

ZVH 45/L3000

STAR EDITION

MOVING COLUMN MACHINING CENTRE
Z SERIES EDITION

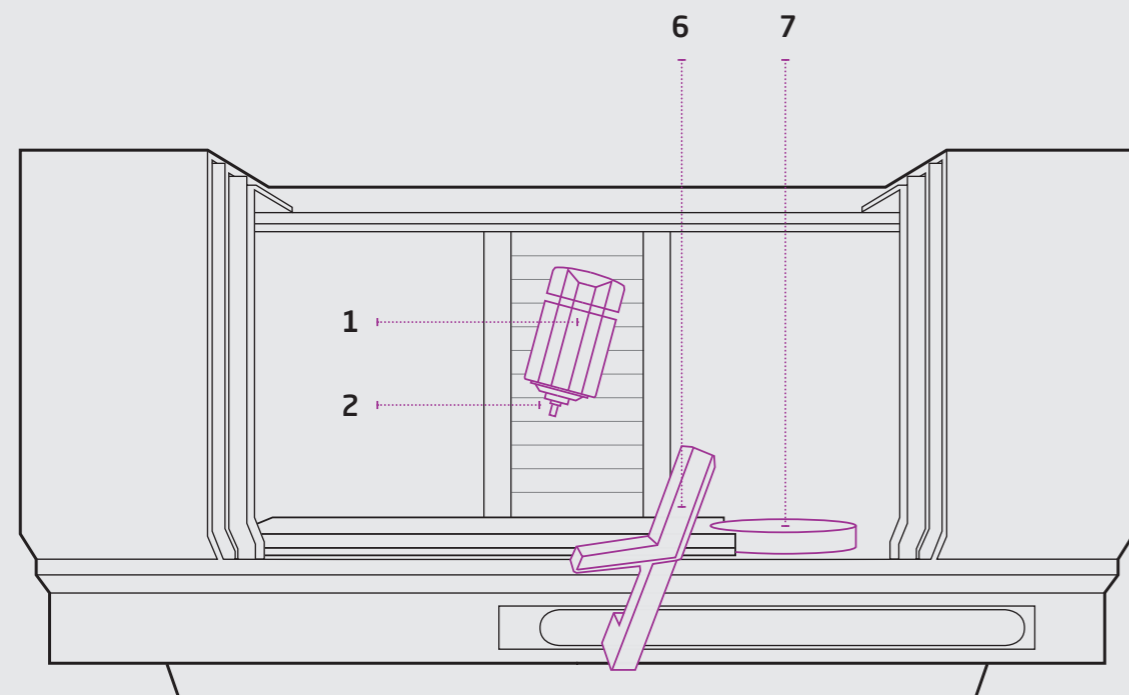
IBARMIA.
YOUR MACHINE TOOL POINT





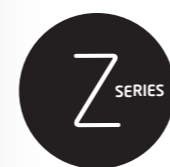
ZVH 45/L3000 STAR EDITION

IBARMIA HIGH TECHNOLOGY
COMPRESSED IN
A PREMIUM MODEL



The ZVH 45 STAR is a new milestone in the history of IBARMIA, launching for the first time a machine with a closed configuration covering the widest range of machining requirements. This configuration is based on the awarded moving column architecture and the strategy of using only the best quality products with a high technological content. A new approach to continue with our working philosophy: **to be the best among the best.**

- 1_ B axis headstock
- 2_ Electrospindle
- 3_ Machine it all
- 4_ Moving column Design
- 5_ Tool magazine
- 6_ CNC control
- 7_ Optional rotary tables
- 8_ Optimal floor space occupation
- 9_ Equipment & Technical specifications



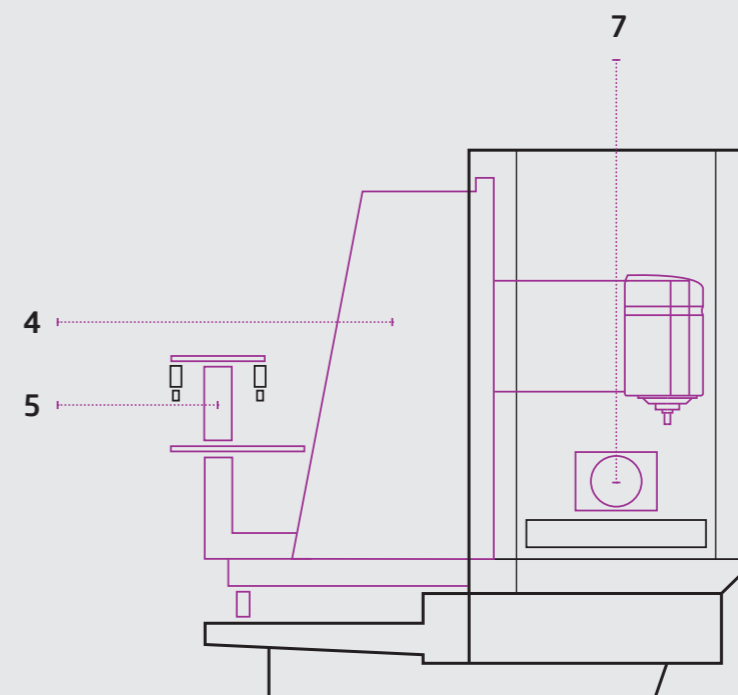
Z SERIES
SPECIAL EDITION



5 AXIS
TECHNOLOGY



40 POSITIONS
TOOL MAGAZINE



ZVH 45/L3000

STAR EDITION_

1

B AXIS HEADSTOCK_

SUPERIOR TECHNOLOGY

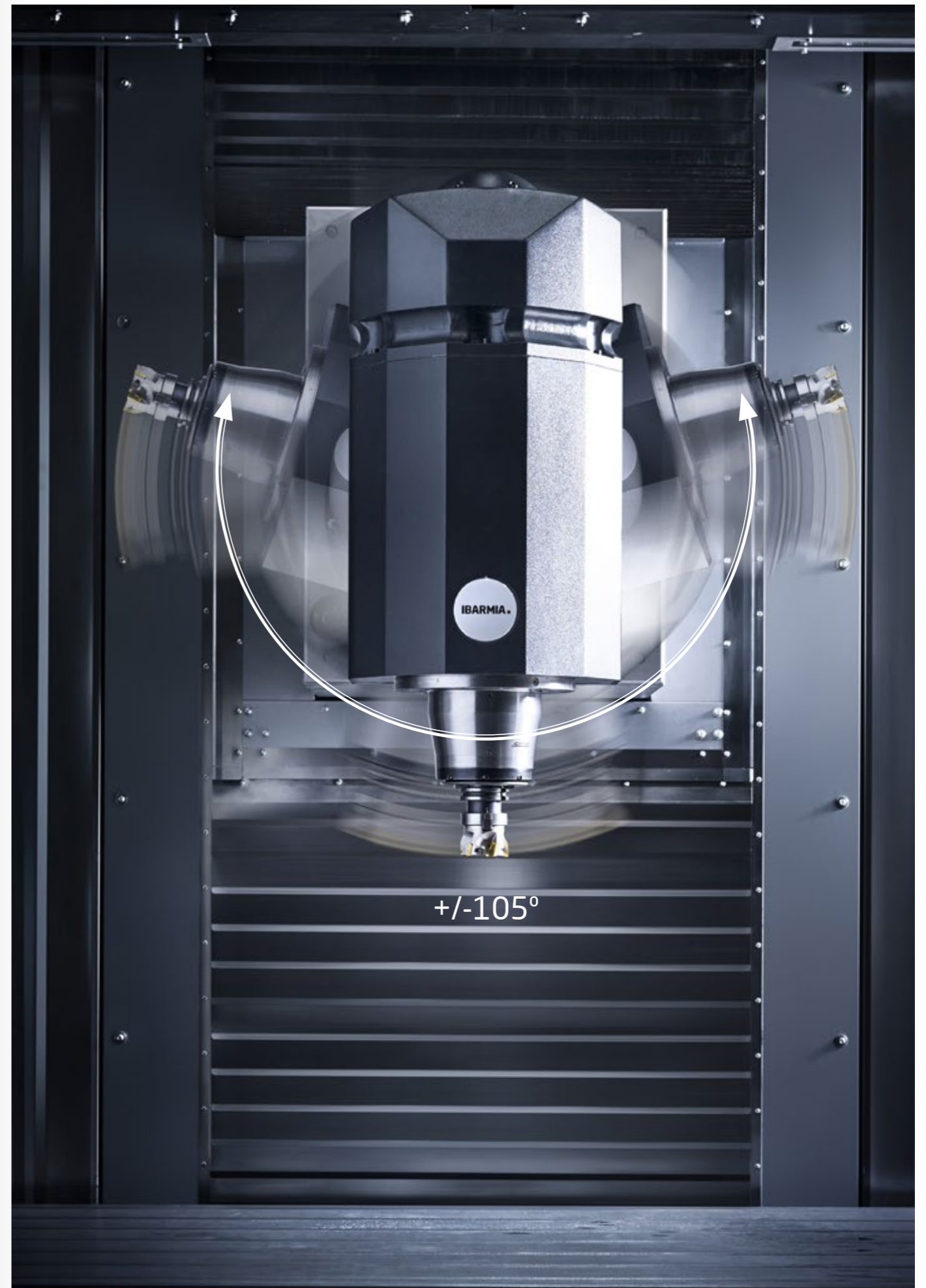
Head tilting range $\pm 105^\circ$. Transmission by a torque motor installed on the rotating shaft and direct measuring on the axis. Extraordinary dynamics, automatic recovery after collisions and maximum precision in positioning and repeatability.



VERSION
ZV vertical headstock
ZV 45/L3000 STAR

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- TORQUE MOTOR technology.
- AWARD winning B axis.
- Fast continuous and accurate movements measured by glass scale.
- 6000 Nm clamping force.



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- 2_ **Electrospindle**
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ELECTROSPINDLE THE DEFINITE SPINDLE

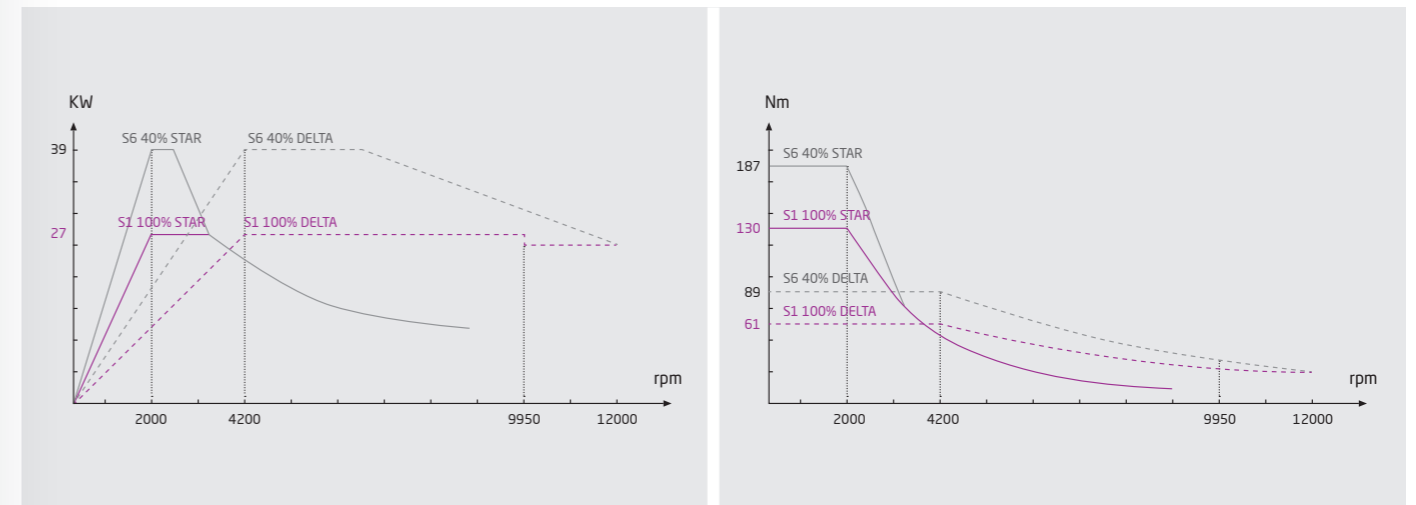
A key element for:

- Machining various materials.
- Machining various shapes.
- Suitable for single pieces and large batches.



Digital technology spindle; dynamics and high revolutions:

- Spindle taper: **ISO-40 | SK-40**
(Option: **HSK A-63**)
- Power in service S1 (100%): **27 KW**
- Power in service S6 (40%): **39 KW**
- Total available power from: **2000 rpm**
- Torque in service S1 (100%): **130 Nm**
- Torque in service S6 (40%): **187 Nm**
- Maximal rotation speed: **12000 rpm**



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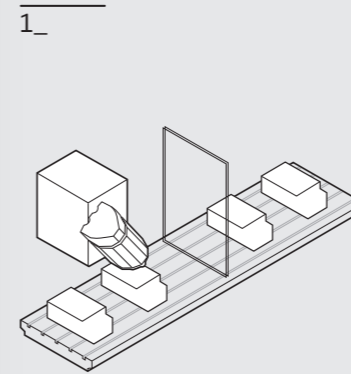
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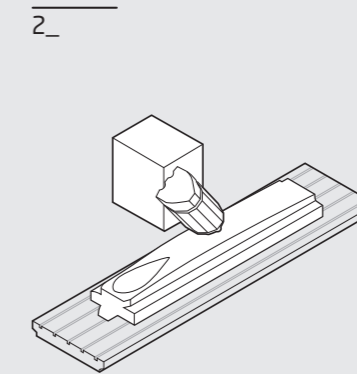
MACHINE IT ALL_ ONE STAR FOR ALL YOUR MACHINING REQUIREMENTS

Capacity to machine a wide range of size and shapes in various materials. Ideal for subcontractors that work in various sectors such as Aerospace, Energy, Automotive etc... The high configurability and the combination of axes and rotary tables provide an unlimited field of work which ensures an efficient return of the investment.

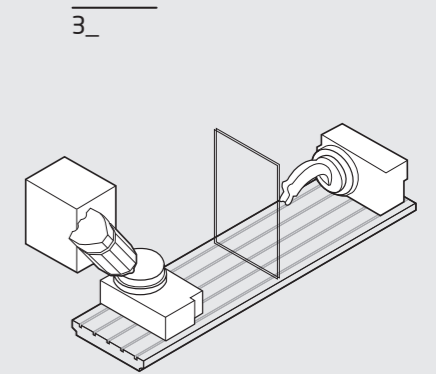
Use the fixed table (3000 mm) for endless applications:



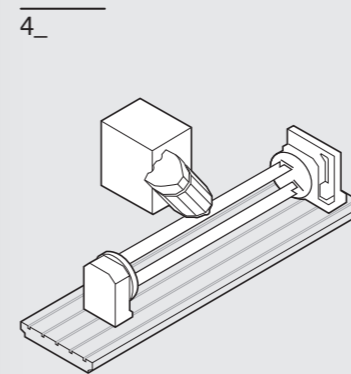
1_ Machining in pendulum cycle of batches of small or medium size pieces, avoiding constant tool changes.



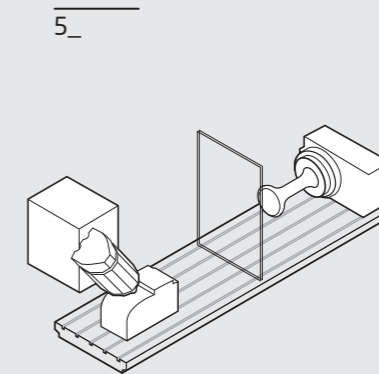
2_ Machining of all kind of pieces of complex surface.



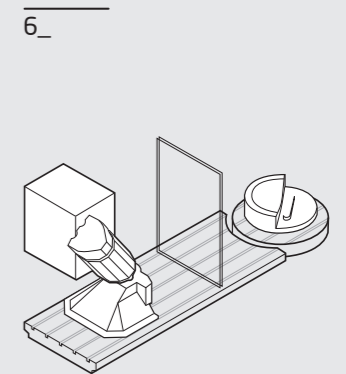
3_ Machining with a vertical/horizontal rotary table placed over the fixed working table.



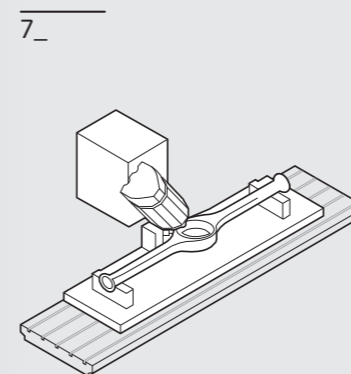
4_ Machining of pieces fixed on plates or cubes rotated by a horizontal rotary table and support.



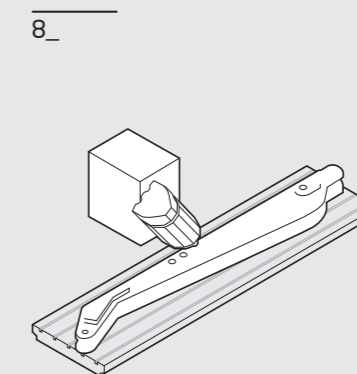
5_ Machining in pendulum cycle with a rotary table in one side and pieces on the fixed working table on the other side.



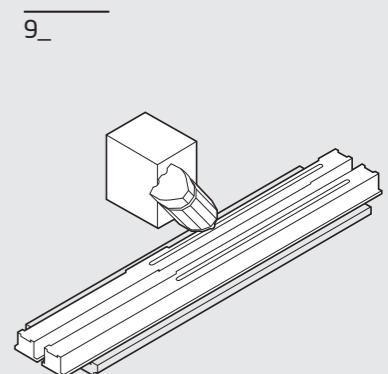
6_ Machining in pendulum cycle with an integrated rotary table.



7_ Machining of the sides and top face of a long piece.



8_ Machining of large pieces along the whole extension of the working table.



9_ Machining of extra long pieces thanks to side windows on the guarding.

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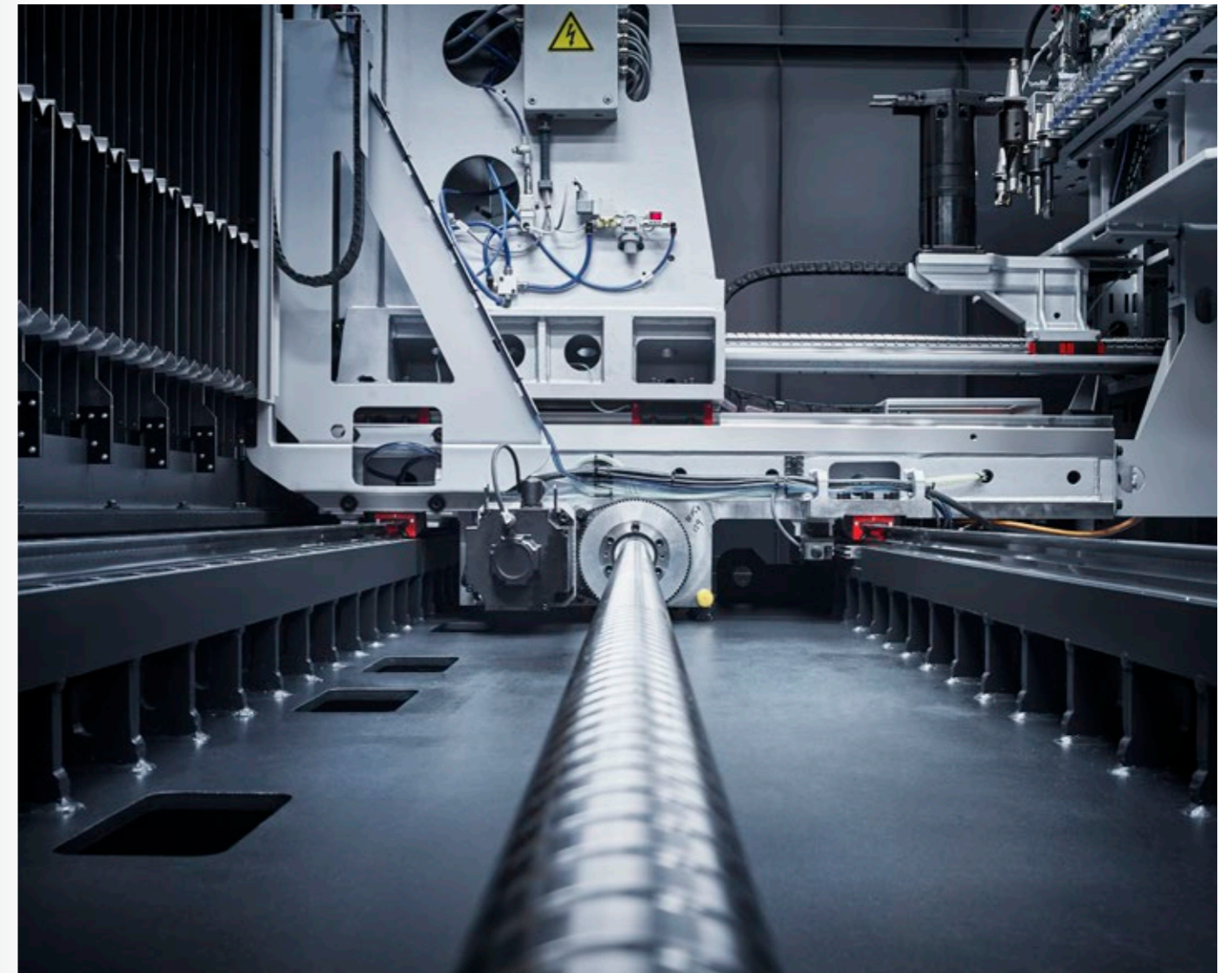
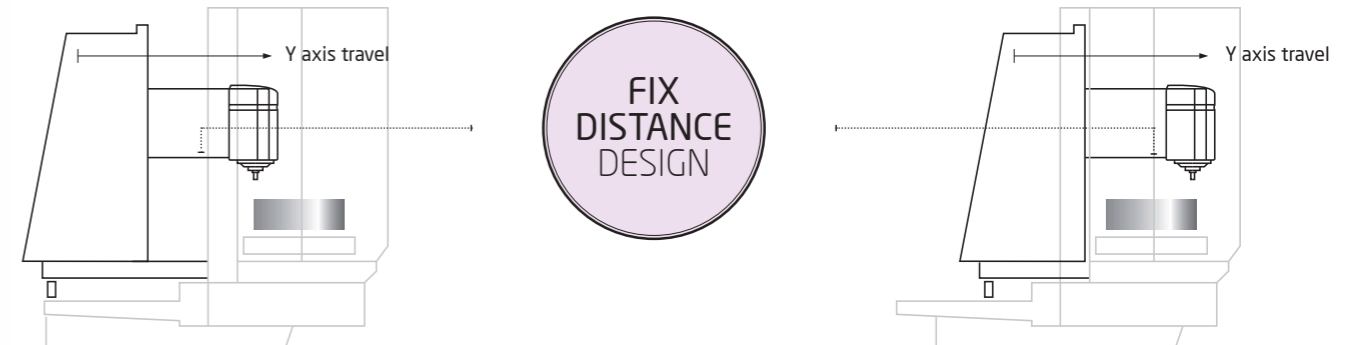
AWARD WINNING DESIGN_ MOVING COLUMN

Monoblock machine bed, everlasting stability in moving column architecture. High dynamic performance, lineal rapid movements at 40 m/min with high accelerations. Movements on X / Y / Z axis over linear guides with preloaded rolling shoes with two rows of circulating rollers.



- FIX DISTANCE DESIGN: Constant cutting conditions in all points of Y axis.
- DYNAMIC AND POWERFUL MOVEMENTS on guideways with INTEGRATED MEASURING SYSTEMS in all axes.

Moving column on Y axis.



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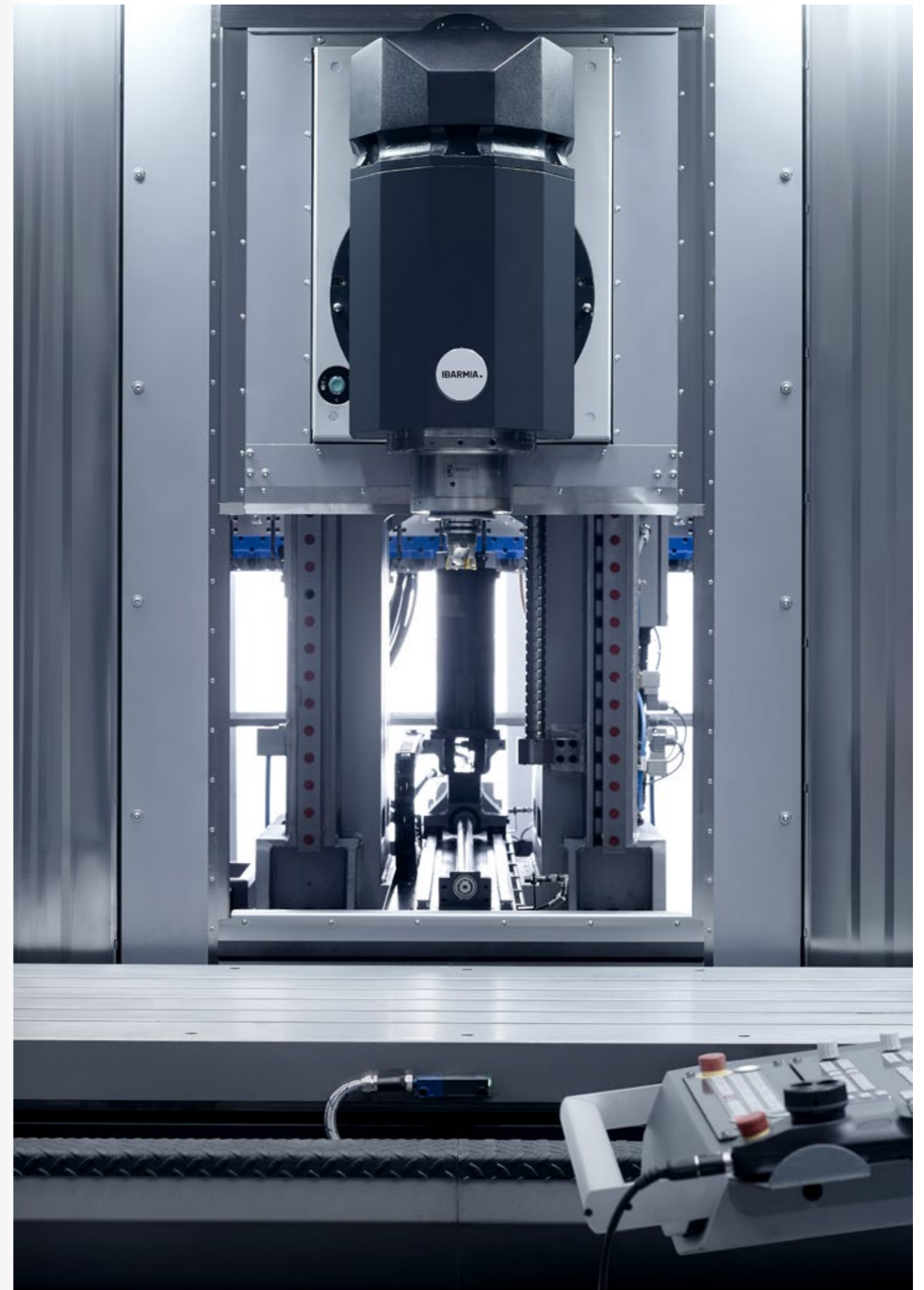
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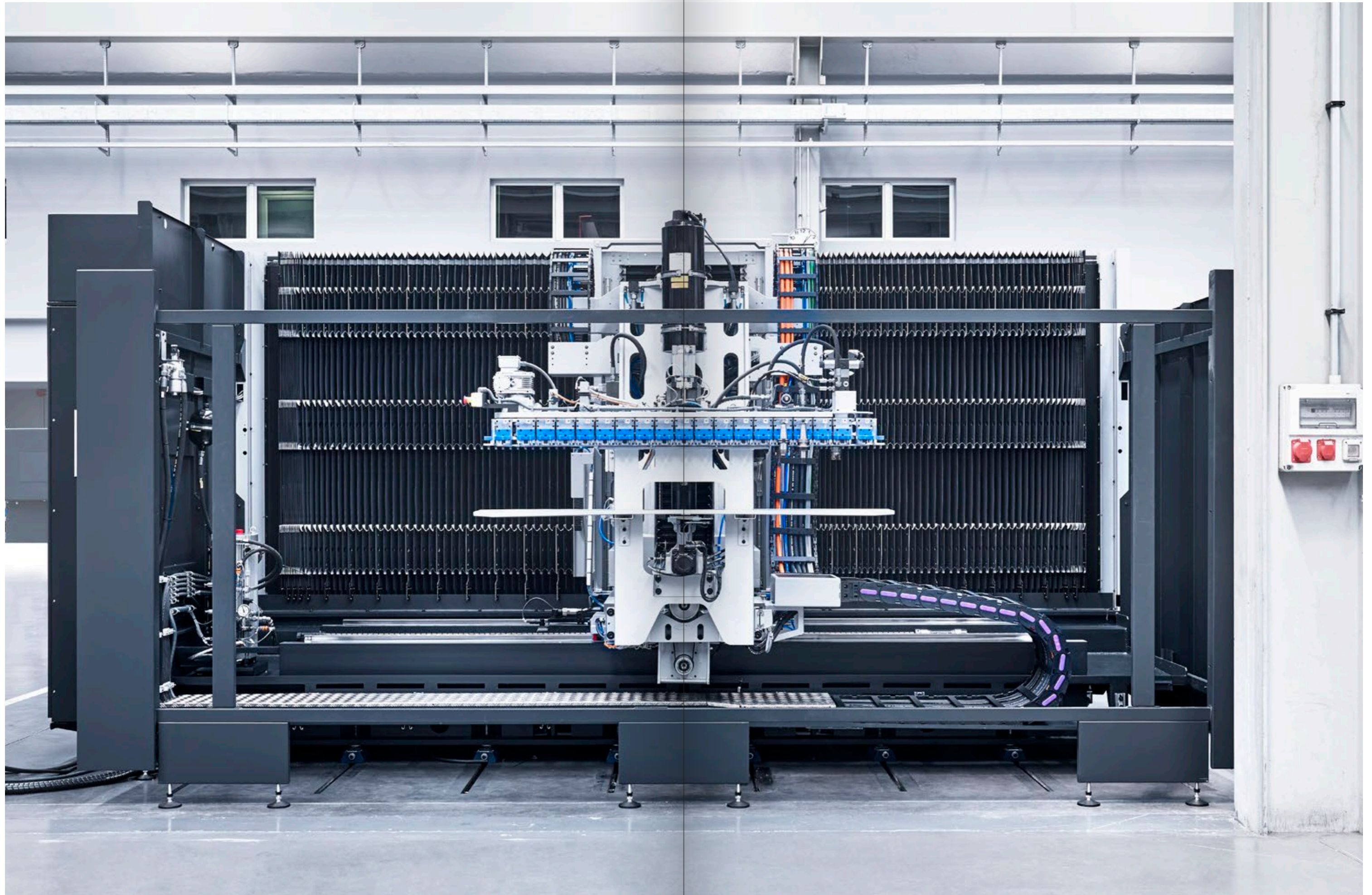
TOOL MAGAZINE & AUTOMATIC CHANGER_ CHANGE TOOLS WITHOUT INTERFERENCE

Separated from column to avoid vibration interference, the tool magazine travels with the carriage that makes the longitudinal movement, allowing the tool change at any position on the X axis. The tools are protected, away from the working area.



- Number of positions: **40 Positions**
(60 positions in option)
- Maximum tool diameter:
Previous & Posterior taken position: **90 mm**
Previous & Posterior free position: **150 mm**
- Maximum tool length: **350 mm**
- Maximum tool weight: **8 kg**
- Tool management system: **Random**





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EQUIPPED WITH THE HIGHEST AND LATEST CNC SYSTEM. HEIDENHAIN TNC 640 HSCI

A workshop orientated control, especially suited for high speed milling and five axis machining. An optimized user interface to make your job even easier. The TNC 640 features optimized motion control, short block processing times and special control strategies. Together with its uniform digital design and its integrated digital drive control including inverters, it enables you to reach very high machining speeds and the best possible contour accuracy—particularly when machining 3-D contours.



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7

OPTIONAL WORKING ROTARY TABLES

A 3000x850mm working fixed table in combination with 3 options of rotary tables for 5 axes simultaneous machining. An integrated rotary table and/or a bolt on rotary table to be used either in horizontal or vertical axis.

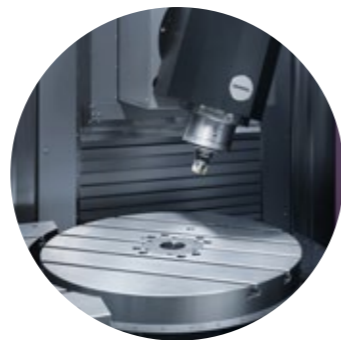
- Length x width of the table: **3000x850 mm**
- Number of T slots: **5**
- Size of T slots: **1x18 (H7) / 4x18 (H12)**
- Distance between T slots: **125 mm**
- Maximum admissible load over the table: **1500 Kg/m²**
- Distance from table surface to spindle nose:
V (min./max.): **0/800 mm**
H (min./max.): **360/1160 mm**



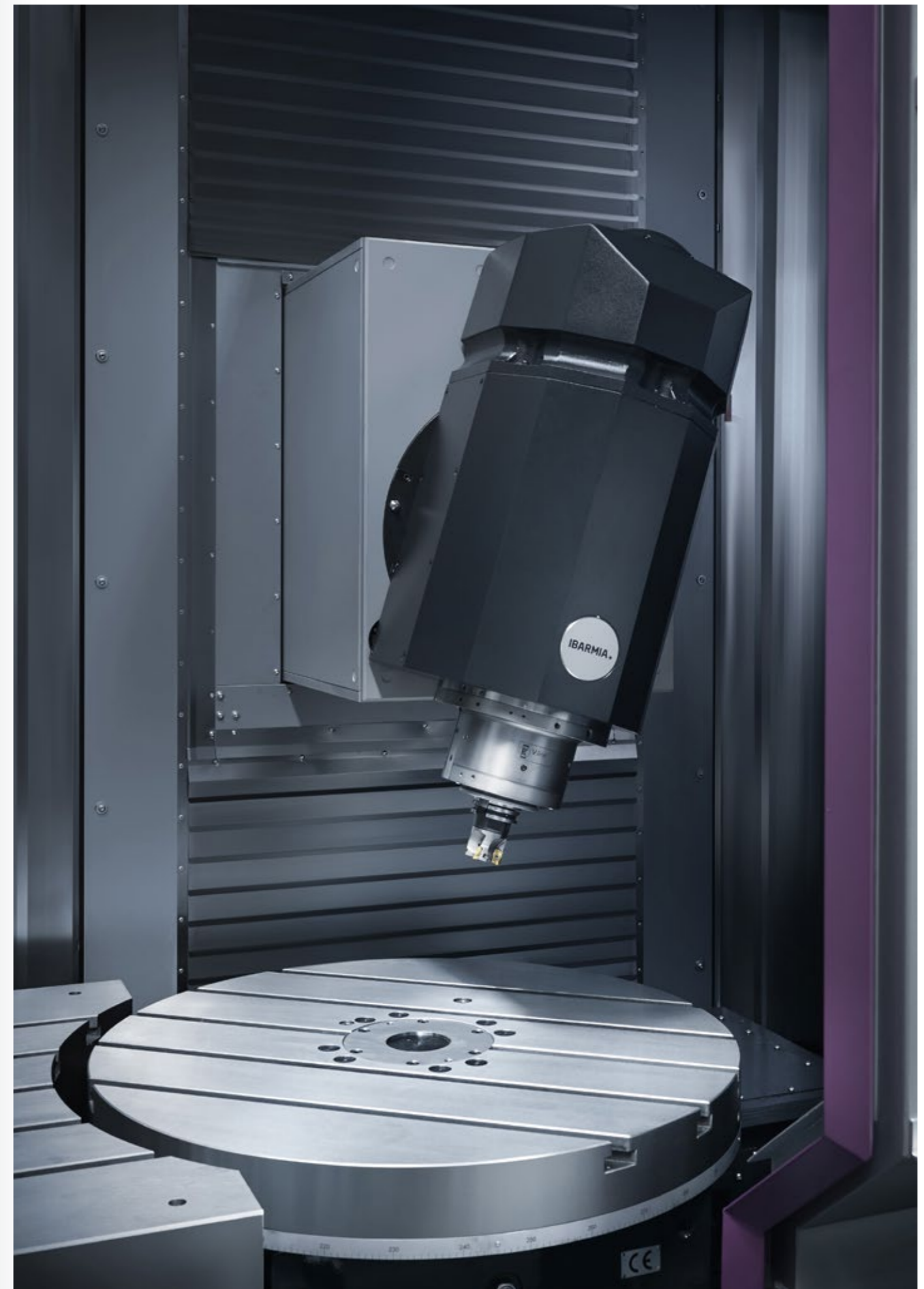
OPTION 1.1
Vertical axis bolt-on
rotary table



OPTION 1.2
Horizontal axis bolt-on
rotary table



OPTION 2
Vertical axis integrated
rotary table

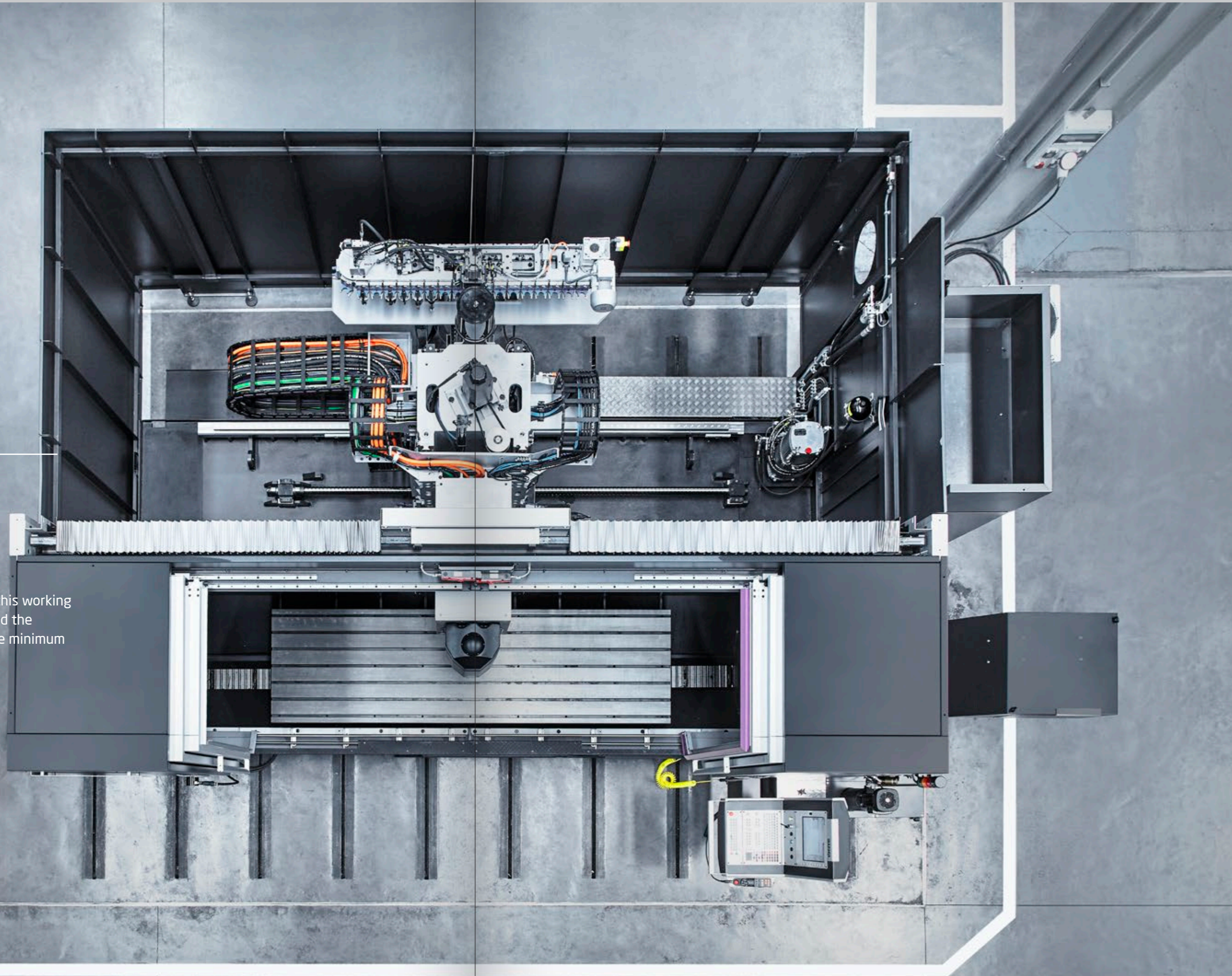


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OPTIMAL FLOOR SPACE OCCUPATION_

An efficient design for a machine with this working area. Chip evacuation, tool magazine and the electric cabinet are designed to take the minimum space on your floor.



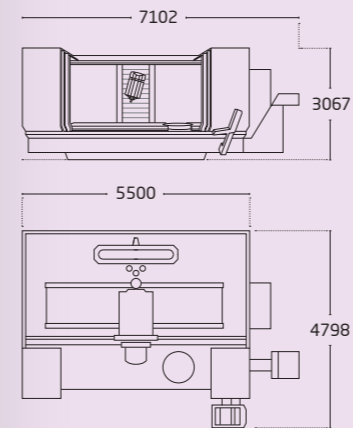
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EQUIPMENT & TECHNICAL SPECIFICATIONS

OPTIMAL FLOOR SPACE OCCUPATION



STANDARD TECHNICAL SPECIFICATIONS

STROKES

X-axis, longitudinal	3000 mm
Y-axis, transversal	800 mm
Z-axis, vertical	800 mm
NC Head tilting range	+/-105°
Maximum swing diameter	1100

WORKING TABLE

Length x width of the table	3000x850 mm
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FEEDS

Digital servomotors

Feed thrust X, Y, Z 100%	12020/8500/8558 N
Feed thrust X, Y, Z 40% (S3)	19120/13600/13700 N

Rapid feed for positioning

X-axis:	m/min 40
Y-axis:	m/min 40
Z-axis:	m/min 40

Maximum working feed

X-axis:	m/min 30
Y-axis:	m/min 30
Z-axis:	m/min 30

Machine dimensions

Maximum length:	7102 mm
Maximum width:	4798 mm
Maximum height:	3067 mm

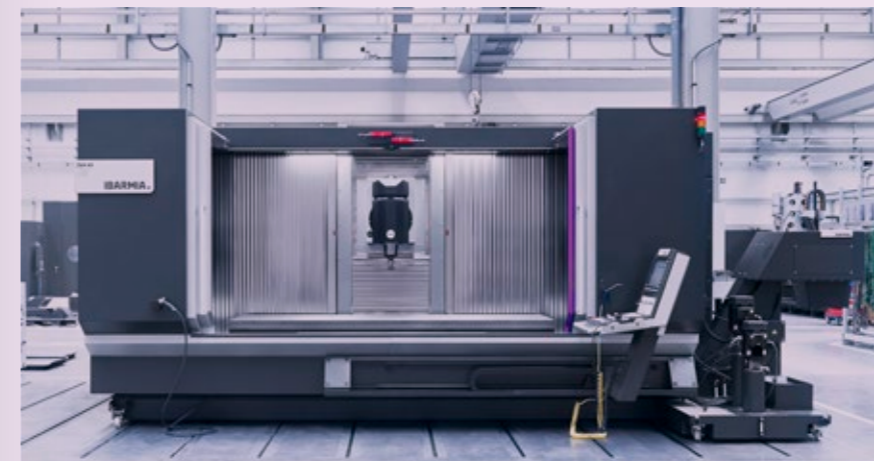
CNC CONTROL

HEIDENHAIN TNC 640 HSCI (Option FANUC 31i-B)

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Informative content
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INCLUDED ITEMS IN STANDARD CONFIGURATION

- EXTERNAL COOLANT 12bar
- COOLANT THROUGH SPINDLE 22bar
- CHIP CONVEYOR
- FULL ENCLOSURE OF THE WORKING AREA
- LED LIGHTING IN THE WORKING AREA
- CLIMASED ELECTRIC CABINET
- SIDE WINDOWS FOR LONG PARTS
- WATER AND AIR GUNS
- ELECTRONIC HANDWHEEL



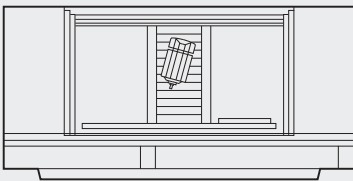


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