



SORALUCE

KB-150-W

HORIZONTAL
BORING
MACHINE



EFFICIENT MULTI-FACE BORING MACHINE

ROBUSTNESS AND PRECISION

Rigid design

KB-150-W HORIZONTAL BORING MACHINE



The SORALUCE KB-150-W range is the T type boring machine for efficient multi-face machining of large sized work pieces weighing up to 40,000 kg / 88,184 lb.

The linear guiding system and hydrostatic damping system with high loading capacity and low friction for all axes, provides high dynamics which improves machining efficiency.

The highly rigid structure and boring spindle design, using the latest technologies for thermal stability, ensure long term machine precision.

Different accessories are available to meet customer requirements in the most demanding sectors and components.

The KB-150-W can be fitted with a single table, with automatic pallet changing system or integrated in a FMS (Flexible Machining System) cell with high levels of automation.



KB-150-W-RAM

HORIZONTAL BORING MACHINE (RAM OPTION)



Horizontal boring machine integrating ram with 1000 mm / 39" traverse. It allows for deep bore machining, using the complete column, ram and quill traverses.

The spindle nose reaches the centre of the table with the ram traverse, without the need of the quill traverse.

The ram horizontal boring machine is a highly rigid solution assuring no vibrations and providing high quality machining results.



Strong Technology, enhanced Precision

BACKGROUND CONCEPTS

Precision

The T type configuration guarantees high rigidity of the machine and optimum machining efficiency.

The machine undergoes specific reliability and precision testing, pursuant to the demanding SORALUCE standards.

High performance

High feed forces of the cross axis and quill spindle, resulting in high stock removal capacity.

Its heavy duty design and high dynamics provides optimum power and cutting speed capacity.

User friendly

Machine configuration allows the operator to be next to the working area, enabling easy part setting, measuring operations, etc. In addition, total enclosure is available.

Robustness

Rigid and stable design for the highest precision, all main machine elements made of cast iron.

The machine has been developed using the finite elements method and tested for maximum rigidity to reduce vibration problems to a minimum.



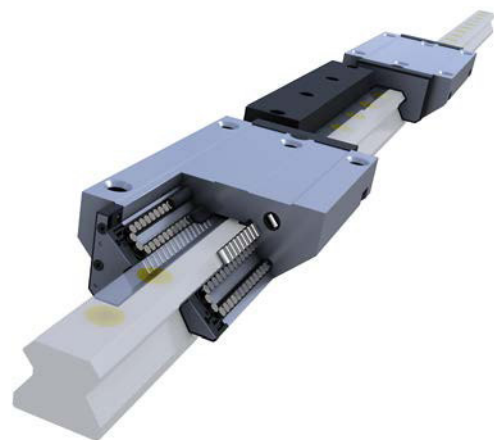
CONSTRUCTION CHARACTERISTICS

Combined guiding and damping system

The linear guiding system with recirculating cylindrical rollers on each axis (X-Y-Z) and our own specifically developed hydrostatic damping elements (Y-Z) guarantees great stability and high precision.

The guiding system incorporates hydrostatic damping pads between the recirculating cylindrical rollers, thus eliminating any vibration during machining processes.

This system guarantees high dynamics, minimum maintenance, low heat levels and reduced grease consumption.



Driving system

The longitudinal, vertical and cross axes are driven by preloaded ball screws with double recirculating nuts.

The vertical axis includes an electromechanical safety brake.

AUTOMATIC HEAD CHANGING SYSTEM

SORALUCE provides a highly reliable and flexible automatic head changing system with adapter plates.

Accurate, strong and robust head changing system is achieved with a Hirth coupling interface. Each head is clamped by several hydraulic clamping cylinders. Fluid, pneumatic and electrical supplies are provided via quick release couplings.

A fully enclosed pick-up station is provided to protect heads from pollution from the machining processes and workshop environment during head is stocking.

The automatic head changing system developed by SORALUCE allows for automatic changing of facing heads, angular heads, rotary couplings, seat pocket tools, ejector drills or any special heavy tooling.



ADDITIONAL MILLING AND BORING HEAD RANGE



Universal head

41 / 53 / 54 kW
2,5° x 2,5° / 1° x 2,5° / 0,001° x 0,001°
4000 / 5000 / 7000 rpm



Orthogonal head

40 / 41 / 53 / 54 kW
1° x 1° / 1° x 0,001°
4000 / 6000 rpm

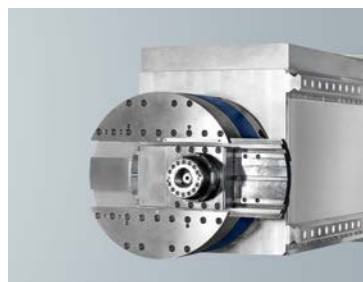


Automatic angular rotary head with manual tool change



Fixed horizontal boring head

46 / 60 / 70 kW
3000 / 4000 / 5000 rpm



NC facing and boring head



Facing head

QUILL

- Rigid quill spindle provided by quill body mounted on $\varnothing 200$ mm / 7.87" angular contact ball bearings lubricated with air-oil.
- It includes a linear guiding system with an integrated measuring system.
- Maximum thermal stability due to a complete cooling system of the gearbox and spindle motor systems.
- High power transmission, guaranteeing high stock removal capacity.
- Great feed force.
- Quill orientation by direct encoder.



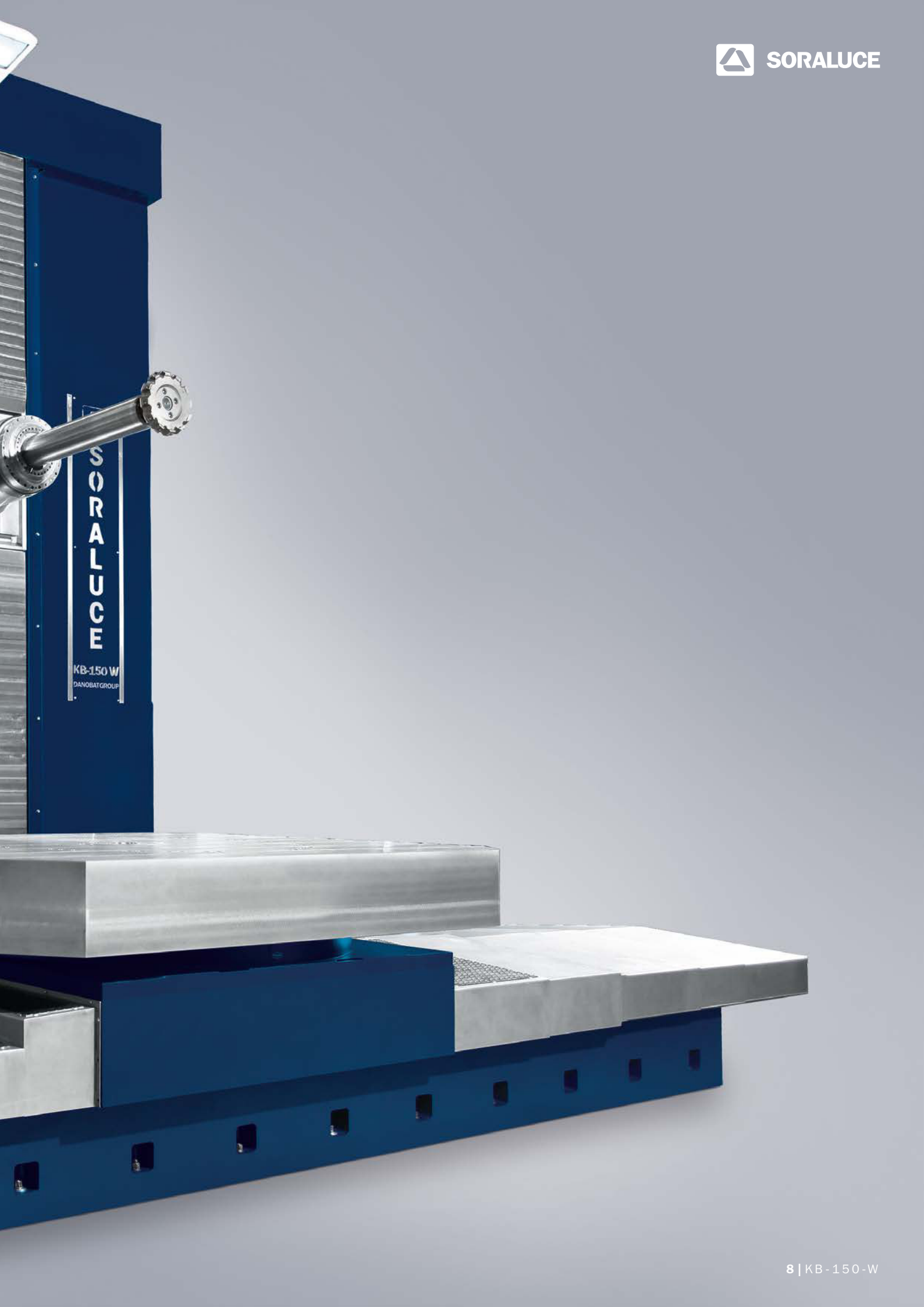
ROTARY TABLE

- Unique highly robust design.
- Prime technological precision and stability parameters.
- Accurate positioning repeatability.
- High dynamics with rotation speeds up to 4.2 rpm (S1) and 6.7 rpm (S6).
- Rotation by high precision bearing and low friction surfaces for tables up to 10,000 kg / 22,046 lb loading capacity. Rotation by hydrostatic bearings for tables up to 40,000 kg / 88,184 lb loading capacity. Rotation systems which ensures no surface wear, meaning its suitability is optimal for highly demanding and accurate processing.
- Rotary encoder with up to 36,000 signals, guaranteeing extremely precise angular positioning and perfect precision. Infinitely variable positioning (360,000) in each angular position and NC-axis controlled for rotary milling.
- Rotation by dual drive system through a large external crown gear with helical gearing and zero backlash precision gearbox.
- Hydraulic clamping system up to 140,000 Nm / 103,244 lbf.ft tangential clamping force.
- High load rate, handles components of up to 40,000 kg / 88,184 lb load. A very large encoder in relation to table size ensures long term precision.
- Locator pins for each 90° increment ensuring high accuracy (option).



KB-150-W HORIZONTAL BORING MACHINE

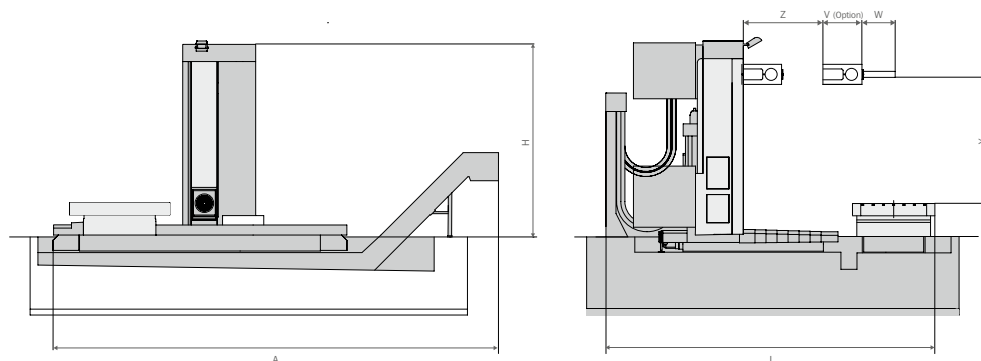




TECHNICAL SPECIFICATIONS **KB-150-W**

CHARACTERISTICS		KB-150-W		
Quill Ø	mm / in	150 / 5.9" * 130 / 5.1" available upon request		
Quill traverse, "W" axis	mm / in	700 - 800 / 27 - 31"		
Rapid traverse, "W" axis	mm/min / in/min	7500 - 15000 / 295 - 590		
Ram traverse, "V" axis (option)	mm / in	1000 / 39"		
Thrust, "W / V (option)" axes	N / lbf	40000 - 20000 / 8992 - 4496		
Spindle power	kW / Hp (S1)	Up to 54 / 72		
Spindle torque	Nm / lbf.ft	2344 - 4490 / 1728 - 3311		
Spindle speed	rpm	3500		
Spindle nose		ISO-50		
Longitudinal traverse, "X" axis	mm / in	3000 / 118"	4000 / 157"	5000 / 196"
Rapid traverse, "X" axis	mm/min / in/min	20000 / 787		
Table size / loading weight	mm-kg / in-lb	2000x2000 - 20000 / 78"x78" - 44092 2000x2500 - 20000 / 78"x98" - 44092 2000x2000 - 40000 / 78"x78" - 88184 2000x2500 - 40000 / 78"x98" - 88184 2500x2500 - 40000 / 98"x98" - 88184		
Table rotation, "B" axis	degrees	0,001°		
Vertical traverse, "Y" axis	mm / in	2600 - 3200 / 102" - 126"		
Cross traverse, "Z" axis	mm / in	2000 - 2500 - 3000 - 4000 - 5000 / 78" - 98" - 118" - 157" - 196"		
Rapid traverse, "Y/Z" axes	mm/min / in/min	17500 - 35000 / 689 - 1378		
Thrust, "Y/Z" axes	N / lbf	40000 - 20000 / 8992 - 4496		
Heads		Manual / Automatic / NC facing / Seat pocket tools / Ejector drills		
CNC		HEIDENHAIN TNC 640 / SIEMENS 840 D sl / FANUC 31-iB		
Coolant		External coolant system / Internal coolant system up to 70 bar / 1015 psi		
Tool magazine	No. tools	40 / 60 / 80 / 100 / 120 / 150		
Machine weight	kg / lb	36500 / 80468	39000 / 85980	43000 / 94798

LAYOUT **KB-150-W**



X	Y	Z	W	V (Option)	A	H	J
3000 / 118"	2600-3200 / 102"-126"	2000 - 2500 - 3000 - 4000 - 5000 / 78" - 98" - 118" - 157" - 196"	700 - 800 / 27 - 31"	1000 / 39"	9100 / 358"	4500-5000 / 177"-196"	7800-8300-8800-9800-10800 / 307"-326"-346"-385"-425"
4000 / 157"					10300 / 405"		
5000 / 196"					11500 / 452"		

APPLICATIONS



Fluid End |

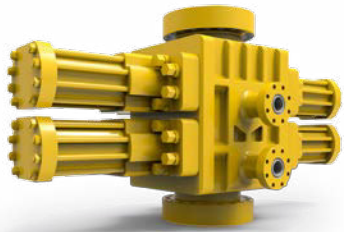


Annual Blowout Preventer |



Master Valve Block |

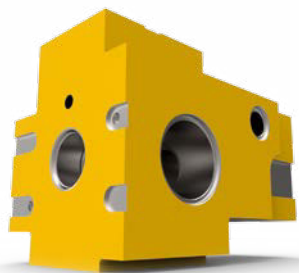




Ram Blowout Preventer |



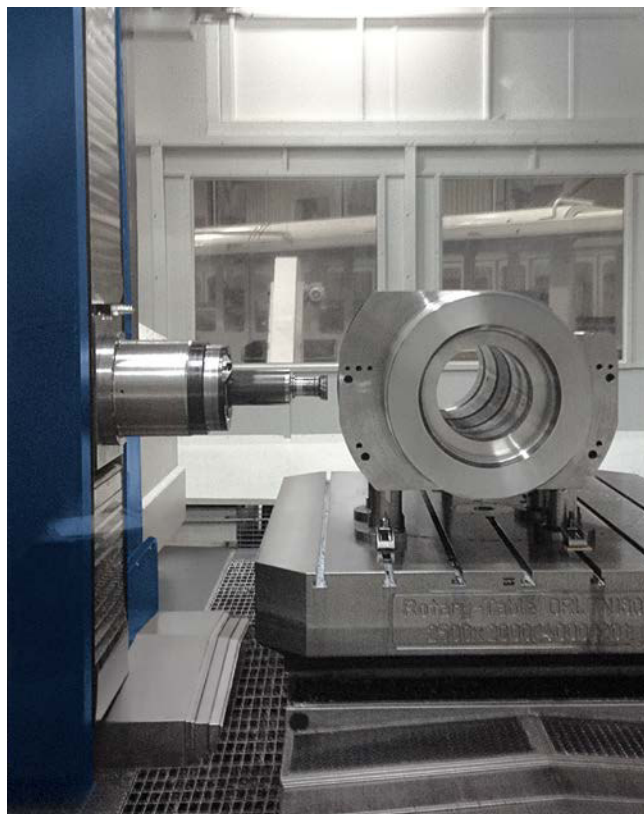
Connector Part Lower Body |



Production Wing Block |



Connector Part Upper Body |



SORALUCE GLOBAL SOLUTIONS



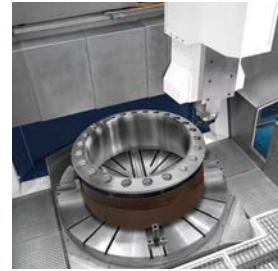
Bed type milling centre



Floor type multi-function
milling boring machines



Multitasking milling-turning
centre



Vertical turning centres

YOUR LIFECYCLE PARTNER



**PROJECT
MANAGEMENT**



**PERSONNEL
TRAINING AND
PRODUCTION
ASSISTANCE**



**TECHNICAL
ASSISTANCE BY
LOCAL SERVICE
ENGINEERS**



**SPARE PARTS
MANAGEMENT**



**MINIMUM
RESPONSE TIME**

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