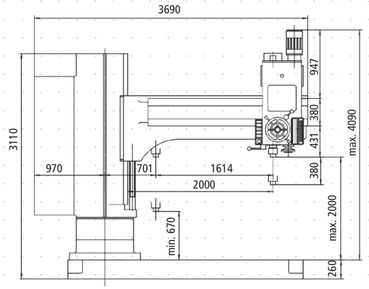
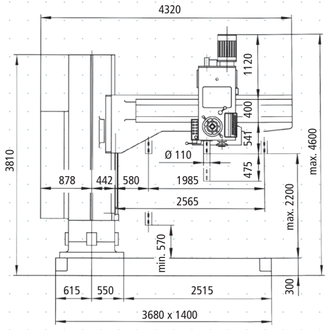
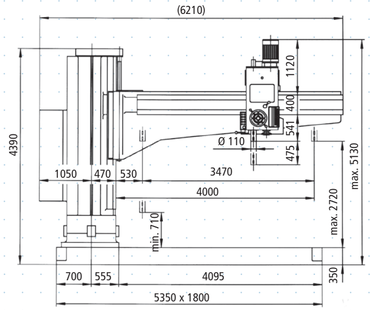
Dimensions



Layout drawing VO75



Layout drawing VO100



Layout drawing VO104

Service

Radial Drilling Machines

CNC Lathes

Cycle-Controlled Lathes

Tool Room Lathes / Semi-Cycle Controlled Lathes

Technical Data

Working Range		VO75	VO100	VO104	VOP100	VOP104
Max. drilling diameter in steel, strength up to 600 N/mm²	mm	75	100	100	100	100
grey cast iron, strength up to 250 N/mm²	mm	90	110	110	110	110
Max. thread cutting in steel, strength up to 600 N/mm²		M 75 x 4	M 76 x 6	M 76 x 6	M 76 x 6	M 76 x 6
grey cast iron, strength up to 250 N/mm²		M 85 x 4	M 100 x 6	M 100 x 6	M 100 x 6	M 100 x 6
Vertical arm travel, max.	mm	950	1,155	1,535	1,155	1,535
Drilling head travel on radial arm	mm	1,614	1,985	3,470	1,985	3,470
Spindle reach, min./max.	mm	386 / 2,000	580 / 2,565	530 / 4,000	580 / 2,565	530 / 4,000
Spindle travel, max	mm	380	475	475	475	475
Distance from spindle nose to clamping surface, min./max.	mm	670 / 2,000	570 / 2,200	710 / 2,720	–	–
Distance from spindle nose to machine bed, min./max.	mm	–	–	–	840 / 2,470	980 / 2,990
Clamping surface	mm	2,300 x 1,100	2,400 x 1,380	4,080 x 1,770	–	–
Swivelling range	degrees	360	360	360	360	360
Drilling spindle outer diameter	mm	72	110	110	110	110
Taper in spindle	MT	5	6	6	6	6
Spindle speed range	rpm	11.2 - 2,000	9 - 2,800	9 - 2,800	9 - 2,800	9 - 2,800
Number of spindle speeds	n	16	32	32	32	32
Feed range	mm/rev	0.035 - 2.8	0.035 - 2.8	0.035 - 2.8	0.035 - 2.8	0.035 - 2.8
Number of feed rates		16	16	16	16	16
Power of spindle motor	kW	7.5	11 (15)	11 (15)	11 (15)	11 (15)
Total connected load	kVA	9.3	13 (16.8)	13 (16.8)	13.6 (17.6)	13.6 (17.6)
Weight incl. standard accessories	kg	6,900	12,100	19,500	16,500*	22,400*
Length of the machine	mm	3,700	4,500	6,210	9,280*	9,280*
Width of the machine	mm	1,375	1,456	1,800	4,600	6,200
Height of the machine	mm	4,090	4,600	5,130	4,900	5,380

*with standard versions of VOP machines, the traversing range is 4,500 mm

We reserve the right to make technical changes · 10/15 · 5.09115.08.90.02.02

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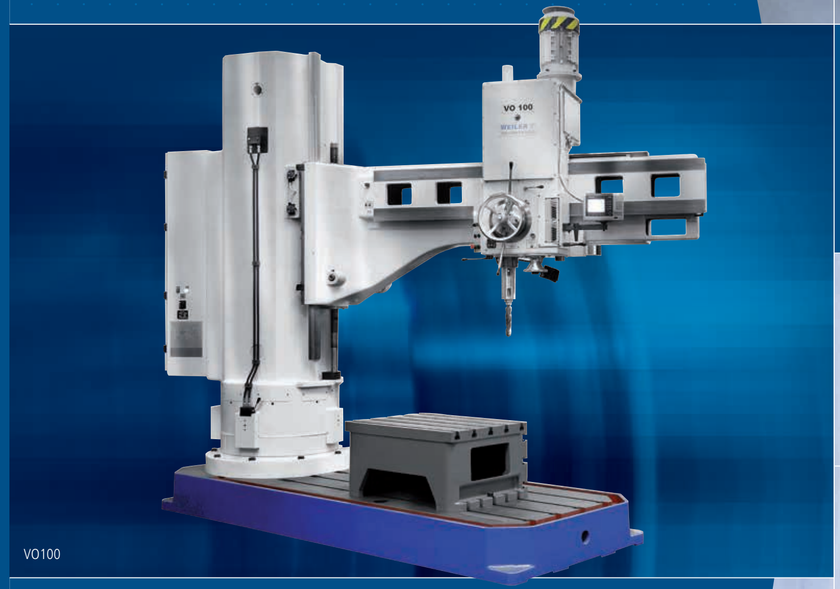
Radial Drilling Machines



VO100

VO75 / VO100 / VO104
VOP100 / VOP104

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Service
Radial Drilling Machines
CNC Lathes
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Radial Drilling Machines

VO75

VO104

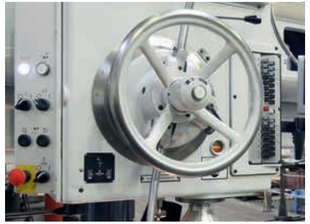
VOP104

Machine with Traversable Supports
The V0100 and V0104 radial drilling machines are available as VOP100 and VOP104 versions with supports that can be moved along the heavy-duty machine bed. The standard traversing range of the slide is 4500 mm, which can be optionally increased through an additional traversing path of 3500 mm. Versions with a number of drilling units on a common machine bed are also conceivable.

Machine Frame
The main part of the machine frame is made of high-quality grey cast iron. The main frame has a clamping surface to enable the attachment of workpieces, tables and fixtures. The guideways on the housing and vertical arm are hardened and ground and the opposite surfaces are scraped.

Headstock and Drive
Heavy-duty grey cast iron housing with extendible spindle sleeve. The drilling spindle is hardened and runs in permanently lubricated precision bearings that ensure high concentric accuracy and smooth running. The headstock is fixed to the swivelling arm through a hydro-mechanical clamping device. The spindle speeds and feed rates are selected through an operating panel. With selection occurring through the spindle starting lever. The drilling depths are set through a fixed stop and rotating depth scale. The permissible drilling performance is monitored through a safety feed clutch to prevent the machine being overloaded. A starting clutch ensures that the spindle is started softly and smoothly. The spindle is braked and stopped through a magnetic brake on the shaft below the motor.

Electrical Equipment
The clearly arranged operating panel with an EMERGENCY STOP button and switches for the main functions is located on the headstock.
Standard electrical configuration according to EN 60204-1
Standard operating voltage 3 x 400 V / 50 Hz.

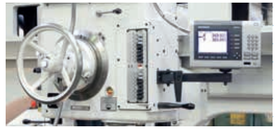


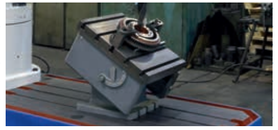
Standard Features
- Machine lamp
- Adapter sleeve
- Knock-out wedges
- Groove cleaner
- Oil can
- Push-type grease gun
- Set of operating tools
- Transport locks
- Operating manual and spare part catalogue

Accessories / Options
- Coolant device with tank
- Clamping block Vb8
- Tilting table Vc8
- Clamping vice 160 mm
- Frequency regulated main drive
- Heidenhain 2-axis position readout.
- Heidenhain 3-axis position readout
- Platform for operation and maintenance
- Anchoring materials with stone bolts
- Anchoring materials with anchor bolts and adhesive cartridge
- Version for tropical conditions TH32
- Electrical equipment for other mains supplies than 400 V / 50 Hz
- Special paint finishes
- Electrical stop for thread cutting (only for V075)
- Strengthened main drive 15 kW (only for V0100 and V0104)
- Motorised headstock setting (only for V0100 and V0104)
- Motorised shell turning (only for V0104)

Motorised Headstock Setting (only for V0100 and V0104)
The motorised headstock setting assists the operator when moving the headstock on the swivelling arm. The movement in the required direction is executed through corresponding pushbuttons. Rapid movement can be carried out through an additional pushbutton.

Motorised Sleeve Turning (only for V0104)
The sleeve with the swivelling arm can be turned either with a motor or manually. The motorized turning movement is controlled through directional pushbuttons on the operating panel. The brake is automatically applied when the pushbutton is released. For the manual turning of the sleeve, there is an additional pushbutton that allows the brake to be released prior to movement.





Heidenhain Position Readout
- 2-axes position readout
  For horizontal headstock position and swivelling arm angle position
- 3-axes position readout
  For horizontal headstock position, swivelling arm angle position and sleeve travel

Clamping Block Vb8
- Clamping area on top 1000 x 700 mm
- Clamping area at side 1000 x 500 mm
- Weight 410 kg

Tilting Table Vc8
- Clamping area on top 750 x 600 mm
- Clamping area at side 750 x 550 mm
- Weight 420 kg