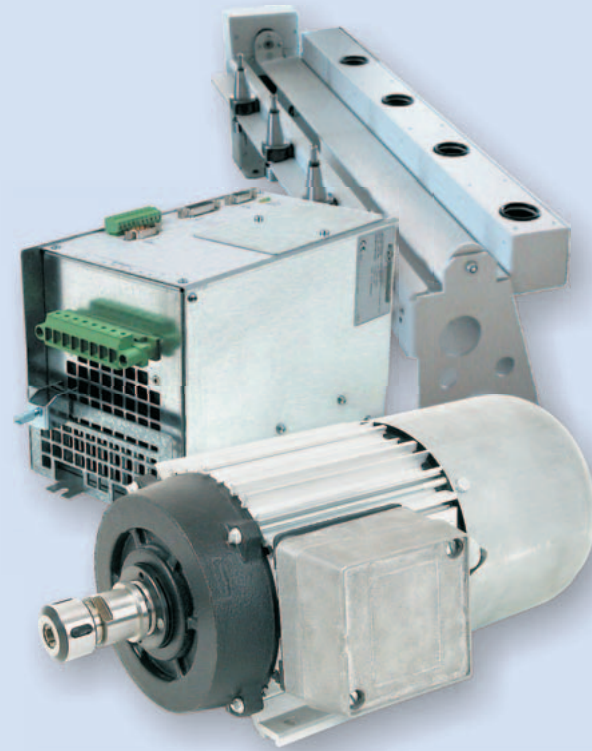


Spindle Drives with automatic tool change

- 3-phase asynchronous motor with tool-holder taper for drilling and milling tools
- Available with different power rates, 500 W up to 2,2 kW
- Pneumatic tool change with cone SK 20 or collet chuck
- Speed control through frequency converter
- Programmable by analog control signal and SPS compatible inputs or CAN fieldbus

Options:

- Tool change station for tool holder with cones SK 20
- Collet chucks (direct clamping)
- Application software for CNC machines



From Components to Systems.

MECHANICS

ELECTRONICS

SOFTWARE

MECHA-TRONICS

SOFT-TRONICS

SYSTEMS-APPLICATIONS

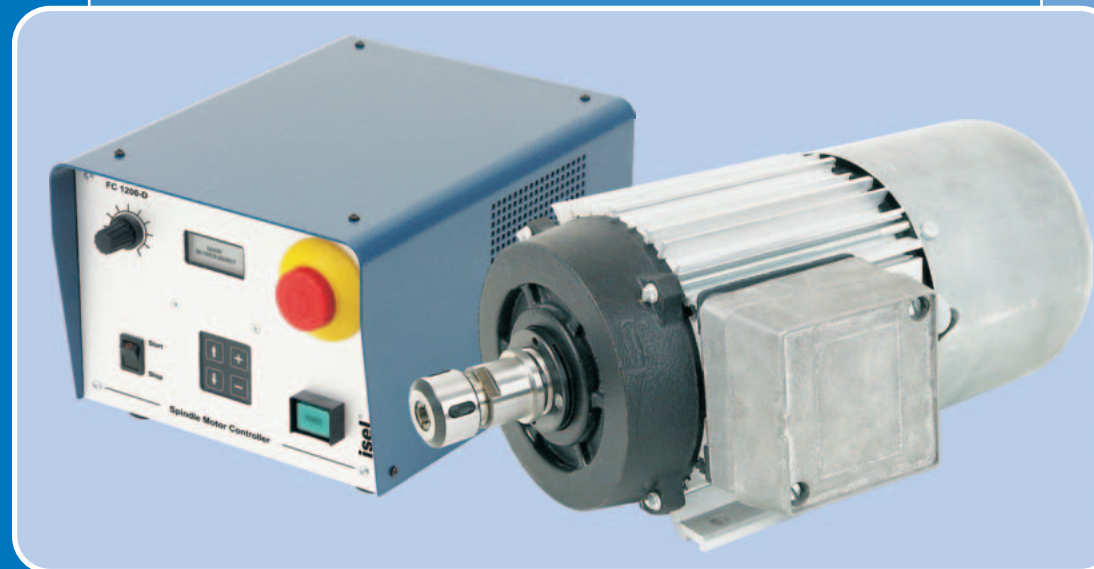
Product Info: electronic-sales@isel.com // www.isel.com >Flyer

iselautomation KG // Bereich Elektronik
Sachsenweg 8 // D-36132 Eiterfeld

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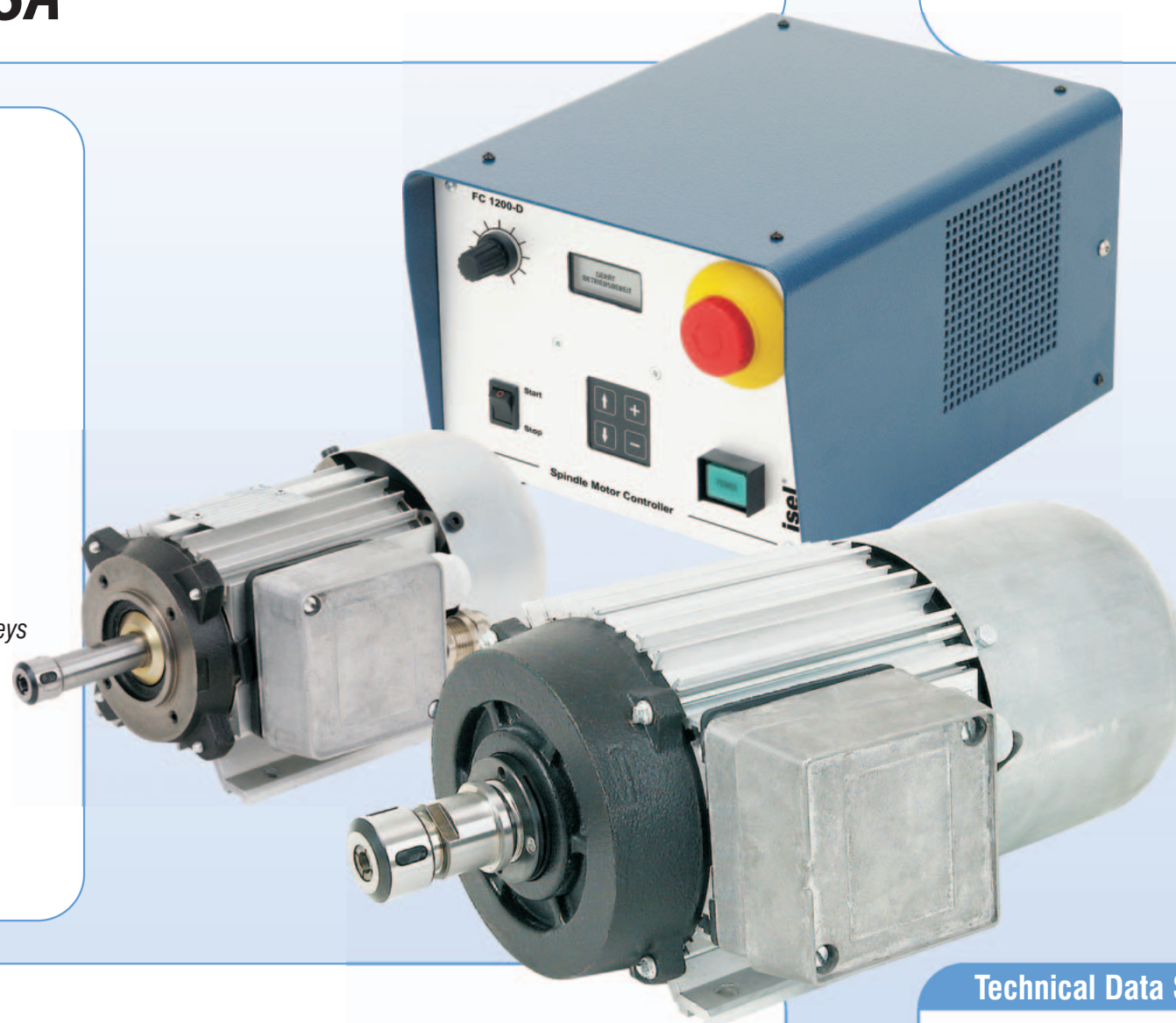
Spindle Drives HSA

1	Positioning Motors	Drive Technology	4
2	Linear Motors	Control Electronics	5
3	Spindle Drives	Applications	6



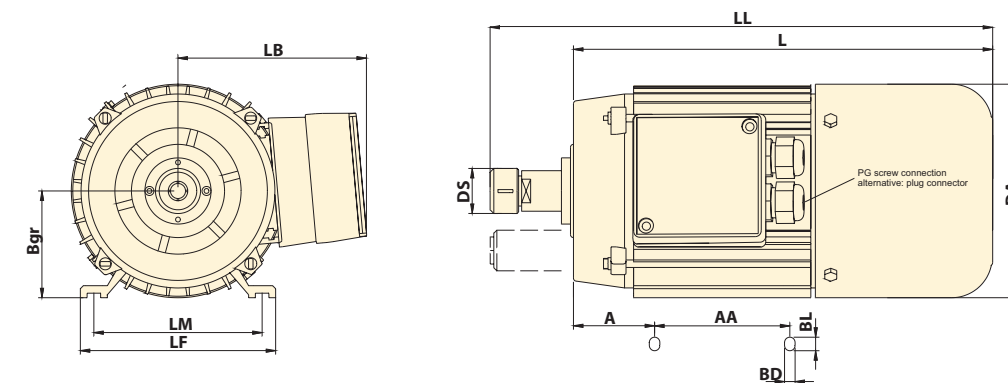
Spindle Drives HSA

- 3-phase asynchronous motor, **speed control**
- Motor rated power
 - 500 W (300 - 24.000 min⁻¹), Bgr 56
 - 600 W (300 - 18.000 min⁻¹), Bgr 63
 - 1.1 kW (200 - 6.000 min⁻¹), Bgr 71
 - 1.1 kW (300 - 13.000 min⁻¹), Bgr 71
- Special shaft with tool holder for drilling and engraving tools
- High precision bearing, zero backlash
- Standard motor design rating IP 54
- Frequency converter with voltage/frequency characteristic
- Simple handling by LC display and function keys
- Remote connector for external control signals
- Integrated chopper and ballast resistor
- Line filter according industrial standard (A)
- Emergency switch off for motor output



Spindle Drives HSA

Dimensions Spindle Motor



Description	LL (mm)	L (mm)	A (mm)	AA (mm)	DA (mm)	DS (mm)	LB (mm)	LM (mm)	LF (mm)	Bgr (mm)
MAH 2.05-S	238,5	191	36	71	110	18	90	90	106	56
MA 2.05-S	265	223	41	80	123	18	92	100	125	63
MA 2.11-S	325	277	51,5	90	140	30	130	112	130	71
MA 4.11-S	325	277	51,5	90	140	30	130	112	130	71

Spindle drives from **isel** are used for drilling, milling and engraving in industrial and handicraft applications. Many different materials can be processed such as wood, plastic and metal. The drives consist of two units, a 3-phase spindle motor and a dedicated frequency converter.

The spindle motor itself is a powerful asynchronous motor with a special shaft for collet chucks accommodating tools with shaft diameters from 1,0 to 12,7 mm.

To guarantee high resistance against radial forces and long life the motor integrates high precision bearings with labyrinth box.

For mounting the motor has a foot-flange B3, for electrical connection a box is present.

To control the speed the drive uses a frequency converter with U/f vectors and programmable base points.

The frequency converter can be used in three different modes.

For stand-alone applications, a front side speed potentiometer and a Start/Stop button can control the unit.

The unit can also be controlled through a LC-panel (2x20 characters) and four function keys. Herewith the complete motion parameters such as start/stop, spindle speed, direction and acceleration / deceleration are programmed.

To control the unit through remote signals from SPS or through an **isel**-specific system, a backside connector is available.

The converters are integrated in a complete enclosed housing with fan, emergency switch and filter components.

Technical Data Spindle Motors

Description	Item number	Rated power kW (S6-40%)	Speed range min ⁻¹	Nominal speed min ⁻¹	Continuous power kW (S1)	Nominal voltage V	Concentricity 1/100 mm	F _{axial} / F _{radial} N	Weight kg	Collet chuck	Frequency converter
MAH 2.05-S	477505 1124	0,5	300 ... 24.000	18.000	0,30	3x 210	2,0	150/100	4,0	1,0 ... 6,35	FC 1200-D
MA 2.05-S	477605 1118	0,65	300 ... 18.000	4.300	0,58	3x 210	2,0	200/150	5,8	1,0 ... 6,35	FC 1200-D
MA 2.11-S	477711 1113	1,1	300 ... 13.000	4.200	0,75	3x 210	2,0	300/200	11,0	3,0 ... 10	FC 2200-D
MA 4.11-S	477711 1106	1,1	200 ... 6.000	2.250	0,75	3x 210	2,0	300/200	11,0	3,0 ... 10	FC 2200-D

Order Information

Spindle drive HSAH 050-SR	(Spindle motor MAH 2.05-S, converter FC 1200-D, motor cable l = 8 m)	Item No.: 310850 1000
Spindle drive HSA 2.05-SR	(Spindle motor MA 2.05-S, converter FC 1200-D, motor cable l = 8 m)	Item No.: 310860 1000
Spindle drive HSA 2.11-SR	(Spindle motor MA 2.11-S, converter FC 2200-D, motor cable l = 8 m)	Item No.: 310870 1000
Spindle drive HSA 4.11-SR	(Spindle motor MA 4.11-S, converter FC 2200-D, motor cable l = 8 m)	Item No.: 310871 1000
Frequency converter FC 1200-D	(Speed control with U/f characteristics, rated power 1200 VA)	Item No.: 311212 1000
Frequency converter FC 2200-D	(Speed control with U/f characteristics, rated power 2200 VA)	Item No.: 311222 1000