

### 03 | 2024 SANDING MACHINES



PKFM 100	KNS 150 A	KMS 250	TS 300
<b>PKFM 150</b>	TBS 620	DS 150 S	TS 300 P
KFM 100 K	TBS 620 A	DS 175 S	TS 300 Pro
KM 140	TBS 760	DS 200 S	BES 250
KFM 175	TBS 760 A	DS 250 S	BES 250-2
KFM 200 M	NTS 250 Top	DS 300 S	UWS 300
KFM 500 M	NTS 250 Vario	SPM 150	UWS 350
KSM 500 S	DSA 150	KSE 200	BDS 75
KFM 600 S	DSA 200	PS 200 S	BDS 75-2
KFM 600 Duo	DSA 250	PS 250 S	BS 100 x 1220 S
DP 120	KSA 150	PS 350	BS 100 x 1220 S-2
DP 120 A	KSA 200	MPS 350	MS 75 x 2000 S
KNS 150	KMS 200 S	TS 250	MS 150 x 2000 S

DG 13 M DG 13 MD DG 20 M DG 32 MD DG 32 PRO EMG 14 EMG 30 EMG 14 Pro EMG 30 Pro STG 20 STG 42 CM 14 U3M

## DG 13 M

The handy drill grinding machine DG 13 M is ideal for grinding of HSS and carbide twist drills. The adjustable centre point of 90° to 135° makes this model universal for double-edged twist drills.

- Sanding machines
- Economic, efficient grinding
- Adjustable center point of 90° to 135°
- Suitable for HSS and carbide twist drills (2 13 mm)
- Includes device for thinning of the drill bit
- Precisely guided collet guarantees best results
   ER 20 collets allow clamping of irregular sizes



Pre-setting



Grinding the point angle



Thinning

Technical data	DG 13 M
Drill diameter	2 - 13 mm
Point angle	90° - 135°
Speed	4800 rpm
Motor power	0,12 kW
Voltage	230 V
Length	280 mm
Width	135 mm
Height	165 mm
Weight approx.	8 kg
Art. no.	05-1612



Optional accessories:	Art. no. excl	. VAT
Grinding wheel CBN for HSS-drill	05-1708	
Diamond grinding wheel SDC for carbide drill	05-1709	



The handy drill grinding machine DG 13 MD is ideal for grinding of twist drills out of HSS, carbide, cobalt and so on. The advantage of this model – compared to DG 13 M – is the possibility of relief-grinding of the cutting face, which ensure a perfect drilling result.

G 13 MD

BERRARDO.

DG 13 MD

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Stations for thinning of the

chisel edge and relief-grinding of the relief angle

- Including device for thinning, that means better centering of the drill bit on the workpiece and reduction of the required feeding force
- Additional station for relief-grinding of the cutting face (relief angle)
- Adjustable center point of 90° to 135°
- Suitable for HSS and carbide twist drills (2 13 mm)
- Rotor features precise ball bearings to guarantee smooth operation
- Quick and precise working results through the easy handling



Pre-setting



Grinding the point angle



Thinning



Relief-grinding of the relief angle

Technical data	DG 13 MD	
Drill diameter	2 - 13 mm	
Point angle	90° - 135°	
Speed	4800 rpm	
Motor power	0,12 kW	
Voltage	230 V	
Length	280 mm	
Width	135 mm	
Height	165 mm	
Weight approx.	8,1 kg	
Art. no.	05-1613	

Standard	accessories:

- Grinding wheel CBN
  Collets ER 20, 3 13 mm, 11 pcs. (3,0 / 4,0 / 5,0 / 6,0 / 7,0 / 8,0 / 9,0 / 10,0 / 11,0 / 12,0 / 13,0 mm)
  Collet holder ER 20

Optional accessories:	
Grinding wheel CBN for HSS-drill	
Diamond grinding wheel SDC for carbide drill	

Art. no.	excl. VAT
05-1710	
05-1711	

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**BERNARDO**®

## DG 20 M

The handy drill grinding machine DG 20 M is ideal for grinding of twist drills out of HSS, carbide, cobalt and so on. The adjustable centre point of 90° to 135° makes this model universal for double-edged twist drills.

- Suitable for HSS and carbide twist drills (2 20 mm)
- ER 20 and ER 25 collets allow clamping of irregular sizes
- Precisely guided collet guarantees best results
- Includes device for thinning of the drill bit
- Adjustable point angle of 90° to 135°
- Economic, efficient grinding



Pre-setting



Grinding the point angle



Thinning



Quick and easy grinding of twist drills

Technical data	DG 20 M
Drill diameter	2 - 20 mm
Point angle	90° - 135°
Speed	4800 rpm
Motor power	0,12 kW
Voltage	230 V
Length	285 mm
Width	130 mm
Height	170 mm
Weight approx.	8,6 kg
Art. no.	05-1614

#### Standard accessories:

- Grinding wheel CBN
- Collets ER 20, 3 12 mm, 11 pcs. (3/4/5/6/7/8/9/10/11/12/13 mm)
  Collets ER 25, 14 20 mm, 7 pcs. (14/15/16/17/18/19/20 mm)
  Collet holder ER 20 resp. ER 25

BERRARDO.

DG 20 M

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**BEST PRICE!** 

- **Optional accessories:** Grinding wheel CBN for HSS-drill

Diamond grinding wheel SBC for carbide drill

Art. no. excl. VAT 05-1712 05-1713



The DG 32 MD drill grinding machine is suitable for most common double edged twist drills out of HSS cobalt, carbide or similar - ranging from 8 – 32 mm. The advantage of this model is the possibility of relief-grinding of the cutting face, which ensure a perfect drilling result.

- Including device for thinning, that means better centering of the drill bit on the workpiece and reduction of the required feeding force
- Additional station for relief-grinding of the cutting face (relief angle)
- 25 pcs. ER 40 collets are part of the standard equipment, also suitable for clamping of intermediate sizes
- Allows for grinding of HSS-, carbide or TiN- coated twist drills ranging from 8 32 mm
- Rotor features precise ball bearings to guarantee smooth operation
- Heavy machine construction and rubber feet minimize vibrations
   Point angle can be adjusted to all conventional twist drills



Pre-setting



Grinding the point angle



Thinning



Relief-grinding of the relief angle

Technical data	DG 32 MD
Drill diameter	8 – 32 mm
Point angle	90° - 140°
Speed	4800 rpm
Motor power	0,25 kW
Voltage	230 V
Length	425 mm
Width	220 mm
Height	235 mm
Weight approx.	30 kg
Art. no.	05-1615

### Standard accessories:

• Grinding wheel CBN • Collets ER 40, 8 – 32 mm, 25 pcs. [8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 18 / 19 / 20 / 21 / 22 / 23 / 24 / 25 / 26 / 27 / 28 / 29 / 30 / 31 / 32 mm]

DG 32 MD

Collet holder ER 40

### Optional accessories:

Grinding wheel CBN for HSS-drill Diamond grinding wheel SBC for carbide drill Stations for thinning of the chisel edge and relief-grinding of the relief angle

BERNARDO

Art. no.	excl. VAT
05-1714	
05-1715	

DG 32 MD



## DG 32 PRO

- Including device for thinning, that means better centering of the drill bit on the workpiece and reduction of the required feeding force
- 30 pcs. ER collets are part of the standard equipment, also suitable for clamping of intermediate sizes
- Additional station for relief-grinding of the cutting face (relief angle)
- Adjustable point angle of 90° to 135°

Sanding machines

- Rotor features precise ball bearings to guarantee smooth operation
- Quick and precise working results through the easy handling
- Heavy machine construction and rubber feet minimize vibrations





1. Grinding the point angle Ø 2 - 13 mm 2. Grinding the point angle Ø 8 - 32 mm





1. Thinning Ø 2 - 13 mm / 2. Thinning Ø 8 - 32 mm





1. Relief-grinding of the relief angle Ø 2 - 13 mm 2. Relief-grinding of the relief angle Ø 8 - 32 mm

Technical data	DG 32 PRO
Drill diameter	2 – 32 mm
Point angle	90° - 135°
Speed	4800 rpm
Motor power	0,25 kW
Voltage	230 V
Length	350 mm
Width	210 mm
Height	305 mm
Weight approx.	32 kg
Art. no.	05-1616





**Top quality** 

Quick and easy grinding of twist drills

#### Standard accessories:

- Diamantschleifscheibe SBC

Stations for thinning of the

chisel edge and relief-grinding of the relief angle

Diamantscheirscheire SBC
Collets ER 20, 3 - 12 mm, 10 pcs. (3/4/5/6/7/8/9/10/11/12 mm)
Collets ER 40, 13 - 32 mm, 20 pcs. (13/14/15/16/17/18/19/20/21/22/23/ 24/25/26/27/28/29/30/31/32 mm)
Collet holder ER 20 resp. ER 25

**Usable for** nearly all type of twist drills

> Sparanee 08 32 190





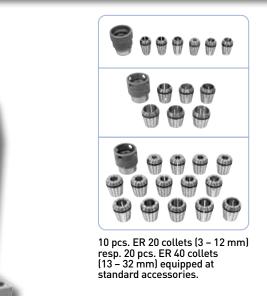
1. Pre-setting Ø 2 - 13 mm 2. Pre-setting Ø 8 - 32 mm

DC 32 Pro

The DG 32 Pro drill grinding machine is suitable for most common double edged twist drills out of HSS cobalt, carbide or similar - ranging from 2 – 32 mm. The advantage of this model is the possibility of relief-grinding of the cutting face, which ensure a perfect drilling result. Fast grinding process at low investment makes this model highly economical.

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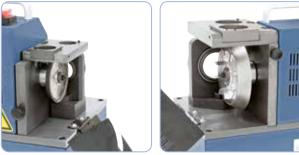
Sanding machines

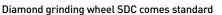






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#### **Optional accessories:**

Grinding wheel CBN (3 - 12 mm) for HSS-drill Diamond grinding wheel SBC (3 - 12 mm) for carbide drill Grinding wheel CBN (12,1 - 32 mm) for HSS-drill Diamond grinding wheel SBC (12,1 - 32 mm) for carbide drill





OCCA

### **End mill grinding machines**

The end mill grinding machines EMG 14 and EMG 30 are ideal for grinding of HSS and carbide end mills. The adjustable centre point of 0° to 5° make these models universal for end mills with 2, 3 and 4 cutting edges.

# 14

- For grinding of end mills with 2, 3 and 4 cutting edges, from diam. 12 mm with 6 cutting edges
   For face grinding of HSS and carbide end mills
- Heavy machine construction and rubber feet minimize vibrations
- Quick and precise working results through the easy handling
- Rotor features precise ball bearings to guarantee smooth operation
- 2 models available, either from 4 14 mm or 12 30 mm



Pre-setting

Sanding machines



Grinding the cutting edge 1 and 3



Grinding of the relief-angle at 3- or 4-edged end mill



Grinding the point angle



Grinding of the relief angle at 2-edged end mill





Technical data	EMG 14	EMG 30
End mill diameter	4 – 14 mm	12 - 30 mm
Point angle	0° - 5°	0° - 5°
Speed	4800 rpm	4800 rpm
Motor power	0,16 kW	0,25 kW
Voltage	230 V	230 V
Length	300 mm	350 mm
Width	190 mm	270 mm
Height	200 mm	300 mm
Weight approx.	13 kg	25 kg
Art. no.	05-1619	05-1622

#### Standard accessories:

- Grinding wheel CBN
  Collets ER 20, 3 14 mm, 6 pcs. (EMG 14) (4 / 6 / 8 / 10 / 12 / 14 mm)
  Collets ER 40, 12 30 mm, 10 pcs. (EMG 30) (12 / 14 / 16 / 18 / 20 / 22 / 24 / 26 / 28 / 30 mm)
- Spannzangenhalter

Optional accessories:	Art. no. excl. VAT
Grinding wheel CBN for EMG 14	05-1718
Diamond grinding wheel SBC for EMG 14	05-1719
Grinding wheel CBN for EMG 30	05-1720
Diamond grinding wheel SBC for EMG 30	05-1721



### End mill grinding machines

# EMG 14 Pro EMG 30 Pro

GREARDO

- For face grinding of HSS and carbide end mills
- Additional station for grinding the outer spiral cutting edge
- For grinding of end mills with 2, 3 and 4 cutting edges, from diam. 12 mm with 6 cutting edges
- Heavy machine construction and rubber feet minimize vibrations
- Quick and precise working results through the easy handling
- Rotor features precise ball bearings to guarantee smooth operation

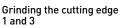


Pre-setting



Grinding the point angle







Grinding of the relief-angle at 3- or 4-edged end mill

Technical data

Point angle

Motor power

Weight approx.

Speed

Voltage

Length

Width

Height

Art. no.

End mill diameter







Grinding the outer spiral cutting edge

EMG 14 Pro

4 - 14 mm

4800 rpm

0,16 kW

380 mm

190 mm

285 mm

05-1623

20 kg

230 V

0° - 5°



EMG 30 Pro

12 - 30 mm

4800 rpm

0,25 kW

550 mm

300 mm

360 mm

39 kg 05-1624

230 V

0° - 5°

#### Standard accessories:

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- Grinding wheel CBN
  Collets ER 20, 3 14 mm, 6 pcs. (EMG 14 Pro) (4/6/8/10/12/14 mm)
- Collets ER 40, 12 30 mm, 10 pcs. [EMG 30 Pro] (12 / 14 / 16 / 18 / 20 / 22 / 24 / 26 / 28 / 30 mm]
   Spannzangenhalter

#### **Optional accessories:**

Grinding wheel CBN f. face side f. EMG 14 Pro 05-1718 Diamond grinding wheel SDC f. face side f. EMG 14 Pro 05-1719 Grinding wheel CBN f. side cutting face f. EMG 14 Pro 05-1722 Diamond grinding wheel SDC f. side cutting face f. EMG 14 Pro 05-1723 Grinding wheel CBN f. face side f. EMG 30 Pro 05-1724 Diamond grinding wheel SDC f. face side f. EMG 30 Pro 05-1725 Grinding wheel CBN f. side cutting face f. EMG 30 Pro 05-1726 Diamond grinding wheel SDC f. side cutting face f. EMG 30 Pro 05-1727



excl. VAT

Art. no.

### Screw tap grinder

The screw tap grinders STG 20 and STG 42 are ideal for grinding of HSS and carbide screw taps. The adjustable centre point of 5° to 30° make these models universal for screw taps with 2, 3 and 4 chip flutes.

- Sanding machines
  - Portable screw tap grinder for grinding of screw taps with 2, 3 and 4 chip flutes
  - Rotor features precise ball bearings to guarantee smooth operation
  - Suitable for grinding of HSS or carbide screw taps
  - Quick and precise working results through the easy handling
  - 2 models available, either from M5 M20 or M16 M42



Pre-setting



Grinding the broached length



Grinding the cutting edge



Grinding the front surface

Technical data	STG 20	STG 42	
Grinding area	M5 – M20	M16 - M42	
Point angle	5° - 30°	5° - 30°	_
Speed	4800 rpm	4800 rpm	_
Motor power	0,16 kW	0,25 kW	_
Voltage	230 V	230 V	
Length	320 mm	400 mm	_
Width	235 mm	300 mm	_
Height	265 mm	310 mm	_
Weight approx.	14 kg	24 kg	
Art. no.	05-1628	05-1629	_

#### Standard accessories:

- Grinding wheel CBN
  Collets ER 20, 5 14 mm, 6 pcs. (STG 20) (5/7/8/9/13/14 mm)
  Collets ER 40, 13 30 mm, 9 pcs. (STG 42) (13/14/16/18/20/23/25/28/30 mm)

SERRARDO STG 20

- Collet holder

Optional accessories:	Art. no. excl. VAT
Grinding wheel CBN for STG 20	05-1730
Diamond grinding wheel SBC for STG 20	05-1731
Grinding wheel CBN for STG 42	05-1732
Diamond grinding wheel SBC for STG 42	05-1733





### **Cutting machine**

The cutting machine CM 14 is the ideal machine for trimming of cylindrical tools from 4 - 14 mm (e.g. ejector pins), face grinding the front surface of drills and mills, grooving,.....

- Quick and precise working results through the easy handling
- Rotor features precise ball bearings to guarantee smooth operation
- Heavy machine construction and rubber feet minimize vibrations
- 11 pcs. ER 20 ollets are part of the standard equipment, also suitable for clamping of intermediate sizes
- For cutting workpieces made of HSS or carbide



CM 14

ER 20 collets from 4 – 14 mm comes standard



Pre-setting



Adjustable grinding angle from -30° to +30°



Example of use



Technical data	CM 14
Clamping range	4 - 14 mm
Angle adjustment	-30° to +30°
Drehzahl	4800 rpm
Motorleistung	0,16 kW
Spannung	230 V
Länge	320 mm
Breite	190 mm
Höhe	200 mm
Gewicht ca.	11 kg
Art. no.	05-1631

#### Standard accessories:

- Grinding wheel CBN
  Collets ER 20, 4 14 mm, 11 pcs. (4/5/6/7/8/9/10/11/12/13/14 mm)
  Collet holder ER 20

#### **Optional accessories:**

Grinding wheel CBN for HSS Diamond grinding wheel SBC for carbide Art. no. excl. VAT 05-1734 05-1735



### Universal cutter grinder

The U3M universal cutter grinder features various angles and adjustments, making it highly versatile. Furthermore, the large number of standard accessories makes this model excellent for price and performance.

> Standard accessories: Attachment for twist drill, end mill and turning tool, collets, corundum grinding wheel, diamond

> > 131

grinding wheel, drive belt

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- Grinding of dies, twist drills, electrodes, gravers, live centers etc.
- High user-friendliness
- Various angles and adjustments allow taper, cylindrical and central grinding of graving tools
- Solid construction ensures rigorous, long lasting precision
- Head features 24 locking positions for grinding of polygones on dies or electrodes
- Wide range of standard accessories, such as attachment for twist drills, end mills or turning chisels, diamond wheel, collets
- Ideal for grinding of graving tools (engraving cutter)
- Precisely, vibration-free driven grinding spindle guarantees optimal results

Suitable for grinding of eg. - dies

Attractive price

U3M

- twist drills
- electrodes
- lathe tools
- centers







#### Turning tool attachment

Technical data	U3M
Collet diameter min./max.	3 - 18 mm
Sanding diameter max.	25 mm
Taper grinding	0 - 180°
Rear angle	0 - 45°
Negative angle	0 - 25°
Speed	5000 rpm
Grinding wheel	100 x 50 x 20 mm
Locking position dividing head	24 (all 15°)
Motor power	0,37 kW
Voltage	230 V or 400 V
Length	450 mm
Width	500 mm
Height	400 mm
Weight approx.	45 kg
Art. no.	05-1639 (230 V)
	05-1641 (400 V)



End mill attachment

<b>Optional accessories:</b>
Corundum grinding wheel
Diamant grinding wheel
Disc flange
Dressing diamond
Collet 3 mm
Collet 14 mm
Collet 16 mm
Collet 18 mm



Twist drill attachment

excl. VAT

Art. no.

05-1786

05-1787

05-1788B

05-1788C

05-1789 05-1795

05-1796

05-1796B

#### Standard accessories:

- Diamond grinding wheel
- Corundum grinding wheel
   Dressing diamond
- Disc flange
- LED working light
  Collets 4, 6, 8, 10, 12 mm
- Twist drill attachment
- End mill attachment
- Turning tool attachment
  Extra belt



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### Pneumatic chamfering machines

### PKFM 100 PKFM 150

- Powerful pneumatic-drive "Made in Japan"
- Comfortable work due to low weight and handy design
- Advantage of the pneumatic-drive: more insensitive and durable
- than an electric motor, therefore designed for continuous operation
- Suitable for processing of steel, stainless steel, plastics and non-ferrous materials
- For processing of differently shaped workpieces (PKFM 100)
- Application area is directly on workpiece, ideal for processing of large boards



Stepless setting of bevel width with adjustable scale ring



BERNARDO® PROFESSIONAL



Examples of use



Easy handling due to handy design (PKFM 100)



Technical data

### **PKFM 100**

Bevel angle	45°
Width of bevel	3 mm
Bevel dimension adjustable	0,1 mm
Smallest inner radius	10,5 mm
Quantity of inserts	2 pcs.
Speed	13.000 rpm
Air pressure	6 - 8 bar
Machine dimension (W x D x H)	170 x 100 x 120 mm
Weight approx.	1,4 kg
Art. no.	05-1643

Technical data	PKFM 150
Max. bevel width at 45°	3 mm
Angle adjustment	45°
Guide rail	150 mm
Speed	13.000 rpm
Air pressure	6 - 8 bar
Machine dimension (L x W x H)	195 x 100 x 150 mm
Weight approx.	2,2 kg
Art. no.	05-1644

#### Standard accessories:

- Guide rail 150 mm (PKFM 150)
- Milling head
  Carbide inserts
- Carbide inse
   Tool

#### **Optional accessories:**

Milling head (without inserts) f. PKFM 100 Milling head (without inserts) f. PKFM 150 Carbide inserts (10 pcs.) f. PKFM 100 Carbide inserts (10 pcs.) f. PKFM 150

#### Art. no. excl. VAT 05-1679 05-1681 05-1682 05-1683

G 60 m



The chamfering machine KFM 100 K is the ideal model for chamfering and deburring various materials. The cost-effective model is suitable for chamfering of inner and outer edges, as well as for milling of contours and drilled holes from diam. 20 mm.

KFM 100 K





The chamfering machine KFM 140 is suitable for chamfering, preparation of bevelled edges and economic preparation of welding seams of straight edges. This model is very popular for steel and machine construction as well as assembly works.

Sanding machines

- Designed for chamfering of straight edges and preparation of welding seams
- Essential machine in steel and machine construction and mounting works
- Application area is directly on workpiece, ideal for processing of large boards
- Suitable for steel, stainless steel, aluminium and non-ferrous metals Ergonomic two-hand control ensures high working comfort
- Complete with mill head 45° and 2 TiN-coated inserts



45° milling head incl. 2 pcs. carbide inserts, comes standard



Robust guide rail, ideal guidance on the workpiece.



The handle is alternatively mountable on the left or right side of the machine

Technical data	KFM 140
Max. bevel width at 45°	3 mm
Angle adjustment	45°
Guide rail	140 mm
Speed	10.000 rpm
Motor power	720 W
Voltage	230 V
Machine dimension (L x W x H)	310 x 120 x 150 mm
Weight approx.	3,8 kg
Art. no.	05-1647

#### Standard accessories:

- Guide rail 140 mm
- Milling head
   Carbide inserts
- Side handle Tool

BERNARDO

**Optional accessories:** 

Milling head (without inserts) Carbide inserts (10 pcs.)

Ideal for economic preparation of welding seams

> Art. no. excl. VAT 05-1674 05-1659





**KFM 140** 





## KFM 175

The chamfering machine KFM 175 is suitable for chamfering, preparation of bevelled edges and economic preparation of welding seams of straight edges. The rollers integrated in the guide rail ensure a constant feed during work.

- Application area is directly on workpiece, ideal for processing of large boards
- Guide rails are hardened and feature integrated rolls for easy feed
- Essential machine in steel and machine construction and mounting works
- Powerful drive motor (1400 W) featuring high torque
- Ergonomic two-hand control ensures high working comfort
- Designed for chamfering straight edges and preparation of welding seams
- Suitable for steel, stainless steel, aluminium and non-ferrous metals





Complete with rolls to minimize friction resistance

Includes milling head with commercial HM-reversible plates.



For steel, aluminium, non-ferrous material, etc.



Stepless setting of bevel width with adjustable stop bar

Best Price

HERRICHERO



Ergonomic handle for high work comfort, alternatively mountable on the left or right side.



#### Technical data **KFM 175** Max. bevel width at 45° 5 mm Angle adjustment 45° Guide rail 175 mm Speed 10.000 rpm 1400 W Motor power Voltage 230 V Machine dimension (L x W x H) 320 x 190 x 230 mm Weight approx. 5,2 kg 05-1648 Art. no.

#### Standard accessories:

- Guide rail 175 mm
- Milling head
- Carbide inserts
- Side handle
- Tool

### **Optional accessories:**

Milling head (without inserts) Carbide inserts (10 pcs.) Art. no. excl. VAT 05-1677 05-1672



The KFM 200 M chamfering machine is suitable for deburring and chamfering of various materials as well as economic preparation of welding seams. Its main area of application is definitely the metal industry.

> Ideal for economic preparation of welding seams

KFM 200 M

- Working direct at the workpiece, hence ideal for processing of large boards, steel joists and profiles with a 90° surface
- Designed for chamfering straight edges and preparation of welding seams
- Essential device in steel and machine construction as well as assembly works
- Ergonomic two-hand operation ensures high work comfort
- Quick and easy removal of cutting edges
- Cost-effective model for mid-range demands



Stepless adjustment of chamfering angle from 15° to 45°.



Setting of chamfering height and depth requires no tools.



Includes milling head with commercial HM-reversible plates.

For steel, aluminium, non-ferrous material, etc.

Technical data	KFM 200 M
Max. bevel width at 45°	10 mm
Angle adjustment	15° - 45°
Guide rail	200 mm
Speed	2800 rpm
Motor power	0,37 kW
Voltage	230 V or 400 V
Machine dimension (L x W x H)	370 x 250 x 230 mm
Weight approx.	11 kg
Art. no.	05-16320 (230 V)
	05-1632 (400 V)

Standard accessories: • Guide rail 200 mm

- Milling headCarbide inserts
- Tool

**Optional accessories:** Cutting knives (9 pcs.) Insert plate

excl. VAT Art. no. 05-1736 05-1737





The KFM 500 M chamfering machine is perfect for deburring and chamfering various materials as well as for economic preparation of welding seams. This model is mainly used in the metal industry.

- Easy setting of milling depth and desired angle
- Highly suitable for deburring and chamfering (visible edges) of various materials e.g. steel, aluminium, non-ferrous metals, plastics etc.
- Ideal machine for economic preparation of welding seams
- Stepless adjustment of chamfering angle from 15° to 45°
- Low cost model for light to mid-range demands



Adjustable chamfering height from 0 – 3 mm.



Adjustable chamfering angle from 15 to 45°.



Large guide rail allows for secure workpiece support.

Max. bevel width at 45°

Machine dimension (L x W x H)

Technical data

Angle adjustment

Guide rail

Motor power Voltage

Weight approx.

Speed

Art. no.



Electron

M 500 M



Powerful motor (400 V) features high torque.

KFM 500 M

Standard accessories: • Guide rail 500 mm Milling head Carbide inserts Tool **Optional accessories:** Cutting knives (9 pcs.)

Best

price

**KFM 500 M** 

5 mm

15° - 45°

2800 rpm

500 x 370 x 265 mm

0,55 kW

400 V

33 kg

05-1633

500 mm

#### For steel, aluminium, non-ferrous material, etc.

Art. no excl. VAT 05-1736 05-1737



Insert plate

### **Grinding wheel chamfer**

The grinding wheel chamfer KSM 500 S is used for deburring and chamfering various materials, such as aluminium, copper, brass, plastics, etc., but also especially suitable for hard materials up to HRC63. This model is mainly used in the metal industry.

- Best suited for deburring and chamfering (45°) of straight edges
- As standard with corundum grinding wheel, ideally suited for hardened materials up to HRC63, but also for aluminum, non-ferrous materials, plastics, etc.
- Sturdy and simple grinding wheel chamfer for machining small and medium workpieces from 2 mm thickness
- Low cost model for light to mid-range demands
- High own weight for vibration-free work



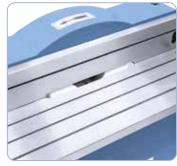




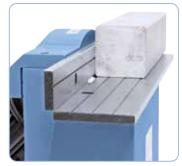
**KSM 500 S** 

Powerful drive motor is smooth running and performs well

Stepless adjustment of bevel height with adjusting screw



Hardened and grounded guide rails



Large guide rail allows for secure workpiece support.

Technical data	KSM 500 S
Max. bevel width at 45°	5 mm
Angle adjustment	45°
Guide rail	500 mm
Speed	2800 rpm
Motor power	0,55 kW
Voltage	400 V
Machine dimension (L x W x H)	500 x 360 x 360 mm
Weight approx.	37 kg
Art. no.	05-1637



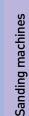
Inclusive corundum grinding wheel

#### Standard accessories:

- Guide rail 500 mm
- Corundum grinding wheel
- Tool

**Optional accessories:** Corundum grinding wheel Art. no excl. VAT 05-1747

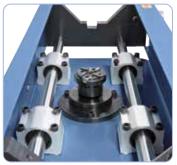
**BERNARDO**®





The chamfering machine KFM 600 S is used for deburring and chamfering various materials, such as aluminium, copper, brass, plastics, etc. This model is mainly used in the metal industry.

- Advantage of the sliding guide rail: the workpiece will not be moved and therefore can not scratch
- Highly suitable for deburring and chamfering (visible edges) of various materials e.g. steel, aluminium, non-ferrous metals, plastics etc.
- Great for creating clean visible edges with excellent surface quality
- High own weight for vibration-free work



Robust round column guiding for smooth movement of the guide rail



Grounded guide rail with workpiece fence.



Easy adjustment of the bevel width through adjustable stop bar.

Technical data	KFM 600 S
Max. bevel width at 45°	4 mm
Angle adjustment	45°
Guide rail	500 mm
Speed	10.000 rpm
Motor power	0,75 kW
Voltage	400 V
Machine dimension (L x W x H)	560 x 300 x 450 mm
Weight approx.	44 kg
Art. no.	05-1649

For steel, aluminium, non-ferrous material, etc.



**KFM 600 S** 

Serially with moveable guide rail.



Standard accessories:

- Moveable guide rail 500 mm
- Milling head
- Carbide inserts
- Tool

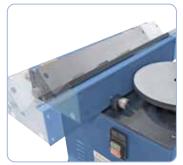
Optional accessories: Carbide inserts (10 pcs.) Milling head BEERVARDO® WWW.WINGKA

Art. no excl. VAT 05-1673 05-1678



### Chamfering and KFM 600 Duo contour milling machine

- Advantage of the sliding guide rail: the workpiece will not be moved and therefore can not scratch
- Suitable for processing of steel, stainless steel, plastics and non-ferrous materials
- Quick and easy removal of raw cutting edges
- Great for creating clean visible edges with excellent surface quality
- Perfect for removal of sharp edges and corners



Serially with moveable guide rail.



Fast adjustment of the bevel width at contour milling by turning the turntable



Easy adjustment of the bevel width through adjustable stop bar.

Technical data	KFM 600 Duo
Max. bevel width at 45°	4 mm
Angle adjustment	45°
Guide rail	500 mm
Smallest inner radius	7 mm
Speed	10.000 rpm
Motor power	0,75 kW
Voltage	400 V
Machine dimension (L x W x H)	560 x 500 x 495 mm
Weight approx.	62 kg
Art. no.	05-1651





Sanding machines

Grounded guide rail with workpiece fence.



#### Optional accessories: Carbide inserts (10 pcs.) (contour) Carbide inserts (10 pcs.) (straight) Milling head (contour) Milling head (straight)

Art. no excl. VAT 05-1659 05-1673 05-1674 05-1678



### **Glazing machines**

# DP 12 DP 120

- Optimal tool for glazing, polishing, brushing, structuring, deburring, smoothening and removing rust
- Ideal for processing stainless steel, cast iron, non-ferrous metals, aluminium, plastics, wood etc.
- Aluminium cast iron gear housing allows for long life span
- 6 speed settings allow for ideal adjustment to the workpiece (DP 120)
- Ergonomical two-hand operation ensures high work comfort
- Powerful drive motor with soft start and overload protection
- Electronics are designed to ensure constand band speed
- Standard with powerful 18 V DC battery and charger (DP 120 A)



Sanding machines

Handle threefold height adjustable



Convenient speed adjustment on handle (Picture shows DP 120)

<mark>BERNARDO</mark>

Standard accessories: • Handle with protective cover

Sanding disc
Battery (DP 120 A)
Charger (DP 120 A)
Tools

Technical data



Best

Price

□滎(€

**Optional accessories:** 

Battery for DP 120 A

Charger for DP 120 A

Rubber expansion roller

Sanding sleeve Ø 90 mm x 100 mm, Grit 60 (5 pcs.)

Surface condition belt Ø 90 mm x 100 mm (5 pcs.)

Multi disc grinding wheel 105 x 100 x 19 mm (2 pcs.)

Hook & loop sanding belt 40 x 600 mm, Grit 120 (10 pcs.) 49-1124

Model DP 120 A incl. battery and charger

Universal in use



Complete with inflatable rubber sanding drum, which adjusts to the surface of the workpiece.



Excellent finishes when glazing, polishing, structuring and matting



Optional with conditioning belt for touching up mounted stainless steel railings.





49-1110

49-1115

22

### DP 120 / DP 120 A

Max. sanding disc diameter	120 mm
Sanding width min./max.	100 mm
Shaft diameter	19 mm
No load speed (DP 120)	(6) 700 - 3000 rpm
No load speed (DP 120 A)	1400/1700/2100 rpm
Power (DP 120)	800 W
Voltage (DP 120)	230 V
Battery voltage (DP 120 A)	18 V DC
Battery capacity (DP 120 A)	4,0 Ah
Weight approx.	3,7 kg / 3,1 kg
DP 120	05-1323
DP 120 A	05-1331

### **Fillet weld grinders**

# KNS 150 KNS 150 A

- Ideal for machining of welding seams at hardly accessible places
- Handle can be turned 180° allowing minimum space requirements
- Designed for grinding and polishing of stainless steel constructions
- Useable for grinding and polishing wheels up to max. 150 mm diameter
- Electronics are designes to ensure constant speed
- Powerful drive motor with 6 speed steps (KNS 150)
- Standard with powerful 18 V DC battery and charger (KNS 150 A)







Convenient speed adjustment on handle (Picture shows KNS 150).



Adjustable protective cover

No load speed (KNS 150)

No load speeds (KNS 150 A)

Battery voltage (KNS 150 A)

Battery capacity (KNS 150 A)

Technical data

Grinding disc

Power (KNS 150)

Voltage (KNS 150)

Weight approx.

KNS 150

KNS 150 A







- Handle
- Protective cover
- 2 pcs. carbon brush (KNS 150)
- Battery (KNS 150 A)
- Charger (KNS 150 Å)
- Tools

(6) 1100 - 4500 rpm

800 W

230 V

18 V DC

4,0 Ah

05-1326

05-1334

3,3 kg / 2,7 kg

1800/2500/3100 rpm

**Optional accessories:** Battery for KNS 150 A Charger for KNS 150 A



excl. VAT Art. no. 05-13360 05-1337



### Wraparound tube sander/polisher

# TBS 620 TBS 620 A

Model TBS 620 A incl.

battery and charger

- The tiltable arm enables the grinding belt to adjust to the diameter of each pipe
- The large contact wheel allows grinding of welding seams on plane surfaces without making bumps or wrinkles
- Ergonomic two-hand control ensures high working comfort
- Sanding belt conducts heat, making this model ideal for grinding of stainless steel welding seams without discolouration

**Best** 

price

- Powerful drive motor with 6 speed steps (TBS 620)
- Electronics are designed to ensure constant belt speed
- Effective removal of welding seams through power motor
- No tools required for belt change making it simple and straightforward
- Standard with powerful 18 V DC battery and charger (TBS 620 A)



Set screw for quick belt change without tools.



Convenient speed adjustment (6 steps) on handle (TBS 620).



#### Standard accessories:

- Handle
- Abrasive web
- 2 pcs. carbon brush (TBS 620)
  Battery (TBS 620 A)
  Charger (TBS 620 A)
- Technical data

#### 1

BS 620 / TBS 620 A
--------------------

Belt length	620 mm
Belt width	40 mm
Pipe diameter max.	120 mm
Belt speed (TBS 620)	3,1 - 11,6 m/sec.
No load speed (TBS 620)	(6) 500 - 2800 rpm
Belt speed (TBS 620 A)	4,7 / 5,7 / 7 m/sec.
No load speed (TBS 620 A)	1400 / 1700 / 2100 rpm
Power (TBS 620)	800 W
Voltage (TBS 620)	230 V
Battery voltage (TBS 620 A)	18 V DC
Battery capacity (TBS 620 A)	4,0 Ah
Weight approx.	4,1 kg / 3,5 kg
TBS 620	05-1324
TBS 620 A	05-1332



**BERNARDO**°

excl. VAT

Examples of use

#### **Optional accessories:** Art. no. Battery for TB 620 A 05-13360 Charger for TB 620 A 05-1337 Sanding belt 40 x 620 mm - Grit 60 (10 pcs.) 49-1136 Sanding belt 40 x 620 mm - Grit 100 (10 pcs.) 49-1138 Sanding belt 40 x 620 mm - Grit 180 (10 pcs.) 49-1141 Surface conditioning belt 40 x 620 mm, rough (5 pcs.) 49-1142 Surface conditioning belt 40 x 620 mm, medium (5 pcs.) 49-1143 Surface conditioning belt 40 x 620 mm, fine (5 pcs.) 49-1144



### **Pipe grinding machines**

The TBS 760 / TBS 760 A pipe grinding machine is a highly versatile, handy model for various grinding, polishing and satin finishing works. This model is mainly used in metal and railing work as well as locksmiths.

TBS 760 TBS 760 A

- Ideal for grinding and polishing of pipe constructions
- Suitable for follow up works (grinding, satin finishing and polishing) on mounted rails
- Handle can be turned 180°, allowing minimum space requirements for example handrails close to walls
- Powerful drive motor with 6 speed steps (TBS 760)
- Special electronic device allows constant band speed
- Effective removal of welding seams through power motor
- Easy, straightforward grinding belt change, no toosl required
- 2 steps allow 360° peripheral grinding
- Flexible arm allows ideal adjustment to pipes up to 270°
- Standard with powerful 18 V DC battery and charger (TBS 760 A)



Convenient speed adjustment (6 steps) on handle (TBS 760)

Model TBS 760 A incl. battery and charger





Example of use



**SERNARDO** 

Standard accessories:

- Handle
- Sanding belt
- 2 pcs. carbon brush (TBS 760 A)
  Battery (TBS 760 A)
  Charger (TBS 760 A)
- Technical data

#### TBS 760 / TBS 760 A

Belt length	760 mm
Belt width	40 mm
Pipe diameter max.	180 mm
Belt speed (TBS 760)	2,4 - 9,1 m/sec.
No load speed (TBS 760)	(6) 900 - 2800 rpm
Belt speed (TBS 760 A)	4,2 / 5 / 6,2 m/sec.
No load speeds (TBS 760 A)	1400 / 1700 / 2100 rpm
Power (TB 760)	800 W
Voltage (TB 760)	230 V
Battery voltage (TBS 760 A)	18 V DC
Battery capacity (TBS 760 A)	4,0 Ah
Weight approx.	3,9 kg / 3,3 kg
TBS 760	05-1325
TBS 760 A	05-1333

#### **Optional accessories:**

Battery for TB 760 A Charger for TB 760 A Sanding belt 40 x 760 mm, Grit 80 (10 pcs.) Sanding belt 40 x 760 mm, Grit 120 (10 pcs.) Sanding belt 40 x 760 mm, Grit 220 (10 pcs.) Abrasive web 40 x 760 mm, rough (5 pcs.) Abrasive web 40 x 760 mm, medium (5 pcs.) Abrasive web 40 x 760 mm, fine (5 pcs.)

₩(€

Universal in use

Art. no.	excl
05-13360	
05-1337	
49-1147	
49-1148	
49-1149	
49-1155	
49-1156	
49-1157	

VAT



### Wet and dry grinders

### NTS 250 Top NTS 250 Vario

- Model NTS 250 Vario with stepless speed adjustment, ideal adjustment to each material
- The height adjustable universal support can also be used for various devices of different manufacturers
- Solid sheet steel model in stylish design featuring powerful drive motor to achieve top results
- The corundum grinding wheel runs in water tank (removable), which cools the blade during the grinding process and protects the tools from overheating or annealing
- Multifunctional device for grinding of knives, axes, turning gouges, planer blades, scissors etc.
   Suitable for amateurs, craftsmen with high demands and commercial customers,
- requiring sharp blades in a short period of time
   Low speed of grinding wheel ensures high safety and reduces risk of flying sparks



Complete with leather wheel for burr removal after grinding.



Sanding machines

Universal device UNI-100, suitable for various straight tools (standard).



Easy angle adjustments by using the angle gauge WL-60 (standard).





Shelf to store the accessories comes standard.

Technical data	NTS 250 Top	NTS 250 Vario	
Grinding wheel	250 x 50 x 32 mm	250 x 50 x 32 mm	
Leather wheel	210 x 30 x 12 mm	210 x 30 x 12 mm	
Speed	90 rpm	90 - 180 rpm	
Input power	200 W	200 W	
Voltage	230 V	230 V	
Width	470 mm	470 mm	
Depth	300 mm	300 mm	
Height	440 mm	440 mm	
Weight approx.	19 kg	18,5 kg	
Art. no.	05-1082	05-1083	





The NTS-series wet and dry grinding machines can easily and quickly achieve perfect grinding results. Using the appropriate attachments this machine can grind spoon carving gouges, finger-shaped turning tools, oval skew, chisels etc. To ensure a constant grinding performance, the model NTS 250 Vario is equipped with a stepless speed adjustment to compensate the abrasion of the grinding stone.

# NTS 250 Top NTS 250 Vario



05-2050 Stone grader: Suitable for thorough preparation of grinding wheel (fine / rough).



05-2058 Diamond turning tool: for circular and accurate dressing of grinding wheel



05-2056 Tool rest: Ideal when working on small items



05-2054 Plane camper jig: Suitable for plane irons and chisels with a maximum width of 70 mm and maximum thickness of 6.5 mm



05-2057 Long knife jig: For knives from 100 mm in blade length, also suitable for draw knives



05-2052 Turning gouge jig: Max. tool diameter of 20 mm



Best

price

05-2055 Sciccors jig: Ideal for sciccors or secateurs



05-1809A Profiled leather wheel: For dressing and polishing of insides of turning gouges and crowbars



Optional accessories:	Art. no.
Corundum grinding wheel 250 x 50 x 32 mm, grit 220	05-1808
Leather wheel 210 x 30 x 12 mm	05-1809
Profiled leather wheel	05-1809A
Stone grader	05-2050
Grinding angle set-up jig	05-2051
Turning gouge jig	05-2052

#### Standard accessories:

- Leather wheel

- Adapter 32 / 12 mm
  Universal bracket
  Universal device UNI-100 • Angle gauge WL-60
- White corundumg grinding wheel grit 220
- Water tank

Art. no. ex	xcl. VAT
05-2054	
05-2055	
05-2056	
05-2057	
05-2058	
	05-2054 05-2055 05-2056 05-2056



excl. VAT

### **Bench grinders**

Sanding machines

## **DSA-Serie**

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**ISO** 

The bench grinding machines of the DSA series are versatile and perfectly suitable for semi-professional users. The induction motor runs quietly and requires no maintenance. High quality grinding discs allow for optimal results when sharpening and deburring tools.

- Comes complete with a solid, adjustable workpiece support to achieve top results
- Universal use for various materials (metals, plastics, wood etc.)
- Rotor features ball bearings to ensure smooth operation and long life-span
- State-of-the-art machine design, aluminium die-cast construction
- Work lamp and wheel dressing tool as part of standard equipment
- Coolant tank integrated in machine housing
- Large protective glass on both sides protect from sparks
- High-performance motor ensures powerful torque
- Protective cover closed on sides for more efficient spark protection







Picture shows optionally available console WH

Work lamp, wheel dressing tool and protective glass with magnifier come standard

Optional accessories:	Art. no. excl. VAT	
Grinding wheel Ø 150 x 25,4 mm, Grit 36	05-1810	
Grinding wheel Ø 150 x 25,4 mm, Grit 60	05-1811	
Grinding wheel Ø 200 x 25,4 mm, Grit 36	05-1812	
Grinding wheel Ø 200 x 25,4 mm, Grit 60	05-1813	
Grinding wheel Ø 250 x 25,4 mm, Grit 36	05-1814	
Grinding wheel Ø 250 x 25,4 mm, Grit 60	05-1815	
Console WH	56-1049	
Stand model C for DSA-series	56-1042	
Stand model F for DSA 150, DSA 200	56-1045	
Stand model K for DSA 250	56-10480	

Technical data	DSA 150	DSA 200	DSA 250
Grinding wheel Ø x W	150 x 25,4 mm	200 x 25,4 mm	250 x 25,4 mm
Grinding wheel bore	12,7 mm	15,88 mm	20 mm
Grinding wheel grit	Grit 36 / Grit 80	Grit 36 / Grit 80	Grit 36 / Grit 80
Speed	2850 rpm	2850 rpm	2850 rpm
Motor power output S1 100%	0,37 kW	0,55 kW	0,75 kW
Motor power input S6 40%	0,50 kW	0,75 kW	1,0 kW
Voltage	230 V	230 V or 400 V	230 V or 400 V
Width	345 mm	410 mm	450 mm
Depth	270 mm	340 mm	360 mm
Height	275 mm	330 mm	370 mm
Weight approx.	10 kg	18 kg	26 kg
Art. no.	05-1090	05-1092 (230 V)	05-1096 (230 V)
		05-1094 (400 V)	05-1098 (400 V)



#### Standard accessories:

- Roughing wheel grit 36
- Finishing wheel grit 80
  Spark protection on both sides
- Workpiece support
- LED working light
- Integrated coolant tank
  Wheel dressing tool



### **Combined sanding machines**

The KSA-series of combined sanding machines is suitable for straightforward sanding operations of numerous materials, such as metals, non-ferrous metals, plastics, wood, plexiglass and many others. The wide range of applications make these models hard to miss in any DIY workshop.

- **KSA-Serie**
- Sanding machines

- Combines regular sanding operations and belt sanding
- Universal in use for various materials (metals, plastics, wood etc.)
- Coolant tank integrated in machine housing
- Solid aluminium die-cast housing for a long life-span
- Convenient sanding belt change no tools required
- Low noise, maintenance free induction motor
- Ideal for deburring, surface and contour grinding
- Balanced rotor with high-quality ball bearings ensures smooth run
- Top-quality construction guarantees prolonged machine life



Complete with roughing wheel, adjustable workpiece support, safety cover fully enclosed at sides and eye protection



Fabric sanding belt $685 \times 50 \text{ mm}$ - Grit $60 (10 \text{ pcs.})$ 11-2116A         Fabric sanding belt $685 \times 50 \text{ mm}$ - Grit $80 (10 \text{ pcs.})$ 11-2116         Fabric sanding belt $685 \times 50 \text{ mm}$ - Grit $100 (10 \text{ pcs.})$ 11-2117         Fabric sanding belt $685 \times 50 \text{ mm}$ - Grit $120 (10 \text{ pcs.})$ 11-2117         Fabric sanding belt $685 \times 50 \text{ mm}$ - Grit $120 (10 \text{ pcs.})$ 11-2117A         Fabric sanding belt $685 \times 50 \text{ mm}$ - Grit $120 (10 \text{ pcs.})$ 11-2118         Fabric sanding belt $685 \times 50 \text{ mm}$ - Grit $120 (20 \text{ pcs.})$ 11-2118	Optional accessories:	Art. no.	excl. VAT
Fabric sanding belt 685 x 50 mm - Grit 100 (10 pcs.)         11-2117           Fabric sanding belt 685 x 50 mm - Grit 120 (10 pcs.)         11-2117A           Fabric sanding belt 685 x 50 mm - Grit 150 (10 pcs.)         11-2118	Fabric sanding belt 685 x 50 mm - Grit 60 (10 pcs.)	11-2116A	
Fabric sanding belt 685 x 50 mm - Grit 120 (10 pcs.)         11-2117A           Fabric sanding belt 685 x 50 mm - Grit 150 (10 pcs.)         11-2118	Fabric sanding belt 685 x 50 mm - Grit 80 (10 pcs.)	11-2116	
Fabric sanding belt 685 x 50 mm - Grit 150 (10 pcs.) 11-2118	Fabric sanding belt 685 x 50 mm - Grit 100 (10 pcs.)	11-2117	
0	Fabric sanding belt 685 x 50 mm - Grit 120 (10 pcs.)	11-2117A	
Estais and in that COE EQ man. Out 100 (10 mar.) 11 0110	Fabric sanding belt 685 x 50 mm - Grit 150 (10 pcs.)	11-2118	
Fabric sanding beit 685 x 50 mm - Grit 180 (10 pcs.) 11-2119	Fabric sanding belt 685 x 50 mm - Grit 180 (10 pcs.)	11-2119	
Fabric sanding belt-set 685 x 50 mm - 11-2119A		11-2119A	
Grit 60 / 80 / 100 / 120 / 150 / 180 (each 2 pcs.)			
Grinding wheel Ø 150 x 20 mm, Grit 36 05-1800	Grinding wheel Ø 150 x 20 mm, Grit 36	05-1800	
Grinding wheel Ø 150 x 20 mm, Grit 80 05-1801	Grinding wheel Ø 150 x 20 mm, Grit 80	05-1801	
Grinding wheel Ø 200 x 20 mm, Grit 36 05-1827	Grinding wheel Ø 200 x 20 mm, Grit 36	05-1827	
Grinding wheel Ø 200 x 20 mm, Grit 80 05-1828	Grinding wheel Ø 200 x 20 mm, Grit 80	05-1828	
Belt cleaner 11-2175	Belt cleaner	11-2175	
Stand model C for KSA-Serie 56-1042	Stand model C for KSA-Serie	56-1042	
Stand model F for KSA-Serie 56-1045	Stand model F for KSA-Serie	56-1045	

Technical data	KSA 150	KSA 200
Grinding wheel Ø x W	150 x 20 mm	200 x 20 mm
Grinding wheel bore	12,7 mm	15,88 mm
Grinding wheel grit	Grit 36	Grit 36
Sanding belt	685 x 50 mm	685 x 50 mm
Sanding belt speed	15,4 m/sec.	15,4 m/sec.
Sanding area	125 x 50 mm	125 x 50 mm
Speed	2850 rpm	2850 rpm
Motor power output S1 100%	0,25 kW	0,37 kW
Motor power input S6 40%	0,35 kW	0,50 kW
Voltage	230 V	230 V
Width	370 mm	420 mm
Depth	280 mm	300 mm
Height	350 mm	390 mm
Weight approx.	11 kg	16 kg
Art. no.	05-1030	05-1035

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Standard accessories:

- Roughing wheel grit 36
  Sanding belt grit 80
  Spark protection

- Workpiece support LED working light
- Integrated coolant tank
  Wheel dressing tool



### **Combined sanding machine**

The KMS 200 S is an incredibly economical universal grinding machine purchased at a relatively low cost. The powerful motor and the robust construction make this model ideal for professional workshops.

- Complete with solid, adjustable workpiece support for optimal results
- Wide range of applications for various materials, such as metals, plastics, wood etc.
- Perfectly designed die-casting machine body
- Sanding unit can be used in horizontal as well as vertical position
- Quick clamping lever allows for convenient change of sanding belt
- Rotor features ball bearings to guarantee smooth running and a long life span
- Ideal for chamfering, surface and contour grinding
- Combines belt sanding and ordinary sanding operations
- High quality manufacturing ensures long life span

Sanding unit - ideal for deburring or surface sanding operations



#### Standard accessories:

- Roughing wheel grit 36
- Sanding belt grit 80
  Sanding unit SA 1
- Graphite coating
  Workpiece support
- Spark protection

#### **Optional accessories:** Art. no. Grinding wheel Ø 200 x 32 mm, Ø 32 mm, Grit 36 05-1818A Grinding wheel Ø 200 x 32 mm, Ø 32 mm, Grit 60 05-1818B 05-1819A Grinding wheel Ø 200 x 32 mm, Ø 32 mm, Grit 80 Fabric sanding belt 762 x 75 mm - Grit 60 - (10 Stk.) 49-0970 Fabric sanding belt 762 x 75 mm - Grit 80 - (10 pcs.) 49-0971 Fabric sanding belt 762 x 75 mm - Grit 100 - (10 pcs.) 49-0972 Fabric sanding belt 762 x 75 mm - Grit 120 - (10 pcs.) Fabric sanding belt 762 x 75 mm - Grit 150 - (10 pcs.) Fabric sanding belt 762 x 75 mm - Grit 180 - (10 pcs.) Fabric sanding belt-set 762 x 75 mm -grit 60 / 80 / 100 / 120 / 150 / 180 (each 2 pcs.) Belt cleaner

49-0973	
49-0974	
49-0975	
49-0976	
11-2175	
56-1048	
50-1048	

excl. VAT

Technical data	KMS 200 S
Grinding wheel Ø x W	200 x 32 mm
Grinding wheel bore	32 mm
Grinding wheel grit	Grit 36
Sanding belt	762 x 75 mm
Speed of grinding wheel	2850 rpm
Speed of sanding belt	16,4 m/sec.
Dust extraction outlet	32 mm
Tilting range of sanding unit	90°
Sanding area	180 x 75 mm
Motor power output S1 100%	0,9 kW
Motor power input S6 40%	1,25 kW
Voltage	230 V or 400 V
Width	540 mm
Depth	310 mm
Height	370 mm
Weight approx.	27 kg
Art. no.	05-1164 (230 V)
	05-1168B (400 V)



**KMS 200 S** 



Regulating

1245 200 2 0004 9004



Universal in use

Stand model H

### **Combined sanding machine**

The KMS 250 is an incredibly economical universal grinding machine purchased at a relatively low cost. The powerful motor and the robust construction make this model ideal for professional workshops.

**KMS 250** 

- Universal use for various materials (metals, plastics, wood etc.)
- Tiltable support table for a large variety of applications
- Balanced rotor features high quality ball bearings to ensure a smooth run
- Powerful motor guarantees high torque
- Motor comes equipped with copper wiring for long life span
- Sanding unit can be used in horizontal as well as vertical position
- Sanding unit complete with dust port (diameter 38 mm)
- On-/off switch according IP 54 standards and undervoltage release





Complete with roughing wheel, adjustable workpiece support, fully closed protective cover and eye protection

Grinding unit - ideal for deburring or surface sanding operations

Optional accessories:	Art. no.	excl. VAT
Grinding wheel Ø 250 x 32 mm, Ø 32 mm, Grit 36	05-1820	
Grinding wheel Ø 250 x 32 mm, Ø 32 mm, Grit 60	05-18200	)
Grinding wheel Ø 250 x 32 mm, Ø 32 mm, Grit 80	05-1821	
Fabric sanding belt 1016 x 75 mm - Grit 60 (10 pcs.)	49-0980	
Fabric sanding belt 1016 x 75 mm - Grit 80 (10 pcs.)	49-0981	
Fabric sanding belt 1016 x 75 mm - Grit 100 (10 pcs.)	49-0982	
Fabric sanding belt 1016 x 75 mm - Grit 120 (10 pcs.)	49-0983	
Fabric sanding belt 1016 x 75 mm - Grit 150 (10 pcs.)	49-0984	
Fabric sanding belt 1016 x 75 mm - Grit 180 (10 pcs.)	49-0985	
Fabric sanding belt-set 1016 x 75 mm -	49-0986	
Grit 60/80/100/120/150/180 (each 2 pcs.)		
Belt cleaner	11-2175	
Stand model H	56-1048	
Stand model K	56-10480	)

Technical data	KMS 250
Grinding wheel Ø x W	250 x 32 mm
Grinding wheel bore	32 mm
Grinding wheel grit	Grit 36
Sanding belt	1016 x 75 mm
Speed of grinding wheel	2850 rpm
Speed of sanding belt	16,4 m/sec.
Dust extraction outlet	38 mm
Tilting range sanding unit	90°
Grinding area	300 x 75 mm
Motor power output S1 100%	1,5 kW
Motor power input S6 40%	2,0 kW
Voltage	400 V
Width	580 mm
Depth	310 mm
Height	570 mm
Weight approx.	34 kg
Art. no.	05-1170



Standard accessories:

- Roughing wheel grit 36
  Sanding belt grit 80
  Sanding unit SA 2
- Graphite coating
- Workpiece support
  Spark protection



### **Bench grinders**

### These universal bench grinding machines are designed for professional use. The induction motor features top quality ball bearings to eliminate noise and maintenance. Quality grinding wheels ensure optimal results when sharpening and deburring tools.

**DS-Serie** 

- On/off switch in accordance with IP54 standards and undervoltage release
- Universal use for various materials, such as metals, plastics, wood and many others
- Balanced rotor with quality ball bearings ensure smooth running
- Motor features copper wiring for long life span (DS 250 S)
- Large protective glass provide optimal spark protection
- Solid, adjustable die-cast workpiece support
- High performance drive motor ensures powerful torque
   Optionally available sanding attachment (DS 200 S/ 250 S)
- increase range of applications significantly



Sanding machines



Console WH optional available.

Sanding attachment available for DS 200 S and DS 250 S

#### Standard accessories:

- Roughing wheel grit 36
- Finishing wheel grit 80
- Spark protection on both sides Workpiece support

Optional accessories:	Art. no.	excl. VAT
Grinding wheel Ø 150 x 25 mm, Ø 32 mm, Grit 36	05-18020	
Grinding wheel Ø 150 x 25 mm, Ø 32 mm, Grit 80	05-18021	
Grinding wheel Ø 175 x 25 mm, Ø 32 mm, Grit 36	05-1816	
Grinding wheel Ø 175 x 25 mm, Ø 32 mm, Grit 80	05-1817	
Grinding wheel Ø 200 x 32 mm, Ø 32 mm, Grit 36	05-1818A	
Grinding wheel Ø 200 x 32 mm, Ø 32 mm, Grit 80	05-1819A	
Grinding wheel Ø 250 x 32 mm, Ø 32 mm, Grit 36	05-1820	
Grinding wheel Ø 250 x 32 mm, Ø 32 mm, Grit 80	05-1821	
Sanding attachment SA 1 for DS 200 S (Sanding belt 762 x 75 mm)	05-1130	
Sanding attachment SA 2 for DS 250 S (Sanding belt $1016 \times 75$ mm)		
Fabric sanding belts for sanding attachments SA 1 and SA 2 are $\alpha$	on page 94	
Console WH	56-1049	
Stand model H	56-1048	
Stand model K for DS 250 S	56-10480	

Technical data	DS 150 S	DS 175 S	DS 200 S	DS 250 S
Grinding wheel Ø x W	150 x 25 mm	175 x 25 mm	200 x 32 mm	250 x 32 mm
Grinding wheel bore	32 mm	32 mm	32 mm	32 mm
Grinding wheel grit	Grit 36 / Grit 80			
Speed	2850 rpm	2850 rpm	2850 rpm	2850 rpm
Motor power output S1 100%	0,50 kW	0,50 kW	0,90 kW	1,5 kW
Motor power input S6 40%	0,70 kW	0,70 kW	1,25 kW	2,0 kW
Voltage	230 V	230 V	230 V or 400 V	400 V
Width	430 mm	450 mm	510 mm	510 mm
Depth	195 mm	230 mm	270 mm	320 mm 💕
Height	230 mm	250 mm	310 mm	360 mm
Weight approx.	16 kg	18 kg	25 kg	30 kg
Art. no.	05-1119	05-1121	05-1125 (230 V)	05-1127
			05-1126 (400 V)	







### Industrial bench grinder

## DS 300 S

Rigid, height adjustable workpiece support, and big dimensioned protective glass

000A

On and off switch features undervoltage

release and emergency-stop button

0

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- Rotor features ball bearings to ensure smooth running and long life span
- High performance drive motor ensures powerful torque
- Protective cover closed on sides for more efficient spark protection
- Complete with dust port (Ø 35 mm) to allow for connection to dust collector
- Solid design and top of the range accessories make this model qualify for industrial use

000A

excl. VAT

Art. no. 05-1822A 05-1822B

05-1823A 56-1044 56-1046 ČE.

- Optionally available dust collector allows efficient elimination of dust
- Comes complete with solid, adjustable workpiece support to achieve top results



Solid machine body with dust extraction outlet, large dimensioned spark protection and working light

#### Standard accessories:

- Roughing wheel grit 36
- Finishing wheel grit 80
- Folding protective glasses
- Adjustable workpiece support
  LED working light

### **Optional accessories:**

Technical data

• p
Grinding wheel Ø 300 x 50 mm, grit 36
Grinding wheel Ø 300 x 50 mm, grit 60
Grinding wheel Ø 300 x 50 mm, grit 80
Stand model G
Stand model D with aspiration MSA 500
Stand model G

DS	300	(

Grinding wheel Ø x W	300 x 50 mm
Grinding wheel bore	75 mm
Grinding wheel grit	Grit 36 / Grit 80
Speed	1450 rpm
Dust extraction outlet	2x 35 mm
Motor power output S1 100%	2,2 kW
Motor power input S6 40%	3,0 kW
Voltage	400 V
Width	700 mm
Depth	500 mm
Height	460 mm
Weight approx.	84 kg
Art. no.	05-1154

Picture shows optionally available stand - model D - with extraction unit MSA 500

Top quality





### **Combined sanders**

These combined sanding machines are suitable for processing a variety of materials, such as metals, non-ferrous metals, plastics, wood, plexiglass etc. The wide range of applications makes these models hard to miss in any workshop.

## SPM 1 **KSE 20**

- Work lamp and wheel dressing tool as part of the standard accessories (SPM 150)
- Model KSE 200 features dust outlet (60 mm in diameter) at steel brush wheel
- Rotor with ball bearings ensures smooth run and long life span
- Quick and easy deburring of complicated profiles
- Powerful and low noise drive motor
- Suitable for polishing of metals, plastics and non-ferrous materials



SPM 150



**KSE 200** 

#### Standard accessories SPM 150:

- Polishing wheel hard
- Grinding wheel grit 36
  Steel brush wheel

Technical data

- Working light
  Wheel dressing tool

Bore

Speed

Voltage Width

Depth Height

Art. no.

Weight approx.

- Spark protection on both sides
- Integrated coolant tank

Grinding wheel Ø x W

Grinding wheel grit

Steel brush wheel

Motor power output S1 100%

Motor power input S6 40%

Polishing wheel

Standard	accessories	KSE	200
	where I amit 2/		

- Grinding wheel grit 36
  Steel brush wheel

**KSE 200** 

32 mm

Grit 36

200 x 32 mm

200 x 20 mm

230 V or 400 V

05-1172 (230 V)

05-1173 (400 V)

2850 rpm

0,90 kW

1,25 kW

570 mm

270 mm

300 mm 26 kg

**SPM 150** 

12,7 mm

2850 rpm

0,37 kW

0,50 kW

450 mm

280 mm

370 mm

10 kg 05-1045

230 V

Grit 36

150 x 20 mm

150 x 12,5 mm

150 x 12,5 mm

Spark protection
Workpiece support

Optional accessories:	Art. no.	excl. VAT
Grinding wheel Ø 150 x 20 mm, Ø 12,7 mm, Grit 36	05-1800	
Grinding wheel Ø 150 x 20 mm, Ø 12,7 mm, Grit 80	05-1801	
Polishing wheel Ø 150 x 20 mm, Ø 12,7 mm for SPM 150	05-1838	
Steel brush wheel Ø 150 x 20 mm, Ø 12,7 mm for SPM 150	05-1836	
Stand model F for SPM 150	56-1045	
Grinding wheel Ø 200 x 32 mm, Ø 32 mm, Grit 36	05-1818A	
Grinding wheel Ø 200 x 32 mm, Ø 32 mm, Grit 60	05-1818B	
Grinding wheel Ø 200 x 32 mm, Ø 32 mm, Grit 80	05-1819A	
Steel brush wheel Ø 200 x 25 mm, Ø 32 mm for KSE 200	05-1799	
Stand model H for KSE 200	56-1048	



34

### **Polishing machines**

The PS-series of polishing machines are perfectly suitable for treating surfaces of different materials. Achieve different polishing finishes, from matt to gloss, by using suitable polishing wheels and pastes.

# 

- On/ off switch in accordance with IP 54 standards and undervoltage release
- Ideal device to achieve matt, polished, high gloss finishes on various materials by using optionally available polishing wheels and pastes
- Solid construction and top of the range equipment designed for professional use
- Motor comes complete with copper wiring for long life span
- Equipped with rubber feet to eliminate vibrations
- Balanced rotor with high quality ball bearings ensures a smooth run
- Aluminium die-cast machine housing in state-of-the-art design
- Suitable for polishing of metals, plastics and non-ferrous metals





Sisal-cord green Ø 200 mm Sisal-cord green Ø 250 mm



Nettle-polishing wheel PS 1001 stepped Ø 200 mm Nettle-polishing wheel PS 1001 stepped Ø 250 mm



Sisal-Nettle polishing wheel Ø 200 mm Sisal-Nettle polishing wheel Ø 250 mm



Molleton-polishing wheel PS 1004 loose Ø 200 mm Molleton-polishing wheel PS 1004 loose Ø 250 mm

Technical data	PS 200 S	PS 250 S
Polishing wheel Ø x W	200 x 20 mm	250 x 25 mm
Bore	16 mm	20 mm
Speed	2850 rpm	2850 rpm
Motor power output S1 100%	0,9 kW	1,5 kW
Motor power input S6 40%	1,25 kW	2,0 kW
Voltage	230 V or 400 V	400 V
Width	580 mm	600 mm
Depth	250 mm	290 mm
Height	270 mm	300 mm
Weight approx.	19 kg	23 kg
Art.no.	05-1051 (230 V)	05-1053
	05-1052 (400 V)	



#### Standard accessories:

- Polishing wheel soft
  Polishing wheel hard

Polishing	whee	els an	d
pastes see f	from	page	97

Optional accessories:	Art. no.	excl. VAT
Polishing wheel see page 97		
Polish paste and polish sets see page 98   99		
Console WH	56-1049	
Stand model H for PS-series	56-1048	
Stand model K for PS 250 S	56-10480	



### **Polishing machine**

The PS 350 polishing machine is the ideal device to treat different types of materials. Various polishing results from matt to gloss can be achieved by using suitable polishing wheels and pastes.

- High quality die-cast machine housing in state-of-the-art design
- Including acute shaft end on both sides for mounting different polishing wheels
- Rotor features ball bearings to ensure smooth running and long life span
- Ideal for chamfering and sanding surfaces and contours
- Solid design and top of the range accessories make this model qualify for industrial use
- Ideal device to achieve matt, polished, high gloss finishes on various materials by using optionally available polishing wheels and pastes



With acute shaft end for mounting polishing wheels with a bore of 16 to 30 mm



On/off switch features undervoltage release and emergency stop-button

#### Standard accessories:

• 2 pcs. polishing wheel soft

Technical data	PS 350
Polishing wheel Ø x W Bore Speed Motor power output S1 100% Motor power input S6 40% Voltage Width	350 x 45 mm           16 mm           1450 rpm           2,2 kW           3,0 kW           400 V           1000 mm
Height	400 mm
Depth	350 mm
Weight approx. Art.no.	54 kg 05-1061

#### **Optional accessories:**

BERNARDO

	AIL IIU.
Polishing wheel soft, Ø 350 x 40 mm, Ø 16 mm	05-1844
Sisal-Nettle-Polishing wheel Ø 350 x 25 mm, Ø 16 mm	05-1890
Sisal-cord green Ø 350 x 25 mm, Ø 16 mm	05-1891
Nettle-Polishing wheel PS 1001 loose Ø 350 x 25 mm, Ø 16 mm	05-1892
Nettle-Polishing wheel PS 1001 stepped Ø 350 x 25 mm, Ø 16 mm	05-1893
Molleton-Polishing wheel PS 1004 loose Ø 350 x 25 mm, Ø 16 mm	05-1894
Molleton-Polishing wheel PS 1004 stepped Ø 350 x 25 mm, Ø 16 mm	05-1895
Stand model G	56-1044
Polish paste and polish sets see page 97   98	





**PS 350** 

**Best** 

Price

Polishing wheels and

pastes see from page 97

Sisal-cord green for stainless steel, further polishing wheels see page 97

Art. no. excl. VAT 05-1844 05-1890

## **Polishing machine**

The MPS 350 polishing and belt sanding machine is the ideal device for grinding and polishing of various materials, such as metals, non-ferrous metals, plastics, wood, plexiglass and many more. The wide choice of applications makes this model overly popular for businesses and industrial use.

excl. VAT

- Includes frequency converter for stepless speed settings to allow ideal adjustment to each workpiece
- Quick and convenient deburring of complex profiles
- Powerful motor ensures high torque
- Straightforward sanding belt change no tools required
- Machine base complete with lockable tool storage
- Individually tiltable sanding arm with dust extraction outlet
- Suitable for sanding, polishing and brushing of metals, plastics and non-ferrous metals for instance copper, bronze, aluminium and brass



Adjustable protective cover features safety device and dust outlet

Optional accessories:	Art. no.
Dust collector MSA 750	56-1085
Connector 100 mm inside	12-1038
Reducer 100 mm inside to 80 mm inside	12-1039
Branch connection with slider 100 – 100 / 100 mm	12-1040
Alu-tube diam. 100 mm, extendable to 5 m	12-1087
Fleece sanding disc Ø 250 x 50 mm, Ø 35 mm	05-1847
Polishing wheel soft, Ø 300 x 30 mm, Ø 35 mm	05-1848
Polishing wheel stepped, Ø 300 x 30 mm, Ø 35 mm	05-1849
Fabric sanding belt 2000 x 50 mm - Grit 40 (10 pcs.)	49-1051
Fabric sanding belt 2000 x 50 mm - Grit 60 (10 pcs.)	49-1052
Fabric sanding belt 2000 x 50 mm - Grit 80 (10 pcs.)	49-1053
Fabric sanding belt 2000 x 50 mm - Grit 100 (10 pcs.)	49-1054
Fabric sanding belt 2000 x 50 mm - Grit 120 (10 pcs.)	49-1055
Fabric sanding belt 2000 x 50 mm - Grit 150 (10 pcs.)	49-1055A
Fabric sanding belt 2000 x 50 mm - Grit 180 (10 pcs.)	49-1055B
Fabric sanding belt-set 2000 x 50 mm -	49-1056
Polish paste and polish sets see page 97   98	
Fabric sanding belt 2000 x 50 mm - Grit 180 (10 pcs.)	49-1055B

Technical data	MPS 350
Polishing wheel Ø x B	250 x 50 mm
Bore	35 mm
Sanding belt	2000 x 50 mm
Speed, stepless	400 - 2800 rpm
Dust extraction outlet	2 x 80 mm
Motor power output S1 100%	2,2 kW
Motor power input S6 40%	3,0 kW
Voltage	400 V
Width	1160 mm
Depth	700 mm
Height	1850 mm
Weight approx.	150 kg
Art.no.	05-1062

# hind



#### Standard accessories:

Fleece sanding Ø 250 x 50 mm, Ø 35 mm
Sanding belt 2000 x 50 mm / Grit 100

Stand



### **Disc sanding machines**

The TS 250 and TS 300 disc grinding machines are designed for grinding of metals, non-ferrous metals and wood. Model TS 300 comes complete with a velcro fastener for practical disc change.

- Tiltable table (0° to +45°) for different machining tasks
- Universal useable for metal, non-ferrous metals and wood
- Stable machine body with rubber lining
- Balanced sanding disc ensures vibration-free run
- Grinding table is positioned below the middle, to utilize the entire sanding disc
- Powerful motor guarantees best results, even at longer operation
- Complete with integrated brake to stop the sanding disc (TS 300)



The serially equipped velcro fastener makes disc change quick and easy. (TS 300)

#### Standard accessories:

- Lockable angle fence
  Sanding disc Grit 80 (TS 250)
  Sanding disc Grit 100 (TS 300)
  Disc brake (TS 300)
- Velcro fastener (TS 300)
- Motor protective switch

Optional accessories:	Art. no.	excl
Velcro fastener diam. 250 mm	11-2131A	
Sanding disc diam. 250 mm - Grit 60 (10 pcs.), velcro fastener	11-2202	
Sanding disc diam. 250 mm - Grit 80 (10 pcs.), velcro fastener	11-2095	
Sanding disc diam. 250 mm - Grit 100 (10 pcs.), velcro fastener	11-2096	
Sanding disc diam. 250 mm - Grit 120 (10 pcs.), velcro fastener	11-2097	
Sanding disc diam. 250 mm - Grit 150 (10 pcs.), velcro fastener	11-2203	
Sanding disc - set velcro fastener diam. 250 mm - Grit 60 / 80 / 100 / 120 / 150 (each 2 pcs.)	11-2216	
Velcro fastener diam. 300 mm	11-2131	
Sanding disc diam. 300 mm - Grit 60 (10 pcs.), velcro fastener	11-2206	
Sanding disc diam. 300 mm - Grit 80 (10 pcs.), velcro fastener	11-2101	
Sanding disc diam. 300 mm - Grit 100 (10 pcs.), velcro fastener	11-2102	
Sanding disc diam. 300 mm - Grit 120 (10 pcs.), velcro fastener	11-2103	
Sanding disc diam. 300 mm - Grit 150 (10 pcs.), velcro fastener	11-2207	
Sanding disc - set velcro fastener diam. $300 \text{ mm}$ - Grit $60 / 80 / 100 / 120 / 150$ (each 2 pcs.)	11-2218	
Belt cleaner	11-2175	
Stand model B 1	56-1041	

Technical data	TS 250	TS 300
Sanding disc	250 mm	300 mm
Table size	290 x 140 mm	435 x 150 mm
Table tiltable	0° to 45°	0° to 45°
Speed	1400 rpm	1450 rpm
Dust extraction outlet	35 mm	50 mm
Motor power output S1 100%	0,55 kW	0,90 kW
Motor power input S <sub>6</sub> 40%	0,75 kW	1,25 kW
Voltage	230 V	230 V
Width	370 mm	450 mm
Depth	360 mm	450 mm
Height*	300 mm	400 mm
Weight approx.	15 kg	29 kg
Art. no.	05-1185	05-1186



Serially equipped with integrated dust extraction outlet underneath the 45° tiltable table.



BERNARDO®

TS 300

**Best** 

price

BERNARDO

TS 250

I. VAT

\* without stand

## **Disc sanding machine**

The TS 300 P disc sanding machine is a great device to achieve perfectly smooth wooden surfaces but is evenly suitable for non-ferrous metals and plastic materials. Complete with a hook and loop fastener to allow for a quick and convenient change of sanding discs without tools.

- Wide application range for various materials, such as wood, metals or plastics
- Complete with integrated brake to bring the sanding disc to a standstill
- Powerful motor guarantees best results, even when operated continously
- Grinding table is positioned below the middle, to utilize the entire sanding disc
- Balanced sanding disc eliminates vibrations
- Polished grey cast-iron table tilts to both sides
- Includes dust port to allow connection to dust collector



Manual brake brings sanding disc to a standstill within seconds



Polished grey cast-iron table with tilting range from 0° to +45°



Complete with mitre fence for precise grinding of angles



#### Standard accessories:

- Lockable angle fence
- Sanding disc
- Hook and loop fastener Disc brake
- · Motor protective switch

Technical data	TS 300 P
Sanding disc	300 mm
Table size	440 x 128 mm
Table tiltable	0° to +45°
Speed	1400 rpm
Dust extraction outlet	60 mm
Motor power output S1 100%	0,75 kW
Motor power input S6 40%	1,0 kW
Voltage	230 V
Width	440 mm
Depth	450 mm
Height*	380 mm
Weight approx.	32 kg
Art. no.	05-1191

On/Off switch in accordance with IP 54 standards and undervoltage release





### **Optional accessories:**

Optional accessories:	Art. no.	excl. VAT
Hook and loop fastener diam. 300 mm	11-2131	
Sanding disc diam. 300 mm - Grit 60 (10 pcs.), hook and loop fastener	11-2206	
Sanding disc diam. 300 mm - Grit 80 (10 pcs.), hook and loop fastener	11-2101	
Sanding disc diam. 300 mm - Grit 100 (10 pcs.), hook and loop fastener	11-2102	
Sanding disc diam. 300 mm - Grit 120 (10 pcs.), hook and loop fastener	11-2103	
Sanding disc diam. 300 mm - Grit 150 (10 pcs.), hook and loop fastener	11-2207	
Sanding disc - set hook and loop fastener diam. 300 mm - Grit 60 / 80 / 100 / 120 / 150 (each 2 pcs.)	11-2218	
Belt cleaner	11-2175	
Stand model B 1	56-1041	





### **Disc sanding machine**

## **TS 300 Pro**

The TS 300 Pro disc grinding machine features a heavy duty, solid construction, allowing a precise and vibration-free operation. This model is predominantely used among professionals.

- Complete with integrated brake to stop the sanding disc
- Grey, cast-iron table features T-slots for the circular sanding unit and the mitre fence
- Powerful motor guarantees best results, even at longer operation
- Robust tilting device with adjustable end stops
- Includes mitre fence for accurate angle grinding
- Balanced sanding disc ensures vibration-free run
- Dust extraction below work table allows for clean working conditions
- Useable for different materials (wood, metal, plastics, etc.)



Circular grinding unit is part of standard equipment.

#### Standard accessories:

- Lockable angle fence
- Sanding disc
  Velcro fastener
- Velcro faste
   Disc brake
- Disc brake
   Mitre fence
- Circular sanding unit
- Exhaust fan
- Stand
- Motor protective switch

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		-	0002020	2-6-

Tiltable grey cast-iron table features T-slots.



Complete with exhaust fan inside machine housing.

Sentance.

TS 300 F



**Optional accessories:** excl. VAT Art. no. Sanding disc 300 mm, velcro fastener Grit 60 (10 pcs.) 11-2206 Sanding disc 300 mm, velcro fastener Grit 80 (10 pcs.) 11-2101 Sanding disc 300 mm, velcro fastener Grit 100 (10 pcs.) 11-2102 Sanding disc 300 mm, velcro fastener Grit 120 (10 pcs.) 11-2103 Sanding disc 300 mm, velcro fastener Grit 150 (10 pcs.) 11-2207 Sanding disc -set 300 mm, velcro fastener Grit 60 / 80 / 100 / 120 / 150 (each 2 pcs.) 11-2218 Velcro fastener 11-2131 Belt cleaner 11-2175

Technical data	TS 300 Pro
iecnnicai aata	15 300 Pro
Sanding disc	300 mm
Table size	420 x 250 mm
Table tiltable	-15° to +45°
Working height	950 mm
Speed	1450 rpm
Dust extraction outlet	100 mm
Motor power output S1 100%	0,75 kW
Motor power input S <sub>6</sub> 40%	1,0 kW
Voltage	230 V
Width	460 mm
Depth	600 mm
Height	1150 mm
Weight approx.	46 kg
Art. no.	05-1188





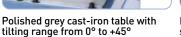
## **Disc sanding machine**

The disc sanding machine TS 510 Vario is the perfect device for sanding of wood, plastics, steel and non-ferrous metals. Complete with a hook and loop fastener to allow for a quick and convenient change of sanding discs without tools.

Sanding machines

- Includes frequency converter for stepless speed settings to allow ideal adjustment to each workpiece
- For optimal use of sanding disc the sanding table is mounted below the middle
- Powerful motor guarantees best results, even when operated continously
- Machine base complete with lockable tool storage
- Balanced sanding disc eliminates vibrations
- Complete with dust port (100 mm) for connecting a dust collector
- Heavy machine base in torsion-free construction
- Grey cast-iron table features T-slot for mounting of mitre fence







Complete with mitre fence for precise grinding of angles

Standard accessories:

- Sanding disc Grit 60
- Velcro fastener
- Mitre fence
- Frequency inverterMachine feet

#### TS 510 Vario Technical data Sanding disc 500 mm

Sanding disc	500 mm
Table size	635 x 305 mm
Table tiltable	0° to +45°
Working height	975 mm
Speed, stepless	500 - 1500 rpm
Dust extraction outlet	100 mm
Motor power output S1 100%	1,5 kW
Motor power input S <sub>6</sub> 40%	2,0 kW
Voltage	400 V
Width	690 mm
Depth	630 mm
Height	1119 mm
Weight approx.	132 kg
Art. no.	05-10634



Electronic, stepless speed setting





### 

Optional accessories:	Art. no.	excl. VAT
Velcro fastener diam. 500 mm	11-21330	
Paper sanding disc 500 mm, velcro fastener - Grit 150 (5 pcs.)	11-21083	
Paper sanding disc 500 mm, velcro fastener - Grit 180 (5 pcs.)	11-21084	
Paper sanding disc - set 500 mm, velcro fastener	11-21085	
Grit 60 / 80 / 100 / 120 / 150 / 180 (each 2 pcs.)		
Fabric sanding disc 500 mm, velcro fastener - Grit 60 (5 pcs.)	11-2109	
Fabric sanding disc 500 mm, velcro fastener - Grit 80 (5 pcs.)	11-21090	
Fabric sanding disc 500 mm, velcro fastener - Grit 100 (5 pcs.)	11-21091	
Fabric sanding disc 500 mm, velcro fastener - Grit 120 (5 pcs.)	11-21092	
Fabric sanding disc - set 500 mm, velcro fastener	11-21093	
Grit 60 / 80 / 100 / 120 (each 2 pcs.)		
Dust collector MSA 750	56-1085	
Alu-tube diam. 100 mm, extendable to 5 m	12-1087	





TS 510 Vario

# Sanding machines

### Belt and disc sanding BTS 510 Vario machine

NEW

- For optimal use of sanding disc the sanding table is mounted below the middle
- Includes frequency converter for stepless speed settings to allow ideal adjustment to each workpiece
- Machine base complete with lockable tool storage
- Individually tiltable sanding arm with dust extraction outlet
- Serially with integrated extraction for optimal working conditions and clean air at work
- Heavy machine base in torsion-free construction
- Grey cast-iron table features T-slot for mounting of mitre fence
- Powerful motor guarantees best results, even when operated continously



Low space requirement thanks to the suction integrated in the base

> Integrated extraction





#### Standard accessories:

- Sanding disc Grit 60
- Velcro fastener
  Sanding belt Grit 100
  Mitre fence

- Frequency inverter
  Integrated extraction

#### Technical dat RTS 510 Vari

	DIS SIV Vario
Sanding belt	2000 x 50 mm
Sanding disc	500 mm
Table size	635 x 305 mm
Table tiltable	0° to +45°
Working height	1020 mm
Speed, stepless	400 - 2800 rpm
Dust extraction outlet	100 mm
Motor power output S1 100%	2,2 kW
Motor power input S <sub>6</sub> 40%	3,0 kW
Voltage	400 V
Width	1080 mm
Depth	1020 mm
Height	1600 mm
Weight approx.	197 kg
Art. no.	05-1065

### **Optional accessories:**

Sanding discs see page 41	
Fabric sanding belt 2000 x 50 mm - Grit 40 (10 pcs.)	49-1051
Fabric sanding belt 2000 x 50 mm - Grit 60 (10 pcs.)	49-1052
Fabric sanding belt 2000 x 50 mm - Grit 80 (10 pcs.)	49-1053
Fabric sanding belt 2000 x 50 mm - Grit 100 (10 pcs.)	49-1054
Fabric sanding belt 2000 x 50 mm - Grit 120 (10 pcs.)	49-1055
Fabric sanding belt 2000 x 50 mm - Grit 150 (10 pcs.)	49-1055A
Fabric sanding belt 2000 x 50 mm - Grit 180 (10 pcs.)	49-1055B
Fabric sanding belt-set 2000 x 50 mm -	
Grit 40/60/80/100/120/150/180 (each 2 pcs.)	49-1056

Art. no.

excl. VAT



## **Brush deburring machines**

The BES 250 / BES 250-2 brush deburring machine is ideal for deburring the inside and outside edges of profiles and flat materials. The rapidly rotating wire brush creates slightly rounded edges without burrs or counter-burrs in one work pass.

- Rotor features ball bearings to ensure smooth operation and long life-span
- Ideal for deburring cut edges, derusting metal surfaces, removing paintwork,...
- Complete with dust port (Ø 75 mm) to allow for connection to dust collector
- Powerful and low noise drive motor
- High quality manufacturing ensures long life span
- Solid and torsion-free machine housing guarantees smooth run
   Standard with 2-speed motor (1400 / 2800 rpm BES 250 2)



High protection against flying sparks through big dimensioned protective glass





#### Standard accessories:

- Steel brush wheel
- Spark protection
- Workpiece support

\*without stand

• 2-speed-motor (BES 250 - 2)

Technical data	BES 250	BES 250 - 2
Steel brush wheel	250 x 60 mm	250 x 60 mm
Bore	50 mm	50 mm
Wire strength	0,3 mm	0,3 mm
Speed	1400 rpm	1400 / 2800 rpm
Dust extraction outlet	75 mm	75 mm
Motor power output S1 100%	2,2 kW	1,5 / 2,2 kW
Motor power input S6 40%	3,0 kW	2,1 / 3,0 KW
Voltage	400 V	400 V
Width	460 mm	460 mm
Depth	420 mm	420 mm
Height*	380 mm	480 mm
Weight approx.	38 kg	38 kg
Art. no.	05-1193	05-11930



#### **Optional accessories:**

Steel brush wheel Ø 250 x 60 mm, Ø 50 mm Fleece sanding disc Ø 250 x 60 mm, Ø 50 mm Stand BF 0 with chip tray Stand UGA 1 with aspiration Art. no. excl. VAT 05-1835 05-18460 56-1004 56-10481



### **Universal tool** grinding machine

# **UWS 300**

- For grinding of various tools, e.g. drills, milling cutters, turning tools etc.
- Large number of standard accessories
- Solid construction for vibration-free run
- Ergonomically arranged control elements
- Headstock adjustable in height and tiltable (-45° to +45°)
- Various application areas increase productivity
- Table can be tilted for conical grinding operations and scale allows adjustment to desired position





Metric shell end mill

Twist drill

### Standard accessories:

- Adjustable table end stops
- Center 60°
- 1 Corundum grinding wheel type B, 150 x 32 mm
  1 Corundum cup grinding wheel type A, 150 x 50 x 32 mm
  1 Diamond cup grinding wheel type A, 150 x 30 x 32 mm
  Lathe tool grinding attachment

- Clamping mandrel for milling cutter 22, 27, 32 mm
- Diamond dressing stone
  LED working light
  Left and right turning

- Tools

Technical data **UWS 300** Workpiece diameter max. 260 mm Table size 490 x 130 mm Table longitudinal travel 280 mm 195 mm Table cross travel -40° to +40° Grinding head vertically tiltable Grinding head horizontally tiltable -45° to +45° Speed grinding spindle 2800 rpm 0,55 kW Motor power Voltage 400 V Machine dimension (W x D x H)\* 750 x 570 x 790 mm Weight approx. 137 kg 05-13650 Art. no.

\* without stand

Turning tool

End mill outer spiral cutting edge



Ball end mill



End mill face side



Standard accessories





The universal tool grinding machine UWS 300 features a variety of applications for professional users, requiring minimum space. The wide range of optional accessories guarantees a maximum of performance.

# UWS 300



Drill bit - screw tap grinding attachment 50K, grinding range: 3 - 32 mm (optional).

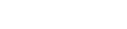


End mill cutter grinding attachment 50D, grinding range: 3 - 25 mm (optional).



Spiral mill - ball cutter grinding attachment 50E, grinding range: 6 - 25 mm (optional).





<b>.</b> .	
Optional accessories:	Art. no.
Spiral mill - ball cutter grinding attachment 50E	05-1366
Drill bit - screw tap grinding attachment 50K	05-13660
End mill cutter grinding attachment 50D	05-13661
Tailstock 50J	05-13662
Corundum cup grinding wheel type A	05-13663
Corundum grinding wheel type B	05-13664
Diamond cup grinding wheel type A	05-13665



BERNARDO® www.bernardo.at

Stand

56-1035

### **Universal tool** grinding machine

## UWS 350

- For grinding of various tools, e.g. drills, milling cutters, turning tools etc.
- Large number of standard accessories
- Solid construction for vibration-free run
- Ergonomically arranged control elements
- Headstock adjustable in height and tiltable (-45° to +45°)
- Drive unit with 3-jaw chuck (Ø 80 mm) for shaft grinding Various application areas increase productivity
- Table can be tilted for conical grinding operations and scale allows adjustment to desired position



Metric shell end mill



Ball end mill



End mill outer spiral cutting edge



Twist drill



End mill face side

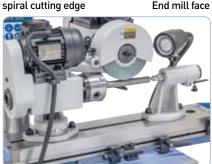


Turning tool



60 mm 40 x 130 mm 30 mm 95 mm
30 mm 95 mm
95 mm
15° to +45°
15° to +45°
000 rpm
,55 kW
00 V
35° to +35°
60°
300 rpm
0 W
00 V
70 x 650 x 800 mm
97 kg
5-13651

\* without stand



#### Shaft grinding

#### Standard accessories:

- Tailstock
- Adjustable table end stops
- Center 60°
- 1 Corundum grinding wheel type B, 150 x 32 mm 1 Corundum cup grinding wheel type B, 150 x 32 mm
  1 Diamond grinding wheel type B, 150 x 32 mm
  1 Diamond grinding wheel type B, 150 x 32 mm
  Drive unit with 3-jaw chuck diam. 80 mm
  Lathe tool grinding attachment

- Clamping mandrel for milling cutter 22, 27, 32 mm
- Diamond dressing stone
- LED working light
- Left and right turning • Tools



Drive unit with 3-jaw chuck diam. 80 mm, ideal for shaft grinding (standard).



Spiral mill - ball cutter grinding attachment 50E, grinding range: 6 - 25 mm (optional).





**Big range of** 

The universal tool grinding machine UWS 350 features a variety of applications for professional users, requiring minimum space. The wide range of optional accessories guarantees a maximum of performance.

# UWS 350





### **Belt and disc sanding** machine

# BDS 75 BDS 75-2

- Graphite coating on face grinder increases sliding capacity of sanding belt
- High belt speed ensures excellent grinding performance
- Wide range of applications such as contour, surface and cylindrical grinding
- Quick adjustment from vertical to horizontal grinding
- Solid and torsion-free machine housing guarantees smooth run
- Efficient deburring of edges, buffing of welding seams
- Sanding disc with Velcro fastener, ideal for multiple change of grit
- Model BDS 75-2 comes with 2 speed settings and adjustable workpiece support
- Sanding belt is easy to change, manual adjustment of belt tension



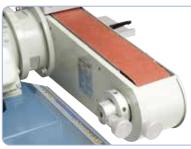
Regulating screws ensure

convenient adjustment of parallel belt run.



Sanding machines

Tiltable sanding disc table comes complete with adjustable fence stop.



Large face sanding area with workpiece fence.

### Standard accessories:

- Sanding belt grit 80
- Sanding disc grit 80
  Spark protection (BDS 75-2)
- Sanding and supporting table
- Graphite coating
  Dust extraction outlet
  2-speed switch

Technical data	BDS 75	BDS 75-2
Sanding belt	75 x 1180 mm	75 x 1180 mm
Belt speed	11 m/sec.	11 / 22 m/sec.
Belt sanding table	280 x 80 mm	280 x 80 mm
Belt sanding table tiltable	0° to 90°	0° to 90°
Sanding disc diam.	150 mm	150 mm
Sanding disc table	150 x 130 mm	150 x 130 mm
Sanding disc table tiltable	0° to 45°	0° to 45°
Dust extraction outlet	50 mm	50 mm
Motor power output S1 100%	1,1 kW	1,5 / 1,8 kW
Motor power input S <sub>6</sub> 40%	1,5 kW	2,1 / 2,5 kW
Voltage	400 V	400 V
Machine dimension (W x D x H)	470 x 720 x 520 mm	580 x 680 x 765 mm
Weight approx.	65 kg	69 kg
Art. no.	05-1197	05-1198

00 [sunkakee 30375 Stepless tilt of face grinding table from 0° to 90°.

303 75



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The belt and disc sanding machines BDS 75 and BDS 75-2 are universal in use eg, deburring, surface and contour grinding. These models are perfect for grinding of shapes and materials of all kind among professionals in workshops as well as advanced amateurs.

# BDS 75 BDS 75-2



Powerful motor and protective switch in accordance with IP 54 standards.



Complete with integrated dust port below grinding table which tilts up to 45°.



Model BDS 75-2 comes complete with adjustable workpiece support and spark protection.



**Best** 

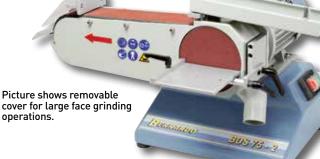
Price





Model BDS 75-2 **Belt speed** 

11 / 22 m/sec.



Optional accessories:	Art. no.	excl. VAT
Fabric sanding belt 1180 x 75 mm - grit 40 (10 pcs.)	49-0964	
Fabric sanding belt 1180 x 75 mm - grit 60 (10 pcs.)	49-0965	
Fabric sanding belt 1180 x 75 mm - grit 80 (10 pcs.)	49-0966	
Fabric sanding belt 1180 x 75 mm - grit 100 (10 pcs.)	49-0967	
Fabric sanding belt 1180 x 75 mm - grit 120 (10 pcs.)	49-0968	
Fabric sanding belt set 1180 x 75 mm -		
Grit 40 / 60 / 80 / 100 / 120 (each 2 pcs.)	49-0969	
Belt cleaner	11-2175	
Den dicarier	11 21/0	

Complete with 2-step switch for 2 speed settings, ideal for grinding of stainless steel and aluminium. (BDS 75-2)

### **Optional accessories:**

Sanding disc diam. 150 mm - grit 60 (10 pcs.), velcro fastener	11-2121A
Sanding disc diam. 150 mm - grit 80 (10 pcs.), velcro fastener	11-2122A
Sanding disc diam. 150 mm - grit 100 (10 pcs.), velcro fastener	11-2120A
Sanding disc diam. 150 mm - grit 120 (10 pcs.), velcro fastener	11-2123A
Sanding disc diam. 150 mm - grit 150 (10 pcs.), velcro fastener	11-2124A
Sanding disc set diam. 150 mm -	11-2124B
G60 / 80 / 100 / 120 / 150 (each 2 pcs.), velcro fastener	
Velcro fastener diam. 150 mm	11-2132

305 73-2



Stackarbo

excl. VAT

Art. no.

### **Belt sanding** machines

# BS 100 x 1220 S BS 100 x 1220 S-2

- Balanced discs ensure vibration-free run
- BS 100 x 1220 S-2 comes complete with 2 speed settings, optimal for grinding of stainless steel
- Time-efficient chamfering of edges, fettling of welded seams
- Motor protective switch according to IP 54 including undervoltage release
- Powerful drive and belt speed
- User-friendly belt change, quick and easy
- Large grinding surface, adjustable fence for universal use
- Fine adjustment for parallel belt run as standard
- Solid and vibration-free construction
- Machine base included



Sanding machines



High protection against flying sparks through big dimensioned protective glass

### Standard

accessories:

- Sanding belt grit 80
- Workpiece fence Dust extraction outlet
- Motor protective switch
- User manual
  Foldable protective glass
  Machine base
- Sanding and support table
- Separate emergency stop switch

Technical data	BS 100 x 1220 S	BS 100 x 1220 S-2
Belt dimensions	100 x 1220 mm	100 x 1220 mm
Belt speed	19 m/sec.	9,5 / 19 m/sec.
Contact disc Ø x W	125 / 100 mm	125 / 100 mm
Belt sanding table	285 x 105 mm	285 x 105 mm
Dust extraction outlet	2 x 75 mm	2 x 75 mm
Motor power output S1 100%	1,5 kW	1,0 / 1,5 kW
Motor power input S6 40%	2,2 kW	1,35 / 2,2 kW
Voltage	230 V or 400 V	400 V
Length	690 mm	690 mm
Width	400 mm	400 mm
Height	940 mm	940 mm
Weight approx.	41 kg	41 kg
Art. no.	05-1236 (400 V)	05-1238
	05-1237 (230 V)	

Optional accessories:	Art. no.	excl. VAT
Dust collector MSA 300 (for wall mounting)	56-1087	
Connector 100 mm inside	12-1038	
Reducer 100 mm inside to 80 mm inside	12-1039	
Branch connection with slider 100 – 100 / 100 mm	12-1040	
Alu-tube diam. 100 mm, extendable to 5 m	12-1087	
Fabric sanding belt 1220 x 100 mm - Grit 40 (10 pcs.)	49-1011A	
Fabric sanding belt 1220 x 100 mm - Grit 60 (10 pcs.)	49-1011	
Fabric sanding belt 1220 x 100 mm - Grit 80 (10 pcs.)	49-1012	
Fabric sanding belt 1220 x 100 mm - Grit 100 (10 pcs.)	49-1013	
Fabric sanding belt 1220 x 100 mm - Grit 120 (10 pcs.)	49-1013A	
Fabric sanding belts-Set 1220 x 100 mm -		
Grit 40 / 60 / 80 / 100 / 120 (each 2 pcs.)	49-1014	
Belt cleaner	11-2175	



### Model BS 100 x 1220 S-2

Belt speed 9,5 / 19 m/sec. Voltage 400 V Art. no. 05-1238

Onti	ona	accessories:

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### **Belt sanding** machines

# MS 75 x 2000 MS 150 x 2000



- Workpiece fence
- Dust extraction outlet
- Stand
- Separate emergency stop switch

Technical data	MS 75 x 2000 S	MS 150 x 2000 S
Belt dimensions	75 x 2000 mm	150 x 2000 mm
Belt speed	29 m/sec.	29 m/sec.
Contact disc Ø x W	200 / 80 mm	200 / 155 mm
Belt sanding table	460 x 75 mm	460 x 150 mm
Dust extraction outlet	100 mm	100 mm
Motor power output S1 100%	3,0 kW	4,0 kW
Motor power input S6 40 %	4,0 kW	5,5 kW
Voltage	230 V or 400 V	400 V
Length	1080 mm	1080 mm
Width	440 mm	520 mm
Height	1000 mm	1000 mm
Weight approx.	66 kg	84 kg
Art. no	05-12459 (230 V)	05-1248
	05-1246 (400 V)	

Optional accessories:	Art. no.	excl. VAT
-		0/10/11 1/11
Dust collector MSA 750	56-1085	
Alu-tube diam. 100 mm, extendable to 5 m	12-1087	
Fabric sanding belt 2000 x 75 mm – Grit 40 (10 pcs.)	49-1020	
Fabric sanding belt 2000 x 75 mm – Grit 60 (10 pcs.)	49-1021	
Fabric sanding belt 2000 x 75 mm – Grit 80 (10 pcs.)	49-1022	
Fabric sanding belt 2000 x 75 mm – Grit 100 (10 pcs.)	49-1023	
Fabric sanding belt 2000 x 75 mm – Grit 120 (10 pcs.)	49-1024	
Fabric sanding belts-Set 2000 x 75 mm –	49-1024A	
Grit 40 / 60 / 80 / 100 / 120 (each 2 pcs.)		
Fabric sanding belt 2000 x 150 mm – Grit 40 (10 pcs.)	49-1025	
Fabric sanding belt 2000 x 150 mm – Grit 60 (10 pcs.)	49-1026	
Fabric sanding belt 2000 x 150 mm – Grit 80 (10 pcs.)	49-1027	
Fabric sanding belt 2000 x 150 mm – Grit 100 (10 pcs.)	49-1028	
Fabric sanding belt 2000 x 150 mm – Grit 120 (10 pcs.)	49-1029	
Fabric sanding belts-Set 2000 x 150 mm –	49-1030	

Grit 40 / 60 / 80 / 100 / 120 (each 2 pcs.)



## **Belt sanding machines**

The MS-models are very economical and cost effective belt sanding machines. The powerful motor and the robust construction makes these models ideal for professional workshops and in small series production.

Both models comes complete with 2 speed settings, optimal for grinding of stainless steel

Powder coated

- Universal use for grinding of edges, surfaces and round grinding
- Graphite coating on grinding surface increases sliding capacity of sanding belt
- Spring loaded device ensures consistent belt tension
- User-friendly belt change, fast and straightforward
  High belt speed guarantees brilliant sanding performance
- Quick adjustment for horizontal and inclined position
- Universal use for trade and industry
- Large face grinding surface with protective cover
- Includes fine adjustment for parallel belt run



Comes complete with dust extraction outlet (diameter 100 mm).



Contact disc 70° - 74° Shore A, ideal for roughing.

#### Optimal price-performance ratio

Separate emergency stop switch and big dimensioned protective glas for increased safety

00/



**Top quality** 



Includes quick clamping system for fast belt change.

Technical data	MS 75 x 2000 S-2	MS 150 x 2000 S-2
Belt dimensions	75 x 2000 mm	150 x 2000 mm
Belt speed	14,5 / 29 m/sec.	14,5 / 29 m/sec.
Contact disc Ø x W	200 / 80 mm	200 / 155 mm
Belt sanding table	460 x 75 mm	460 x 150 mm
Dust extraction outlet	100 mm	100 mm
Motor power output S1 100%	1,5 / 2,2 kW	2,1 / 2,8 kW
Motor power input S6 40 %	2,2 / 3,0 kW	2,8 / 3,6 kW
Voltage	400 V	400 V
Length	1080 mm	1080 mm
Width	440 mm	520 mm
Height	1000 mm	1000 mm
Weight approx.	67 kg	85 kg
Art. no.	05-1247	05-1249

### Standard accessories:

- Sanding belt grit 80
- Folding protective glass
  Sanding and supporting table
  Workpiece fence

- Dust extraction outlet
- · Motor protective switch
- Rubber coated grinding roller Graphite coating
- Stand
- Separate emergency stop switch





## MS 75 x 2000 S-2 MS 150 x 2000 S-2



Tiltable protective cover increases grinding surface.

Same and

000





Sanding machines

Large contact and drive wheel



Complete with 2 belt speeds



Dust hood can easily be removed.

Continuous face grinding surface allows ideal grinding of long workpieces.

Optional accessories MS 2	75 x 2000 S-2:	Art. no.	excl. VAT
Dust collector MSA 750		56-1085	
Alu-tube diam. 100 mm, ex	tendable to 5 m	12-1087	
Fabric sanding belt 2000 x	75 mm - Grit 40 (10 pc	s.) 49-1020	
Fabric sanding belt 2000 x	75 mm - Grit 60 (10 pc	s.) 49-1021	
Fabric sanding belt 2000 x	75 mm - Grit 80 (10 pc	s.) 49-1022	
Fabric sanding belt 2000 x	75 mm - Grit 100 (10 p	cs.) 49-1023	
Fabric sanding belt 2000 x	75 mm - Grit 120 (10 p	cs.) 49-1024	
Fabric sanding belts-Set 20	000 x 75 mm -		
Grit 40 / 60 / 80 / 100 / 12	20 (each 2 pcs.)	49-1024A	
Surface conditioning belt 20	000 x 75 mm, rough	49-1017	
Surface conditioning belt 20	000 x 75 mm, medium	49-1018	
Surface conditioning belt 20	000 x 75 mm, fine	49-1019	

Optional accessories MS 150 x 2000 S-2:	Art. no.	excl. VAT
Dust collector MSA 750	56-1085	
Alu-tube diam. 100 mm, extendable to 5 m	12-1087	
Fabric sanding belt 2000 x 150 mm - Grit 40 (10 pcs.)	49-1025	
Fabric sanding belt 2000 x 150 mm - Grit 60 (10 pcs.)	49-1026	
Fabric sanding belt 2000 x 150 mm - Grit 80 (10 pcs.)	49-1027	
Fabric sanding belt 2000 x 150 mm - Grit 100 (10 pcs.)	49-1028	
Fabric sanding belt 2000 x 150 mm - Grit 120 (10 pcs.)	49-1029	
Fabric sanding belts-Set 2000 x 150 mm -		
Grit 40 / 60 / 80 / 100 / 120 (each 2 pcs.)	49-1030	
Surface conditioning belt 2000 x 150 mm, rough	49-1031	
Surface conditioning belt 2000 x 150 mm, medium	49-1032	
Surface conditioning belt 2000 x 150 mm, fine	49-1033	



# Sanding machines

### Belt sanding machines with integrated extraction

- Serially with integrated extraction for optimal working conditions and clean air at work
- Both models comes complete with 2 speed settings, optimal for grinding of stainless steel

**Top quality** 

- Universal use for grinding of edges, surfaces and round grinding
- Graphite coating on grinding surface increases sliding capacity of sanding belt
- Spring loaded device ensures consistent belt tension
- User-friendly belt change, fast and straightforward
- High belt speed guarantees brilliant sanding performance
- Universal use for trade and industry
- Large face grinding surface with protective cover



Serially with integrated extraction incl. filter bag



Contact disc 70° - 74° Shore A, ideal for roughing.

#### Optimal price-performance ratio

Technical data	MS 75 x 2000 DC-2	MS 150 x 2000 DC-2
Belt dimensions	75 x 2000 mm	150 x 2000 mm
Belt speed	18 / 36 m/sec.	18 / 36 m/sec.
Contact disc Ø x W	200 / 75 mm	200 / 150 mm
Belt sanding table	500 x 75 mm	500 x 150 mm
Dust extraction outlet	2x 100 mm	2x 100 mm
Suction power	520 m <sup>3</sup> /h	520 m <sup>3</sup> /h
Speed suction	2780 rpm	2780 rpm
Motor power suction	0,37 kW	0,37 kW
Motor power output S1 100%	2,5 / 3,3 kW	2,5 / 3,3 kW
Motor power input S6 40 %	3,3 / 4,3 kW	3,3 / 4,3 kW
Voltage	400 V	400 V
Length	1130 mm	1130 mm
Width	520 mm	600 mm
Height	1130 mm	1130 mm
Weight approx.	104 kg	116 kg
Art. no.	05-1258	05-1260

Separate emergency stop switch and big dimensioned protective glas for increased safety



**NEW** 

**Powder coated** 

Standard accessories: • Sanding belt grit 80

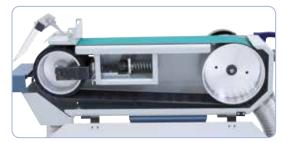
- Sanding bett grit 80
  Folding protective glass
  Integrated extraction
  2x Alu-tube diam. 100 mm
  Filter bag
  Sanding and supporting table
  Workpiece fence
- Motor protective switch
- Rubber coated grinding roller
- Graphite coating

 Separate emergency stop switch Stand





## MS 75 x 2000 DC-2 MS 150 x 2000 DC-2



Oversize contact and drive wheel



Complete with 2 belt speeds

Integrated extraction Includes quick clamping system for fast belt change.



18 / 36 m/sec.



NEW



excl. VAT

Continuous face grinding surface allows ideal grinding of long workpieces.

Optional accessories MS 75 x 2000 DC-2:	Art. no.	excl.
Fabric sanding belt 2000 x 75 mm - Grit 40 (10 pcs.)	49-1020	
Fabric sanding belt 2000 x 75 mm - Grit 60 (10 pcs.)	49-1021	
Fabric sanding belt 2000 x 75 mm - Grit 80 (10 pcs.)	49-1022	
Fabric sanding belt 2000 x 75 mm - Grit 100 (10 pcs.	) 49-1023	
Fabric sanding belt 2000 x 75 mm - Grit 120 (10 pcs.	) 49-1024	
Fabric sanding belts-Set 2000 x 75 mm -		
Grit 40 / 60 / 80 / 100 / 120 (each 2 pcs.)	49-1024A	
Surface conditioning belt 2000 x 75 mm, rough	49-1017	
Surface conditioning belt 2000 x 75 mm, medium	49-1018	
Surface conditioning belt 2000 x 75 mm, fine	49-1019	

Optional accessories MS 150 x 2000 DC-2:	Art. no.
Fabric sanding belt 2000 x 150 mm - Grit 40 (10 pcs.)	49-1025
Fabric sanding belt 2000 x 150 mm - Grit 60 (10 pcs.)	49-1026
Fabric sanding belt 2000 x 150 mm - Grit 80 (10 pcs.)	49-1027
Fabric sanding belt 2000 x 150 mm - Grit 100 (10 pcs.)	49-1028
Fabric sanding belt 2000 x 150 mm - Grit 120 (10 pcs.)	49-1029
Fabric sanding belts-Set 2000 x 150 mm -	
Grit 40 / 60 / 80 / 100 / 120 (each 2 pcs.)	49-1030
Surface conditioning belt 2000 x 150 mm, rough	49-1031
Surface conditioning belt 2000 x 150 mm, medium	49-1032
Surface conditioning belt 2000 x 150 mm, fine	49-1033



VAT

# Sanding machines

### **Combined belt and pipe** sanding machine

# KBR 100 x

- Spring balanced clamping device allows for continuous belt tension
- Comes complete with round grinding device for grinding diameters from 20 76 mm
- Quick and easy grinding angle adjustment
- Graphite coating on face grinding area increases sliding capacity of sanding belt
- Large face grinding area with protective cover
- Low speed setting (15 m/sec) allows for optimal grinding of stainless steel and aluminium

Suitable for grinding of pipes and profiles

2 speed settings

(serially)

- User-friendly belt change, straightforward and guick
- Fast and easy change of grinding rolls no tools required
- Various grinding angles from 30° to 90° are easily achieved
- Short processing times compared to milling



The 400 x 100 mm face grinding support increases the application range significantly



Grinding device swivels from 30° to 90°



Backside with workpiece support and large dimensioned protective glass



1. Switch for pipe / belt grinding 2. Switch for speed setting

Technical data	KBR 100 x 2000 Duo
Belt dimension	100 x 2000 mm
Belt speed	15 / 30 m/sec.
Grinding diameter	20 - 76 mm
Carriage adjustment	30° - 90°
Belt sanding table	400 x 100 mm
Contact disc Ø x W	195 x 100 mm
Dust extraction outlet	2 x 75 mm
Speed	1420 / 2660 rpm
Motor power	2,5 / 3,3 kW (400 V)
Machine dimension (W x D x H)	750 x 1400 x 1200 mm
Weight approx.	148 kg
Art. no.	05-1312
Belt speed         Grinding diameter         Carriage adjustment         Belt sanding table         Contact disc Ø x W         Dust extraction outlet         Speed         Motor power         Machine dimension (W x D x H)         Weight approx.	15 / 30 m/sec.         20 - 76 mm         30° - 90°         400 x 100 mm         195 x 100 mm         2 x 75 mm         1420 / 2660 rpm         2,5 / 3,3 kW (400 V)         750 x 1400 x 1200 mm         148 kg

#### Standard accessories:

- Sanding belt grit 36
- Rubber coated grinding roller
  1 pc. grinding wheel for 1 1/4" pipe (42/44 mm pipe)
  2 pcs. foldable protective covers
- Sanding and supporting table • 2 x dust extraction outlet diam. 75 mm
- 2 pcs. chip tray
- Graphite coating
  Motor protective switch



3 in 1

**Belt sanding** Pipe sanding Face grinding

Adjustable grinding angle from 30° to 90°

Easily detachable chip tray



The KBR 100 x 2000 DUO is a multifunctional grinding machine for grinding of pipes and end of profiles at the front, grinding of edges, face and round grinding on reverse side as well as face grinding on the machine surface.

## KBR 100 x 2000 DUO



Optional accessories:	Art. no.	excl
Dust collector MSA 750	56-1085	
Reducer 100 mm inside to 80 mm inside	12-1039	
Branch connection with slider 100 – 100 / 80 mm	12-10400	
Alu-tube diam. 80 mm, extendable to 5 m	12-1086	
Fabric sanding belt 2000 x 100 mm - grit 40 (10 pcs.)	49-1039	
Fabric sanding belt 2000 x 100 mm - grit 60 (10 pcs.)	49-1040	
Fabric sanding belt 2000 x 100 mm - grit 80 (10 pcs.)	49-1041	
Fabric sanding belt 2000 x 100 mm - grit 100 (10 pcs.)	49-1042	
Fabric sanding belt 2000 x 100 mm - grit 120 (10 pcs.)	49-1043	
Fabric sanding belt set 2000 x 100 mm -		
grit 40 / 60 / 80 / 100 / 120 (each 2 pcs.)	49-1044	
Surface conditioning belt 2000 x 100 mm, rough	49-1036	
Surface conditioning belt 2000 x 100 mm, medium	49-1037	
Surface conditioning belt 2000 x 100 mm, fine	49-1038	

### **Optional accessories:**

Grinding wheel for 1/2" pipe\* Grinding wheel for 21,3 mm pipe\* Grinding wheel for 3/4" pipe\* Grinding wheel for 26,9 mm pipe\* Grinding wheel for 1" pipe\* Grinding wheel for 1 1/4" pipe\* Grinding wheel for 1 1/4" pipe\* Grinding wheel for 42,4 mm pipe\* Grinding wheel for 42,4 mm pipe\* Grinding wheel for 48,3 mm pipe\* Grinding wheel for 2" pipe\* Grinding wheel for 20,3 mm pipe\* Grinding wheel for 2 1/2" pipe\* Grinding wheel for 76,1 mm pipe\*

Art. no.	excl. VAT
05-1313	
05-1313	
05-13130	
05-13130	
05-13131	
05-13131	
05-13132	
05-13132	
05-13133	
05-13133	
05-13134	
05-13134	
05-13135	
05-13135	
05-15155	



. VAT

### **Dust collector for metal chips**

The dust collector MSA 300 is particularly suitable for extraction of metal dust and chips at bench grinding machines, metal belt sanders etc. With the serially bracket this model can be mounted on the wall or directly on the machine base. The optionally available branch connection with slider allows the connection on 2 machines at the same time.

- Care for ideal production conditions and clean air at the workplace
- High-quality powder coating creates scratch-resistant and shock-proof surface
- Optimal fan design guarantees top efficiency and smooth run
- Ideal for metal working factories, mechanical workshops,...
- Statically and dynamically balanced steel fan wheel
- Easy mounting through serially bracket
- Simultaneous operation of several machines possible





Price

Top

MSA 300

Optionally available: Branch connection with slider to connect 2 machines at the same time

Wooven fine-filter bag keep dust inclosed.



### Standard accessories:

- Filter bag
- On-Off-switch
- Adapter round / square
- Bracket

Technical data	MSA 300
Capactiy	870 m³/h
Dust extraction outlet	100 mm
Outlet diameter	112 mm
Motor power	0,75 kW
Voltage	230 V
Dimension without dust bag	430 x 400 x 420 mm
Dimension with dust bag	430 x 400 x 780 mm
Weight approx.	15,6 kg
Art. no.	56-1087

Pictured with various sanding machines, stands and connection parts, not included in standard accessories.

#### **Optional accessories:**

Filter bag	12-0992
Adapter A100/70 - A65/45 - A40/40 - A35/35	12-1034
Connector 100 mm inside	12-1038
Reducer 100 mm inside to 80 mm inside	12-1039
Branch connection with slider 100 – 100 / 100 mm	12-1040
Alu-tube diam. 80 mm, extendable to 5 m	12-1086
Alu-tube diam. 100 mm, extendable to 5 m	12-1087
Hose clamp for tube 100 mm	12-1109
Grounding set ES 1	12-1140
Automatic start-up ALV 2 / M 230 - 230 V	12-1152
Automatic start-up ALV 10 / 1 M	12-1150

Art. no.

excl. VAT



### Stand model D with extraction for metal chips

# **MSA 500**

- State-of-the-art design allows for optimal working conditions and clean air at work
- Complete with large chip tray, easy to empty
- Equipped with practical water tank to allow for cooling of processed workpiece
- Optimal fan design guarantees top efficiency and smooth run
- For use at metal sanding machines such as belt sanding machines, bench grinder,...
- Statically and dynamically balanced steel fan wheel
- Requires minimum space but features top performance



On/Off switch in accordance with IP 54 features undervoltage release. Powerful drive motor, particularly smooth-running



included in standard accessories

#### Standard accessories:

- Filter bag
  Dust and chip tray
  2x Alu tube diam. 100 mm
  2x Reduction 100 / 35 mm
- Y-Adapter 125 mm / 2 x 100 mm
- Water tank

**Optional accessories:** Filter bag

Art. no. excl. VAT 12-0989

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### **Dust collector for metal chips**

The dust collector MSA 750 is particularly suitable for extraction of metal dust and chips at bench grinding machines, metal belt sanders etc. This model is predominantely used by mechanical workshops and metal working factories.

Extractable chip drawer at the front of machine
Optimal fan design guarantees top efficiency and smooth run
Serially equipped with 2 dust extractor outlets Ø 100 mm
Statically and dynamically balanced steel fan wheel
High-quality powder coating creates scratch-resistant and shock-proof surface
Requires minimum space but features top performance
Simultaneous operation of several machines possible
Powder coated
Easy mptying of sanding dust at the front of machine.

Standard accessories:

**Best** 

price

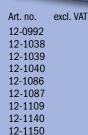
- Filter bag
- Chip drawer
- Carry handles

Technical data	MSA 750
Capacity	1100 m³/h
Inlet diameter Ø	2 x 100 mm
Motor power	0,75 kW
Voltage	400 V
Dimension without dust bag	570 x 490 x 1180 mm
Dimension with dust bag	940 x 490 x 1180 mm
Weight approx.	36 kg
Art. no.	56-1085

Pictured with various sanding machines, not included in standard accessories.

### Optional accessories:

Filter bag
Connector 100 mm inside
Reducer 100 mm inside to 80 mm inside
Branch connection with slider 100 – 100 / 100 mm
Alu-tube diam. 80 mm, extendable to 5 m
Alu-tube diam. 100 mm, extendable to 5 m
Hose clamp for tube 100 mm
Grounding set ES 1
Automatic start-up ALV 10 / 1 M



**MSA 750** 



60

### Dust collector for metal chips with fine dust filter

# **MSA 1500**

**Powder coated** 

- State-of-the-art design allows for optimal working conditions and clean air at work
- Complete with large chip tray, easy to empty
- Optimal filtration of extracted air, circulated back into work space
- For use at metal sanding machines such as belt sanding machines, bench grinder,...
- Serially with carriage for increased mobility
- High-quality powder coating creates scratch-resistant and shock-proof surface
- Statically and dynamically balanced steel fan wheels
- Optimal fan design guarantees top effi ciency and smooth run
- Simultaneous operation of several machines possible
- Small space requirements due to compact design





Built-in fine dust filter with big surface

Extractable collecting tray



Standard accessories:

- Filter bag
  Fine dust filter (2 pcs.)
- Carriage
  Chip drawer
  Sliding handles

Easy handling

**BERNARDO**°

excl. VAT

Art. no.

Technical data **MSA 1500** 1500 m<sup>3</sup>/h Capacity Inlet diameter Ø 2 x 100 mm 1,5 kW Motor power Voltage 400 V 860 x 680 x 770 mm Dimension Weight approx. 72 kg 56-1086 Art. no.

121

**Optional accessories:** 

Fine dust filter (2 pcs.)	12-0991	
Filter bag	12-0990	
Connector 100 mm inside	12-1038	
Reducer 100 mm inside to 80 mm inside	12-1039	
Branch connection with slider 100 – 100 / 100 mm	12-1040	
Alu-tube diam. 80 mm, extendable to 5 m	12-1086	
Alu-tube diam. 100 mm, extendable to 5 m	12-1087	
Hose clamp for tube 100 mm	12-1109	
Grounding set ES 1	12-1140	
Automatic start-up ALV 10 / 1 M	12-1150	

Pictured with various sanding machines, not included in standard accessories



# Stands with extraction for metal chips

# UGA 1 UGA 2

Integrated cooling water tray

- Low space requirement thanks to the suction integrated in the base
- Including automatic start-up system, which means the suction switches on and off with the machine
- Extractable chip drawer at the back of machine
- Optimal fan design guarantees top efficiency and smooth run
- Requires minimum space but features top performance
- Optimal filtration of extracted air, circulated back into work space
- Standard with 230 V continuous supply (UGA 1)



Sanding machines



Easy emptying of sanding dust at the back of machine.

For connecting a 230 V machine with continuous supply as standard (UGA 1)



Technical data	UGA 1	UGA 2	
Capacity	190,8 m <sup>3</sup> /h	270,8 m³/h	
Dust extraction outlet	2 x 50 mm	2 x 60 mm	
Motor power	1,5 kW	2 x 1,5 kW	
Voltage	400 V	400 V	
Supporting area	340 x 420 mm	480 x 320 mm	
Height	805 mm	850 mm	
Weight approx.	35 kg	40 kg	
Art. no.	56-10481	56-10484	

### Standard accessories:

Easy handling

**BERNARDO** 

- Dust and chip tray
- 2x Alu tube
- Water tank
  Automatic start-up system
- Automatic start-up system

**Optional accessories:** Filter (10 pcs.) Art. no. excl. VAT 12-0988

Pictured with various sanding machines, not included in standard accessories.

### Downdraft table

The downdraft table BDT 1250 is suitable for collecting dust that occurs when grinding all types of parts manually or mechanically. Thanks to the extraction connection on both sides, the extraction table can be connected to an existing extraction system and the dust-containing air is extracted through the table surface.

- Suitable for sanding of any type of workpieces
- Complete with hinged side panels for longer workpieces
- Rubber table protection guarantees scratch-free work
- High-quality powder coating creates scratch-resistant and shock-proof surface
- Extraction connection on both sides for connecting to existing extraction systems
- For sanding edges with a stepped table support
- Stable, height-adjustable table support surface
- Downward airflow guarantees clean air in the workplace





Rubber coating on table Easy sanding of edges thanks to protects the workpiece from corrected table surface.



 Suction connection on both sides diam. 125 mm.



BDT 1250



**Powder coated** 



The side panels can be folded down to process long workpieces.



### NEW

#### Standard accessories:

- Rubber table protection
- Height adjustable work table

Technical data	BDT 1250
Table size	1235 x 605 mm
Table size stepped	1235 x 165 mm
Table height	760 - 1100 mm
Max. load capacity	250 kg
Dust extraction outlet	2 x 125 mm
Machine dimension (W x D x H)	1335 x 760 x 855* / 1195* mm
Weight approx.	52 kg
Art. no.	12-21950

\* minimum / maximum height



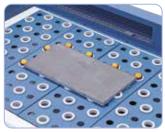


## **Downdraft tables** AT 1000 HM / AT 1500 HM

- State-of-the-art design allows for optimal working conditions and clean air at work
- Optimal filtration of extracted air, circulated back into work space
- Optimal fan design guarantees top efficiency and smooth run
- Suitable for sanding of any type of workpieces
- Extractable chip drawer at the front of machine • Complete with hinged side panels for longer workpieces
- Installed fan, additional dust collector not necessary
- Rubber table protection guarantees scratch-free work • Statically and dynamically balanced steel fan wheels



Rubber coating on table protects the workpiece from . scratches.



Standard with stops for positioning the workpiece.



Attention! The dust collector must be grounded at all time to reduce the risk of fire and explosion.

powder coated



BERNARDO

Technical data	AT 1000 HM	AT 1500 HM
Table size	1000 x 550 mm	1550 x 550 mm
Table height	825 mm	825 mm
Max. load capacity	200 kg	225 kg
Capacity max.	2500 m <sup>3</sup> /h	2x 2500 m <sup>3</sup> /h
Motor power	1,0 KW (1,5 HP)	2x 0,75 kW (2x 1,0 HP)
Voltage	230 V / 50 Hz	230 V / 50 Hz
Machine dimension (W x D x H)	1070 x 630 x 930 mm	1660 x 620 x 900 mm
Weight approx.	66 kg	105 kg
Art. no.	12-2196	12-2197

Standard accessories AT 1000 HM:

- On-Off switch
- 2x filter (wood / metal)
- Rubber table protection
- Chip drawer
  6x workpiece fence



Enuance AT 1500-IM

Sanding machines

The downdraft tables of the AT-series guarantee a clean work environment in single and small series production. A fan at the table allows for decent extraction of the sanding dust.

## AT 2000 HM



Through the lateral opening, the filtered air is added to the working space again.



Integrated filter (wood / metal) with large surface.



powder coated

Easy emptying of sanding dust at the front of machine.



Extraction of the sanding dust also to the rear - advantage at large plates.







Grounding set ES 1

12-2198

Art. no.

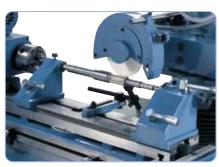
12-1140

# Sanding machines

### Universal grinding machine USM 500 with dust extractor

**BERNARDO**®

- Round, flat and tool grinding combined in one machine
- Heavy cast-iron construction allows vibration-free machining
- Special spindle bearing for precise sanding results
- Used in tool and die making, production as well as in training workshops
- Various application areas increase productivity
- Coolant device, central lubrication and dust extractor as standard
- Easy gear shifting allows quick speed change
- Hydraulic or manual longitudinal adjustment of table (in x-axis)
- Headstock adjustable in height and tiltable (-100° to +100°)

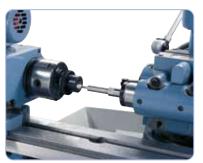


Longitudinal grinding

Technical data	USM 500	
Max. workpiece diameter	200 mm	
Distance between centers	500 mm	
Surface grinding	200 x 50 mm	
Outside grinding	Ø 5 - 50 x 400 mm	
Inside grinding	Ø 10 - 50 x 75 mm	
Max. workpiece weight	10 kg	
Headstock	0	
Tilting range	-90° to +90°	
Speed	110 / 200 / 300 rpm	
Spindle taper	MT 2	
Chuck diameter	100 mm	
Grinding headstock		
Tilting range	-100° to +100°	
Travel		
Cross	230 mm	
Vertical	210 mm	
Scale division vertical	0,01 mm	
Vertical adjustment per handwheel rotation		
Scale division cross	0,02 mm	
Cross adjustment per handwheel rotation	1 2 / 4 mm/rev.	
Sanding disc	200 x 20 x 75 mm	
Speed	2500 rpm	
Speed inside grinding spindle	13500 rpm	
Grindstone	Ø 26 x 20 x 6 mm	
	Ø 10 x 10 x 3 mm	
Working table		
Max. travel	480 mm	
Hydraulic longitudinal feed	0,01 - 6 m/min	
Table tilting range	-45° to +45°	
Taper of tailstock sleeve	MT 2	
Travel of tailstock sleeve	15 mm	
Total motor power	2,5 kW	
Motor power of sanding disc	1,1 kW	
Machine dimension (L x W x H)*	1500 x 1150 x 1400 mm	
Weight approx.	1300 kg	
Art. no.	05-1375	



Surface grinding



Inside round grinding



External cylindrical grinding

Surface grinding Internal cylindrical grinding External cylindrical grinding Tool grinding **Conical grinding** 

\* without dust collector and coolant device



The USM 500 universal grinding machine features a variety of applications for professional users, requiring minimum space. High user-friendliness and a wide range of standard accessories guarantees a maximum of performance.

# USM 500





# Cylindrical grinding machine

Sanding machines

# URS 500 N

Variable

spindle speed

- Table can be tilted for conical grinding operations and scale allows adjustment to desired position
- Spindle stock can be swivelled 180° for inside grinding operations
- Main spindle is mounted hydro-dynamically oil film prevents contact between spindle and bearing
- Longitudinal table guide and grinding spindle stock cross guide feature V- and flat guiding each
- Strong reinforcements and generously designed walls make the machine base
- resistant to temperature fluctuations and deformations
   Oil film between spindle and bearing reduces the vibrations to a minimum
- to achieve top results and high accuracy
- Stepless feed adjustment with selective programmable stop at end of each table movement
- Precisely adjusted spindle head and solid grinding spindle stock to achieve
- top processing results at various grinding operations
- Precisely polished and manually finished guideways in x- and y-axis
- Hydraulic or manual resetting of grinding spindle stock
- Longitudinal movement of table is either manually by handwheel or automatically by hydraulic feed
- Grinding spindle features bearings on both sides and adjustable sliding flat grids



Complete with 2-axis digital readout to guarantee work convenience and increase accuracy.

Technical data	URS 500 N
Distance between centers	500 mm
Center height	135 mm
Outside grinding diameter	8 - 200 mm
Max. workpiece weight	60 kg
Inside grinding diameter	13 - 100 mm
Inside grinding depth max.	125 mm
Table tilting range max.	+3° to -9°
Table longitudinal travel max.	600 mm
Table feed	0,1 bis 4 m/min
Man. table travel / hand turn	6 mm/rev.
Headstock	
Spindle speed, stepless	25 – 220 rpm
Spindle taper	MT 4
Tilting range spindle	90°
Grinding headstock	
Sanding disc	400 x 50 x 203 mm
Spindle speed	1670 rpm
Speed inside grinding spindle	20000 rpm
Tiltange range grinding headstock	+/- 30°
Travel of grinding head	200 mm
Scale division	0,005 mm
Tailstock	
Taper of tailstock sleeve	MT 4
Travel of tailstock sleeve	35 mm
Motor power	
Sinding spindle	4,0 kW
Working spindle	0,75 kW
Machine dimension (W x D x H)	2150 x 1450 x 1700 mi
Weight approx.	2170 kg
Art. no.	05-1370



The URS 500 N universal cylindrical grinding machine is suitable for outside grinding operations up to 200 mm in diameter. The machine comes complete with an inside grinding device to increase the application range significantly. Most commonly this model is used in machine construction, tool and mould shaping and in the production of small series.

# URS 500 N



Complete with inside grinding device.



For conical grinding operations the robust spindle head can be tilted up to 90°.



Essential control elements are clearly arranged on the front of the machine.



# Cylindrical grinding machine

Sanding machines



Including

digital readout

- Hydro-dynamically mounted main spindle, oil film prevents contact between spindle and bearing
- For conical grinding operations table can be tilted scale allows precise adjustment to desired position
- Guideways in x- and y-axis are precisely polished and manually finished
- Longitudinal table guide and grinding spindle stock cross guide each feature V- and flat guiding
- Achieve smooth results at various grinding operations due to the precisely adjusted spindle
- head and solid grinding spindle stock
  Strong reinforcements and generously designed walls make the machine base
- resistant to temperature fluctuations and deformations
- Oil film between spindle and bearing keeps the vibrations to a minimum to achieve top results and high accuracy
- Longitudinal movement of table is either manual (by hand wheel) or automatic (by hydraulic feed)

0

- Stepless feed adjustment with selective programmable stop at end of each table movement
- Hydraulic or manual repositioning of grinding spindle stock
- Grinding spindle features bearings on both sides and adjustable sliding flat grids
- Swivelling spindle stock (up to 180°) for inside grinding operations



Comes complete with digital 2-axis digital readout.

Technical data	URS 800 N		
Distance between centers	800 mm		
Center height	135 mm		
Dutside grinding diameter	8 – 200 mm	UpS-stord	
Max. workpiece weight	60 kg	Istencano distant	and the second se
Inside grinding diameter	13 – 100 mm		
Inside grinding depth max.	125 mm	0	
Table tilting range max.	+3° to -7°		
Table longitudinal travel max.	850 mm		
Table feed	0,1 bis 4 m/min		
Man. table travel / hand turn	6 mm/rev.		
Headstock		_	
Spindle speed, stepless	25 – 380 rpm	_	
Spindle taper	MT 4	_	
Filting range spindle	90°		
Grinding headstock		Standard accessories:	
Sanding disc	400 x 50 x 203 mm	<ul> <li>• 2-axis digital readout ES-12 H</li> </ul>	
Spindle speed	1670 rpm	<ul> <li>with LCD-display</li> </ul>	
Speed inside grinding spindle	20000 rpm	Grinding wheel	
Tiltange range grinding headstock	+/- 30°	<ul> <li>Grinding wheel flange</li> </ul>	
Travel of grinding head	200 mm	• 3-jaw chuck 200 mm	1
Scale division	0,005 mm	<ul> <li>Frequency inverter</li> <li>Open rest</li> </ul>	
Tailstock		Opennest     Oclosed rest	
Taper of tailstock sleeve	MT 4	Inside grinding device	
Travel of tailstock sleeve	35 mm	<ul> <li>LED machine light</li> </ul>	The state
Motor power		Balancing stand	
Sinding spindle	4,0 kW	<ul> <li>Balancing arbor</li> <li>2 dead centers</li> </ul>	A BOAR
Working spindle	0,75 kW	Coolant device	
Machine dimension (W x D x H)	2900 x 1450 x 1700 mm	Splash guard	
Weight approx.	2570 kg	Grinding wheel dresser	For conical grinding between
Art. no.	05-1371	<ul> <li>Workpiece carrier</li> <li>Tools</li> </ul>	centers the table can be ti from +3° bis ·



The URS 800 N universal cylindrical grinding machine features an excellent range of standard accessories which includes an inside grinding device and a 2-axis digital readout. Designed predominantly for model and tool making, this model is popular for the production of small series.

# **URS 800 N**



Spindle head tilts from 0° - 90° for conical grinding operations.



Clearly arranged and ergonomically positioned electronic control element.



Hydraulic tailstock features top accuracy and rigidity, foot pedal allows for movement.



Handwheel with scale (0.0025 mm) allows for manual cross movement of grinding spindle.



### **Cylindrical grinding** machines

## 1000 1500

- When conical grinding, the table can be swivelled to either side and exactly positioned by using the scale
- Oil film between bearing and spindle keeps vibrations at a minimum level, hence achieving outstanding results and top accuracy
- Precisely balanced spindle head and solid grinding head guarantees extraordinary results at any type of operation
- Strong reinforcements and solidly designed walls of the machine base makes it resistant to temperature fluctuations and deformations
- Spindle is mounted from both sides and features adjustable sliding bearings consisting of three segments
- Hydrodynamic bearing of spindle, therefore no contact between spindle and bearing
- Longitudinal table feed can be set to automatic mode hydraulically driven or manual mode by handwheel
- Stepless feed adjustments with selective programmable hold time at the end of each table movement
- Longitudinal table guide and cross guide of grinding headstock each feature a V-guide and flat guide
- Hydraulic or manual repositioning of grinding spindle stock
- Guideways in x- and y-axis are precisely constructed and hand-polished



Tiltable spindle head from +30° to -30°, featuring stepless speed adjustment.



Comes complete with removable internal grinding device.

Technical data	URS 1000 N	URS 1500 N
Distance between centers	1000 mm	1500 mm
Center height	180 mm	180 mm
Outside grinding diameter	8 - 320 mm	8 - 320 mm
Max. workpiece weight	150 kg	150 kg
Inside grinding diameter with rest	35 - 100 mm	35 - 100 mm
Inside grinding diameter without rest	30 - 100 mm	30 - 100 mm
Inside grinding depth max.	125 mm	125 mm
Table tilting range max.	+3° to -7°	+3 to -6°
Table longitudinal travel max.	1000 mm	1500 mm
Table feed	0,1 - 4 m/min	0,1 - 4 m/min
Man. table travel / hand turn	6 mm	6 mm
Headstock		
Spindle speed, stepless	25 - 220 rpm	25 - 220 rpm
Spindle taper	MT 4	MT 4
Tilting range spindle	+90°	+90°
Grinding headstock		
Sanding disc	400 x 50 x 203 mm	400 x 50 x 203 mm
Spindle speed	1670 rpm	1670 rpm
Speed inside grinding spindle	10000 rpm	10000 rpm
Tilting range grinding headstock	+/- 30°	+/- 30°
Travel of grinding head	180 mm	180 mm
Scale division	0,0025 mm	0,0025 mm
Rapid feed, hydraulic	50 mm/min	50 mm/min
Tailstock		
Taper of tailstock sleeve	MT 4	MT 4
Travel of tailstock sleeve	30 mm	30 mm
Motor power		
Sanding spindle	5,5 kW	5,5 kW
Working spindle	1,5 kW	1,5 kW
Inside grinding spindle	1,1 kW	1,1 kW
Machine dimension (W x D x H)	3700 x 1900 x 1500 mm	4700 x 1900 x 1500 mm
Weight approx.	3700 kg	4300 kg
Art. no.	05-1382XL	05-1383XL

**Big range of** standard accessories

0884



Stennando UNS 1500 N

Standard accessories:

- 2-axis digital readout ES-12 H
- with LCD-display
- Grinding wheel

A

- Grinding wheel flange
  3-jaw chuck diam. 200 mm
- 2 pcs. open rest
- Closed rest Inside grinding device
- LED machine light
- Balancing stand
- Balancing arbor
- Frequency inverter
  2 dead centers
- Measuring plate
- Coolant device
- Splash guard front and back
- Grinding wheel dresser Workpiece carrier
   Tools





The URS 1000 N and URS 1500 N universal cylindrical grinding machines are suitable for external cylindrical grinding of workpieces up to 320 mm diameter. Part of the standard equipment is the internal grinding device, increasing the range of applications significantly. A popular model for machine construction, mould and tool making and production of small series.

## URS 1000 N URS 1500 N



Hydraulic tailstock with high accuracy and stability, moveable by foot pedal.



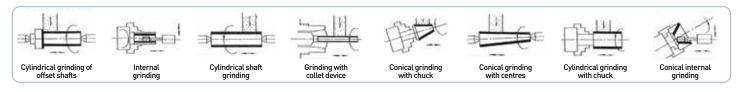
One open rest and two closed rests for supporting long workpieces come standard.



User-friendly arrangement of all electronic control elements.



### Application area





### **Cylindrical** grinding machines

## RS 2000 RS 3000 URS 30(

- When conical grinding, the table can be swivelled to either side and exactly positioned by using the scale
- Oil film between bearing and spindle keeps vibrations at a minimum level, hence achieving outstanding results and top accuracy
- Precisely balanced spindle head and solid grinding head guarantees extraordinary results at any type of operation
- Strong reinforcements and solidly designed walls of the machine base makes it resistant to temperature fluctuations and deformations
- Spindle is mounted from both sides and features adjustable sliding bearings consisting of three segments
- Hydrodynamic bearing of spindle, therefore no contact between spindle and bearing
- Longitudinal table feed can be set to automatic mode hydraulically driven or manual mode by handwheel
- Stepless feed adjustments with selective programmable hold time at the end of each table movement
- Longitudinal table guide and cross guide of grinding headstock each feature a V-guide and flat guide
- Hydraulic or manual repositioning of grinding spindle stock
- Guideways in x- and y-axis are precisely constructed and hand-polished





Tiltable spindle head from +30° to -30°, featuring stepless speed adjustment.

Comes complete with removable internal grinding device.

Technical data	URS 2000 N	URS 3000 N
Distance between centers	2000 mm	3000 mm
Center height	180 mm	180 mm
Outside grinding diameter	8 - 320 mm	8 - 320 mm
Max. workpiece weight	150 kg	150 kg
Inside grinding diameter with rest	35 - 100 mm	35 - 100 mm
Inside grinding diameter without rest	30 - 100 mm	30 - 100 mm
Inside grinding depth max.	125 mm	125 mm
Table tilting range max.	+5° to -2°	+3 to -2°
Table longitudinal travel max.	2100 mm	3100 mm
Table feed	0,1 - 3 m/min	0,1 - 3 m/min
Man. table travel / hand turn	6 mm	6 mm
Headstock		
Spindle speed, stepless	25 - 220 rpm	25 - 220 rpm
Spindle taper	MT 4	MT 4
Tilting range spindle	+90°	+90°
Grinding headstock		
Sanding disc	500 x 50 x 203 mm	500 x 50 x 203 mm
Spindle speed	1330 rpm	1330 rpm
Speed inside grinding spindle	10000 rpm	10000 rpm
Tilting range grinding headstock	+/- 30°	+/- 30°
Travel of grinding head	200 mm	200 mm
Scale division	0,0025 mm	0,0025 mm
Rapid feed, hydraulic	50 mm/min	50 mm/min
Tailstock		
Taper of tailstock sleeve	MT 4	MT 4
Travel of tailstock sleeve	30 mm	30 mm
Motor power		
Sanding spindle	7,5 kW	7,5 kW
Working spindle	1,5 kW	1,5 kW
Inside grinding spindle	1,1 kW	1,1 kW
Machine dimension (W x D x H)		7400 x 2000 x 2000 mm
Weight approx.	6200 kg	8000 kg
Art. no.	05-1384XL	05-1385XL
Price excl. VAT		on request

**Big range of** standard accessories



- Standard accessories:
- 2-axis digital readout ES-12 H
- with LCD-display
- Grinding wheel
- Grinding wheel flange 3-jaw chuck diam. 200 mm
- 2 pcs. open rest
- Closed rest
- Inside grinding device • LED machine light
- Balancing stand
- Balancing arbor Frequency inverter
- 2 dead centers
- Measuring plate
- Coolant device
- Splash guard front and back
- Grinding wheel dresser
- Workpiece carrier
  Tools







The URS 2000 N and URS 3000 N universal cylindrical grinding machines are suitable for external cylindrical grinding of workpieces up to 320 mm diameter. Part of the standard equipment is the internal grinding device, increasing the range of applications significantly. A popular model for machine construction, mould and tool making and production of small series.

### URS 2000 N URS 3000 N

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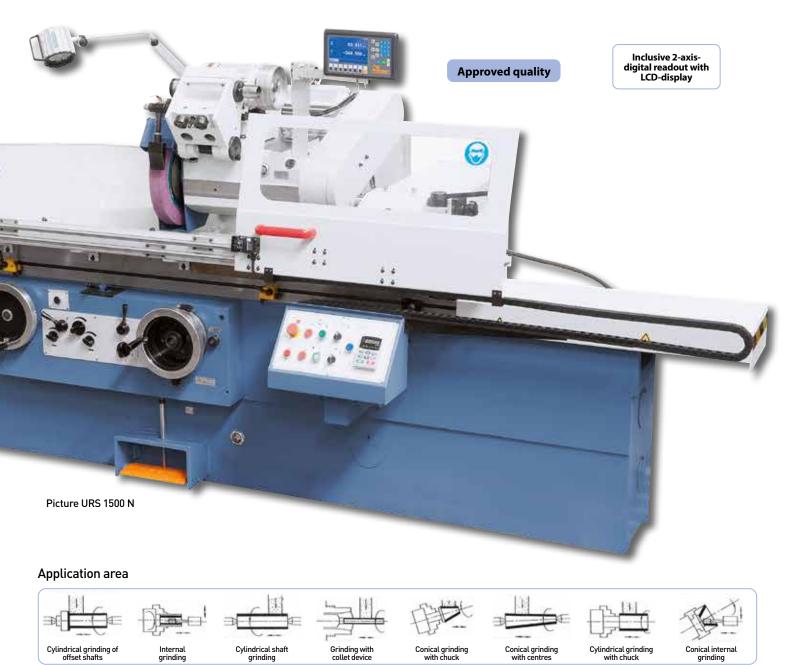
Hydraulic tailstock with high accuracy and stability, moveable by foot pedal.



One open rest and two closed rests for supporting long workpieces come standard.



User-friendly arrangement of all electronic control elements.



BERNARD

(R)

w.bernardo.al

# Surface grinding<br/>machine with digital readoutFSM 2040

- High quality bearings of spindle ensure vibration-free run
- Hardened, polished linear guiding for table longitudinal movement
- Double V-guide of cross table movement
- Main parts, such as stand, base and apron made of high quality grey cast iron
- Completely equipped with 2-axis digital readout and permanently magnetic clamping plate

Inklusive LCD

14 10

- Central lubrication of all guide rails
- Essential for grinding of small parts and fast grinding



2-axis digital readout with LCDdisplay comes standard



The pre-tensioned special bearings of the spindle assure a vibration-free run and highest accuracy.



High-quality electronical parts guarantees a consistent run.

Technical data	FSM 2040	
Table dimensions	500 x 210 mm	
T-slot quantity / width	1 / 14 mm	
Permanent magnet clamping plate	200 x 400 mm	
Max. travel, longitudinal	530 mm	
Max. travel, cross	220 mm	
Max. distance spindle / table	420 mm	
Grinding wheel	200 x 20 x 31,75 mm	
Table speed, electric	3 – 20 m/min	
Cross adjustment		
Table speed, electric	0,1 – 2 m/min	
Adjustment per handwheel rotation	2,5 mm	
Scale division on handwheel	0,02 mm	
Vertical adjustment		
Adjustment per handwheel rotation	1,25 mm	
Scale division on handwheel	0,01 mm	
Motor power of sanding spindle	1,5 kW	
Spindle speed	2800 rpm	
Length	1250 mm	
Depth	1400 mm	
Height	1730 mm	
Weight approx.	750 kg	
Art. no.	05-1404	

2-axis digital readout for y- and z-axis

### Optional accessories:

rialige	00-1410
Dust suction with coolant system and magnetic separator	05-1418
Precision tool maker vise QKG 125	28-6003
Precision tool maker vise QGG 100	28-6007
Precision angle vise QKJ 100	28-6012
Precision angle vise QGJ 73	28-6016
Precision universal vise, 2-dimensional, 70 mm	28-6035
Universal coolant fluid MN 1103, 5 I canister	54-1206

Art. no. excl. VAT



The FSM 2040 is a solidly constructed surface grinding machine with compact dimensions. The high user-friendliness makes this model ideal for training workshops, education as well as tool and die making.

## FSM 2040





### Hydraulic surface grinding machines with digital readout

- Plastic-coated counter guide in x- and y-axis assure a low slip-stick-effect
- V-flat longitudinal table guide, double-V cross table guide
- Spindle features axial and radial, clearance-free, pre-tensioned bearings
- Seperate hydraulic unit with heat exchanger to omit vibrations and thermal load
- Solidly constructed and well supported structure assures high stability
- State of the art hydraulic system guarantees soft table traverse even at high work load
- Completely equipped with 2-axis digital readout and permanently magnetic clamping plate
- Central lubrication of all guide rails



The pre-tensioned special bearings of the spindle assure a vibration-free run and highest accuracy.





Technical data	FSM 2550	FSM 3060
Table dimensions	250 x 520 mm	300 x 700 mm
T-slot quantity / width	1 / 14 mm	1 / 14 mm
Permanent magnet clamping plate	250 x 500 mm	300 x 600 mm
Max. travel, longitudinal	560 mm	640 mm
Max. travel, cross	260 mm	320 mm
Max. distance spindle / table	450 mm	520 mm
Max. workpiece weight*	150 kg	200 kg
Grinding wheel	200 x 20 x 31,75 mm	350 x 30 x 127 mm
Table speed, hydraulic	3 – 20 m/min	3 – 20 m/min
Cross adjustment		
Adjustment per handwheel rotation	4 mm/rev.	4 mm/rev.
Scale division on handwheel	0,02 mm	0,02 mm
Vertical adjustment		
Adjustment per handhwheel rotation	2 mm/rev.	2 mm/rev.
Scale division on handwheel	0,01 mm	0,01 mm
Motor power of sanding spindle	1,5 kW	4,0 kW
Spindle speed	2850 rpm	1440 rpm
Motor power of hydraulic pump	1,5 kW	1,5 kW
Length	1700 mm	2000 mm
Depth	1400 mm	1650 mm
Height	1750 mm	1850 mm
Weight approx.	1010 kg	1330 kg
Art. no.	05-1405	05-1407

vibrations and thermal strain.

> Hydraulic longitudinal travel of table



Standard accessories:

- 2-axis digital readout ES-12 H with LCD-display
- Grinding wheel
- Flange
- LED machine light Permanent magnet clamping plate
- Balancing stand
- Balancing arbor
  Protective covers
- Demagnetization device
- Coolant device
- Dressing diamond
- Machine feet Central lubrication
- Tools

\* with magnet clamping plate



The surface grinding machine FSM 2550 / FSM 3060 assured with its robust construction. All main parts, like stand, base and apron are made of high-quality grey cast iron. The wide range of accessories make this model very cost-effective for tool and die making.

### FSM 2550 FSM 3060



#### **Optional accessories:**

Flange for FSM 2550 Flange for FSM 3060 Dust suction with coolant system and magnetic separator Precision tool maker vise QKG 125 Precision tool maker vise QGG 50 Art. no. excl. VAT 05-1415 05-14160 05-1418 28-6003 28-6005

#### Optional accessories: Precision tool maker vise QGG 100 Precision angle vise QKJ 100

Precision angle vise QKJ 100 Precision angle vise QGJ 73 Precision universal vise, 2-dimensional, 70 mm Universal coolant fluid MN 1103, 5 I canister

Art. no.	excl. VAT
28-6007	
28-6012	
28-6016	
28-6035	
54-1206	



## Hydraulic surface grinding machines with digital readout

- Plastic-coated counter guide in x- and y-axis assure a low slip-stick-effect
- V-flat longitudinal table guide, double-V cross table guide
- Spindle features axial and radial, clearance-free, pre-tensioned bearings
- Solidly constructed and well supported structure assures high stability
- Digitally controlled, automatic vertical feed with servo motor
- State of the art hydraulic system guarantees soft table traverse even at high work load
   Infeed via rapid feed to height of workpiece, adjustable to finishing and sparking,
- automatic lift at program end
   Adjustable longitudinal and cross table movement via and stors
- Adjustable longitudinal and cross table movement via end stops

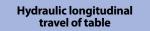


Control with touch operation and electronic handwheel.





The pre-tensioned special bearings of the spindle assure a vibration-free run and highest accuracy.



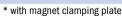
Technical data	FSM 2550 AHD	FSM 3060 AHD
Table dimensions	250 x 520 mm	300 x 700 mm
T-slot quantity / width	1 / 14 mm	1 / 14 mm
Electric magnet clamping plate	250 x 500 mm	300 x 600 mm
Max. travel, longitudinal	560 mm	640 mm
Max. travel, cross	260 mm	320 mm
Max. distance spindle / table	450 mm	520 mm
Max. workpiece weight*	150 kg	200 kg
Grinding wheel	200 x 20 x 31,75 mm	350 x 30 x 127 mm
Table speed, hydraulic	2 - 18 m/min	2 - 18 m/min
Cross adjustment		
Automatic adjustment, cross	0,5 - 10 mm/Stroke	0,5 - 10 mm/Stroke
Rapid feed, cross	990 mm/min	990 mm/min
Adjustment per handwheel rotation	4 mm/rev.	4 mm/rev.
Scale division on handwheel	0,02 mm	0,02 mm
Vertical adjustment		
Automatic adjustment, vertical	0,01 / 0,1 mm	0,01 / 0,1 mm
Rapid feed, vertical	360 mm/min	360 mm/min
Adjustment per handhwheel rotation	2 mm/rev.	2 mm/rev.
Scale division on handwheel	0,01 mm	0,01 mm
Motor power of sanding spindle	1,5 kW	4,0 kW
Spindle speed	2850 rpm	1440 rpm
Motor power of hydraulic pump	1,5 kW	1,5 kW
Motor power of vertical feed	0,75 kW	0,75 kW
Length	1700 mm	2000 mm
Depth	1400 mm	1650 mm
Height	1750 mm	1850 mm
Weight approx.	1100 kg	1400 kg
Art. no.	05-1406	05-1408



Separate hydraulic unit to eliminates vibrations and thermal strain

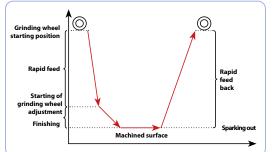
#### Standard accessories:

- 2-axis digital readout ES-12 H with LCD-display
- Control with touch operation
  Electronic handwheel
- Electronic handwh
   Grinding wheel
- Grinding whe
  Flange
- LED machine light
- Electric magnet clamping plate
- Balancing stand
- Balancing arbor
- Protective covers
- Demagnetization device
- Coolant device
- Dressing diamond
- Machine feet
  Central lubrication
- Tools









The FSM-AHD-series are solidly-built surface grinding machines featuring automatic vertical feed. The extensive range of standard equipment ensures optimal performance eg. computer automated vertical feed, magnetic clamping plate with demagnetization device, control via touchscreen and a electronic handwheel.

### FSM 2550 AHD FSM 3060 AHD



Automatic central lubrication for all guide rails and spindles.



The solid guiding of the grinding head ensures precise infeed.

#### **Optional accessories:**

Flange for FSM 2550 Flange for FSM 3060 Dust suction with coolant system and magnetic separator Precision tool maker vise QKG 125 Precision tool maker vise QGG 50

### excl. VAT

05-1415 05-14160 05-1418 28-6003 28-6005

Art. no.

0

0004 000

#### **Optional accessories:** Precision tool maker vise QGG 100 Precision angle vise QKJ 100 Precision angle vise QKJ 100

Precision angle vise QKJ 100 Precision angle vise QGJ 73 Precision universal vise, 2-dimensional, 70 mm Universal coolant fluid MN 1103, 5 I canister

Art. no.	excl. VA
28-6007	
28-6012	
28-6016	
28-6035	
54-1206	



# Surface grindingBSG 2040 MCmachine with digital readout





The BSG 2040 MC is a solidly constructed surface grinding machine with compact dimensions. The high user-friendliness make this model ideal for training workshops, education as well as tool and die making.

## BSG 2040 MC



## Hydraulic surface grinding machines with digital readout



BERNARDO www.bernardo.at

Length

Depth

Height

Art. no.

Weight approx.

Motor power of hydraulic pump

Motor power of vertical feed

0,75 kW

0,5 kW

2160 mm

1650 mm 1840 mm

1640 kg

05-1445B

200 x 20 x 31,75 mm

0,5 - 8 mm / Stroke

7 - 25 m/min

990 mm/min

4 mm/rev. 0,02 mm

Grinding wheel

**Cross adjustment** 

Rapid feed, cross

Table speed, hydraulic

Automatic adjustment, cross

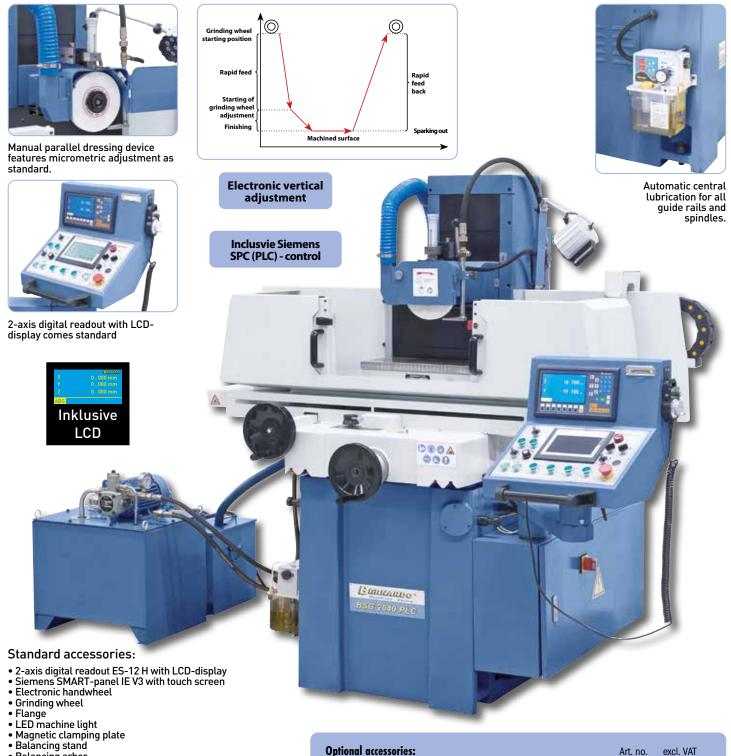
Scale division on handwheel

\* with magnet clamping plate

Adjustment per handwheel rotation

The hydraulic surface grinding machine BSG 2040 PLC features an extensive range of standard equipment eg. computer automated vertical feed, parallel dresser with micrometre setting, magnetic clamping plate with demagnetization device and 2-axis digital readout.

## **BSG 2040 PLC**



- Balancing arbor
  Parallel dresser
- Protective covers
- Demagnetization device
- Coolant device
- Dressing diamond
- Machine feet
- Central lubrication
- Tools

### **Optional accessories:**

Flange	05-1462
Dust suction with coolant system and magnetic separator	05-1465
Dust suction with coolant system and paper filter	05-1467
Dust suction with coolant system, magnetic separator and paper filter	05-1469
Precision tool maker vise QGG 50	28-6005
Universal coolant fluid MN 1103, 5 I canister	54-1206



## Hydraulic surface grinding machines with digital readout

- Plastic-coated counter guide in x- and y-axis assure a low slip-stick-effect
- V-flat longitudinal table guide, double-V cross table guide
- Spindle features axial and radial, clearance-free, pre-tensioned bearings
- Seperate hydraulic unit with heat exchanger to omit vibrations and thermal load (BSG 3060 PLC)
- Special hydraulic system guarantees gentle table adjustment even at full load
- Solidly constructed and well supported structure assures high stability
- Digitally controlled, automatic vertical feed with servo motor
- Infeed via rapid feed to height of workpiece, adjustable to finishing and sparking, automatic lift at program end

**BSG 2550 PLC** 

250 x 510 mm

250 x 500 mm

200 x 20 x 31,75 mm

0,5 - 8 mm/Stroke

0,005 / 0,01 / 0,02 /

0,03 / 0,04 / 0,05 mm

1 / 14 mm

560 mm

275 mm

450 mm

5 - 25 m/min

990 mm/min

480 mm/min

2 mm/rev.

0,005 mm

2850 rpm

1900 mm

2050 mm

1840 mm

05-1446B

1750 kg

0,75 kW

0,5 kW

2,2 kW

4 mm/rev.

0,02 mm

180 kg

Adjustable longitudinal and cross table movement via end stops



Including cable guiding by energy chain

Technical data

Table dimensions

Max. travel, cross

Grinding wheel Table speed, hydraulic

**Cross adjustment** 

Rapid feed, cross

Vertical adjustment

Rapid feed, vertical

Spindle speed

Weight approx.

Length

Depth

Height

Art. no.

T-slot quantity / width

Max. travel, longitudinal

Max. workpiece weight\*

Electric magnet clamping plate

Max. distance spindle / table

Automatic adjustment, cross

Scale division on handwheel

Automatic adjustment, vertical

Scale division on handwheel

Motor power of sanding spindle

Motor power of hydraulic pump

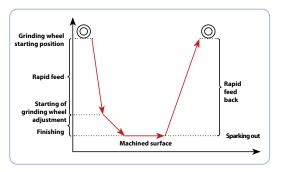
Motor power of vertical feed

Adjustment per handwheel rotation

Adjustment per handhwheel rotation

2-axis digital readout

for y- and z-axis



**BSG 3060 PLC** 

305 x 635 mm

300 x 600 mm

350 x 40 x 127 mm

0,5 - 8 mm/Stroke

0,005 / 0,01 / 0,02 /

0,03 / 0,04 / 0,05 mm

5 - 25 m/min

990 mm/min

480 mm/min

2 mm/rev.

0,005 mm

1450 rpm

2350 mm

2220 mm

1910 mm

05-1447B

2375 kg

4,0 kW

2,2 kW

0,5 kW

5 mm/rev.

0,02 mm

3 / 14 mm

765 mm

340 mm

580 mm

270 kg



Manual parallel dresser comes standard



Clearly arranged control elements at the tiltable control panel

#### Hydraulic longitudinal travel of table



The spindle features pre-tensioned bearings to ensure high accuracy and a smooth run.

#### Standard accessories:

- 2-axis digital readout ES-12 H with LCD-display
- Siemens SMART-panel IE V3 with touch screen
  Electronic handwheel
- Electronic handwhe
   Grinding wheel
- Grinding wr
   Flange
- LED machine light
- Magnetic clamping plate
- Balancing stand
- Balancing arbor
  Parallel dresser
- Protective covers
- Demagnetization device
- Coolant device
- Dressing diamond
  Machine feet
- Central lubrication
- Tools

Price excl. VAT \* with magnet clamping plate



### Hydraulic long

The BSG-series are solidly-built surface grinding machines, featuring automatic vertical feed. All main parts, like stand, base and apron are made of high-quality grey cast iron. The wide range of accessories make these models very cost-effective for tool and die making.

### BSG 2550 3

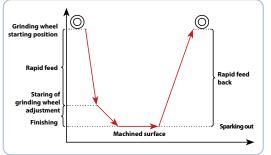


### Hydraulic surface grinding machines with digital readout

- Separate hydraulic unit with heat exchanger eliminates vibrations and thermal strain
- Hardened and polished table guides cross and longitudinal. Durcite- B coated counter guides ensure high rigidity and low friction
- Longitudinal table guide V-flat, cross table guide double V
- Computer automated feed via rapid feed to workpiece height, adjustable roughing and surface finishing stroke, automatic return into start position at end of program
- Axial and radial bearings in grinding spindle are clamped clearance free
- Annealed machine base guarantees high accuracy
- Strong reinforcements and thick walls ensure rigidity
- Digital automatic vertical feed features servo motor
- End stops allow adjustable longitudinal and cross travel
- State of the art hydraulic system guarantees soft table traverse even at high work load



Siemens SMART-Paneel IE V3 with touch-screen and electronic handwheel





Including cable guiding by energy chain



lectronic vertical adjustment

Ε

Technical data	BSG 4080 PLC	BSG 40100 PLC
Table dimensions	405 x 815 mm	405 x 1020 mm
T-slot quantity / width	3 / 14 mm	3 / 14 mm
Electric magnet clamping plate	400 x 800 mm	400 x 1000 mm
Max. travel, longitudinal	900 mm	1130 mm
Max. travel, cross	450 mm	450 mm
Max. distance spindle / table	580 mm	580 mm
Max. workpiece weight*	500 kg	600 kg
Grinding wheel	350 x 40 x 127 mm	350 x 40 x 127 mm
Table speed, hydraulic	5 - 25 m/min	5 - 25 m/min
Cross adjustment		
Automatic adjustment, cross	0,5 - 8 mm/Stroke	0,5 - 8 mm/Stroke
Rapid feed, cross	990 mm/min	990 mm/min
Adjustment per handhweel rotation	5 mm/rev.	5 mm/rev.
Scale division on handwheel	0,02 mm	0,02 mm
Vertical adjustment		
Automatic adjustment, vertical	0,005 / 0,01 / 0,02 /	0,005 / 0,01 / 0,02
	0,03 / 0,04 / 0,05 mm	0,03 / 0,04 / 0,05 mm
Rapid feed, vertical	480 mm/min	480 mm/min
Adjustment per handwheel rotation	2 mm/rev.	2 mm/rev.
Scale division on handwheel	0,005 mm	0,005 mm
Motor power of sanding spindle	4,0 kW	4,0 kW
Spindle speed	1450 rpm	1450 rpm
Motor power of hydraulic pump	2,2 kW	2,2 kW
Motor power of vertical feed	0,5 kW	0,5 kW
Length	2650 mm	3100 mm
Depth	2200 mm	2200 mm
Height	1900 mm	1900 mm
Weight approx.	3400 kg	3700 kg
Art. no.	05-1448B	05-1449B

Coolant device with extractor

and magnetic seperator are optionally available.

#### Standard accessories:

- 2-axis digital readout ES-12 H with LCD-display
- Siemens SMART-panel IE V3 with touch screen
   Electronic handwheel
- Grinding wheel
- Flange
- LED machine light • Magnetic clamping plate
- Balancing stand
- Balancing arbor
  Parallel dresser
- Protective covers
- Demagnetization device
- Coolant device
- Dressing diamond
- Machine feet Central lubrication
- Tools

\* with magnet clamping plate



The BSG 4080 PLC and BSG 40100 PLC are suitable models for processing of workpieces up to 500 or 600 kg and a grinding surface up to 900 x 450 or 1130 x 450 mm. The extensive range of standard equipment ensures optimal performance eg. Computer automated vertical feed, parallel dresser with micrometre setting, magnetic clamping plate with demagnetization device and 2-axis digital readout.

# BSG 4080 PL BSG 40100 PL





**Central lubrication** for all guide ways and spindles.

### Ontional accessories

	7416.110.	0/10/11 1/11
Flange for BSG 4080 TDC / BSG 40100 TDC	05-1463	
Dust suction with coolant system and magnetic separator	05-1465	
Dust suction with coolant system and paper filter	05-1467	
Dust suction with coolant system, magnetic separator and paper filter	05-1469	
Precision tool maker vise QGG 73	28-6006	
Precision angle vise QKJ 100	28-6012	
Universal coolant fluid MN 1103, 5 I canister	54-1206	



### Hydraulic surface grinding machines with digital readout

- Hardened and polished table guides cross and longitudinal. Durcite- B coated counter guides ensure high rigidity and low friction
- Longitudinal and cross movement takes place via V-flat guiding
- Computer automated feed via rapid feed to workpiece height, adjustable roughing and surface finishing stroke, automatic return into start position at end of program
- Axial and radial bearings in grinding spindle are clamped clearance free
- Annealed machine base guarantees high accuracy
- Strong reinforcements and thick walls ensure rigidity
- End stops allow adjustable longitudinal and cross travel
- State of the art hydraulic system guarantees soft table traverse even at high work load
- Including Siemens PLC-control for programming simple sanding cycles via touchscreen



Including Siemens SMART-Paneel IE V3 with touchscreen and electronic handwheel

#### Standard accessories:

- 2-axis digital readout ES-12 H with LCD-display Siemens SMART-panel IE V3 with touch screen
- Electronic handwheel
- Grinding wheel
- Flange
- LED working light
- Magnetic clamping plate Balancing stand
- Balancing arbor

**Inclusvie Siemens** SPC (PLC) - control

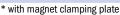
**BERNARDO**°

- Protective covers
- Parallel dresser
- Demagnetization device
- Coolant device
- Dressing diamond
- Machine feet Central lubrication
- Hydraulik oil cooler
- Tools

Technical data	BSG 50100 PLC	BSG 50160 PLC
Table dimensions	500 x 1100 mm	500 x 1600 mm
T-slot quantity / width	3 / 18 mm	3 / 18 mm
Electric magnet clamping plate	500 x 1000 mm	500 x 800 mm (2 pcs.)
Max. travel, longitudinal	1150 mm	1700 mm
Max. travel, cross	560 mm	560 mm
Max. distance spindle / table	600 mm	600 mm
Max. workpiece weight*	700 kg	900 kg
Grinding wheel	350 x 50 x 127 mm	350 x 50 x 127 mm
Table speed, hydraulic	5 - 25 m/min	5 - 25 m/min
Cross adjustment		
Automatic adjustment, cross	0,5 - 30 mm/stroke	0,5 - 30 mm/stroke
Rapid feed, cross	0 - 600 mm/min	50 - 600 m/min
Vertical adjustment		
Automatic adjustment, vertical	0,005 / 0,01 / 0,015 /	0,005 / 0,01 / 0,015 /
	0,02 / 0,03 / 0,04 mm	0,02 / 0,03 / 0,04 mm
Rapid feed, vertical	0 - 300 mm/min	50 - 500 mm/min
Motor power of sanding spindle	7,5 kW	7,5 kW
Spindle speed	1440 rpm	1450 rpm
Motor power of hydraulic pump	3,0 kW	3,0 kW
Total connected load	13,2 kW	13,2 kW
Length	3880 mm	5640 mm
Depth	2150 mm	2250 mm
Height	2420 mm	2500 mm
Weight approx.	5500 kg	6000 kg
Art. no.	05-1450XL	05-1452XL



Individual hydraulic unit with oil cooling eliminates vibrations and thermal strain on the machine frame.







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These models are suitable models for processing of workpieces up to 700 or 900 kg and a grinding surface up to 1150 x 560 or 1700 x 560 mm. The extensive range of standard equipment ensures optimal performance eg. Computer automated vertical feed, parallel dresser with micrometre setting, magnetic clamping plate with demagnetization device and 2-axis digital readout.

### BSG 50100 PLC BSG 50160 PLC





### Hydraulic surface grinding machines with digital readout

- Hardened and polished table guides cross and longitudinal. Durcite- B coated counter guides ensure high rigidity and low friction
- Longitudinal and cross movement takes place via V-flat guiding
- Computer automated feed via rapid feed to workpiece height, adjustable roughing and surface finishing stroke, automatic return into start position at end of program
- Axial and radial bearings in grinding spindle are clamped clearance free
- Annealed machine base guarantees high accuracy
- Strong reinforcements and thick walls ensure rigidity
- End stops allow adjustable longitudinal and cross travel
- State of the art hydraulic system guarantees soft table traverse even at high work load
- Including Siemens PLC-control for programming simple sanding cycles via touchscreen



Including Siemens SMART-Paneel IE V3 with touchscreen and electronic handwheel



Coolant device with extractor, magnetic seperator and paper filter are optionally available.

Technical data	BSG 60120 PLC	BSG 60160 PLC	BSG 60220 PLC
Table dimensions	600 x 1200 mm	600 x 1600 mm	600 x 2200 mm
T-slot quantity / width	3 / 18 mm	3 / 18 mm	3 / 18 mm
Electric magnet clamping plate	600 x 1200 mm	600 x 800 mm (2 pcs.)	600 x 1000 mm (2 pcs.)
Max. travel, longitudinal	1520 mm	1750 mm	2350 mm
Max. travel, cross	660 mm	660 mm	660 mm
Max. distance spindle / table	600 mm	600 mm	600 mm
Max. workpiece weight*	970 kg	1300 kg	1700 kg
Grinding wheel	350 x 50 x 127 mm	350 x 50 x 127 mm	350 x 50 x 127 mm
Table speed, hydraulic	5 - 25 m/min	5 - 25 m/min	5 - 25 m/min
Cross adjustment			
Automatic adjustment, cross	0,5 - 30 mm/stroke	0,5 - 20 mm/stroke	0,5 - 20 mm/stroke
Rapid feed, cross	50 - 600 m/min	50 - 600 m/min	50 - 600 m/min
Vertical adjustment			
Automatic adjustment, vertical	0,005 / 0,01 / 0,015 /	0,005 / 0,01 / 0,015 /	0,005 / 0,01 / 0,015 /
	0,02 / 0,03 / 0,04 mm	0,02 / 0,03 / 0,04 mm	0,02 / 0,03 / 0,04 mm
Rapid feed, vertical	0 - 300 mm/min	50 - 500 mm/min	50 - 500 mm/min
Motor power of sanding spindle	7,5 kW	7,5 kW	7,5 kW
Spindle speed	1440 rpm	1450 rpm	1450 rpm
Motor power of hydraulic pump	5,5 kW	5,5 kW	5,5 kW
Total connected load	18 kW	18 kW	18 kW
Length	4800 mm	5500 mm	6600 mm
Depth	2750 mm	2750 mm	2750 mm
Height	2420 mm	2700 mm	2700 mm
Weight approx.	6500 kg	7000 kg	8000 kg
Art. no.	05-1451XL	05-1453XL	05-1454XL
Price excl. VAT			

### Standard accessories:

- 2-axis digital readout ES-12 H with
- Siemens SMART-panel IE V3
- with touch screen
- Electronic handwheel Grinding wheel
- Flange
- LED working light
- Magnetic clamping plate
- Balancing stand
- Balancing arbor
- Protective covers
  Parallel dresser
- Demagnetization device
- Coolant device • Dressing diamond
- Machine feet
- Central lubrication
- Hydraulik oil cooler
  Tools

\* with magnet clamping plate





# BSG 60120 PLC / BSG 60160 PLC BSG 60220 PLC



2-axis digital readout for y- and z-axis

BSG 80160 PLC **BSG 80220 PLC** see www.bernardo.at

^	1	•
U	ptional	accessories:

**Inclusvie Siemens** 

SPC (PLC) - control

Flange

Dust suction with coolant system and magnetic separator Dust suction with coolant system and paper filter Dust suction with coolant system, magnetic separator and paper filter Universal coolant fluid MN 1103, 5 I canister

excl. VAT Art. no. 05-1464 05-1466 05-1468 05-1470 54-1206

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Individual hydraulic unit with oil cooling eliminates vibrations and thermal strain on the machine frame.



### Fabric sanding belts (brown)



Universal in use, this sanding belt consists of electro corundum for grinding and deburring of steel plates, aluminium, cast parts, non-ferrous metals, plywood, soft and hard woods.

Long service life and performance guarantee high efficiency.



Art.no.	Description	excl. VAT	Art.no.	Description	excl. VAT
11-2116A	685 x 50 mm - Grit 60 (10 pcs.)		49-1057	1500 x 75 mm - Grit 40 (10 pcs.)	
11-2116	685 x 50 mm - Grit 80 (10 pcs.)		49-1058	1500 x 75 mm - Grit 60 (10 pcs.)	
11-2117	685 x 50 mm - Grit 100 (10 pcs.)		49-1059	1500 x 75 mm - Grit 80 (10 pcs.)	
11-2117A	685 x 50 mm - Grit 120 (10 pcs.)		49-1060	1500 x 75 mm - Grit 100 (10 pcs.)	
11-2118	685 x 50 mm - Grit 150 (10 pcs.)		49-1061	1500 x 75 mm - Grit 120 (10 pcs.)	
11-2119	685 x 50 mm - Grit 180 (10 pcs.)		49-1062	1500 x 75 mm - Grit 40 /60 /80 /100 /120 (each 2 pcs	.)
11-2119A	Set 685x50 mm - G 60/80/100/120/150/180 (each 2 pcs.)		49-1051	2000 x 50 mm - Grit 40 (10 pcs.)	
49-0970	762 x 75 mm - Grit 60 (10 pcs.)		49-1052	2000 x 50 mm - Grit 60 (10 pcs.)	
49-0971	762 x 75 mm - Grit 80 (10 pcs.)		49-1053	2000 x 50 mm - Grit 80 (10 pcs.)	
49-0972	762 x 75 mm - Grit 100 (10 pcs.)		49-1054	2000 x 50 mm - Grit 100 (10 pcs.)	
49-0973	762 x 75 mm - Grit 120 (10 pcs.)		49-1055	2000 x 50 mm - Grit 120 (10 pcs.)	
49-0974	762 x 75 mm - Grit 150 (10 pcs.)		49-1055A	2000 x 50 mm - Grit 150 (10 pcs.)	
49-0975	762 x 75 mm - Grit 180 (10 pcs.)		49-1055B	2000 x 50 mm - Grit 180 (10 pcs.)	
49-0976	Set 762x75 mm - G 60/80/100/120/150/180 (each 2 pcs.)		49-1056	$2000x50\text{mm}\mathchar`-G40/60/80/100/120/150/180$ (each 2 pcs.)	
49-0980	1016 x 75 mm - Grit 60 (10 pcs.)		49-1020	2000 x 75 mm - Grit 40 (10 pcs.)	
49-0981	1016 x 75 mm - Grit 80 (10 pcs.)		49-1021	2000 x 75 mm - Grit 60 (10 pcs.)	
49-0982	1016 x 75 mm - Grit 100 (10 pcs.)		49-1022	2000 x 75 mm - Grit 80 (10 pcs.)	
49-0983	1016 x 75 mm - Grit 120 (10 pcs.)		49-1023	2000 x 75 mm - Grit 100 (10 pcs.)	
49-0984	1016 x 75 mm - Grit 150 (10 pcs.)		49-1024	2000 x 75 mm - Grit 120 (10 pcs.)	
49-0985	1016 x 75 mm - Grit 180 (10 pcs.)		49-1024A	Set 2000 x 75 mm - G40/60/80/100/120 (each 2 pcs.)	
49-0986	Set 1016 x 75 mm-G60 / 80 / 100 / 120 / 150 / 180 (each 2 pcs	s.)	49-1025	2000 x 150 mm - Grit 40 (10 pcs.)	
49-0964	1180 x 75 mm - Grit 40 (10 pcs.)		49-1026	2000 x 150 mm - Grit 60 (10 pcs.)	
49-0965	1180 x 75 mm - Grit 60 (10 pcs.)		49-1027	2000 x 150 mm - Grit 80 (10 pcs.)	
49-0966	1180 x 75 mm - Grit 80 (10 pcs.)		49-1028	2000 x 150 mm - Grit 100 (10 pcs.)	
49-0967	1180 x 75 mm - Grit 100 (10 pcs.)		49-1029	2000 x 150 mm - Grit 120 (10 pcs.)	
49-0968	1180 x 75 mm - Grit 120 (10 pcs.		49-1030	Set 2000 x 150 mm - G 40 / 60 / 80 / 100 / 120 (each 2 pcs.)	
49-0969	Set 1180x 75 mm - G40 / 60 / 80 / 100 / 120 (each 2 pcs.)				
49-1011A	1220 x 100 mm - Grit 40 (10 pcs.)				
49-1011	1220 x 100 mm - Grit 60 (10 pcs.)				
49-1012	1220 x 100 mm - Grit 80 (10 pcs.)				
49-1013	1220 x 100 mm - Grit 100 (10 pcs.)				
49-1013A	1220 x 100 mm - Grit 120 (10 pcs.)				
49-1014	Set 1220 x 100 mm - G40/60/80/100/120 (each 2 pcs.)				



### Fabric sanding belts (blue)



Suitable particularly for grinding of hard materials such as stainless steel and high allow steel.

Unique features of this belt are its short processing times, high performance and the incredibly long service life.

The additional coating reduces heat generation during the grinding process.



Art.no.	Description	excl. VAT	Art.no.	Description	excl. VAT
49-1039	2000 x 100 mm - Grit 40 (10 pcs.)		49-1042	2000 x 100 mm - Grit 100 (10 pcs.)	
49-1040	2000 x 100 mm - Grit 60 (10 pcs.)		49-1043	2000 x 100 mm - Grit 120 (10 pcs.)	
49-1041	2000 x 100 mm - Grit 80 (10 pcs.)		49-1044	Set 2000 x 100 mm - G40/60 /80/100/120 (each 2 pcs.)	)

#### Surface conditioning belts



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Surface conditioning belts are very flexible and universal in use.

Suitable for polishing, sanding and preparation of oxidized and lacquer painted surfaces of various materials as well as refining of metal, wooden, painted or plastic surfaces.





49-1017	Surface conditioning belt 2000 x 75 mm, rough
49-1018	Surface conditioning belt 2000 x 75 mm, medium
49-1019	Surface conditioning belt 2000 x 75 mm, fine
49-1031	Surface conditioning belt 2000 x 150 mm, rough
49-1032	Surface conditioning belt 2000 x 150 mm, medium
49-1033	Surface conditioning belt 2000 x 150 mm, fine
49-1036	Surface conditioning belt 2000 x 100 mm, rough
49-1037	Surface conditioning belt 2000 x 100 mm, medium

49-1038	Surface conditioning belt 2000 x 100 mm, fine
49-1142	Surface conditioning belt 40 x 620 mm, rough (5 pcs.)
49-1143	Surface conditioning belt 40 x 620 mm, medium (5 pcs.)
49-1144	Surface conditioning belt 40 x 620 mm, fine (5 pcs.)
49-1155	Surface conditioning belt 40 x 760 mm, rough (5 pcs.)
49-1156	Surface conditioning belt 40 x 760 mm, medium (5 pcs.)
49-1157	Surface conditioning belt 40 x 760 mm, fine (5 pcs.)

### Velcro fastener





### Sanding discs

Art. no.



Description

Universal in use for sanding and deburring of steel, aluminium, non-ferrous metals, wood and plastics.

Discs vary in diameters of 150 mm, 250 mm and 300 mm and come complete with practical velcro fastener to allow for extra fast disc change without requiring glue.

excl. VAT

11-2121A	diam. 150 mm - Grit 60 (10 pcs.), velcro fastener
11-2122A	diam. 150 mm - Grit 80 (10 pcs.), velcro fastener
11-2120A	diam. 150 mm - Grit 100 (10 pcs.), velcro fastener
11-2123A	diam. 150 mm - Grit 120 (10 pcs.), velcro fastener
11-2124A	diam. 150 mm - Grit 150 (10 pcs.), velcro fastener
11-2124B	Set diam. 150 mm - Grit 60 / 80 / 100 / 120 / 150 (each 2 pcs.), velcro fastener
11-2200A	diam. 230 mm - Grit 60 (10 pcs.), self-adhesive
11-2091A	diam. 230 mm - Grit 80 (10 pcs.), self-adhesive
11-2092A	diam. 230 mm - Grit 100 (10 pcs.), self-adhesive
11-2093A	diam. 230 mm - Grit 120 (10 pcs.), self-adhesive
11-2201A	diam. 230 mm - Grit 150 (10 pcs.), self-adhesive
11-2214	Set diam. 230 mm - Grit 60 / 80 / 100 / 120 / 150 (each 2 pcs.), self-adhesive
11-2202	diam. 250 mm - Grit 60 (10 pcs.), velcro fastener
11-2095	diam. 250 mm - Grit 80 (10 pcs.), velcro fastener
11-2096	diam. 250 mm - Grit 100 (10 pcs.), velcro fastener
11-2097	diam. 250 mm - Grit 120 (10 pcs.), velcro fastener
11-2203	diam. 250 mm - Grit 150 (10 pcs.), velcro fastener
11-2216	Set diam. 250 mm - Grit 60 / 80 / 100 / 120 / 150 (each 2 pcs.), velcro fastener
11-2206	diam. 300 mm - Grit 60 (10 pcs.), velcro fastener
11-2101	diam. 300 mm - Grit 80 (10 pcs.), velcro fastener
11-2102	diam. 300 mm - Grit 100 (10 pcs.), velcro fastener
11-2103	diam. 300 mm - Grit 120 (10 pcs.), velcro fastener
11-2207	diam. 300 mm - Grit 150 (10 pcs.), velcro fastener
11-2218	Set diam. 300 mm - Grit 60 / 80 / 100 / 120 / 150 (each 2 pcs.), velcro fastener
11-2109	diam. 500 mm - Grit 60 (5 pcs.), velcro fastener
11-21090	diam. 500 mm - Grit 80 (5 pcs.), velcro fastener
11-21091	diam. 500 mm - Grit 100 (5 pcs.), velcro fastener
11-21092	diam. 500 mm - Grit 120 (5 pcs.), velcro fastener

#### Steel brush wheels



Steel brush wheels are ideal for treating surfaces such as removing paint, corrosion, dirt etc. Furthermore for roughing, polishing and deburring of workpieces.

The high-quality wire ensure a long life span.

05-1836	Steel brush wheel Ø 150 x 20 mm, Ø 12,7 mm
05-1799	Steel brush wheel Ø 200 x 25 mm, Ø 32 mm
05-1835	Steel brush wheel Ø 250 x 60 mm, Ø 50 mm



### Grinding wheels



#### Grit 60 / Grit 80

Special corundum grinding wheels are perfect for grinding of HSS steel such as twist drills, chisels, scissors, knives and many more.

#### Grit 36

Standard corundum grinding wheels are suitable for simple tool grinding operations, for instance knives, flat irons, axes and more made from iron, steel, construction steel, cast steel, and brass.

Art. no.	Description	excl. VAT
05-18020	Grinding wheel rough Ø 150 x 25 mm, Ø 32 mm, Grit36	
05-18021	Grinding wheel fine Ø $150\ x\ 25\ mm,$ Ø $32\ mm,$ Grit80	
05-1800	Grinding wheel rough Ø $150x20$ mm, Ø $12,70$ mm, Grit36	
05-1801	Grinding wheel fine Ø $150x20$ mm, Ø 12,70 mm, Grit80	
05-1810	Grinding wheel rough Ø 150 x 25,4 mm, Ø 12,70 mm, Grit36	
05-1811	Grinding wheel fine Ø $150x25,4\text{mm},$ Ø 12,70 mm, Grit60	
05-1816	Grinding wheel rough Ø 175 x 25 mm, Ø 32 mm, Grit36	
05-1817	Grinding wheel fine Ø $175x25$ mm, Ø $32$ mm, Grit80	
05-1812	Grinding wheel rough Ø 200 x 25,4 mm, Ø 15,88 mm, Grit36	
05-1813	Grinding wheel fine Ø 200 x 25,4 mm, Ø 15,88 mm, Grit60	
05-1818A	Grinding wheel rough Ø 200 x 32 mm, Ø 32 mm, Grit36	
05-1819A	Grinding wheel fine Ø 200 x 32 mm, Ø 32 mm, Grit80	
05-1827	Grinding wheel rough Ø 200 x 20 mm, Ø 15,88 mm, Grit36	
05-1828	Grinding wheel fine Ø 200 x 20 mm, Ø 15,88 mm, Grit80	
05-1808	Grinding wheel fine Ø 250 x 12 mm, Ø 50 mm, Grit220	
05-1814	Grinding wheel rough Ø 250 x 25,4 mm, Ø 20 mm, Grit36	
05-1815	Grinding wheel fine Ø 250 x 25,4 mm, Ø 20 mm, Grit60	
05-1820	Grinding wheel rough Ø 250 x 32 mm, Ø 32 mm, Grit36	
05-1821	Grinding wheel fine Ø 250 x 32 mm, Ø 32 mm, Grit80	
05-1822A	Grinding wheel rough Ø 300 x 50 mm, Ø 75 mm, Grit36	
05-1823A	Grinding wheel fine Ø 300 x 50 mm, Ø 75 mm, Grit80	

### Polishing wheels

		•		Most suitable polishing wheel for stainless steel, steel, aluminium, brass, plastics and wood. Thickness of wheel can be determined by the type of application, simply by omitting single layers.
Art. no. Description		excl. VAT	Art. no.	Description excl. VAT
05-1838 Polishing wheel g	uilted Ø 150 x 20 mm, Ø 1	2,7 mm	05-1852	Nettle-polishing wheel loose Ø 200 x 20 mm, Ø 16 mm
05-1840 Polishing wheel s	oft, 200 x 20 mm, Ø 16 mn	1	05-1872	Nettle-polishing wheel loose Ø 250 x 25 mm, Ø 20 mm
05-1841 Polishing wheel q	uilted, 200 x 20 mm, Ø 16	mm	05-1892	Nettle-polishing wheel loose Ø 350 x 25 mm, Ø 16 mm
05-1842 Polishing wheel s	oft, 250 x 25 mm, Ø 20 mn	1		
05-1843 Polishing wheel q	uilted, 250 x 25 mm, Ø 20	mm		
05-1848 Polishing wheel s	oft, Ø 300 x 30 mm, Ø 35 r	nm		Suitable for polishing of stainless
05-1849 Polishing wheel q	uilted, Ø 300 x 30 mm, Ø 3	5 mm		steel, steel, aluminium and brass. Top quality German production
05-1844 Polishing wheel s	oft, 350 x 40 mm, Ø 16 mn	1		ensures long service life.
PRE-POLISHING	POLISHING	VARNISHING		
for e.g. removing scratches:	for main polish:	for high gloss:	05-1853	Nettle-polishing wheel quilted Ø 200 x 20 mm, Ø 16 mm
Sisal-cord green	Nettle quilted for all metals, nettle	Molleton quilted, Molleton loose	05-1873	Nettle-polishing wheel quilted Ø 250 x 25 mm, Ø 20 mm
for stainless steel, Sisal-nettle for aluminium, brass, non-ferrous metal	all metals, nettle loose (the thickness of the wheel can be determined)	Molleton loose (the thickness of the wheel can be determined)	05-1893	Nettle-polishing wheel quilted Ø 350 x 25 mm, Ø 16 mm
	Hard polishing wh pre-polishing and of rough surfaces workpieces.	for processing		Softer polishing wheels are suitable for achieving high-gloss finish, wheels are not sewn together so the thickness can be varied depending on the type of use. High-quality manufacturing guarantees long service-life.
05-1850 Sisal-Nettle-polish	ning wheel Ø 200 x 20 mm,	Ø 16 mm	05-1854	Molleton-polishing wheel loose Ø 200 x 20 mm, Ø 16 mm
	ning wheel Ø 250 x 25 mm,	Ø 20 mm	05-1874	Molleton-polishing wheel loose Ø 250 x 25 mm, Ø 20 mm
	ning wheel Ø 350 x 25 mm,		05-1894	Molleton-polishing wheel loose $\emptyset$ 350 x 25 mm, $\emptyset$ 16 mm
Excellent for pre-polishing of stainless steel, deep immersion is ideal for angles, corners, corrugated panels and parts of different shapes.				
05-1851 Sisal-cord green	ð 200 x 20 mm, Ø 16 mm		05-1855	Molleton-polishing wheel quilted Ø 200 x 20 mm, Ø 16 mm
05-1871 Sisal-cord green	ð 250 x 25 mm, Ø 20 mm		05-1875	Molleton-polishing wheel quilted Ø 250 x 25 mm, Ø 20 mm
05-1891 Sisal-cord green Ø	ð 350 x 25 mm, Ø 16 mm		05-1895	Molleton-polishing wheel quilted Ø 350 x 25 mm, Ø 16 mm



Polish paste			
Pre-polishing paste ABRA		Polishing paste REKORD	
ABRA is a grinding and brushing paste several metals. Often these pastes cont particularly resistant grain which can b in an electric arc at 2000° C.	ain electro corundum, a	REKORD is used for polishing of non-ferrous a naturally occurring, soft, siliceous sedimen relatively mild polishing grain for processing delicate coating.	tary rock, suitable as a
	Colour: black Grit: 10 (10= strong, 1 = mild) Fat content: dry Weight: approx. 1000 g		Colour: brown Grit: 5 (10 = strong, 1 = mild) Fat content: average Weight: approx. 800 g
Description: Strong matting paste with coarse grain of steel and stainless steel. Paste is per ore-polishing of aluminium.		Description: Classic polishing paste with slightly coarser of quick to achieve perfect surfaces on non-ferr aluminium, copper, brass, magnesium, zinc e Perfect paste for polishing aluminium alloy w	bus metals. (for instance tc.)
Art.no. Description	excl. VAT	Art.no. Description	excl. VAT
05-1916 Polish Abra 153 (black) f. alumi	nium	05-1917 Polish Rekord 845 (brown) f. aluminiu	n
from mild to very abrasive. Generally, c hardness is determined by the tempera	ay (aluminium oxide) is used for this		
Description: High-gloss grain, extremely good suctio for pre-polishing of stainless steel and		Description: Fine polishing paste, especially for wood and	plastics.
05-1910 Polish Kiesolin 410 (green) f. st	ainless steel	05-1926 Polish Kiesolin 327 (light brown) f. woo	od
15.5	Colour: red Grit: 4 (10 = strong, 1 = mild) Fat content: middle Weight: approx. 1000 g		

Description: Classic universal paste with medium grain, suitable for all types of metals.

05-1911 Polish Kiesolin 358 (red) f. stainless steel



### Polish paste

#### High-gloss/Varnishing paste LUMO Colour: light brown Grit: 1 LUMO is a great paste for finishing off the workpiece with a special (10 = strong, 1 = mild) polishing grain to achieve the most shiny, glossy surfaces. Fat content: low Weight: approx. 900 g Description: Fine varnishing paste especially for plastics, hard wood and non-ferrous materials. Colour: blue Grit: 2 Art.no. Description excl. VAT (10 = strong, 1 = mild) Fat content: low Weight: approx. 700 g Polish Lumo 939 (light brown) f. plastic material 05-1923 Description: The "Classic" is suitable for stainless steel, aluminium, copper, brass and wood. Special ingredients make this paste fat soluble to achieve high gloss on pre-polished pieces. Art.no. Description excl. VAT 05-1912 Polish Lumo 934 (blue), universal **Polishing sets** Polishing set for aluminium Polishing set for plastic Set consists of: Set consists of: Polish ABRA 153 (black) Polish REKORD 845 (brown) Polish LUMO 934 (blue) Polish REKORD 845 (brown) Polish LUMO 939 (light brown) Nettle-polishing wheel loose Molleton-polishing wheel loose Sisal-Nettle-polishing wheel Nettle-polishing wheel guilted Molleton-polishing wheel quilted 05-2000 Polishing set for aluminium Ø 200 x 20 mm, Ø 16 mm, 6-pcs. 05-2020 Polishing set for plastic Ø 200 x 20 mm, Ø 16 mm, 4-pcs. 05-2001 Polishing set for aluminium Ø 250 x 25 mm, Ø 20 mm, 6-pcs. 05-2021 Polishing set for plastic Ø 250 x 25 mm, Ø 20 mm, 4-pcs. 05-2002 Polishing set for aluminium Ø 350 x 25 mm, Ø 16 mm, 6-pcs. 05-2022 Polishing set for plastic Ø 350 x 25 mm, Ø 16 mm, 4-pcs. Polishing set for stainless steel Polishing set for wood Set consists of: Set consists of: Polish KIESOLIN 410 (green) Polish KIESOLIN 358 (red) Polish LUMO 934 (blue) Polish KIESOLIN 327 (light brown) Polish LUMO 934 (blue) Nettle-polishing wheel loose Sisal-cord green Molleton-polishing wheel loose Nettle-polishing wheel quilted Molleton-polishing wheel quilted Polishing set f. stainless steel Ø 200 x 20 mm, Ø 16 mm, 6-pcs. 05-2030 Polishing set for wood Ø 200 x 20 mm, Ø 16 mm, 4-pcs. 05-2010 05-2011 Polishing set f. stainless steel Ø 250 x 25 mm, Ø 20 mm, 6-pcs. 05-2031 Polishing set for wood Ø 250 x 25 mm, Ø 20 mm, 4-pcs. 05-2012 Polishing set f. stainless steel Ø 350 x 25 mm, Ø 16 mm, 6-pcs. 05-2032 Polishing set for wood Ø 350 x 25 mm, Ø 16 mm, 4-pcs.



### Console Stands

Sanding machines

## WH Modelle F/C/B1



#### Picture with optionally available machine

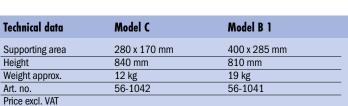
Technical data	Model WH	Model F	
Supporting area	330 x 300 mm	315 x 250 mm	
Height	230 mm	700 - 900	
Weight approx.	5 kg	10 kg	-
Art. no.	56-1049	56-1045	
Price excl. VAT			



### **Description:**

- Comes complete with practical water tank to cool processed workpieces
- Console WH suitable for models up to 250 mm
- Height adjustable from 700 900 mm (model F)
- Machine base F in light-weight construction, suitable for machines up to 175 mm







### **Description:**

- Stand C features a shelving unit for grinding wheels and a tool compartment as part of the standard accessories
- Model B comes with a large support area, universal in used for bench grinders, combo and disc sanding machines



### Stands

## Modell H / Modell G Modell D





**6**1.



Technical data	Model H	Model K	Model G
Supporting area	355 x 210 mm	350 x 330 mm	380 x 240 mm
Height	830 mm	800 mm	790 mm
Weight approx.	14 kg	15 kg	25 kg
Art. no.	56-1048	56-10480	56-1044
Price excl. VAT			

•					
D	es	cri	pti	on	:
_			г		

- Model H in compact construction with coolant fluid tray, recommended for model 200 mm and 250 mm
- Stand G in solid steel plate construction, suitable for models 300 mm and 350 mm
- Complete with coolant fluid tray and lockable tool compartment (model G)

Technical data	Model D			
Capacity	1275 m <sup>3</sup> /h			
Dust extraction outlet inside	2 x 35 mm	34		
Dust extraction outlet outside	2 x 50 mm			
Motor power	0,37 kW			
Voltage	400 V			
Supporting area	400 x 285 m	mm		
Height	810 mm	N 19		
Weight approx.	50 kg			
Art. no.	56-1046		-	
Price excl. VAT				

#### **Description:**

- State-of-the-art design allows for optimal working conditions and clean air at work
- Complete with large chip tray, easy to empty
- Equipped with practical water tank to allow for cooling of processed workpiece



#### Which stand is suitable for which machine?

	WH	F	C	<b>B</b> 1	H	K	G	D
DSA 150	1	1	1	3	3	5	5	5
DSA 200	1	3	1	3	3	3	5	5
DSA 250	1	5	3	1	1	1	3	5
KSA 150	3	1	1	3	3	5	5	5
KSA 200	5	3	1	3	3	3	5	5
KMS 150	3	1	3	3	1	5	5	3
KMS 200 S	5	5	5	1	1	3	3	3
KMS 250	5	5	5	1	3	1	3	5
DS 150 S	1	1	3	3	1	5	5	5
DS 175 S	1	1	3	3	1	5	5	5
DS 200 S	1	5	5	3	1	3	3	5
DS 250 S	1	5	5	1	1	1	3	5
DS 300 S	5	5	5	3	5	3	1	1
KSE 200	1	5	5	3	1	3	3	5
SPM 150	1	1	1	3	3	5	5	5
PS 200 S	1	5	5	1	1	3	3	5
PS 250 S	1	5	5	1	1	1	3	5
PS 350	5	5	5	3	5	3	1	5
TS 250	5	5	5	1	5	5	5	5
TS 300	5	5	5	1	5	5	5	5
TS 300 P	5	5	5	1	5	5	5	5

 $1 \dots \text{recommended}$ 

3 ... limited recommended 5 ... not recommended

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Your dealer





PWA Handelsges.m.b.H. 4020 Linz | Nebingerstraße 7a | Austria phone: +43.732.66 40 15 | fax: +43.732.66 40 15-9 e-mail: bernardo@pwa.at | www.bernardo.at

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