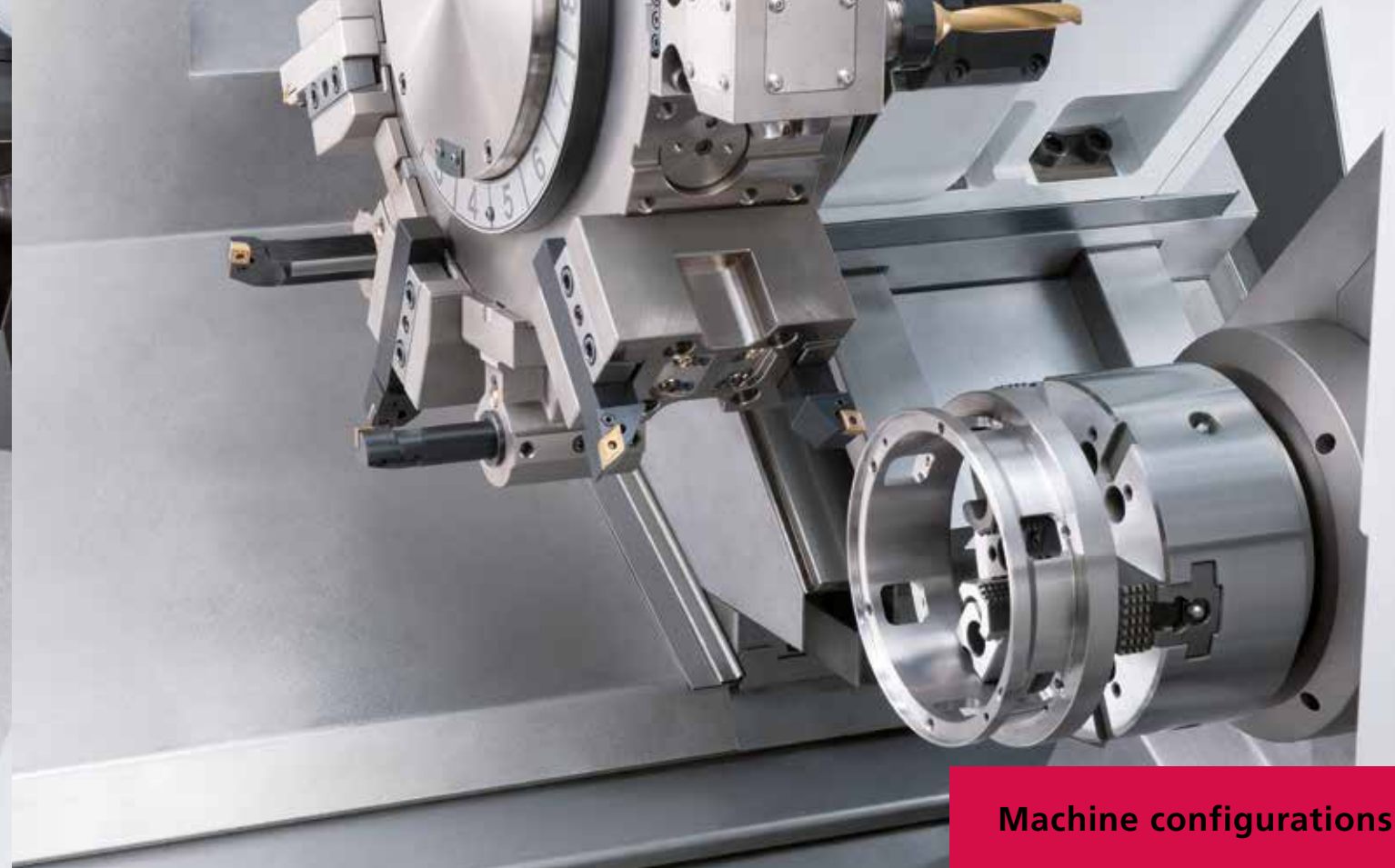


CNC TURNING CENTRES

B750 | B1250





Cutting edge technology and unequalled productivity.

B750



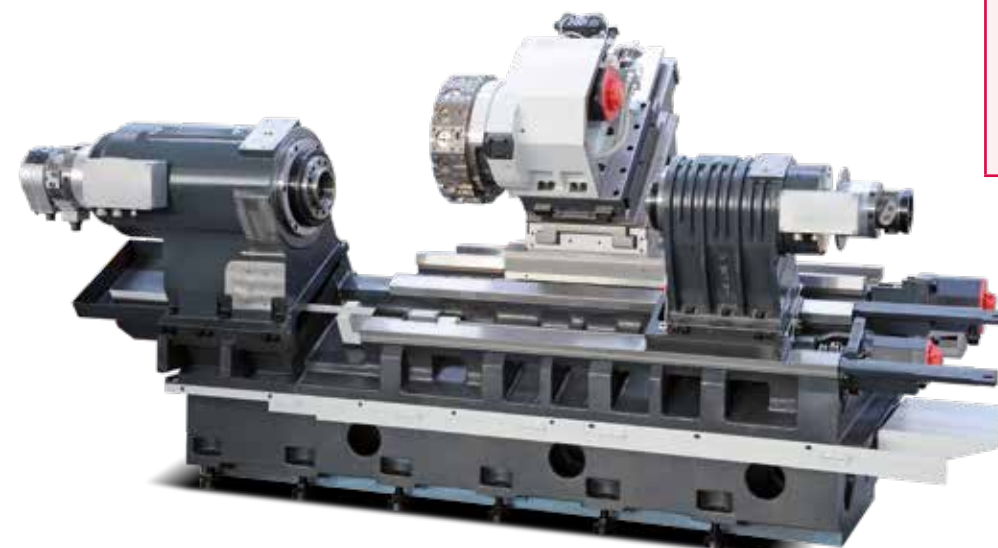
The B750/B1250 series represents the "state of the art" of multifunction turning centres. The turret with **direct drive built-in motor and the hardened and ground slide-ways on all axes** are the heart of this range of machines. Available in 2 models and 10 versions featuring 750 mm or 1250 mm turning 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 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 (index time 0,215 sec), and the high capability of chip removal in both turn and mill operations is enabled by the powerful servo motors.

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.



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.

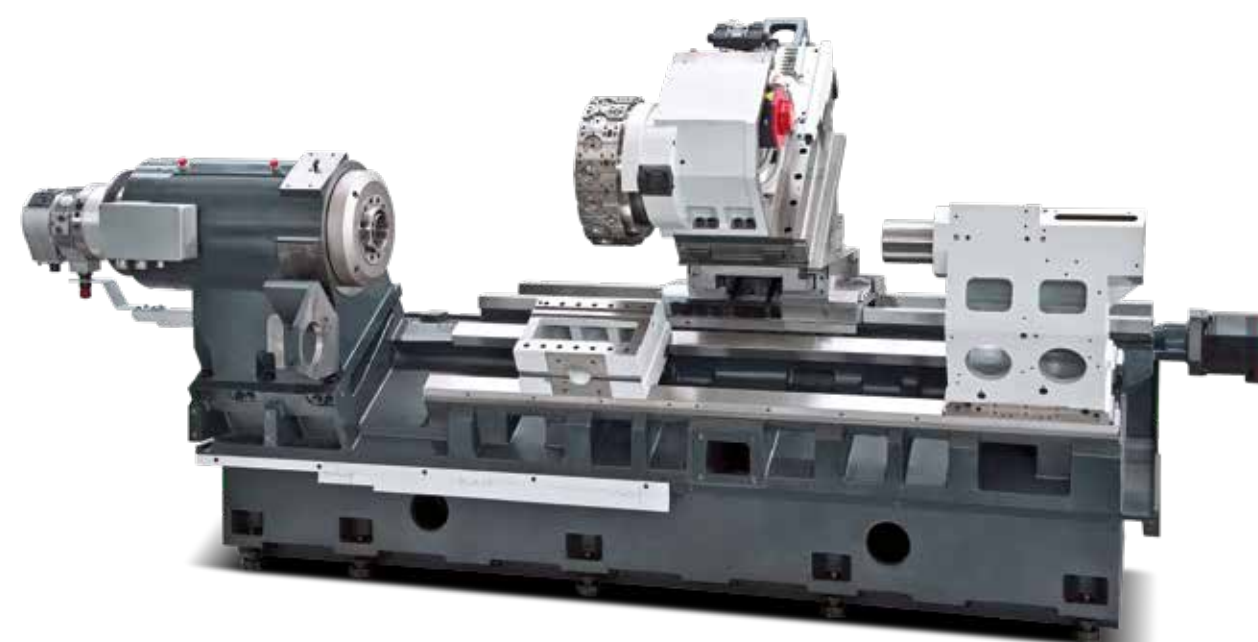
B1250



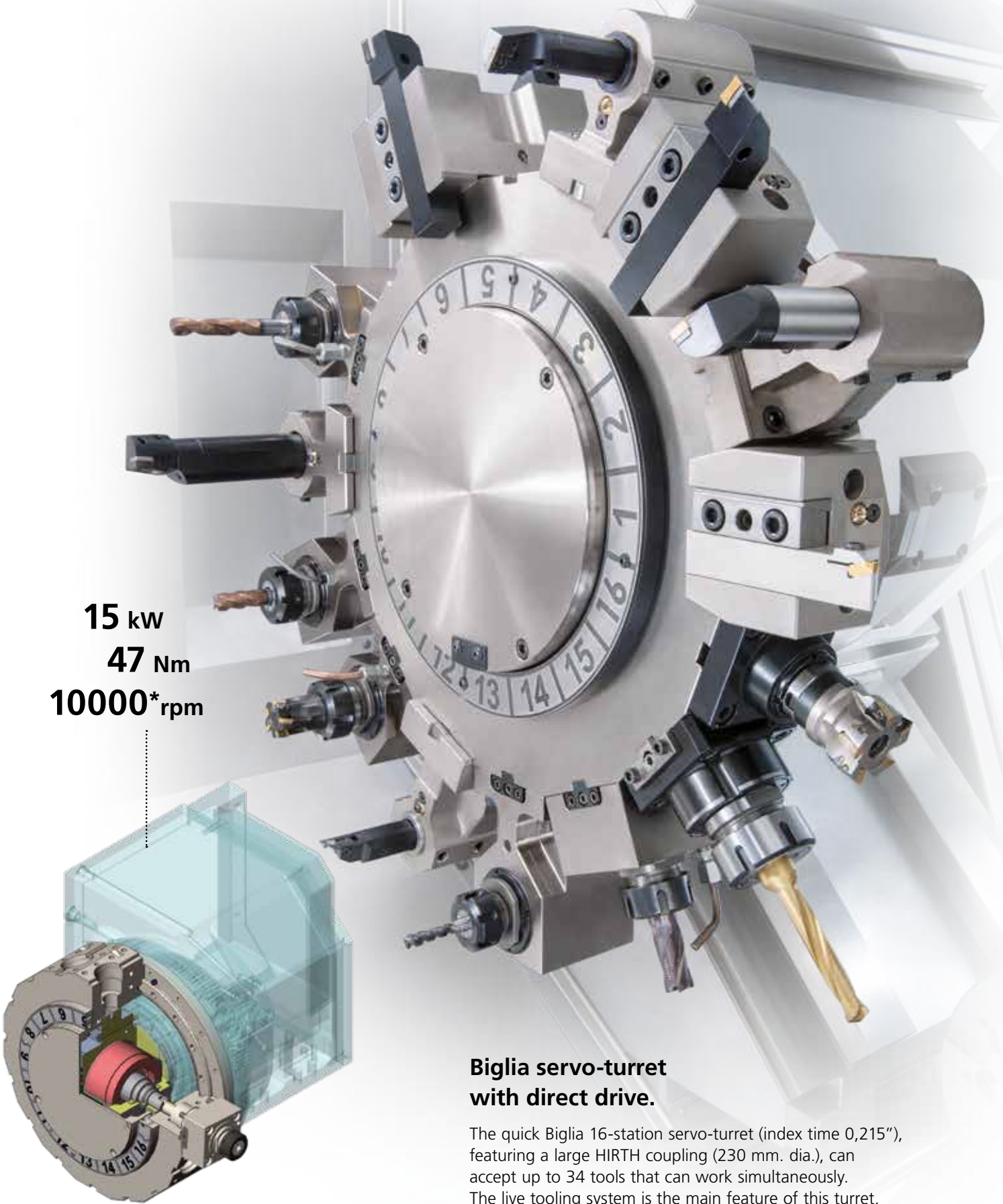
The B1250 is particularly suitable for the machining of long shafts. This machine features a long bed with a longitudinal stroke of 1310 mm and a sturdy CNC automatic tailstock with a 115 mm hydraulic quill. The B1250 can accept the automatic steady-rest operated by the axis motor.

Thermal stability

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

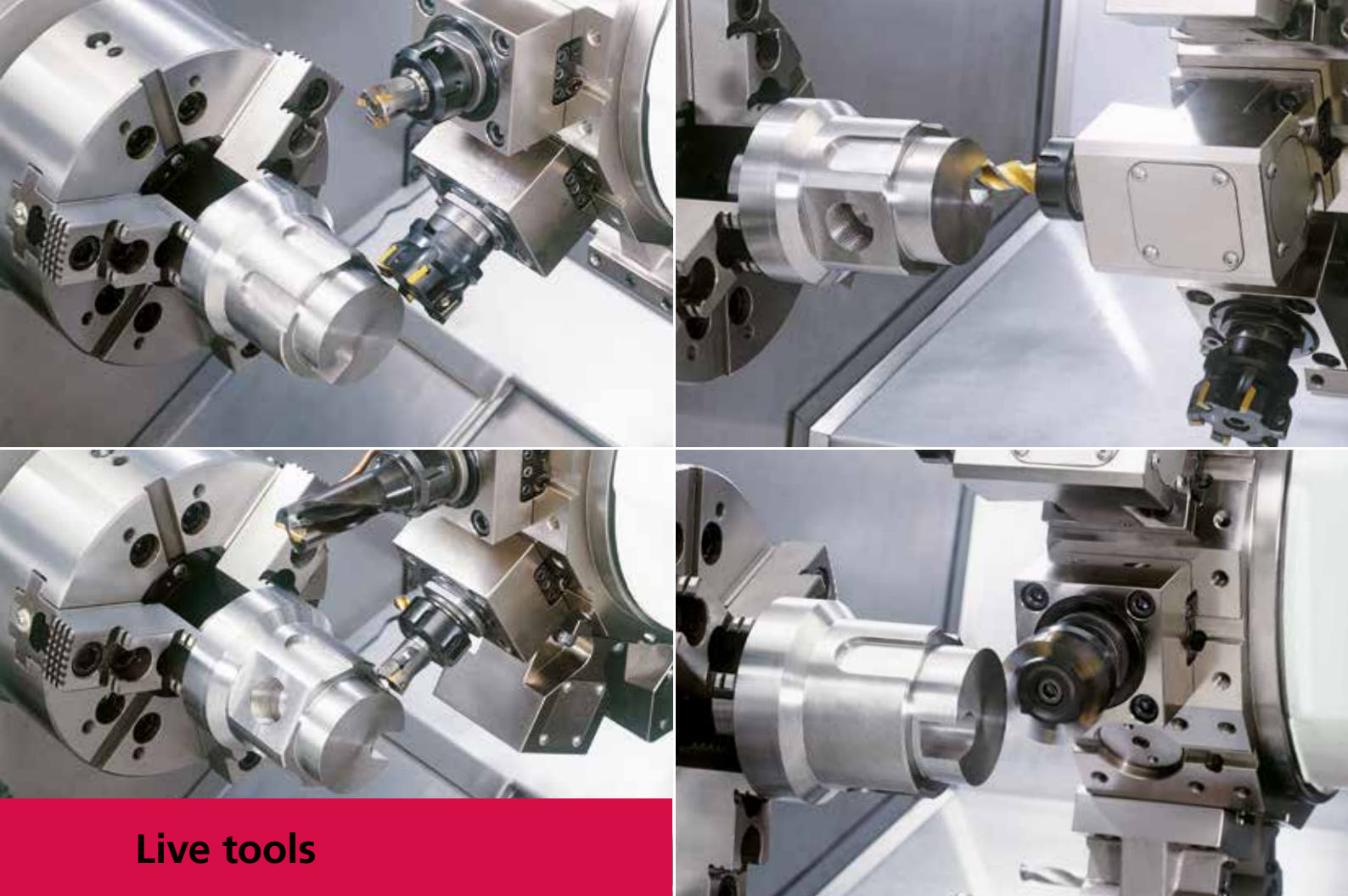


Servo-turret with built-in motor.



15 kW
47 Nm
10000* rpm

Biglia servo-turret with direct drive.
The quick Biglia 16-station servo-turret (index time 0,215"), featuring a large HIRTH coupling (230 mm. dia.), can accept up to 34 tools that can work simultaneously. The live tooling system is the main feature of this turret, with the rotary motion being transmitted by the built-in motor, integrated in the tool plate, directly to the rotary tool.

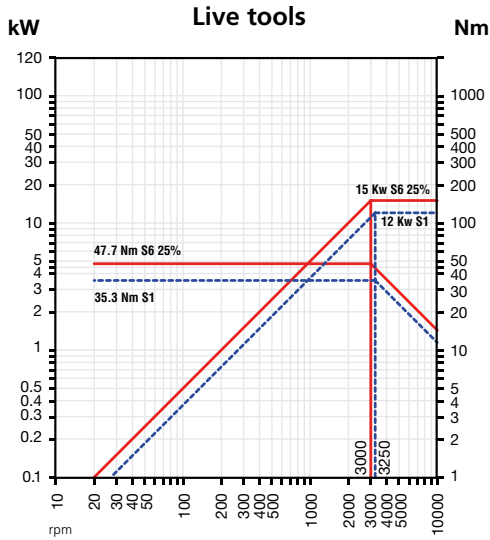


Live tools

This turret equipped with a cooled direct drive built-in spindle motor (15 kW – max. 10.000* rpm) to drive the rotary tools represents the main feature of the 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



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

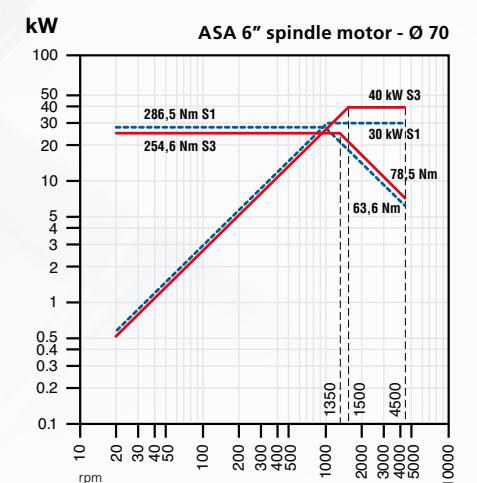
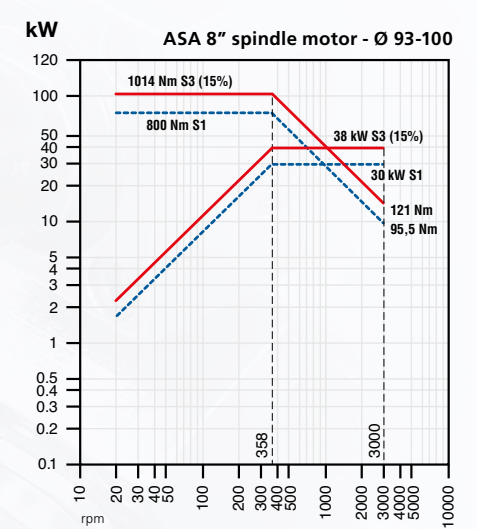
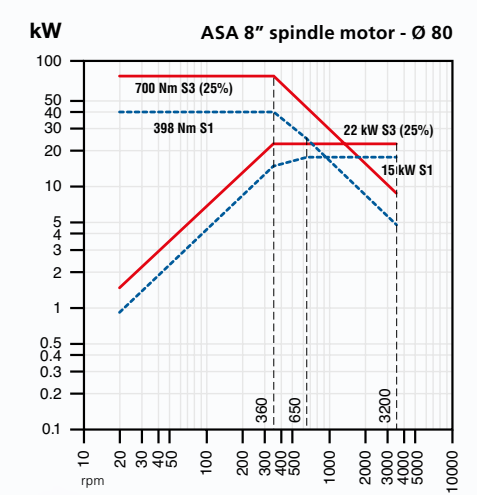
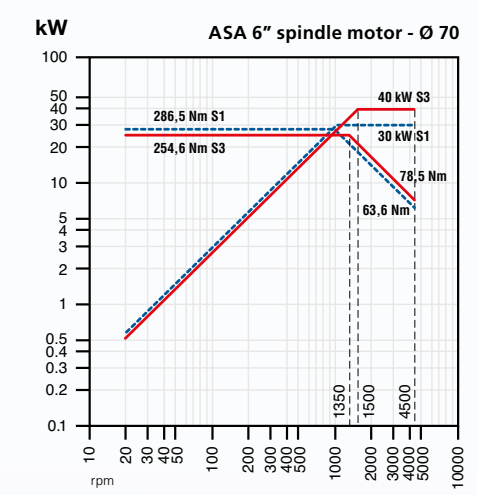
MACHINING WITH LIVE TOOLS					
MILLING			DRILLING		
Face mill diameter	mm	40	Insert drill diameter	mm	30
No. of 45° inserts	N°	4	Spindle speed	rpm	800
Spindle speed	rpm	1600	Cutting speed	m/min	85
Axial cutting depth	mm	3	Feed rates	mm/min	120
Radial cutting depth	mm	32	Feed rates	mm/rew	0,1
Cutting 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	Tap	mm	20x1,5



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

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

POWER TORQUE DIAGRAM



Spindles

The B750/B1250 range of machines is equipped with liquid cooled built-in motor spindles. Available with bar capacity of 70 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"	71	4500	40	286
ASA 8"	82	3200	22	700
ASA 8"	95/102,5	3000	38	1014

* Max. performance



Wide range of equipment and optionals.

Standard features

- Heavy cast-iron machine bed
- 12/16 position BIGLIA servo-turret
- Comprehensive tooling package
- Cooling system
- Chip conveyor
- Signal 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 workpiece 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).

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.



CNC automatic tailstock

Two versions of tailstock are available, both sliding on flat slide-ways. On the **B750** (option on the B1250), 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. On the **B1250**, the tailstock is positioned by the turret-holding carriage (Z-axis). The stroke of the 115mm diameter hydraulic quill is 150 mm. A rotating tailstock integrated to the quill is offered as an option on both B750/B1250.



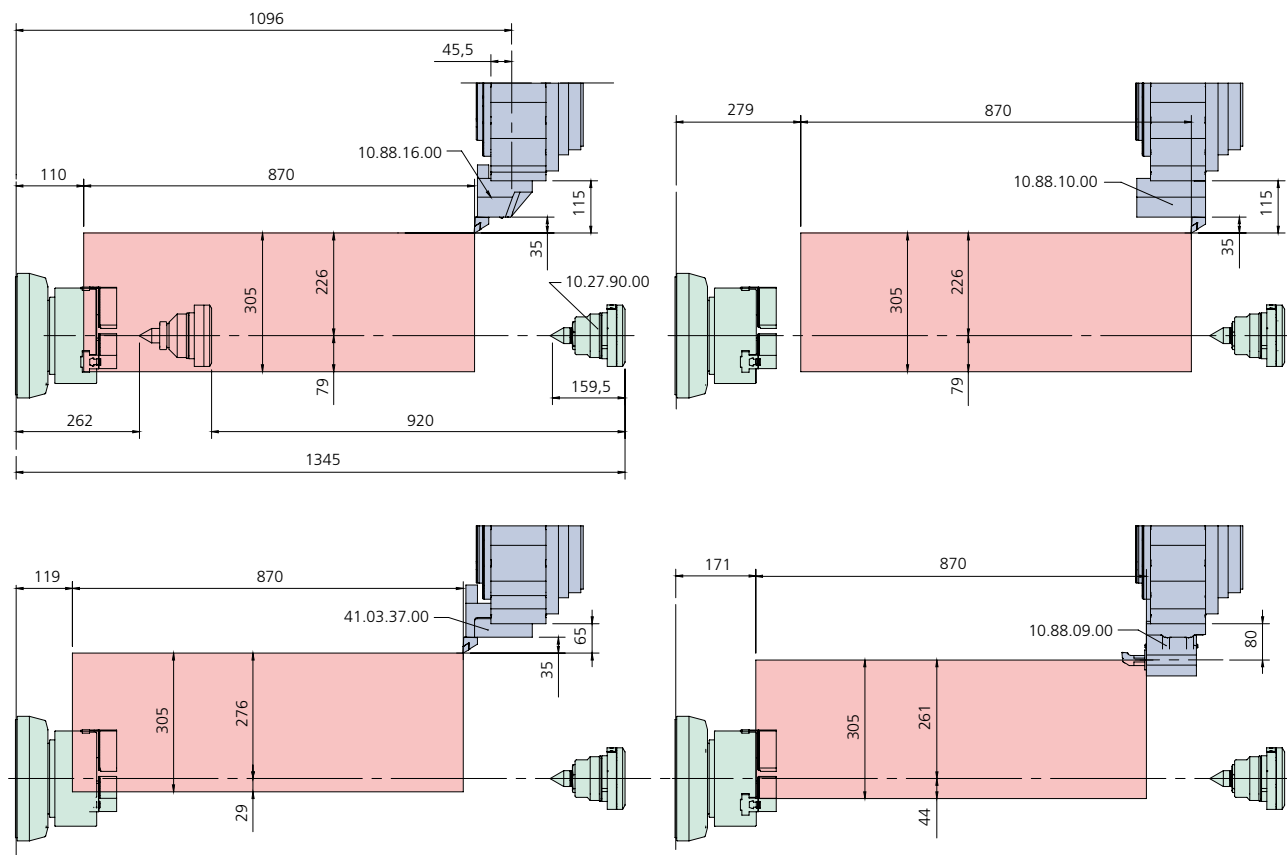
Tailstock thrust monitoring.



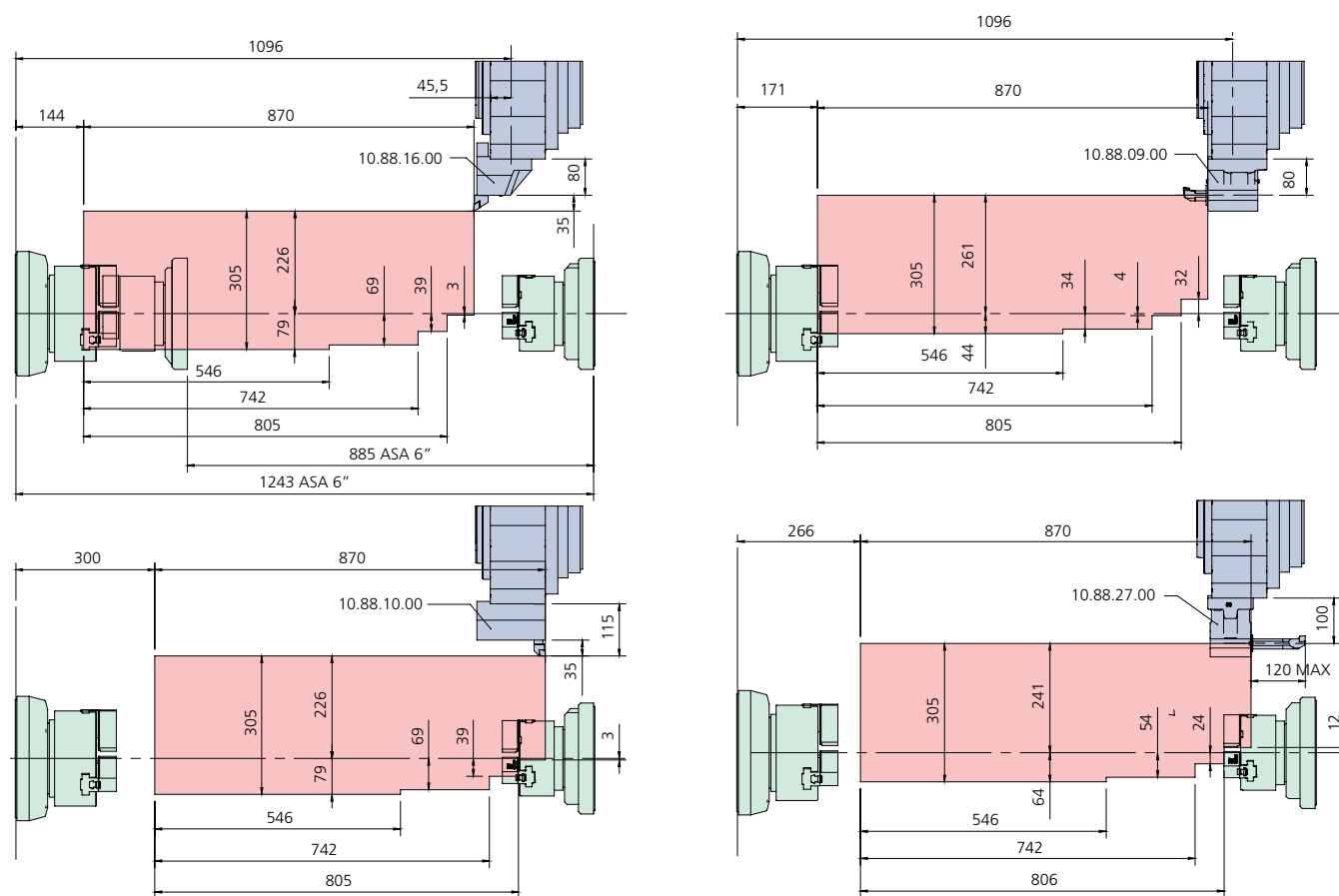
"B" axis tailstock (Standard on B750 / Option on B1250).



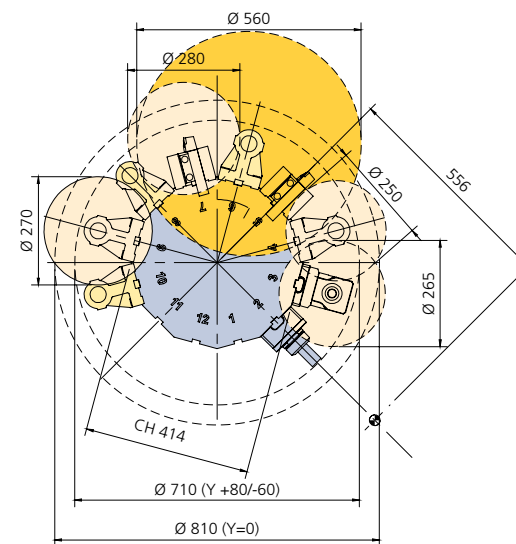
TURNING FIELD WITH TAILSTOCK B750 - 16-station turret



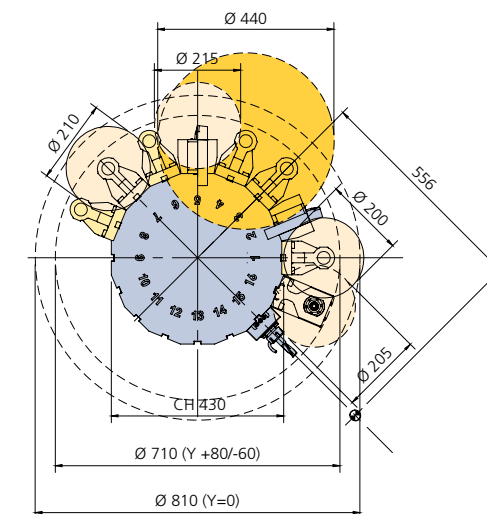
TURNING FIELD WITH SUB-SPINDLE B750 - 16-station turret



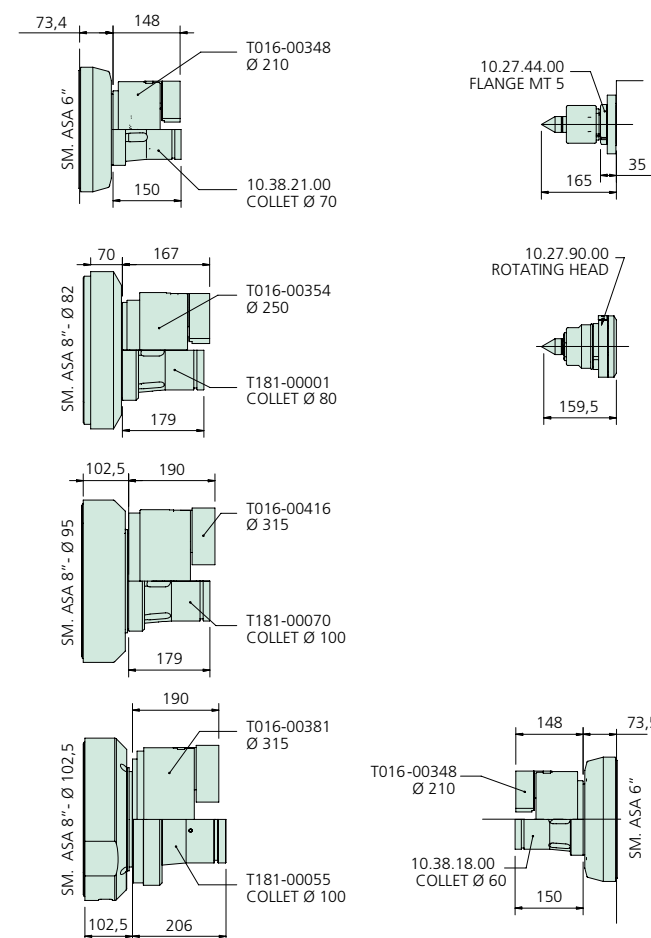
12-STATION TURRET B750 - B1250



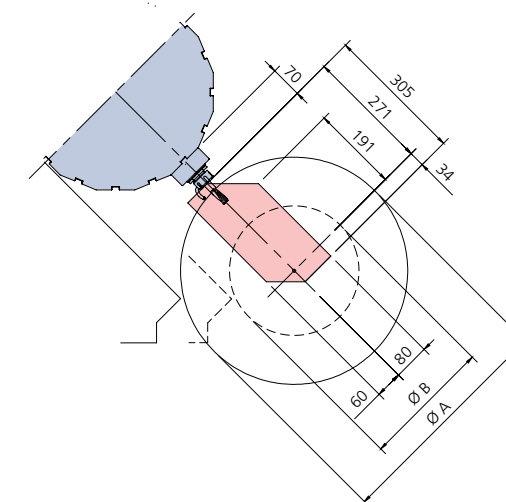
16-STATION TURRET B750 - B1250



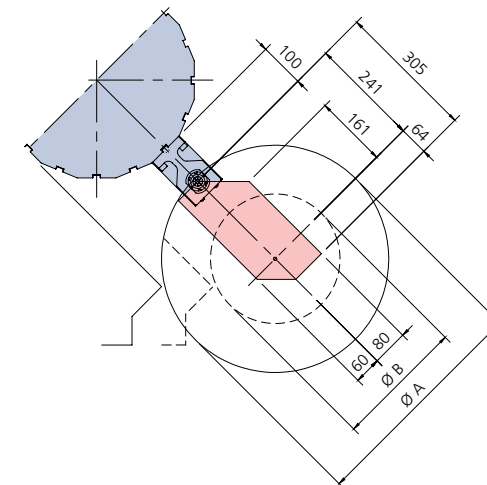
AREA OF FRONT PART OF THE SPINDLE B750 - B1250



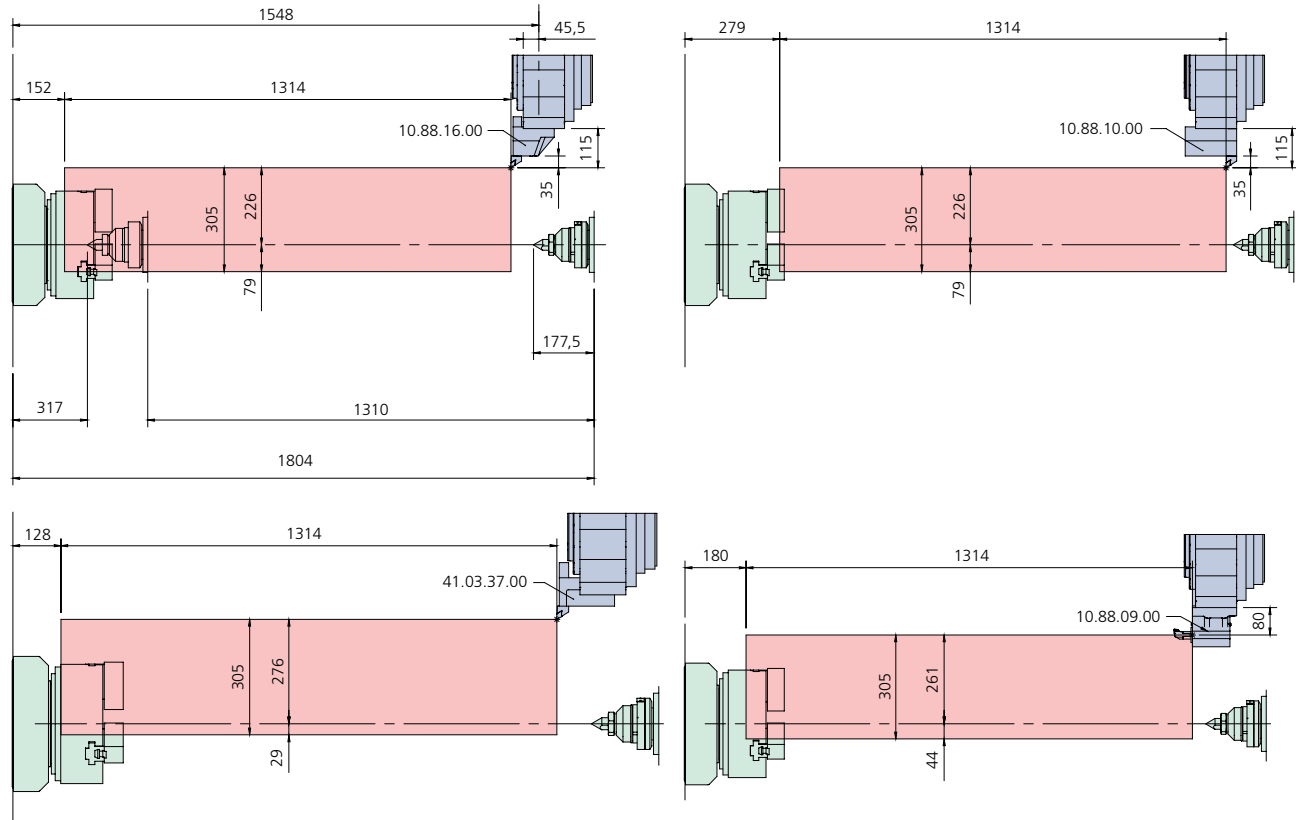
MILLING FIELD SPINDLE B750 - B1250



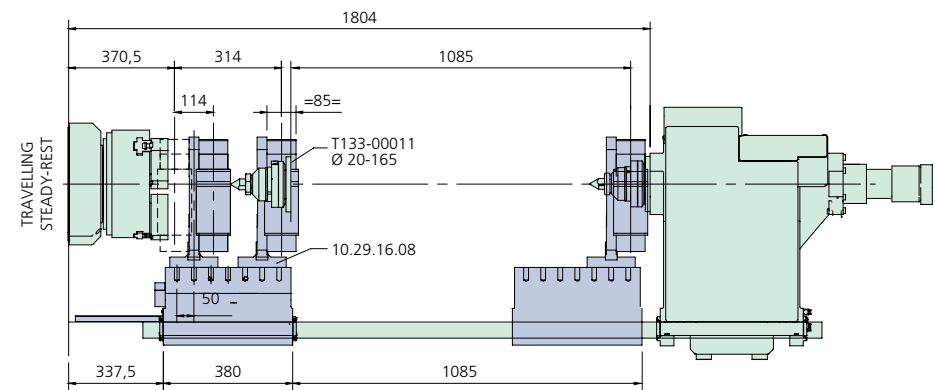
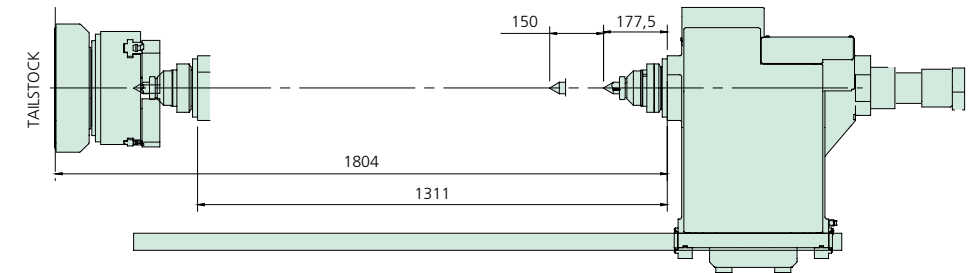
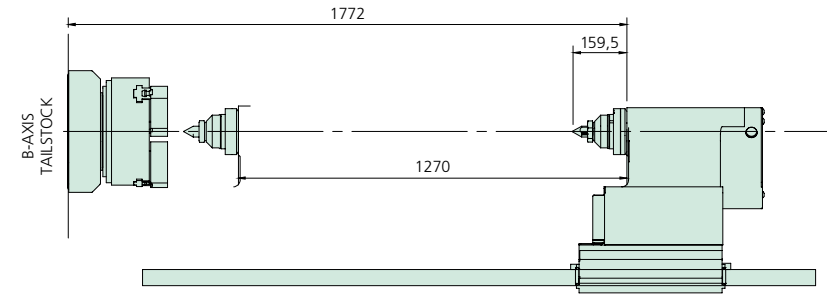
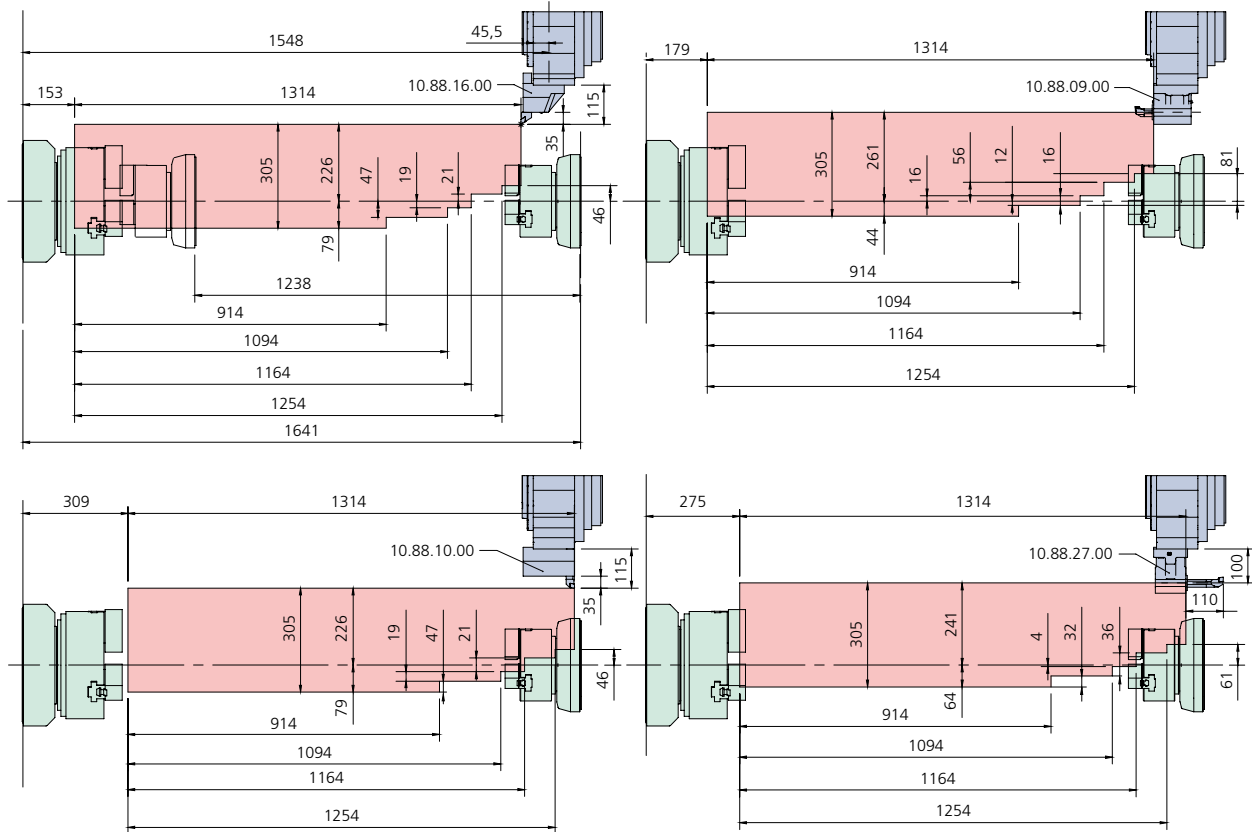
A= 500 mm max. swing diameter with turret in Y0
B= 285 mm max. swing diameter with turret in Y+/- 80 mm

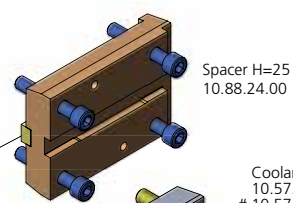
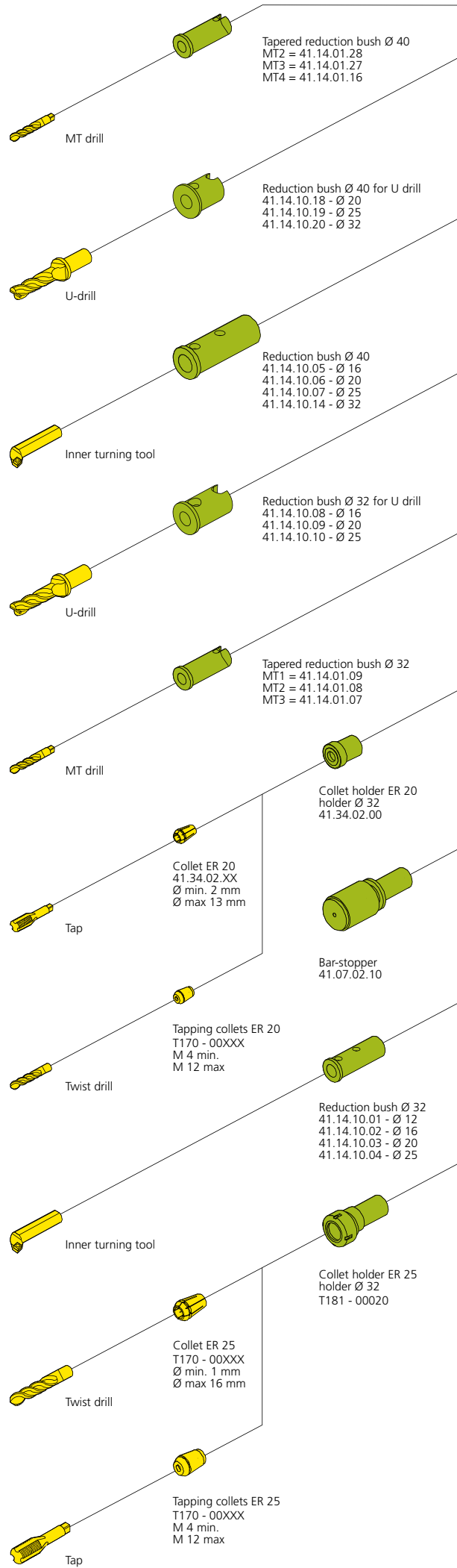


TURNING FIELD WITH TAILSTOCK - 16-station turret

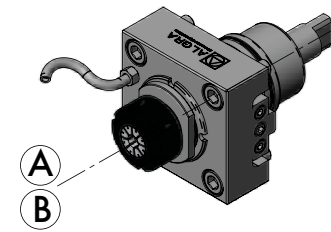
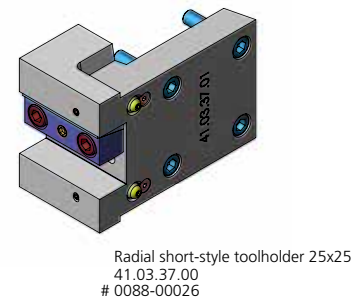
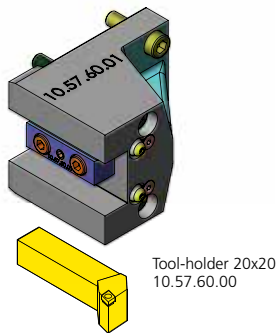
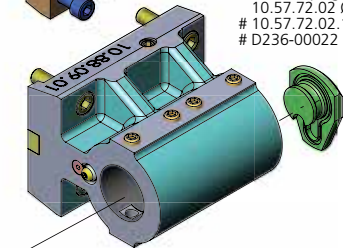


TURNING FIELD WITH SUB-SPINDLE - 16-station turret

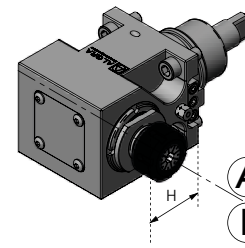




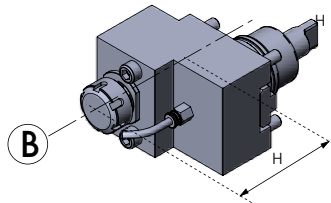
Coolant plug
10.57.72.02 Ø 40
10.57.72.02.1 Ø 40
D236-00022 Ø 50



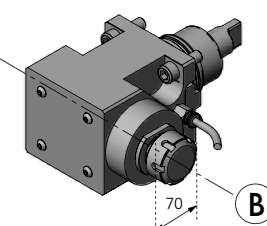
Radial live-spindle
T134-00242 ER25 QF
0088-00026



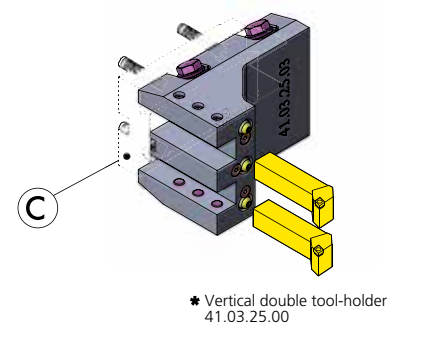
Axial live-spindle
H=80 T134-00212A ER25 QF
0088-00026



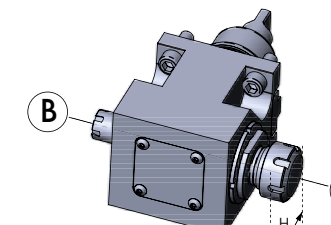
Radial live-spindle
12000 rpm
H=108 T134-00026A



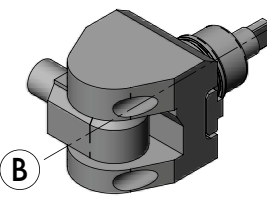
Axial live-spindle
12000 rpm
T134-00133



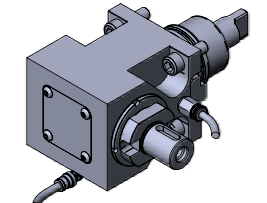
Vertical double tool-holder
41.03.25.00



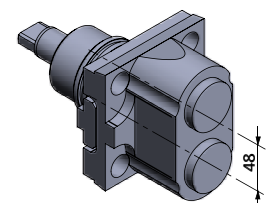
Axial live-spindle, double
H=70 T134-00135
H=100 T134-00158



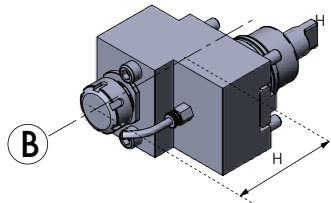
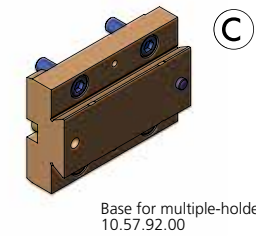
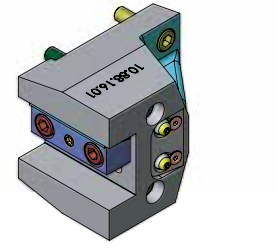
Adjustable live-spindle
T134-00251



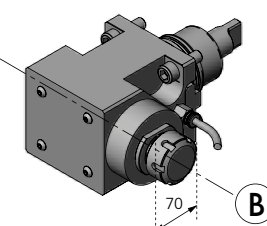
Polygon live-spindle
Ø 27x33
T134-00283



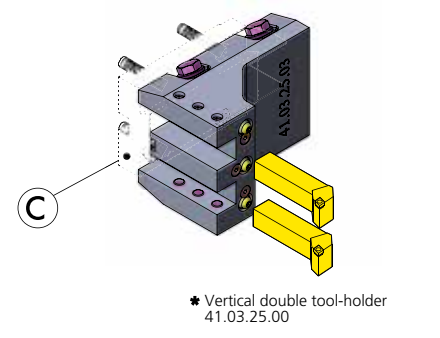
Radial live-spindle, double
T134-00119



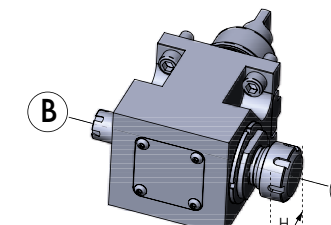
Radial live-spindle
12000 rpm
H=108 T134-00026A



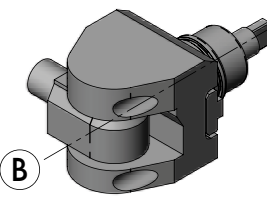
Axial live-spindle
12000 rpm
T134-00133



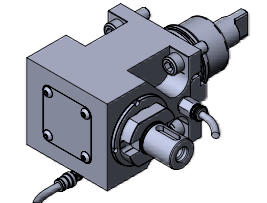
Vertical double tool-holder
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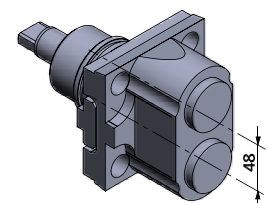
Axial live-spindle, double
H=70 T134-00135
H=100 T134-00158



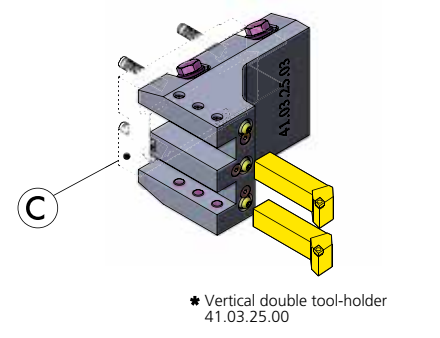
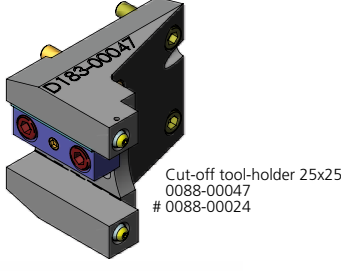
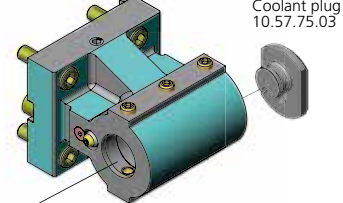
Adjustable live-spindle
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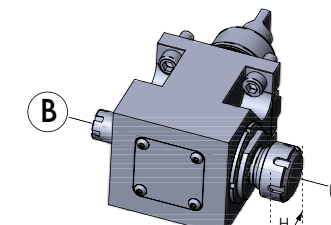
Polygon live-spindle
Ø 27x33
T134-00283



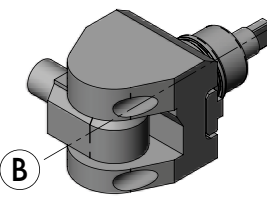
Radial live-spindle, double
T134-00119



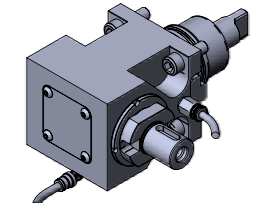
Vertical double tool-holder
41.03.25.00



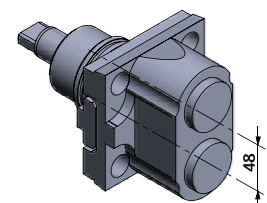
Axial live-spindle, double
H=70 T134-00135
H=100 T134-00158



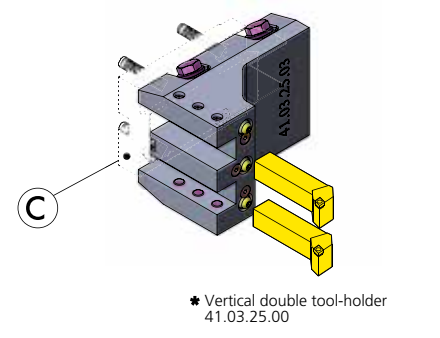
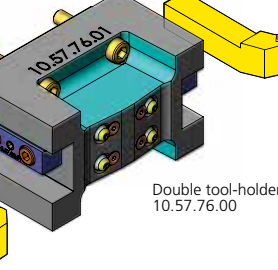
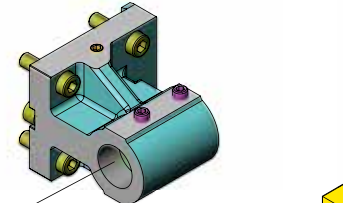
Adjustable live-spindle
T134-00251



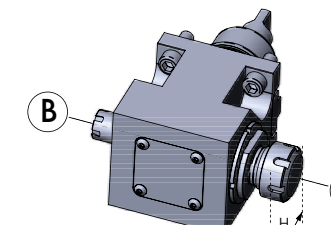
Polygon live-spindle
Ø 27x33
T134-00283



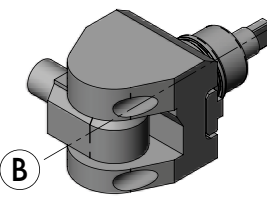
Radial live-spindle, double
T134-00119



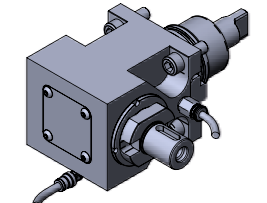
Vertical double tool-holder
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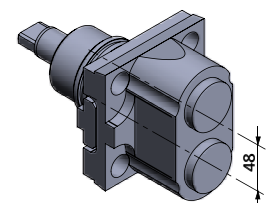
Axial live-spindle, double
H=70 T134-00135
H=100 T134-00158



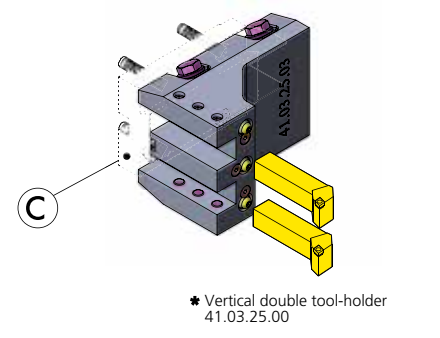
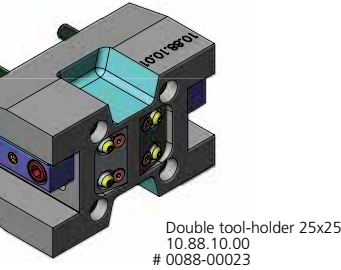
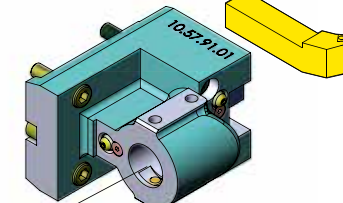
Adjustable live-spindle
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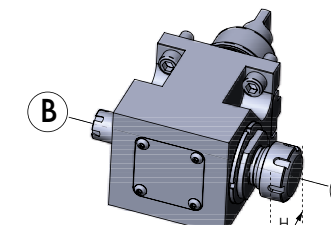
Polygon live-spindle
Ø 27x33
T134-00283



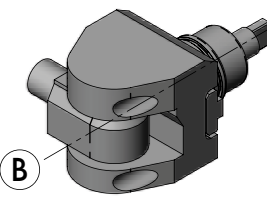
Radial live-spindle, double
T134-00119



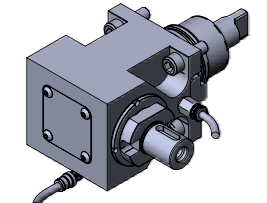
Vertical double tool-holder
41.03.25.00



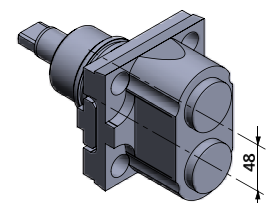
Axial live-spindle, double
H=70 T134-00135
H=100 T134-00158



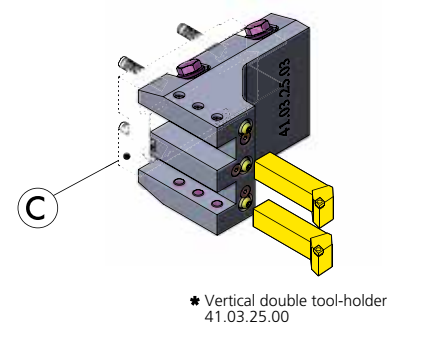
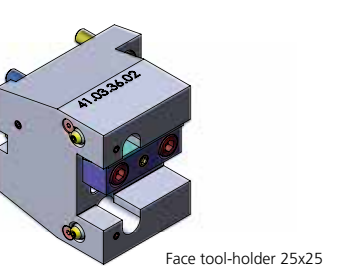
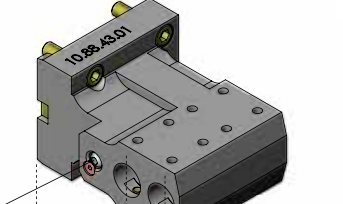
Adjustable live-spindle
T134-00251



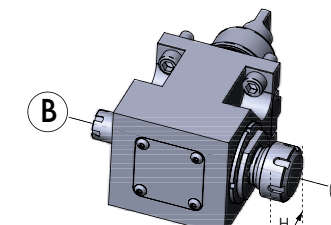
Polygon live-spindle
Ø 27x33
T134-00283



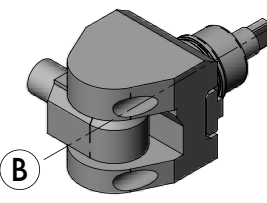
Radial live-spindle, double
T134-00119



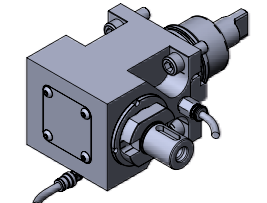
Vertical double tool-holder
41.03.25.00



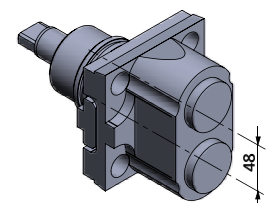
Axial live-spindle, double
H=70 T134-00135
H=100 T134-00158



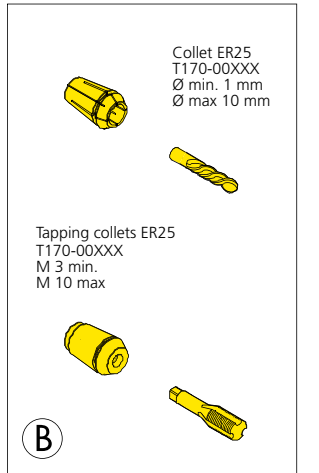
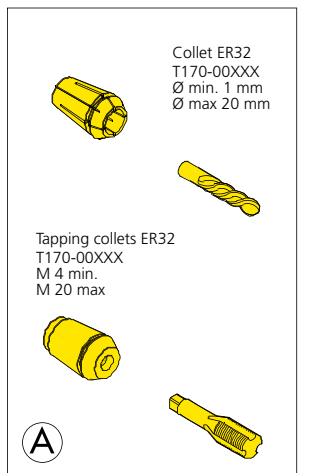
Adjustable live-spindle
T134-00251



Polygon live-spindle
Ø 27x33
T134-00283



Radial live-spindle, double
T134-00119



Only with Y-axis
With internal coolant
Only with 12 positions turret



ERGONOMIC OPERATOR PANEL

CNC FANUC i-HMI:
- 15" colour display
touch screen
- QWERTY keyboard

- BIGLIA operator panel
- Data transmission:
Ethernet gate,
memory card, USB,
RS232 port



INTUITIVE AND EXTREMELY USER-FRIENDLY

The i-HMI is the human-machine interface, 15" colour display with touch screen. The i-HMI system offers a high performance operating area where a simple touch allows the operator to gain access to all CNC functions: from work planning to BIGLIA customised pages, real time display of machining conditions and records of specific technical documentation.



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).



OPERATOR PANEL

Using a simple touch, the panel allows the operator to select, enable and disable all main functions during set-up operations. The green and red colours facilitate an immediate and fast reaction which results in reduced set-up times and cost saving.



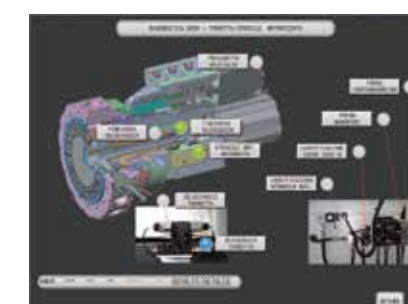
SBS: TOOL LOAD MONITORING (Option)

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).



QUICK DATA VIEW

This option can be used with digital documentation in the appropriate folder. Tailstock set-up, BIGLIA customised tool life management, SBS tool load monitoring system, CSS spindle rpm variation – all in a simple and interactive mode.



MANAGEMENT, DIAGNOSTICS and MAINTENANCE

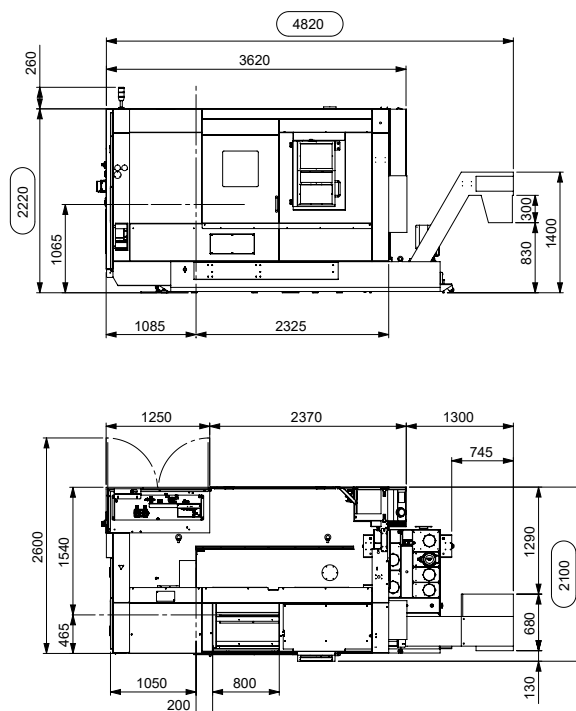
Constant and fast monitoring of the main data related to maintenance and machining conditions of the main machine components. Monitor operating pressures, motors, wears and oil levels along with simple instructions on how and where to troubleshoot.

MACHINE TYPE				B750			B750 M			B750 SM			B750 Y			B750 YS			B1250			B1250 M			B1250 SM			B1250 Y			B1250 YS						
MACHINING CAPACITY																																					
Max. bar machining diameter	mm	70	80	93/100	70	80	93/100	70	80	93/100	70	80	93/100	70	80	93/100	80 ⁽³⁾	93/100	80 ⁽³⁾	93/100	80 ⁽³⁾	93/100	80 ⁽³⁾	93/100	80 ⁽³⁾	93/100	80 ⁽³⁾	93/100	80 ⁽³⁾	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	552/350	552/450	552	552/450	552	552/450	552	553/450	552	552/450	552	552/450	552	553/450	552	552/450	552							
Max. machining length	mm	765 ⁽¹⁾			765 ⁽¹⁾			765 ⁽¹⁾			765 ⁽¹⁾			765 ⁽¹⁾			1195 ⁽²⁾			1195 ⁽²⁾			1195 ⁽²⁾			1195 ⁽²⁾			1195 ⁽²⁾								
Max. swing over diameter	mm	680/500			680/500			680/500			680/500			680/500			680/500			680/500			680/500			680/500			680/500								
MAIN SPINDLE																																					
Max. speed	rpm	4500	3200	3000	4500	3200	3000	4500	3200	3000	4500	3200	3000	4500	3200	3000	3200	3000	3200	3000	3200	3000	3200	3000	3200	3000	3200	3000	3200	3000							
Spindle nose	ASA	6"	8"	8"	6"	8"	8"	6"	8"	8"	6"	8"	8"	6"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"						
Spindle bore	mm	77.5	91	106/111	77.5	91	106/111	77.5	91	106/111	77.5	91	106/111	77.5	91	106/111	91	106/111	91	106/111	91	106/111	91	106/111	91	106/111	91	106/111	91	106/111							
Inside diam. of bearings	mm	110	130	150	110	130	150	110	130	150	110	130	150	110	130	150	130	150	130	150	130	150	130	150	130	150	130	150	130	150							
Chuck diameter	mm	250	315	400	250	315	400	250	315	400	250	315	400	250	315	400	315	400	315	400	315	400	315	400	315	400	315	400	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	30-40	15-22	30-38	15-22	30-38	15-22	30-38	15-22	30-38	15-22	30-38	15-22	30-38	15-22	30-38	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	286	398-700	800-1014	398-700	800-1014	398-700	800-1014	398-700	800-1014	398-700	800-1014	398-700	800-1014	398-700	800-1014	398-700	800-1014							
SUB-SPINDLE																																					
Max. speed	rpm	--			--			4500			--			4500			--			--			4500			--			4500								
Spindle nose	ASA	--			--			6"			--			6"			--			--			6"			--			6"								
Spindle bore	mm	--			--			77.5			--			77.5			--			--			77.5			--			77.5								
Drawtube inside diameter	mm	--			--			70			--			70			--			--			70			--			70								
Inside diam. of bearings	mm	--			--			110			--			110			--			--			110			--			110								
Chuck diameter	mm	--			--			210-250			--			210-250			--			--			210 - 250			--			210 - 250								
Motor power	kW	--			--			30-40			--			30-40			--			--			30 - 40			--			30 - 40								
Max. torque	Nm	--			--			286			--			286			--			--			286			--			286								
B-axis automatic positioning	mm	--			--			895			--			895			--			--			1130			--			1130								
B-axis rapid traverse	m/min	--			--			24			--			24			--			--			24			--			24								
TURRET																																					
No of tools	N°	16/12			16/12			16/12			16/12			16/12			16/12			16/12			16/12			16/12			16/12			16/12					
Tool shank for OD turning	mm	25x25			25x25			25x25			25x25			25x25			25x25			25x25			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			32-40 / 40-50			32-40 / 40-50			32-40 / 40-50			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			0,3			0,3			0,3			0,3			0,3			0,3			0,3					
LIVE TOOLING																																					
No of live tools	N°	--			16/12			16/12			16/12			16/12			16/12			--			16/12			16/12			16/12			16/12			16/12		
Max. speed	rpm	--			6000 / (10000)			6000 / (10000)			6000 / (10000)			6000 / (10000)			6000 / (10000)			--			6000 / (10000)			6000 / (10000)			6000 / (10000)			6000 / (10000)					
Motor power	kW	--			12/15			12/15			12/15			12/15			12/15			--			12/15			12/15			12/15			12/15					
Max. torque	Nm	--			35/37			35/37			35/37			35/37			35/37			--			35/37			35/37			35/37			35/37					
C-AXIS																																					
Min. programmable value	°	--			0,001			0,001			0,001			0,001			0,001			--			0,001			0,001			0,001			0,001					
Max. rapid traverse	rpm	--			100			100			100			100			100			--			100			100			100			100					
AXES																																					
X-axis stroke	mm	305			305			305			305			305			305			305			305			305			305			305					
Y-axis stroke	mm	--			--			--			140			140			140			--			--			140			140			140					
Z-axis stroke	mm	860			860			860			860			860			1310			1310			1310			1310			1310			1310					
X-axis rapid traverse	m/min	18			18			18			18			18			18			18			18			18			18			18					
Y-axis rapid traverse	m/min	--			--			--			7,5			7,5			--			--			7,5			7,5			7,5			7,5					
Z-axis rapid traverse	m/min	24			24			24			24			24			24			24			24			24			24			24					
TAILSTOCK																																					
Automatic quill stroke	mm	--			--			--			--			--			150			150			--			150			--			--					
Quill diameter	mm	--			--			--			--			--			115			115			--			115			--			--					
Morse taper	MT	--			--			--			--			--			5			5			--			5			--			--					
Automatic positioning	mm	--			--			--			--			--			1310			1310			--			1310			--			--					
B-AXIS TAILSTOCK																																					
Morse taper	MT	4-5			4-5			--			4-5			--			5/4			5/4			5/4			5/4			5/4			--					
B-axis automatic positioning	mm	910			910			--			910			--			1140			1140			1140			1140			1140			--					
B-axis rapid traverse	m/min	15			15			--			15			--			15			15			15			15			15			--					
COOLING SYSTEM																																					
Tank capacity	l	300			300			300			300			300			300			300			300			300			300			300					
Pump nominal displacement	l/min	60			60			60			60			60			60			60			60			60			60			60					
Electropump motor rating	kW	1,1			1,1			1,1			1,1			1,1			1,1			1,1			1,1			1,1			1,1			1,1					
DIMENSIONS AND WEIGHT																																					
Machine with swarf conveyor	cm	528x203x248h			528x203x248h			528x203x248h			528x203x248h			528x203x248h			562x219x249h			562x219x249h			562x219x249h			562x219x249h			562x219x249h			562x219x249h					
Spindle centre height	mm	1065			1065			1065			1065			1065			1065			1065			1065			1065			1065			1065					
Machine weight with swarf conv.	kg	7250			7350			7500			7450			7600			7850			7950			8250			8100			8400			8400					

CNC TURNING CENTRES

M A C H I N E O V E R A L L D I M E N S I O N S

B750



B1250

