.
- metal powder can be picked up without difficulty and accurately conveyed to the workpiece.
- easy repolishing of the welded areas even for high-gloss finish.
- suitable for all forms of mold damage
- fast and easy handling of the control unit
- no need for other welding aids, e.g. protective gas
- no occurrence of welding vapours harmful to health

Applications

- damages in areas of parting edges, pin holes, cutting edges etc.
- elimination of typical blow holes, sink marks, pores following shield arc-welding processes
- repairs of slides, ejectors, core pins, flat cores, mold edges and the large-area deposition of material by sheet metal strips
- elimination of machining faults caused by milling, EDM-machining and wire erosion etc.
- after design changes, modifications, and for prototype molds etc.

Welding materials

More than 20 different welding materials are available to the user, e.g. metal powder, sheet metal strips (0.1 - 0.2 mm) as well as steel wire (\varnothing 0.2 - 0.4 mm). The OEM welding materials are particularly suitable for build-up welding on molds- and high grade tool steels.

Fig. 4

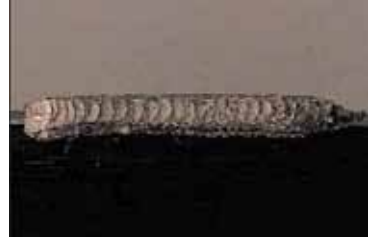


Fig. 5



2



Info

Microtec MT 1500 S, MT 2500



The type MT 2500 combines two welding units in one:

- The standard welding function for big and small welding areas
- The precision welding function for very precise repairs of small areas

Standard function

- More efficiency (up to 70%) than the Microtec MT1500 S. Suitable for extremely small up to very large tools.
- Repairs can be carried out even on mounted molds in the injection molding machine.
- Reduced machining time due to higher efficiency.
- Processing of welding sheet metals with thickness of up to 0,3mm and welding electrodes up to 0,5mm.
- Suitable for continuous performance.
- Even discharge guarantee for best welding quality.

Precision function

- Permanently controlled output voltage makes precision welds possible without damaging edge zones.
- Permanent discharge of small efficiency rates at short periods provide for tiny repairs without heat built-up and structural deformation.
- The precision function is suitable for welding of ejector pin tips.



Hand welding machine

MT 1500 S

Includes:

- Control unit, main cable, foot switch cable for electrode holder (1.300 mm), ground cable (1.300 mm) with copper ground plate (2 x 20 x 100 mm)
- Electrode holder, black Ø 2, 3, 4 and 5 mm (1 off each)
- Electrode holder, brown Ø 2, 4 mm (1 off each)
- Magnetic electrodes Ø 2 x 50 mm; Ø 3 x 50 mm, Ø 4 x 50 mm, Ø 4 x 60 mm (1 off each)
- Standard electrodes Ø 2 x 50 mm; Ø 3 x 50 mm, Ø 4 x 50 mm (1 off each)
- Standard flat electrodes 1,2 x 5 x 35 mm
- Adapter for clamping of flat electrodes
- Tool cabinet
- Sheet metal shears
- 1 pair of protective gloves
- 1 off protective glasses
- 1 off adhesive tape
- 1 off spare fuse
- Welding powder (50 g each):
MP 66 / N 51 (approx. 63 HRC)
MP 70 / N 80 (approx. 38 - 40 HRC)
- Heat metal strips (10 off each):
NAK80-0,1x5x100mm, approx. 38-40HRC
NTA 1 - 0,1 x 30 x 70 mm, approx. 135 HV
NTA 2 - 0,2 x 30 x 70 mm, approx. 135 HV
- Cables P 501 (+), P 502 (-), PE 10 (extension cable for + and -)



2

Description	MT 1500S
Output power	700 W
Input voltage	230 V, 50 ~ 60 Hz
Charging voltage	600 VA
Control system	I SCR Pulse system
Cycle time	0,2 - 0,4 sec
Output voltage	0 ~ 9 V
Output current	0 ~ 1.100 A
Weight	28 kg
Dimensions	165 x 450 x 405 mm

REF	€
MT 1500 S	5974,44



MT 2500

Hand welding machine



Includes:

- Control unit, main cable, foot switch cable for electrode holder (1.300 mm), ground cable (1.300 mm) with copper ground plate (2 x 20 x 100 mm)
- Electrode holder, black Ø 2, 3 and 4 mm (1 off each) Ø 5 mm (2 off)
- Electrode holder, brown Ø 3 mm (2 off), Ø 4 mm (1 off)
- Magnetic electrodes Ø 2 x 50 mm; Ø 3 x 50 mm, Ø 4 x 50 mm, Ø 4 x 60 mm (1 off each)
- Standard electrodes Ø 2 x 50 mm; Ø 3 x 50 mm, Ø 4 x 50 mm, Ø 5 x 60 mm (1 off each)
- Standard flat electrodes 1,2 x 5 x 35 mm
- Adapter for clamping of flat electrodes
- Tool cabinet
- Sheet metal shears
- 1 pair of protective gloves
- 1 off protective glasses
- 1 off adhesive tape
- 1 off spare fuse
- Welding powder (50 g each):
MP 66 / N 51 (approx. 63 HRC)
MP 70 / N 80 (approx. 38 - 40 HRC)
- Sheet metal strips (10 off each):
NAK80-0,1x5x100mm, approx. 38-40HRC
NTA 1 - 0,1 x 30 x 70 mm, approx. 135 HV
NTA 2 - 0,2 x 30 x 70 mm, approx. 135 HV
- Cables P 501 (+), P 502 (-), PE 10 (extension cable for + and -)

Description	Standard funct.	Precision
Output power	1.000 W	400 W
Input voltage	230 V, 50 ~ 60 Hz	
Charging voltage	1.000 VA	400 VA
Control system	SCR pulse system	
Cycle time	0,2 - 0,7 sec	
Output voltage	0 - 10 V	0 - 6 V
Weight	35 kg	
Dimensions	375 x 520 x 270 mm	

REF	€
MT 2500	13131,66

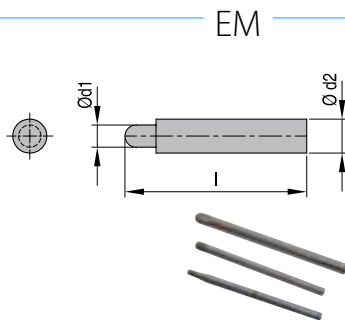
• upon request

26/07/2012



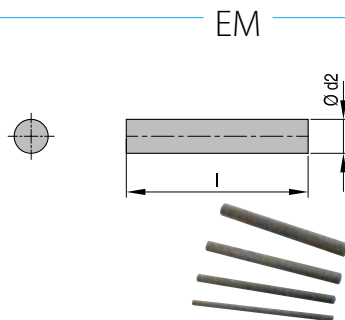
Magnetic electrodes for powder

REF	d1	d2	l	€
EM-R2	2	3	50	66,43
EM-R3	3	3	50	73,61
EM-R4	4	4	60	81,15
EM-R5	5	5	60	88,32



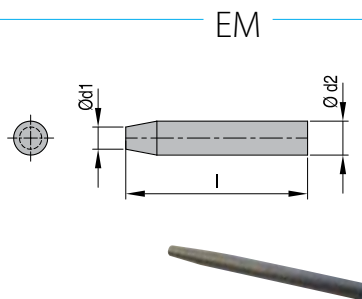
Magnetic electrodes for powder

REF	d1	d2	l	€
EM 210	-	2	50	68,52
EM 211	-	3	50	76,08
EM 212	-	4	50	83,77
EM 213	-	5	50	91,13



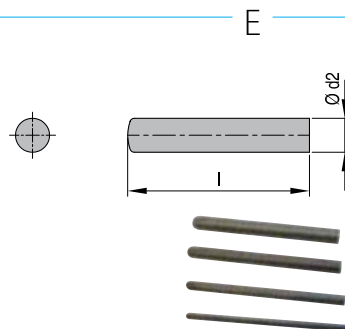
Magnetic electrodes for powder

REF	d1	d2	l	€
EM-T4	1,5	4	50	83,77
EM-T5	2,5	5	50	82,91



Standard electrodes

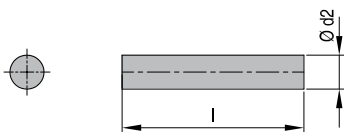
REF	d1	d2	l	€
E-R22	-	2	50	65,92
E-R33	-	3	50	75,51
E-R44	-	4	50	82,70
E-R55	-	5	50	99,48





E

Standard electrodes

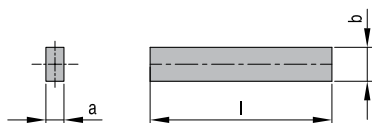


REF	d1	d2	l	€
E 201	-	2	50	60,81
E 202	-	3	50	68,52
E 203	-	4	50	83,52
E 204	-	5	50	91,13



E

Standard electrodes

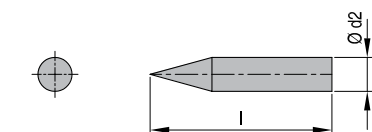


REF	d1	d2	l	€
E 205	1,2	5	35	58,88
E 206	2,2	5	35	82,91



E

Standard electrodes

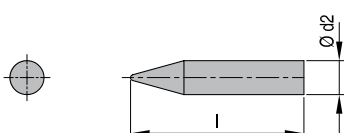


REF	d1	d2	l	€
E-SP 2	-	2	45	61,69



E

Standard electrodes



REF	d1	d2	l	€
E-SR2	-	2	45	61,69



• upon request

26/07/2012



Electrode holder / Adapter

H / A



REF	€	suitable for electrodes	REF	€	suitable for electrodes
H-303	•	EM-R4, EM212, EM-T4, E-R44, E-203	A-403	43,22	E-205
H-304	•	EM-R5, EM213, EM-T5, E-R55, E-204	A-404	66,19	E-206
H-306	•	EM-210, E-R22, E-201, E-SP2, E-SR2			
H-307	•	EM-R2, EM-R3, EM211, E-R33, E-202			

2

Welding material - powder

MTP ...



REF	Designation	Hardness	for steel types	€
MTP 1	N 90	16-20 HRC	All mold steels (esp. Ni alloys)	82,00
MTP 2	N 51	63 HRC	1.3343, all mold steels	134,86
MTP 3	N 11	50 HRC	Heat-treated steels	134,86
MTP 4	N 61	51 HRC	1.2343, 1.2344	134,86
MTP 5	N 70	50-55 HRC	All mold steels	82,00
MTP 6	N 80	38-40 HRC	1. 2711	134,86
MTP 7	N 55	34-41 HRC	Heat-treated steels	134,86
MTP 8	N 39	50-52 HRC	Stavax	134,86
MTP 9	SP 80	38-40 HRC	Preheat-treated steels	255,95
MTP 10	SP 55	38-41 HRC	Preheat-treated steels	255,95
MTP 11	N 5	54-56 HRC	1.2162, All mold steels	134,86
MTP 12	N 6	38-45 HRC	1.2343, 1.2344	134,86
MTP 13	N 14	30 HRC	1.2311, 1.2312	134,86
MTP 14	N 15	30-35 HRC	1.2764	134,86
MTP 15	N16	30-35 HRC	1.2767	134,86

Liquid for making paste

MTA 1

REF	Designation	€
MTA 1	0,5 ccm	16,98

• upon request

26/07/2012



MTD ...

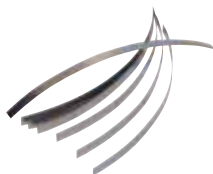
Welding material - wire



REF	Designation	Ø	Hardness	for steel types	€
MTD 1	S 2	0,2	90 HRB	All mold steels	16,98
MTD 2	S 3	0,3	90 HRB	All mold steels	17,36
MTD 3	S4	0,4	90 HRB	All mold steels	17,36
MTD 4	S5	0,5	90 HRB	All mold steels	16,98

MTB ...

Welding material - sheet



REF	Designation	Dim.	Hardness	for steel types	€
MTB 1	NT 6	0,2 x 5 x 100 mm	30 HRC	All mold steels	162,07
MTB 2	NTA 1	0,1 x 30 x 70 mm	135 HV		44,38
MTB 3	NTA 2	0,2 x 30 x 70 mm	135 HV		44,38
MTB 4	NS 1	0,1 x 30 x 70 mm	90 HRB		42,61
MTB 5	NS 2	0,2 x 30 x 70 mm	90 HRB		42,61
MTB 6	NAK 80	0,1 x 5 x 100 mm	38-40 HRC	preheat-treated steel	127,80
MTB 7	NAK 80	0,2 x 5 x 100 mm	38-40 HRC		127,80
MTB 8	HPM 2	0,1 x 5 x 100 mm	30-35 HRC	1.2311	127,80
MTB 9	HPM 2	0,2 x 5 x 100 mm	30-35 HRC		127,80
MTB 10	NAK 55	0,1 x 5 x 100 mm	38-41 HRC	preheat-treated steel	127,80
MTB 11	NAK 55	0,2 x 5 x 100 mm	38-41 HRC		127,80
MTB 12		0,1 x 50 x 70 mm	45-48 HRC	All mold steels	91,62
MTB 13		0,2 x 50 x 70 mm	45-48 HRC		91,62
MTB 14		0,2 x 5 x 100 mm	40-42 HRC	Stavax	127,80

• upon request

26/07/2012



Wax guns

Specification	FA 89-1	FA 89-2
Volt	220 V	220 V
Power	240 W	240 W
Volume Wax	600 cm ²	1800 cm ²
Operating pressure for air connection	6 - 8 bar	6 - 8 bar
Ø Sprue Nozzle	3 mm	3 mm
Empty weight	3,5 kg	8 kg

REF	€
FA 89-1	•
FA 89-2	•

Wax package

Features:

- Weight: 5 kg blue
- Inflammability point: 250°C
- Meltpoint: ~100°C
- Solidification temp.: 84°C
- Volume: 660 cm³ = 1kg (1l=1,5kg)

REF	€
FA 89 W	•

Stand for wax guns

Features:

- Only for FA 89 1

REF	€
FA 89 S	•

FA 89 ...



FA 89 W



FA 89 S



2

• upon request

26/07/2012



USC S ...

Ultrasonic cleaning units



Features:

- Electronic time and temperature control
- Autostart temperature-controlled / temperature pre-selection
- High-performance transducer systems
- Dry run proof ceramic heating
- Quick degassing with Autodegas / Degas
- Improved cleaning performance with Sweep
- Safety switch-off

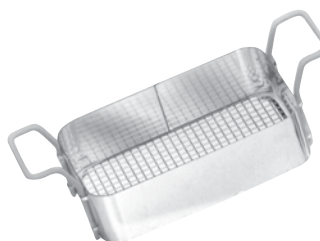
Includes:

- Unit, cover and basket

REF with heating	€	REF without heating	€	REF with heating	€	REF without heating	€
USC S10 H	471,06	USC S10	396,44	USC S100 H	1899,55	USC S100	1592,06
USC S15 H	837,48	USC S15	710,90	USC S120 H	2299,29	USC S120	1991,49
USC S30 H	989,44	USC S30	842,83	USC S180 H	2542,74	USC S180	2211,84
USC S40 H	1378,20	USC S40	1194,30	USC S300 H	3100,72	USC S300	2811,16
USC S60 H	1645,36	USC S60	1428,16	USC S450 H	3884,88	-	
USC S70 H	1727,98	USC S70	1594,73	USC S900 H	5931,09	-	
USC S80 H	1924,50	USC S80	1749,30				

USC S ...

Ultrasonic cleaning units



REF	Dimension	mesh size	Load	€
USC S10B	177 x 73 x 35 mm	7 x 1 mm	1 kg	64,07
USC S15B	112 x 103 x 55 mm	7 x 1 mm	1 kg	•
USC S30B	189 x 106 x 55 mm	7 x 1 mm	1 kg	•
USC S40B	190 x 105 x 80 mm	7 x 1 mm	3 kg	•
USC S60B	255 x 115 x 80 mm	9 x 1 mm	5 kg	•
USC S70B	465 x 106 x 55 mm	9 x 1 mm	5 kg	•
USC S80B	455 x 106 x 80 mm	9 x 1 mm	5 kg	•
USC S100B	255 x 200 x 80 mm	9 x 1 mm	6 kg	•
USC S120B	250 x 190 x 120 mm	9 x 1 mm	7 kg	•
USC S180B	280 x 250 x 120 mm	9 x 1 mm	8 kg	•
USC S300B	455 x 250 x 120 mm	9 x 1 mm	10 kg	298,53
USC S450B	455 x 270 x 194 mm	9 x 1 mm	20 kg	•
USC S900B	545 x 450 x 250 mm	16 x 1,2 mm	30 kg	511,24

• upon request

26/07/2012



Ultrasonic cleaning units

USC S ...

	REF	USC S10 USC S10H	USC S15 USC S15H	USC S30 USC S30H	USC S40 USC S40H	USC S60 USC S60H	USC S70 USC S70H
Tank volume max.	liter	0,8	1,75	2,75	4,25	5,75	6,9
Tank internal dim.	WxDxH mm	190x85x60	151x137x100	240x137x100	240x137x150	300x151x150	505x137x100
Tank external dim.	WxDxH mm	206x116x178	175x180x212	300x179x214	300x179x264	365x186x264	568x179x214
Ultrasonic frequency	kHz	37	37	37	37	37	37
Ultrasonic peak max*	W	240 *2)	280 *2)	320 *3)	560 *3)	600 *3)	600 *3)
Heating power	W	0 / 60	0 / 60	0 / 200	0 / 200	0 / 400	0 / 600
Power consumpt. tot.	W	30 / 90	35 / 95	80 / 280	140 / 340	150 / 550	150 / 750
Drain duct / Ø	mm	no	no	9,53	9,53	9,53	9,53
with heating (H)	220-240 Vac	100 1214	100 2060	100 1955	100 2006	100 2238	100 2140
without heating	220-240 Vac	100 5507	100 4626	100 4631	100 4635	100 4643	100 4650

	REF	USC S80 USC S80H	USC S100 USC S100H	USC S120 USC S120H	USC S180 USC S180H	USC S300 USC S300H	USC 450 H	USC 900 H
Tank volume max.	liter	9,4	9,5	12,75	18	28	45	90
Tank internal dim.	WxDxH mm	505x137x150	300x240x150	300x240x200	327x300x200	505x300x200	500x 300x300	600x500x300
Tank external dim.	WxDxH mm	568x179x264	365x278x264	365x278x321	390x340x321	568x340x321	615x370x467	715x570x467
Ultrasonic frequency	kHz	37	37	37	37	37	37	37
Ultrasonic peak max*	W	600 *3)	600 *3)	800 *3)	800 *3)	1200 *3)	1600 *3)	3200 *3)
Heating power	W	0 / 600	0 / 400	0 / 800	0 / 800	0 / 1200	1600	2000
Power consumpt. tot.	W	150 / 750	150 / 550	200 / 1000	200 / 1000	300 / 1500	2000	2800
Drain duct / Ø	mm	9,53	953	9,53	9,53	9,53	12,7	12,7
with heating (H)	220-240 Vac	100 2170	100 2279	100 2825	100 2877	100 3033	100 3908	100 3946
without heating	220-240 Vac	100 4652	100 4655	100 4658	100 4662	100 4669	-	-

* The choice of the waveform has been matched to the relevant tank size. *2) Impulse waveform *3) Standard sine-wave modulation



USC A1

Cleaning solution

REF	L	€
USC A1 2,5	2,5	32,31
USC A1 10	10	87,29
USC A1 25	25	209,21

Features:

- Cleaning concentrate (alkaline) for electronics and fine optics.
- Removes light oils, grease, fluxing agents, dust, finger prints, etc.

USC A2

Cleaning solution

REF	L	€
USC A2 2,5	2,5	32,31
USC A2 10	10	87,29
USC A2 25	25	209,21

Features:

- Intensive cleaner (ammoniacal) with brightening effect for nonferrous and precious metals.
- Removes grinding, polishing and lapping media, grease, oil, etc.

USC A3

Cleaning solution

REF	L	€
USC A3 2,5	2,5	32,31
USC A3 10	10	87,29
USC A3 25	25	209,21

Features:

- Cleaning concentrate (alkaline) for iron, steel, stainless steel and precious metals.
- Removes punching oil, drawing grease, soot, forge, grinding and polishing media, high-performance cooling lubricants, etc.

USC A4

Cleaning solution

REF	L	€
USC A4 2,5	2,5	32,31
USC A4 10	10	87,29
USC A4 25	25	209,21

Features:

- Universal cleaning concentrate (alkaline)
- Removes oil, grease, soot, coking, forge, dust, finger prints, etc.

• upon request

26/07/2012



Cleaning solution

USC A5

Features:

- Powerful cleaner (alkaline) in powder form for iron and light metals.
- Removes forged and gummed oil and grease, grinding and polishing media, lacquer and paint remnants, wax, etc.

REF	kg	€
USC A5 085	0.85	22,33
USC A5 25	25	258,17

Cleaning solution

USC N1

Features:

- Neutral cleaning concentrate.
- Removes oil, grease, grinding, lapping and polishing media, dust, sweat, finger prints, etc.

REF	L	€
USC N1 2,5	2,5	32,31
USC N1 10	10	87,29
USC N1 25	25	209,21

Cleaning solution

USC S1

Features:

- Mild acid cleaning concentrate.
- Removes rust, lime, oxide films (e.g. verdigirs), grease, oil, etc.

REF	L	€
USC S1 2,5	2,5	32,31
USC S1 10	10	209,21
USC S1 25	25	209,21

Cleaning solution

USC S2

Features:

- Strong acid cleaning concentrate.
- Removes mineral contaminations such as lime, rust and other oxides, films that can be removed with corrosives, etc.

REF	L	€
USC S2 2,5	2,5	106,93
USC S2 10	10	106,93
USC S2 25	25	258,17



EC 100

Cleaning solution (25 kg)

Features:

- For abrasive and polishing paste, resin, drawing compound

REF	€
EC 100	247,52

EC 145

Cleaning solution (25 kg)

Features:

- For abrasive and polishing paste, light oil and grease contamination

REF	€
EC 145	301,49



Ergonomical Work Bench

PWT300 - PWT 600

**Features**

- Continuous height adjustment from 700 to 1100 mm
- Operation by electric hydraulics
- Fixed or on wheels
- Variable workbench size and material
- Extensive accessories upon request
- Sturdy steel construction with environmentally friendly, solvent-free powder-coating
- Loading capacity: 300 kg - 600 kg max.
- Favorable cost-benefit ratio
- Electrical connection 230V / 50 Hz

• upon request

26/07/2012



PWT300 - PWT 600 Ergonomical Work Bench



Description	PWT 300	PWT 600	PWT 300 S	PWT 600 S
Max load	max. 300 kg (centered)	max. 600 kg (centered)	max. 300 kg (centered)	max. 600 kg (centered)
Work surface material	wood veneered 40 mm multiplex		1 mm stainless steel sheeted 40 mm multiplex	
Input voltage	230 V / 50 Hz		230 V / 50 Hz	
Output power	360 W		360 W	
Power supply	power track with 4 earthed sockets 220 V		power track with 4 earthed sockets 220 V	
Noise	< 70 dB (A)		< 70 dB (A)	
Dimensions*	1500 x 750 mm (width x depth)	1600 x 750 mm (width x depth)	1500 x 750 mm (width x depth)	1600 x 750 mm (width x depth)
Height adjustment	from 700 mm to 1100 mm (hydraulic)		from 700 mm to 1100 mm (hydraulic)	
Weight	according to size		according to size	
Stroke rate	9 mm/s	15 mm/s	9 mm/s	15 mm/s

*Other dimensions available upon request

REF	€	REF	€	REF	€	REF	€
PWT 300	•	PWT 300 S	•	PWT 600	•	PWT 600 S	•

AS600 - AS601 Accessories



- 1. Stool - AS601**
With flat steel foot; seating height: 600 - 850 mm
- 2. Chair - AS600**
Seating height: 450 - 650 mm; hydraulic height adjustment. Seat and back in black PU; on wheels

REF	€	REF	€
AS600	•	AS601	•

• upon request

26/07/2012

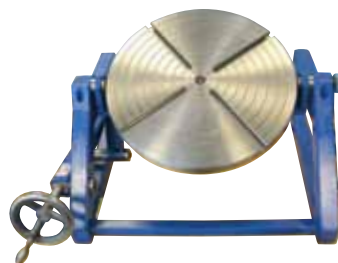


Polishing table 360° rotating

PT 500

Features:

- Dimensions: (L x B x H) 500 x 630 x 260 mm
- Max. permissible table load 500 kg
- Bore-Ø 140 mm



2

REF	€
PT 500	2306,32

Permanent magnet die chuck

PMR 160 S

Features:

- For PT 500, Ø 200 mm
- Other designs on request



REF	€
PMR 160 S	1720,26



DW ...

Rotating and reversing clamp



DW 1/A

DW 1/B

Features:

- Fixing method: A Screw on
- Fixing method: B Clip on

REF	Size	Fixing method	Jaw width	Width of span	Depth of span
DW 1 /	A	A	46	50	35
DW 1 /	B	B	46	50	35
DW 2 /	A	A	80	100	52
DW 2 /	B	B	80	100	52

REF	€
DW 1/A	156,27
DW 1/B	217,59
DW 2/A	366,04
DW 2/B	380,76

DWST ...

Steel jaws

REF	€
DWST 80	40,39

DWKU ...

Plastic jaws

REF	€
DWKU 46	14,25
DWKU 80	40,39

DWAL ...

Aluminium jaws

REF	€
DWAL 46	14,25
DWAL 80	40,39



Cold light source

KLB ...

Includes:

- Cold light source with fan and build-in brightness control.

Description	KLB 150
Power	150 W
Weight	3,200 kg
Dimensions W x H x D	150 x 120 x 230 mm

REF	€
KLB 150	1032,65



2

Glass fibre optic

KLB 160

Features:

- Total length: 1.800 mm with stiff isolated end tube (Ø 5 x 300 mm)
- Other diameters and accessories on request

REF	€
KLB 160	302,14



Swan-neck

KLB 145

Features:

- 1-arm swan-neck, Ø 4 mm

REF	€
KLB 145	336,74





KLB 245

Swan-neck



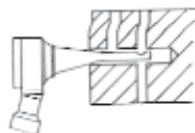
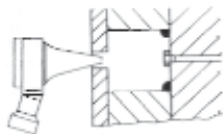
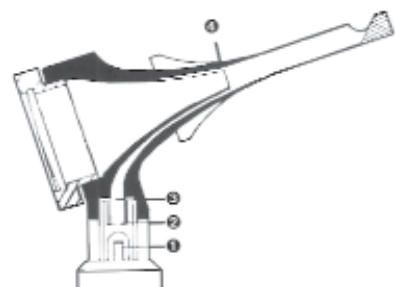
Features:

- 2-arm swan-neck, Ø 4 mm
- 900 mm flexible lead

REF	€
KLB 245	479,64

KLB 345

Mini Fibrilux light



Features:

- Fibrilux principle: The light from a filament lamp (1) illuminates the face end (2) of a fibre bundle (3) comprising several thousand optic fibres. At the light emittance point (4) the fibres are annularly configured. This produces even, shadow-free, coaxial illumination of the field of view.
- The viewer looks through the instrument and can inspect objects in bores, cavities etc. at the distances and magnifications specified below with a 0° angle of view (without mirror attachment).
- Two different, front mounted mirror attachments are available to give 90° angle of view. A magnifying lens which can be inserted in line enables inspections to be conducted with corresponding magnification.
- Thanks to its small dimensions and low weight (only 100g), the polyamide mini-Fibrilux, in combination with the mini-2 battery grip, is a compact, handy inspection instrument which fits ideally in the pocket and is therefore always handy.
- Object distance with 0° angle of view : max 45 mm from light emittance point.



Mini Fibr lux light

KLB 345

Includes:

- Mini Fibr lux light
- 2 mirror attachments KLB 345-1 and KLB 345-2
- 1 spare halogen bulb, 2,5 V KLB 345-6



REF	€
KLB 345	270,62

Mini Fibr lux light - Light attachment

KLB 345 4

Includes:

- 2,5 V bulb

REF	€
KLB 345 4	156,33

Mini Fibr lux light - Mini spare battery grip

KLB 345 5

Includes:

- batteries

REF	€
KLB 345 5	194,76

Mini Fibr lux light - XHL Xenon bulb 2,5 V

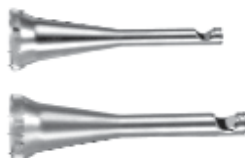
KLB 345 6

REF
KLB 345 6

Mini Fibr lux light - Mirror attachment 90°

KLB 345 ...

REF	Ø	L	€
KLB 345 1	5	25	66,75
KLB 345 2	6	30	66,75



2



LU 1187



Precision folding magnifiers

Features:

- biconvex, Ø 30 mm
- Magnification: 4 X + 6 X = 10 X

REF	€
LU 1187	74,62

LUK 2781 ...



Head magnifier

Features:

- Side-closing screen
- Flexible front band
- Fast-closing elastic rear head band
- Height-adjustable screen which can be tilted upwards

Description	LUK 2781-4	LUK 2781-6
Magnification	1,25 x	1,4 x
Working distance	260 mm	200 mm
Weight	110 gr	110 gr

REF	€
LUK 2781 4	146,91
LUK 2781 6	162,84



Vario maxi stand magnifier with light

LU 2771

Features:

- Aspheric PXM®-Lightweight lens
- With cera-tec hard coating, Ø 220 mm, 3,0 dpt/ 1,75 x
- Illumination: 11 W PL-bulb /900 Lm/G 23/ color 21
- Max. load distance 900 mm
- Turning range of the magnifier head: vertical $\pm 90^\circ$, radial $\pm 90^\circ$
- Cable length 3 m

Includes:

- Bulb LU 2771 1
- Table clamp LU 2771 2 for tabletop thickness from 18/74 mm
- Dustprotector



2

REF	€
LU 2771	699,58

Vario maxi stand magnifier - spare bulb

LU 2771 1

REF	€
LU 2771 1	.

Vario maxi stand magnifier - screw mounting

LU 2771 2

REF	€
LU 2771 2	.





TR 70 / TR 70 EA

Dry blasting cabinets



Features:

- Blasting cabinet with high blasting capacity and push-up front door.
- Special model with turntable available on request.
- Appropriate dust separator TR 70 K 10
- TR 70 EA with push-up side door

REF	€
TR 70	4224,09
TR 70 EA	.

TR 80

Dry blasting cabinets



Features:

- Blasting cabinet with folding front door and lateral slides for passage of rod materials, incl.
- Special model with turntable available on request.
- Other dimensions upon request

REF	€
TR 80	5507,95

Description	TR 70	TR 70 EA	TR 80
Dimensions W x H x D	700 x 600 x 1.800 mm	700 x 600 x 1.800 mm	800 x 900 x 1.680 mm
Internal dimensions W x H x D	680 x 550 x 450 mm	680 x 550 x 450 mm	780 x 800 x 700 mm
Air consumption	18-50 m ³ / 5 bar	18-50 m ³ / 5 bar	35-70 m ³ / 5 bar



Dust separator

TR ... K

Features:

- Equipped with cartridge filter and mechanical shaking device



2

REF	€	L x W x H	Power	Exhaust capacity
TR 60 K 5	•	680 x 400 x 590 mm	0,37 W	5m ³ /min
TR 70 K 10	•	670 x 800 x 970 mm	0,37 W	10m ³ /min
TR 80 K 15	•	670 x 800 x 970 mm	0,55 W	15m ³ /min
TR 110 K 20	•	715 x 500 x 1.130 mm	1,10 W	20m ³ /min

Compact portable suction unit

DO 2000

Features:

- professional lab dust extraction unit for sandblaster, bench, trimmer
- improved new motor
- reliable and solid construction
- power regulator 400-1000 W
- ready for all sandblasters
- ready for most popular benches
- special BIA tissue filters (4 pcs Included)
- decibel 62-69
- dimensions 33x25x38 cm
- weight 12 kg

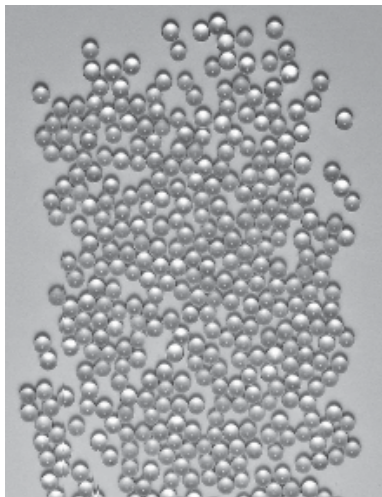
Price upon request

REF	Description
DO 2000	suction unit
DO 2010	suction arm
DO 2020	4 x filter bags



STP ...

Glass beads



Features:

- Generally applied for simple cleaning operations or polished surfaces of silk-dull finish.
- Compressing of work piece surfaces, STP 200 is also suitable for deburring operations.
- Can be used for all materials.

REF	Grain	kg	€
STP 50	0 - 50 µm	25	59,97
STP 70	40 - 70 µm	25	59,97
STP 110	70 - 110 µm	25	59,97
STP 150	90 - 150 µm	25	59,97
STP 200	100 - 200 µm	25	59,97

STK ...

Steel corundum



Features:

- Preferably used for cleaning operations and descaling.
- Successfully applied also for deburring operations, also for reproduceable decorative blasting operations.
- Abrasive effect.

REF	Grain	kg	€
STK 12	0,06 - 0,12 mm	25	58,29
STK 25	0,12 - 0,25 mm	25	58,29
STK 50	0,25 - 0,50 mm	25	58,29
STK 100	0,50 - 1,00 mm	25	58,29

• upon request

26/07/2012



Ceramic

STC ...

Features:

- Used for simple, gentle cleaning operations, silk-dull surface finish will be obtained.
- Compression of work piece surfaces.
- Preferably used for all kind of metals.
- Service life is up to 20-times higher compared to glass beads.



REF	Grain	kg	€
STC 125	0 - 0,125 mm	25	24,33
STC 120	0,070 - 0,125 mm	25	•
STC 60	0,125 - 0,250 mm	25	21,34
STC 40	0,250 - 0,425 mm	25	21,34
STC 30	0,425 - 0,600 mm	25	21,34
STC 20	0,600 - 0,850 mm	25	21,34

We can also supply the following products

- As well as glass beads, corundum and ceramic blasting agents, we can also supply other mineral and abrasive agents if required.
- Ceramic jet nozzles: Ø = 6, 8, 10 mm
- Boron carbide jet nozzles: Ø = 6, 8, 10, 12 mm
- Protective gloves: Size: 10

