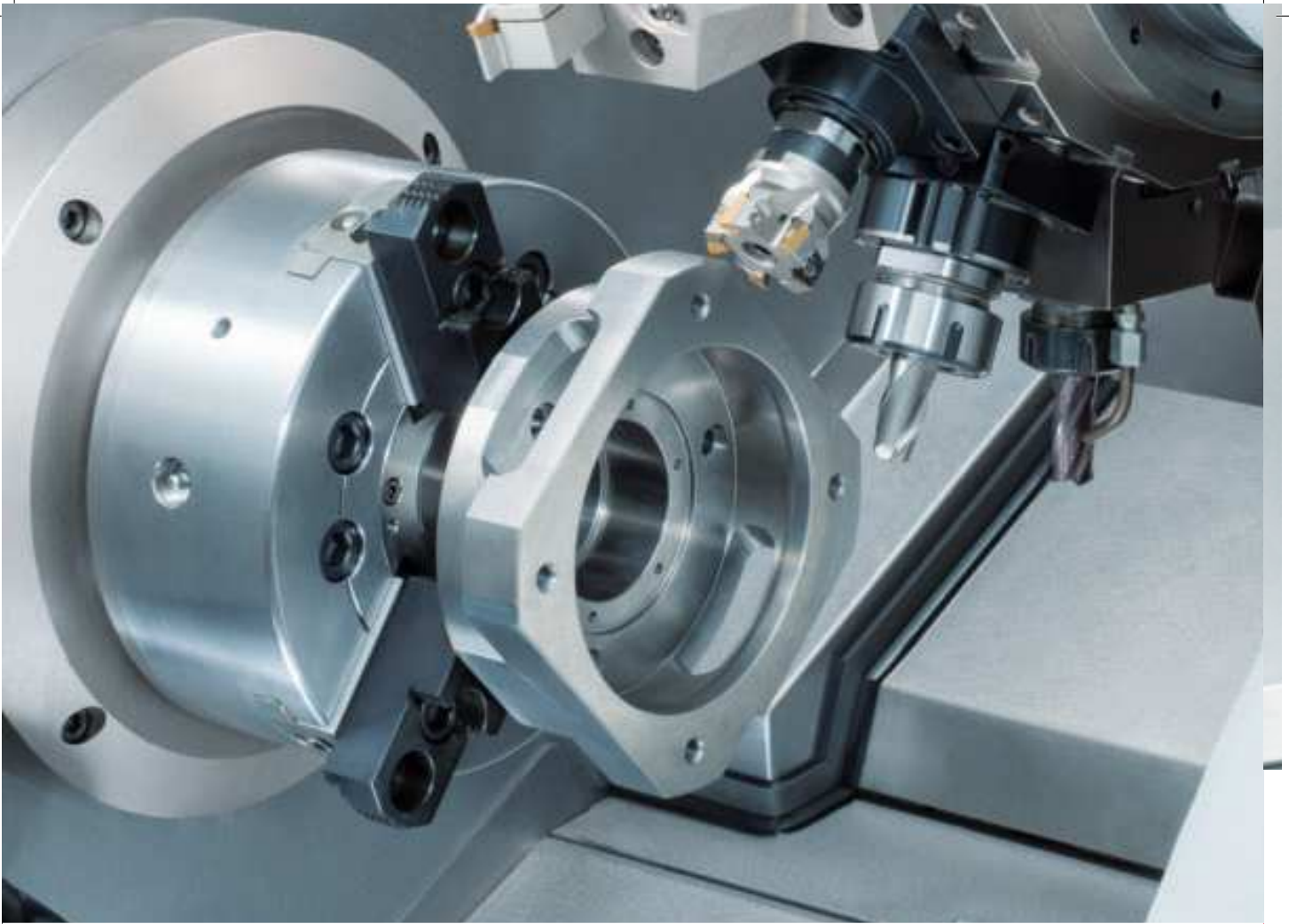


CNC TURNING CENTRES

B750 | B1250 B1250 Y



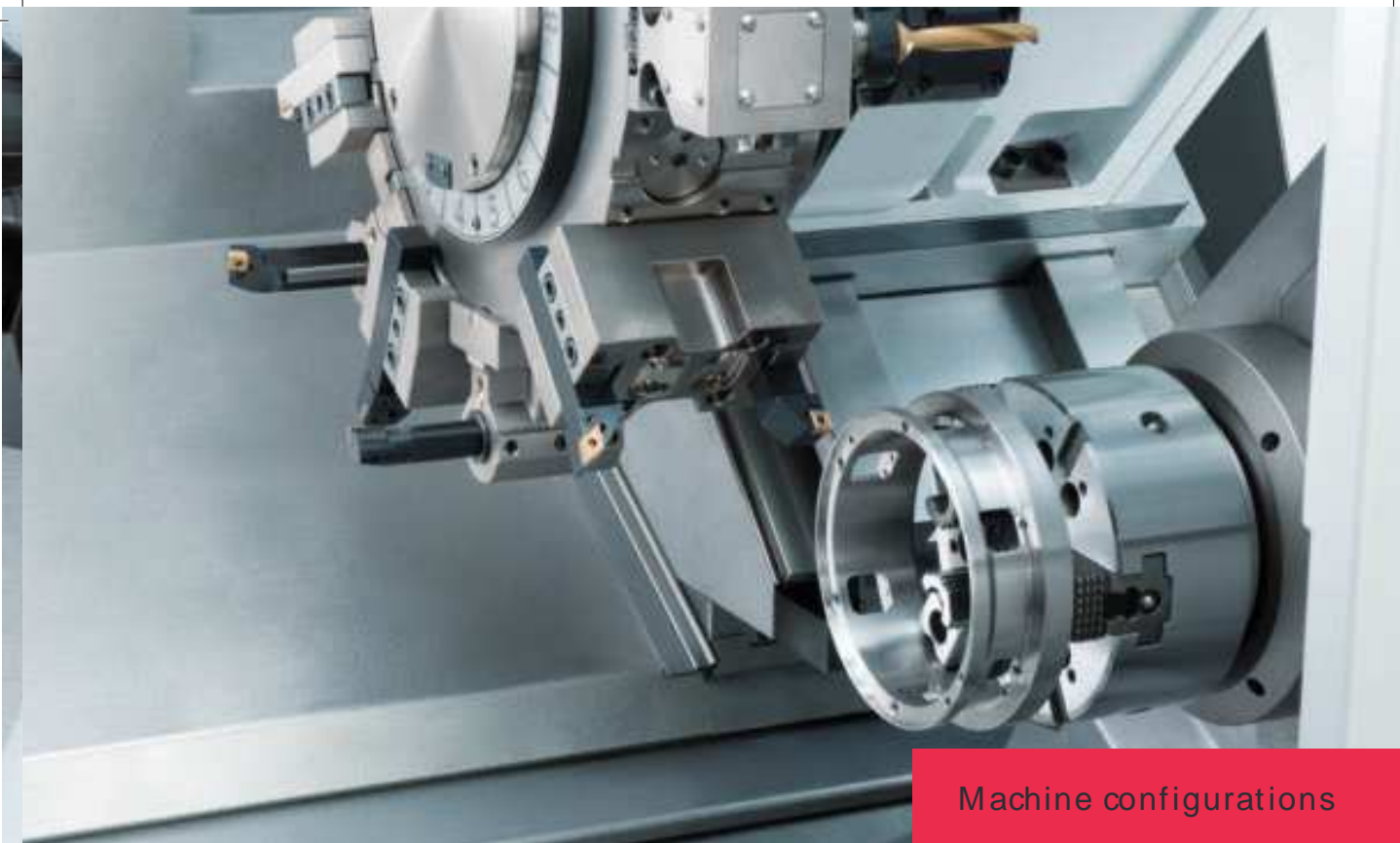


Cutting edge technology and unequalled productivity.

B750



 **Biglia**



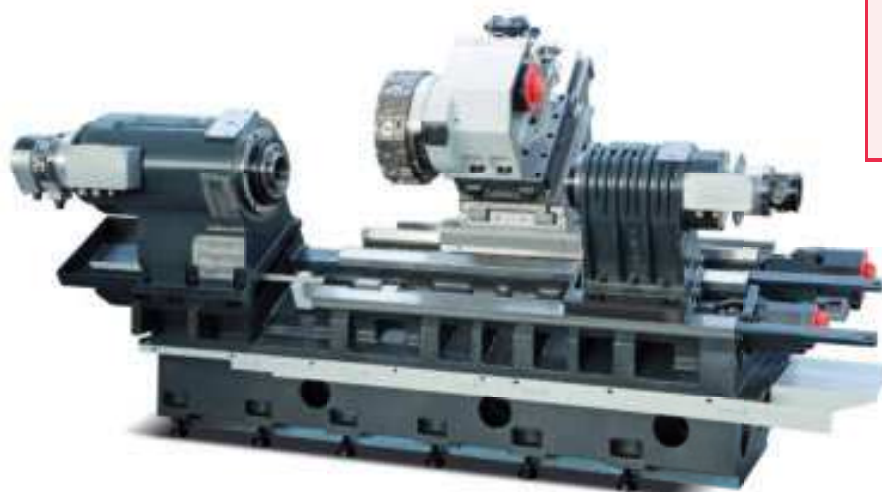
The new B750/B1250 series represents the “state of the art” of multifunction turning centres. The new turret with direct drive built-in motor is the heart of this range of machines. Available in 10 versions featuring 750 mm or 1250 mm turning length, this line of machines provides a wide spectrum of machining possibilities ranging from universal turning to complete machining of complex parts thanks to the CNC automatic tailstock, sub-spindle, rotary tools and C/Y axis.

More accuracy

Delivered by the rugged bed designed for higher heat stability, and the thermal stabilisation of the main heat sources such as spindles, turret and hydraulic unit.

More productivity

Thanks to the massive rigid cast-iron machine bed and the flat hardened and ground slide-ways on all axes ensuring high rigidity and exceptional vibration dampening. The fast indexing, sturdy BIGLIA servo-turret, and the high capability of chip removal in both turn and mill operations is enabled by the new powerful servo motors.



Machine configurations

B750 / B1250

- Standard machine with CNC automatic tailstock

B750M / B1250M

- Rotary tools (12/16)
- C-axis
- CNC automatic tailstock

B750SM / B1250SM

- Rotary tools (12/16)
- C-axis on the main spindle
- C-axis on the second spindle

B750Y / B1250Y

- Rotary tools (12/16)
- C-axis
- Y-axis
- CNC automatic tailstock

B750YS / B1250YS

- Rotary tools (12/16)
- C-axis on the main spindle
- Y-axis
- C-axis on the second spindle

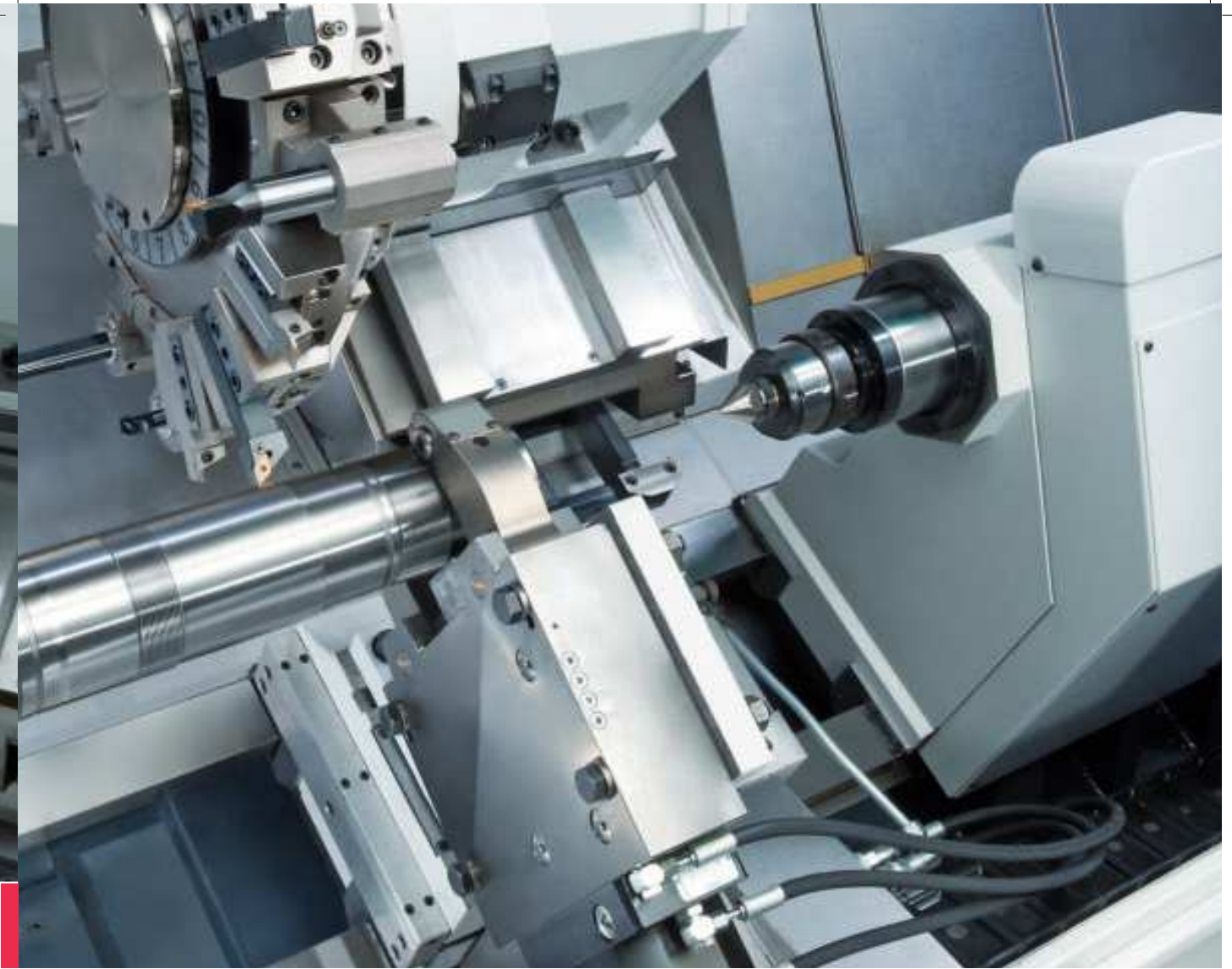


Great versatility and superb chip removal.

B1250



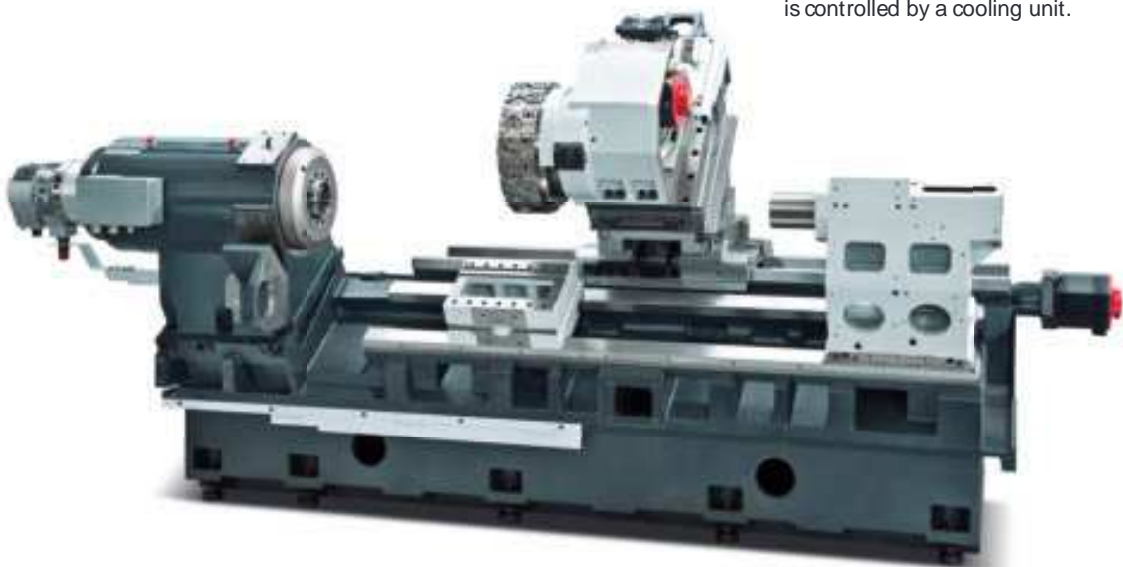
 **Biglia**



Both B1250 and B750 machines are equipped with the same turrets and X/Y slides. The B1250 is particularly suitable for the machining of long shafts. This machine features a long bed with a longitudinal stroke of 1310 mm and a sturdy CNC automatic tailstock with a 115 mm hydraulic quill. The B1250 can accept two versions of automatic steady-rests: "in-cycle" version with positioning by the Z-axis slide; "travelling" version operated by the axis motor.

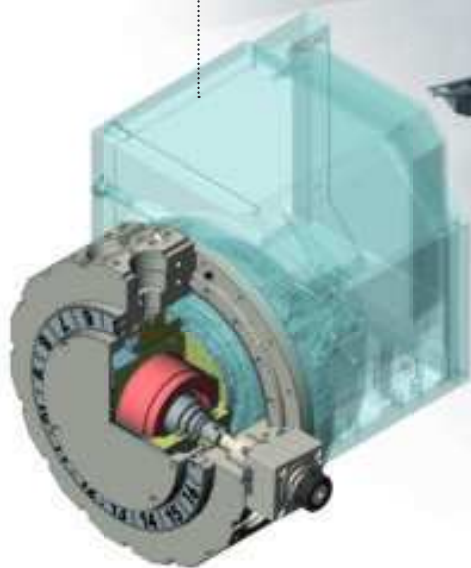
Thermal stability

To minimize dimensional changes and maintain the accuracy in the long-run, the temperature of the main heat sources (integral motor-spindles, hydraulic unit) is controlled by a cooling unit.



Servo-turret with built-in motor.

17,5 kW
56 Nm
10000* rpm



New Biglia servo-turret with direct drive.

The quick BIGLIA 12- or 16-station servo-turret (index time 0,3 sec.), featuring a large HIRTH coupling (230 mm diam.), can accept up to 34 tools that can work simultaneously. The new live tooling system is the main feature of this new turret, with the rotary motion being transmitted by the built-in motor, integrated in the tool plate, directly to the rotary tool.



* Max. spindle speed limited to 6000 rpm by standard rotary tools



Live tools

This new turret equipped with a cooled direct drive built-in spindle motor (10-17,5 kW - max. 10000* rpm) to drive the rotary tools represents the main feature of the new B750/B1250 series.

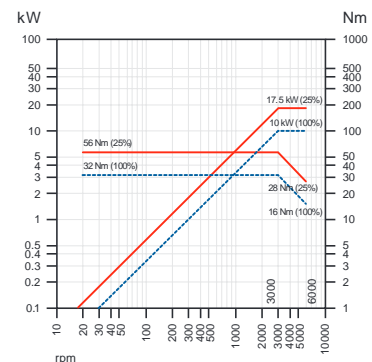
The kinematic chain has been eliminated. The motion is now transmitted by a direct coupling between the integrated motor and the rotary tool.

The main advantages are:

- REDUCTION OF VIBRATION DAMPENING
- ELIMINATION OF POWER LOSS AND MECHANICAL PLAY
- REDUCTION OF HEAT

This innovative concept ensures high rigidity, exceptional surface finish, superb chip removal and restricted noise.

Live tools



Machining capability - Material C40 (M-SM-Y-YS versions)

MACHINING WITH LIVE TOOLS						
MILLING			DRILLING			
Face mill diameter	mm	40	Insert drill diameter	mm	30	
No. of 45° inserts	N°	4	Spindle speed	rpm	800	
Spindle speed	rpm	1600	Cutting speed	m/min	85	
Axial cutting depth	mm	3	Feed rates	mm/min	120	
Radial cutting depth	mm	32	Feed rates	mm/rew	0,1	
Cutting speed	m/min	200	Volume of swarf removal	cm³/min	56,5	
Feed rate	mm/min	765	TAPPING			
Volume of swarf removal	cm³/min	73				

* Max. spindle speed limited to 6000 rpm by standard rotary tools



Spindles

The B750/B1250 range of machines is equipped with liquid cooled built-in motor spindles, with the exception of the B1250, this machine comes with the standard spindle configuration. Available with bar capacity of 65 up to 102 mm, the BIGLIA integral motor-spindles are driven by powerful (22 to 38 kW) and high torque (286 to 1014 Nm) motors.

Also, the combination of the roller and ball bearings plus the high torque and power range available at low rpm allow superb chip removal rates as well as exceptional surface finish and roundness accuracy.

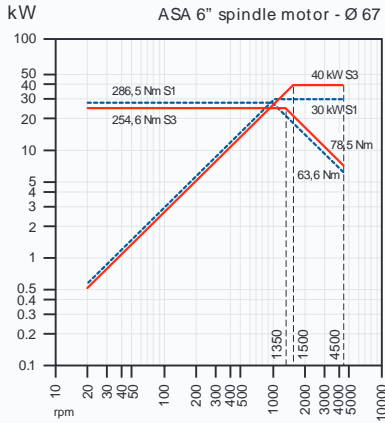
AVAILABLE SPINDLE SIZES

Motor spindles	Bore (mm)	rpm*	kW*	Nm*
ASA 6"	67	4500	40	286
ASA 8"	82	3500	22	700
ASA 8"	95/102,5	3000	38	1014
Belt-type spindle	Bore (mm)	rpm*	kW*	Nm*
ASA 8"	102,5	2800	30	772

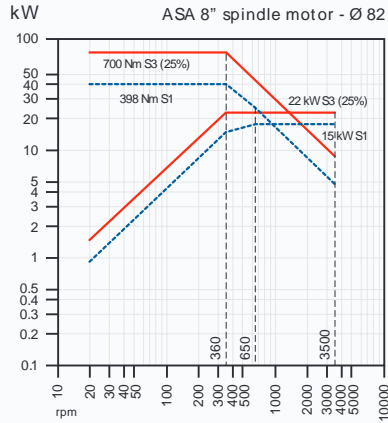
* Max. performance



P O W E R T O R Q U E D I A G R A M

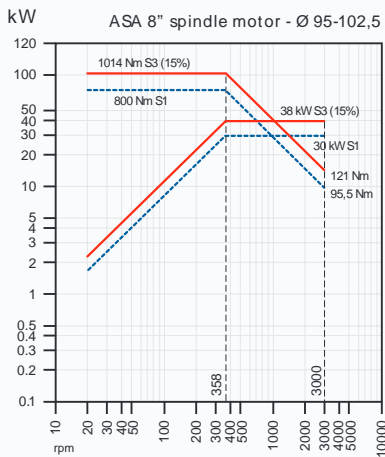


B750

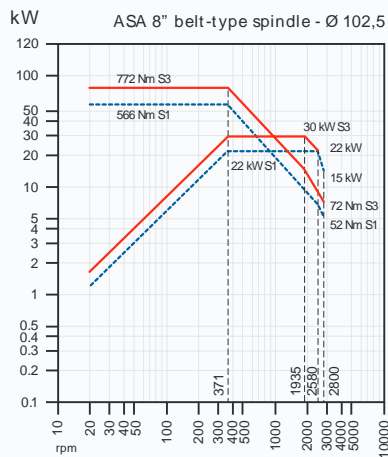


B750-B1250

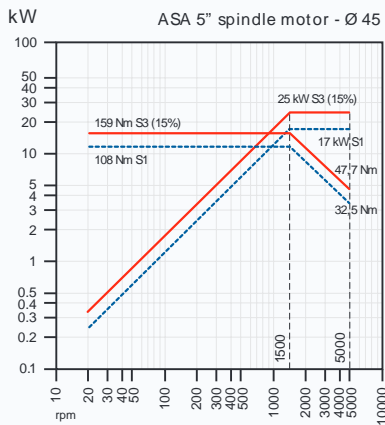
MAIN SPINDLES



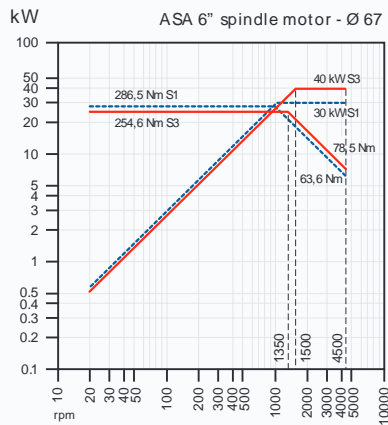
B750-B1250



B1250



B750



B750-B1250

SUB-SPINDLES



Wide range of equipment and optionals.

Standard features

- Cast-iron machine bed
- 12/16 position BIGLIA servo-turret
- Tooling kit (toolholders & bushings)
- Cooling system
- Chip conveyor
- Two color alarm lamp
- Coolant supply (medium pressure) including filter
- Electrical cabinet air conditioned

Optional features

- Tool setter
- High pressure coolant
- Rotating tailstock
- Coolant filter
- Kit for bar machining
- Finished parts conveyor
- Oil skimmer
- Moist exhauster
- SBS tool load monitoring system
- Automatic door



Sub-spindle

The work-piece is automatically transferred from the main to the sub-spindle to allow the complete machining process on both sides. The sub-spindle is equipped with B-axis load detection system and pneumatic ejector to check presence of the component (option) which allows you to perform safe machining operations.



Tool-setter (option)

This device makes tool-setting simple, fast and accurate. The tool tip is brought into contact with the probe and the tool offset value is automatically stored into relevant table of the CNC control.



Kit for bar machining (option)

It includes the automatic parts-catcher to unload finished parts and the models equipped with the sub-spindle. Also feature the pneumatic ejector with wash-down system to clean the clamping device.

Wide range of equipment and optionals.



Tailstock with hydraulic quill (B1250).

CNC automatic tailstock (standard feature on base, M and Y models)

Both B750 and B1250 range of machines are equipped with the tailstock body that slides on flat slide-ways. Positioning is fully automatic. On the B750, the tailstock is operated by a servo motor and ballscrew (B axis). This solution improves operating flexibility since position and thrust are CNC-controlled. It can also be used to perform simultaneously both drilling and turning (option). On the B1250, the tailstock is positioned by the turret-holding carriage (Z-axis). The stroke of the 115 mm diameter hydraulic quill is 150 mm. A rotating tailstock integrated to the quill is offered as an option on both B750/B1250.



Tailstock thrust monitoring.



'B' axis tailstock (Standard on B750 / Option on B1250).

Automatic steady-rest (option on B1250 only)

The automatic and self-centre steady-rest is suitable for shaft ranging up to 240 mm diameter.

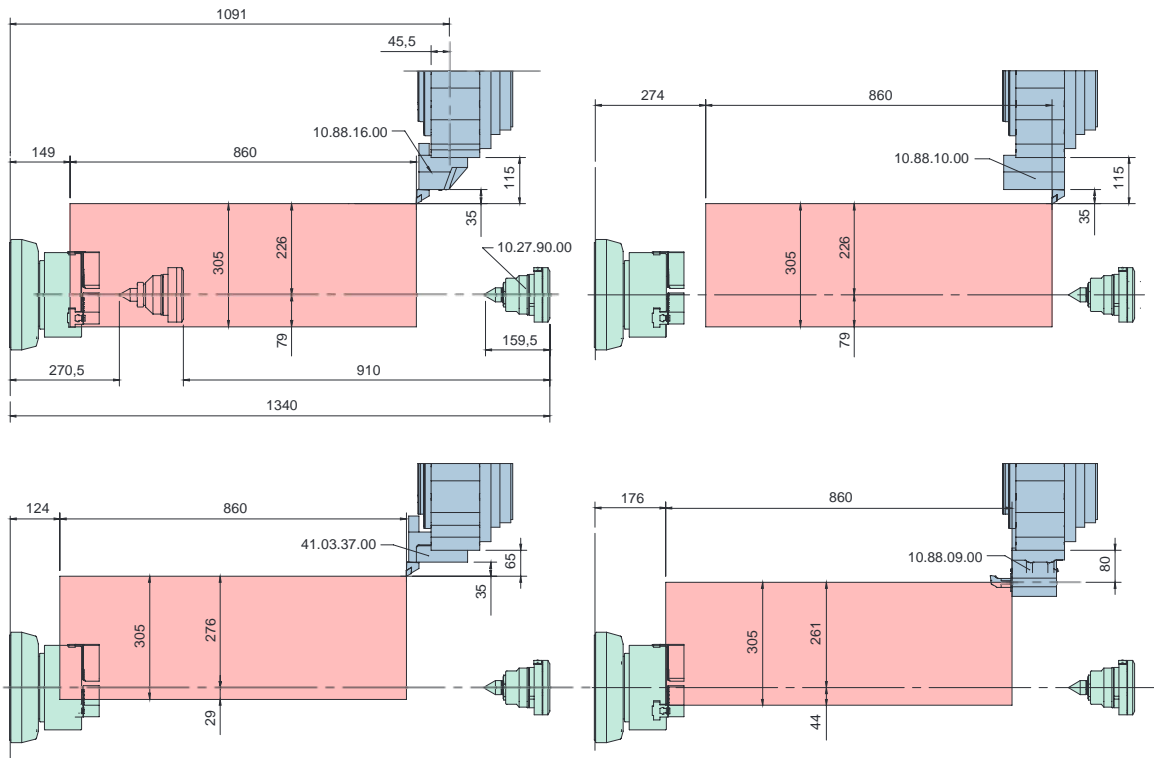
Positioning as well as opening and closing of the arms is programmable.

The steady-rest can be single or double and is available in two versions:

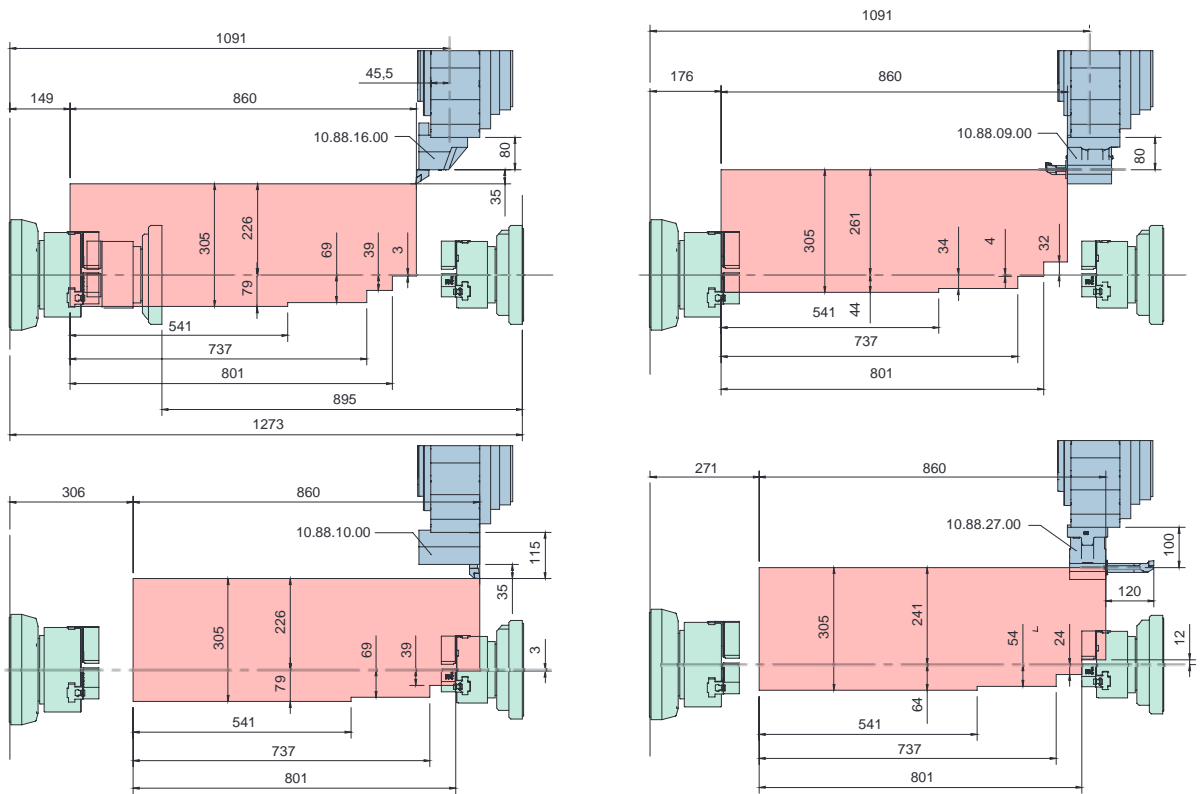
- "in cycle" version with positioning by the Z-axis slide,
- "travelling" version operated by the axis motor. The movement can be synchronized or independent from the Z-axis slide.



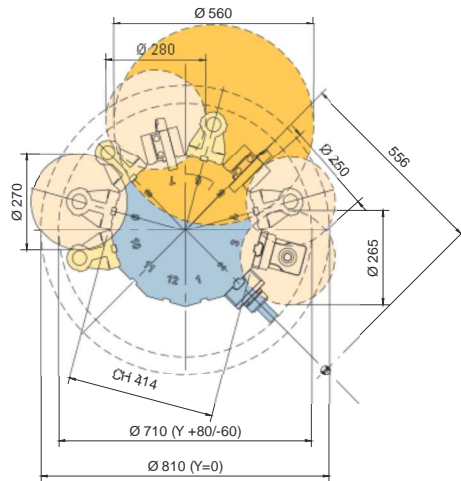
TURNING FIELD WITH TAILSTOCK B750 - 16-station turret



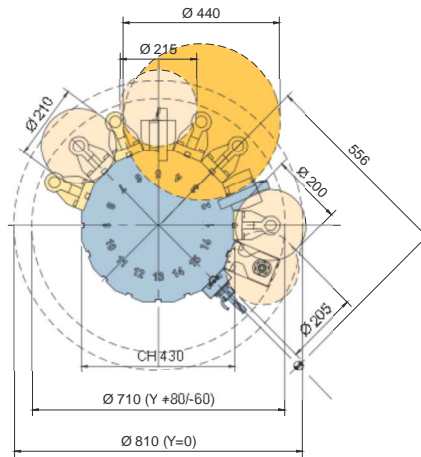
TURNING FIELD WITH SUB-SPINDLE B750 - 16-station turret



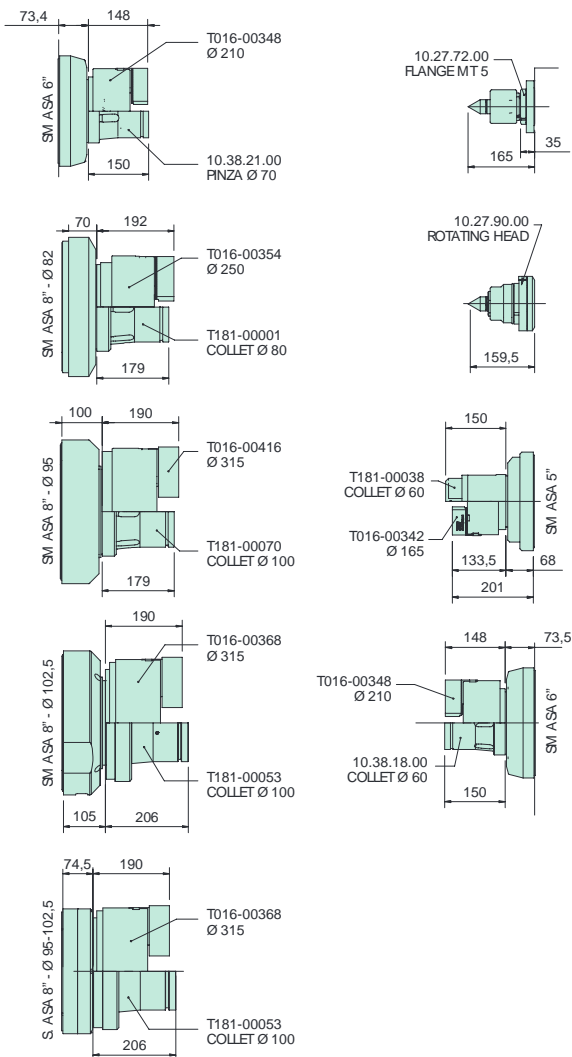
12-STATION TURRET B750 - B1250



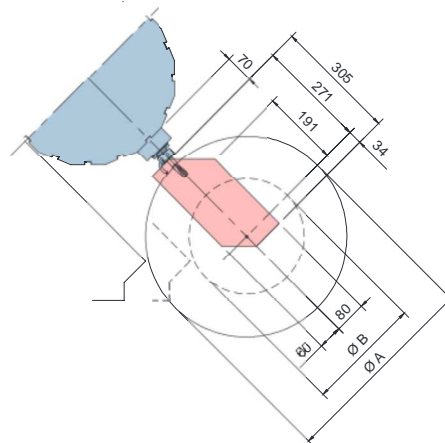
16-STATION TURRET B750 - B1250



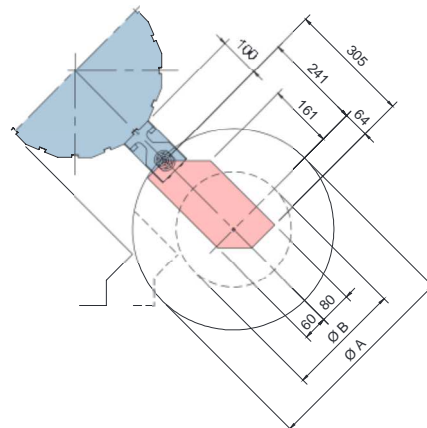
AREA OF FRONT PART OF THE SPINDLE B750 - B1250



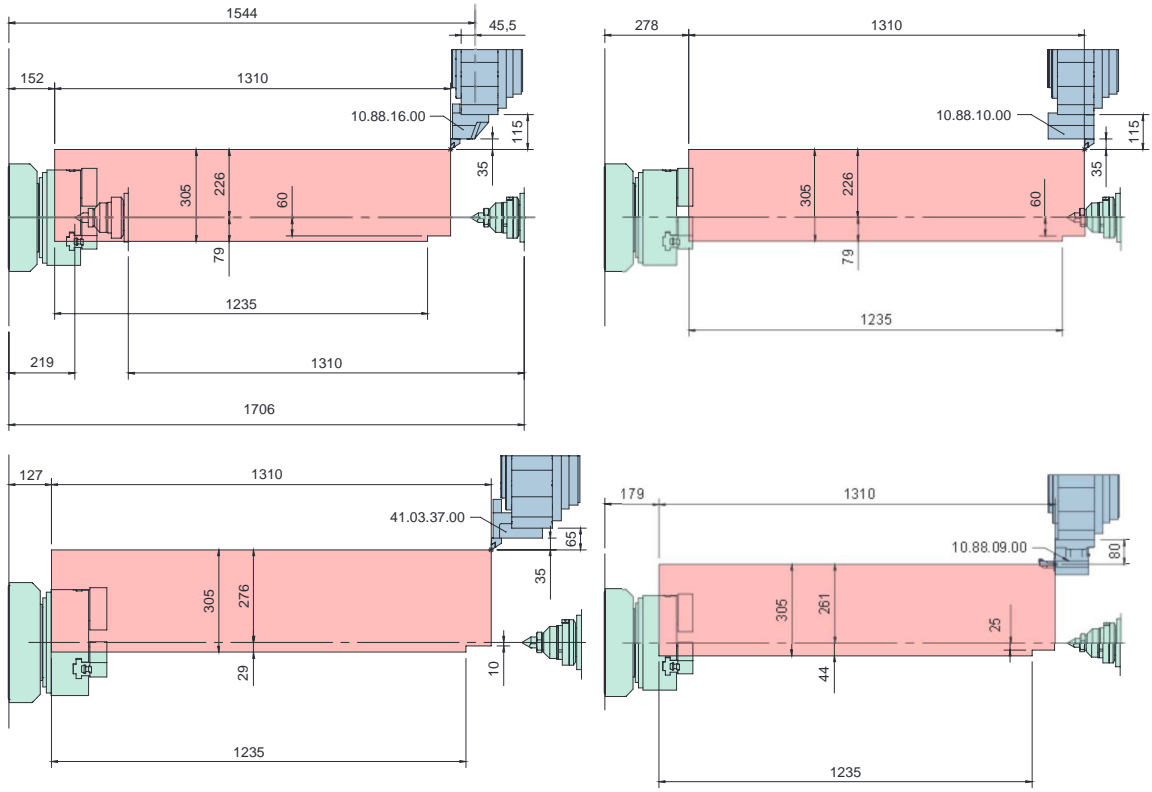
MILLING FIELD SPINDLE B750 - B1250



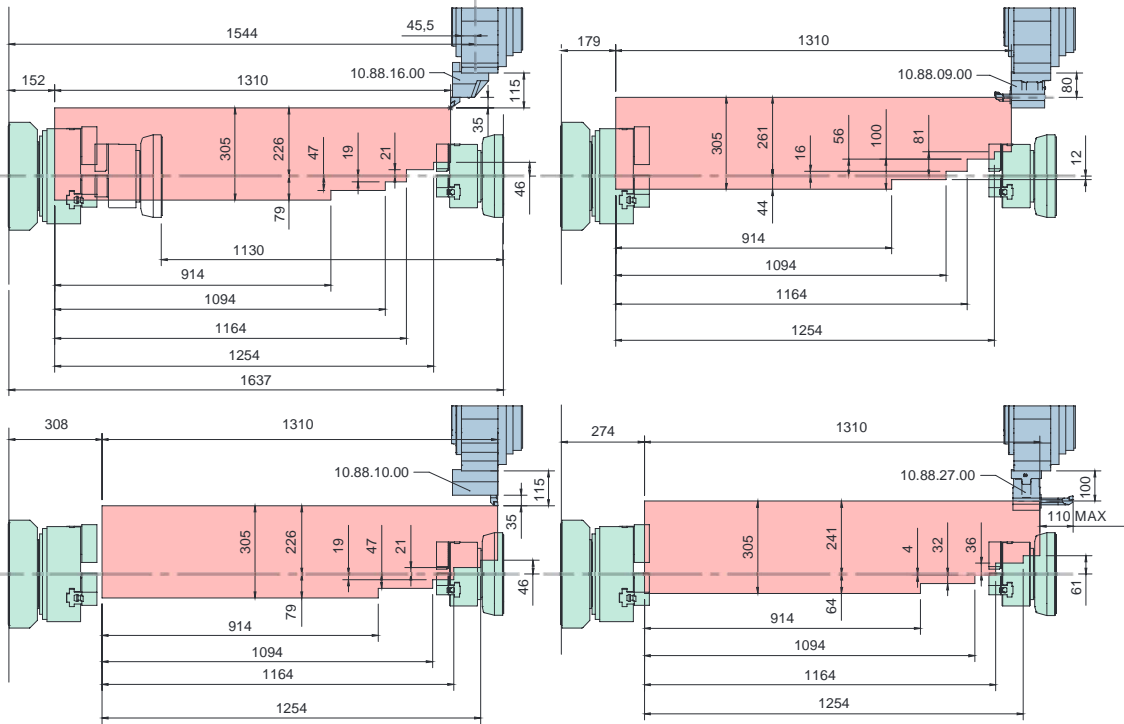
A= 500 mm max. swing diameter with turret in Y0
 B= 285 mm max. swing diameter with turret in Y+= 80 mm

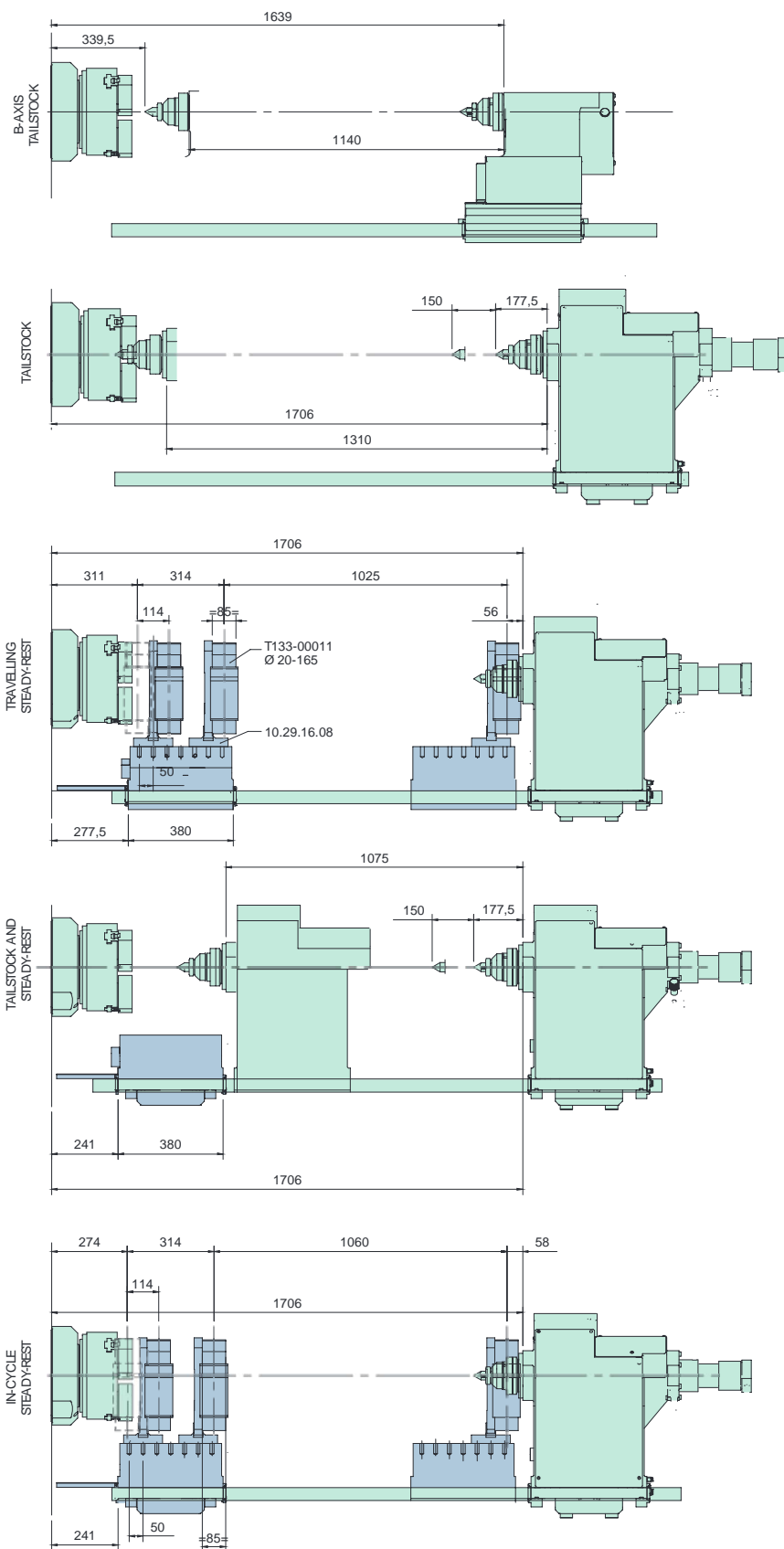


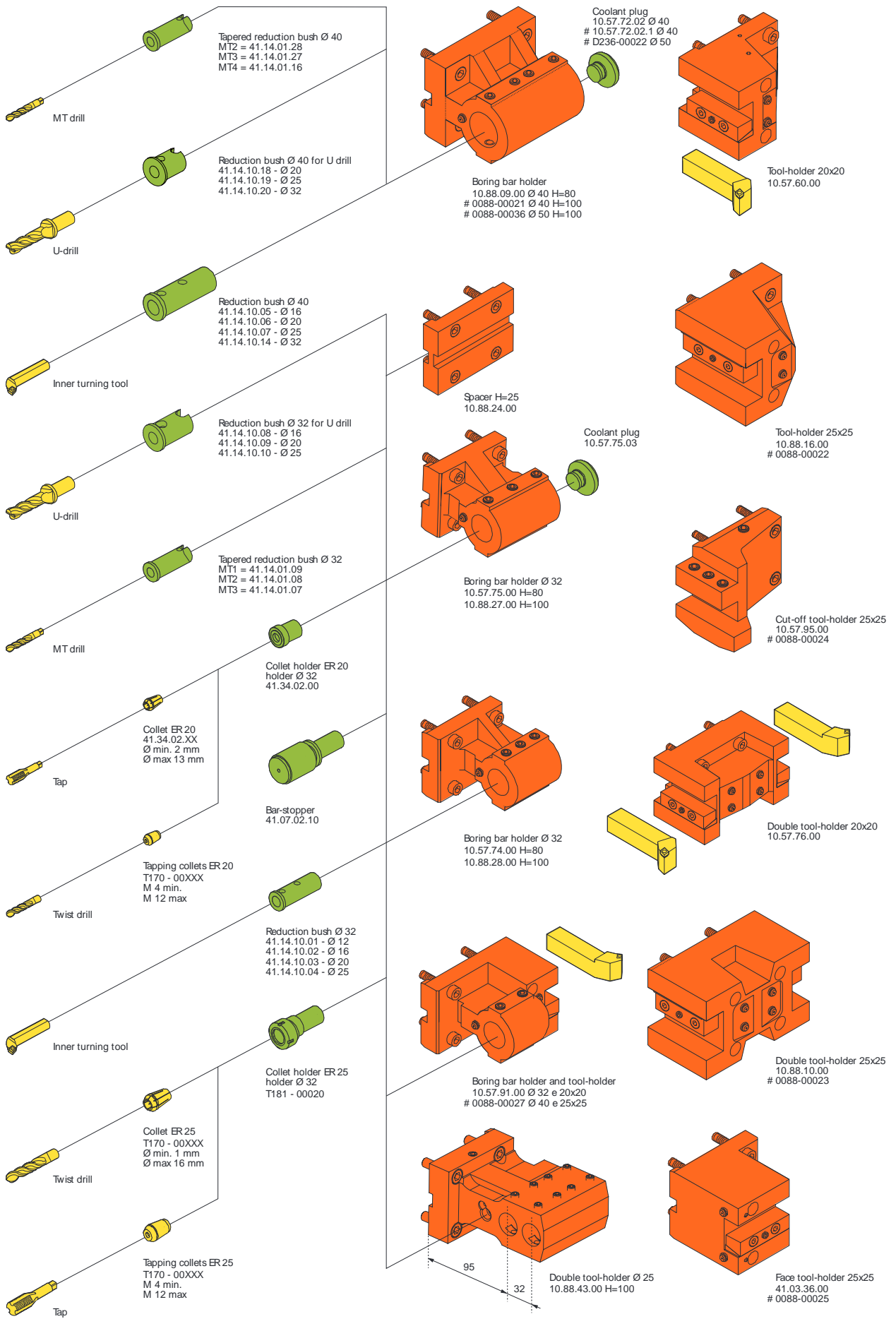
TURNING FIELD WITH TAILSTOCK - 16-station turret

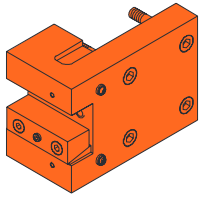


TURNING FIELD WITH SUB-SPINDLE - 16-station turret

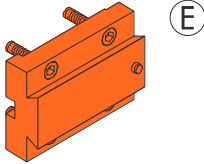




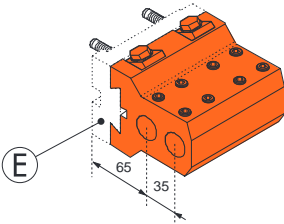




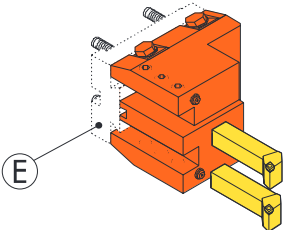
Double-tool-holder 25x25
41.03.37.00
0088-00026



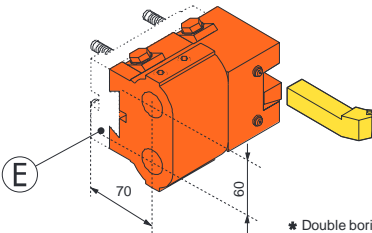
Base for multiple-holder
10.57.92.00



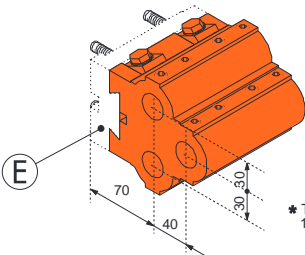
Double boring bars Ø25
41.03.29.00



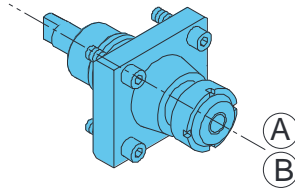
* Vertical double tool-holder
41.03.25.00



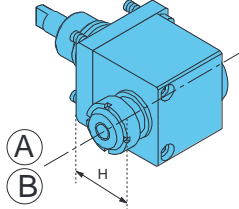
* Double boring bars Ø25
and tool-holder 20x20
10.57.94.00



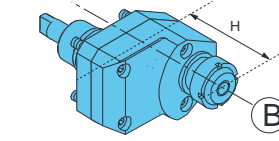
* Triple boring bar holder Ø25
10.57.93.00



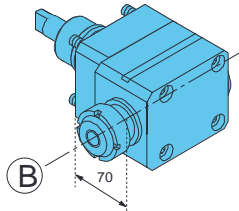
Radial live-spindle
10.57.88.00 ER25
T134-00061 ER32
● T134-00092 ER32
■ T134-00089 ER32
T134-00139 ER32
T134-00140 ER40



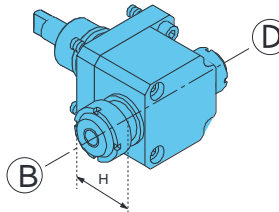
Axial live-spindle
H=70 10.57.87.00 ER25
H=70 T134-00062 ER32
H=100 T134-00076 ER25
H=100 T134-00077 ER32
● H=100 T134-00088 ER32
■ H=70 T134-00093 ER32
H=90 T134-00141 ER32
H=90 T134-00142 ER40



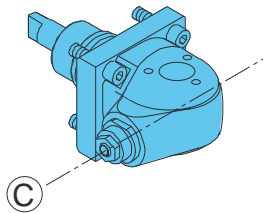
Radial live-spindle
8000 rpm
H=108 T134-00026
12000 rpm
H=70 T134-00060



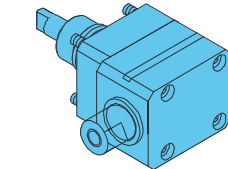
Axial live-spindle
8000 rpm
T134-00027
12000 rpm
T134-00070



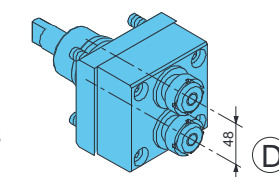
Axial live-spindle, double
H=70 T134-00024
H=100 T134-00094



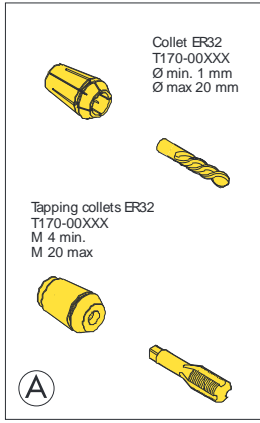
Adjustable live-spindle
T134-00025 ER16
T134-00057 ER20



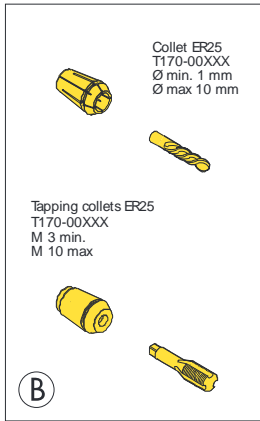
Polygon live-spindle
42.47.10.43



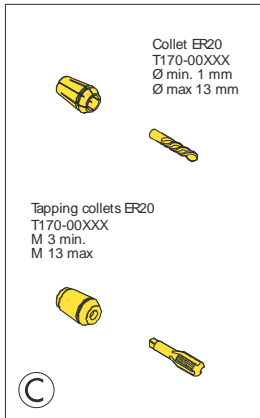
* Radial live-spindle, double
41.32.30.00



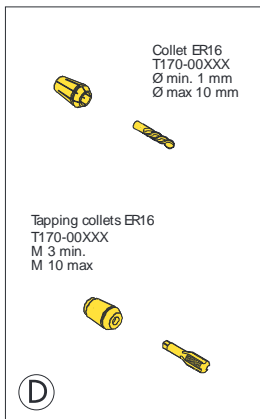
Collet ER32
T170-00XXX
Ø min. 1 mm
Ø max 20 mm
Tapping collets ER32
T170-00XXX
M 4 min.
M 20 max



Collet ER25
T170-00XXX
Ø min. 1 mm
Ø max 10 mm
Tapping collets ER25
T170-00XXX
M 3 min.
M 10 max



Collet ER20
T170-00XXX
Ø min. 1 mm
Ø max 13 mm
Tapping collets ER20
T170-00XXX
M 3 min.
M 13 max



Collet ER16
T170-00XXX
Ø min. 1 mm
Ø max 10 mm
Tapping collets ER16
T170-00XXX
M 3 min.
M 10 max

* Only with Y-axis
● With internal coolant
■ With stronger bearings
Only with 12 positions turret

B750 - B1250



CNC unit

CNC Fanuc 32i-T:

- 10.4" (15" option) colour liquid crystal display
- Alphanumeric full-keyboard
- BIGLIA operator panel featuring softkeys
- Data transmission: Ethernet gate, memory card, USB, RS232 port.

Manual Guide: quick and easy for program reliability

The innovative MANUAL GUIDE software package provides operators with access to a very simple and user-friendly graphics interface, strong "editing" functions and offers a wide selection of machining cycles (turning, milling and drilling). This system allows the execution of even the most complex programs with ease of operation. The 3D simulation facilitates the checking of programmes before machining operations (option).



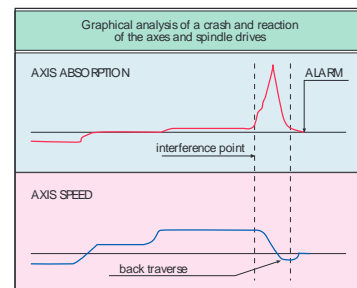


Tool life management (standard)



SBS: Biglia safety software tool load monitoring

This system monitors the loading of the most heavily used tools such as cutting tools, roughening tools, drills or U-drills. It ensures safe automatic machining with limited operator presence (option).



Approximate diagram

Damage protection (air bag)

This special software detects the abnormal load created by a collision. When a collision occurs, spindle rotation is stopped and the axis movement is halted thus damping the interference and limiting damage to the tooling.

T E C H N I C A L S P E C I F I C A T I O N S

MACHINE TYPE		B750			B750 M			B750 SM			B750 Y		
MACHINING CAPACITY													
Max. bar machining diameter	mm	65	80	93/100	65	80	93/100	65	80	93/100	65	80	93/100
Max. suggested machining diameter	mm	552/350	552/450	552	552/350	552/450	552	552/350	552/450	552	552/350	552/450	552
Max. machining length	mm	765 ⁽¹⁾			765 ⁽¹⁾			765 ⁽¹⁾			765 ⁽¹⁾		
Max. swing over diameter	mm	680/500			680/500			680/500			680/500		
MAIN SPINDLE													
Max. speed	rpm	4500	3500	3000	4500	3500	3000	4500	3500	3000	4500	3500	3000
Spindle nose	ASA	6"	8"	8"	6"	8"	8"	6"	8"	8"	6"	8"	8"
Spindle bore	mm	76	91	106/111	76	91	106/111	76	91	106/111	76	91	106/111
Inside diam. of bearings	mm	110	130	150	110	130	150	110	130	150	110	130	150
Chuck diameter	mm	250	315	400	250	315	400	250	315	400	250	315	400
Motor power (S1-S3)	kW	30-40	15-22	30-38	30-40	15-22	30-38	30-40	15-22	30-38	30-40	15-22	30-38
Max. torque (S1-S3)	Nm	286	398-700	800-1014	286	398-700	800-1014	286	398-700	800-1014	286	398-700	800-1014
SUB-SPINDLE													
Max. speed	rpm	--			--			5000 - 4500			--		
Spindle nose	ASA	--			--			5" - 6"			--		
Spindle bore	mm	--			--			55 - 76			--		
Drawtube inside diameter	mm	--			--			45 - 67			--		
Inside diam. of bearings	mm	--			--			90 - 110			--		
Chuck diameter	mm	--			--			140-165 / 210-250			--		
Motor power	kW	--			--			17-25 / 30-40			--		
Max. torque	Nm	--			--			108-159 / 286			--		
B-axis automatic positioning	mm	--			--			895			--		
B-axis rapid traverse	m/min	--			--			24			--		
TURRET													
No of tools	N°	16/12			16/12			16/12			16/12		
Tool shank for OD turning	mm	25x25			25x25			25x25			25x25		
Tool shank for ID turning	mm	32-40 / 40-50			32-40 / 40-50			32-40 / 40-50			32-40 / 40-50		
Turret indexing (1 pos)	sec	0,3			0,3			0,3			0,3		
LIVE TOOLING													
No of live tools	N°	--			16/12			16/12			16/12		
Max. speed	rpm	--			6000			6000			6000		
Motor power	kW	--			10/17,5			10/17,5			10/17,5		
Max. torque	Nm	--			32/56			32/56			32/56		
C-AXIS													
Min. programmable value	°	--			0,001			0,001			0,001		
Max. rapid traverse	rpm	--			100			100			100		
AXES													
X-axis stroke	mm	305			305			305			305		
Y-axis stroke	mm	--			--			--			140		
Z-axis stroke	mm	860			860			860			860		
X-axis rapid traverse	m/min	18			18			18			18		
Y-axis rapid traverse	m/min	--			--			--			7,5		
Z-axis rapid traverse	m/min	24			24			24			24		
TAILSTOCK													
Automatic quill stroke	mm	--			--			--			--		
Quill diameter	mm	--			--			--			--		
Morse taper	MT	--			--			--			--		
Automatic positioning	mm	--			--			--			--		
B-AXIS TAILSTOCK													
Morse taper	MT	4-5			4-5			--			4-5		
B-axis automatic positioning	mm	910			910			--			910		
B-axis rapid traverse	m/min	15			15			--			15		
COOLING SYSTEM													
Tank capacity	l	300			300			300			300		
Pump nominal displacement	l/min	60			60			60			60		
Electropump motor rating	kW	1,1			1,1			1,1			1,1		
DIMENSIONS AND WEIGHT													
Machine with swarf conveyor	cm	507x203x222h			507x203x222h			507x203x222h			507x203x222h		
Spindle centre height	mm	1070			1070			1070			1070		
Machine weight with swarf conv.	kg	7250			7350			7500			7450		

B750 - B1250

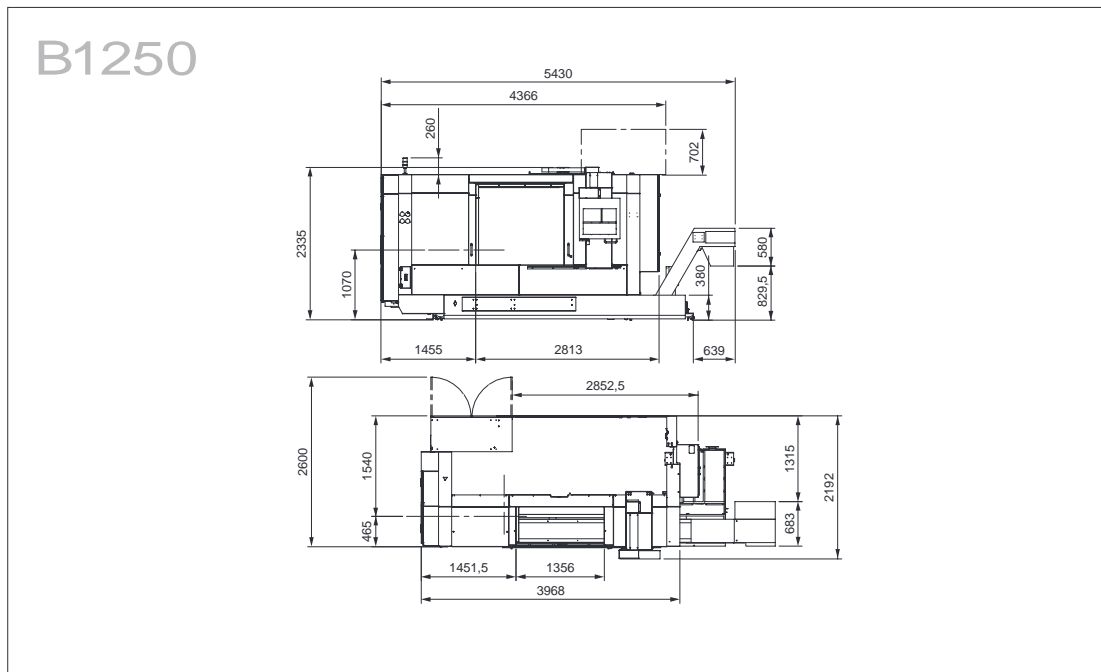
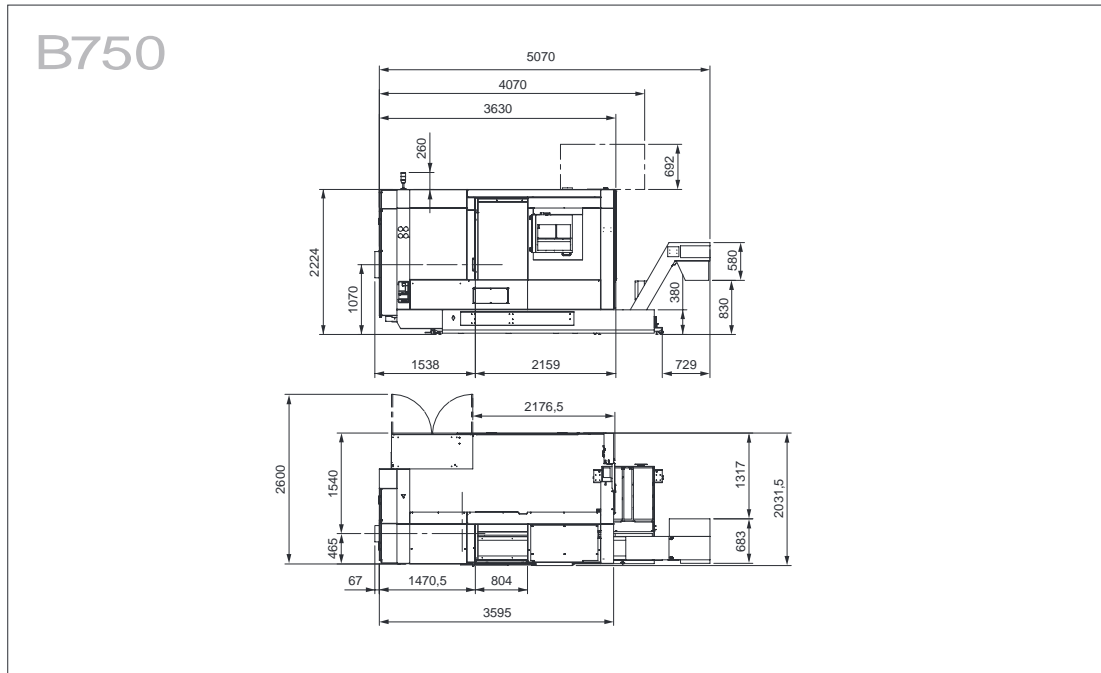
B750 YS			B1250			B1250 M			B1250 SM			B1250 Y			B1250 YS		
65	80	93/100	100	80	93/100	100	80	93/100	65	80	93/100	100	80	93/100	65	80	93/100
552/350	552/450	552	552	552/450	552	552	552/450	552	552	553/450	552	552	552/450	552	552/350	553/450	552
765 ⁽¹⁾			1195 ⁽²⁾			1195 ⁽²⁾			1195 ⁽²⁾			1195 ⁽²⁾			1195 ⁽²⁾		
680/500			680/500			680/500			680/500			680/500			680/500		
2800	3500	3000	2800	3500	3000	2800	3500	3000	4500	3500	3000	2800	3500	3000	4500	3500	3000
6"	8"	8"	8"	8"	8"	8"	8"	8"	6"	8"	8"	8"	8"	8"	6"	8"	8"
76	91	106/111	111	91	106/111	111	91	106/111	76	91	106/111	111	91	106/111	76	91	106/111
110	130	150	150	130	150	150	130	150	110	130	150	150	130	150	110	130	150
250	315	400	400	315	400	400	315	400	250	315	400	400	315	400	250	315	400
30-40	15-22	30-38	22-30	15-22	30-38	22-30	15-22	30-38	30-40	15-22	30-38	22-30	15-22	30-38	30-40	15-22	30-38
286	398-700	800-1014	566-772	398-700	800-1014	566-772	398-700	800-1014	286	398-700	800-1014	566-772	398-700	800-1014	286	398-700	800-1014
5000 - 4500			--			--			4500			--			4500		
5' - 6"			--			--			6"			--			6"		
55 - 76			--			--			76			--			76		
45 - 67			--			--			67			--			67		
90 - 110			--			--			110			--			110		
140-165 / 210-250			--			--			210-250			--			210-250		
17-25 / 30-40			--			--			30-40			--			30-40		
108-159 / 286			--			--			286			--			286		
895			--			--			1130			--			1130		
24			--			--			24			--			24		
16/12			16/12			16/12			16/12			16/12			16/12		
25x25			25x25			25x25			25x25			25x25			25x25		
32-40 / 40-50			32-40 / 40-50			32-40 / 40-50			32-40 / 40-50			32-40 / 40-50			32-40 / 40-50		
0,3			0,3			0,3			0,3			0,3			0,3		
16/12			--			16/12			16/12			16/12			16/12		
6000			--			6000			6000			6000			6000		
10/17,5			--			10/17,5			10/17,5			10/17,5			10/17,5		
32/56			--			32/56			32/56			32/56			32/56		
0,001			--			0,001			0,001			0,001			0,001		
100			--			100			100			100			100		
305			305			305			305			305			305		
140			--			--			--			140			140		
860			1310			1310			1310			1310			1310		
18			18			18			18			18			18		
7,5			--			--			--			7,5			7,5		
24			24			24			24			24			24		
--			150			150			--			150			--		
--			115			115			--			115			--		
--			5			5			--			5			--		
--			1310			1310			--			1310			--		
--			5/4			5/4			--			5/4			--		
--			1140			1140			--			1140			--		
--			15			15			--			15			--		
300			300			300			300			300			300		
60			60			60			60			60			60		
1,1			1,1			1,1			1,1			1,1			1,1		
507x203x222h			543x219x233h			543x219x233h			543x219x233h			543x219x233h			543x219x233h		
1070			1070			1070			1070			1070			1070		
7600			7850			7950			8250			8100			8400		

(1) Ø250 Chuck - (2) Ø315 Chuck Belt-type main spindle

CNC TURNING CENTRES

MACHINE OVERALL DIMENSIONS

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