



**IBARMIA.**  
your machine-tool point

# ZVH 45/L3000 **STAR** SPECIAL EDITION

MOVING COLUMN MACHINING CENTRE  
Z SERIES\_ SPECIAL EDITION





# ZVH 45/L3000 STAR

SPECIAL 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



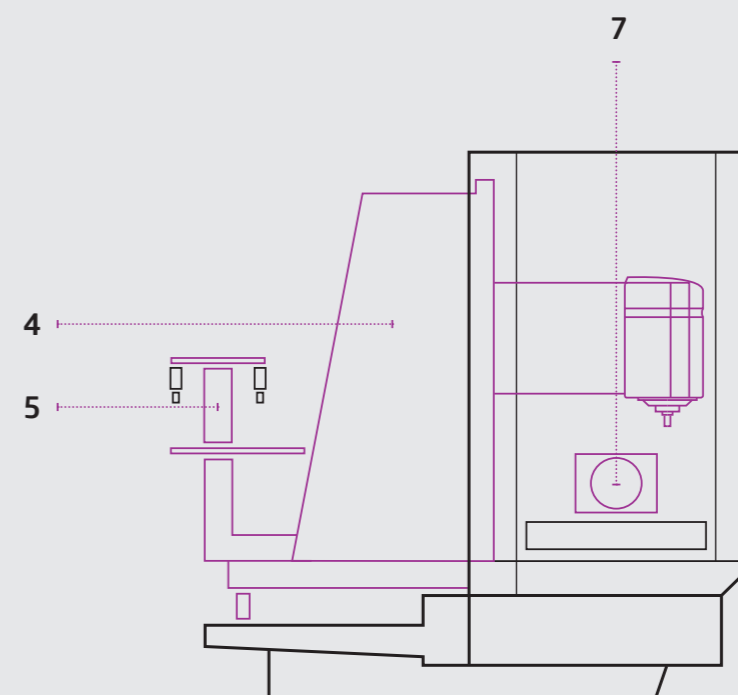
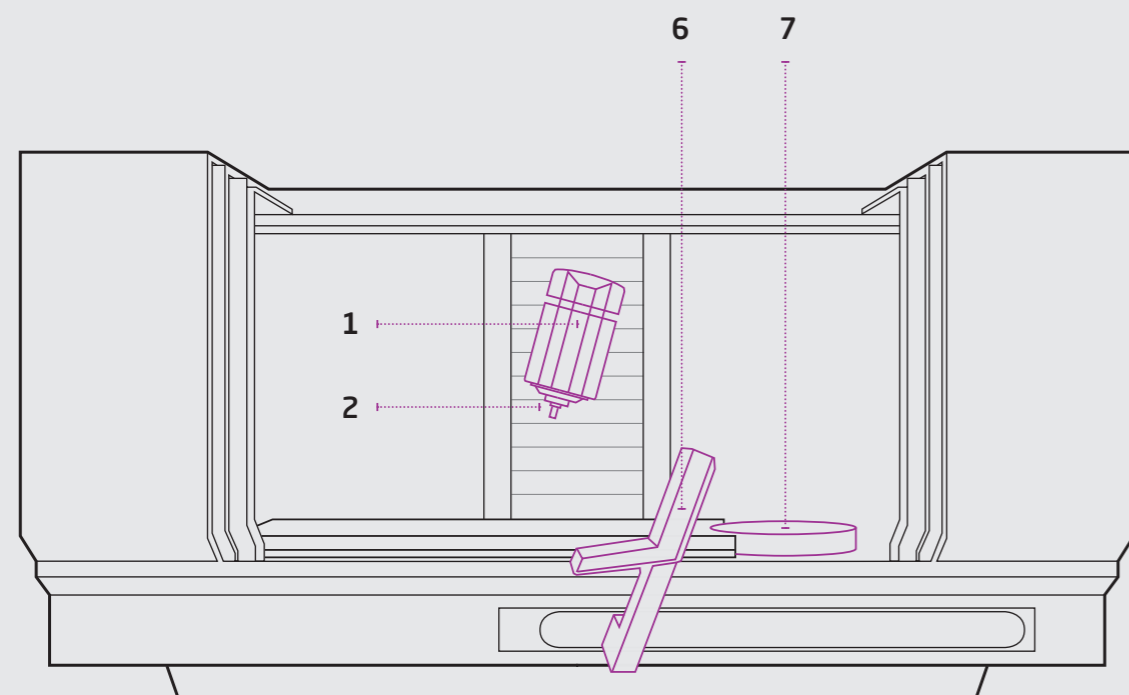
Z SERIES  
SPECIAL EDITION



5 AXIS  
TECHNOLOGY



40 POSITIONS  
TOOL MAGAZINE



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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.

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



#### VERSION

ZV vertical headstock  
ZV 45/L3000 STAR



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2

## ELECTROSPINDLE\_

### THE DEFINITE SPINDLE

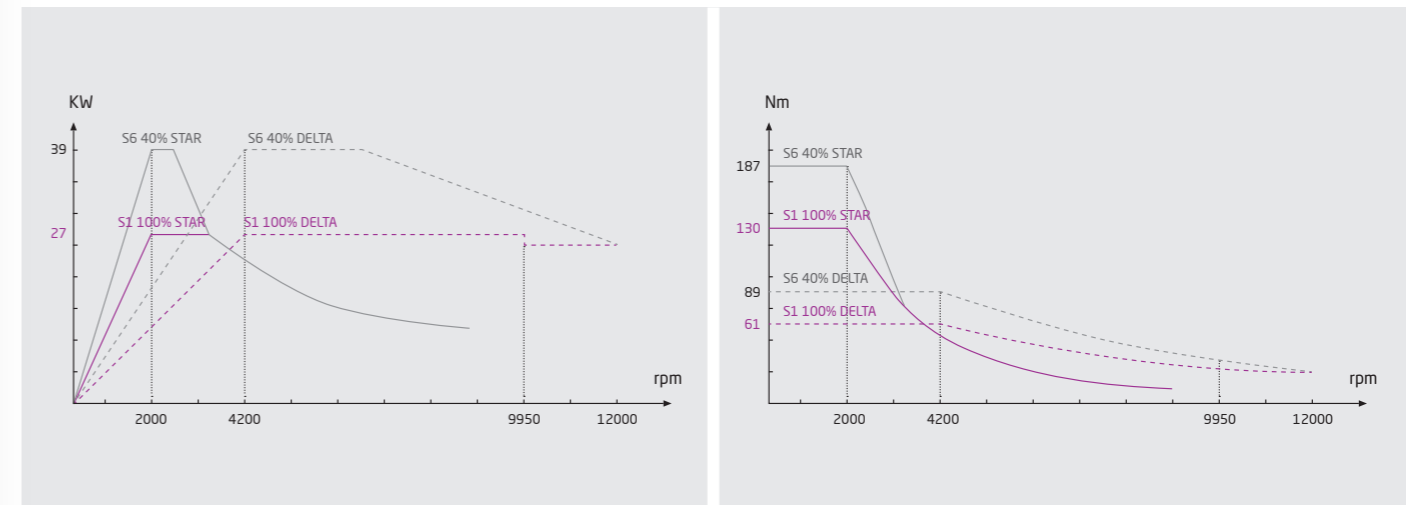
A key element for:

- 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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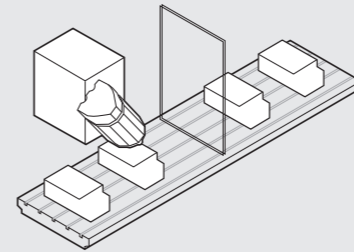
# MACHINE IT ALL\_

## 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.

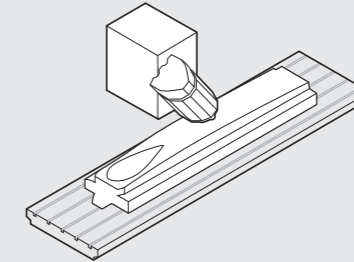
Use the fixed table (3000 mm) for endless applications:

1\_



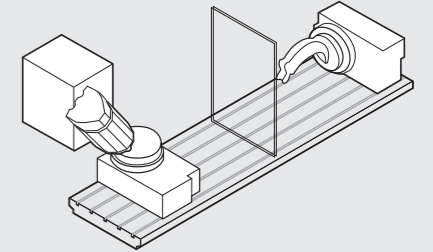
Machining in pendulum cycle of batches of small or medium size pieces, avoiding constant tool changes.

2\_



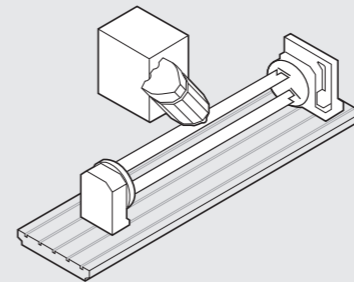
Machining of all kind of pieces of complex surface.

3\_



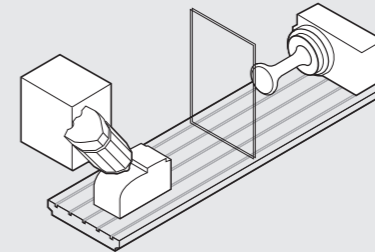
Machining with a vertical/horizontal rotary table placed over the fixed working table.

4\_



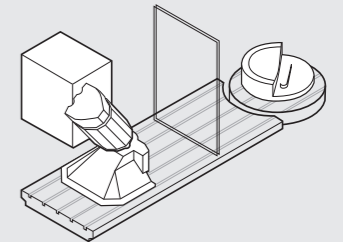
Machining of pieces fixed on plates or cubes rotated by a horizontal rotary table and support.

5\_



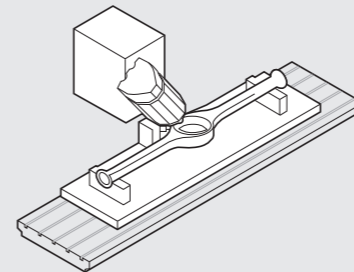
Machining in pendulum cycle with a rotary table in one side and pieces on the fixed working table on the other side.

6\_



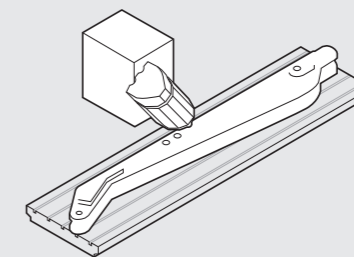
Machining in pendulum cycle with an integrated rotary table.

7\_



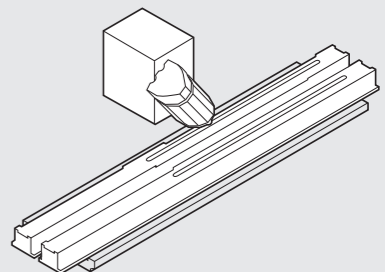
Machining of the sides and top face of a long piece.

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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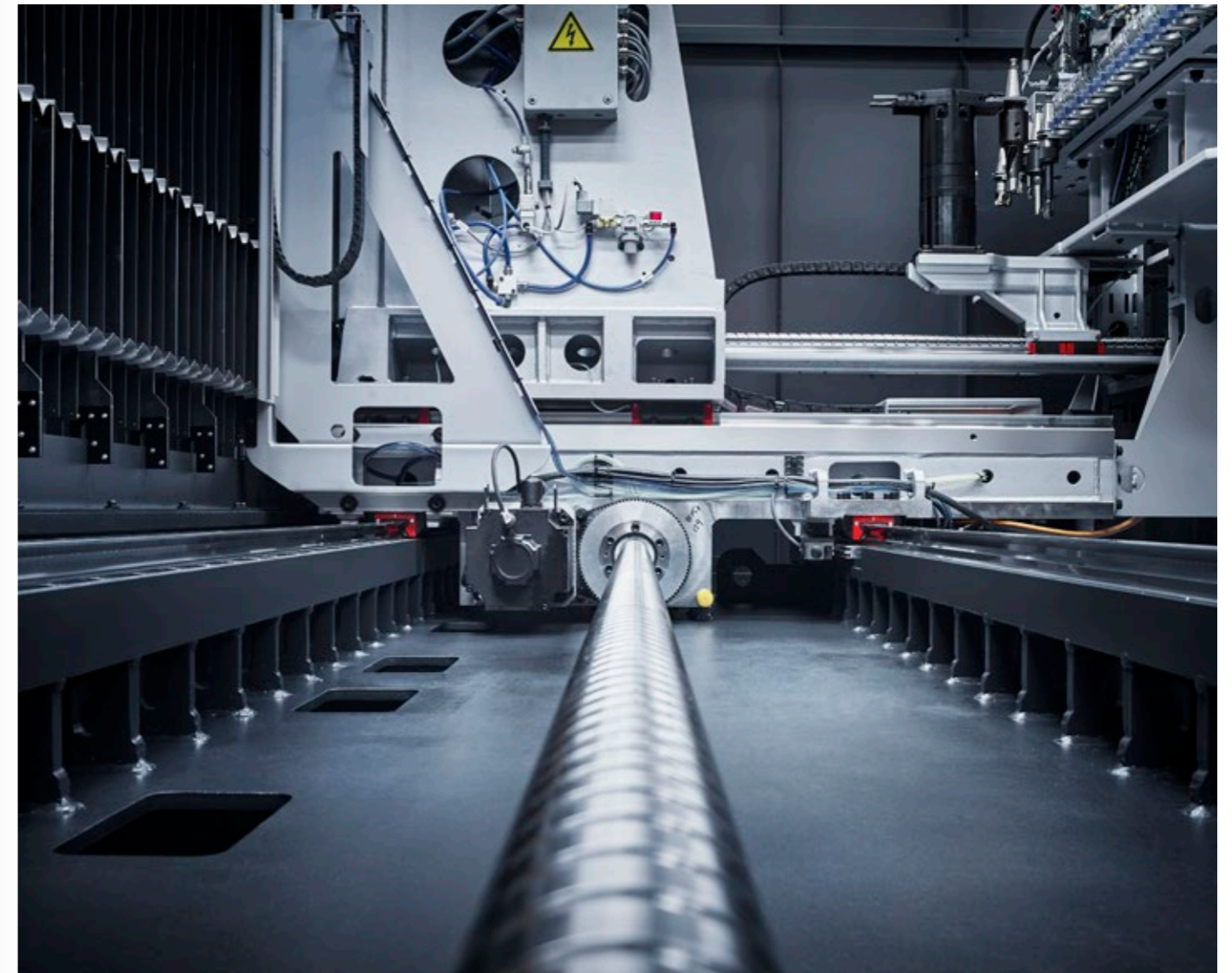
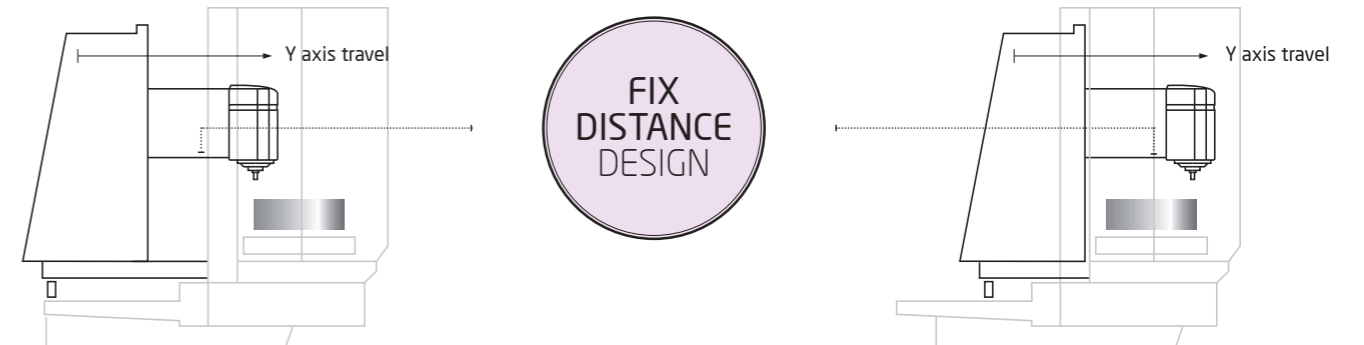
## AWARD WINNING DESIGN\_ MOVING COLUMN

Monoblock machine bed, everlasting stability in moving column architecture. High dynamic performance, lineal rapid movements at 40m/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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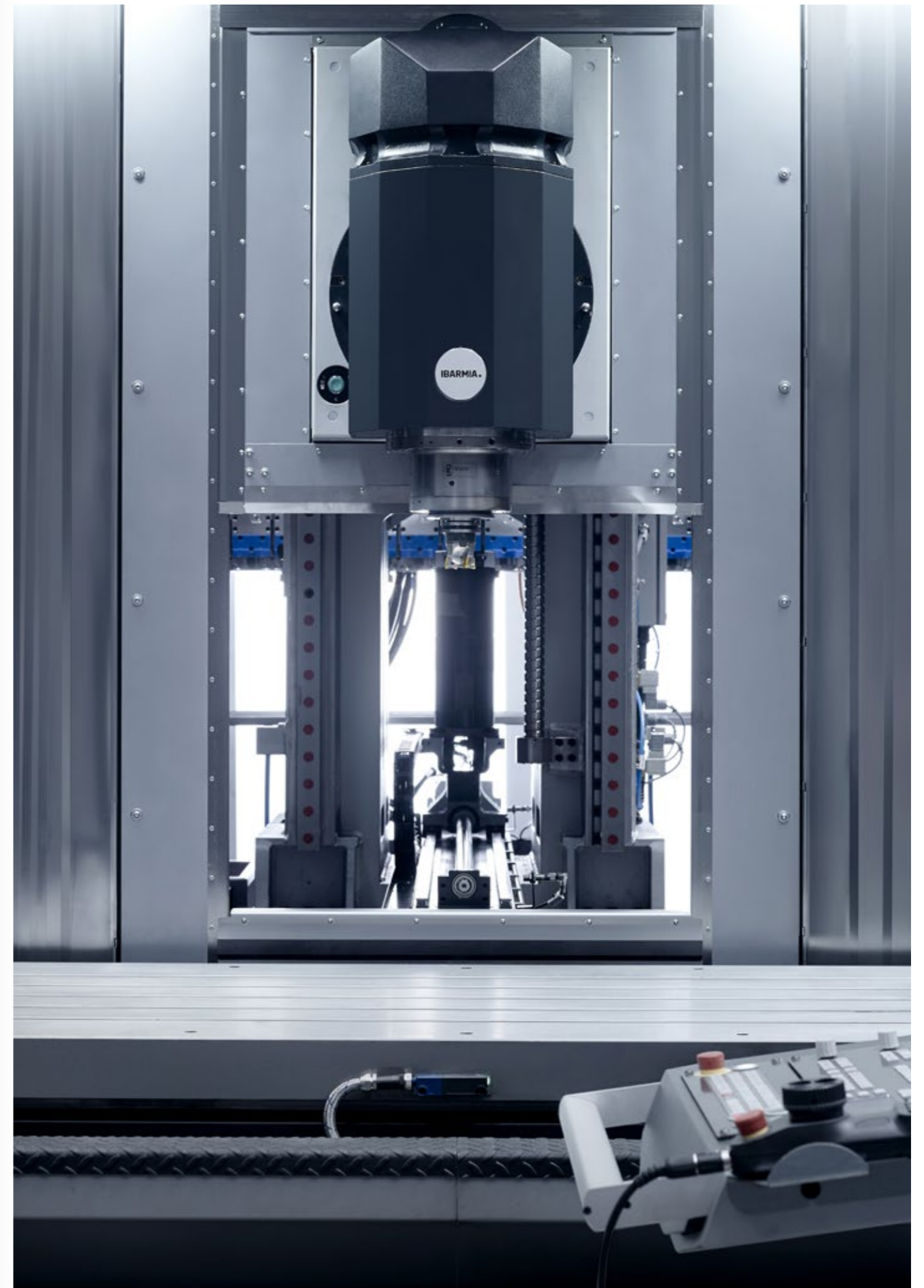
5

## TOOL MAGAZINE & AUTOMATIC CHANGER\_ CHANGE TOOLS WITHOUT INTERFERENCE

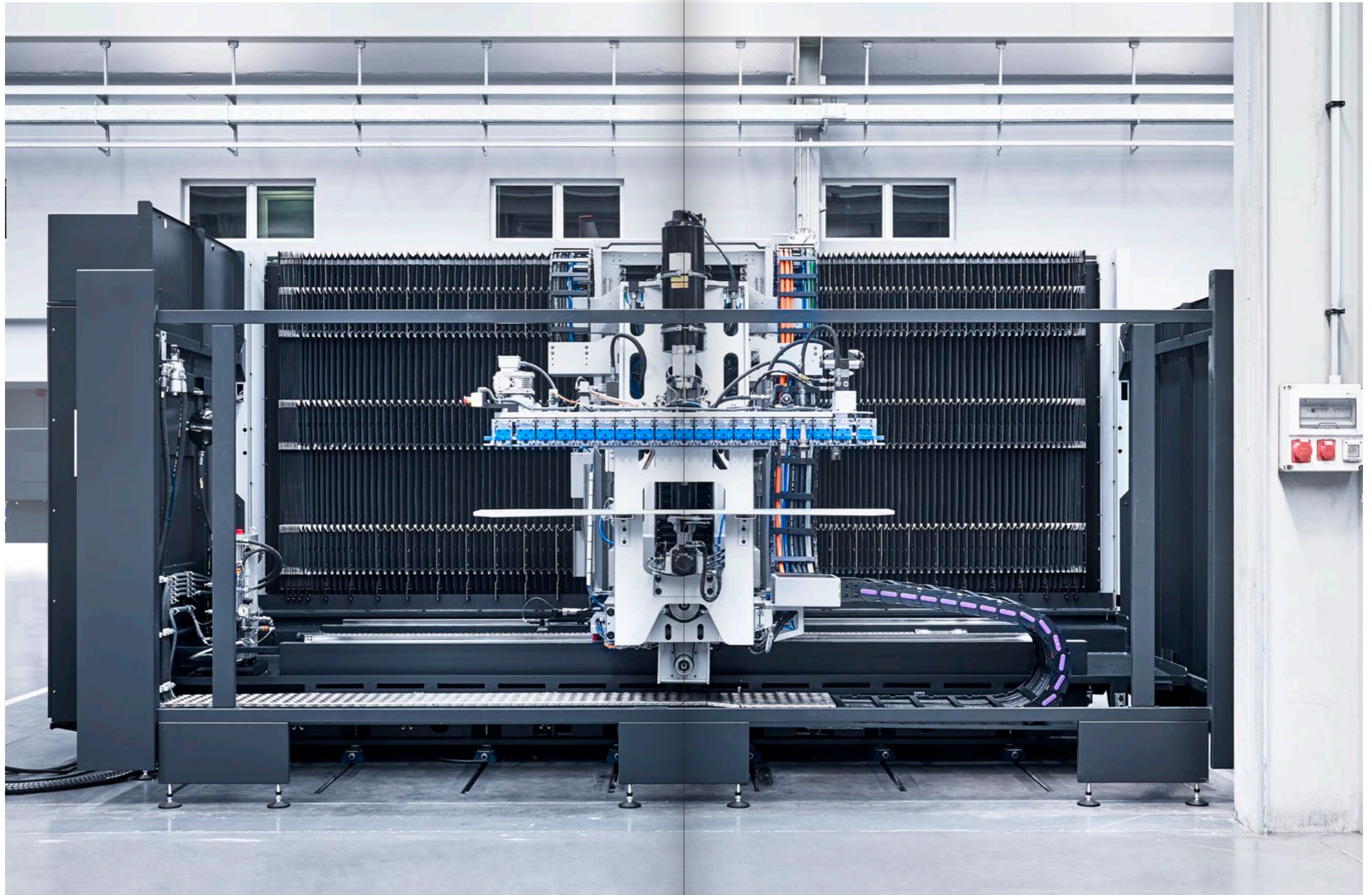
Separated from column to avoid vibration interference, the tool magazine travels with the carriage that makes the longitudinal movement, allowing the tool change at any position on the X axis. The tools are protected, away from the working area.



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







6

## 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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## 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.

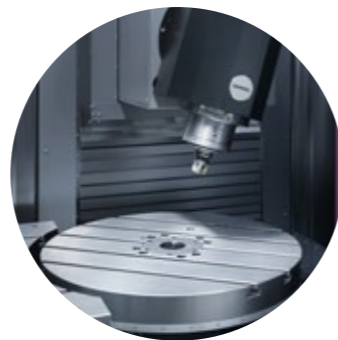
- Length x width of the table: **3000x850mm**
- Number of T slots: **5**
- Size of T slots: **1x18(H7) / 4x18(H12)**
- Distance between T slots: **125mm**
- Maximum admissible load over the table: **1500 Kg/m<sup>2</sup>**
- Distance from table surface to spindle nose:  
V (min./max.): **0/800mm**  
H (min./max.): **360/1160mm**



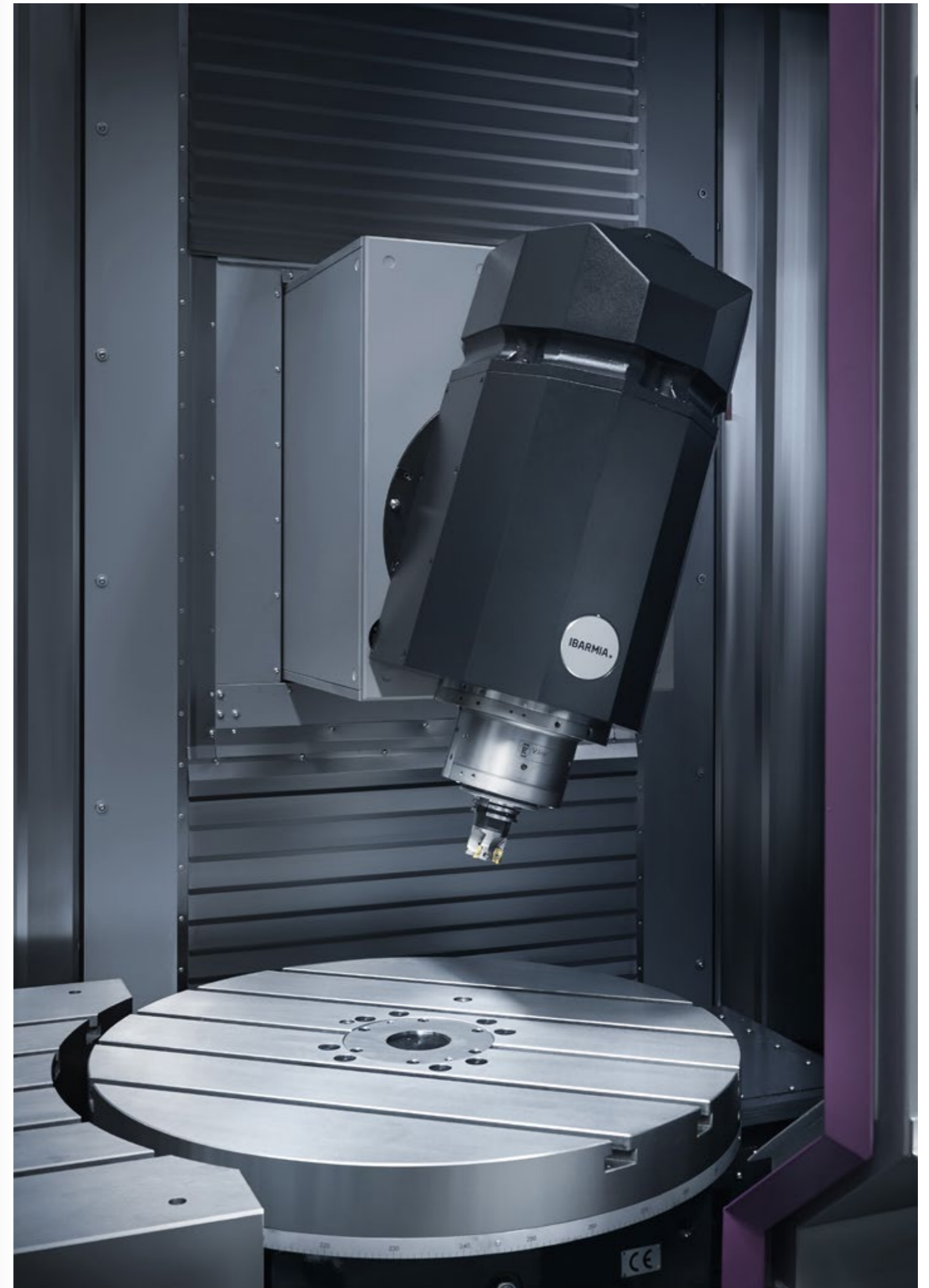
**OPTION 1.1**  
Vertical axis bolt-on  
rotary table



**OPTION 1.2**  
Horizontal axis bolt-on  
rotary table



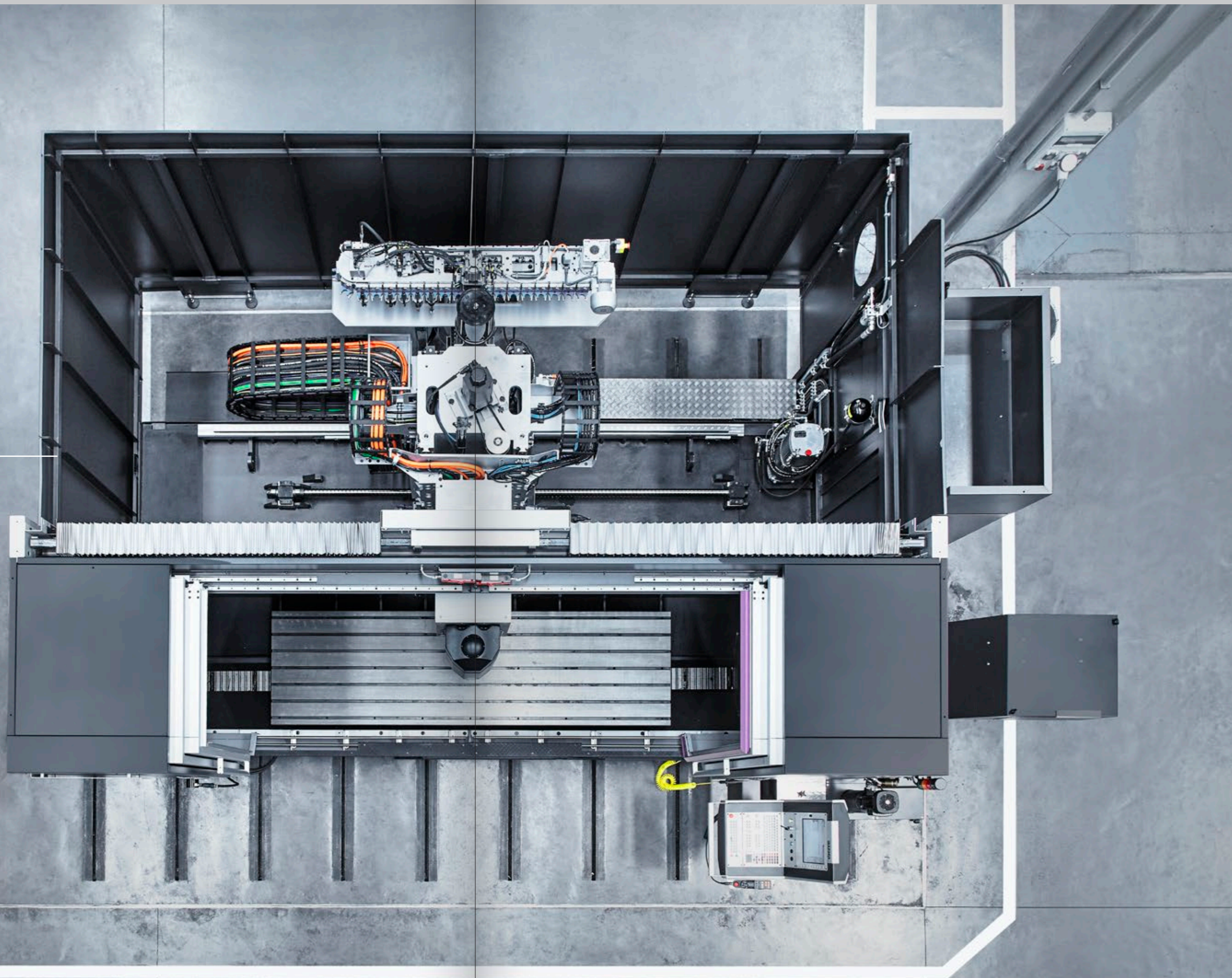
**OPTION 2**  
Vertical axis integrated  
rotary table



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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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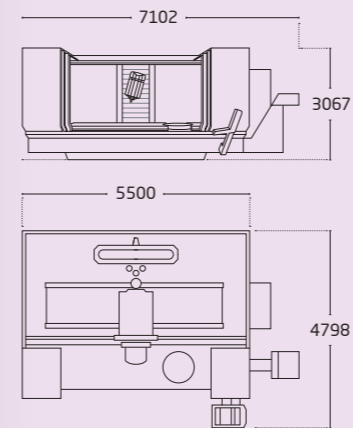
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## EQUIPMENT & TECHNICAL SPECIFICATIONS

### 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	3000x850mm
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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

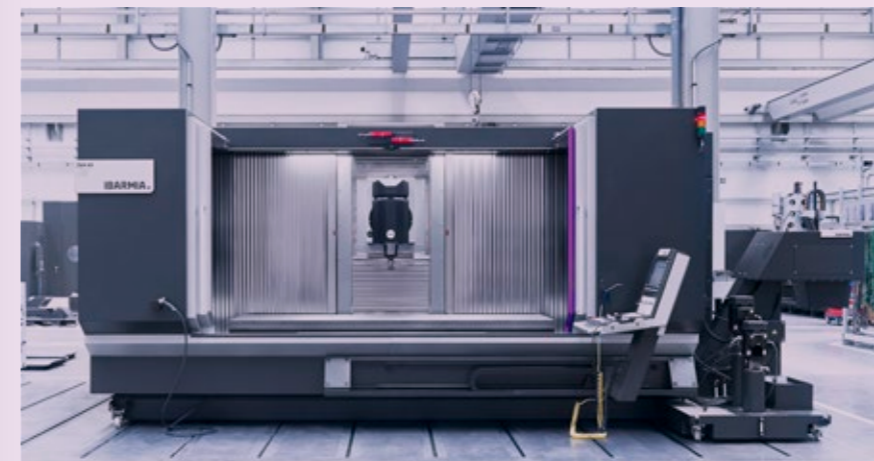
##### CNC CONTROL

HEIDENHAIN TNC 640 HSCI

Subject to changes without previous warning. Informative content is not binding.

### 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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YOUR  
MACHINE TOOL  
POINT