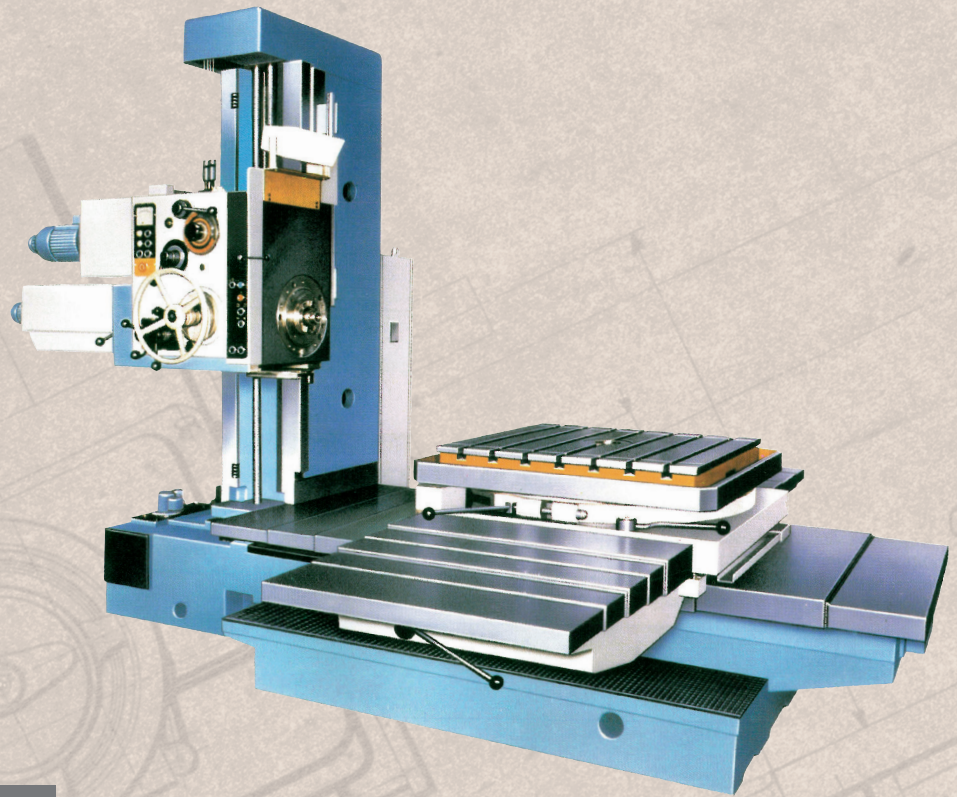


ReTOS Varnsdorf s.r.o., The Czech Republic, followed up with 40 years tradition in the field of horizontal boring machines overhauls. We use the most modern technologies as our parent company TOS Varnsdorf a.s.



Features

- manually controlled horizontal boring machine
- fixed column, crosswise travelling table
- 4 linear axes, rotary table
- sliding workspindle
- machine designed for piece and low-volume engineering production
- suitable for roughing as well as for finishing
- digital optical admeasuring of linear axes and table rotation with DROs
- optionally can be fitted by f.e. facing head with tool slide, tool cooling kit (CHZ), outboard support, rectangular milling head etc.

Configuration

Travelling groups

- X - travel of rotary table slide on saddle
- Z - travel of saddle on bed
- Y - vertical headstock travel on column
- W - spindle travel
- B - table rotation
- S - workspindle rotation

Group guidance

- guideways on all linear axes are grinded, counterways casted by plastic
- guideways on bed and saddle are reinforced with hardened steel plates
- guideways of rotary table are scrapped

Lubrication

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

Clamping

- X, Y, Z, W, B axes - manually by levers

Headstock

- sliding workspindle
- motorical tool clamping ISO 40 (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
- asynchronous motor for driving of rapid traverses 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
- headstock balancing - ropes and counterweight led in column

Admeasurement of position

- HEIDENHAIN digital optical admeasuring and DROs
- DRO PT 880 for admeasuring of X, Y, Z, W, B axes
- DRO ND 780 for admeasuring of X, Y, Z axes
- X, Y, Z axes - LS 688 rules
- W axis - LS 388 rule

- B axis - ROD 480
- 4x90° optical readout

Energy distribution

- X, W axes - metal blade energy carriers
- Y, Z axes - protective tubes

Coverage of machine

- complete coverage of guideways of X, Z axes

CE - valid only for the European Union

- comprehensive safety elements according to the applicable legislation and technical standards
- original spoke hand wheel replaced by new filled one
- stairs to headstock
- working area of the machine is fenced off

Optional accessories

- outboard support
- removable facing head LD-75
- CHZ-75 tool cooling kit
- FP-40-75 ISO 40 rectangular milling head
- change gear kit for thread cutting
- VT80-2500-ISO40 smooth boring bar
- LLK-150/80 sliding bush of the outboard support
- UK-500 clamping block
- UU-800, UU950 clamping angle plate
- spares kit for 3-year operation
- 2D touch probe KT 130 HEIDENHAIN

- Noted accessories are available in limited quantity and will be delivered unless they are out of the store.

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

Machine parameters

Workspindle diameter	75	mm
Clamping taper	40	ISO
	5	Morse
Spindle speed range - 21 gears	18 - 1800	rpm
Main motor power	11	kW
Speed of main motor	2940	rpm
Maximum torque of the workspindle	2200	Nm
Maximum torque of the hollowspindle	4400	Nm
Motor power of rapid traverse	3	kW
Motor speed of rapid traverse	1420	rpm
X...transversal travel of table	1250	mm
Z...longitudinal travel of table	1000	mm
Y...vertical travel of headstock	900	mm
W...spindle stroke	560	mm
Table clamping surface	950 x 950	mm x mm
Table loading capacity	3000	kg
Width of T-slots	23 H8	mm
Centring hole diameter / depth	100 H6 / 12	mm
Feeds...X, Y, Z, W, U - 18 gears	16 - 755	mm / min
Feeds...X, Y, Z, W, U - 18 gears	0,016 - 0,8	mm / rev
Thread feeds...X, Y, Z, W, U - metric - 18 gears	0,25 - 12	mm / rev
Thread feeds...X, Y, Z, W, U - inch - 25 gears	120 - 2	threads / 1"
Rapid traverse...X, Y, Z, W, U	3550	mm / min
Rapid traverse of table rotation...B	2,58	rpm
Total power consumption	19	kVA
Machine weight	10700	kg
Total area including CE - approximate	6500 x 5000	mm x mm

Facing head parameters

Facing head diameter	480	mm
U...tool slide travel	170	mm
Maximal facing diameter	710	mm
Facing head speed range	18 - 180	rpm

Outboard support parameters

Face of hollow spindle to bearing of outboard support	2000	mm
Z...longitudinal travel of table (limitation)	900	mm
Bearing axis above table	0 - 900	mm
Rapid traverse of bearing	1620	mm / min
Bearing bore	150 H7	mm
Motor power of outboard support	0,55	kW
Motor speed of outboard support	2780	rpm