ELECTROSPINDLES

OLIspeed®

CATALOGUE 2024

OLI Speed: one stop solution.

Index

OLIspeed®

Company Profile

OLI Speed is a company specialized in the **design, production, and large-scale commercialization** of electric spindles and milling heads for machine tools, mainly intended for the processing of **wood, aluminium, and composite materials**.

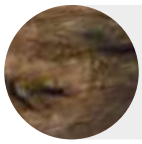
OLI Speed positions itself in the international market as an **independent company, not tied** by organizational and corporate constraints **to specific machine manufacturers**.

Since 2023, OLI Speed has joined forces with **OMLAT Mechatronics**, a leading company in the electric spindle sector with over 80 years of history. Thanks to the **experience** and **synergies** created by the merger of these two companies, the new group is now positioned in the market as a **global supplier** for all machine manufacturers involved in the processing of **any type of material.**

OLI Speed and OMLAT have as their primary objective to guarantee **safety**, **reliability**, and **sustainability** in all processes. The logistical and production model has been developed to **respond quickly and flexibly** to each customer's request.

OLI Speed and **OMLAT** are part of the **OLI group**, from which they can exploit numerous potentials, from **management experience** to technological **know-how**, to the widespread commercial and logistical network, which currently boasts **24 subsidiaries** distributed throughout the world, thus ensuring **excellent pre and post-sales assistance** to our customers.

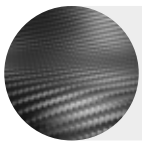
Exclusive Certifications

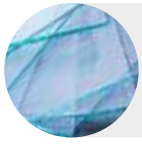

Wood


Aluminium


Marble


Stone


Composit


Glass


Plastic

ISF-OLI01 E481805

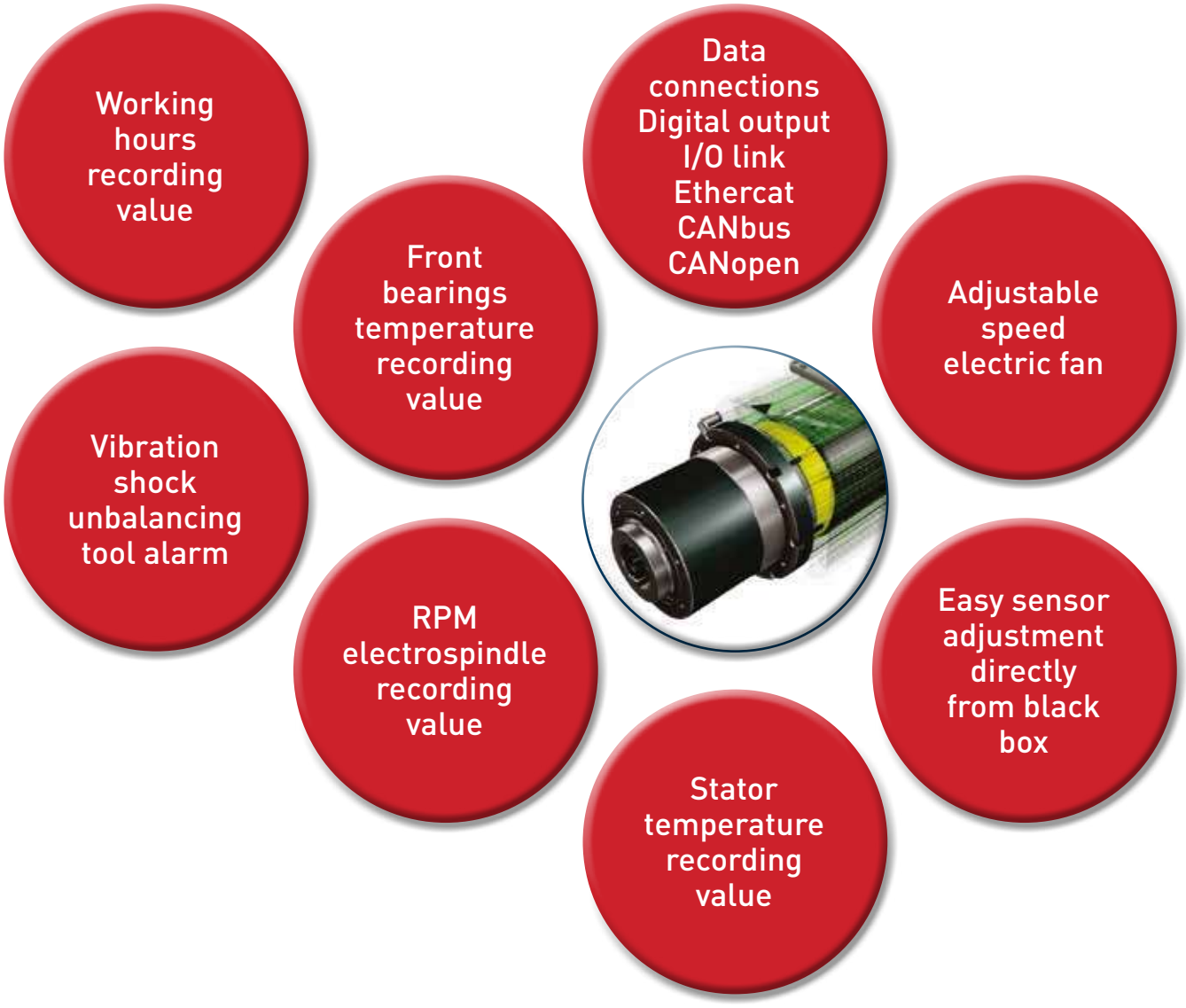
The **UL certification mark** is one of the most highly recognised symbols, ensuring that a product is guaranteed to meet the **safety and quality standards** of products in the United States and Canada, making it highly competitive for the free movement of products in international markets.

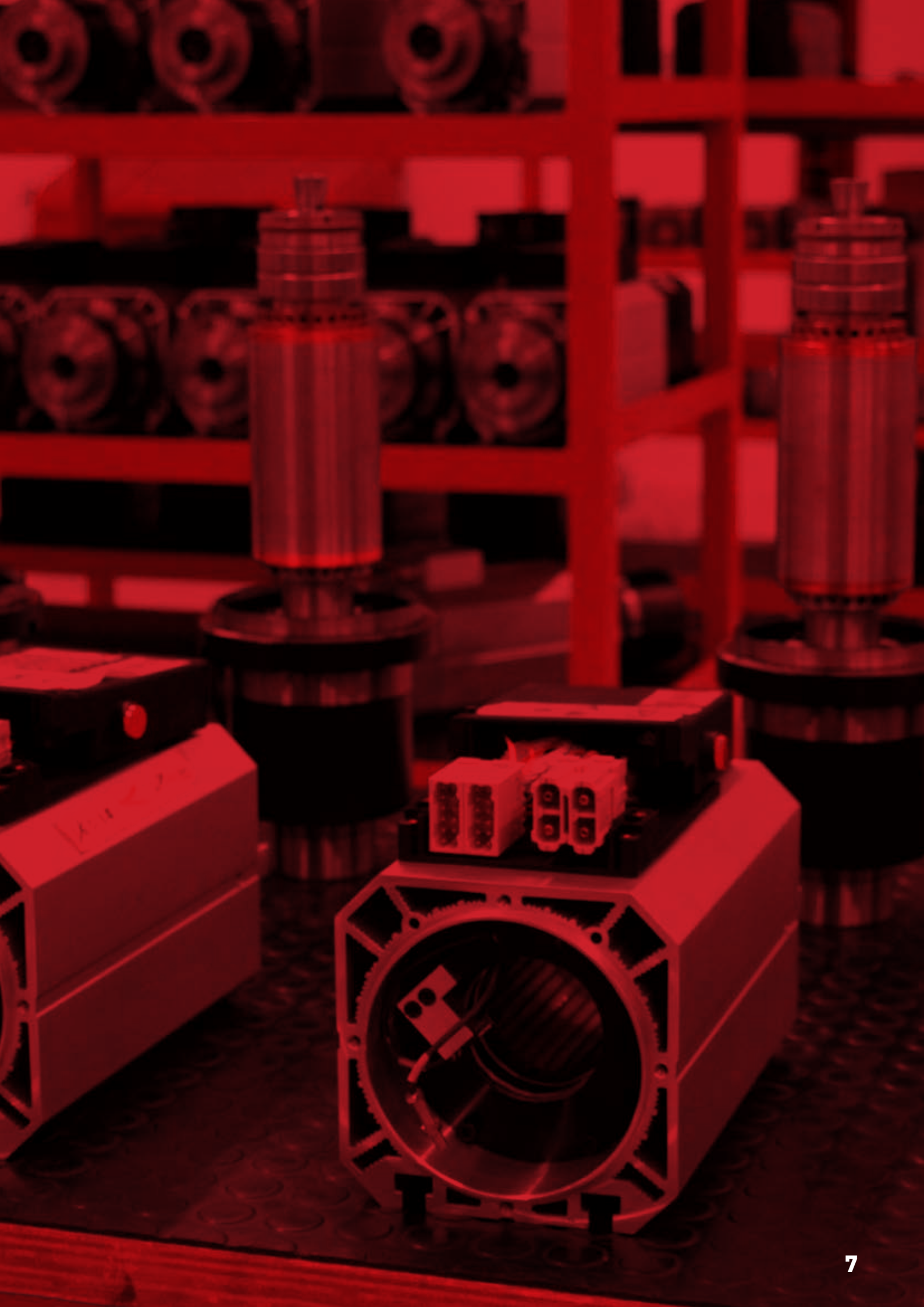
Designed and manufactured in Italy for the global market.

OLI Group Network

- Experienced management and comprehensive support.
- Extensive know-how with industry
- Advanced production technology
- Optimized response times

Network communications 4.0





SME

Manual tool change

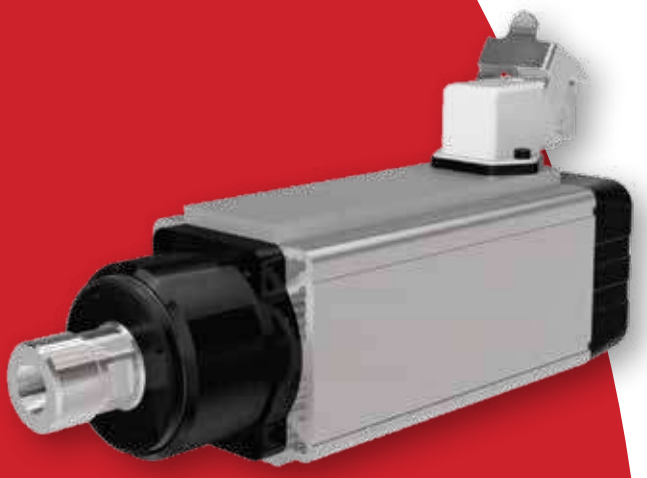
Main features:

- FEM designed aluminium frame;
- Extruded body with high thermal stability;
- High efficiency electric motors;
- Heavy duty versions available.

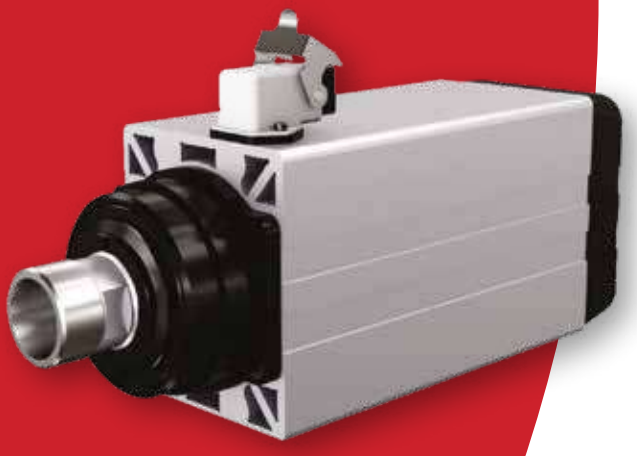
Technical data:

- Rotational speed up to 24,000 rpm;
- Ceramic front bearings;
- Steel rear bearings;
- Connector ILME type.

Range



SME 070

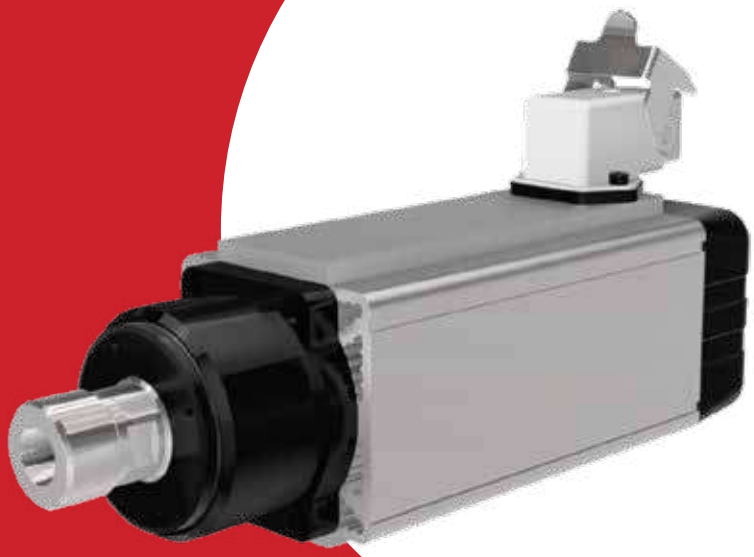


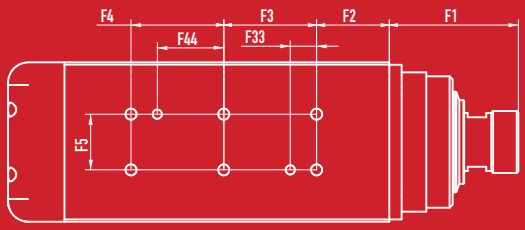
SME 103

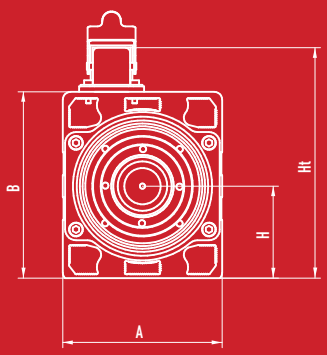
SME 070

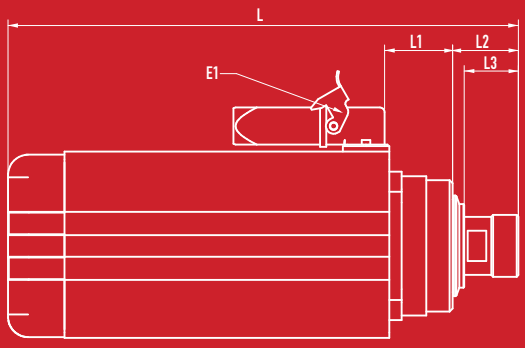
Collet type

Wood
Aluminium
Plastic









SME70/Collet Type - Dimension Table															
A	B	H	HT	F1	F2	F3	F4	F5	F33	F44	E1	L	L1	L2	L3
70	66	35	117.5	69	15	55	55	22	-	-	POWER CONNECTION	230	32.5	27.5	25

Electrospindle with manual tool change, projected to work wood and aluminium, and plastic materials. Well protected to work in environments with wood dust, and aluminium or plastic chippings.
Suitable for entry level CNC machines where require light-medium drilling, milling operations.
Available in many combinations of power and torque to satisfy any customers requirements.
Cooled by low noise
direct fan.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

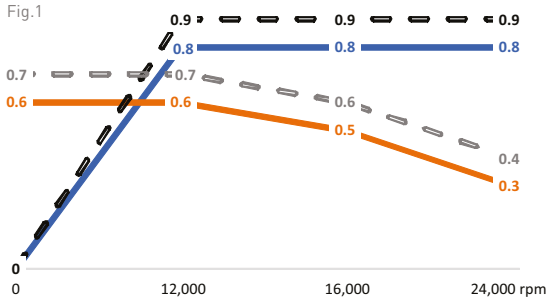


Fig.2

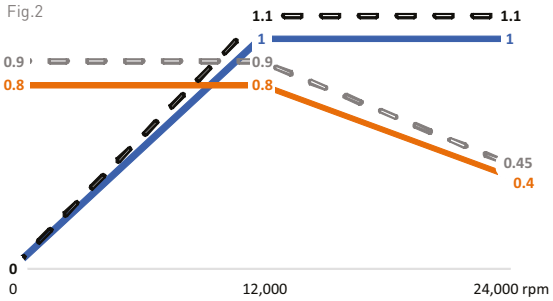
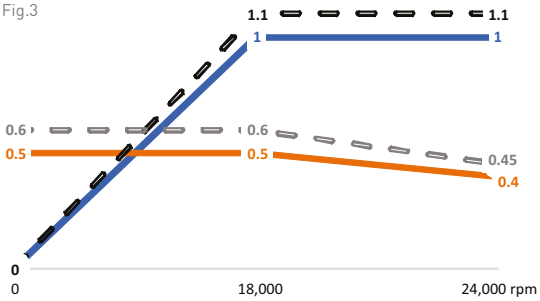


Fig.3



Main characteristics

SME 070 - MANUAL TOOL CHANGE			
Power S1/Rated speed	kW /rpm*1000	0.8 / 12	Fig.1
		1.0 / 12	Fig.2
		1.0 / 18	Fig.3
Torque S1	Nm	See chart	
Tool taper	-	ER 16 - ER 20	
Nose type	-	-	
Maximum frequency	Hz	400	
Nominal tension	V	380	
Numbers of poles	N°	2	
Maximum speed	rpm	24000	
Tool Clamping	-	Manual	
Tool Unlocking	-	-	
Cylinder return	-	-	
Front Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Rear Bearings/Max speed	Steel	24000	
Bearings lubrication	-	Longlife	
Cooling system	Type	Direct fan	
Electric board 4.0	-	-	
Weight	kg	3.5	

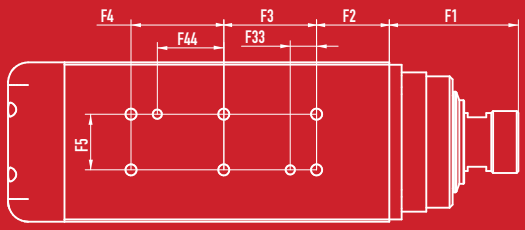
OPTIONS AVAILABLE	
Pressurization	●

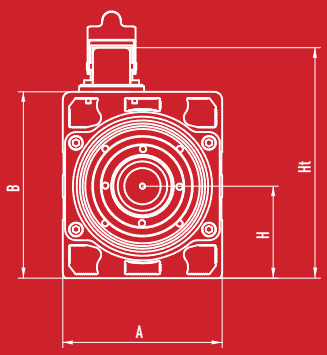
● available / — not available

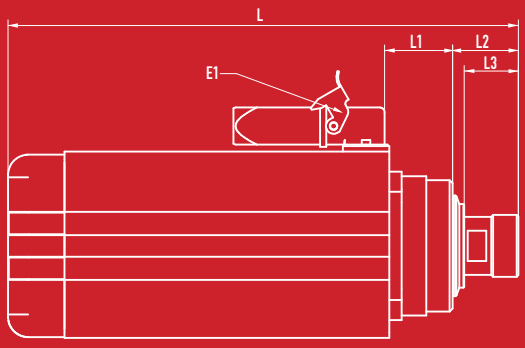
SME 103

Collet type

Wood
Aluminium
Plastic



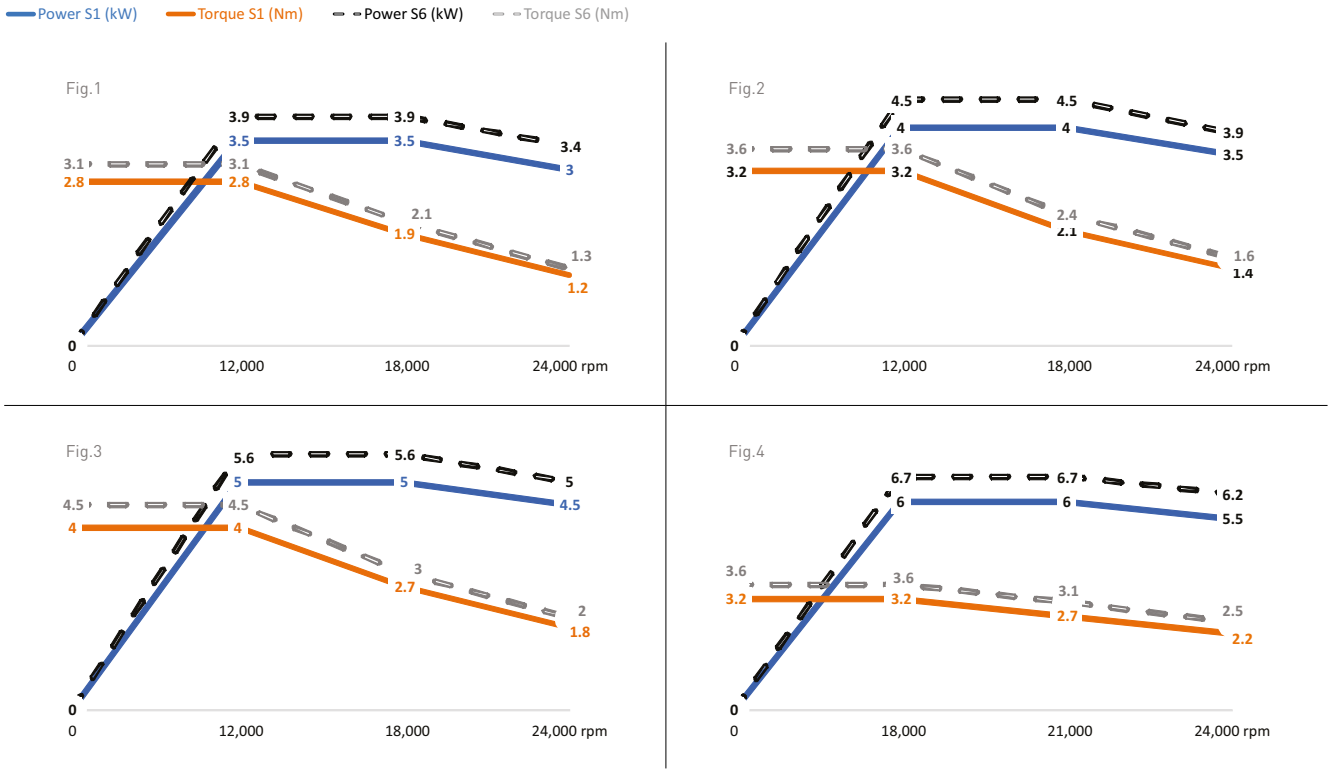




SME103/Collet Type - Dimension Table															
A	B	H	HT	F1	F2	F3	F4	F5	F33	F44	E1	L	L1	L2	L3
103	120.5	59.5	172.5	83	47	60	60	36	17	17	POWER CONNECTION	330	41	42.5	35

Electrospindle with manual tool change, projected to work wood and aluminium, and plastic materials. Well protected to work in environments with wood dust, and aluminium or plastic chippings.
Suitable for entry level CNC machines where require light-medium drilling, milling operations.
Available in many combinations of power and torque to satisfy any customers requirements.
Cooled by low noise
direct fan.

Power and torque



Main characteristics

SME 103 - MANUAL TOOL CHANGE			
Power S1/Rated speed	kW /rpm*1000	3.5 / 12	Fig.1
		4.0 / 12	Fig.2
		5.0 / 12	Fig.3
		6.0 / 18	Fig.4
Torque S1	Nm	See chart	
Tool taper	-	ER 32	
		HSK C40	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	400	
Nominal tension	V	380	
Numbers of poles	N°	2	
Maximum speed	rpm	24000	
Tool Clamping	-	-	
Tool Unlocking	-	-	
Cylinder return	-	-	
Front Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Rear Bearings/Max speed	Steel	24000	
Bearings lubrication	Grease	Longlife	
Cooling system	Type	Direct fan	
Electric board 4.0	-	-	
Weight	kg	12.3	

OPTIONS AVAILABLE	
Pressurization	●

● available / — not available

SAE

Automatic tool change

Main features:

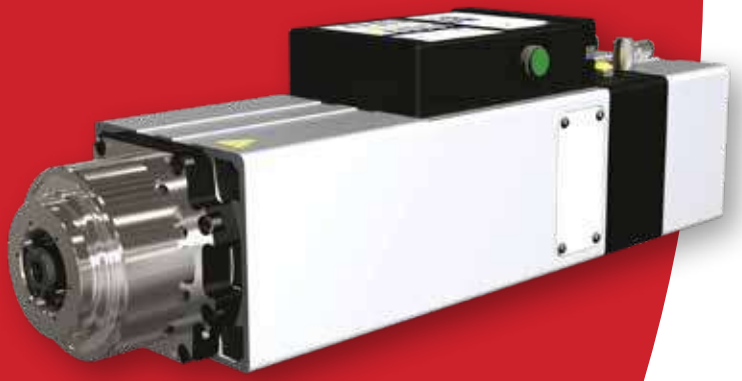
- FEM designed aluminium frame;
- Extruded body with high thermal stability;
- High efficiency electric motors;
- Heavy duty versions available;
- Synchronouss electric motor versions available;
- Kit shaft available for easy and quick exchange;
- Encoder for vector control available (optional);
- Front labyrinth;
- Automatic tool change piston return operated by springs (standard);
- Additional pneumatic service for “air piston return” (standard).

Technical data:

- Rotational speed up to 24,000 rpm;
- Ceramic front and rear bearings.

Range

SAE 145 Compact



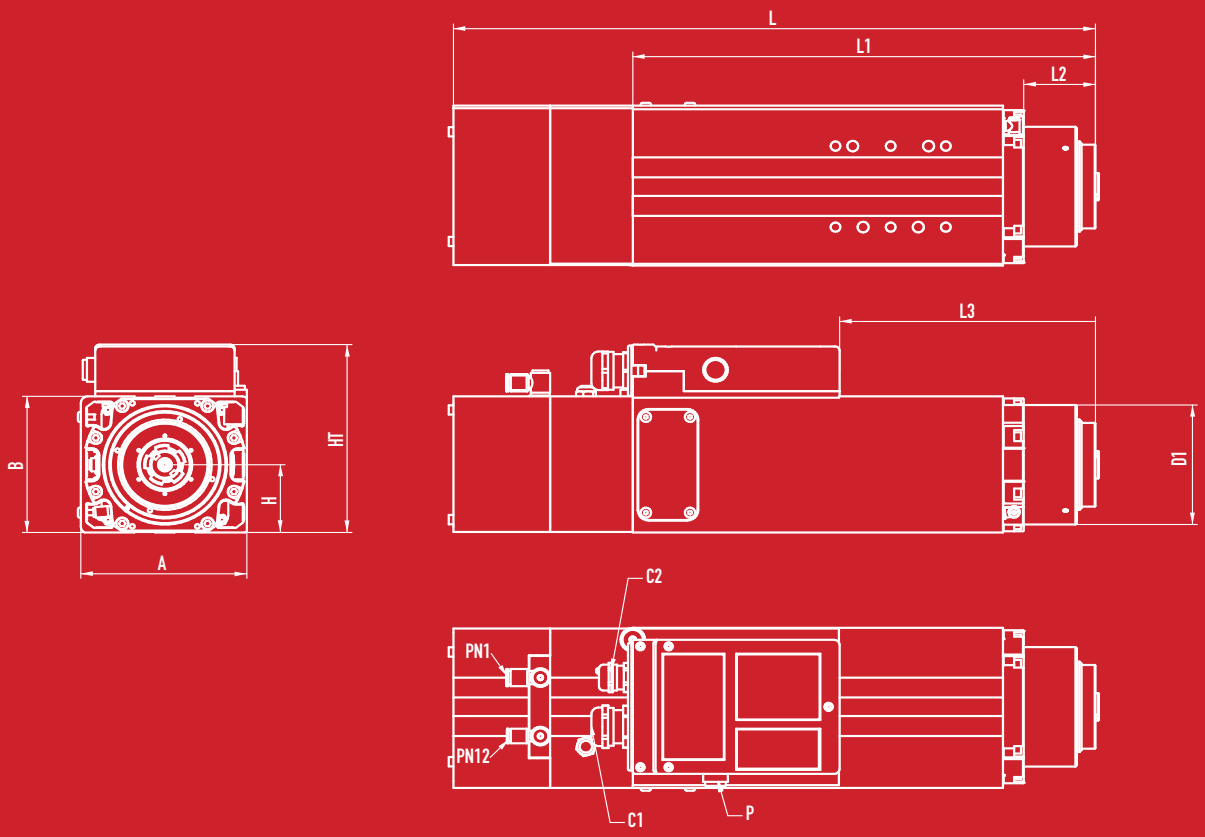
SAE 103

SAE 145

SAE 103

Air cooled

Wood
Aluminium
Plastic



SAE103/Air cooled - Dimension Table													
A	B	H	HT	L	L1	L2	L3	D1	C1	C2	P	PN1	PN12
120.5	102.5	51	141.5	469	328.5	67	185	100	POWER CONNECTION	SENSOR CONNECTION	PUSHBOTTON	INLET CONE RELEASE	INLET PRESSURIZATION + CONE CLEANING

Well protected to work in environments with wood dust, aluminium, and plastic chippings. Suitable for light-medium milling operations.

Available in many combinations of power and torque to satisfy any customers requirements.

Power and torque

Fig.1

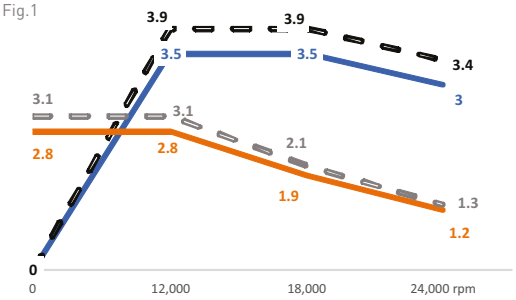


Fig.2

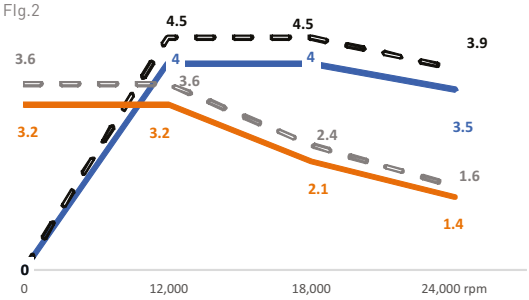


Fig.3

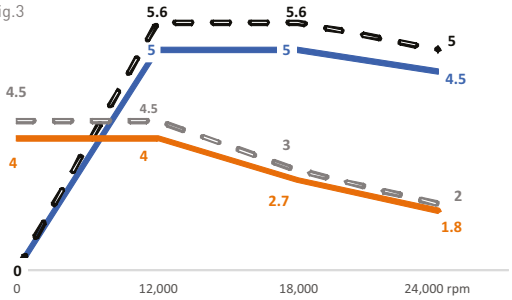
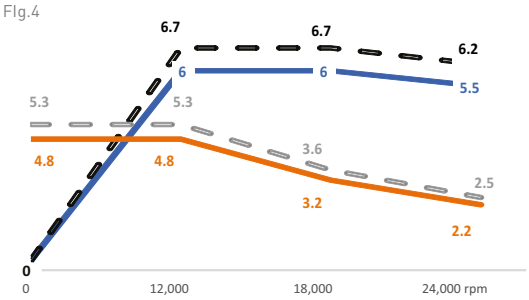


Fig.4



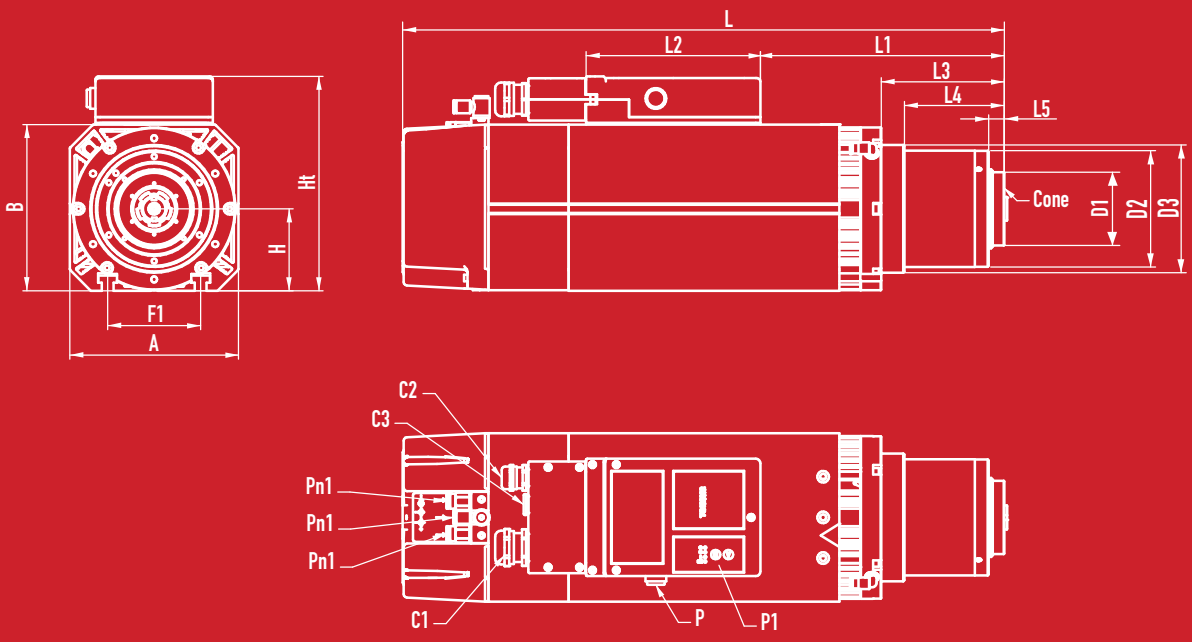
Main characteristics

SAE 103 - AUTOMATIC TOOL CHANGE			
Power S1/Rated speed	kW /rpm*1000	3.5 / 12	Fig.1
		4.0 / 12	Fig.2
		5.0 / 12	Fig.3
		6.0 / 12	Fig.4
Torque S1	Nm	See chart	
Tool taper	-	ISO 30	
		HSK F63	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	800	
Nominal tension	V	220/380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	4 (min.)	
Cylinder return	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
	Steel	18000	
Rear Bearings/Max speed	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type/V	Electric fan/24	
Electric board 4.0	-	-	
Weight	kg	18.0	

SAE 145

Air cooled / Compact

Wood
Plastic
Composite materials

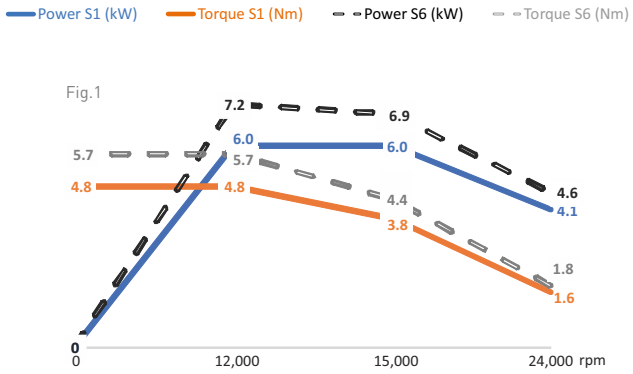


SAE145/Air cooled/Compact - Dimension Table																			
A	B	H	HT	F1	L	L1	L2	L3	L4	L5	D1	D2	D3	C1	C2	C3	P	P1	PN1
145	143	70.5	184.5	80	398.5	90.5	160	46.5	-	13.5	63	108/ 101	110	OUTPUT SENSOR CABLE	OUTPUT ENCODER CABLE	OUTPUT POWER CABLE	PUSHBOTTON	LED -WITH BALCK BOX	PNEUMATIC INLET

SAE 145 range is available in many combinations of power and torque to satisfy any customers requirements. Quick and easy maintenance, thanks to a “shaft kit”. Available in ISO30 and HSK F63 configuration, short and long nose. Due to the compact dimensions can be used easily in a anthropomorphic “robot” applications.

C axis available for all configuration.

Power and torque



Main characteristics

SAE 145 - AUTOMATIC TOOL CHANGE AIR COOLING			
Power S1/Rated speed	kW /rpm*1000	6.0 / 12	Fig.1
Torque S1	Nm	See chart	
Tool taper	-	ISO 30	
		HSK F63	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	800	
Nominal tension	V	220/380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
	Steel	18000	
Rear Bearings/Max speed	Ceramic	24000	
Bearings lubrication	-	For life	
Cooling system	Type/V	Electric fan/24	
Electric board 4.0	Standard	Digital	
	Protocols available	can bus - can open - ethercat - I/O link	
Weight	kg	19.0	

OPTIONS AVAILABLE	
Speed monitoring	●
C axis	—
C axis with pneumatic service	—
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	●
Bearing Temperature	●

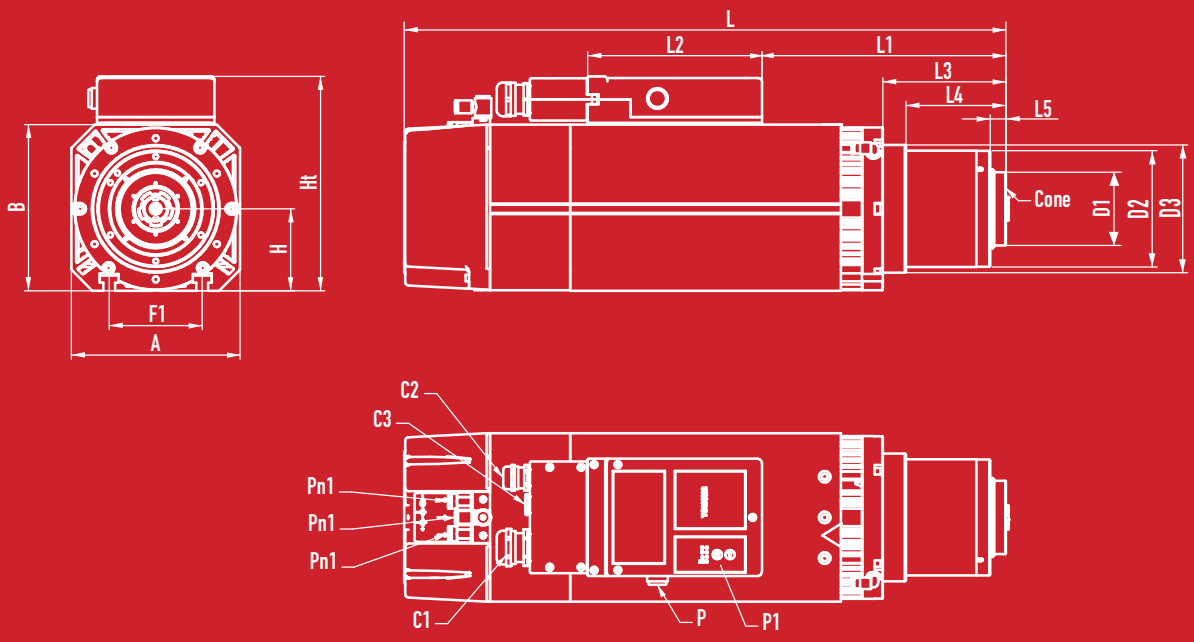
● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAE 145

Air cooled

Wood
Plastic
Composite materials



SAE145/Air cooled - Dimension Table																		
A	B	H	HT	F1	L	L1	L2	L3	L4	L5	D1	D2	D3	C1	C2	C3	P	P1	PN1
145	143	70.5	184.5	80	LN 518 SN 468	LN 210 SN 160	160	LN 106 SN 56	LN 84.5 SN 34.5	13.5	63	108/ 101	110	OUTPUT SENSOR CABLE	OUTPUT ENCODER CABLE	OUTPUT POWER CABLE	PUSHBOTTON	LED -WITH BALCK BOX	PNEUMATIC INLET

SAE 145 range is available in many combinations of power and torque to satisfy any customers requirements. Quick and easy maintenance, thanks to a “shaft kit”. Available in ISO30 and HSK F63 configuration, short and long nose. Due to the compact dimensions can be used easily in a anthropomorphic “robot” applications.

C axis available for all configuration.

Power and torque

Power S1 (kW) — Torque S1 (Nm) — Power S6 (kW) — Torque S6 (Nm)

Fig.1

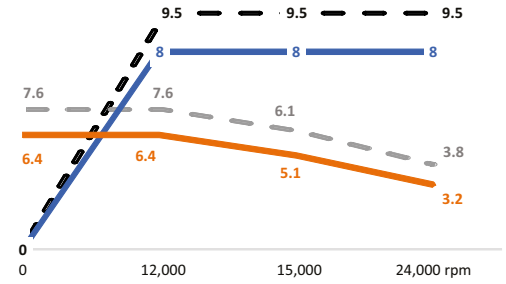


Fig.2

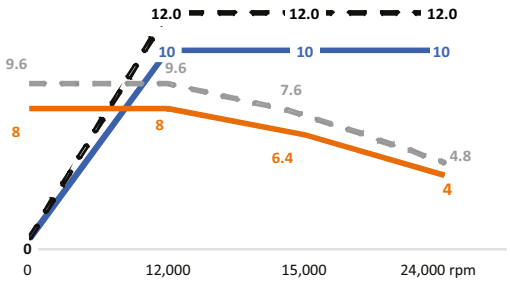
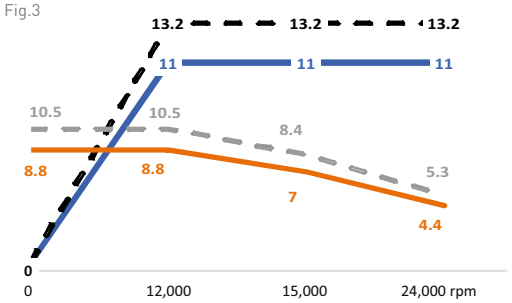


Fig.3



Main characteristics

SAE145 - AUTOMATIC TOOL CHANGE AIR COOLING			
Power S1/Rated speed	kW /rpm*1000	8.0 / 12	Fig.1
		10.0 / 12	Fig.2
		11.0 / 12	Fig.3
Torque S1	Nm	See chart	
Tool taper	-	ISO 30	
		HSK F63	
Nose type	-	Short nose - SN	
		Long nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	220/380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
	Steel	18000	
Rear Bearings/Max speed	Ceramic	24000	
Bearings lubrication	-	For life	
Cooling system	Type/V	Electric fan/24	
Electric board 4.0	Standard	Digital	
	Protocols available	can bus - can open - ethercat - I/O link	
Weight	kg	28.0	

OPTIONS AVAILABLE	
Speed monitoring	●
C axis	●
C axis with pneumatic service	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	●
Bearing Temperature	●

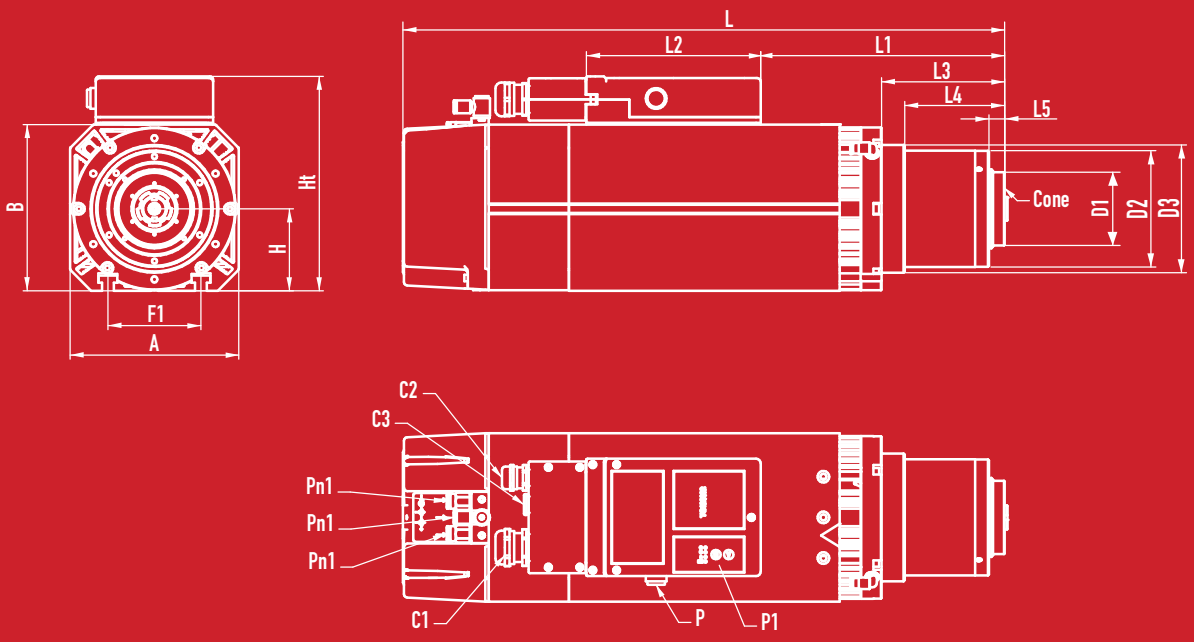
● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAE 145

Air cooled / Heavy duty

Wood
Plastic
Composite materials
Aluminium



SAE145/Air cooled/Heavy duty - Dimension Table																		
A	B	H	HT	F1	L	L1	L2	L3	L4	L5	D1	D2	D3	C1	C2	C3	P	P1	PN1
145	143	70.5	184.5	80	LN 518 SN 468	LN 210 SN 160	160	LN 106 SN 56	LN 84.5 SN 34.5	13.5	63	108/ 101	110	OUTPUT SENSOR CABLE	OUTPUT ENCODER CABLE	OUTPUT POWER CABLE	PUSHBOTTON	LED -WITH BALCK BOX	PNEUMATIC INLET

SAE 145 range is available in many combinations of power and torque to satisfy any customers requirements. Quick and easy maintenance, thanks to a “shaft kit”. High performances at very low speed especially if combined with TTL or 1VPP encoder.

Available in ISO30 and HSK F63 configuration. C axis available for all configuration.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

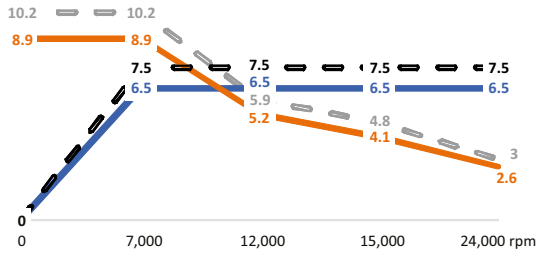
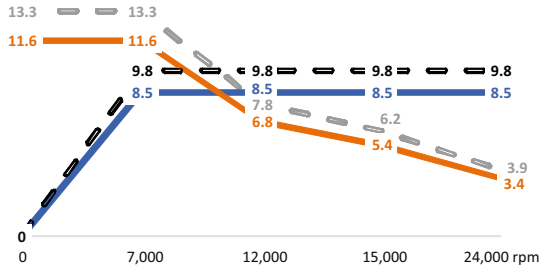


Fig.2



Main characteristics

SAE 145 - HEAVY DUTY - AUTOMATIC TOOL CHANGE AIR COOLING			
Power S1/Rated speed	kW /rpm*1000	6.5 / 7	Fig.1
		8.5 / 7	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	ISO 30	
		HSK F63	
Nose type	-	Short nose - SN	
		Long nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	220/380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	springs	
Front Bearings/Max speed	Ceramic	24000	
	Steel	18000	
Rear Bearings/Max speed	Ceramic	24000	
Bearings lubrication	-	For life	
Cooling system	Type/V	Electric fan/24	
Electric board 4.0	Standard	Digital	
	Protocols available	can bus - can open - ethercat - I/O link	
Weight	kg	28.0	

OPTIONS AVAILABLE	
Speed monitoring	●
C axis	●
C axis with pneumatic service	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	●
Bearing Temperature	●

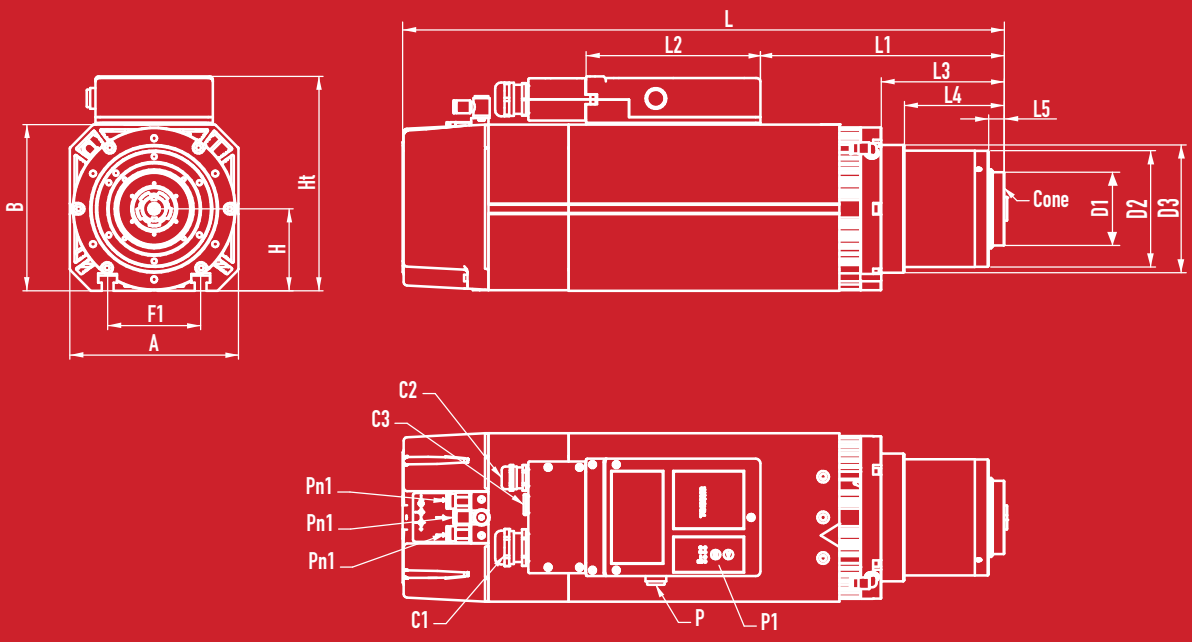
● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAE 145

Air cooled / Synchronous

Wood
Plastic
Composite materials
Aluminium



SAE145/Air cooled/Synchronous - Dimension Table																			
A	B	H	HT	F1	L	L1	L2	L3	L4	L5	D1	D2	D3	C1	C2	C3	P	P1	PN1
145	143	70.5	184.5	80	LN 518 SN 468	LN 210 SN 160	160	LN 106 SN 56	LN 84.5 SN 34.5	13.5	63	108/ 101	110	OUTPUT SENSOR CABLE	OUTPUT ENCODER CABLE	OUTPUT POWER CABLE	PUSHBOTTON	LED -WITH BALCK BOX	PNEUMATIC INLET

SAE 145 range is available in many combinations of power and torque to satisfy any customers requirements. Quick and easy maintenance, thanks to a “shaft kit”. C axis available for all configuration. High performances in the entire speed range, especially if combined with TTL or 1VPP encoder.

It represents a valid alternative in those applications where high power is required but liquid cooling is not desired. Due to the higher performances is available only in HSK F63 configuration.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

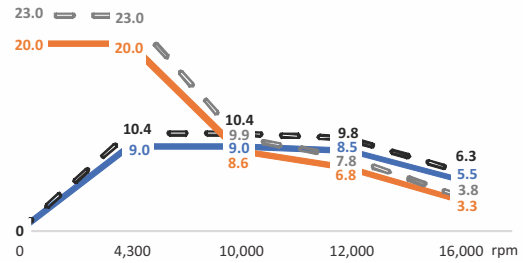
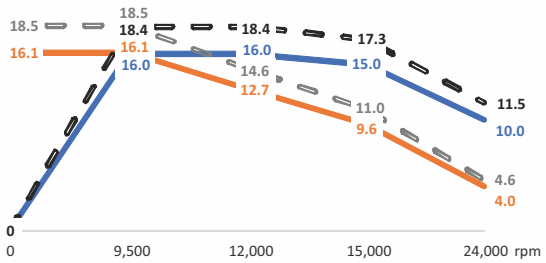


Fig.2



Main characteristics

SAE 145 - AUTOMATIC TOOL CHANGE AIR COOLING			
Power S1/Rated speed	kW /rpm*1000	9.0 / 4.3	Fig.1
		16.0 / 9.5	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	HSK F63	
Nose type	-	Short nose - SN	
		Long nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	220/380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
	Steel	18000	
Rear Bearings/Max speed	Ceramic	24000	
Bearings lubrication	-	For life	
Cooling system	Type/V	Electric fan/24	
Electric board 4.0	Standard	Digital	
	Protocols available	can bus - can open - ethercat - I/O link	
Weight	kg	28.0	

OPTIONS AVAILABLE	
Speed monitoring	●
C axis	●
C axis with pneumatic service	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	●
Bearing Temperature	●

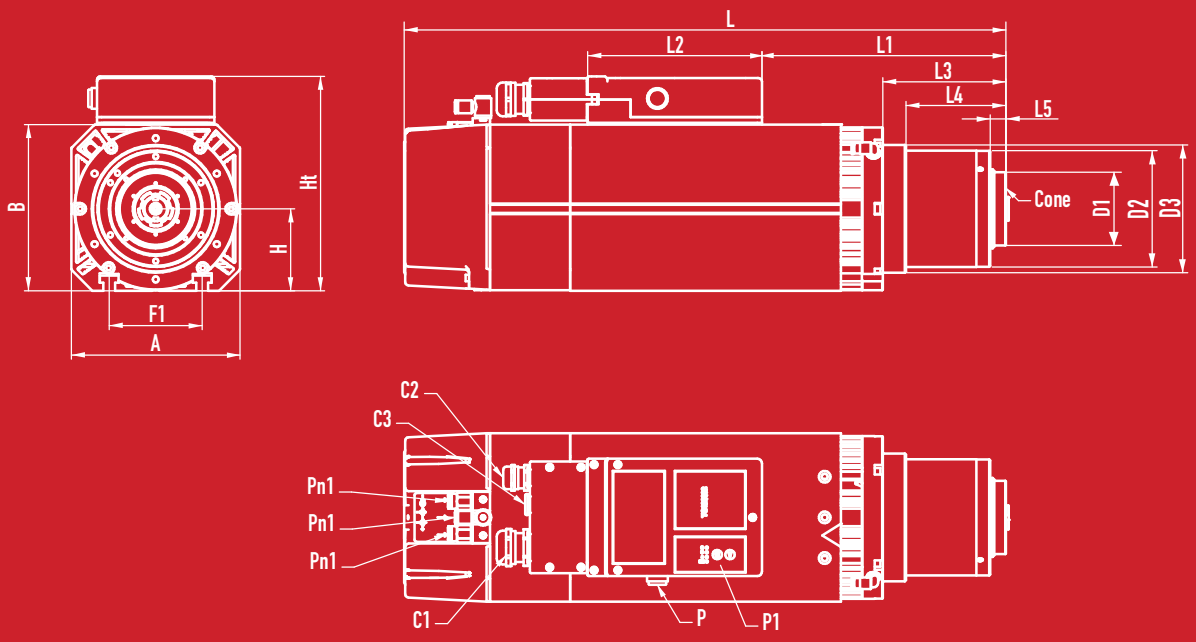
● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAE 145

Liquid cooled

Wood
Plastic
Composite materials
Aluminium



SAE145/Liquid cooled - Dimension Table																			
A	B	H	HT	F1	L	L1	L2	L3	L4	L5	D1	D2	D3	C1	C2	C3	P	P1	PN1
145	143	70.5	184.5	80	LN 480 SN 430	LN 210 SN 160	160	LN 106 SN 56	LN 84.5 SN 34.5	13.5	63	108/ 101	110	OUTPUT SENSOR CABLE	OUTPUT ENCODER CABLE	OUTPUT POWER CABLE	PUSHBOTTON	LED -WITH BALCK BOX	PNEUMATIC INLET

SAE 145 range is available in many combinations of power and torque to satisfy any customers requirements. Quick and easy maintenance, thanks to a “shaft kit”. Available in ISO30 and HSK F63 configuration, short and long nose. Due to the compact dimensions can be used easily in a anthropomorphic “robot” applications.

C axis available for all configuration. High reliability in hard drilling and milling operations thanks to liquid cooling system.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

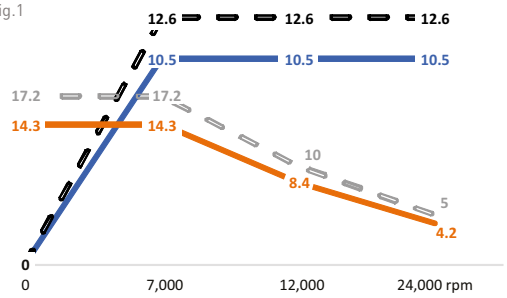
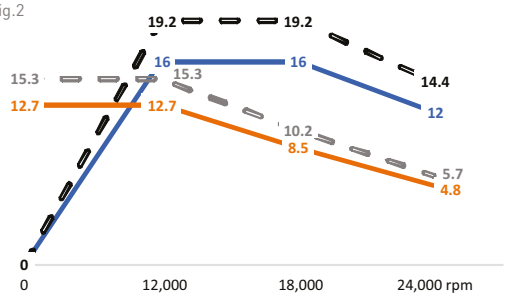


Fig.2



Main characteristics

SAE 145 - AUTOMATIC TOOL CHANGE LIQUID COOLING			
Power S1/Rated speed	kW /rpm*1000	10.5 / 7	Fig.1
		16.0 / 12	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	HSK F63	
Nose type	-	Short nose - SN	
		Long nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	220/380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
	Steel	18000	
Rear Bearings/Max speed	Ceramic	24000	
Bearings lubrication	-	For life	
Cooling system	Type/V	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	can bus - can open - ethercat - I/O link	
Weight	kg	24.5	

OPTIONS AVAILABLE	
Speed monitoring	●
C axis	●
C axis with pneumatic service	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	●
Bearing Temperature	●

● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAB

Block square type

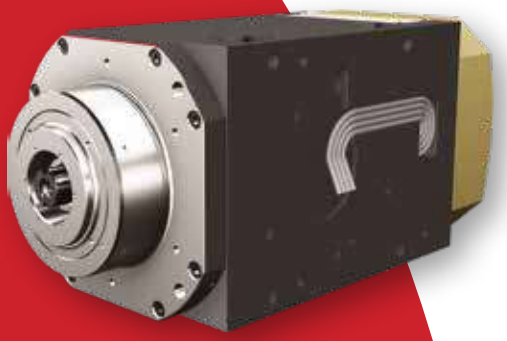
Main features:

- FEM designed high resistance aluminium frame completely manufactured with advanced CNC machines;
- Hard anodizing housing:
- Liquid cooled:
- Low air pressure required for automatic tool change system (Minimum pressure 6 bar):
- Available with encoder 1VPP or TTL type.

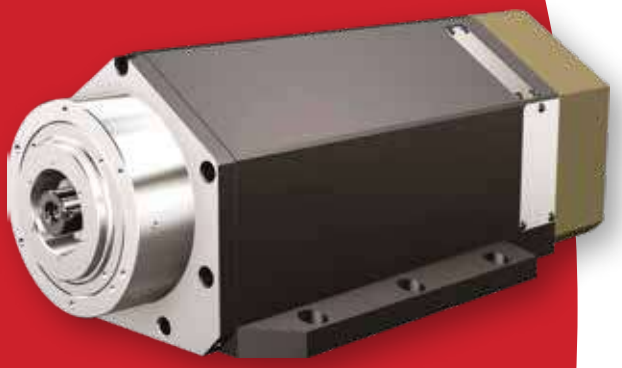
Technical data:

- Rotational speed up to 24,000 rpm;
- Available with Synchronous and Asynchronous motor;
- Available 4 and 6 poles;
- Front and rear «ceramic bearings» with seals on both sides;
- Grease lubrication for life.

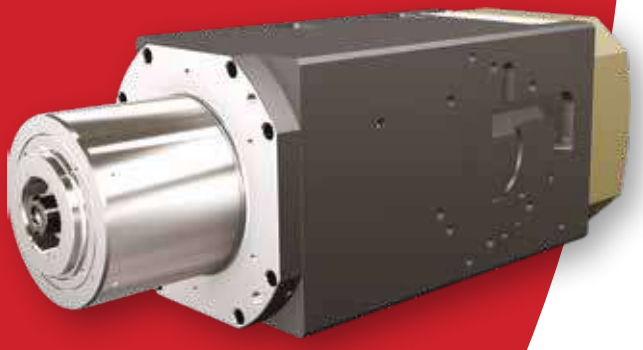
Range



SAB 150 SN



SAB 132



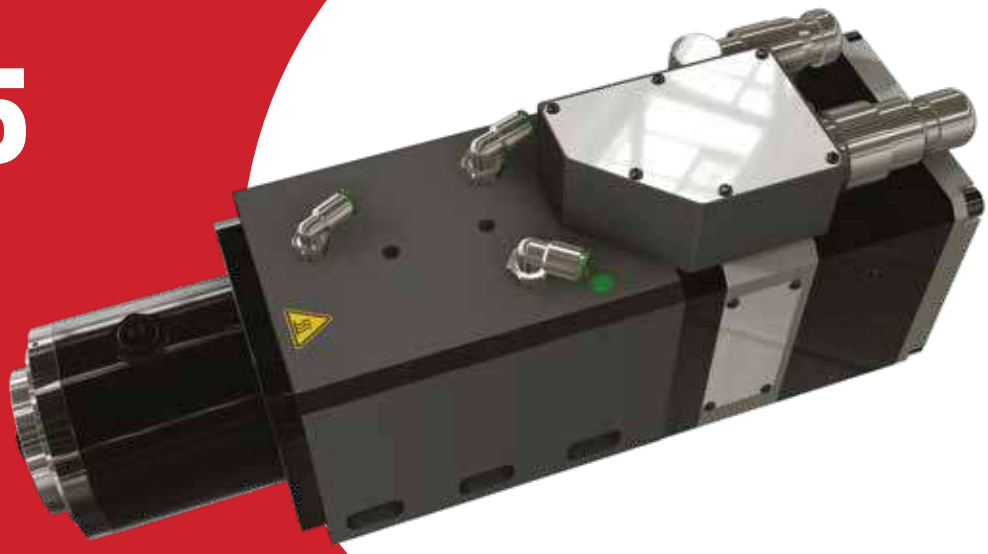
SAB 150 LN

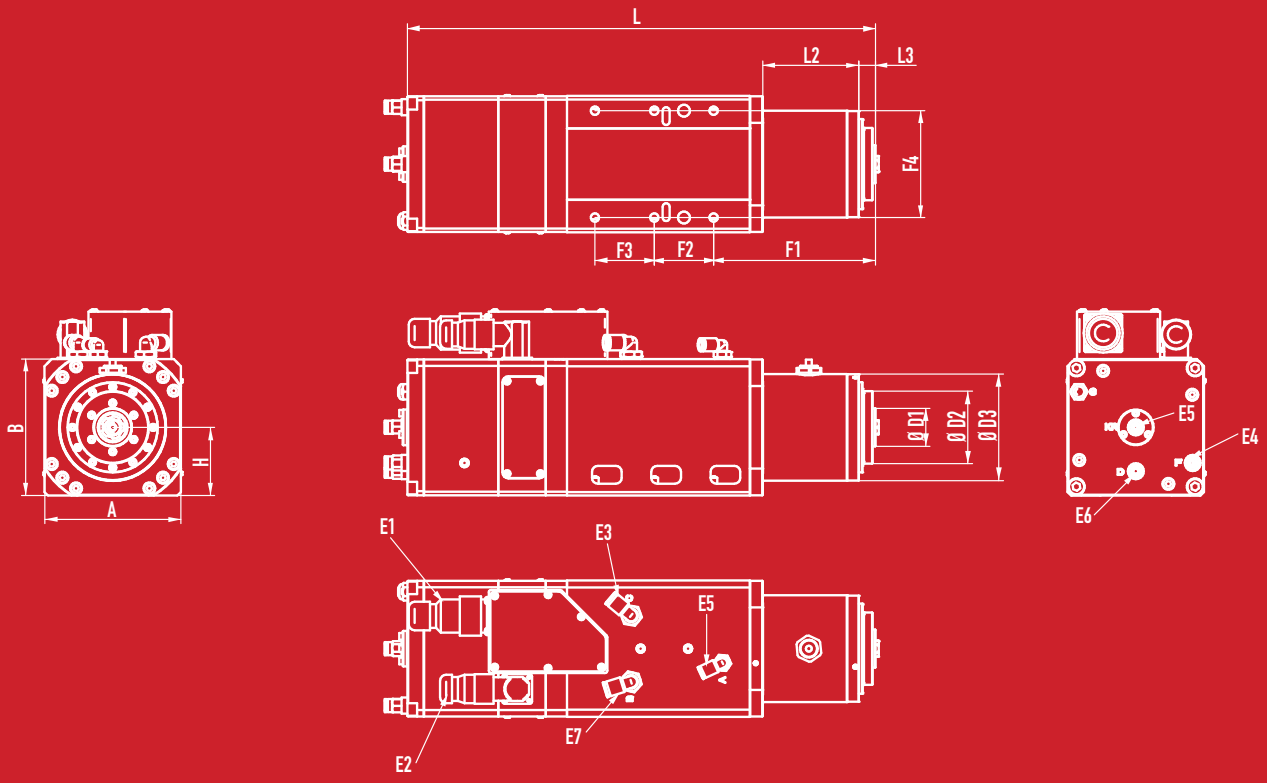
SAB 115

SAB 115

Forced air cooled

Aluminium
Plastic
Light alloy





SAB115/ Forced air cooled - Dimension Table																		
A	B	H	E1	E2	E3	E4	E5	E6	E7	L	L2	L3	F1	F2	F3	F4	D1	D2	D3
115	115	57.5	POWER CONNECTION	OUTPUT SENSOR CONNECTION	OUT MOTOR LIQUID	IN AIR FOR UNLOOCK (OPTIONAL)	N AIR FOR PRESSURIZATION + CONE CLEANING	IN/OUT CHANGE TOOL AIR	IN MOTOR LIQUID	394.5	71	24	136.5	50	50	90	32	61	89.5

Electrospindle specifically projected for 3 axis milling machines. Combines high performances in a very small housing. Available with Asynchronous motor and double voltage 220V and 380V, to satisfy any customers requirements. Available also with forced air cooling. Main applications for processing aluminium, plastic and light alloy.

It represents a valid alternative in those applications where high speed is required but liquid cooling is not desired.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1*

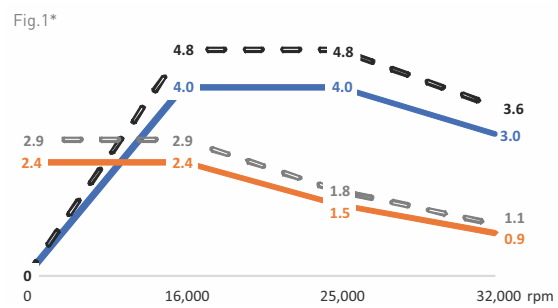
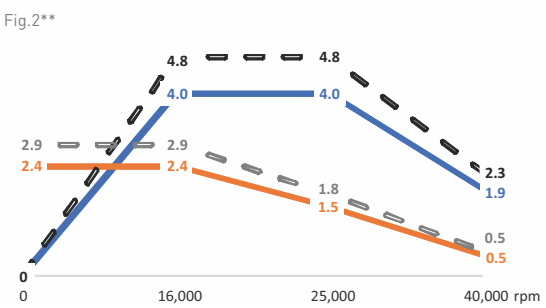


Fig.2**



Main characteristics

SAB 115 - AUTOMATIC TOOL CHANGE ASYNCHRONOUS LONG NOSE			
Power S1/Rated speed	kW /rpm*1000	4.0 / 16	Fig.1*
			Fig.2**
Torque S1	Nm	See chart	
Tool taper	-	HSK E32	
Nose type	-	Long Nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	220/380	
Numbers of poles	N°	4	
Maximum speed	rpm	32000* - 40000**	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	6 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	32000 - 40000	
Rear Bearings/Max speed	Ceramic	32000 - 40000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Forced air	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	18.0	

OPTIONS AVAILABLE	
Speed monitoring	—
C axis	●
C axis with pneumatic service	—
Aggregate reference sleeve	●
Encoder 1Vpp	—
Encoder TTL	—
Vibration sensor	●
Bearing Temperature	—

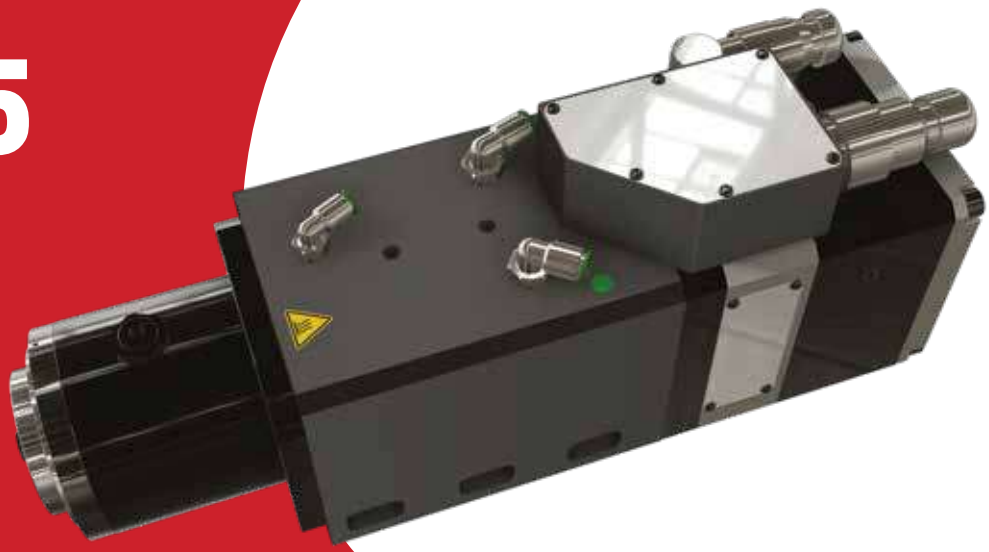
● available / — not available

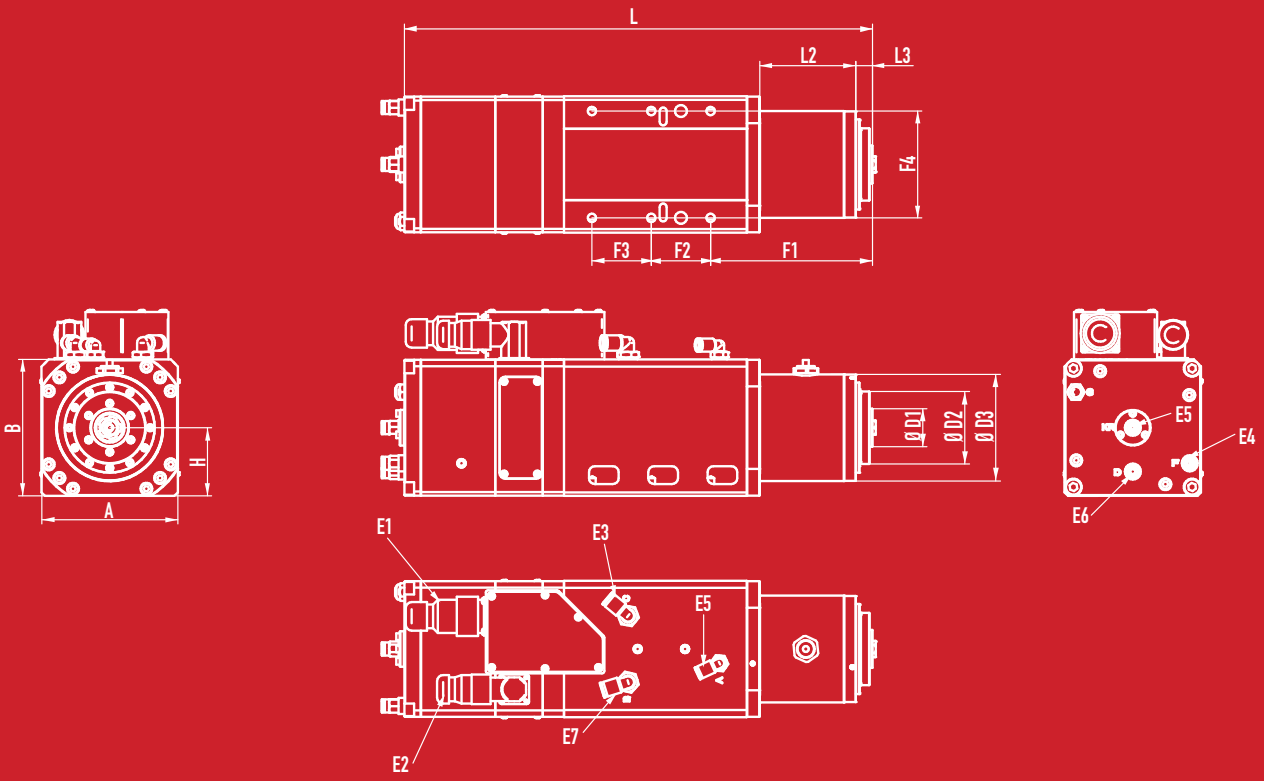
NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAB 115

Liquid cooled

Aluminium
Plastic
Light alloy





SAB115/ Liquid cooled - Dimension Table																		
A	B	H	E1	E2	E3	E4	E5	E6	E7	L	L2	L3	F1	F2	F3	F4	D1	D2	D3
115	115	57.5	POWER CONNECTION	OUTPUT SENSOR CONNECTION	OUT MOTOR LIQUID	IN AIR FOR UNLOOCK (OPTIONAL)	N AIR FOR PRESSURIZATION + CONE CLEANING	IN/OUT CHANGE TOOL AIR	IN MOTOR LIQUID	394.5	71	24	136.5	50	50	90	32	61	89.5

Electrospindle specifically projected for 3 axis milling machines. Combines high performances in a very small housing. Available with Asynchronous motor and double voltage 220V and 380V, to satisfy any customers requirements. Available also with forced air cooling. High reliability in hard milling thanks to liquid cooled system.

Main applications for processing aluminium, plastic and light alloy.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1*

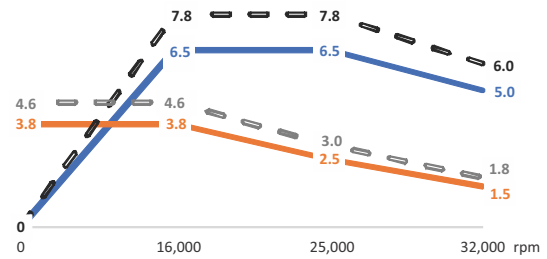
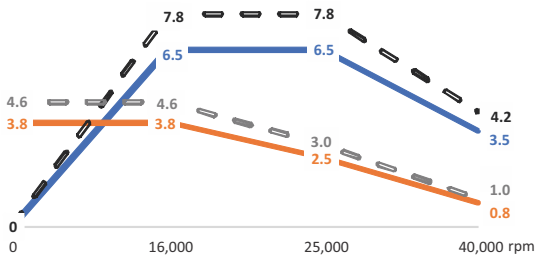


Fig.2**



Main characteristics

SAB 115 - AUTOMATIC TOOL CHANGE ASYNCHRONOUS LONG NOSE			
Power S1/Rated speed	kW /rpm*1000	6.5 / 16	Fig.1*
			Fig.2**
Torque S1	Nm	See chart	
Tool taper	-	HSK E32	
Nose type	-	Long Nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	220/380	
Numbers of poles	N°	4	
Maximum speed	rpm	32000* - 40000**	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	6 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	32000 - 40000	
Rear Bearings/Max speed	Ceramic	32000 - 40000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	18.0	

OPTIONS AVAILABLE	
Speed monitoring	—
C axis	●
C axis with pneumatic service	—
Aggregate reference sleeve	●
Encoder 1Vpp	—
Encoder TTL	—
Vibration sensor	●
Bearing Temperature	—

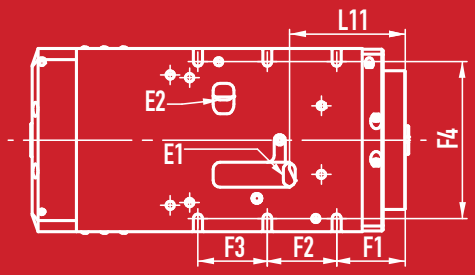
● available / — not available

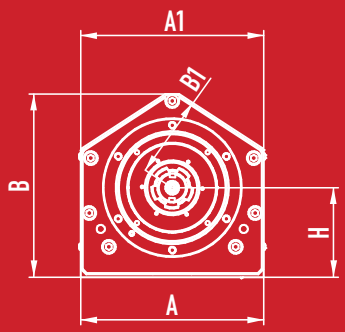
NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

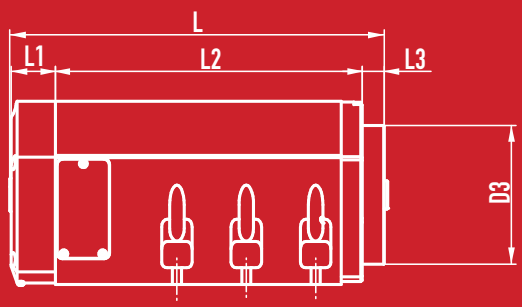
SAB 132

Asynchronous

Wood
Plastic
Composite materials
Aluminium







SAB132/Asynchronous - Dimension Table

A	A1	B	B1	H	E1	E2	L11	F1	F2	F3	F4	L	L1	L2	L3	D3
132	132	132	59.3	64.5	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	79.4	49.5	50	50	113	270	33	221	16	100

Electrospindle specifically designed for 2 axis milling heads with 50-degree axis.
This version combines high performances in a very small housing.
Available Asynchronous and Synchronous versions, both with 4 or 6 poles, to satisfy any customers requirements.
High reliability in hard milling thanks to liquid cooled system. Available also with forced air cooling system for entry level application.

Main applications for processing wood aluminium, plastic and light alloy. It represents a valid alternative entry level applications where medium performances is required but liquid cooling is not desired

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

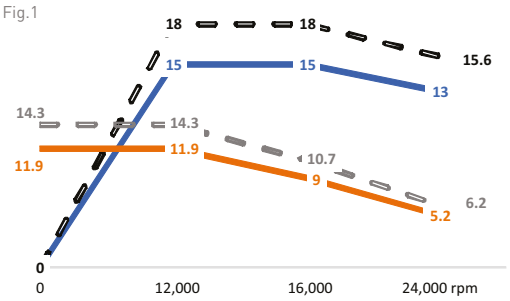
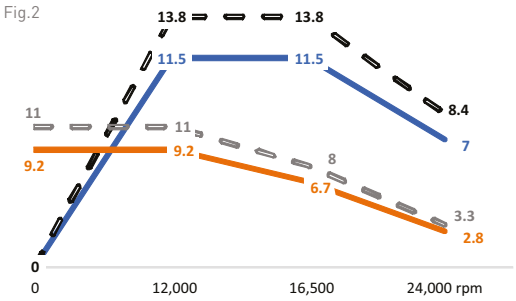


Fig.2



Main characteristics

SAB 132 - AUTOMATIC TOOL CHANGE ASYNCHRONOUS			
Power S1/Rated speed	kW /rpm*1000	15.0 / 12 / 6	Fig.1
		11.5 / 12 / 4	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	HSK F63	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	1200 / 800	
Nominal tension	V	380	
Numbers of poles	N°	6 / 4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	26.0	

OPTIONS AVAILABLE	
Speed monitoring	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

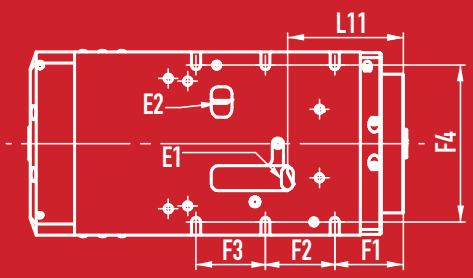
● available / — not available

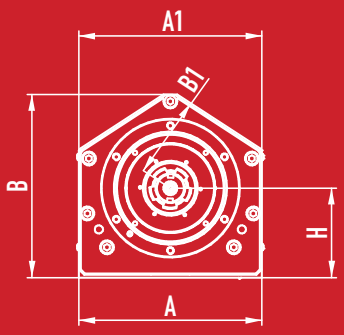
NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

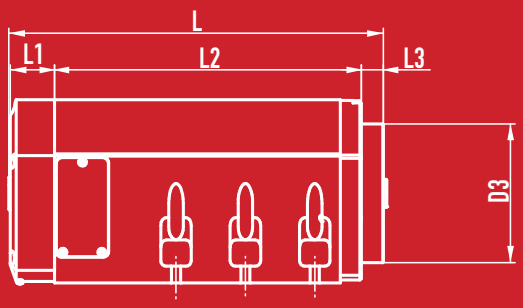
SAB 132

Synchronous

Wood
Plastic
Composite materials
Aluminium







SAB132/Synchronous - Dimension Table

A	A1	B	B1	H	E1	E2	L11	F1	F2	F3	F4	L	L1	L2	L3	D3
132	132	132	59.3	64.5	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	79.4	49.5	50	50	113	270	33	221	16	100

Electrospindle specifically designed for 2 axis milling heads with 50-degree axis. This version combines high performances in a very small housing. Available Asynchronous and Synchronous versions, both with 4 or 6 poles, to satisfy any customers requirements. High reliability in hard milling thanks to liquid cooled system. Available also with forced air cooling system for entry level application. Main applications for processing wood aluminium, plastic and light alloy.

It represents a valid alternative entry level applications where medium performances is required but liquid cooling is not desired.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

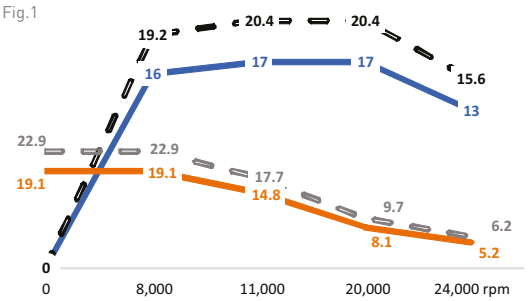
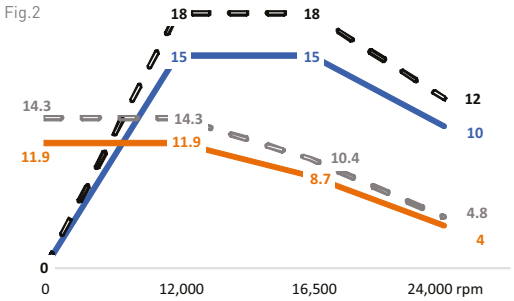


Fig.2



Main characteristics

SAB132 - AUTOMATIC TOOL CHANGE SYNCHRONOUS			
Power S1/Rated speed	kW /rpm*1000	16.0 / 8 / 6	Fig.1
		15.0/ 12 / 4	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	HSK F63	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	1200 / 800	
Nominal tension	V	380	
Numbers of poles	N°	6 / 4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	26.0	

OPTIONS AVAILABLE	
Speed monitoring	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

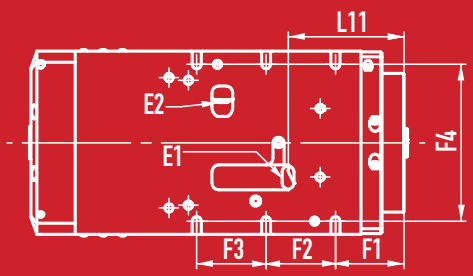
● available / — not available

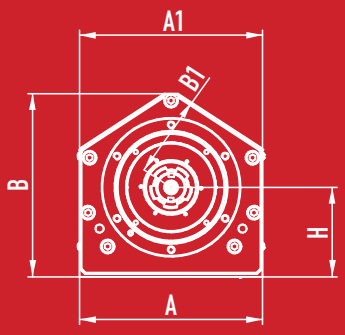
NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

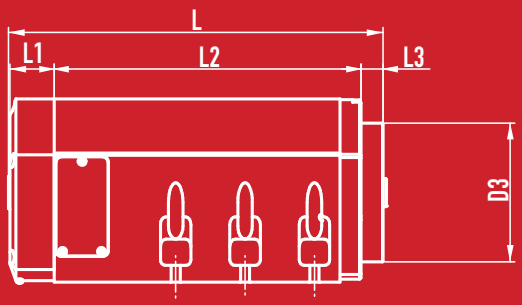
SAB 132 W

Liquid cooled / Asynchronous

Wood
Plastic
Composite materials
Aluminium







SAB132 W/Liquid cooled / Asynchronous - Dimension Table															
A	A1	B	B1	H	E1	E2	L11	F1	F2	F3	F4	L	L1	L2	L3	D3
176	132	132	59.3	64.5	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	79.4	84	70	70	158	354	56	259	39	100

Electrospindle specifically designed for 2 axis milling heads with 50-degree axis. This version combines high performances in a very small housing. Available Asynchronous and Synchronous versions, both with 4 or 6 poles, to satisfy any customers requirements. High reliability in hard milling thanks to liquid cooled system. Easy fixing operation thanks to the wider flange.

Compact solution for standard application, available with TTL or 1VPP encoder. It represents a valid combination of power and torque in medium size CNC machines. Due to the compact dimensions is available only in HSK F63 configuration.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

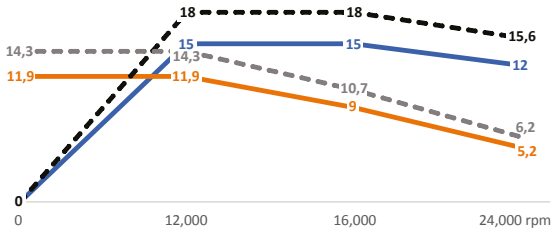
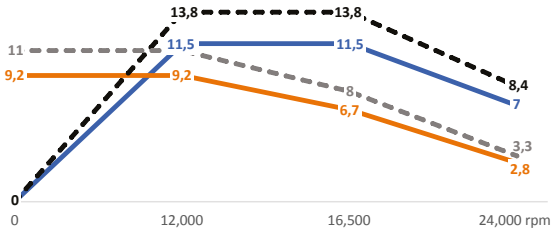


Fig.2



Main characteristics

SAB 132 W - LIQUID COOLED ASYNCHRONOUS			
Power S1/Rated speed	kW /rpm*1000	15.0 / 12	Fig.1
		11.5 /12	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	HSK F63	
Nose type	-	Short nose - SN	
		Long nose - LN	
Maximum frequency	Hz	1200 / 800	
Nominal tension	V	380	
Numbers of poles	N°	6 / 4	
Maximum speed	rpm	18000 o 24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	Pneumatic	
Cylinder return [1]	-	Spring	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Ceramic	24000	
Bearings lubrication	Grease	longlife	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg		

OPTIONS AVAILABLE	
Speed monitoring	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

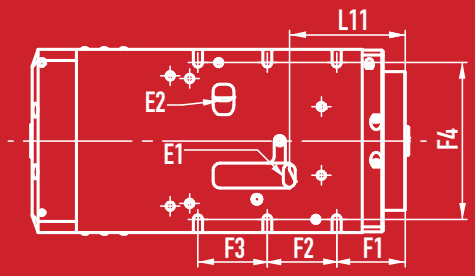
● available / — not available

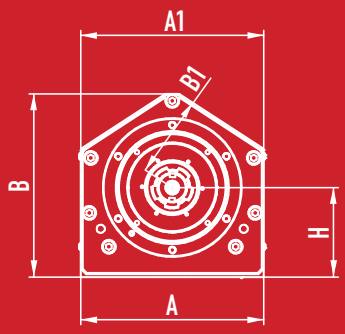
NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

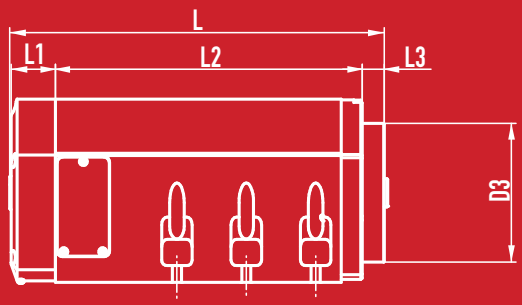
SAB 132 W

Liquid cooled / Synchronous

Wood
Plastic
Composite materials
Aluminium







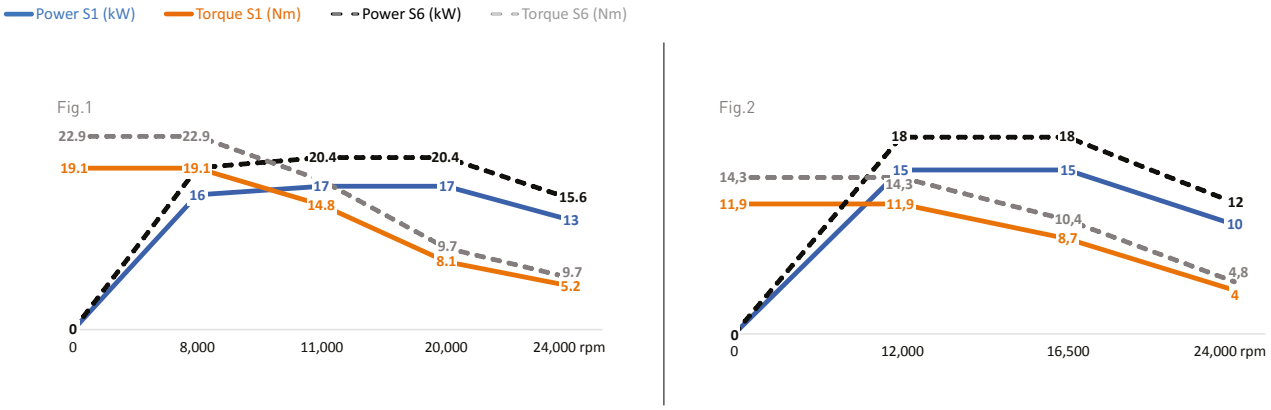
SAB132 W/Liquid cooled/Synchronous - Dimension Table

A	A1	B	B1	H	E1	E2	L11	F1	F2	F3	F4	L	L1	L2	L3	D3
176	132	132	59.3	64.5	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	79.4	84	70	70	158	354	56	259	39	100

Electrospindle specifically designed for 2 axis milling heads with 50-degree axis. This version combines high performances in a very small housing. Available Asynchronous and Synchronous versions, both with 4 or 6 poles, to satisfy any customers requirements. High reliability in hard milling thanks to liquid cooled system. Easy fixing operation thanks to the wider flange.

High performances in the entire speed range, especially if combined with TTL or 1VPP encoder. It represents a valid alternative in those applications where high torque is mandatory. Due to the compact dimensions is available only in HSK F63 configuration.

Power and torque



Main characteristics

SAB 132 W - LIQUID COOLED SYNCHRONOUS			
Power S1/Rated speed	kW /rpm*1000	16.0 / 8	Fig.1
		15.0/ 12	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	HSK F63	
Nose type	-	Short nose - SN	
		Long nose - LN	
Maximum frequency	Hz	1200 / 800	
Nominal tension	V	380	
Numbers of poles	N°	6 / 4	
Maximum speed	rpm	18000 o 24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	Pneumatic	
Cylinder return [1]	-	Spring	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Ceramic	24000	
Bearings lubrication	Grease	longlife	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg		

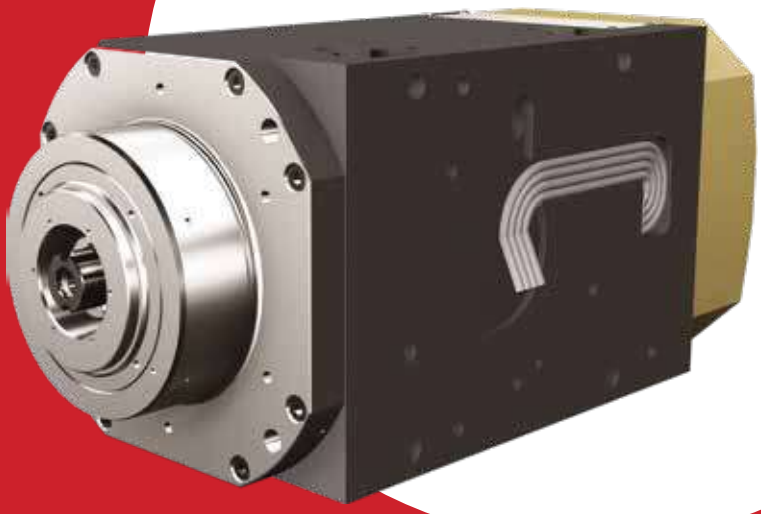
OPTIONS AVAILABLE	
Speed monitoring	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

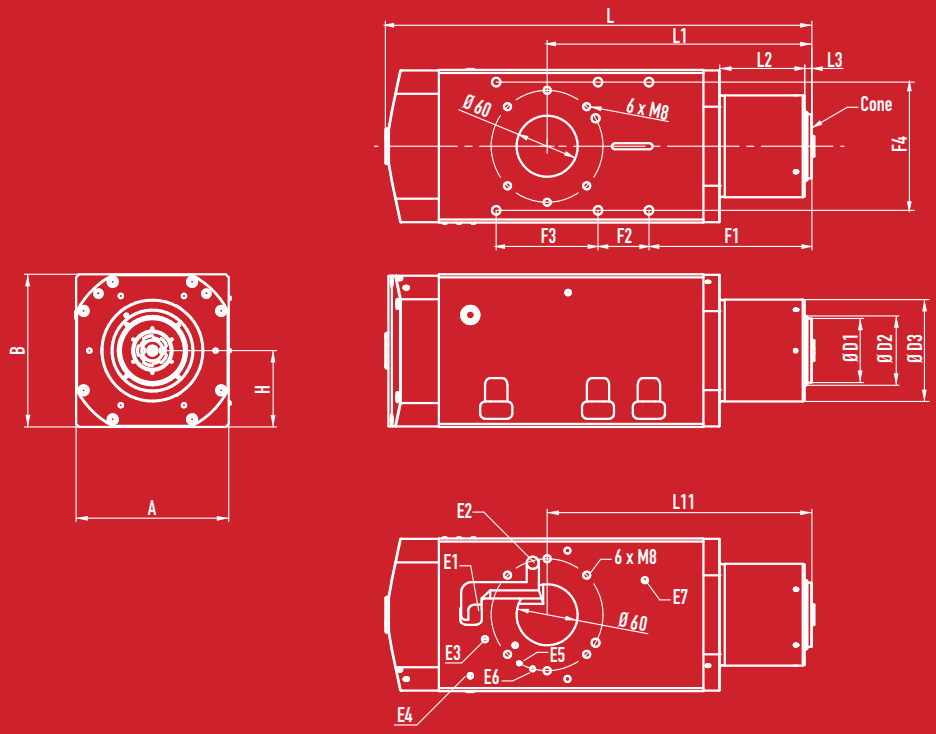
● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAB 150

Asynchronous / Short nose





SAB150/Asynchronous/Short Nose - Dimension Table																	
A	B	H	E1	E2	E3	E4	E5	E6	E7	L11	L	L1	L2	L3	F1-F2 F3-F4	D1	D2	D3
150	150	75	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	OUT MOTOR LIQUID	IN AIR FOR UNLOOCK (OPTIONAL)	N AIR FOR PRESSURIZATION + CONE CLEANING	IN/OUT CHANGE TOOL AIR	IN MOTOR LIQUID	135	324	135	33.5	7	FIXING by STAFFING	Ø 63	Ø 68	Ø 100

Electrospindle specifically projected for 2 axis milling heads with 90-degree axis. This version combines high performances in a very small housing. Available short and long nose, asynchronous and synchronous versions, to satisfy any customers requirements.

High reliability in hard milling thanks to liquid cooled system.

Power and torque

Power S1 (kW) — Torque S1 (Nm) — Power S6 (kW) — Torque S6 (Nm)

Fig.1

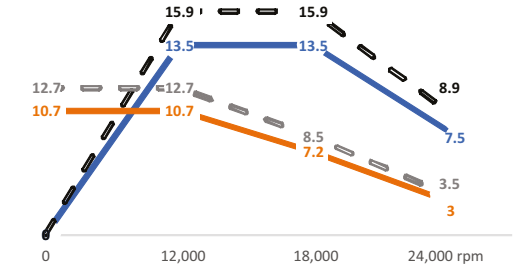


Fig.2

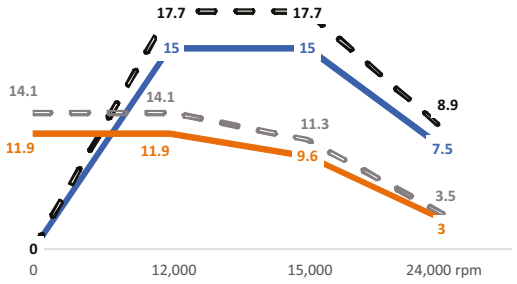
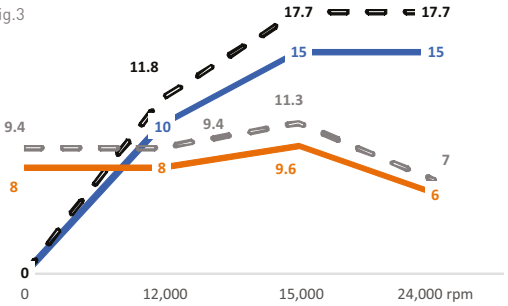


Fig.3



Main characteristics

SAB 150 - AUTOMATIC TOOL CHANGE ASYNCHRONOUS SHORT NOSE			
Power S1/Rated speed	kW /rpm*1000	13.5 / 12	Fig.1
		15.0 / 12	Fig.2
		15.0 / 15	Fig.3
Torque S1	Nm	See chart	
Tool taper	-	HSK F63 - HSK A63	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	800	
Nominal tension	V	380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	24.0	

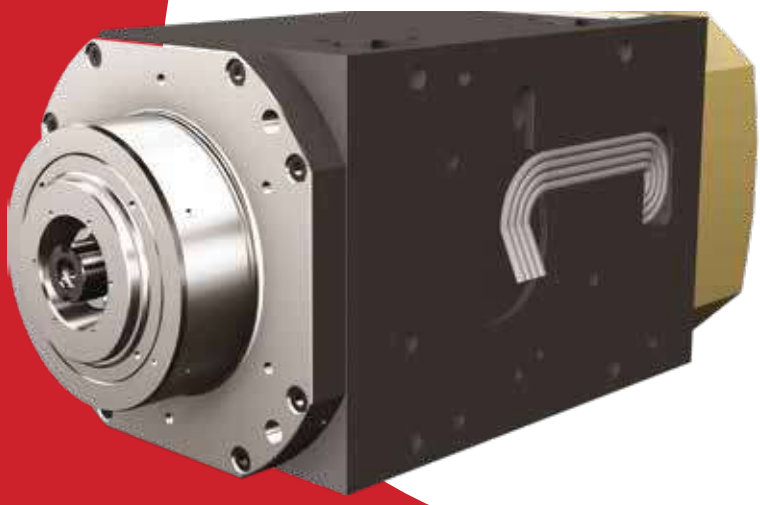
OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	●
Plug and play connectors	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

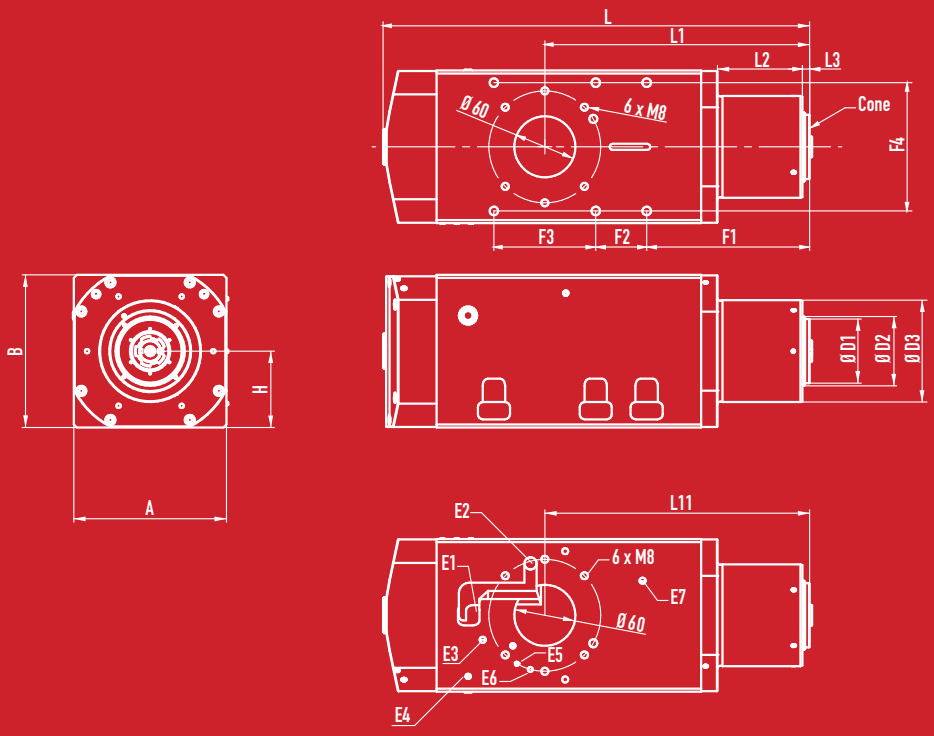
● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAB 150

Asynchronous / Short nose
Heavy duty





SAB150/Asynchronous/Short Nose Heavy duty - Dimension Table																	
A	B	H	E1	E2	E3	E4	E5	E6	E7	L11	L	L1	L2	L3	F1-F2 F3-F4	D1	D2	D3
150	150	75	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	OUT MOTOR LIQUID	IN AIR FOR UNLOOCK (OPTIONAL)	N AIR FOR PRESSURIZATION + CONE CLEANING	IN/OUT CHANGE TOOL AIR	IN MOTOR LIQUID	135	324	135	33.5	7	FIXING by STAFFING	Ø 63	Ø 68	Ø 100

Electrospindle specifically projected for 2 axis milling heads with 90-degree axis. This version combines high performances in a very small housing. Available short and long nose, asynchronous and synchronous versions, to satisfy any customers requirements. High performances exspecially in the low speed range, especially if combined with TTL or 1VPP encoder. It represents a valid alternative in those applications where combination of high power and torque is required.

Due to the higher performances is available only in HSK F63 configuration.

Power and torque

Power S1 (kW) — Torque S1 (Nm) — Power S6 (kW) — Torque S6 (Nm)

Fig.1

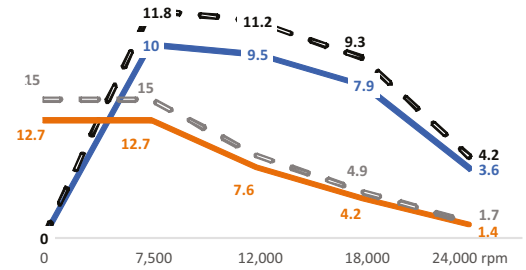


Fig.2

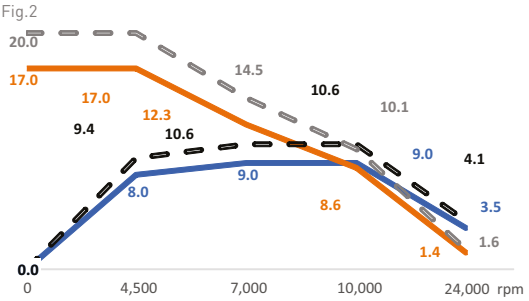
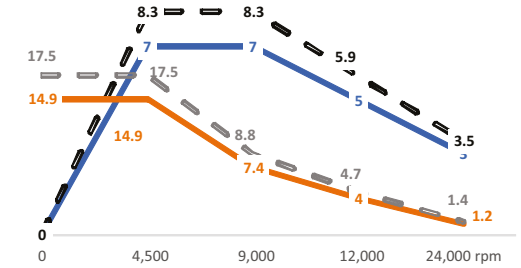


Fig.3



Main characteristics

SAB 150 - AUTOMATIC TOOL CHANGE ASYNCHRONOUS SHORT NOSE HEAVY DUTY			
Power S1/Rated speed	kW /rpm*1000	10.0 / 7.5	Fig.1
		8.0 / 4.5	Fig.2
		7.0 / 4.5	Fig.3
Torque S1	Nm	See chart	
Tool taper	-	HSK F63 - HSK A63	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	800	
Nominal tension	V	380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	24.0	

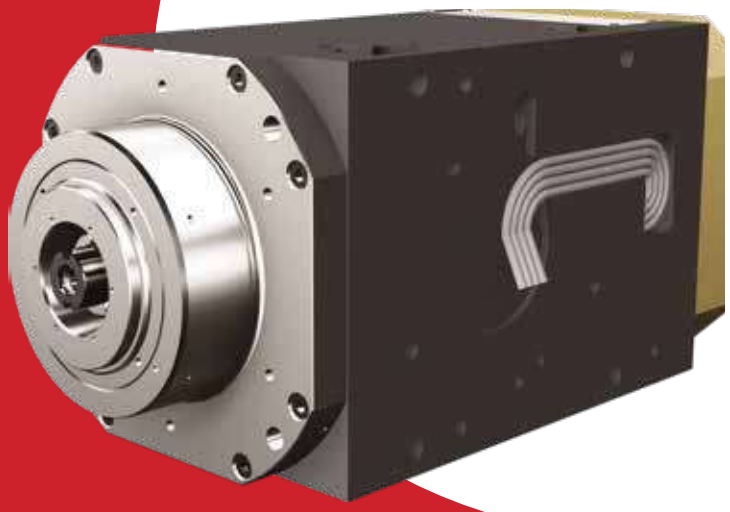
OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	●
Plug and play connectors	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

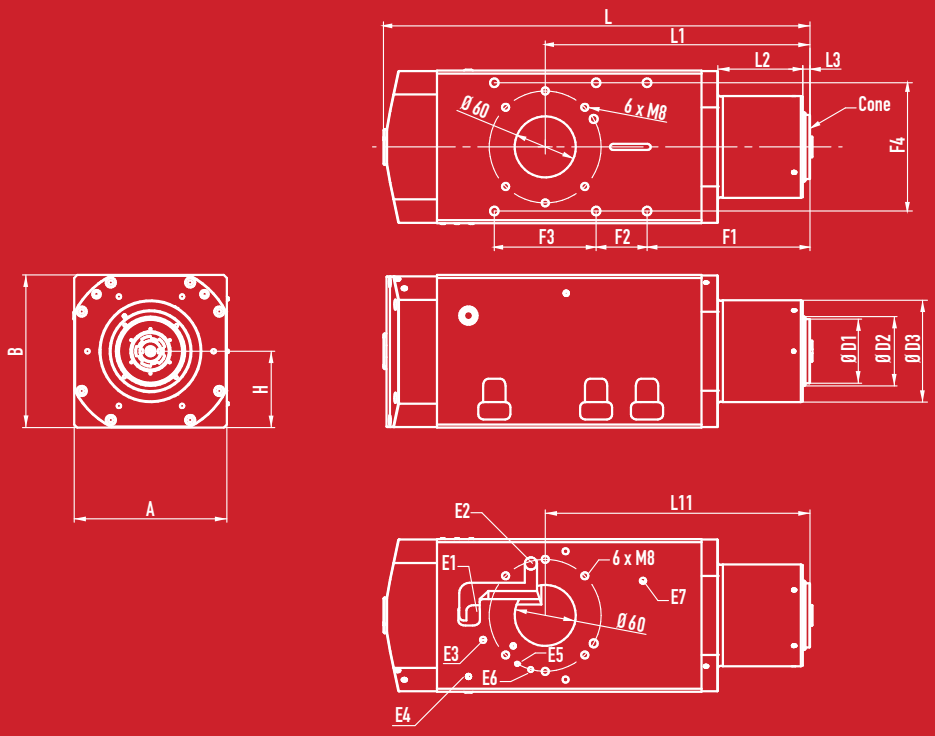
● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAB 150

Synchronous / Short nose





SAB150/Synchronous/Short Nose - Dimension Table																	
A	B	H	E1	E2	E3	E4	E5	E6	E7	L11	L	L1	L2	L3	F1-F2 F3-F4	D1	D2	D3
150	150	75	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	OUT MOTOR LIQUID	IN AIR FOR UNLOOCK (OPTIONAL)	N AIR FOR PRESSURIZATION + CONE CLEANING	IN/OUT CHANGE TOOL AIR	IN MOTOR LIQUID	135	324	135	33.5	7	FIXING by STAFFING	Ø 63	Ø 68	Ø 100

Electrospindle specifically projected for 2 axis milling heads with 90-degree axis. This version combines high performances in a very small housing. Available short and long nose, asynchronous and synchronous versions, to satisfy any customers requirements. High performances in the entire speed range, especially if combined with TTL or 1VPP encoder. It represents a valid alternative in those applications where combination of high power and torque is required.

Due to the higher performances is available only in HSK F63 configuration.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

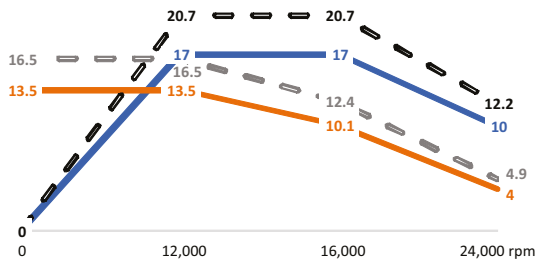
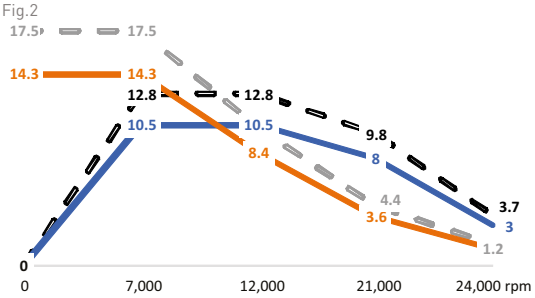


Fig.2



Main characteristics

SAB150 - AUTOMATIC TOOL CHANGE SYNCHRONOUS SHORT NOSE			
Power S1/Rated speed	kW /rpm*1000	17.0 / 12	Fig.1
		10.5 / 7	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	HSK F63 - HSK A63	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	800	
Nominal tension	V	380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	24.0	

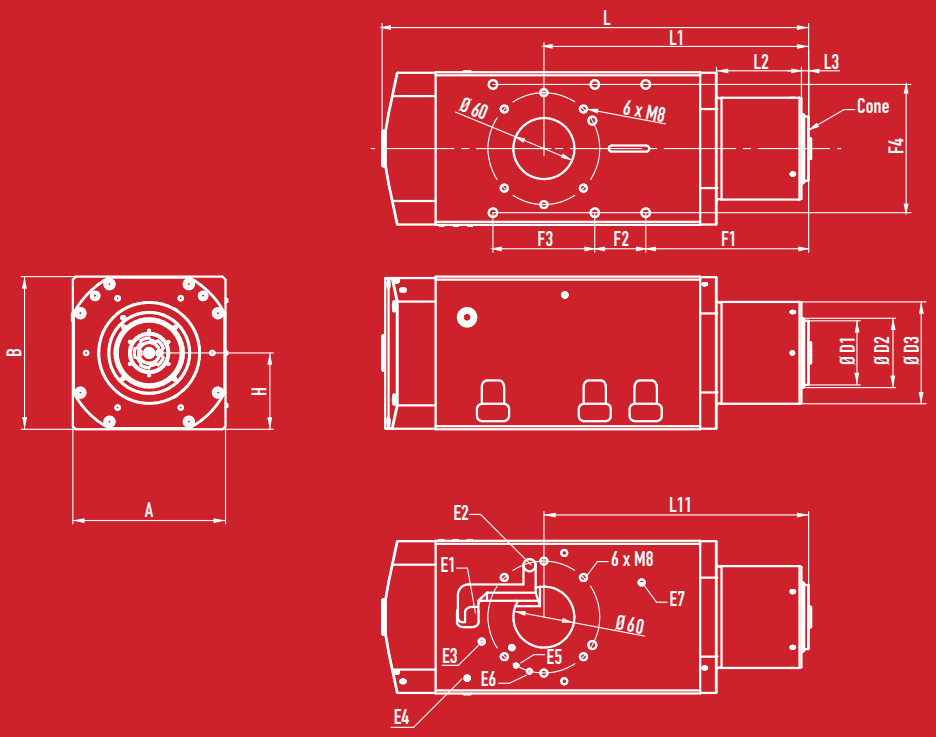
OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	●
Plug and play connectors	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAB 150

Asynchronous / Long nose



SAB150/Asynchronous/Long Nose - Dimension Table																				
A	B	H	E1	E2	E3	E4	E5	E6	E7	L11	L	L1	L2	L3	F1	F2	F3	F4	D1	D2	D3
150	150	75	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	OUT MOTOR LIQUID	IN AIR FOR UNLOOCK (OPTIONAL)	N AIR FOR PRESSURIZATION + CONE CLEANING	IN/OUT CHANGE TOOL AIR	IN MOTOR LIQUID	135	324	135	33.5	7	293.9	50	100	126	Ø 63	Ø 68	Ø 100

Electrospindle specifically projected for 2 axis milling heads with 90-degree axis. This version combines high performances in a very small housing. Available short and long nose, asynchronous and synchronous versions, to satisfy any customers requirements.

High reliability in hard milling thanks to liquid cooled system.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

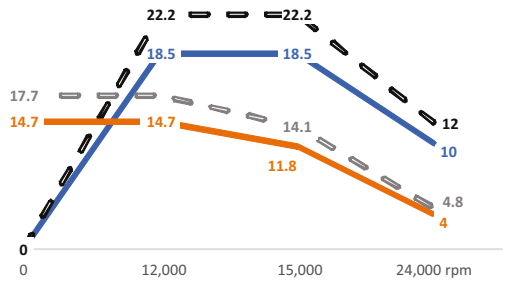


Fig.2

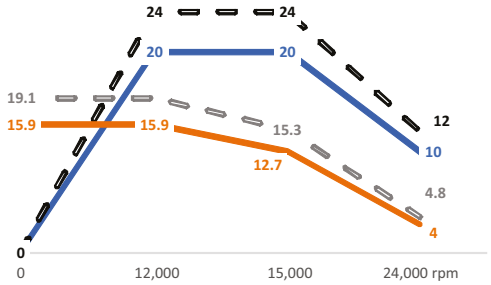
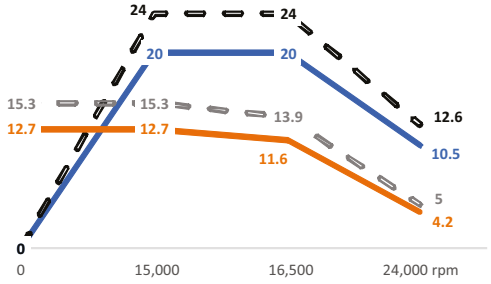


Fig.3



Main characteristics

SAB 150 - AUTOMATIC TOOL CHANGE ASYNCHRONOUS LONG NOSE			
Power S1/Rated speed	kW /rpm*1000	18.5 / 12	Fig.1
		20.0 / 12	Fig.2
		20.0 / 15	Fig.3
Torque S1	Nm	See chart	
Tool taper	-	HSK F63 - HSK A63	
Nose type	-	Long nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	25.3	

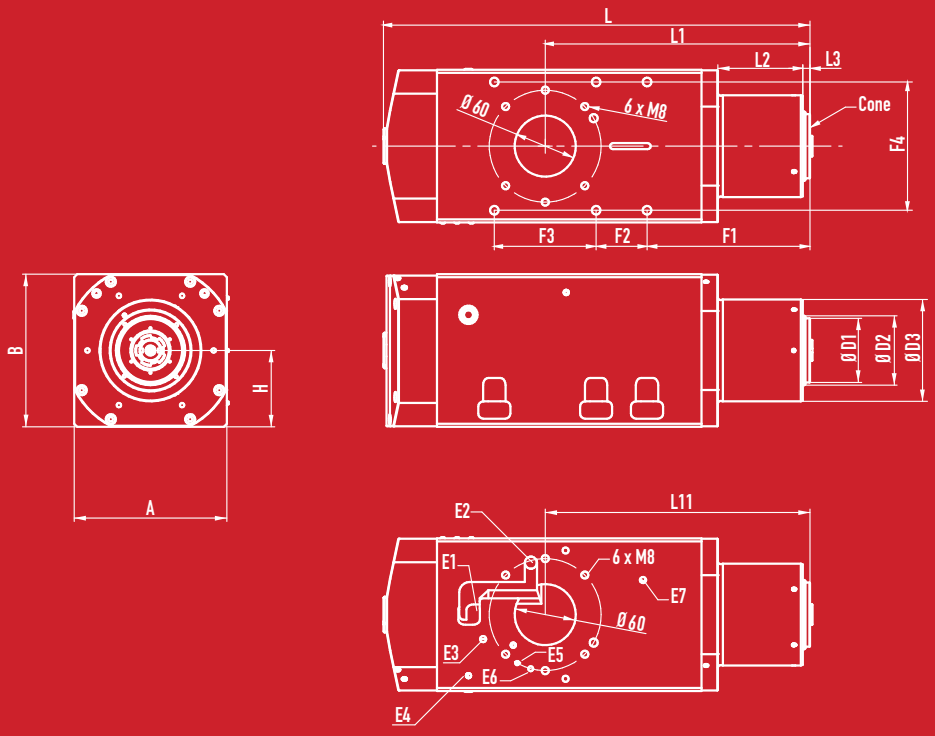
OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	●
Plug and play connectors	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAB 150

Asynchronous / Long nose
Heavy duty



SAB150/Asynchronous/Long Nose/ Heavy duty - Dimension Table																				
A	B	H	E1	E2	E3	E4	E5	E6	E7	L11	L	L1	L2	L3	F1	F2	F3	F4	D1	D2	D3
150	150	75	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	OUT MOTOR LIQUID	IN AIR FOR UNLOOCK (OPTIONAL)	N AIR FOR PRESSURIZATION + CONE CLEANING	IN/OUT CHANGE TOOL AIR	IN MOTOR LIQUID	135	324	135	33.5	7	293.9	50	100	126	Ø 63	Ø 68	Ø 100

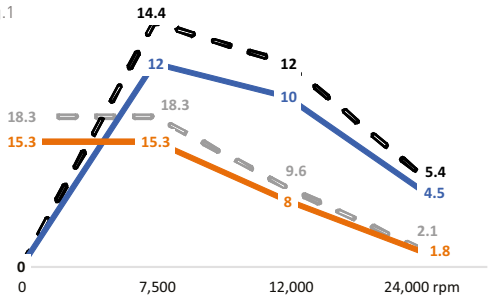
Electrospindle specifically projected for 2 axis milling heads with 90-degree axis. This version combines high performances in a very small housing. High reliability in hard milling thanks to liquid cooled system. High performances exspecially in the low speed range, especially if combined with TTL or 1VPP encoder. It represents a valid alternative in those applications where combination of high power and torque is required.

Due to the higher performances is available only in HSK F63 configuration.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1



Main characteristics

SAB150 - AUTOMATIC TOOL CHANGE ASYNCHRONOUS LONG NOSE HEAVY DUTY			
Power S1/Rated speed	kW /rpm*1000	12.0 / 7.5	Fig.1
Torque S1	Nm	See chart	
Tool taper	-	HSK F63 - HSK A63	
Nose type	-	Long nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	25.3	

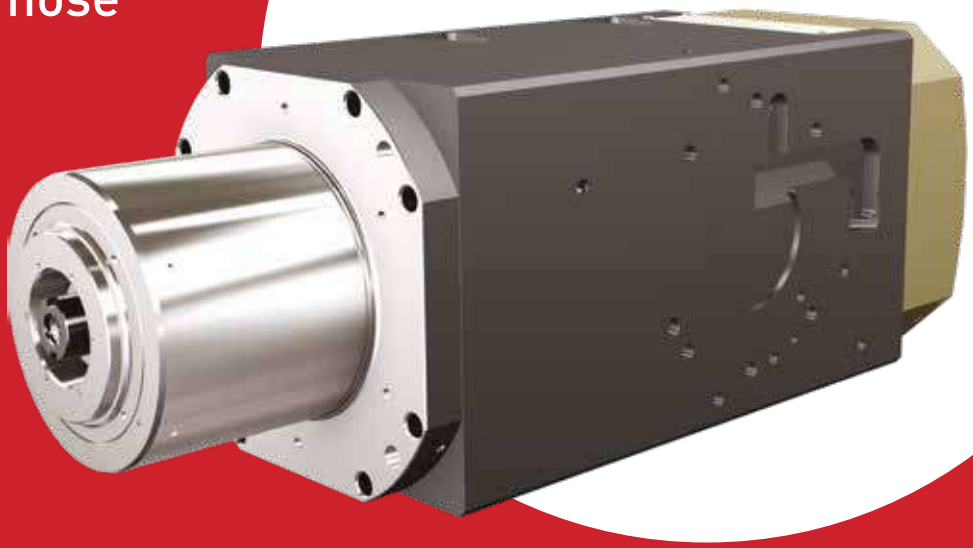
OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	●
Plug and play connectors	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

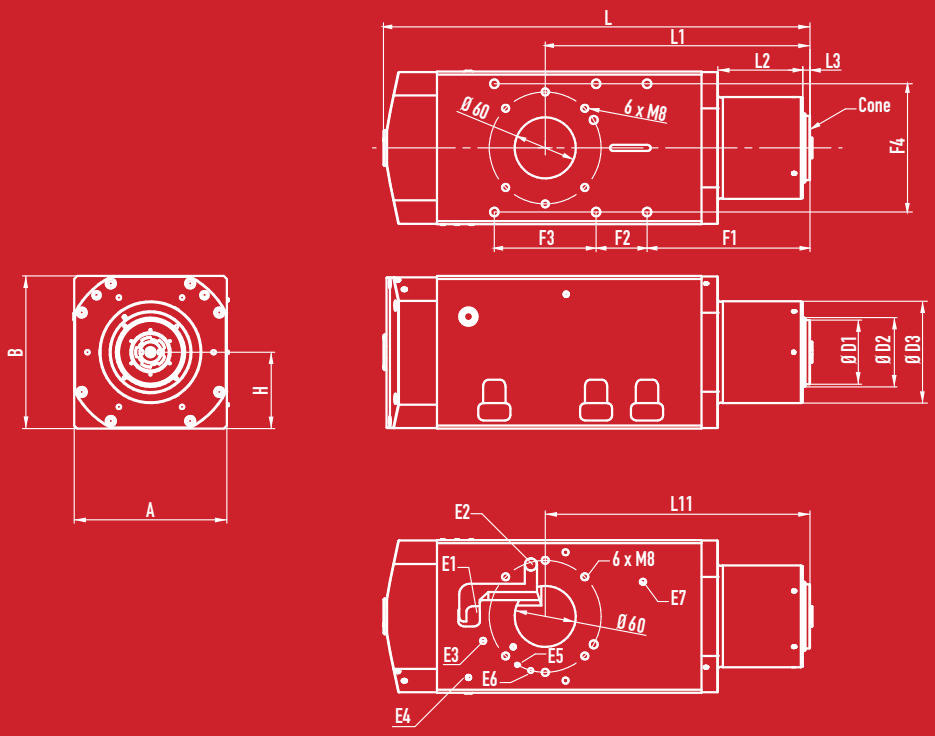
● available / — not available

NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SAB 150

Synchronous / Long nose





SAB150/Synchronous/Long Nose - Dimension Table																				
A	B	H	E1	E2	E3	E4	E5	E6	E7	L11	L	L1	L2	L3	F1	F2	F3	F4	D1	D2	D3
150	150	75	OUTPUT POWER CABLE	OUTPUT SENSOR CABLE	OUT MOTOR LIQUID	IN AIR FOR UNLOOCK (OPTIONAL)	N AIR FOR PRESSURIZATION + CONE CLEANING	IN/OUT CHANGE TOOL AIR	IN MOTOR LIQUID	135	324	135	33.5	7	293.9	50	100	126	Ø 63	Ø 68	Ø 100

Electrospindle specifically projected for 2 axis milling heads with 90-degree axis. This version combines high performances in a very small housing. Available short and long nose, asynchronous and synchronous versions, to satisfy any customers requirements.

High reliability in hard milling thanks to liquid cooled system.

Power and torque

Power S1 (kW) Torque S1 (Nm) Power S6 (kW) Torque S6 (Nm)

Fig.1

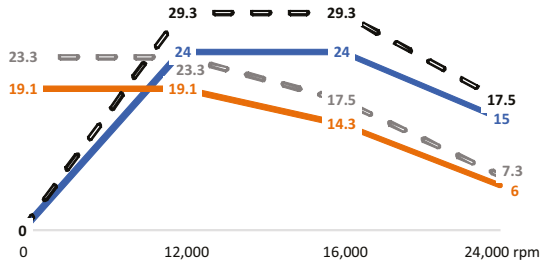
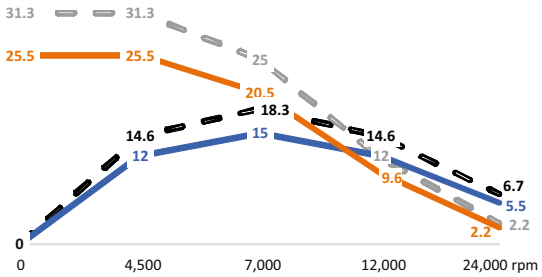


Fig.2



Main characteristics

SAB 150 - AUTOMATIC TOOL CHANGE SYNCHRONOUS LONG NOSE			
Power S1/Rated speed	kW /rpm*1000	24.0 / 12	Fig.1
		15.0 / 7	Fig.2
Torque S1	Nm	See chart	
Tool taper	-	HSK F63 - HSK A63	
Nose type	-	Long nose - LN	
Maximum frequency	Hz	800	
Nominal tension	V	380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator/bar	3 (min.)	
Cylinder return [1]	-	Springs	
Front Bearings/Max speed	Ceramic	24000	
Rear Bearings/Max speed	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Liquid	
Electric board 4.0	Standard	Digital	
	Protocols available	-	
Weight	kg	25.3	

OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	●
Plug and play connectors	●
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

● available / — not available

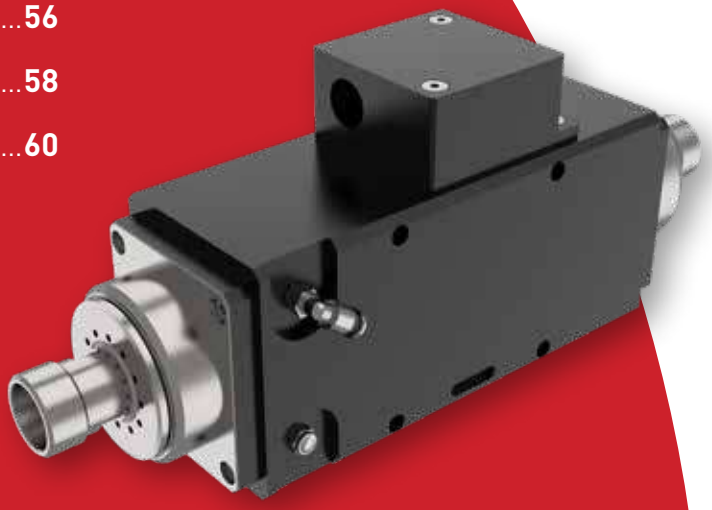
NOTE	
[1]	Available, as standard, additional pneumatic service for cylinder air return

SMB

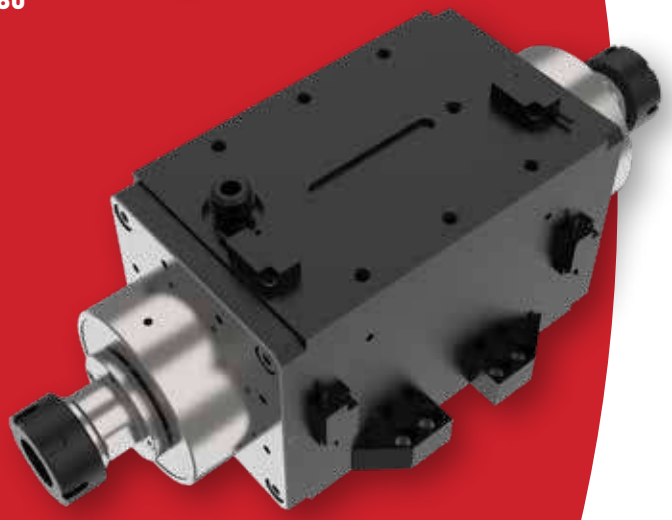
Main features:

• Projected to work in environments with wood dust and aluminium or plastic chippings;
• Mainly dedicated to CNC machine where high productrivity is required and the double shaft/with double tools garantee a "tool change" quickly respect to the automatic tool change traditional;
• Available in many combinations of power and torque to satisfy any customers requirements;
• Cooled by forced air.

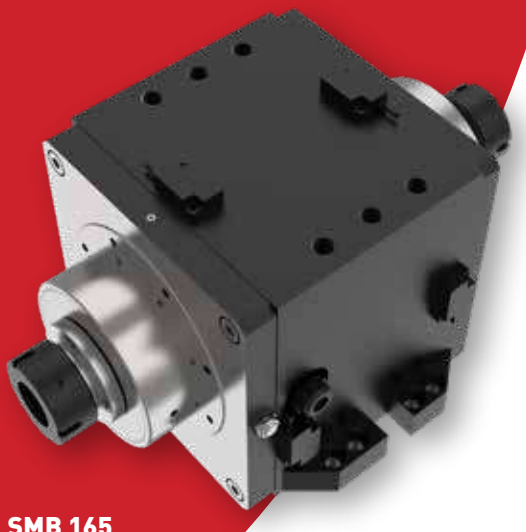
Range



SMB 080



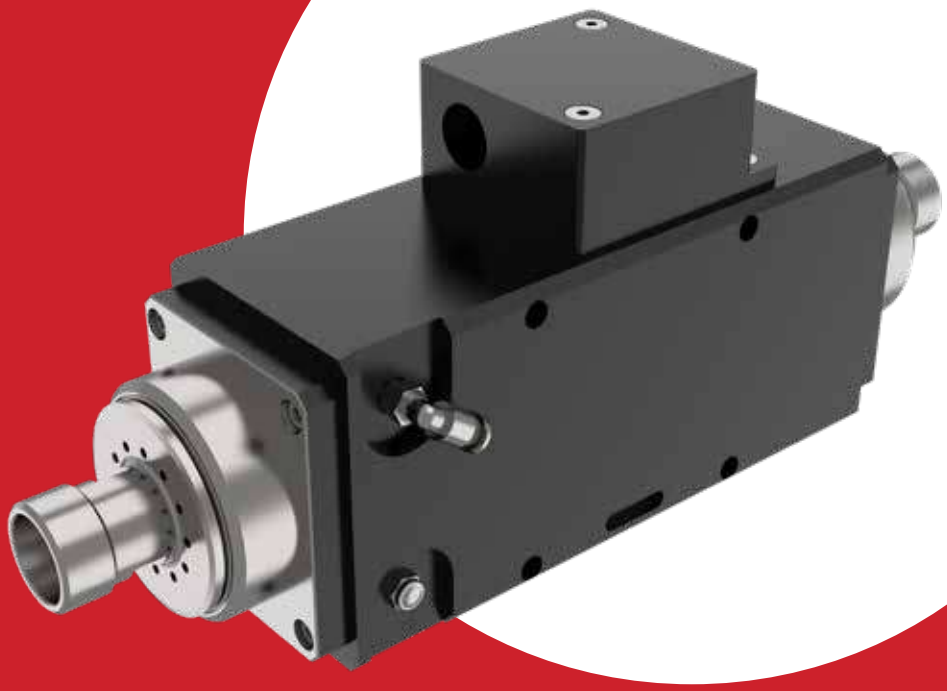
SMB 135

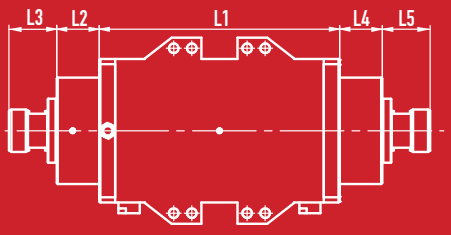


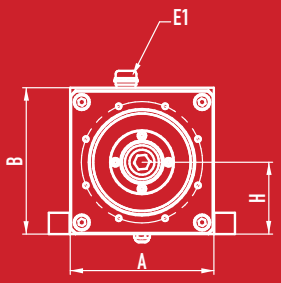
SMB 165

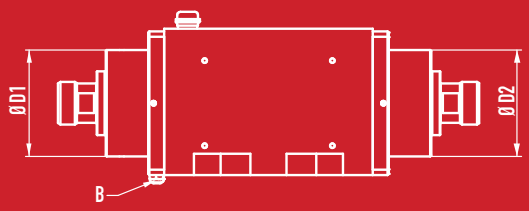
SMB 080

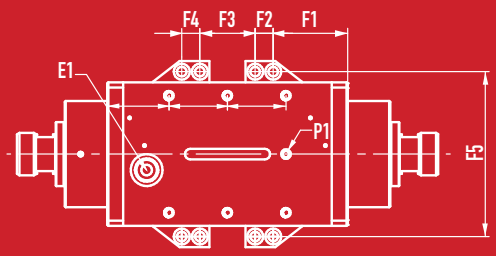
Air cooled









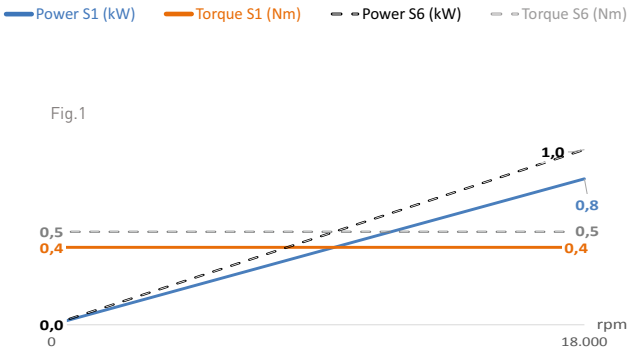


SMB80/Air cooled - Dimension Table																				
A	B	H	E1	L1	L2	L3	L4	L5	D1	D2	F1	F2	F3	F4	F5	F6	F7	F8	F9	P1
67	80	40	ELECTRIC BOX	189	16.5	31.5	16.5	31.5	56	56	108.5	-	-	68	68	-	-	-	-	COMPRESSED AIR INLEET

Projected to work in environments with wood dust and aluminium or plastic chippings. Mainly dedicated to CNC machine where high productrivity is required and the double shaft/with double tools garantee a “tool change” quickly respect to the automatic tool change traditional.

Available in many combinations of power and torque to satisfy any customers requirements. Cooled by forced air.

Power and torque



Main characteristics

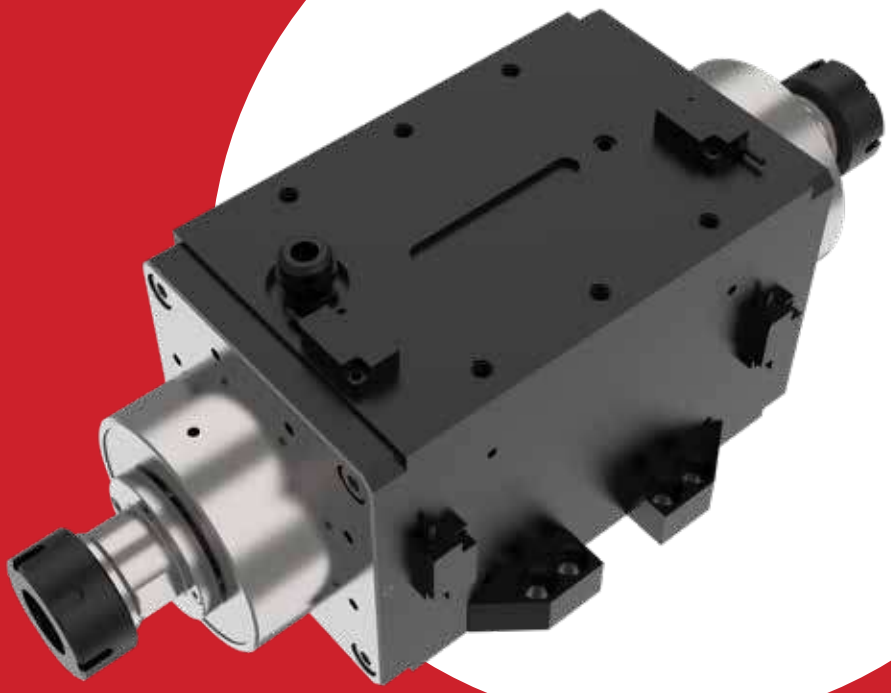
SMB 080 SHORT NOSE			
Power S1/Rated speed	kW /rpm*1000	0.8 / 18	Fig.1
Torque S1	Nm	See Chart	
Tool taper	-	ER 20	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	300	
Nominal tension	V	380	
Numbers of poles	N°	2	
Maximum speed	rpm	18000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator / bar	3 (min.)	
Cylinder return	-	-	
Front Bearings type	Ceramic	24000	
Rear Bearings type	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Compressed Air	
Electric board 4.0	-	-	
	-	-	
Weight	kg	-	

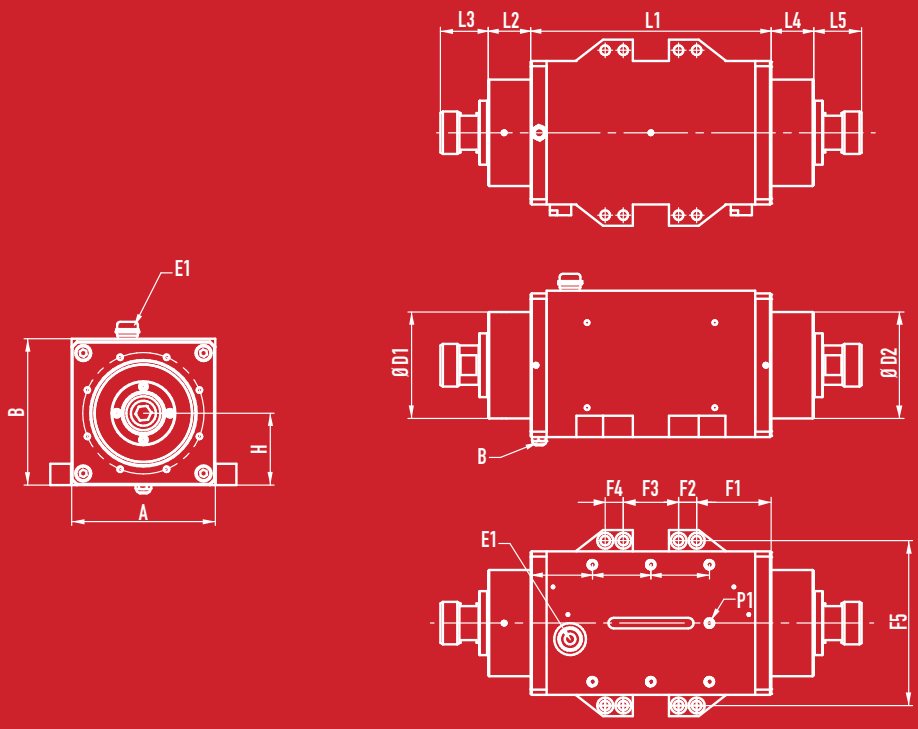
OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	—
Plug and play connectors	—
Aggregate reference sleeve	—
Encoder 1Vpp	—
Encoder TTL	—
Vibration sensor	—
Bearing Temperature	—

● available / — not available

SMB 135

Air cooled





SMB135/Air cooled - Dimension Table																			
A	B	H	E1	L1	L2	L3	L4	L5	D1	D2	F1	F2	F3	F4	F5	F6	F7	F8	F9	P1
135	137.5	67.5	OUTPUT POWER CABLE	226	40	45	40	45	100	100	110	17	52	17	155	58	55	55	110	COMPRESSED AIR INLEET

Projected to work in environments with wood dust and aluminium or plastic chippings. Mainly dedicated to CNC machine where high productrivity is required and the double shaft/with double tools garantee a “tool change” quickly respect to the automatic tool change traditional.

Available in many combinations of power and torque to satisfy any customers requirements. Cooled by forced air.

Power and torque

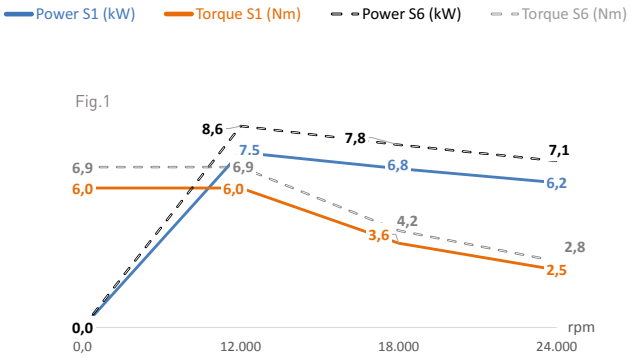


Fig.1

Main characteristics

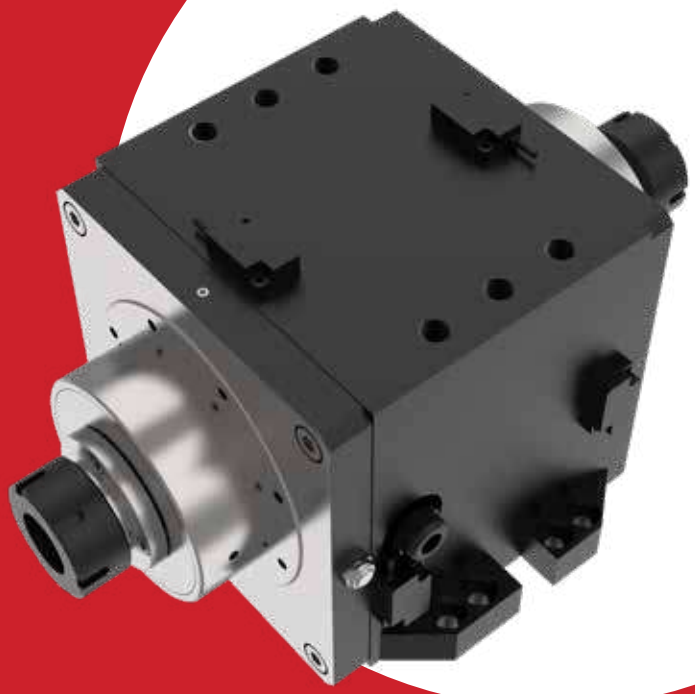
SMB 135 ASYNCRONOUS SHORT NOSE			
Power S1/Rated speed	kW /rpm*1000	7.5 / 12	Fig.1
Torque S1	Nm	See Chart	
Tool taper	-	ER 32	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	200	
Nominal tension	V	380	
Numbers of poles	N°	2	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator / bar	3 (min.)	
Cylinder return	-	-	
Front Bearings type	Ceramic	24000	
Rear Bearings type	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Compressed Air	
Electric board 4.0	-	-	
	-	-	
Weight	kg	-	

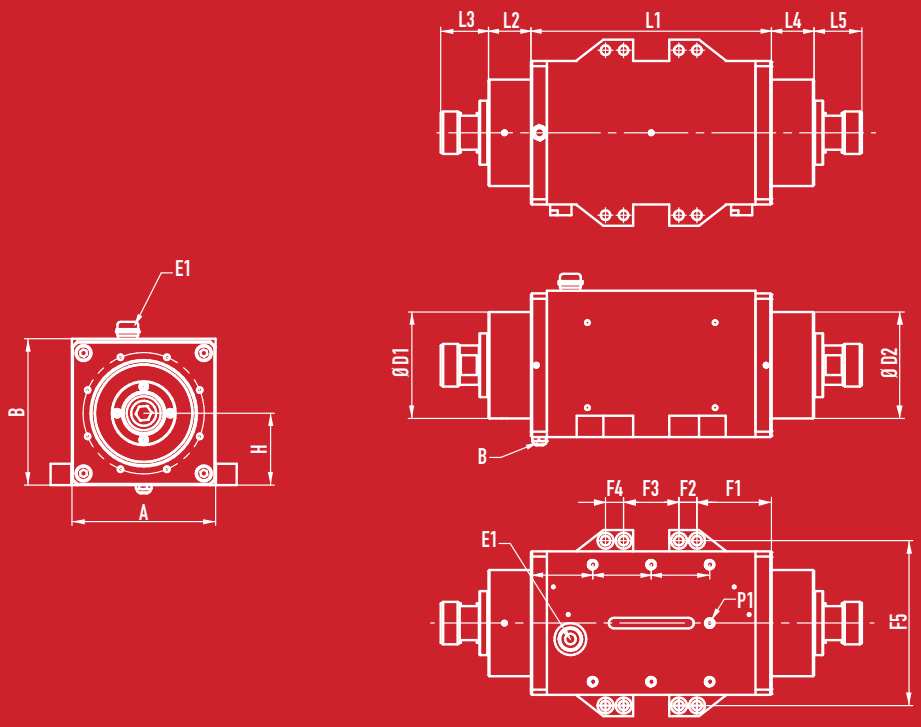
OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	—
Plug and play connectors	—
Aggregate reference sleeve	—
Encoder 1Vpp	—
Encoder TTL	—
Vibration sensor	—
Bearing Temperature	—

● available / — not available

SMB 165

Air cooled





SMB165/Air cooled - Dimension Table																			
A	B	H	E1	L1	L2	L3	L4	L5	D1	D2	F1	F2	F3	F4	F5	F6	F7	F8	F9	P1
165	165	82.5	OUTPUT POWER CABLE	170	39.5	36	35	27	100	100	110	17	52	17	155	58	55	55	110	COMPRESSED AIR INLEET

Projected to work in environments with wood dust and aluminium or plastic chippings. Mainly dedicated to CNC machine where high productivity is required and the double shaft/with double tools garantee a "tool change" quickly respect to the automatic tool change traditional.

Available in many combinations of power and torque to satisfy any customers requirements. Cooled by forced air.

Power and torque

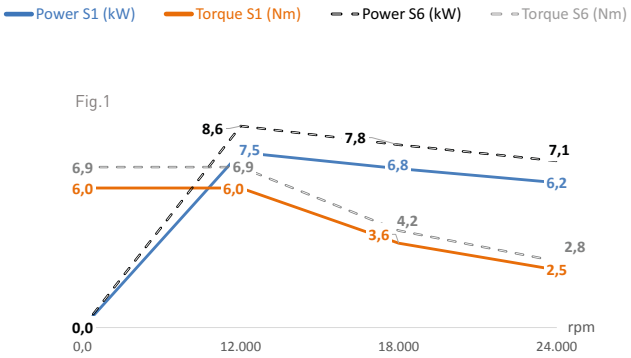


Fig.1

Main characteristics

SMB 165 ASYNCHRONOUS SHORT NOSE			
Power S1/Rated speed	kW /rpm*1000	7.5 / 12	Fig.1
Torque S1	Nm	See Chart	
Tool taper	-	ER 32	
Nose type	-	Short nose - SN	
Maximum frequency	Hz	400	
Nominal tension	V	380	
Numbers of poles	N°	4	
Maximum speed	rpm	24000	
Tool Clamping	-	Springs	
Tool Unlocking	Pneumatic actuator / bar	3 (min.)	
Cylinder return	-	-	
Front Bearings type	Ceramic	24000	
Rear Bearings type	Steel	18000	
	Ceramic	24000	
Bearings lubrication	Grease	For life	
Cooling system	Type	Compressed Air	
Electric board 4.0	-	-	
	-	-	
Weight	kg	-	

OPTIONS AVAILABLE	
Speed monitoring	●
Side box connectors	—
Plug and play connectors	—
Aggregate reference sleeve	—
Encoder 1Vpp	—
Encoder TTL	—
Vibration sensor	—
Bearing Temperature	—

● available / — not available

HFS/HAS/HDS

Shoulders

Main features:

- (HFS/HAS) FEM designed light but rigid aluminium cast main body, finished by CNC machines to achieve high precision;
- (HDS) FEM designed cast iron frame completely produced by advanced CNC machines;
- (HFS) Rotation angle of A axis at 50° respect to the C Axis;
- (HAS) Rotation angle of A axis at 90° respect to the C Axis;
- (HFS/HAS) Electrospindles SAB 132 series with hard anodizing housing;
- (HDS) Electrospindles SAB 150 series with hard anodizing housing;
- Liquid cooled;
- C and A axis with big size Harmonic drive reduction gear.

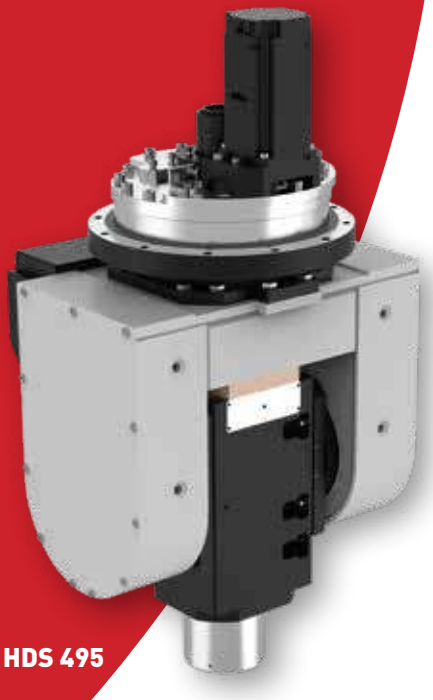
Technical data:

- (HFS) A axis rotation angle +/- 180°;
- (HAS) A axis rotation angle +/- 110°;
- (HDS) A axis rotation angle +105°, -105°;
- C axis rotation angle +/- 365°;
- (HFS/HAS) Electrospindles power up to 16 kW and 24,000 rpm;
- (HDS) Electrospindles power up to 24 kW and 24,000 rpm.

Range

HFS 334

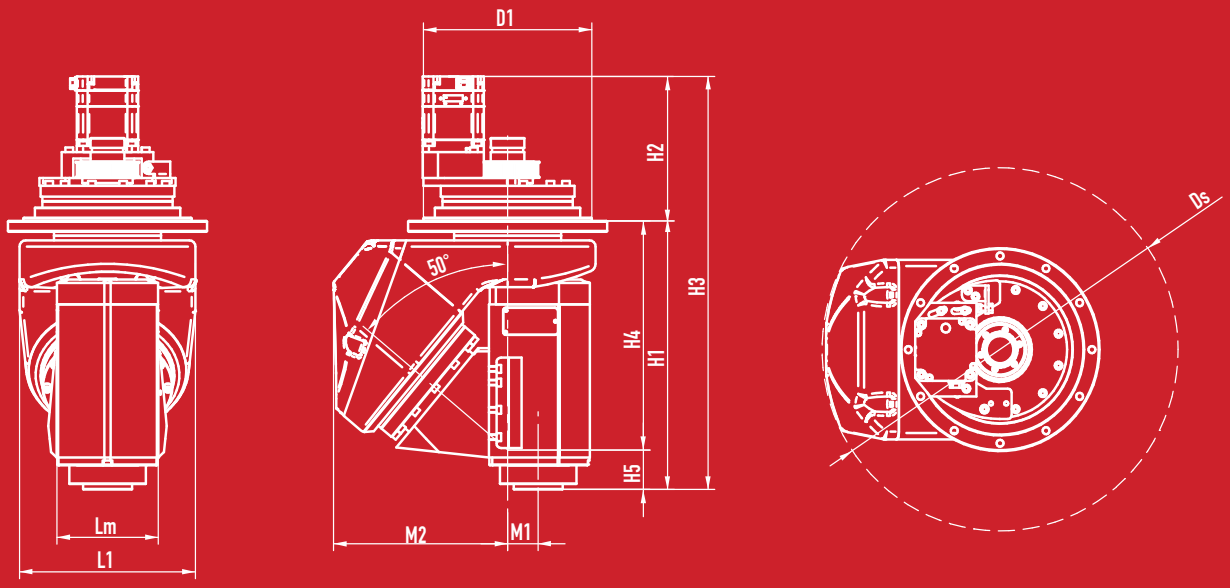
HAS 358



HDS 495

HFS 334

Single shoulder / 50 Degree



SAB132 Dimension Table										
D1	H5	H4	H1	H2	H3	M1	M2	L1	Lm	Ds
220	344	185	529	293	50,3	40	227.4	230	132	470

Small and medium size 5 axis machines. Specifically developed for machines where it's important have high performances in small size. Wood, plastic and aluminium profile materials can be easily milled and drilled.
Available also with electrospindle equipped with encoder for tapping operation. Excellent dimensions - performances ratio.
Extremely versatile thanks to the 50° A axis angle, capable of guaranteeing machining with the electrospindle close to the piece clamping device and/or machine table.

Main characteristics

AXIS A			
Rotation range	grade °	+185	-185
Continuous torque	Nm	360	
Max . Torque	Nm	612	
Servomotor power [2]	W	400	
Servomotor Nominal - Max speed	rpm	3570	/
Limit switch sensor type / N°	-	PNP-NC	2
Gearbox type	-	380	
Ratio	-	2	
Direct axis brake device	Nm	24000	
Direct axis encoder	-	Springs	

AXIS C			
Rotation range	grade °	+365	-365
Continuous torque	Nm	380	
Max . Torque	Nm	650	
Servomotor power [3]	W	600	
Servomotor Nominal - Max speed	rpm	3570	/
Limit switch sensor type / N°	-	PNP-NC	2
Gearbox type	-	Harmonic drive HF US 40 120 2UH	
Ratio	-	1/302.5	
Locking device / type / brake torque	Nm	Yes/Optional	
Axis encoder	-	Yes/Optional	
Weight	kg	60	

Spindles

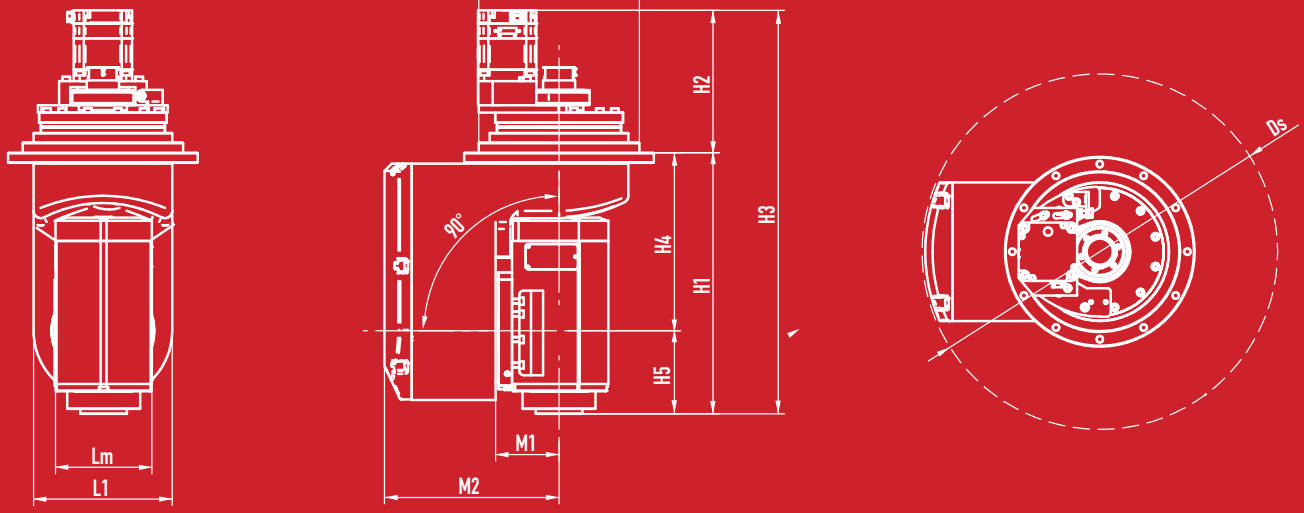
SAB 132 OPTIONAL AVAILABLE	
Speed monitoring	●
Side box connectors	—
Plug and play connectors	—
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

● available / — not available

NOTE	
[1]	For further option see SAB150 catalogue section
[2]	Square motor flange 60x60 Yaskawa -Delta other brands on request
[3]	Square motor flange 80x80 or 90x90 Yaskawa-Delta other brands on request
[4]	Synchronous motor. (Where is not specified asinchronous motor)

HAS 358

Single shoulder



SAB132 Dimension Table										
D1	H5	H4	H1	H2	H3	M1	M2	L1	Lm	Ds
220	358	195	553	244	114	83	239.2	190	132	480

SAB150 Dimension Table										
D1	H5	H4	H1	H2	H3	M1	M2	L1	Lm	Ds
220	358	195	553	244	135	93.5	249.7	190	150	480

Small and medium size 5 axis machines. Specifically developed for machines where it's important have high performances in small size. Wood, plastic and aluminium profile materials can be easily milled and drilled.

Available also with electrospindle equipped with encoder for tapping operation.
Excellent dimensions - performances ratio.

Main characteristics

AXIS A			
Rotation range	grade °	+110	-110
Continuous torque	Nm	360	
Max . Torque	Nm	612	
Servomotor power [2]	W	400	
Servomotor Nominal - Max speed	rpm	3570	/
Limit switch sensor type / N°	-	PNP-NC	2
Gearbox type/size	-	Harmonic drive HF US 40 120 2UH	
Ratio	-	1/302.5	
Locking device / type	-	-	
Axis encoder	-	-	

AXIS C			
Rotation range	grade °	+365	-365
Continuous torque	Nm	380	
Max . Torque	Nm	650	
Servomotor power [3]	W	600	
Servomotor Nominal - Max speed	rpm	3570	/
Limit switch sensor type / N°	-	PNP-NC	2
Gearbox type / size	-	Harmonic drive HF US 40 120 2UH	
Ratio	-	1/302.5	
Weight	kg	60	

Spindles

SAB 132 OPTIONAL AVAILABLE	
Speed monitoring	●
Side box connectors	—
Plug and play connectors	—
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

● available / — not available

NOTE	
[1]	For further option see SAB132 catalogue section
[2]	Square motor flange 60x60 Yaskawa -Delta other brands on request
[3]	Square motor flange 80x80 or 90x90 Yaskawa-Delta other brands on request
[4]	Synchronous motor. (Where is not specified asinchronous motor)

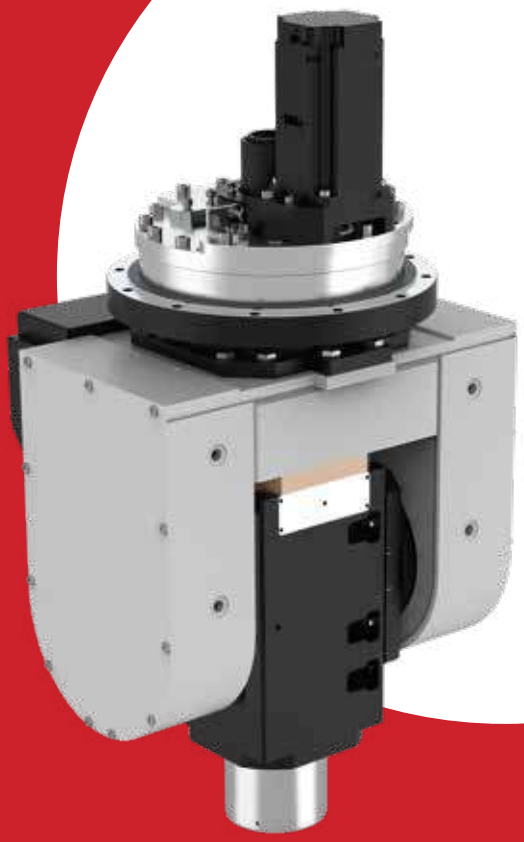
SAB 150 OPTIONAL AVAILABLE	
Speed monitoring	●
Side box connectors	—
Plug and play connectors	—
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

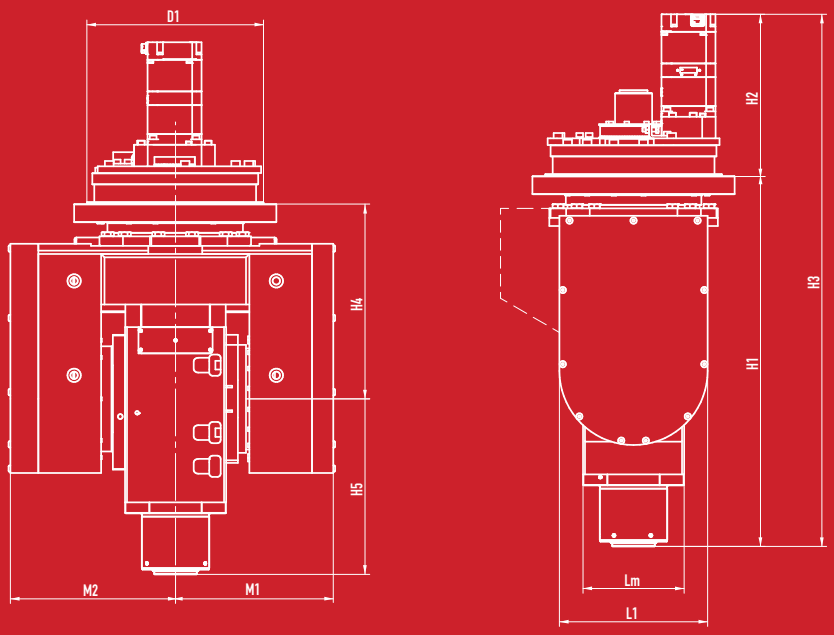
● available / — not available

NOTE	
[1]	For further option see SAB150 catalogue section
[2]	Square motor flange 60x60 Yaskawa-Delta other brands on request
[3]	Square motor flange 80x80 or 90x90 Yaskawa-Delta other brands on request

HDS 495

Double shoulder





SAB150 LN Dimension Table										
D1	H5	H4	H1	H2	H3	M1	M2	L1	Lm	Ds
262	549.3	240	789.3	289	260.3	234	245	220	150	480

SAB150 SN Dimension Table										
D1	H5	H4	H1	H2	H3	M1	M2	L1	Lm	Ds
262	549.3	240	789.3	289	78	234	245	220	150	480

Medium big size wood working and aluminium 5 axis machines for heavy machining duty cycles. Can be equipped with high performance electrospindles for heavy milling operations, wood, plastic and aluminium materials can be easily milled and drilled.

Available with electrospindle encoder for tapping operation.

Main characteristics

AXIS A			
Rotation range	grade °	+105	-105
Continuous torque	Nm	410	
Max . Torque	Nm	1000	
Servomotor power [2]	W	400	
Servomotor Nominal - Max speed	rpm	3000	5000
Limit switch sensor type / N°	-	PNP-NC	2
Gearbox type	-	Planetary gear box	
Ratio	-	1/222	
Direct axis brake device	Nm	Yes/Optional	
Direct axis encoder	-	Yes/Optional	

AXIS C			
Rotation range	grade °	+365	-365
Continuous torque	Nm	600	
Max . Torque	Nm	1800	
Servomotor power [3]	W	800	
Servomotor Nominal - Max speed	rpm	3000	5000
Limit switch sensor type / N°	-	PNP-NC	2
Gearbox type	-	Planetary gear box	
Ratio	-	1/257.25	
Locking device / type / brake torque	Nm	Yes/Optional	
Axis encoder	-	Yes/Optional	
Weight	kg	120	

OPTIONS AVAILABLE HDS 495	
Direct encoder on A and C axies	●
Direct brake on A and C axis	●
Aluminium milling head body	●

● available / — not available

Spindles

SAB 132 OPTIONAL AVAILABLE	
Speed monitoring	●
Side box connectors	—
Plug and play connectors	—
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

● available / — not available

NOTE	
[1]	For further option see SAB132 catalogue section
[2]	Square motor flange 60x60 Yaskawa-Delta other brands on request
[3]	Square motor flange 80x80 or 90x90 Yaskawa-Delta other brands on request
[4]	Synchronous motor. (Where is not specified asinchronous motor)

SAB 150 OPTIONAL AVAILABLE	
Speed monitoring	●
Side box connectors	—
Plug and play connectors	—
Aggregate reference sleeve	●
Encoder 1Vpp	●
Encoder TTL	●
Vibration sensor	—
Bearing Temperature	—

● available / — not available

NOTE	
[1]	For further option see SAB150 catalogue section
[2]	Square motor flange 60x60 Yaskawa-Delta other brands on request
[3]	Square motor flange 80x80 or 90x90 Yaskawa-Delta other brands on request
[4]	Synchronous motor. (Where is not specified asinchronous motor)

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