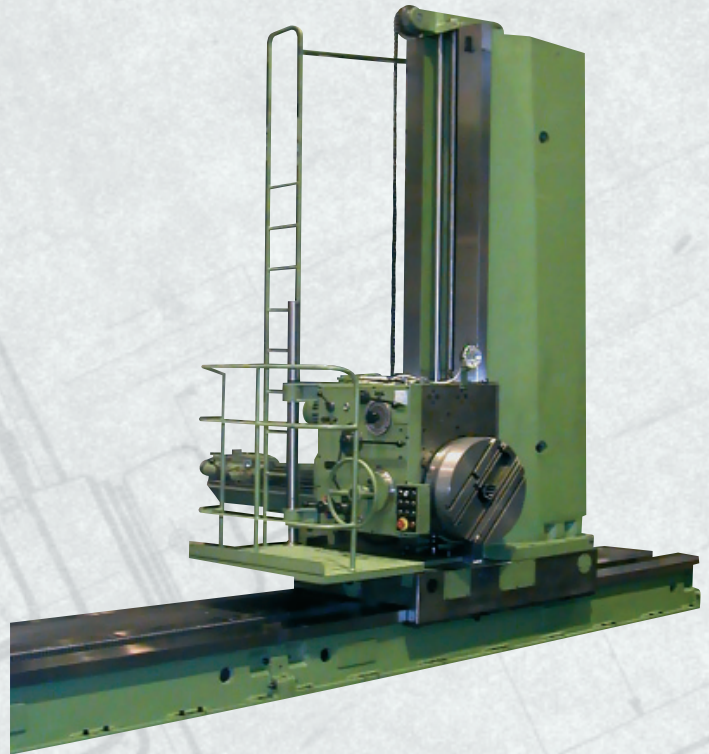


ReTOS Varnsdorf s.r.o., The Czech Republic, followed up with 40 years tradition in the field of horizontal boring machines overhauls. We use the most modern technologies as our parent company TOS Varnsdorf a.s.



Features

- manually controlled floor type of horizontal boring machine
- transversal travelling column with headstock
- 3 linear axes
- sliding workspindle
- facing head with tool slide
- machine designed for piece and low-volume engineering production
- suitable for roughing as well as for finishing
- digital optical admeasuring of linear axes with DROs
- optionally can be fitted by f.e. oil-mist cooling, spindle clamping / guiding support, milling head etc.
- workpiece is clamped on clamping plate or on rotary table (it is not part of machine - optional accessories)

Configuration

Travelling groups

- X - transversal travel of column slide on bed
- Y - vertical headstock travel on column
- W - spindle travel
- U - travel of tool slide of facing head
- S - rotation of workspindle and facing head

Group guidance

- guideways on all linear axes are grinded, counterways casted by plastic
- guideways of bed are reinforced with hardened steel plates
- guideways of facing head are scrapped

Lubrication

- HYTOS lubrication set
- central, time powered by PLC in electric cabinet
- lubricates X, Y, W axes

- U axis lubricated by grease nipples

Clamping

- X, Y, W axes - manually by levers

Headstock

- headstock is used of W100, W100A
- sliding workspindle + facing head
- motorical tool clamping ISO 50 (up client request, if machine has not already been equipped with it)
- asynchronous motor for driving of spindle speed and of feeds of all axes
- spindle speed and feeds driven by mechanical lines - gears
- mechanical shifting of spindle speed and feeds
- most of controls placed on headstock
- operator platform is mounted on headstock
- headstock balancing - chain and coun-

terweight led in column

Admeasurement of position

- HEIDENHAIN digital optical admeasuring and DRO
- DRO PT 780 for admeasuring of X, Y, W axes
- X, Y axes - LS 688 rules
- W axis - LS 388 rule

Energy distribution

- X, W axes - IGUS chain energy carriers
- Y axis - protective tube

Coverage of machine

- bed guideways protected by telescopic way cover

CE - valid only for the European Union

- comprehensive safety elements according to the applicable legislation and technical standards
- original spoke hand wheel replaced by



TÜVRheinland®
COTI
ISO 9001
ISO 14001

ReTOS
VARNSDORF s.r.o.

- new filled one
- working area of the machine is fenced off

Tension options

- 50Hz - 3 x 400V, 3 x 415V, 3 x 500V
- 60Hz - 3 x 220V, 3 x 440V, 3 x 460V, 3 x 480V, 3 x 575V
- parameters of electric parts given in the tables are valid for option 3 x 400V / 50Hz

Optional accessories

- oil-mist cooling (basic configuration)
- PVD100-550 spindle guiding support
- SP100 spindle clamping support
- spindle clamping support up to 800 rpm
- FP40-100 rectangular milling head
- change gear kit for thread cutting
- TD50 telescopic tool holder
- UD4C clamping plate - 4020 x 1885
- UD4D clamping plate - 2420 x 1885
- UK500 clamping cube
- UU800, UU950, UU1120 clamping angle plates
- spares kit for 3-year operation
- 2D touch probe KT 130 HEIDENHAIN

Machine parameters

Workspindle diameter	100	mm
Clamping taper	50	ISO
	6	Morse
Spindle speed range - 23 gears	7,1 - 1120	rpm
Main motor power	11	kW
Main motor speed	1460	rpm
Maximum torque of the spindle - Nmin	3350	Nm
Maximum torque of the spindle - Nmax	78,5	Nm
X...transversal travel of column	bed 3600 mm - basic	2000 mm
	bed 4100 mm	2500 mm
	bed 4600 mm	3000 mm
	bed 5100 mm	3500 mm
	bed 5600 mm	4000 mm
	bed 2000 mm - extension	+2000 mm
Y...vertical travel of headstock	1600 / 2000	mm
W...spindle stroke	900	mm
Feeds...X, Y, W, U - 18 gears	18 - 900	mm / min
Feeds...X, Y, W, U - 32 gears	0,02 - 12	mm / rev
Thread feeds...X, Y, W, U - metric - 18 gears	0,25 - 12	mm / rev
Thread feeds...X, Y, W, U - inch - 18 gears	120 - 2,5	threads / 1"
Rapid traverse...X, Y, W, U	2800	mm / min
Total power consumption	15	kVA
Machine weight - for X = 2000 mm	12000	kg
Total area including CE - approximate	---	mm x mm

It is possible to join the beds together to reach the requested X axis travel.

Facing head parameters

Facing head diameter	600	mm
Centring hole diameter / depth	280H6 / 8	mm
U...tool slide travel	210	mm
Maximal facing diameter	900	mm
Facing head speed range - 16 gears	7,1 - 224	rpm

List of supported standards of tool shanks / clamping adapters for ISO 50

Tool shank	Standard	Adapter
Long shank - metric	ČSN 220432	4100597
Long shank - metric	DIN 2080	4100597
Long shank - inch	DIN 2080	4100892
Short shank - metric	ČSN 220434	4100809
Short shank - metric	DIN 69871	4100809
Short shank - metric	MAS BT 403-1982	4100809
Short shank - inch	CAT ANSI / ASME B5.50-1985	4100913

- Machine design can be tailored to suit the needs of the client.