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58800280

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58001371

Zm witee is npeirnvdeertl-Gikarluhnädnegienndeeitn and a vertically positioned turning spindle on a stand modu[, in 2 x 2-axis compact design with front operation for optimum accessibility to clamping devices, tools and pick-up positions.

Made from high-quality nodular cast iron, the heavily ribbed machine stand has extremely high rigidity with optimum damping properties for high turning and continuous accuracy. It is used to hold the cross slides with the motor spindles and to attach the tool carriers.

Stable, optimally dimensioned and preloaded linear roller guides guarantee a long service life at high feed speeds. All guides, ball screws and measuring systems are chip-protected and easily accessible outside the machining area.

Steep, smooth work area walls ensure good and rapid removal of the hot chips.

1 set of stand-up elements

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Stachflüthreit b/machrese

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slide

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AScushflüttherunnegindheesit for extremely high accuracy and increased dynamics, in horizontal and vertical direction with preloaded precision in near guides. Drive via highly dynamic ball screw drive in the horizontal and vertical directions with maintenance-free synchronous motors. Three-phase servo drives with digital drive technology.

Travel paths:

Horizontal X-axis 1,700 mm

Vertical Z-axis 500mm

Ball screw drives:

X-axis 40 mm Ø, feed force 8 kN at 40 % ED

Z-axis 40 mm Ø, feed force 10 kN at 40 % ED

Rapid traverse speeds, measuring systems:

X-axis 60 m/min., linear measuring system

Z-axis 30 m/min., linear measuring system

Spindle unit left machine side
equipped with:

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M58000to25r7s8 spindle with 35/40 kW power at 100/40% duty cycle
with water cooling. Precision angular contact ball bearings at the front in tandem O
arrangement Wmiat rLuenbgesnfsrediaeureSrp-
FinedtteslcmhomtoierriunndgiguintadlelraAbnytrriniethbsatbedcihchntikung byseaga.

Spindle bearing o: 120mm
Spindle flange: A3. -IN1
Max. speed: 780 min.-1
Torque: 430/610 Nm (100/40% ED)

Torque

The maximum permissible speed depends on the production task and clamping
device.

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z3uDmgSedchruleciktfe uKnütehrlmFiotuteriledrübSeednningen

. Including 2 plastic

nozzles for the running-in process. With set-up and testing.

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Anti-Hot Start Switch

, mounted next to the turning spindle. Max.

Speed 16,000 min-1.

Dressing wheel holder: Diameter 40x10mm

- without diamond dressing wheel -

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zSuprinAdrreeltaierrruetnigerduenrgSpindle when changing clamping device.

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Wedge guide left side of the machine

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m12it-faelcehktrSiscchheeimbeeSncrehvvwoelInvkeartrieb for particularly short
swivel times, swivel direction with directional logic. Tool disk for cylindrical shank holder
WSOemrkzmenuagchhaltDefrnN ISO 10889 with feed-through for cooling lubricant or

air to the

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Internal grinding spindle with grinding software tool holder 028/43

design for mounting on the machine frame next to the tool carrier, precision angular contact ball bearings at the front in tandem 0 arrangement with oil-air minimum quantity lubrication, labyrinth sealing by sealing air, maintenance-free three-phase AC spindle motor.

Spindle bearing 0	45 mm in hybrid version D28/43
Tool holder Speed	(thread M28x2)
limit Nominal speed	45,000 min-1
Drive rating Torque	30,000 min-1
	15/18 kW (100/60% ED)
	4.7/5.7 Nm (100/60% ED)

without dressing unit, without grinding wheel.

A minimum pressure of 5 bar must be provided by the customer.

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External grinding spindle with grinding software

Design for mounting on the machine frame next to the tool carrier, precision angular contact ball bearings *at the front* in 0 arrangement with permanent grease lubrication, labyrinth seal with sealing air, maintenance-free three-phase spindle motor.

Spindle bearing	080 mm in hybrid design
Tool holder taper 1:10; 0 73 mm	
Speed limit	6,000 min-1
Rated speed	2,700 min-1
Drive power	11.5/14 kW (100/60% ED)
Torque	39.7/49 Nm (100/60% ED)

without dressing unit, without grinding wheel.

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Swivel unit, B-axis

with NC rotary table

Load capacity:	1,000 kg
Tangential torque:	6,000 Nm
Clamping:	hydraulic
NC drive:	Worm and 1 FT7...
Dimensions frn 0:	520 mm
Speed at i::120:125 min-1 Swivel	
range:	30" +
2X5°	

Partial accuracy with indirect measurement: +/- 1 O"

Corresponding radian measure at 0: 520 mm +/-0.013 mm

- 10.20.60 58001713
1 Machine-side cladding of the work area
with work area lighting, electrically secured work area door with safety glass and rear machine cladding. Max. Noise level 78 dB(A) according to DrN 45635-1 during machining. This is based on the machining of a solid piece of C 45 steel without interrupting the cut.

Customer-specific workpieces, technologies or special clamping devices may require further insulation ^{measures1}, whereby the resulting additional costs may have to be specified.
- 10.20.70 58001460
1 Cooling unit (water/air)
Integrated liquid air cooling system (FLKS) for cooling spindle motors, hydraulic unit and other units if required.
Enclosure cooling via self-sufficient cooling unit.

Required on site:
Hall air temperature max.: 45°C
- 10.20.80 58000034
1 Central lubrication
Automatt central minimum quantity lubrication with pressure and level monitoring for Unear guides and ball screw drives. Lubrication guides made of steel and plastic.

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- 10.20.90 58:000029
1 Hydraulic power unit
attached to the machine. Equipped with oil tank, motor, hydraulic pump, return line filter, pressure and level monitoring as well as DIN standard valves for actuating the hydraulic units.

System pressure max. 70 bar.
- 10.20.100 5B800244
Clamping technology left
- 10.20.100.10
1 Note on clamping cylinders
the standard clamping cylinder is replaced by the special cylinder from Sterman and is therefore no longer included in the scope of the basic machine.
- 10.20.110 58000862
1 Pneumatic equipment
Control and filtering of the factory-supplied compressed air for the sealing air supply to the main spindle and any other units. Control and actuation of the pneumatic units.

Required system pressure: min. 6 bar

- 10.20.120 58800014
Electrical equipment
consisting of:
- 10.20.120.10 58001124
1 **Switch cabinet with basic electrics**
and duct wiring, complete with power and control section. Cooling by switch cabinet cooling unit(s). A swivel-mounted control panel is attached to the machine for better operability.
- Cables or system cables suitable for the control and drive system. In wet areas with PUR outer sheath. Multi-core cables and single wires in accordance with VDE/EN. Design in accordance with VDE 0113 or DIN EN 60 204-1.
- Control voltage 24 Volt DC
- 10.20.130 58800261
Machine control
consisting of:
- 10.20.130.10 58000305
1 **CNC control SINUMERIK 840D sf**
for a 1-spindle machine with integrated, powerful PLC adaptation control, 317-3PN/DP. Drive system SfnAMfCS S120 with digital coupling to SJNUMERIK 840D st
- Safety and diagnostics radio "SIEMENS Safety Integrated . "
- 10.20.130.20 58002121
1 **Multi-touch control panel(with multi-window technology**
with intuitive WEJSSER user interface and multi-window technology for displaying additional information. Integrated PC with Windows 7 and 21.5" touchscreen, EKS-Ught authorization system, USB and Ethernet interface.

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WEISSER fluid technology specifications

The following specifications must be observed:

- Hydraulic oil HLP46 (manufacturer free) in accordance with DIN 51524-2 must be used for the hydraulics.
- For pneumatics, the compressed air supply to the machine must be of compressed air quality class 4 (ISO 8573-1).
- For central lubrication, use bedway oil (central lubrication oil CGLP68 (manufacturer free) in accordance with DIN 51502.
- The cooling water circuit (cooling unit) for spindle cooling must consist of a mixture with 35% radiator antifreeze (Ref.: SPINCOOL IGW/HersteHer BEKU Oil GmbH) and deionized water.
With a central supply of cooling water, a particle size of max. 100 µm and a hardness value of max. 10° dH is permitted.
WEISSER accepts no liability for damage caused by incorrect use of coolant.

- VDI guidelines 3035 and 3397 must be observed with regard to cooling lubricants.

WEISSER does not give general approval for cooling lubricants.

The machine operator and the supplier (coolant lubricant manufacturer) must take the following points into account and take measures if necessary. The following generally applies to cooling lubricants:

- Corrosion protection in accordance with DIN 51360, with extension: no corrosion after 24 hours (based on Part 2)
- no attack on machine paints etc., according to VDI 3035
- No change in the Shore hardness and elongation properties of elastomers (VDI 3035)
- compatibility with the bed liner oil must be ensured (ideally both products from one manufacturer), there must be no gumming or glass-hard deposits on machine parts, especially guides or ball screws.
- MWF must not contain any ester compounds. These attack machine components, especially plastics. This can result in damage to and precipitation on machines.
- Emulsion concentration typically 7-8% +/- corrosion protection (observe manufacturer's specifications)

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WEISSER energy management

The following energy-saving options can be realized or configured on WEISSER machines:

- When the spindle drives and NC axis drives are braked, excess energy is fed back into the power grid.
- The hydraulic motor and the pneumatic main valve are switched off 30 minutes after no program is active and no manual operation has taken place.
- The sealing air for scales and spindles switches off after 20 minutes via a mechanically delayed valve.
- The chip conveyor stops automatically 2 minutes after the end of the program and runs in intermittent operation (freely programmable via H function).
- The cooling lubricant pump stops after the programmed run-on time. The Run-on time is freely programmable via H function.
- The workpiece transport devices stop after a programmed stopping time. The stopping time is freely programmable via the H function.
- The machine lighting with LED technology switches off 20 minutes after the last operation.
- The enclosure humidification switches off after the enclosure doors are closed.

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Technical data

Ambient temperature. +15°C to +42°C

Electrical connection: power supply from

above
Net shape: TN network

Mains voltage: Mains 400 Volt +/- 10%

frequency: 50Hz

Compressed air
supply:

Required system pressure: 6 bar

Fume / dust extraction:

Required extraction capacity: 2,000 cbm/h

Dimensions and weights of the transport unit:

length approx: 3,200 mm

Width approx: 3,360 mm

Height approx: 3,800 mm

Weight approx: 18,000 kg (depending on machine equipment)

- 10.30 **58800064**
Additional equipment
- 10.30.10 58800086
Control accessories
- 10.30.10.10 58002486
 1 **Remote maintenance/remote diagnosis of the machine**
with installation and testing of the Siemens software package "Step?" for IPC and
the TeamViewer "Quicksupport"
- The connection is established via a network connection
{Prerequisite: Machine is connected to a hardware network}
- Commissioning on site is not included. This will be charged in accordance with the
applicable installation conditions.
- 10.30.10.20 58000128
 1 **Interface for operating handset**
- 10.30.10.30 58000171
 1 **Mobile handset HT2**
with 3-stage enabling button and handwheel for axis feed, facilitates manual
operation during set-up work on the machine.
- 10.30.20 58800027
Accessories for visualization

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WEISSER Tool Correction Center

can be adapted to the processing tasks of the machine and according to individual specifications. It enables manual or automatic corrections to be transferred to tools and variables. The designation and numbering of the corrections is independent of the tool numbers or variable designations. As the system works across all channels, corrections can be made to tools and variables in all channels. It offers an extended range of functions for SIEMENS SfnUMERfK tool management and swivel tool management.

Function overview

- Manual correction of tools and variables, also across channels
- Automatic correction of tools and variables via variables, from programs or external sources.
- Limitation of the possible input values.
- Regulation of access authorization.
- Grouping of corrections and assignment to softkeys.
- Inversion of the input values (e.g. input of a negative value leads to a finer workpiece feature regardless of the position of the tool).
- Automatic correction of fixed values for certain events
- TO data storage module
- Individually customizable per workpiece

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WHITE workpiece counter via on-screen display

The counting function is generated in the CNC program by a defined auxiliary function. Visualization takes place via a menu screen with the following functions: 1 workpiece counter for the total quantity, without reset option.

1 workpiece counter for daily production with 6-digit display and reset option via softkey. Adding counting method.

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3-color rotating beacon

Attachment on the control panel. Visualization according to WHITE standard:
flashing light Machine stopped due to fault
YELLOW, flashing light Pre-warning limit for tool life quantity reached
YELLOW, continuous light: Tool life quantity reached
GREEN, BfinkHcht: Interruption of the VoHautomatic mode selected

GREEN, continuous light: Pre-automatic mode

10.30.30	58800251	
1	Internal control device	
10.30.30.10	58000157	
1	Measuring grids for heat-stack control in the Maschine chip-protected, suitable for dry and wet machining. The measuring value is recorded via a switching probe in conjunction with the NC Aohsen measuring systems. Suitable for contour measuring of freely accessible diameters and lengths. Programmable measuring frequency, e.g. every \Verkstück, every 6th, 10th or 20th \Verkstück with subsequent correction. Servant guidance via the machine control. Tabular oarstelh:mg of the measured values, history of the last 200 measurements, output in ASCU format. NOK parts lead to machine stop, part remains in the clamping device. The probe is calibrated via countermeasurement on a known workpiece. The measuring time is not taken into account in the cycle-time. The measuring time must therefore be added to the cycle time.	
	58800252	
	Compilation of the cooling lubricant system	
10.30.40	58000538	
	Preparation for connection to self-sufficient coolant lubrication system	
10.30.40.10	Pipes and valve for coolant supply to the tool ^{carrier} Flushing the work area and flushing the clamping device from the outside. Lifting pump in the chip conveyor with level control.	
	58000159	
	Cooling lubricant system with compact belt filter	
10.30.40.20	with fleece as filter medium, filter capacity 200l/min.	
1	Coolant tank 1400 liters, coolant pump 4-6 bar, max. flow rate 200l/min , with level monitoring, connection to the machine, sensors and control system.	
	58000204	
	Flushing gun with solenoid shut-off valve	
10.30.40.30	for rinsing the tools and clamping devices in the machine's working area.	
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	58001292	
	High pressure pump max. 25 bar	
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- 10.30.40.50 58001325
1 **Immersion re cooler**
for installation in the tank of the cooling lubricant system.
Designed as an air cooler for an ambient temperature of max. 30°.
- 10.30.50 58800253
Compilation of the chip disposal
- 10.30.50.10 58000670
1 **Hinged belt chip conveyor**
for conveying various types of long-chipping metal chips, with electrical run monitoring.
Operation via the machine control panel.
Discharge height approx. 1,200 mm. Transport direction according to installation plan.
- 10.30.50.20 58001696
Note on chip disposal:
Chip carts, cutting units and pumping stations or their interfaces, as well as interfaces to central and underfloor chip conveyors are not included in the WEISSER scope of delivery.
- 10.30.60 58000083
1 **④ liquid tub drawing**
Scope of delivery from WEISSER. The oil pan is provided by the customer.
- 10.30.70 58800254
Assembly of the extraction system
- 10.30.70.10 58000028
2 **Detection element for fume/dust extraction**
includes the internal piping and the capture element or the internal extraction duct.
- | | |
|------------------------------------|-------------|
| Diameter of the extraction nozzle: | 200mm |
| Required extraction capacity | 2,000 cbm/h |
- The fume / dust extraction system is provided by the customer or is offered below.