

Manual surface grinding machine with digital position indicator DPA 31 for fine grinding (finishing) of metal surfaces

Facts that impress in terms of quality, performance and price

- ▶ Premium spindle with precision taper roller bearings
- ▶ Hardened and ground bed guides
- ▶ Turcite-B coated counter guides for excellent wear-resistance and low friction
- ▶ Integrated grinding wheel dressing device
- ▶ Machine base made of sturdy, torsion-resistant cast iron 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 electrics in 24 V DC
- ▶ Grinding accuracy: 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



Arguments,...



Digital position display DPA 31-2

- › 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



Permanent magnet

- › Fast and safe workpiece clamping



Central lubrication

- › manual

Technical data and dimension

Model	GT 22
Article no.	3111020
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Grinding disc 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 disc	
Size of grinding disc	Ø 200 x 20 mm , shaft Ø 31.75 mm
Clearance grinding wheel - grinding table	405 mm
Circumferential speed of grinding wheel	33 m/s
Grinding spindle true running accuracy	0.005 mm
Manual travel	
X axis	500 mm
Z axis	240 mm
Rotational speeds	
Constant spindle speed	2850 min ⁻¹
Dimensions and weight	
Length x width x height approx.	1400 x 1110 x 1950 mm
Net weight approx.	900 kg

Scope of delivery

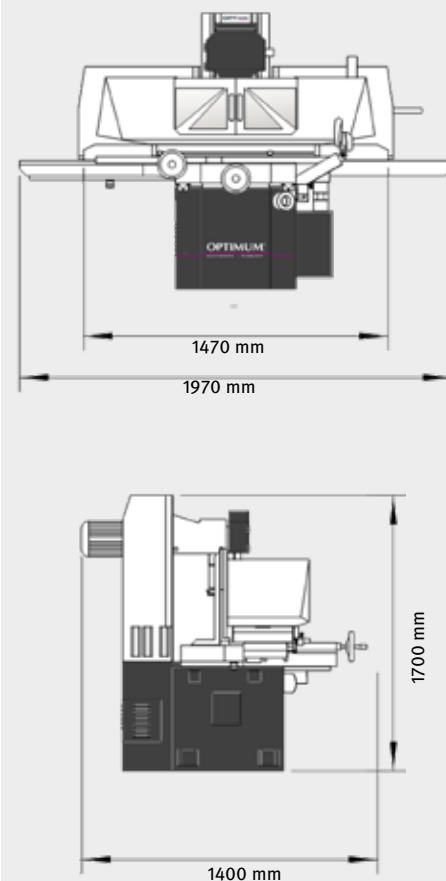
- Corundum grinding wheel 46 grain
- Digital position display
- Balancing stand
- Degaussing unit
- Grinding wheel and clamping chuck
- Dresser for grinding wheel (with diamond tip)
- Wheel balancing mandrel
- Wheel dresser
- Base plate for dresser
- Levelling feet
- Operating tool in toolbox

Accessories

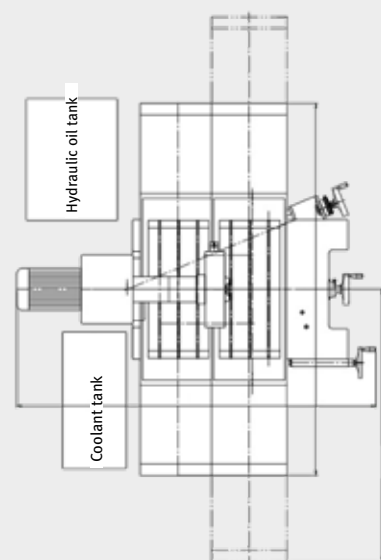
Designation	Article no.
Magnetic separator with paper belt filter MPS 1	3112000
Spare filter paper	3112001
Grinding dust extraction	3112015
Grinding disc adapters	3112010
Diamond dresser	3112025
Corundum grinding discgrain size 46	3112040
Corundum grinding discgrain size 60	3112042
Corundum grinding disc grain size 80	3112044

Information on accessories can be found on page 288.

Dimensions



Installation plan



DRILLING

CORE DRILLING

THREAD TAPPING

MILLING ACCESSORIES

TURNING

MEASURING

SAWS

GRINDING

POLISHING

SHEET METAL WORKING

LIGHTING

COOLING

Solid surface grinding machine from OPTIMUM with compact dimensions. 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
- ▶ Hardened and ground bed guides
- ▶ Turcite-B coated counter guides for excellent wear-resistance and low friction
- ▶ Grinding spindle with premium precision bearings
- ▶ Integrated grinding wheel dressing device
- ▶ External hydraulic power unit with heat exchanger for constant oil temperature
- ▶ Machine base made of sturdy, torsion-resistant cast iron 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 electrics in 24 V DC
- ▶ Generously dimensioned, decoupled hand wheels on all three axes
- ▶ Hydraulic lines according to DIN EN 853
- ▶ Grinding accuracy: 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



Arguments,...



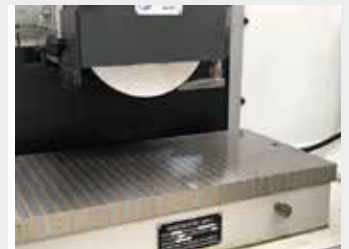
Digital position display DPA 31-2

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



Central lubrication

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



Electromagnetic clamping plate

- › Fast and safe workpiece clamping



Touch display

- › Clear, easy and self-explanatory to use
- › Innovative and technologically advanced
- › available in the languages: - German, Polish, English, Chinese, Dutch, French

- › Hand wheel for moving the Y axis
- › Swivelling control panel

Technical data and dimension

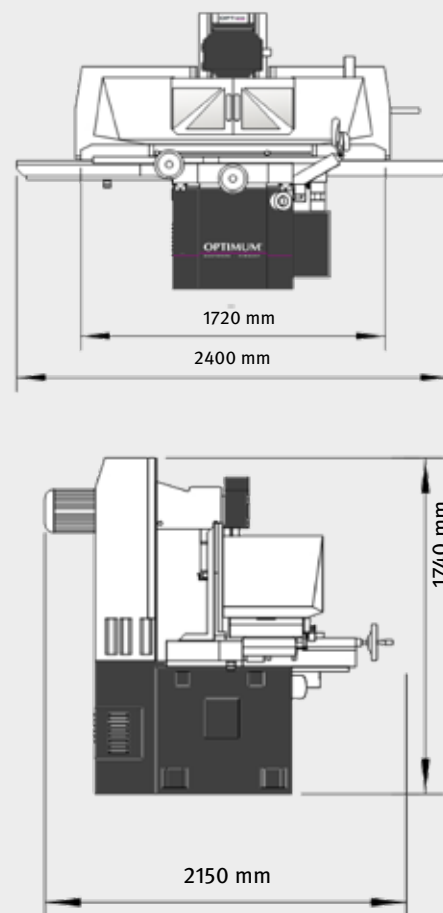
Model	GT 25
Article no.	3111025
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	3.7 kW
Grinding disc drive motor	2.2 kW
Hydraulic motor	0.75 kW
Coolant pump motor	70 W
Surface grinding table	
Surface grinding table length x width	254 x 508 mm
Electro-magnetic clamping plate	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 disc	
Size of grinding disc	Ø 200 x 20 mm , shaft Ø 31.75 mm
Clearance grinding wheel - grinding table	405 mm
Circumferential speed of grinding wheel	33 m/s
Grinding spindle true running accuracy	0.005 mm
Oscillating travel/travel travel	
Oscillating travel X-axis	560 mm
Z-axis traverse path	275 mm
Y axis	
Continuous transverse feed	0.1 - 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Z 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	2850 min ⁻¹
Dimensions and weight	
Length x width x height approx.	2600 x 2000 x 2150 mm
Net weight approx.	1900 kg

Scope of delivery

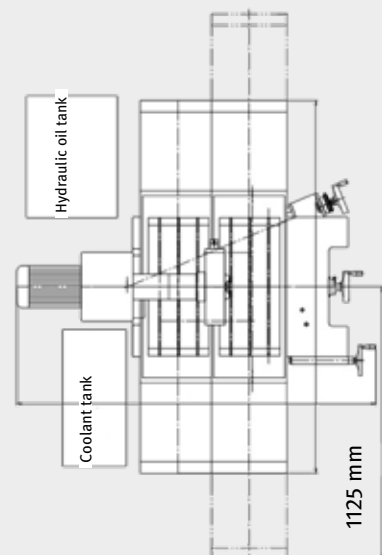
- Corundum grinding wheel 46 grain
- Digital position display
- Balancing stand
- Degaussing unit
- Grinding wheel and clamping chuck
- Dresser for grinding wheel (with diamond tip)
- Wheel balancing mandrel
- Wheel dresser
- Base plate for dresser
- Levelling feet
- Operating tool in toolbox

Accessories can be found on page 288.

Dimensions



Installation plan



DRILLING

CORE DRILLING

THREAD TAPPING

MILLING ACCESSORIES

TURNING

MEASURING

SAWS

GRINDING

POLISHING

SHEET METAL WORKING

LIGHTING

COOLING

Solid surface grinding machine from 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
- ▶ Hardened and ground bed guides
- ▶ Turcite-B coated counter guides for excellent wear-resistance and low friction
- ▶ Grinding spindle with premium precision bearings
- ▶ External hydraulic power unit with heat exchanger for constant oil temperature
- ▶ Machine base made of sturdy, torsion-resistant cast iron 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 electrics 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 accuracy: 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



- › Hand wheel for moving the Y axis
- › Swivelling control panel

Arguments,...



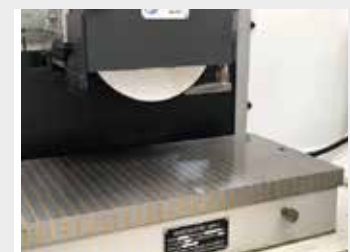
Digital position display DPA 31-2

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



Dressing unit

- › The grinding wheel can be sharpened with a dressing unit directly on the machine



Electromagnetic clamping plate

- › Fast and safe workpiece clamping



Touch display

- › Clear, easy and self-explanatory to use
- › available in the languages: - German, Polish, English, Chinese, Dutch, French
- › The control system has been updated to avoid calculator operations.
- › The workpiece height [H], the grinding height [h] and the resulting removal thickness [d] also appear in the input window.
- › The subsequent infeed for coarse and fine grinding is determined automatically based on the number entered.

Technical data and dimension

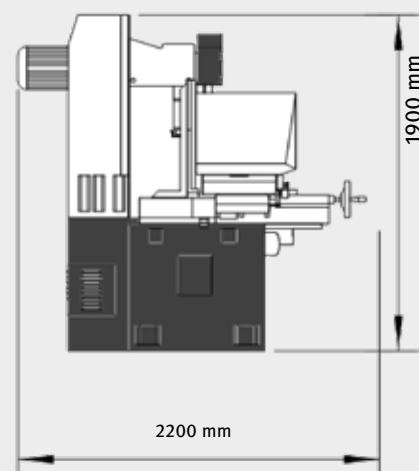
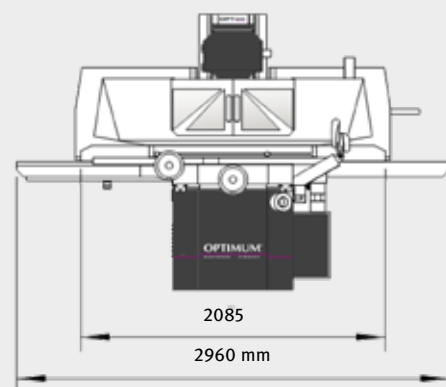
Model	GT 30
Article no.	3111030
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	7.5 kW
Grinding disc drive motor	4 kW
Hydraulic motor	2.2 kW
Coolant pump motor	90 W
Surface grinding table	
Surface grinding table length x width	305 x 635 mm
Electro-magnetic clamping plate	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 disc	
Size of grinding disc	350 x 40 x shaft Ø 127 mm
Clearance grinding wheel - grinding table	405 mm
Circumferential speed of grinding wheel	27 m/s
Grinding spindle true running accuracy	0.005 mm
Oscillating travel/travel travel	
Oscillating travel X-axis	765 mm
Z-axis traverse path	340 mm
Y axis	
Continuous transverse feed	0.1 - 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Z 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	1450 min ⁻¹
Dimensions and weight	
Length x width x height approx.	2960 x 2200 x 1900 mm
Net weight approx.	3000 kg

Scope of delivery

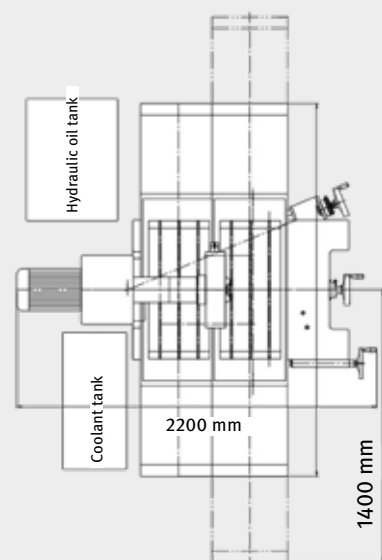
- Corundum grinding wheel 46 grain
- Digital position display
- Balancing stand
- Degaussing unit
- Grinding wheel and clamping chuck
- Dresser for grinding wheel (with diamond tip)
- Wheel balancing mandrel
- Wheel dresser
- Base plate for dresser
- Levelling feet
- Operating tool in toolbox

Accessories can be found on page 288.

Dimensions



Installation plan



DRILLING

CORE DRILLING

THREAD TAPPING

MILLING ACCESSORIES

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Solid surface grinding machine from 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
- ▶ Hardened and ground bed guides
- ▶ Turcite-B coated counter guides for excellent wear-resistance and low friction
- ▶ Grinding spindle with premium precision bearings
- ▶ External hydraulic power unit with heat exchanger for constant oil temperature
- ▶ Machine base made of sturdy, torsion-resistant cast iron 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 electrics 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 accuracy: 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



- › Hand wheel for moving the Y axis
- › Swivelling control panel

Arguments,...



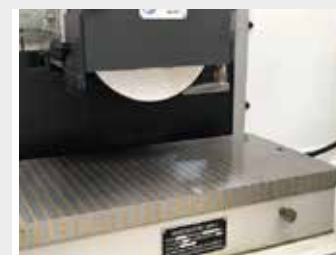
Digital position display DPA 31-2

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



Dressing unit

- › The grinding wheel can be sharpened with a dressing unit directly on the machine



Electromagnetic clamping plate

- › Fast and safe workpiece clamping



Touch display

- › Clear, easy and self-explanatory to use
- › Innovative and technologically advanced
- › available in the languages: - German, Polish, English, Chinese, Dutch, French

Technical data and dimension

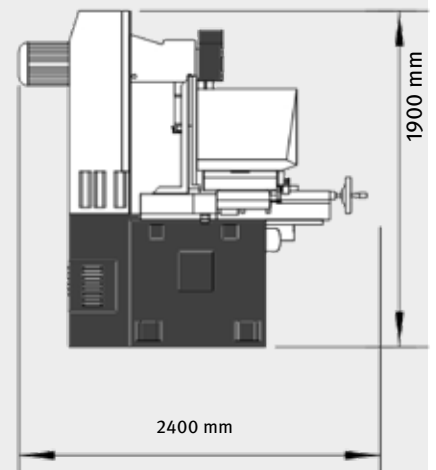
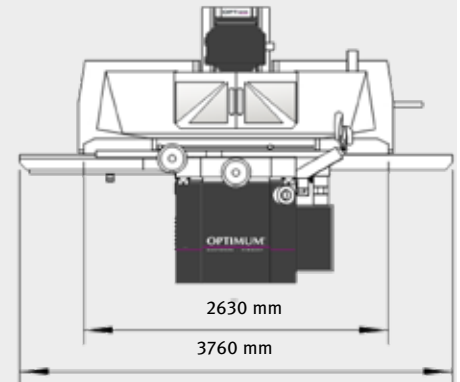
Model	GT 40
Article no.	3111040
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	7.5 kW
Grinding disc drive motor	4 kW
Hydraulic motor	2.2 kW
Coolant pump motor	90 W
Surface grinding table	
Surface grinding table length x width	406 x 813 mm
Electro-magnetic clamping plate	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 disc	
Size of grinding disc	350 x 40 x shaft Ø 127 mm
Clearance grinding wheel - grinding table	405 mm
Circumferential speed of grinding wheel	27 m/s
Grinding spindle true running accuracy	0.005 mm
Oscillating travel/travel travel	
Oscillating travel X-axis	830 mm
Z-axis traverse path	420 mm
Y axis	
Continuous transverse feed	0.1 - 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Z 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	1450 min ⁻¹
Dimensions and weight	
Length x width x height approx.	3760 x 2400 x 1900 mm
Net weight approx.	3600 kg

Scope of delivery

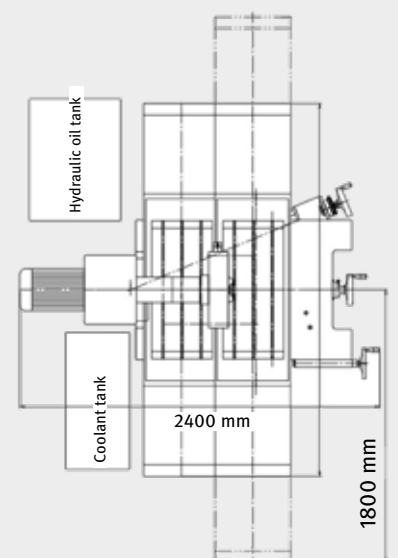
- Digital position display
- Coolant system
- External hydraulic unit with oil cooler
- Balancing station and balancing mandrel
- Corundum grinding wheel 46 grain
- Diamond stylus
- Table enclosure as splash guard when in use
- Levelling feet, adjusting screws and lock nuts
- Operating tool
- LED lamp
- Electromagnetic clamping plate
- Degaussing function

Accessories can be found on page 288.

Dimensions



Installation plan



DRILLING

CORE DRILLING

THREAD TAPPING

MILLING ACCESSORIES

TURNING

MEASURING

SAWS

GRINDING

POLISHING

SHEET METAL WORKING

LIGHTING

COOLING

Precision surface grinding machines

FSM 1545 / FSM 2045 - Precision surface grinding machines with NC-controlled vertical feed

- For precision surface grinding work in the industrial sector
- Maximale Steifigkeit und Stabilität durch spannungsfrei nachgeglühte Gusseisen-Konstruktion
- High-quality spindle with precision tapered roller bearings (concentricity 2 µm)
- Electromagnetic clamping plate for fixing

the workpiece, including automatic demagnetisation function

- Automatic central lubrication for all slideways and spindles
- Hand-scraped and Turcite-B-coated V-flat guides guarantee extremely smooth, low-friction movement and maximum precision.

- Dustproof halogen work light, fully touch-proof and protected against water jets in accordance with IP65

- Additional second grinding wheel flange included in delivery



FSM 2045

Scope of delivery:

- › Grinding disc flange
- › Grinding wheel
- › Balancing mandrel
- › Operating tool

Model		FSM 1545	FSM 2045
Art. no.		3931545	3932045
Technical data			
Plane grinding table clamping surface (L x W)	mm	450 x 150	450 x 200
Distance between spindle and table max.	mm	450	450
Travelling speed of the table	m/min	5 - 25	5 - 25
Workpiece weight max.	kg	110	110
Spindle speed	min ⁻¹	2900	2900
Grinding disc (Ø x width x bore)	mm	180 x 13 x 31.7	180 x 13 x 31.7
Motor power spindle	kW	1.5	1.5
Hydraulic pump motor power	kW	0.75	0.75
Electrical connection	V / Hz	400 / ~50	400 / ~50
Dimensions (L x W x H) approx.	mm	1900 x 1300 x 1700	2080 x 1200 x 1800
Weight approx.	kg	900	950

FSM 2550 / FSM 2550 DT - Precision surface grinding machines with NC-controlled vertical feed

- ▶ For precision surface grinding work in the industrial sector
- ▶ Maximale Steifigkeit und Stabilität durch spannungsfrei nachgeglühte Gusseisen-Konstruktion
- ▶ High-quality spindle with precision tapered roller bearings (concentricity 2 µm)
- ▶ Electromagnetic clamping plate for fixing the workpiece included

- ▶ Automatic demagnetisation function
- ▶ Automatic central lubrication for all slideways and spindles
- ▶ Hand-scraped and Turcite-B-coated V-flat guides guarantee extremely smooth, low-friction movement and maximum precision.
- ▶ Parallel dressing device
- ▶ Alignment feet

- ▶ Halogen work light (IP65)
- ▶ Coolant system
- ▶ Dustproof halogen work light, fully touch-proof and protected against water jets in accordance with IP65
- ▶ Additional second grinding wheel flange included in delivery



FSM 2550

Scope of delivery:

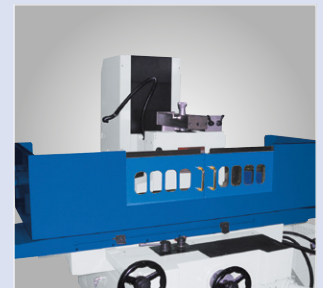
- › Grinding disc flange
- › Grinding wheel
- › Balancing mandrel
- › Operating tool

Model		FSM 2550
Art. no.		3933060

Model		FSM 2550 DT Warehouse equipment
Art. no.		3933061

Technical data		
Plane grinding table clamping surface (L x W)	mm	250 x 500
Distance between spindle and table max.	mm	500
Travelling speed of the table	m/min	5-25
Workpiece weight max.	kg	215
Spindle speed	min ⁻¹	1450
Grinding disc (Ø x width x bore)	mm	355 x 38 x 127
Motor power spindle	kW	3.75
Hydraulic pump motor power	kW	0.75
Electrical connection	V / Hz	400 / ~50
Dimensions (L x W x H) approx.	mm	2650 x 1550 x 1800
Weight approx.	kg	1700

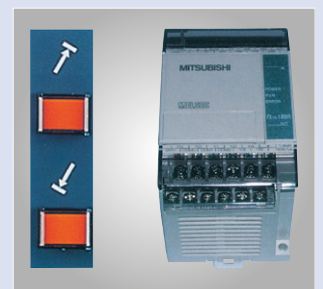
FSM 2550 DT Warehouse equipment



*in addition to the
Standard equipment:*
- Rear splash guard



additionally with:
- Front and side splash guards



additionally with:
Adjustment of the
cross feed via teach buttons

Accessories & options from Seite 358

Equipment options (retrofitable)	Art. no.
Electro-magnetic clamping plate	3939101
Fine pole 300x600	

Precision surface grinding machines

FSM 3060 - Precision surface grinding machine with NC-controlled vertical feed

- ▶ For precision surface grinding work in the industrial sector
- ▶ Maximale Steifigkeit und Stabilität durch spannungsfrei nachgeglühte Gusseisen-Konstruktion
- ▶ High-quality spindle with precision tapered roller bearings (concentricity 2 µm)
- ▶ Electromagnetic clamping plate for fixing the workpiece, including automatic demagnetisation function
- ▶ Automatic central lubrication for all slideways and spindles
- ▶ Hand-scraped and Turcite-B-coated V-flat guides guarantee extremely smooth, low-friction movement and maximum precision.
- ▶ Dustproof halogen work light, fully touch-proof and protected against water jets in accordance with IP65
- ▶ Parallel dressing device
- ▶ Alignment feet
- ▶ Halogen work light (IP65)
- ▶ Coolant system
- ▶ Additional second grinding wheel flange included in delivery



FSM 3060 Storage equipment

Scope of delivery:

- › Grinding disc flange
- › Grinding wheel
- › Balancing mandrel
- › Operating tool

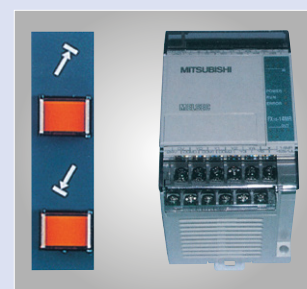
FSM 3060 Warehouse equipment



*in addition to the
Standard equipment:*
Rear splash guard



additionally with:
- Front and side splash guards



additionally with:
Automatic adjustment of the
cross feed via teach buttons

Model		FSM 3060
Art. no.		3933060

Model		FSM 3060 Storage equipment
Art. no.		3933061

Technical data		
Plane grinding table clamping surface (L x W)	mm	600 x 300
Distance between spindle and table max.	mm	500
Travelling speed of the table	m/min	5 - 25
Workpiece weight max.	kg	215
Spindle speed	min ⁻¹	1450
Grinding disc (Ø x width x bore)	mm	355 x 38 x 127
Motor power spindle	kW	3.75
Hydraulic pump motor power	kW	0.75
Electrical connection	V / Hz	400 / ~50
Dimensions (L x W x H) approx.	mm	2630 x 1550 x 1800
Weight approx.	kg	1743

Accessories & options
from Seite 358

FSM 2550DT/ FSM 3060DT - - Precision surface grinding machines with touchscreen NC control

- ▶ For precision surface grinding work
- ▶ Maximum rigidity and stability thanks to stress-free annealed and hardened cast iron construction
- ▶ User-friendly touchscreen control: HMI graphic interface; all functions and grinding feed controllable; function and error display
- ▶ Electromagnetic clamping plate
- ▶ Automatic demagnetisation device
- ▶ Manual parallel dressing device
- ▶ Adjustment of the cross feed via teach buttons
- ▶ Cross grinding unit
- ▶ Ball screw and fine feed in the Z-axis
- ▶ Control panel mounted at an ergonomically favourable height on a swivel arm
- ▶ Longitudinal stroke regulation via solenoid valve
- ▶ Quantity-controlled centralised lubrication system
- ▶ Coolant system with lowering basin
- ▶ Front, side and rear splash guards
- ▶ Alignment feet
- ▶ Halogen work light (IP65)

User-friendly touchscreen control

- HMI graphic interface
- All functions and grinding feed controllable
- Function and error display



Scope of delivery:

- › Grinding disc flange
- › Grinding wheel
- › Balancing mandrel
- › Operating tool

Fig. FSM 2550 DT with optional full splash guard
(item no.: 3941035*)

Accessories & options
from Seite 358

Model		FSM 2550 DT	FSM 3060 DT
Article no.		3942255	3942306
Technical data			
Plane grinding table clamping surface (L x W)	mm	500 x 250	600 x 300
Distance between spindle and table max.	mm	500	500
Travelling speed of the table	m/min	5 – 25	5 – 25
Workpiece weight max.	kg	250	300
Spindle speed	min ⁻¹	2900	1450
Grinding disc (Ø x width x bore)	mm	180 x 13 x 31.75	355 x 38 x 127
Motor power spindle	kW	1.5	3.75
Hydraulic pump motor power	kW	0.75	0.75
Connection voltage	V	400 / ~50	400 / ~50
Dimensions (L x W x H) approx.	mm	2355 x 1830 x 1800	2645 x 2022 x 2022
Weight approx.	kg	1350	1700

AUTOMATIC FEED CONTROL

Different grinding cycles are available:

- ▶ Surface grinding with feed at start point
- ▶ Groove grinding with infeed at the starting point of the X-axis
- ▶ Groove grinding with feed at start and end point of the X-axis
- ▶ The infeed of the grinding disc can be customised depending on the workpiece
- ▶ The overall grinding dimension is divided into coarse and fine infeed, the infeed steps can be freely entered with a minimum resolution of up to 0.001 mm, depending on the application
- ▶ The option to programme dead cycles after a certain number of infeed steps and burn-out cycles after the grinding dimension has been reached ensures the best grinding results

Precision surface grinding machines

FSM 4080 - Precision surface grinding machine with NC-controlled vertical feed

- ▶ For precision surface grinding work in the industrial sector
- ▶ Maximale Steifigkeit und Stabilität durch spannungsfrei nachgeglühte Gusseisen-Konstruktion
- ▶ High-quality spindle with precision tapered roller bearings (concentricity 2 µm)
- ▶ Electromagnetic clamping plate for fixing the workpiece, including automatic demagnetisation function
- ▶ Automatic central lubrication for all slideways and spindles
- ▶ Parallel dressing device
- ▶ Alignment feet
- ▶ Halogen work light (IP65)
- ▶ Coolant system
- ▶ Hand-scraped and Turcite-B-coated V-flat guides guarantee extremely smooth, low-friction movement and maximum precision.
- ▶ Dustproof halogen work light, fully touch-proof and protected against water jets in accordance with IP65
- ▶ Additional second grinding wheel flange included in delivery



FSM 4080

Scope of delivery:

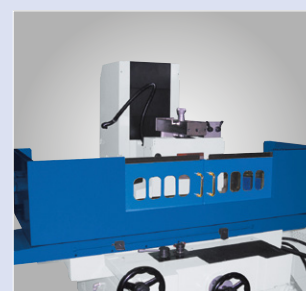
- › Grinding disc flange
- › Grinding wheel
- › Balancing mandrel
- › Operating tool

Model		FSM 4080
Art. no.		3934080

Model		FSM 4080 Warehouse equipment
Art. no.		3934081

Technical data		
Plane grinding table clamping surface (L x W)	mm	800 x 400
Distance between spindle and table max.	mm	550
Travelling speed of the table	m/min	5 – 25
Workpiece weight max.	kg	250
Spindle speed	min ⁻¹	1450
Grinding disc (Ø x width x bore)	mm	406 x 50 x 127
Motor power spindle	kW	3.75
Hydraulic pump motor power	kW	1.5
Electrical connection	V / Hz	400 / ~50
Dimensions (L x W x H) approx.	mm	3450 x 2050 x 1900
Weight approx.	kg	3308

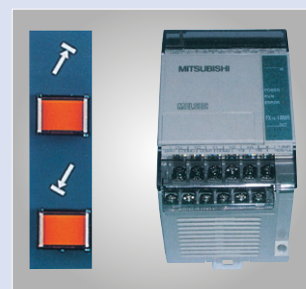
FSM 4080 Warehouse equipment



*in addition to the
Standard equipment:*
Rear splash guard



additionally with:
- Front and side splash guards



additionally with:
Automatic adjustment of the
cross feed via teach buttons

Accessories & options
from Seite 358

FSM 4080 DT - Precision surface grinding machine with touchscreen NC control

- ▶ For precision surface grinding work
- ▶ Maximum rigidity and stability thanks to stress-free annealed and hardened cast iron construction
- ▶ User-friendly touchscreen control: HMI graphic interface; all functions and grinding feed controllable; function and error display
- ▶ Electromagnetic clamping plate
- ▶ Automatic demagnetisation device
- ▶ Manual parallel dressing device
- ▶ Adjustment of the transverse feed via teach buttons
- ▶ Cross grinding unit
- ▶ Ball screw and fine feed in the Z-axis
- ▶ Control panel mounted at an ergonomically favourable height on a swivel arm
- ▶ Longitudinal stroke regulation via solenoid valve
- ▶ Quantity-controlled centralised lubrication system
- ▶ Coolant system with lowering basin
- ▶ Front, side and rear splash guards
- ▶ Alignment feet
- ▶ Halogen work light (IP65)

User-friendly touchscreen control

- HMI graphic interface
- All functions and grinding feed controllable
- Function and error display



Fig. similar with optional full splash guard

Scope of delivery:

- › Grinding disc flange
- › Grinding wheel
- › Balancing mandrel
- › Operating tool



Accessories & options
from Seite 358

Model		FSM 4080 DT
Article no.		3942408
Technical data		
Plane grinding table clamping surface (L x W)	mm	800 x 400
Distance between spindle and table max.	mm	550
Travelling speed of the table	m/min	5 – 25
Workpiece weight max.	kg	400
Spindle speed	min ⁻¹	1450
Grinding disc (Ø x width x bore)	mm	405 x 50 x 127
Motor power spindle	kW	3.75
Hydraulic pump motor power	kW	1.5
Connection voltage	V	400 /~50
Dimensions (L x W x H) approx.	mm	3,645 x 2,305 x 2,305
Weight approx.	kg	3250

AUTOMATIC FEED CONTROL

Different grinding cycles are available:

- ▶ Surface grinding with feed at start point
- ▶ Groove grinding with infeed at the starting point of the X-axis
- ▶ Groove grinding with feed at start and end point of the X-axis
- ▶ The infeed of the grinding disc can be customised depending on the workpiece
- ▶ The total grinding dimension is divided into coarse and fine adjustment. Depending on the application, the adjustment steps can be freely entered with a minimum resolution of up to 0.001 mm.
- ▶ The option to programme dead cycles after a certain number of infeed steps and burn-out cycles after the grinding dimension has been reached ensures the best grinding results

Precision surface grinding machines

FSM - Precision surface grinding machine with NC-controlled vertical feed



FSM 50100



FSM 60150

Convince yourself of our capabilities and ask for individual advice!

+49 95196 555-504
 beratung@metallkraft.de



Accessories & options
see p. 350

More models on request!

ASK FOR YOUR PERSONALISED OFFER!

Model		FSM 50100	FSM 60150	FSM 70200
Art. no.		3935010	3936015	3937020
Technical data				
Size of the clamping plate	mm	500 x 1000	600 x 1500	700 x 2000
Distance between spindle and table	mm	600	600	600
Travelling speed of the table	m/min	5-25	5-25	5-25
Workpiece weight max.	kg	515	880	880
Spindle speed	min ⁻¹	1450	1450	1450
Grinding disc (Ø x width x bore)	mm	405 x 50 x 127	405 x 50 x 127	405 x 50 x 127
Motor power spindle	3940255 kW	7.46	7.46	7.46
Hydraulic pump motor power		2.24	3.73	3.73
Electrical connection	V / Hz	400 /~50	400 /~50	400 /~50
Dimensions (L x W x H) approx.	mm	4600 x 2300 x 2040	4800 x 2450 x 2040	6000 x 2550 x 2040
Weight approx.	kg	6000	7500	9000

Series FSM PRO - NC-controlled surface grinding machine with touch control, for surface grinding, plunge grinding and cross grinding

Standard equipment

- ▶ 10" touchscreen NC control G1 for Y and Z axes
- ▶ Grinding modes: Flat grinding, plunge grinding, cross grinding
- ▶ Spindle bearing class P4 from NSK with guaranteed concentricity of 0.002 mm
- ▶ Electromagnetic fine-pole clamping plate including automatic demagnetisation function
- ▶ Solid and stress-relieved machine body made of honeycomb ribbed grey cast iron
- ▶ Robust V-flat guide with Turcite B coating in the X and Z axes for grinding heavy workpieces

- ▶ Backlash-free ball screws in the Y and Z axes
- ▶ NC-controlled parallel dressing device and levelling device above the machine table
- ▶ Coolant device with magnetic separator
- ▶ Partial enclosure of the worktable with monitored door
- ▶ Stepless speed of the grinding spindle thanks to inverter
- ▶ Automatic, hydraulic X-axis feed
- ▶ Stepless adjustment of the X-axis speed via hydraulic control valve

- ▶ Automatic, motorised Z-axis feed driven by servo motor
- ▶ Setting the end positions in the X and Z axes via joystick
- ▶ Automatic, motorised Y-axis feed driven by servo motor
- ▶ Electronic handwheel for the Y and Z axes
- ▶ Automatic centralised lubrication of all axes/guides
- ▶ Automatic demagnetisation
- ▶ Automatic adjustment of the cross feed
- ▶ Coolant device with magnetic separator
- ▶ LED work lights
- ▶ Semi-enclosed splash guard
- FSM 2550 PRO:**
- ▶ 3 alignment plates
- FSM 3060 PRO/ FSM 4080 PRO:**
- ▶ 5 alignment plates



FSM 2550 PRO
Illustration shows optional NC-controlled parallel dressing and levelling device on the grinding head

Accessories & Option
see p. 350

Scope of delivery:

- › Balancing stand
- › Operating tool

Optional special equipment

- › NC-controlled parallel dressing and levelling device on the grinding head
- › Automatic balancing device
- › Full enclosure of the grinding area with two sliding doors
- › Additional grinding disc flanges
- › Increased motor power

ASK FOR YOUR PERSONALISED OFFER!

Model		FSM 2550 PRO	FSM 3060 PRO	FSM 4080 PRO
Art. no.		3940255	3940306	3940408
Technical data				
Size of the clamping plate	mm	500 x 250	600 x 300	800 x 400
X axis travel length	mm	550	650	860
Z-axis travel length	mm	270	350	450
Travelling speed of the table	m/min	5 – 25	5 – 25	5 – 25
Workpiece weight max.	kg	190	215	250
Spindle speed	min ⁻¹	2900	1450	1450
Grinding disc (Ø x width x bore)	mm	205 x 19 x 31.75	355 x 38 x 127	405 x 50 x 127
Motor power spindle	kW	1.5	3.75	3.75
Hydraulic pump motor power	kW	0.75	0.75	1.5
Electrical connection	V / Hz	400 / ~50	400 / ~50	400 / ~50
Dimensions (L x W x H) approx.	mm	2680 x 2350 x 2460	3000 x 2500 x 2460	3600 x 2650 x 2560
Weight approx.	kg	2000	2500	3700