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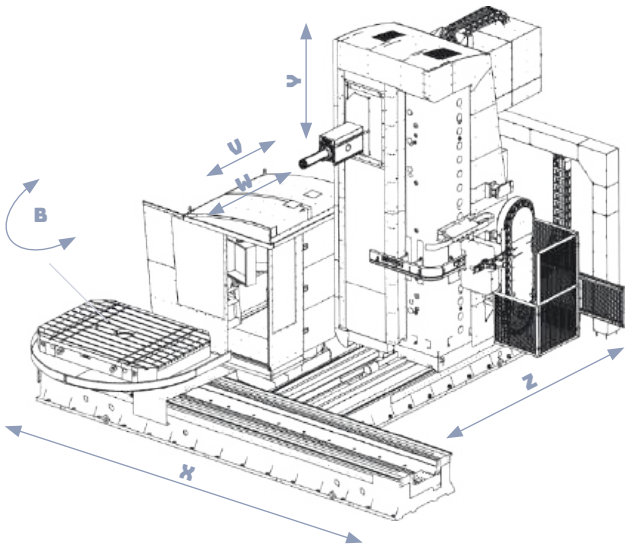
WHR 13

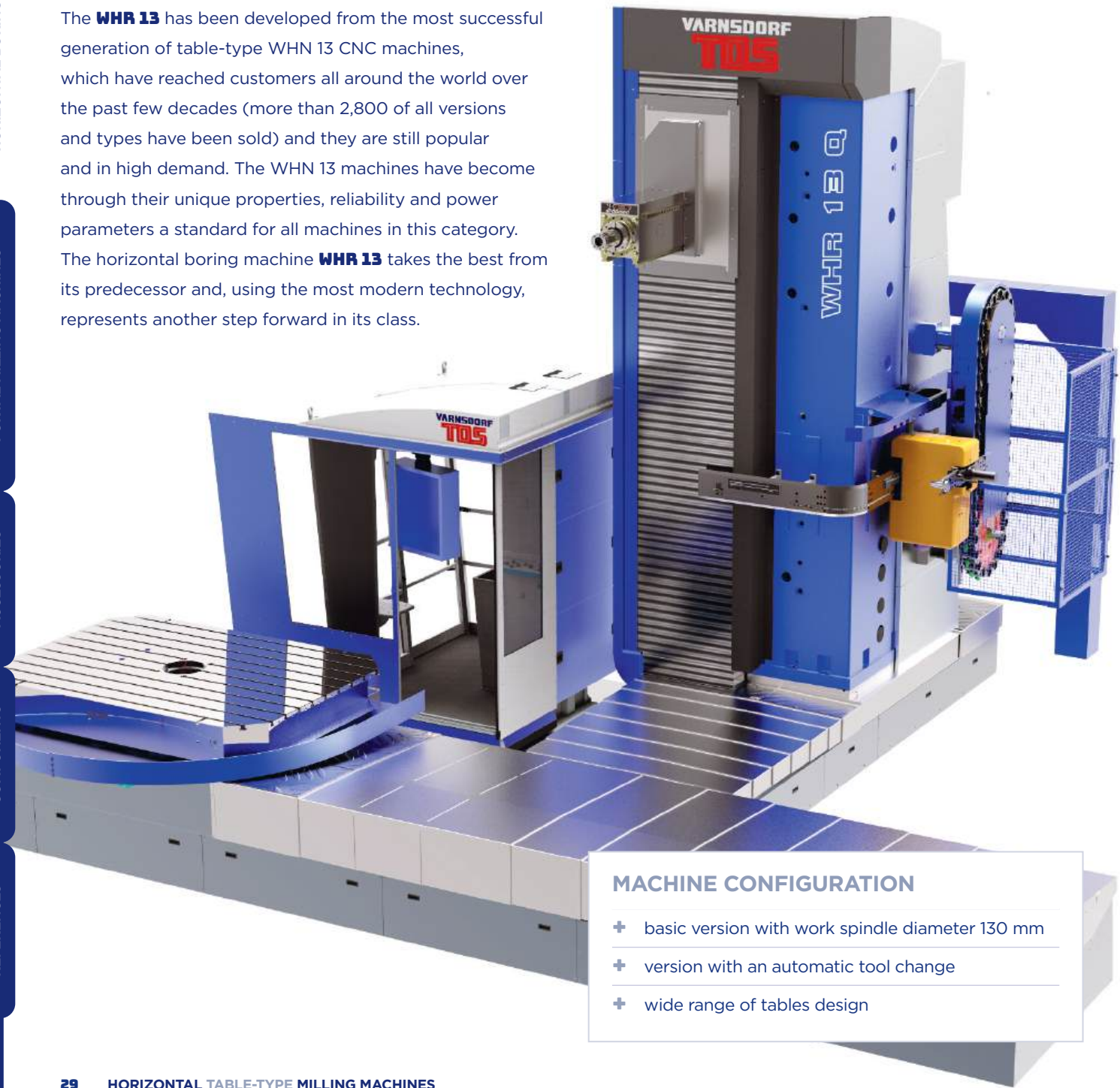


MAIN ADVANTAGES OF THE MACHINE

- MULTIPLE SIDE MACHINING
- SPINDLE REACH BEYOND TABLE CENTER
- COMFORTABLE USAGE OF MILLING HEADS

The latest representative of horizontal table-type boring machines **WHR 13** produce by TOS VARNSDORF.

The **WHR 13** has been developed from the most successful generation of table-type WHN 13 CNC machines, which have reached customers all around the world over the past few decades (more than 2,800 of all versions and types have been sold) and they are still popular and in high demand. The WHN 13 machines have become through their unique properties, reliability and power parameters a standard for all machines in this category. The horizontal boring machine **WHR 13** takes the best from its predecessor and, using the most modern technology, represents another step forward in its class.



MACHINE CONFIGURATION

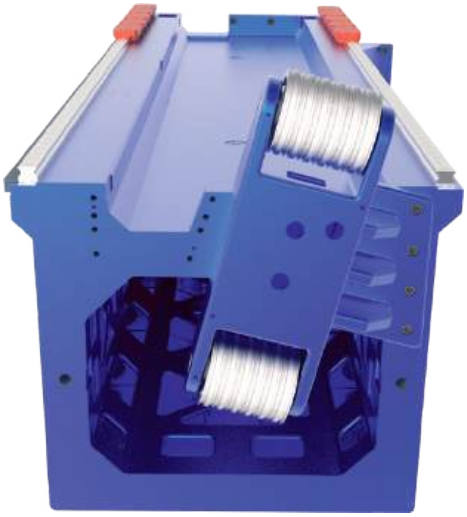
- basic version with work spindle diameter 130 mm
- version with an automatic tool change
- wide range of tables design

TECHNICAL PARAMETERS

HEADSTOCK		
Work spindle diameter	mm (in)	130 (5.1181)
RAM size	mm (in)	320 x 400 (12.5984 x 15.7480)
Spindle taper		ISO 50 / ISO 50 BIG+
Spindle speed range	RPM	10–3,000
Main motor power (S1 / S6 – 60%)	kW (HP)	41 (55.7) / 46 (62.5)
Torque on spindle (S1 / S6 – 60%)	Nm (ft lb)	2,542/3,111 (1,874.9/2,294.6)
Spindle stroke W	mm (in)	650 (25.5905)
RAM stroke V	mm (in)	700 (27.6)
COLUMN		
Headstock vertical travel Y	mm (in)	2,000, 2,500, 3,000 (78.7401, 98.4251, 118.1102)
Longitudinal column adjustment Z	mm (in)	1,250, 1,600, 2,200, 3,200 (49.2125, 62.9921, 86.6141, 125.9842)
ROTARY TABLE		
Transverse table travel X	mm (in)	3,500, 4,000, 5,000, 6,000 (137.7952, 157.4803, 196.8503, 236.2204)
Max. workpiece weight	kg (lbs)	12,000 / 16,000 / 18,000 / 25,000 (26455.5 / 35273.9 / 39683.2 / 55115.6)
Table clamping area	mm (in)	1,800 x 1,800 / 1,800 x 2,200 / 1,800 x 2,500 2,000 x 3,000 / 2,500 x 3,000 (70.8661 x 70.8661 / 70.8661 x 86.6141 / 70.8661 x 98.4251 / 78.7401 x 118.1102 / 98.4251 x 118.1102)
FEEDS		
Range of feeds (working and rapid traverse) – Y, Z, W, V	mm/min (ipm)	5–10,000 (0.1574–393.7007)
– X = 3,500 mm (137.7952 inch) / capacity 12,000 kg	mm/min (ipm)	4–10,000 (0.1574–393.7007) / 12,000 (472.4409)
– X = 3,500 mm (137.7952 inch) / other tables	mm/min (ipm)	4–8,000 (0.1574–314.9606)
– X = 4,000, 5,000, 6,000 mm (157.4803, 196.8503, 236.2204 inch)	mm/min (ipm)	4–8,000 (0.1574–314.9606)
– B capacity 12,000 kg (26,455.5 inch) / other tables	RPM	0.003–2/1.5

The robotic manipulator provides effective tool exchange in the main spindle and milling head.

WHR 13



COLUMN

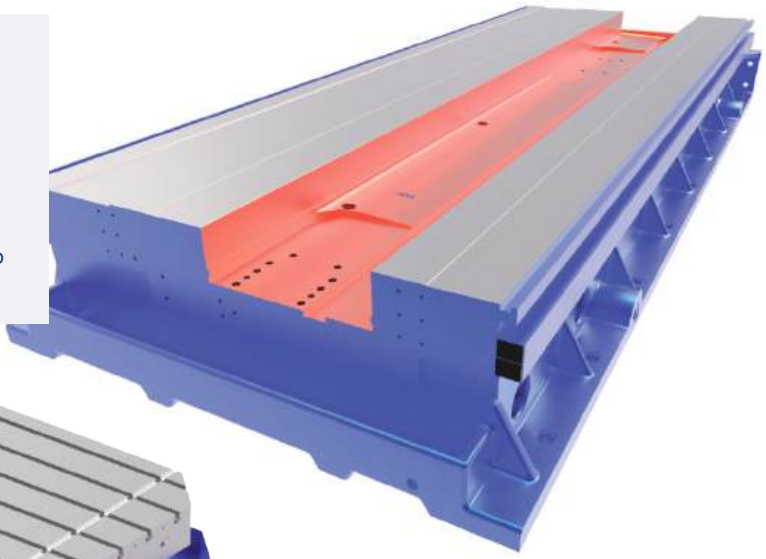
The basic part of the machine frames made by TOS VARNSDORF are of high-quality grey cast-iron made in the Czech Republic, which forms a cast-iron skeleton. The structure and the ribbing of the frame guarantee high rigidity.

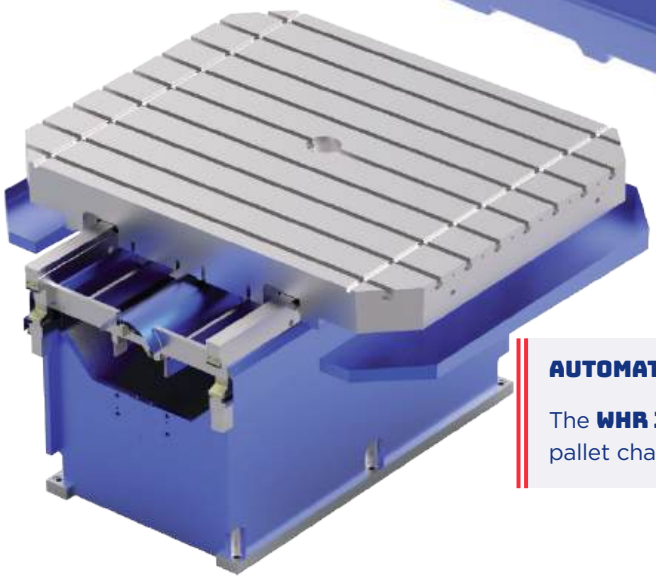
DRIVES OF FEEDS

The travel units are driven by digitally controlled AC servo drives Siemens.
To reach higher travel forces, an allowance-free gear is inserted between the servo drive and the ball screw.

BED

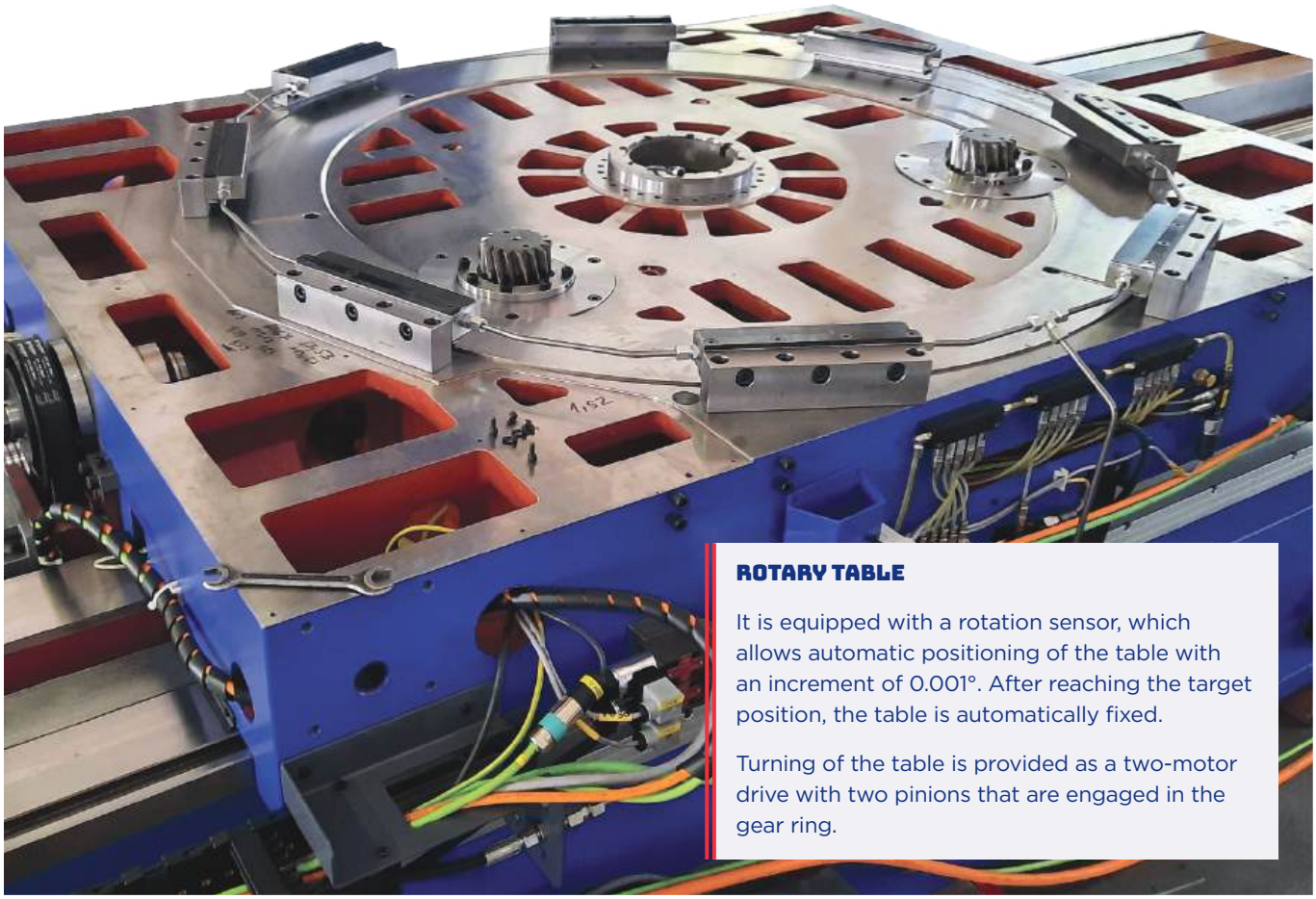
We use the GG 25 cast iron for production of the support sections because of high demands for vibration absorption in the horizontal boring machines. High rigidity of an optimally dimensioned cast-iron frame guarantees high efficiency and productivity of the milling machine while securing top geometrical accuracy of the workpiece.





AUTOMATIC PALLETE CHANGE

The **WHR 13** machine can be equipped with automatic pallet change; for more information see page 65.



ROTARY TABLE

It is equipped with a rotation sensor, which allows automatic positioning of the table with an increment of 0.001°. After reaching the target position, the table is automatically fixed.

Turning of the table is provided as a two-motor drive with two pinions that are engaged in the gear ring.

HEADSTOCK

The main casing is a rigid gray iron casting of L shape which is directly integrated lines for ram. For more information see page 85 – Headstocks.