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TECHNICAL DATA

	M10-6	M10-4
3 AXIS MODULE		
Stroke axis X	300mm	300mm
Stroke axis Y	300mm	300mm
Stroke axis Z	450mm	450mm
Guide axis X-Y	With rollers	With rollers
Guide axis Z	Hydrostatic sleeve + rollers	Hydrostatic sleeve + rollers
Axial thrust X-Y	750 daN	750 daN
Axial thrust Z	1100 daN	1100 daN
Rapid speed axis X-Y-Z	30 m/1'	30 m/1'
Acceleration axis X-Y-Z	5m/s2	5m/s2
"CURBITER" TOOL CHANGE DEVICE		
Max. number of spindles.	60	36
Tool change time	2,5 sec	2,5 Sec
Spindle speed	12000 RPM	12000 RPM
Spindle nose	HSK63	HSK63
Max.spindle power	37.5 Kw	37.5 Kw
Max.spindle torque	65 Nm	65 Nm
"CURBITER" TOOL CHANGE DEVICE		
Number of division	6	4
Motor rotation	torque	torque
Positioning precision	± 1,5" arc	± 1,5" arc
Rotation time	3,5 sec	3 sec
4TH AXIS		
Rotation time	0-180° - 0,9 sec	0-180° - 0,9 sec
Positions	360.000 (360° in continuous)	360.000 (360° in continuous)
Blocking 4th axis	Hydraulic- during machining	Hydraulic- during machining
Table diameter	300 mm	300 mm
Self-centering optional system	30mm (15 + 15)	30mm (15 + 15)
5TH AXIS		
Rotation time	0-210° - 1,5 sec	0-210° - 1,5 sec
Positions	210.000 (210° in continuous)	210.000 (210° in continuous)
Blocking 5th axis	Hydraulic- during machining	Hydraulic- during machining

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TRANSFER

BTB-M10

Maximum flexible
transfer machine concept

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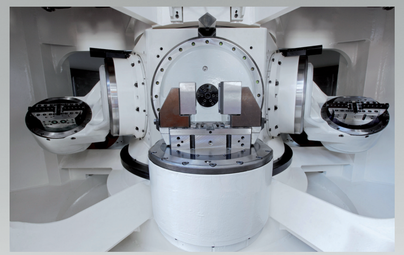
BTB-M10 :
FLEXIBILITY AND PRODUCTIVITY

Transfer machine with 6 stations, of which 1 for loading and unloading the part, and 5 stations for machining. It mounts 10 operating units on axis X-Y-Z with a 6-position tool change device and 6 chuck part holders on the 4th and 5th axis

The machine is based on the traditional transfer concept, with the importance of maintaining its high productivity, however it offers the possibility to drastically diversify the machining operations through machining centers with 4th and 5th axis.

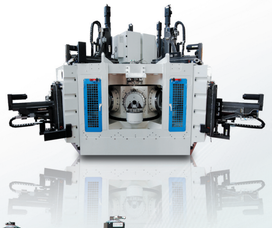
The machine can be supplied in two different versions: with 4 or 6 machining stations, for for part loading/unloading and 3 to 5 stations for machining.
Each machining station has 2 machining centers positioned perpendicular to each other and in radial position according to the work holding. The work holding can be positioned at any angle in space with the 4th and 5th axis.
It is a concept of HMC/VMC that simultaneously machines at each station.
It can carry out numerous various operations in all the angular positions of the 5 sides of the part. With 5 simultaneous stations and 10 machining centers we are able to divide the machining operations in order to drastically reduced the part cycle time.
Also the capacity of 6 tools per machining center and the simplicity in positioning the work holding in space, minimizes the cost of tooling during changeover.

The high availability of tools (total of 60 tools, 10 machining simultaneously), the travel of the unit strokes, and the possibility to position the part in space with 5 axis in each station allows the BTB-M10 to be the most flexible transfer machine currently available on the market.



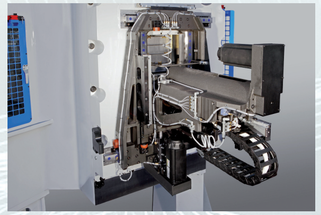
CENTER TABLE D.2150

-Direct Drive Motor
-Precision of positioning: +/- 1.5"
-Cycle time = 3.5 sec. from station to station including locking/unlocking
-Hydraulic locking device



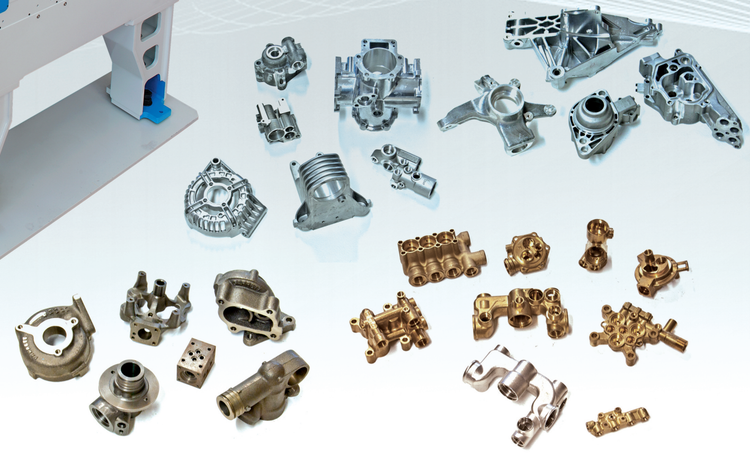
MACHINE FRAME

-6 of 4 station structure, of which1 for loading/unloading
-Table rotation towards the bottom with access area for maintenance
-Channel for chip evacuation through coolant washing and exit through a chip conveyor.
-Support flanges for rotating table
-10 cross adjustment slides
-5 support flanges for machine frame pedestals
-Wide windows for internal maintenance and tool change
-Loading/unloading area with loader/robot



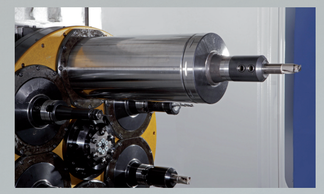
MODULE ON CROSS ADJUSTMENT AND TOOL CHANGE

Axis stroke:
- X = 300 mm
- Y = 300 mm
- Z = 450 mm
- speed 30 m/ with 5m/sec2 acceleration



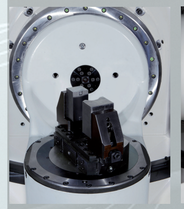
CURBITER" TOOL CHANGE DEVICE"

- Number of tools for each unit:6
-Tool change time:2,5 sec
-Tool type HSK63
- Maximum dimension150mm Diameter and length 250mm
- Integrated and protected from chips and coolant



M10 SPINDLE

- spindle nose: HSK63
- Max. rpm: 12.000 rpm
- Torque: 65Nm
- Max. Power: 37,5 Kw
- Acceleration 0 to 12000 rpm 1 sec
- Internal coolant: up to 50bar
- External coolant: up to 5bar



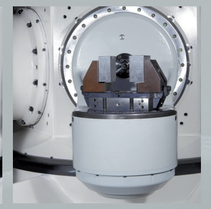
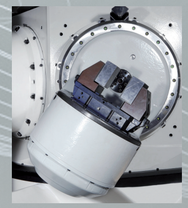


TABLE 4TH AXIS

-360.000 positions (360° continuous)
-Rotation 0°-180°: 0,9 sec
-rotation during the main table rotation
- Active hydraulik blocking during the machining phase.
-work holding table diameter: 300mm
- 4 hydraulic lines for work holding device
- Option self-centering system 30mm (15 + 15)



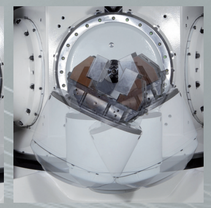


TABLE 5TH AXIS:

210.000 positions (210° continuous)
- Rotation 0-210°: 1,5 sec
- rotation during the main table rotation
- Active hydraulik blocking during the machining phase

OPERATIVE PLATFORM

The machine management is controlled by the Numerical Control Indramotion MTX Advanced. It is the latest generation numerical control available for the machine tool market. This control can provide meaningful advantages in regards to communications, diagnostics and management of the most advanced automation components with data communication and processing times among the most capable in the machine tool field.

EFFICIENCY AND RELIABILITY

BTB offers efficient and reliable customer services.

- *Program of periodic inspection and maintenance, in order to monitor the machine during its entire production life.*
- *Complete programming outside of the machine through BTB offline performance. It consist in a virtual machine with the same user interface which allows to completely program and simulate an actual machining cycle*
- *Remote service assistance via the internet with BTB Power Service System*
- *Trouble shooting, guided through written instructions and images which allows any operator to analyze the problem and carry out immediate maintenance operations.*