

OPTIMUM[®]

MASCHINEN - GERMANY



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NEW ITEMS
20/21





Entry level bench-top drilling machines with V-belt drive

Facts that impress in terms of quality, performance and price

- ▶ Separate emergency stop mushroom button
- ▶ Drilling depth stop
- ▶ Precise workmanship; stable drilling table with diagonal T-slots and all-around cooling water channel (DQ 18/DQ 22)
- ▶ Drilling table pivots through $\pm 45^\circ$ and rotates through 360°
- ▶ Single-piece, pressure cast aluminium spindle sleeve lever with Softgrip handles
- ▶ Precision spindle bore
- ▶ Safety electrical system in 24 V DC
- ▶ Guaranteed concentricity less than 0.03 mm measured in the drilling

- ▶ spindle sleeve
- ▶ Drill spindle with precision ball bearings
- ▶ Premium quick clamping chuck
- ▶ Generously dimensioned, height adjustable protective screen with safety switch (DQ 22)
- ▶ GATES quality belts
- ▶ Clockwise/Anti-clockwise rotation
- ▶ Generously dimensioned baseplate with T-slots, pronounced ribbing on rear



Fig. Belt drive DQ 22.
Two belt pulleys for DQ 14/18

- › Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- › V-belt cover with safety switch



- › Anti-glare LED lighting integrated into the drilling head
- › No annoying shadows



Fig.: DQ 14



Fig.: DQ 22

available from January 2021



Technical data and accessories

Model	DQ 14	DQ 18	DQ 22
Article no. (230V)	3191040	3191042	3191044
Article no. (400V)	-	-	3191045
Output			
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V or 400V
Motor output	350 W	450 W	550 W
Drilling performance			
Drilling performance in steel (S235JR)	Ø 13 mm	Ø 15.9 mm	Ø 16 mm
Continuous drilling performance steel (S235JR)	Ø 12 mm	Ø 14 mm	Ø 14 mm
Spindle			
Spindle sleeve stroke	52 mm	65 mm	85 mm
Throat	104 mm	127 mm	169 mm
Spindle holder	fixed/B16	MK 2	MK 2
Rotational speeds			
Spindle speeds	700 - 2 500 rpm	600 - 2 400 rpm	300 - 2 300 rpm
Number of speeds	5 speeds	5 speeds	12 speeds
Drilling table			
Drilling table workspace L x W	170 x 170 mm	200 x 200 mm	270 x 270 mm
T-slot width	14 mm, 2 diagonal	14 mm, 2 diagonal	14 mm, 2 diagonal
Load bearing capacity of table	8 kg	12 kg	15 kg
Drill table rotation/lateral pivot	360° / ± 45°	360° / ± 45°	360° / ± 45°
Max. distance spindle - drilling table	250 mm	319 mm	460 mm
Machine base			
Machine base work area L x W	138 x 128 mm	145 x 143 mm	191 x 187 mm
Max. distance spindle - machine base	340 mm	518 mm	639 mm
Dimensions and weight			
Column diameter	Ø 46 mm	Ø 60 mm	Ø 70 mm
Length x width x height	472 x 283 x 634 mm	568 x 319 x 849 mm	700 x 351 x 1006 mm
Net weight	18.5 kg	28.5 kg	41.7 kg

Accessories	Article no.
Hold-down device 14 mm/M12	3352031
Twist drill bits HSS-CO 5% , 25 parts	3201010
Twist drill bits HSS-CO 5% , 51 parts	3201020
Twist drill bits HSS-CO 5% , 41 parts	3201021
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick-action drill chuck DKC 13 , 0 - 13 mm	3050632
Quick-action drill chuck DKC 16 , 0 - 16 mm	3050633
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
Assortment of clamping tools size 12	3352017

› More accessories for drills see OPTIMUM main catalogue

Accessories DQ 18/DQ 22	Article no.
Direct quick release chuck 1 - 16 mm	3050571
Direct quick release chuck 1 - 13 mm	3050572
Morse taper MK 2/B16	3050659
Twist drill bit HSS / MK 2, 9 parts	3051002
Thread tapping chuck MK 2	3050702

For a large selection of machine vises, see main catalogue

Contents of package

DQ 14/ DQ 18

- › Quick clamping drill chuck 1 - 15.9 mm
- › T-slot nuts

DQ 22

- › Quick clamping drill chuck 1 - 16 mm
- › Morse taper MK 2/B16
- › T-slot nuts

Inexpensive column drilling machine with V-belt drive

Facts that impress in terms of quality, performance and price

- ▶ User-friendly safety switch with IP 54 degree of protection
- ▶ Separate emergency stop mushroom button
- ▶ Safety electrical system in 24 V DC
- ▶ Guaranteed concentricity less than 0.03 mm measured in the drilling spindle sleeve
- ▶ Drill spindle with precision ball bearings
- ▶ OPTIMUM quick clamping chuck in standard scope of delivery
- ▶ Precise workmanship; stable drilling table with two diagonal T-slots and all-around cooling water channel
- ▶ Drilling depth stop
- ▶ V-belt cover with safety switch
- ▶ Generously dimensioned, height adjustable protective screen with safety switch

Belt drive



- › Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- › V-belt cover with safety switch

Speed change



- › The infinitely variable V-belt drive is used to position the V-belt to the desired V-belt diameter with the hand lever while the drilling spindle is rotating. This causes the speed to change

LED machine lamp



- › Anti-glare LED lighting integrated into the drilling head
No annoying shadows



available from January 2021



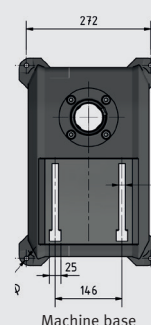
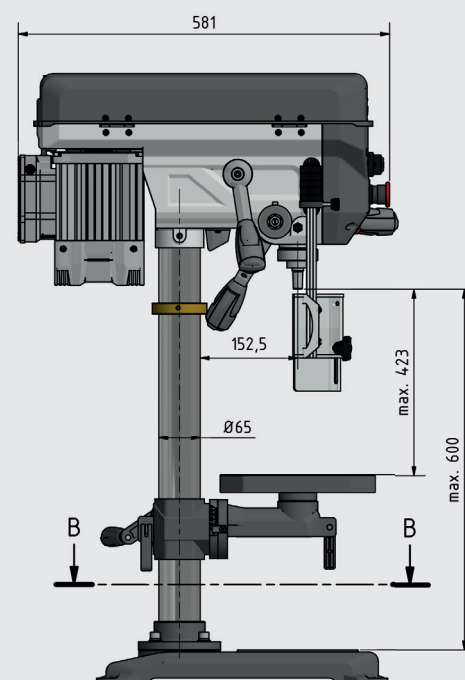
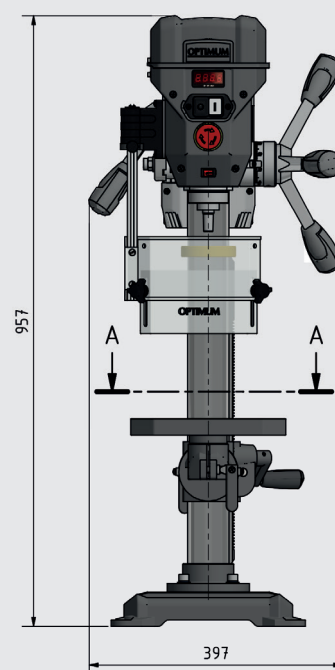
Technical specifications, accessories and dimensions

Model	DQ 20V
Article no.	3191080
Output	
Electrical connection	230 V / 1 Ph
Motor output	0.75 kW
Drilling performance	
Drilling performance in steel (S235JR)	Ø 16 mm
Continuous drilling performance steel (S235JR)	Ø 14 mm
Spindle	
Spindle sleeve stroke	80 mm
Throat	152 mm
Spindle holder	MK 2
Rotational speeds	
Spindle speeds	450 - 2 500 rpm
Number of speeds	Electronically controlled
Drilling table	
Workspace length x width	243 x 243 mm
T-slot size	14 mm, 2 diagonal
Load bearing capacity of table	15 kg
Drill table rotation/lateral pivot	360° / ± 45°
Max. distance spindle - drilling table	423 mm
Machine base	
Machine base work area L x W	181 x 187 mm
Clearance spindle - machine base	max. 599 mm
Dimensions and weight	
Column diameter	Ø 65 mm
Length x width x height	581 x 397 x 957 mm
Net weight	40.7 kg

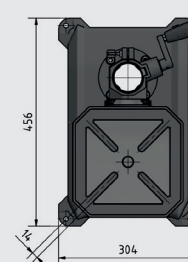
Accessories	Article no.
Direct quick release chuck MK 2, 1 - 16 mm	3050571
Direct quick release chuck MK 2, 1 - 13 mm	3050572
Morse taper MK 2/B16	3050659
Twist drill bit HSS / MK 2, 9 parts	3051002
Assortment of clamping tools size 10, 58-part size	3352016
Taper drill punch MSP1	3050636
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Universal coolant unit	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660

For a large selection of machine vises, see main catalogue
 › More accessories for drills see OPTIMUM main catalogue

Dimensions



Machine base



Machine table

Inexpensive upright drills with V-belt drive

Facts that impress in terms of quality, performance and price

- ▶ Precision drilling table, pivots through $\pm 45^\circ$ and 360° rotatable
- ▶ Solid, generously dimensioned baseplate with grooves, rear with pronounced ribbing
- ▶ Polished multi-tooth carrier
- ▶ Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- ▶ Guaranteed concentricity of drill spindle better than 0.03 mm measured in the drilling spindle sleeve
- ▶ Drill spindle with precision ball bearings
- ▶ Quick-action drill chucks in standard scope of delivery
- ▶ Belt cover with safety switch
- ▶ User-friendly safety switch with IP 54 degree of protection
- ▶ Separate emergency stop button

Belt drive



- › Smooth action thanks to polished multi-tooth carrier
- › Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- › Belt cover with safety switch



Fig.: DQ 25

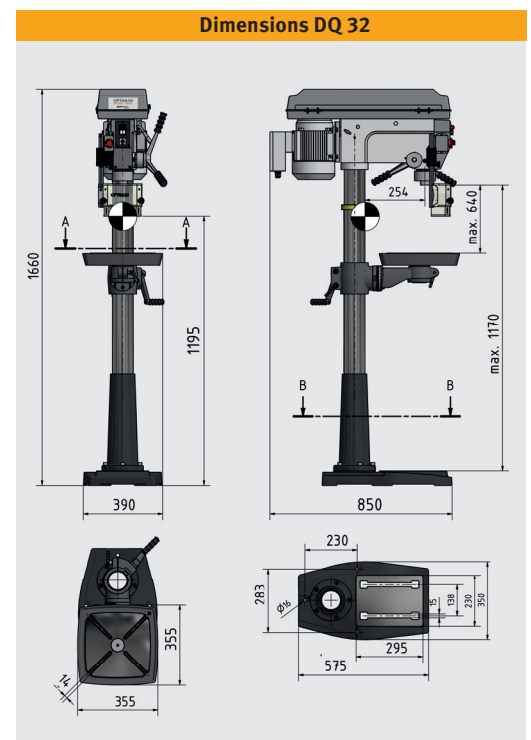
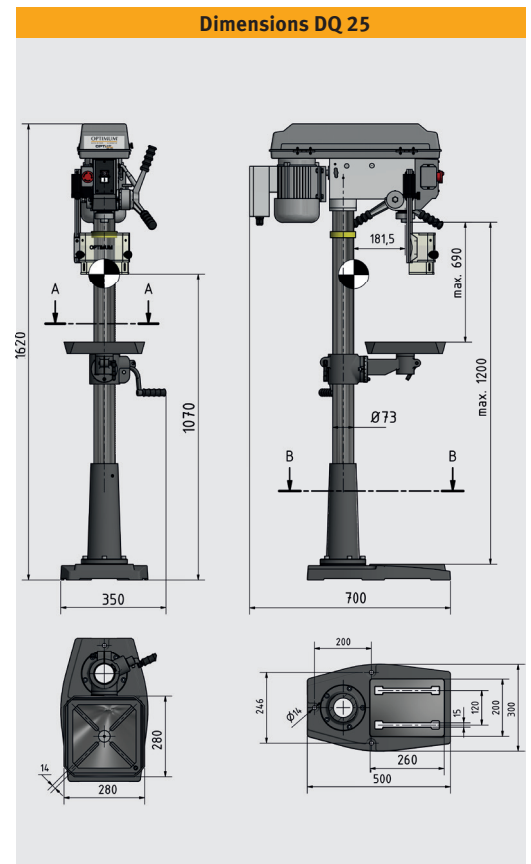


Fig.: DQ 32



Technical specifications, accessories and dimensions

Model	DQ 25	DQ 32
Article no.	3191047	3191049
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor output	750 W	1,1 kW
Drilling performance		
Drilling performance in steel (S235JR)	Ø 25 mm	Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 20 mm	Ø 25 mm
Spindle		
Spindle sleeve stroke	80 mm	120 mm
Throat	181 mm	254 mm
Spindle seat	MT 3	MT 4
Speeds		
Spindle speeds	200 - 2 440 rpm	120 - 1 810 rpm
Number of speeds	12	9
Drilling table		
Drilling table workspace L x W	280 x 280 mm	355 x 355 mm
T-slot size	14 mm, 2 diagonal	14 mm, 2 diagonal
Traglast	40 kg	55 kg
Drill table rotation/lateral tilt	360° / ± 45°	360° / ± 45°
Clearance spindle - drilling table	690 mm	640 mm
Machine base		
Machine base L x W	500 x 300 mm	575 x 350 mm
Machine base work area L x W	200 x 260 mm	230 x 295 mm
T-slot size / spacing / count	14 mm / 120 mm / 2	14 mm / 138 mm / 2
Distance spindle - machine base	1 200 mm	1 170 mm
Dimensions and Weight		
Column diameter	Ø 73 mm	Ø 92 mm
Length x width x height	700 x 350 x 1 620 mm	850 x 390 x 1 660 mm
Weight	71 kg	120 kg



Accessories	Article no.
Niederhalter 14 mm/M 12	3352031
Twist drill bits HSS-CO 5%, 25-teilig	3201010
Twist drill bits HSS-CO 5%, 51-teilig	3201020
Twist drill bits HSS-CO 5%, 41-teilig	3201021
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick clamping drill chuck DKC 13 / 0-13 mm	3050632
Quick clamping drill chuck DKC 16 / 0-16 mm	3050633
Universal coolant unit	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
Assortment of clamping tools SPW 12	3352017

› More accessories for drilling machines see main catalogue



Wide range of machine vices

› Informationen see main catalogue

Scope of supply

- › Quick-action drill chuck 1 - 16 mm
- › T-slot nuts
- › Morse cone MT 3/B16 (DQ 25)
- › Morse cone MT 4/B16 (DQ 32)
- › Taper drift

Bench drilling machine with continuously adjustable speed control. and digital LCD display

Facts that impress in terms of quality, performance and price

- ▶ Best possible force transmission thanks to aluminium pulleys
- ▶ Emergency stop button
- ▶ Drill spindle with precision ball bearings
- ▶ Guaranteed concentricity less than 0.03 mm measured at the drilling spindle sleeve
- ▶ High-contrast, digital LCD speed display integrated in the housing, speed control by potentiometer
- ▶ Dirt- and water-resistant, easy-to-clean membrane keyboard
- ▶ Anti-glare LED lighting on the left and right, integrated into the drilling head. No annoying shadows
- ▶ Height adjustability chuck guard with microswitch
- ▶ Precision drilling table with parallel T-slots, precision surface finish
- ▶ Swivelling drilling table
- ▶ Solid base plate with parallel T-slots

SINAMICS V20



- › Energy-efficient and robust solutions with the SINAMICS V20 frequency inverter

LCD display



- › Spindle speed
- › Depth display (target/actual)
- › Right/left



Fig.: Machine with optional machine chassis



Technical specifications, accessories and dimensions

Model	DX 17E
Article no.	3020168
Motor	
Electrical connection	230 V / 1 Ph ~50 Hz
Motor output	1.0 kW
Drilling performance	
Drilling performance in steel (S235JR)	Ø 16 mm
Continuous drilling performance in steel (S235JR)	Ø 13 mm
Spindle	
Spindle sleeve stroke	60 mm
Spindle seat	MT 2
Throat	235 mm
Speeds	
Spindle speeds	50 - 4 000 rpm
Number of speeds	Electronic speed control
Drilling table	
Drilling table workspace L x W	290 x 290 mm
T-slot size / spacing / count	10 mm / 100 mm / 2
Rotating drilling table	360°
Clearance chuck - drilling table	98 - 315 mm
Machine base	
Machine base work area L x W	290 x 280 mm
T-slot size / spacing / count	14 mm / 100 mm / 2
Distance chuck - machine base	max. 385 mm
Dimensions and Weight	
Column diameter	Ø 60 mm
Length x width x height	425 x 481 x 910 mm
Net Weight	73 kg

Scope of supply

- › Quick clamping drill chuck 1 - 13 mm
- › Adapter MK2-B16

Accessories	Article no.
Assortment of clamping tools SPW 8	3352015
Assortment of clamping tools SPW 12	3352017
Quick release chuck direct MT 2 / 16 mm	3050571
Quick release chuck direct MT 2 / 13 mm	3050572
T-slot nut 10 mm / M 8	3353020
T-slot nut 14 mm / M 12	3353025
Twist drill bits HSS-CO 5%, 25-teilig	3201010
Twist drill bits HSS-CO 5%, 51-teilig	3201020
Twist drill bits HSS-CO 5%, 41-teilig	3201021
Universal coolant unit	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
Machine chassis MSM 1	3353000
NEW Universal machine and tool trolley MSU 3	3352990

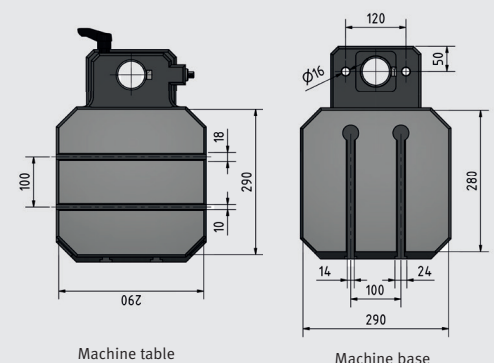
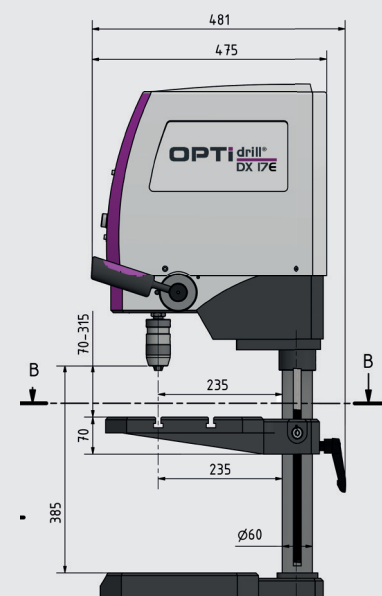
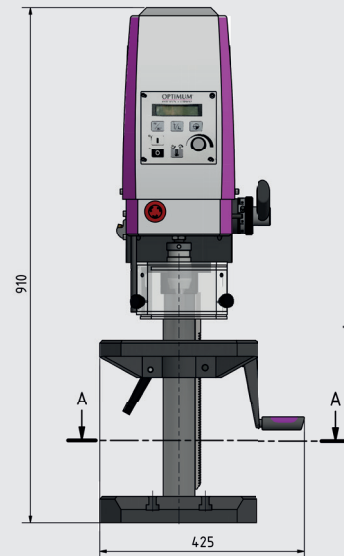
- › More information about machine chassis see main catalogue
- › More accessories for drilling machines see main catalogue

Wide range of machine vices

- › Informationen see main catalogue



Dimensions



Rugged bench drilling machine with automatic spindle sleeve feed.

Facts that impress in terms of quality, performance and price

- ▶ Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- ▶ Smooth action thanks to polished multi-tooth carrier
- ▶ Guaranteed concentricity guaranteed to be less than 0.015 mm measured in the drilling spindle sleeve
- ▶ Separate emergency stop mushroom button
- ▶ Premium OPTIMUM quick clamping chuck as standard
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- ▶ Drilling depth stop
- ▶ V-belt cover with safety switch
- ▶ V-belt tensioning device
- ▶ Clockwise/Anti-clockwise rotation
- ▶ Machine lamp integrated in drilling head
- ▶ Precision workmanship; rugged drilling table with two diagonal T-slots, 360° rotation and all-around cooling water channel
- ▶ Thick walled cast column for high force absorption and stability
- ▶ Solid baseplate, large dimensions and pronounced ribbing on rear

Automatic spindle sleeve feed



- › Drilling depth stop adjustable within range of 0-85 mm. The feed is automatically switched off after reaching the preset drilling depth and turned back to its original position by the spring force of the return spring

V-belt tensioning device Spindle sleeve feed



- › The feed is driven by a belt pulley
- › The feed rate depends on the selected spindle speed
- › Clamp and release the V-belt with a lever

Integrated push-out tool



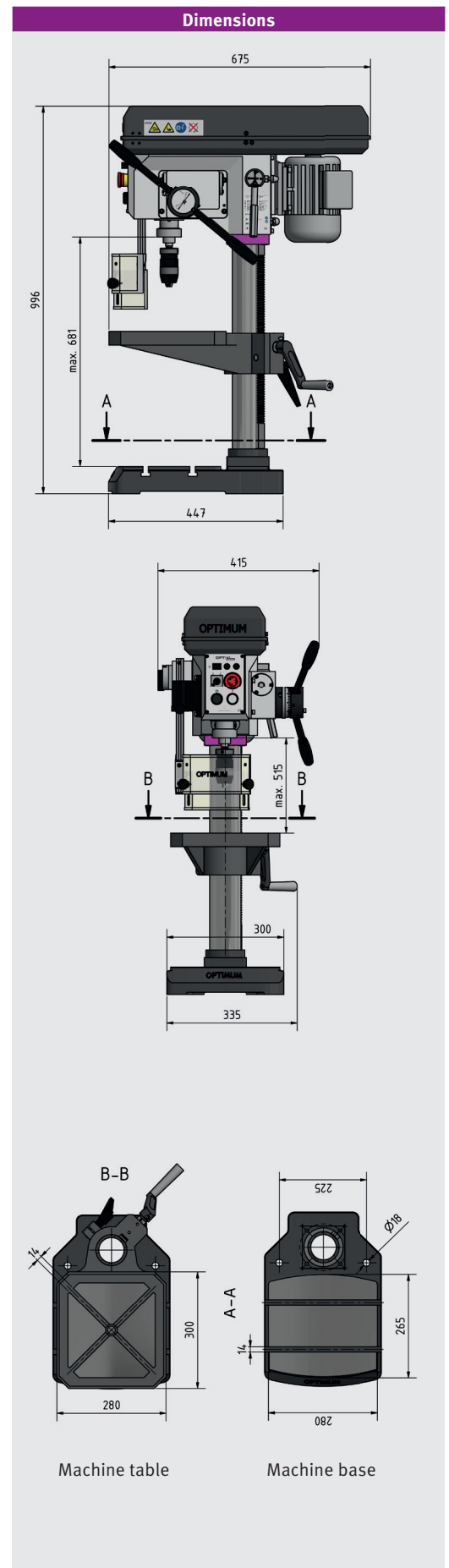
- › for simple tool changes





Technical specifications, accessories and dimensions

Model	DH 24FT
Article no.	3020244
Output	
Electrical connection	400 V / 3 Ph ~50 Hz
Motor output	850 W
Drilling performance	
Drilling performance in steel (S235JR)	Ø 24 mm
Continuous drilling performance steel (S235JR)	Ø 20 mm
Spindle	
Spindle sleeve stroke	85 mm
Spindle holder	MK 2
Throat	164 mm
Rotational speeds	
Spindle speeds	350 - 3 000 rpm
Number of speeds	6 speeds
Drilling table	
Workspace length x width	280 x 300 mm
T-slot size	14 mm, 2 diagonal
Max. distance spindle - drilling table	445 mm
Machine base	
Machine base work area L x W	280 x 360 mm
T-slot size / spacing / count	14 mm
Clearance spindle - machine base	max. 595 mm
Dimensions and weight	
Column diameter	Ø 80 mm
Length x width x height	665 x 434 x 998 mm
Net weight	92 kg



Contents of package

- › Quick clamping drill chuck 1 - 16 mm
- › Morse taper MK
- › T-slot nut

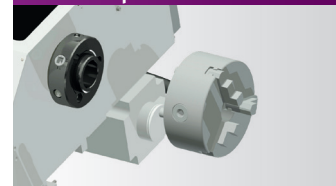
Accessories DH 24FT	Article no.
Direct quick release chuck 1 - 16 mm	3050571
Direct quick release chuck 1 - 13 mm	3050572
Collet chuck set MK 2/ ER 25	3352052
Morse taper MK 2/B16	3050659
Twist drill bit HSS / MK 2, 9 parts	3051002
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Thread tapping chuck MK 2 / M3-M12	3050702
› More information about machine chassis see main catalogue	
› More accessories for drilling machines see main catalogue	

Gear-head gap-bed lathe impresses with simple handling.

Facts that impress in terms of quality, performance and price

- ▶ Precision workmanship
- ▶ Tempered and polished z-axis guideway
- ▶ Guaranteed concentricity of spindle nose better than 0.015 mm
- ▶ Free moving feed gear with rounded gear wheels running in an oil bath
- ▶ Switch rod on the bed slide for selection of longitudinal or cross feed
- ▶ Tempered main spindle borne on adjustable, precision taper roller bearings
- ▶ Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- ▶ Ribbed grey cast steel prism bed with strong ribbing, induction tempered and precision ground
- ▶ All guides adjustable using cleats
- ▶ Tempered spindle nose
- ▶ Leading spindle for thread tapping or automatic longitudinal turning
- ▶ Leading and feed spindles borne on two sintered bearings
- ▶ Tailstock adjustable ± 5 mm for turning spheres
- ▶ Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.02 mm
- ▶ Fast, easy adjustment of the tailstock without tools thanks to clamping lever
- ▶ Emergency stop button
- ▶ Four x tool holder
- ▶ Concentricity at chuck better than 0.04 mm
- ▶ Three-jaw lathe chuck included in standard scope of delivery
- ▶ Interchangeable gears in standard scope of delivery for thread tapping

Spindle holder



- › The spindle is designed as Camlock DIN ISO 702-2 no.4 holding fixture.

Longitudinal/cross feeds



- › Automatic longitudinal/cross feeds
- › Switch rod enables longitudinal or cross feed. The engagement lever activates the feed with the drawbar.



Accessories
Machine chassis MST1

Fig.: TH 3110 – Shown with an optional machine chassis MST 1



Technical specifications, accessories and dimensions

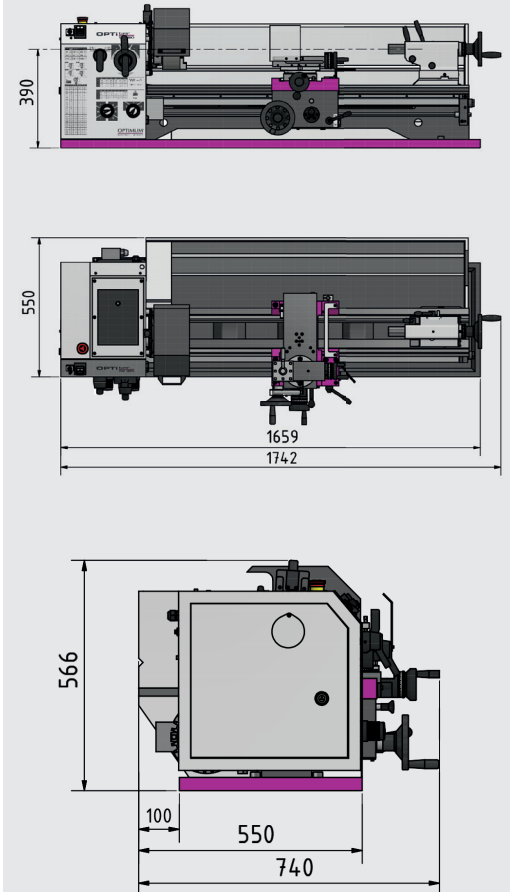
Model	TM 3110
Article no.	3403010
Output	
Electrical connection	400 V / 3 Ph ~50 Hz
Spindle	
Drive motor	1.1 kW
Spindle taper	MK 5
Spindle holder	Camlock DIN ISO 702-2 No. 4
Spindle bore, bar passage diameter	Ø 38 mm
Four x tool holder mounting height	max. 16 mm
Work areas	
Max. height	155 mm
Max. width	1 000 mm
Orbit Ø above machine bed*	323 mm
Orbit Ø above cross slide	216 mm
Bed width	190 mm
Speed range	
Spindle speeds	65 - 2,000 rpm
Number of speeds	9 speeds
Strokes	
Top slide stroke	90 mm
Cross slide stroke	168 mm
Feed and pitches	
Longitudinal feed within the range	0.02 - 0.4 mm/rev (24 feeds)
Cross feed within	0.01 - 0.2 mm/rev (32 feeds)
Pitch - metric in range	0.4 - 10 mm/rev (29 pitches)
Pitch - inch in range	56 - 4 turns/inch (34 pitches)
Tailstock	
Tailstock chuck	MK 3
Spindle sleeve diameter / stroke	Ø 38 mm / 100 mm
Dimensions and weight	
Length x width x height	1,749 x 740 x 566 mm
Net weight	360 kg

Lathe chuck Ø 160 mm No. 4	Art no.
OPTIMUM Four-jaw lathe chuck centric clamping	3442840
BISON Four-jaw lathe chuck centre clamping	3450355

› Information on lathe chucks see main catalogue

Accessories	Art no.
Quick change tool holder SWH 3-E	3384303
Factory assembly SWH 3-E	9000400
Lathe tool set 16 mm, 11-part	3441604
Lathe tool set 16 mm, 5-part	3441668
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Lathe tool set 16 mm, 5-part	3441610
› For information on lathe tool sets, see main catalogue	
Travelling steady passageway Ø 10 - Ø 70 mm	3441465
Fixed steady passageway Ø 10 - Ø 70 mm	3441466
Machine chassis MST1	3440409
Levelling platen SE 1 (if the MST1 chassis is used, 6 units are required)	3381012
› More accessories for lathes see main catalogue	

Dimensions



Accessories	Art no.
Dig. Position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip length 1 100 mm	3383978
Factory assembly	9000420
› Info on the position display see main catalogue	



Contents of package	
› Three-jaw lathe chuck Ø 160 mm, no. 4	
› Reduction sleeve MK 5 - MK 3	
› Two fixed centres MK 3	
› Quadruplicate tool holder 25 mm	
› Interchangeable gear set	
› Machine initially filled with premium grade oil	
› Operating tool	

Feed and lead spindle lathes impress with their rugged design and simple handling. TM 3310D with DPA 31 digital position display

Facts that impress in terms of quality, performance and price

- ▶ Tempered and polished z-axis guideway
- ▶ Guaranteed concentricity of spindle nose better than 0.015 mm
- ▶ DC 24 Volt electrical system
- ▶ Free moving feed gear with rounded gear wheels running in an oil bath
- ▶ Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- ▶ Safety hand wheels with release function acc. to EN23125 in the X and Z axis
- ▶ Clockwise/anti-clockwise rotation switchable on bed slide
- ▶ Two-channel CW/CCW switch approved in line with EN 23125
- ▶ Switch rod on the bed slide for selection of longitudinal or cross feed
- ▶ Switch with lifecycle calculation, approved in line with EN ISO 13849
- ▶ Tempered main spindle borne on adjustable, precision taper roller bearings
- ▶ Machine chassis with rugged steel design
- ▶ Motor circuit switch
- ▶ Main motor electrically braked
- ▶ Four x tool holder
- ▶ Emergency stop button right and left
- ▶ Three-jaw lathe chuck included in standard scope of delivery

TM 3310D - Digital position display DPA 31

Display:

- › User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean

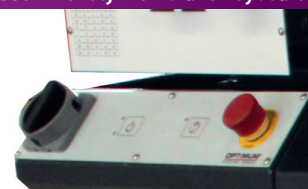
NEW



Measuring system:

- › Magnetic belt on X and Z0 axis
- › Scale on Z axis
- › The electronic measuring components of the scale are protected and sealed in the housing
- › Provides accurate and reliable measurement results even if the measuring system is operated in oil or coolant
- › Tolerant towards vibration and magnetic interference

User-friendly membrane keyboard



- › Lockable main switch
- › Control on
- › Direct run spindle
- › Emergency stop mushroom button

Spindle holder



- › The spindle is designed as Camlock DIN ISO 702-2 no.4 holding fixture.

LED machine lamp



- › Dazzle-free, integrated into chip guard

Chip tray



- › Pull-out chip drawer with guide rails

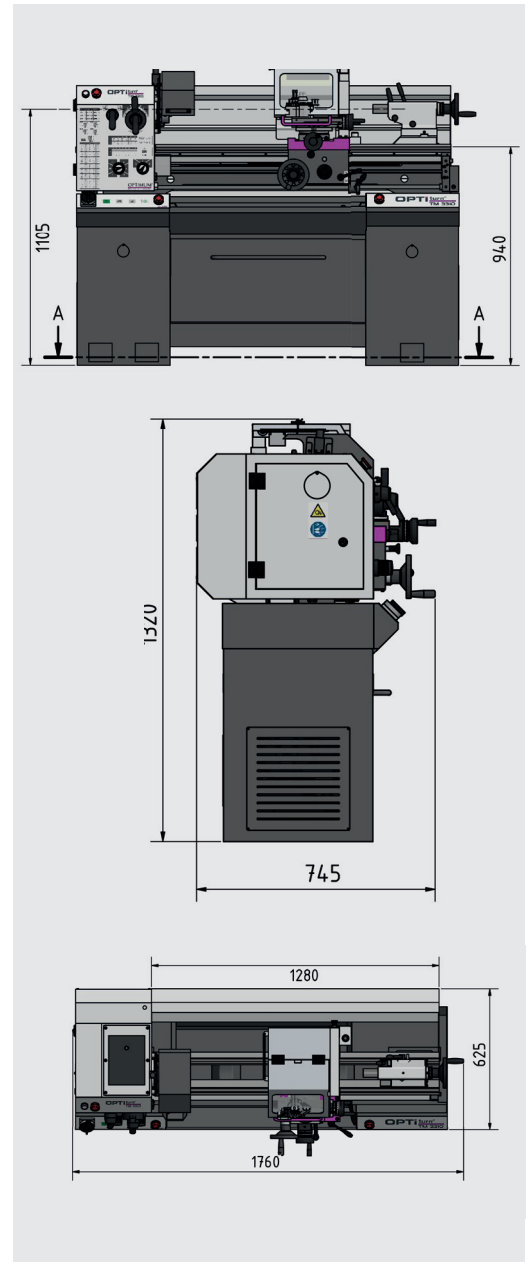


Fig.: TM 3310D



Technical specifications, accessories and dimensions

Model	TM 3310
€ plus VAT	5,190.00
Model	TM 3310D
Article no.	3403025
Output	
Electrical connection	400 V / 3 Ph ~50 Hz
Spindle	
Drive motor	1.5 kW
Spindle taper	MK 5
Spindle holder	Camlock DIN ISO 702-2 No. 4
Spindle bore, bar passage diameter	Ø 38 mm
Four x tool holder mounting height	max. 16 mm
Work areas	
Max. height	165 mm
Max. width	1 000 mm
Orbit Ø above machine bed*	330 mm
Orbit Ø above cross slide	216 mm
Speed range	
Spindle speeds	65 - 2,000 rpm
Number of speeds	9 speeds
Strokes	
Top slide stroke	90 mm
Cross slide stroke	168 mm
Feed and pitches	
Longitudinal feed within the range	0.02 - 0.4 mm/rev (24 feeds)
Cross feed within	0.01 - 0.2 mm/rev (32 feeds)
Pitch - metric in range	0.4 - 10 mm/rev (29 pitches)
Pitch - inch in range	56 - 4 hel./inch
Tailstock	
Tailstock chuck	MK 3
Spindle sleeve diameter / stroke	Ø 38 mm / 100 mm
Dimensions and weight	
Length x width x height	1 760 x 745 x 1 320 (DPA 1 590) mm
Net weight	469 kg/471 kg



Lathe chuck Ø 160 mm No. 4	Art no.
OPTIMUM Four-jaw lathe chuck centric clamping	3442840
BISON Four-jaw lathe chuck centre clamping	3450355
› Information on lathe chucks see main catalogue	

Accessories	Art no.
Travelling steady passageway Ø 10 - Ø 70 mm	3441469
Fixed steady passageway Ø 10 - Ø 70 mm	3441470
Vibration-damping machine base SE55 (6 units required)	3352981
Quick change tool holder SWH 3-E	3384303
Factory assembly SWH 3-E	9000400
Lathe tool set 16 mm, 11-part	3441604
Lathe tool set 16 mm, 5-part	3441668
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Lathe tool set 16 mm, 5-part	3441610
› For information on lathe tool sets, see main catalogue	
› More accessories for lathes see main catalogue	

Our recommendation

cleancraft
flexCAT 378 EOT-PRO
Article no. 7003380



Contents of package

- › Three-jaw lathe chuck Ø 160 mm, no. 4
- › LED machine lamp
- › Reduction sleeve MK 5 - MK 3
- › Non-travelling centre MK 3
- › Quadruplicate tool holder **16 mm**
- › Interchangeable gear set
- › Machine mobile base
- › Machine initially filled with premium grade oil
- › Operating tool

Precision feed and lead spindle lathe with electronically controlled drive and digital position display **NEWALL** DP 700

Facts that impress in terms of quality, performance and price

- ▶ Machine bed and chassis made heavily ribbed cast material
- ▶ Single-part steel machine chassis
- ▶ High degrees of rigidity of the spindle bar housing thanks to strong ribbed 25GG cast material
- ▶ Precision slide
- ▶ shafts on needle bearings, all components lubricated in oil bath
- ▶ Hardened and polished bed guides
- ▶ All electronic controls centrally accessible
- ▶ All feed gearwheels made of steel, hardened and polished
- ▶ Hand wheels decoupled and approved in line with EN 23125
- ▶ Two-channel CW/CCW switch approved in line with EN 23125
- ▶ Switch with lifecycle calculation, approved in line with EN ISO 13849
- ▶ Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- ▶ Complete feed and lead spindle cover
- ▶ Working area completely illuminated
- ▶ Easy to service thanks to removable rear panel
- ▶ Hardened and polished spindle guarantees high degrees of accuracy and durability
- ▶ The powerful machining performance means that a high level of chip removal during roughing work is no problem
- ▶ Energy chain for material-friendly cable and hose guiding
- ▶ Lockable chip guard moves with the bed slide with integrated position indicator and coolant hose, manually adjustable
- ▶ No interchangeable gears required
- ▶ With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- ▶ Electronically braked motor
- ▶ Electronic feed shut-off of Z axis
- ▶ Electrical position shut-off with quadruple positioning stop
- ▶ Three-jaw lathe chuck included in standard scope of delivery
- ▶ Quick change tool holder SWH 7-C
- ▶ Tool holder 32 x 130 type D for square chisels 25 mm

Dig. Position display DPA 700



- › Intuitive and user-friendly user interface

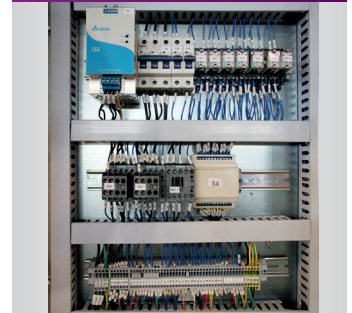
Siemens inverter

Made in EU



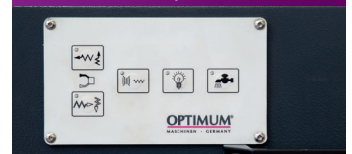
- › **SINAMICS G120D**
- › More information: see main catalogue

Control cabinet



- › 24 Volt DC adapter
- › All contactors and relays by **SIEMENS** or **Schneider**

Touch panel



Centralised control

- › Pitch deactivation using button
- › Feed bar drive
- › Rapid motion X and Y axis
- › Machine lamp
- › Coolant



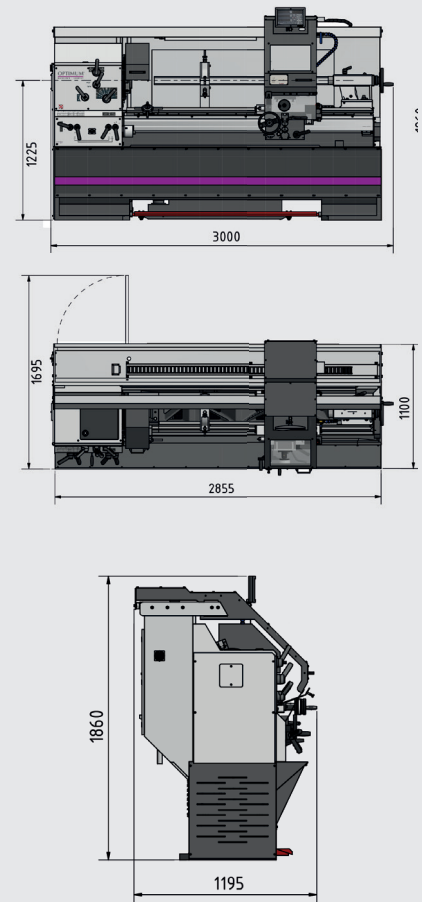


Technical specifications, accessories and dimensions

Model	TX 5216V
Article no.	3432445
Output	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	5.5 kW
Coolant pump motor	100 W
Spindle	
Drive motor	5.5 kW
Spindle taper	MK 7
Spindle holder	Camlock DIN ISO 702-2 No. 8
Spindle bore, bar passage diameter	Ø 80 mm
Quick change tool holder	SWH 7-C
Work area	
Max. height	260 mm
Max. width	1 600 mm
Orbit Ø above machine bed*	520 mm
Orbit Ø above cross slide	324 mm
Bed width	350 mm
Speed range	
Spindle speed	45 - 1 800 rpm
Number of speeds	2 x 3 speeds
Strokes	
Top slide stroke	170 mm
Cross slide stroke	350 mm
Feeds and pitches	
Longitudinal feed within the range	0.05 - 1.5 mm/rev (55 feeds)
Cross feed within	0.025 - 0.75 mm/rev (55 feeds)
Metric pitch	0.5 - 15 mm/rev (55 pitches)
Pitch - inch in range	60 - 2 turns/inch (55 pitches)
Diametral pitch in range	0.25 - 7.5 mm x π (55 thread)
Modular thread in range	120 - 4 turns/π (55 pitch)
Tailstock	
Tailstock chuck	MK 5
Tailstock spindle sleeve diameter / stroke	Ø 72 mm/ 180 mm
Dimensions and weight	
Length x width x height	3,016 x 1,195 x 1,860 mm
Net weight	2 470 kg

Accessories	Art no.
TX 5216	
Travelling steady passageway Ø 15 - Ø 125 mm	3438020
Fixed steady passageway Ø 10 - Ø 185 mm	3438023
Fixed steady passageway Ø 160 - Ø 285 mm	3438024
Lathe tool set HM 20 mm	3441670
Lathe tool set HM 20 mm, extension kit	3441617
Accessories	
Clamping disc Ø 450 mm no. 8	3442982
Travelling centre MK 5	3440705
BISON co-travelling centre MK 5	3451005
Vibration dampers machine base SE 85 (6 units required)	3352982
› More accessories for lathes see main catalogue	

Dimensions



YouTube
Follow this for the video presentation of our OPTIMUM lathe TX 5216



Fig.:
Fixed steady



Fig.:
Travelling steady

Contents of package

- › Three-jaw lathe chuck Ø 315 mm no. 8
- › Machine lamp
- › Reduction sleeve MK 7 / MK 5
- › Non-travelling centre MK 5 long
- › Fixed centre MK 5 short
- › Quick change tool holder SWH 7-C
- › Tool holder for square chisels 32 x 130 type D for 25 mm square chisels
- › Machine initially filled with premium grade oil
- › Operating tool

Digital positioning displays for versatile deployment for two and three axes with speed display.
guarantees excellent results on machines and improves their accuracy

Digital position display	Article no.
DPA 31-2 for two axis	3384030
DPA 31-3 for three axis	3384031
› LED-display › User-friendly membrane keyboard, splash water protected, › sealed and dazzle free › Switchable for milling machine and lathe, freely selectable input signal (sinus/square), e.g. usable for glass measuring probes and/or magnetic strip system › Greater operation accuracy › Clear reduction of manufacturing times › Reduction of error quota › X, Y/Z0, Z axis each with 8-digit display › Sensor supplied for acquiring spindle speeds › Three measuring inputs can be evaluated with seven correction memory stores each for tools › Dimensions L x W x H: 230 x 80 x 260 mm › Weight: 2 kg	



DPA 31-3

DPA 31-2

Measuring strips MSS31	Article no.
› The electronic measuring components of the measuring strips are protected and sealed in the housing › Provides accurate and reliable measurement results even when the measuring system is working in oil or coolant › Tolerant to vibration and magnetic interference › Without assembly	
51 mm (Length 311 mm)	3384405
102 mm (Length 362 mm)	3384410
152 mm (Length 412 mm)	3384415
203 mm (Length 463 mm)	3384417
254 mm (Length 514 mm)	3384419
305 mm (Length 565 mm)	3384421
356 mm (Length 616 mm)	3384422
406 mm (Length 666 mm)	3384423
457 mm (Length 717 mm)	3384424
506 mm (Length 766 mm)	3384425
559 mm (Length 819 mm)	3384426
610 mm (Length 870 mm)	3384427
660 mm (Length 920 mm)	3384428
711 mm (Length 971 mm)	3384429
762 mm (Length 1 022 mm)	3384430
813 mm (Length 1 073 mm)	3384431
864 mm (Length 1 124 mm)	3384432
914 mm (Length 1 174 mm)	3384433
965 mm (Length 1 225 mm)	3384434
1 016 mm (Length 1 276 mm)	3384435
1 118 mm (Length 1 378 mm)	3384437
1 168 mm (Length 1 428 mm)	3384438
1 219 mm (Length 1 479 mm)	3384439
1 270 mm (Length 1 530 mm)	3384440
1 321 mm (Length 1 581 mm)	3384441

1 372 mm (Length 1 632 mm)	3384442
1 422 mm (Length 1 882 mm)	3384443
1 473 mm (Length 1 933 mm)	3384444
1 524 mm (Length 1 784 mm)	3384445
1 626 mm (Length 1 886 mm)	3384446
1 727 mm (Length 1 987 mm)	3384447
1 829 mm (Length 2 089 mm)	3384448
1 930 mm (Length 2 190 mm)	3384449
2 032 mm (Length 2 292 mm)	3384450
2 134 mm (Length 2 394 mm)	3384451
2 235 mm (Length 2 495 mm)	3384452
2 337 mm (Length 2 597 mm)	3384453
2 438 mm (Length 2 698 mm)	3384454
2 540 mm (Length 2 800 mm)	3384455
2 642 mm (Length 2 902 mm)	3384456
2 743 mm (Length 3 003 mm)	3384457
2 845 mm (Length 3 105 mm)	3384458
2 946 mm (Length 3 206 mm)	3384459
3 048 mm (Length 3 248 mm)	3384460

Accessories	Article no.
Extension cable 1 meter	3384040
Read head active	3384035



Vario conversion for milling machines MZ 2S and MZ 4S



Vario conversion with Siemens Inverter drive Sinamics G 110M

- › With integrated EMC filter
- › Low-noise motor operation due to high pulse frequency
- › Status information and alarm messages via the optional BOP control panel
- › Fast current limiting (FCL) for trouble-free operation in case of sudden load surges



› clearly arranged



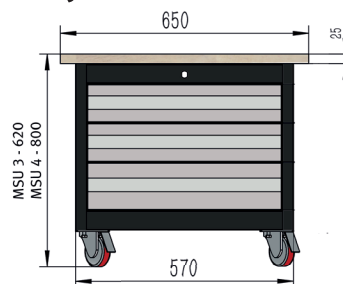
Vario conversion for milling machine MZ 2S	3491119
› with Inverter from Siemens G 110M	
› Motor power 2,2 kW	
› Spindle speed 20 - 2 500 rpm, 2 x 6 Gear steps	

Vario conversion for milling machine MZ 4S	3491120
› with Inverter from Siemens G 110M	
› Motor power 4 kW	
› Spindle speed 20 - 3 045 rpm, 2 x 6 Gear steps	

MSU 3 / MSU 4 - Universal machine and tool trolley

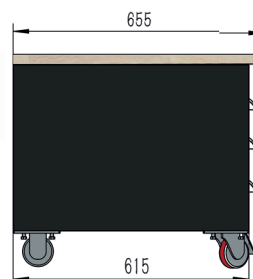
Facts that impress in terms of quality, performance and price

- ▶ All three ball bearing mounted drawers can be operated with full extension and are equipped with a stop at the end to prevent accidental opening when shunting or transporting
- ▶ Stable design
- ▶ Lockable with cylinder lock



MSU 3

Model	MSU 3	MSU 4
Article no.	3352990	3352991
Load bearing capacity	max. 500 kg	max. 500 kg
Load bearing capacity per drawer	max. 45 kg	max. 45 kg
Dimensions LxWxH	650 x 655 x 620 mm	650 x 655 x 800 mm
Net weight	47 kg	55.5 kg



MSU 3

MSU 4 available from January 2021

Exhaust hoods-Set	Article no.
for GU 20P	3107060
for GU 25P	3107061
› 2 pcs (left and right)	
› For the use of a suction unit	



This **manual band saw** can either be installed on the optional work table with vise, or guided manually



- ▶ Powerful 1.1 kW motor
- ▶ Ideally suited for sawing solid steel materials with low tensile strength, preferably for sawing off pipes, steel sections, aluminium and non-ferrous metals.
- ▶ Also suitable for cutting wood, plastics and other thin non-ferrous metals
- ▶ Strong bridge construction with aluminium frame
- ▶ Variable saw band speed for various materials
- ▶ Easy-to-operate saw blade clamps and adjusting screws ensure permanently precise band run
- ▶ The saw supports virtually spark-free sawing without coolant and is thus easy on the material
- ▶ LED work light illuminates dark work areas for precise cutting
- ▶ Reduced cutting noise
- ▶ Always the right working position thanks to the adjustable additional grip
- ▶ Transport case
- ▶ Removable from optional worktable for flexible use



> for variable speed adjustment between 42 and 144 m/min.



Optional accessories




- Work table
- > Includes vise
- > Net weight 13 kg
- Art no. 3184212

Model	SQ-V10
Article no.	3184210
Electrical connection	230 V/1 Ph ~50 Hz
Motor output	1.1 kW
Saw band speed	42 - 144 m/min
Saw band dimensions	1,140 x 13 x 0.65 mm
Length x width x height	465 x 280 x 165 mm
Net weight	6.6 kg

Contents of package

- > Transport case
- > Bi-metal saw band 10-14 teeth per inch M42

Cutting areas

			
with optional work table			
0°	Ø 115 mm	105 mm	100 x 115 mm
45°	Ø 45 mm	40 mm	30 x 45 mm
without optional work table			
0°	Ø 127 mm	127 mm	127 x 127 mm
45°	Ø 40 mm	40 mm	40 x 120 mm

Saw bands HSS bi-metal M 42

Teeth per inch	article no.
10 - 14 tpi	3357548

Transportable mitre bandsaws with excellent cutting precision, extremely low-noise. With continuously adjustable saw band speed



- ▶ Equipped as a factory standard with bi-metal saw blade
- ▶ Adjustable material stop for batch work
- ▶ Pushbutton on lever arm for saw band run switches the saw band run on and off
- ▶ Base plate with anti-slip feet
- ▶ Saw head swivels from 0° to +60° to allow angled sawing



available from January 2021



Optional accessories

Machine chassis MUG 1

- › Stable, space-saving, folding, easy to transport
 - › Dimensions L x W x H: 500 x 470 x 780 mm
- Art. no. 3630000

Contents of package

- › Material stop
- › Bi-metal saw band



Mitre square

- › Easily legible scale for adjusting the angle



Saw band guide

- › Ball-bearing borne; for an excellent band run and thus optimal cutting



Pushbutton

- › Pushbutton on lever arm for saw band run.
- › Switches the saw band run on and off



Vario drive

- › Continuously adjustable saw band speed from 30 to 80 m/min

Model	SQ-V13
Article no.	3194013
Electrical connection	230 V/1 Ph ~50 Hz
Motor output	400 W
Saw band speed	30 - 80 m/min
Saw band dimensions	1,440 x 12.5 x 0.6 mm
Cutting angle	0° - 60°
Length of open/closed vise	795 / 670mm
Width without/with material stop	382 / 613 mm
Height bottom/top limit position	640 / 420 mm
Net weight	23.3 kg

Cutting areas			
0°	Ø 125 mm	125 mm	125 x 125 mm
45°	Ø 85 mm	85 mm	85 x 85 mm
60°	Ø 50 mm	50 mm	50 x 50 mm

The cutting area was determined for aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Saw bands HSS bi-metal M 42

Teeth per inch	Tooth angle	article no.
6 - 10 tpi	0°	3351546
10 - 14 tpi	0°	3351547

Manual surface grinding machine by OPTIMUM for finishing metal surfaces. Precision and high grinding quality with digital position display DPA 31

Facts that impress in terms of quality, performance and price

- ▶ Permanent magnet for holding the workpiece
- ▶ Premium spindle with precision taper roller bearings
- ▶ Tempered and polished bed guides
- ▶ Turcite-B coated counter guides for excellent wear-resistance and low friction
- ▶ Integrated grinding wheel dressing device
- ▶ Machine chassis made of stable, torsion resistant cast material for maximum rigidity and stability
- ▶ Backlash-free V-flat guide on the Z axis and flat guides on the X and Y axes
- ▶ Trapezoidal threaded spindle on the Y axis
- ▶ Manual centralised lubrication system
- ▶ All flat guides are finely honed and thus guarantee a high precision of all manual movements
- ▶ LED lamp
- ▶ Safety electrical system in 24 V DC
- ▶ Grinding precision: 0.005 mm
- ▶ Corundum grinding wheel 46 grain for all popular metals included in standard scope of delivery
- ▶ Two-channel safety electrics
- ▶ EMC filter class
- ▶ Substantial energy savings thanks to IE3 motor
- ▶ Coolant unit with external coolant tank

Digital position display DPA 31-2

Display:

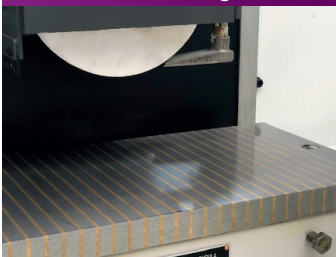
- › User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean

NEW

New measuring strips:

- › The electronic measuring components of the measuring strips are protected and sealed in the housing
- › Provides accurate and reliable measurement results even if the measuring system is operated in oil or coolant
- › Tolerant towards vibration and magnetic interference

Permanent magnet

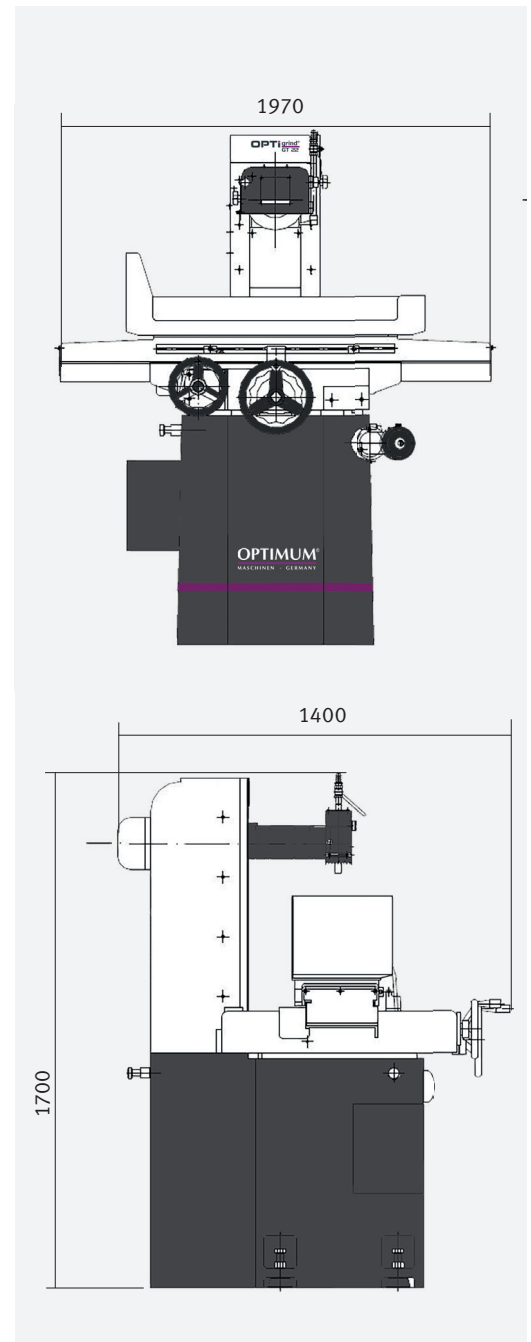


- › Fast and safe workpiece clamping



Technical data and dimension

Model	GT 22
Article no.	3111020
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Grinding wheel drive motor	1.5 kW
Coolant pump motor	125 W
Surface grinding table	
Surface grinding table length x width	200 x 450 mm
Magnetic clamping plate	200 x 500 mm
T-slot size/number of slots	14 mm / 1
Load bearing capacity of grinding table including permanent magnet	128 kg
Workpiece size length x width x height	450 x 200 x 350 mm
Spacing spindle centre - grinding table	max. 450 mm
Grinding wheel	
Size of grinding wheel	Ø 200 x 20 mm, shafts Ø 31.75 mm
Clearance grinding wheel - grinding table	405 mm
Circumferential speed of grinding wheel	33 m/s
Grinding spindle concentricity	0.005 mm
Manual stroke	
X axis	500 mm
Z axis	240 mm
Rotational speeds	
Constant spindle speed	2 850 rpm
Dimensions and weight	
Length x width x height	1,970 x 1,300 x 1,700 mm
Net weight	900 kg



See Seite 30 for accessories

Contents of package
• Corundum grinding wheel 46 grain
• Digital position display
• Balancing stand
• Degaussing unit
• Grinding wheel and clamping chuck
• Dresser for grinding wheel (with diamond tip)
• Wheel balancing mandrel
• Wheel dresser
• Base plate for dresser
• Levelling feet
• Operating tool in toolbox

Solid **surface grinding machine by OPTIMUM** with compact footprint. Impresses with easy handling, precision and great grinding quality.

Facts that impress in terms of quality, performance and price

- ▶ Electro-magnetic clamping plate for holding the workpiece with automatic degaussing function
- ▶ Premium spindle with precision taper roller bearings
- ▶ Tempered and polished bed guides
- ▶ Turcite-B coated counter guides for excellent wear-resistance and low friction
- ▶ Grinding spindle with premium precision bearings
- ▶ Integrated grinding wheel dresser
- ▶ Digital position display
- ▶ Machine chassis made of stable, torsion resistant cast material for maximum rigidity and stability
- ▶ Backlash-free V-flat guide on the Z axis and flat guides on the X and Y axes
- ▶ Trapezoidal threaded spindle on the Y axis
- ▶ Precision ball screws
- ▶ Guideways and transport spindle with centralised lubrication system
- ▶ All flat guides are finely honed and thus guarantee highest precision of all manual movements
- ▶ Safety electrical system in 24 V DC
- ▶ Generously dimensioned, decoupled hand wheels on all three axes
- ▶ Hydraulic lines according to DIN EN 853
- ▶ Grinding precision: 0.005 mm
- ▶ Corundum grinding wheel 46 grain for all popular metals included in standard scope of delivery
- ▶ Pivoting control panel substantially facilitates work
- ▶ Separate hydraulics unit with heat exchanger avoids vibrations and thermal load
- ▶ Two-channel safety electronics
- ▶ Grinding table splash guard
- ▶ EMC filter class
- ▶ Coolant unit with external coolant tank, capacity 100 litres
- ▶ Substantial energy savings thanks to IE3 motor



Digital position display DPA 31-2

NEW



Display:

- › User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean

New measuring strips:

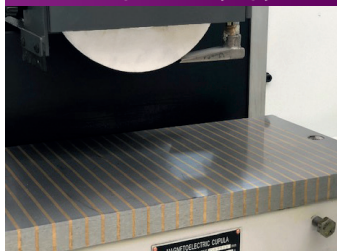
- › The electronic measuring components of the measuring strips are protected and sealed in the housing
- › Provides accurate and reliable measurement results even if the measuring system is operated in oil or coolant
- › Tolerant towards vibration and magnetic interference

Central lubrication



- › Prevents wear, repair costs and unnecessary downtime to a major extent

Electromagnetic clamping plate



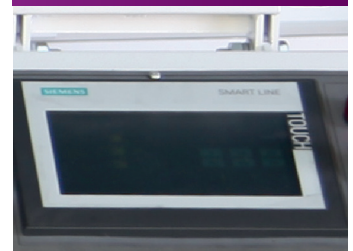
- › Fast and safe workpiece clamping

Hydraulic power unit



- › External hydraulic power unit with heat exchanger for constant oil temperature

Touch Screen



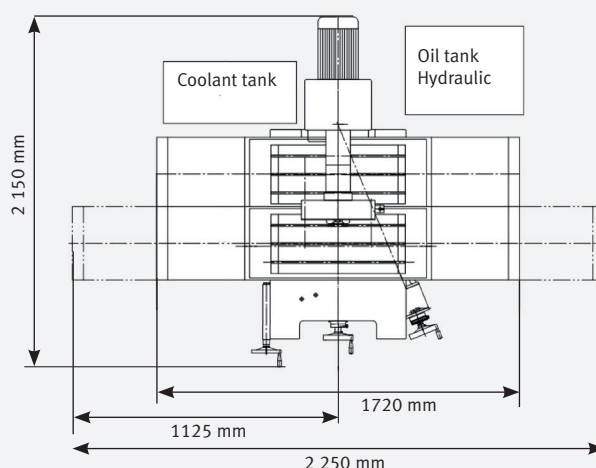
- › for entering work data and displaying information
- › Hand wheel for moving the Y axis
- › Swivelling control panel



Technical data and dimension

Model	GT 25
Article no.	3111025
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	3.7 kW
Grinding wheel drive motor	2.2 kW
Hydraulic motor	0.75 kW
Coolant pump motor	70 W
Surface grinding table	
Surface grinding table length x width	254 x 508 mm
Electro-magnetic clamping plate	250 x 500 mm
T-slot size/number of slots	14 mm / 1
Grinding table load bearing capacity including electromagnetic clamping plate	180 kg
Workpiece size length x width x height	508 x 254 x 350 mm
Spacing spindle centre - grinding table	max. 450 mm
Oscillating speeds of table	5 - 25 m/min
Grinding wheel	
Size of grinding wheel	Ø 200 x 20 mm, shafts Ø 31.75 mm
Clearance grinding wheel - grinding table	405 mm
Circumferential speed of grinding wheel	33 m/s
Grinding spindle concentricity	0.005 mm
Oscillating stroke/travel stroke	
Oscillating stroke X-axis	560 mm
Travel Z axis	275 mm
Z axis	
Continuous transverse feed	0.1 - 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Y axis	
Step widths of fast motion feed	0.005 0.01 0.02 0.03 0.04 0.05
Fast motion adjustment on the Z axis	480 mm/min
Scale division on handwheel	0.005 mm
Rotational speeds	
Constant spindle speed	2 850 rpm
Dimensions and weight	
Length x width x height	2,250 x 2,150 x 1,675 mm
Net weight	1 900 kg

Footprint



See Seite 30 for accessories

Contents of package
• Corundum grinding wheel 46 grain
• Digital position display
• Balancing stand
• Degaussing unit
• Grinding wheel and clamping chuck
• Dresser for grinding wheel (with diamond tip)
• Wheel balancing mandrel
• Wheel dresser
• Base plate for dresser
• Levelling feet
• Operating tool in toolbox

Solid **surface grinding machine** by **OPTIMUM** equipped with digitally controlled automatic vertical feed and **digital position display DPA 31**

Facts that impress in terms of quality, performance and price

- ▶ Electro-magnetic clamping plate for holding the workpiece with automatic degaussing function
- ▶ Premium spindle with precision taper roller bearings
- ▶ Tempered and polished bed guides
- ▶ Turcite-B coated counter guides for excellent wear-resistance and low friction
- ▶ Grinding spindle with premium precision bearings
- ▶ The grinding wheel can be sharpened with a dressing unit directly on the machine
- ▶ Digital position display
- ▶ Machine chassis made of stable, torsion resistant cast material for maximum rigidity and stability
- ▶ Guideways for longitudinal, transverse and vertical movements are play-free and designed to self-centre as V and flat rails
- ▶ Precision ball screws
- ▶ Guideways and transport spindle with centralised lubrication system
- ▶ All flat guides are finely honed and thus guarantee highest precision of all manual movements
- ▶ Safety electrical system in 24 V DC
- ▶ Generously dimensioned, decoupled hand wheels on all three axes
- ▶ Time-controlled centralised lubrication system
- ▶ Hydraulic lines according to DIN EN 853
- ▶ Grinding precision: 0.005 mm
- ▶ Corundum grinding wheel 46 grain for all popular metals included in standard scope of delivery
- ▶ Pivoting control panel substantially facilitates work
- ▶ Two-channel safety electronics
- ▶ Grinding table with splash protection enclosure
- ▶ Coolant unit with external coolant tank, capacity 100 litres
- ▶ Digitally controlled automatic vertical feed with servo motor
- ▶ Motorised vertical height adjustment via spindle
- ▶ Hydraulic and continuously adjustable longitudinal feed
- ▶ EMC filter class
- ▶ Substantial energy savings thanks to IE3 motor



Digital position display DPA 31-2

NEW



Display:

- › User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean

New measuring strips:

- › The electronic measuring components of the measuring strips are protected and sealed in the housing
- › Provides accurate and reliable measurement results even if the measuring system is operated in oil or coolant
- › Tolerant towards vibration and magnetic interference

Dressing unit



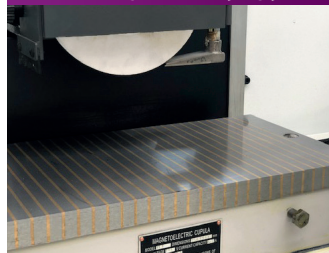
- › Manual parallel dressing unit

Hydraulic power unit



- › External hydraulic power unit with heat exchanger for constant oil temperature

Electromagnetic clamping plate



- › Fast and safe workpiece clamping

Touch Screen



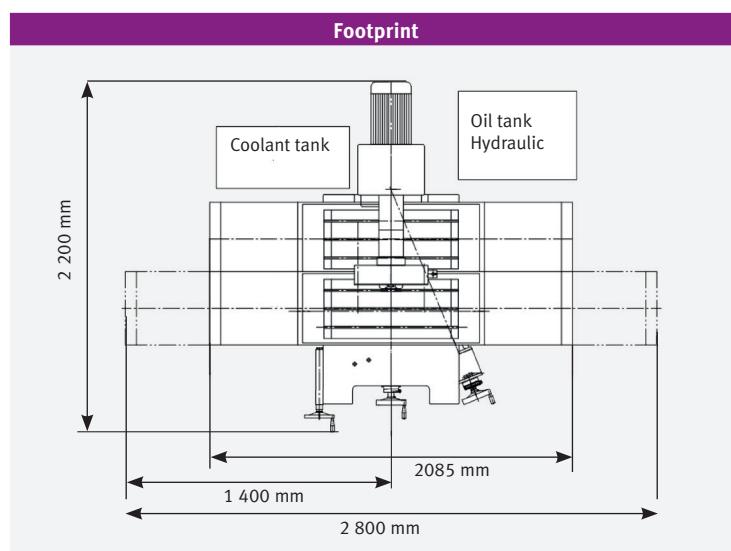
- › for entering work data and displaying information
- › Hand wheel for moving the Y axis
- › Swivelling control panel

Technical data and dimension

Model	GT 30
Article no.	3111030
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	7.5 kW
Grinding wheel drive motor	4 kW
Hydraulic motor	2.2 kW
Coolant pump motor	90 W
Surface grinding table	
Surface grinding table length x width	305 x 635 mm
Electro-magnetic clamping plate	300 x 600 mm
T-slot size/number of slots	14 mm / 1
Grinding table load bearing capacity including electromagnetic clamping plate	270 kg
Workpiece size length x width x height	635 x 305 x 405 mm
Spacing spindle centre - grinding table	max. 580 mm
Oscillating speeds of table	5 - 25 m/min
Grinding wheel	
Size of grinding wheel	350 x 40 x shafts Ø 127 mm
Clearance grinding wheel - grinding table	405 mm
Circumferential speed of grinding wheel	27 m/s
Grinding spindle concentricity	0.005 mm
Oscillating stroke/travel stroke	
Oscillating stroke X-axis	765 mm
Travel Z axis	340 mm
Z axis	
Continuous transverse feed	0.1 - 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Y axis	
Step widths of fast motion feed	0.005 0.01 0.02 0.03 0.04 0.05
Fast motion adjustment on the Z axis	480 mm/min
Scale division on handwheel	0.005 mm
Rotational speeds	
Constant spindle speed	1 450 rpm
Dimensions and weight	
Length x width x height	2,800 x 2,205 x 1,900 mm
Net weight	3 000 kg

See Seite 30 for accessories

Contents of package
• Corundum grinding wheel 46 grain
• Digital position display
• Balancing stand
• Degaussing unit
• Grinding wheel and clamping chuck
• Dresser for grinding wheel (with diamond tip)
• Wheel balancing mandrel
• Wheel dresser
• Base plate for dresser
• Levelling feet
• Operating tool in toolbox



Solid **surface grinding machine** by **OPTIMUM** equipped with digitally controlled automatic vertical feed and **digital position display DPA 31**

Facts that impress in terms of quality, performance and price

- ▶ Electro-magnetic clamping plate for holding the workpiece with automatic degaussing function
- ▶ Premium spindle with precision taper roller bearings
- ▶ Tempered and polished bed guides
- ▶ Turcite-B coated counter guides for excellent wear-resistance and low friction
- ▶ Grinding spindle with premium precision bearings
- ▶ The grinding wheel can be sharpened with a dressing unit directly on the machine
- ▶ Digital position display
- ▶ Machine chassis made of stable, torsion resistant cast material for maximum rigidity and stability
- ▶ Guideways for longitudinal, transverse and vertical movements are play-free and designed to self-centre as V and flat rails
- ▶ Precision ball screws
- ▶ Guideways and transport spindle with centralised lubrication system
- ▶ All flat guides are finely honed and thus guarantee highest precision of all manual movements
- ▶ Safety electrical system in 24 V DC
- ▶ Generously dimensioned, decoupled hand wheels on all three axes
- ▶ Time-controlled centralised lubrication system
- ▶ Hydraulic lines according to DIN EN 853
- ▶ Grinding precision: 0.005 mm
- ▶ Corundum grinding wheel 46 grain for all popular metals included in standard scope of delivery
- ▶ Pivoting control panel substantially facilitates work
- ▶ Two-channel safety electronics
- ▶ Grinding table with splash protection enclosure
- ▶ Coolant unit with external coolant tank, capacity 100 litres
- ▶ Digitally controlled, automatic vertical feed with servo motor
- ▶ Motorised vertical height adjustment via spindle
- ▶ Hydraulic and continuously adjustable longitudinal feed
- ▶ EMC filter class
- ▶ Substantial energy savings thanks to IE3 motor



Digital position display DPA 31-2

NEW



Display:

- › User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean

New measuring strips:

- The electronic measuring components of the measuring strips are protected and sealed in the housing
- › Provides accurate and reliable measurement results even if the measuring system is operated in oil or coolant
- › Tolerant towards vibration and magnetic interference

Dressing unit



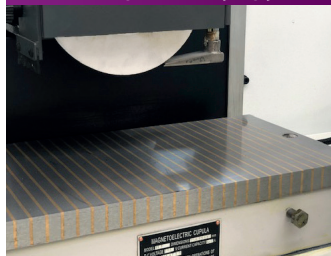
- › Manual parallel dressing unit

Hydraulic power unit



- › Prevents wear, repair costs and unnecessary downtime to a major extent

Electromagnetic clamping plate



- › Fast and safe workpiece clamping

Touch Screen



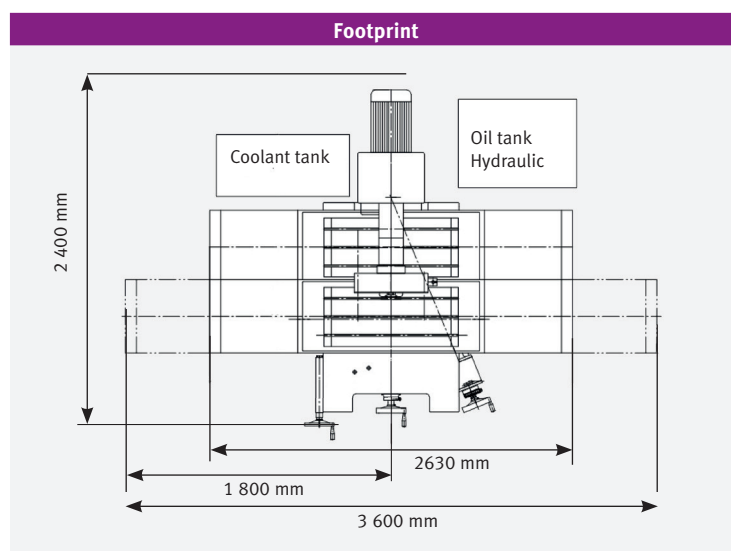
- › for entering work data and displaying information
- › Hand wheel for moving the Y axis
- › Swivelling control panel

Technical data and dimension

Model	GT 40
Article no.	3111040
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	7.5 kW
Grinding wheel drive motor	4 kW
Hydraulic motor	2.2 kW
Coolant pump motor	90 W
Surface grinding table	
Surface grinding table length x width	406 x 813 mm
Electro-magnetic clamping plate	400 x 800 mm
T-slot size/number of slots	14 mm / 3
Grinding table load bearing capacity including electromagnetic clamping plate	500 kg
Workpiece size length x width x height	813 x 406 x 405 mm
Spacing spindle centre - grinding table	max. 580 mm
Oscillating speeds of table	5 - 25 m/min
Grinding wheel	
Size of grinding wheel	350 x 40 x shafts Ø 127 mm
Clearance grinding wheel - grinding table	405 mm
Circumferential speed of grinding wheel	27 m/s
Grinding spindle concentricity	0.005 mm
Oscillating stroke/travel stroke	
Oscillating stroke X-axis	830 mm
Travel Z axis	420 mm
Z axis	
Continuous transverse feed	0.1 - 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Y axis	
Step widths of fast motion feed	0.005 0.01 0.02 0.03 0.04 0.05
Fast motion adjustment on the Z axis	480 mm/min
Scale division on handwheel	0.005 mm
Rotational speeds	
Constant spindle speed	1 450 rpm
Dimensions and weight	
Length x width x height	3,600 x 2,400 x 1,900 mm
Net weight	3 600 kg

See Seite 30 for accessories

Contents of package
• Digital position display
• Coolant system
• Balancing station and balancing mandrel
• Corundum grinding wheel 46 grain
• Diamond stylus
• Bed enclosure
• Levelling feet
• Operating tool
• LED lamp
• Electromagnetic clamping plate
• Degaussing function



Magnetic separator with paper belt filter MPS 1

- ▶ Magnetic separator filters out metal contaminants
- ▶ Paper belt filter for versatile and safe filtering of fluids such as grinding fluids, cooling lubricants, etc. during operation.

Magnetic separator with paper belt filter MPS 1	
Article no.	3112000
Filtration (water-based emulsion)	30 ~ 40 µm
Coolant pump flow rate	25 litres per minute
Tank volume	120 litres
Overall dimensions L x W x H	1,290 x 460 x 580 mm
Diameter of (non-woven) filter cloth	Ø 200 mm
Width of filter cloth	400 mm
Coolant pump drive power	120 W
Filter cloth feed motor drive power	90 W
Weight	120 kg

Spare filter paper	
Article no.	3112001
Width of paper filter	400 mm
Length of paper filter	100 metres

Grinding wheel adapter	article no.
For fast grinding wheel change	
GT 22 / GT 25	3112010
GT 30 / GT 40	3112011



Diamond dresser	3112025
for the grinding wheel	
3/8 x 2" x 1.00 carat	



Corundum grinding wheel	article no.
Dimensions: 200 x 20 x 31.75 mm	
46 grain	3112040
60 grain	3112042
80 grain	3112044



Corundum grinding wheel	article no.
Dimensions: 350 x 40 x 127 mm	
46 grain	3112050
60 grain	3112052
80 grain	3112054



The GT 25, GT 30 and GT 40 series models are equipped with automatic feed control. Various grinding cycles are available as shown in the diagram.

Workpieces can be individually processed by entering the number of feeds with a minimum possible feed of 0.001 mm and by selecting the type of grinding.

The maximum possible feed per sequence step during automatic feed control is 0.01 mm.

A further possibility is to enter the number of grinding passes without grinding wheel feed in order to enable "firing" on the workpiece

