



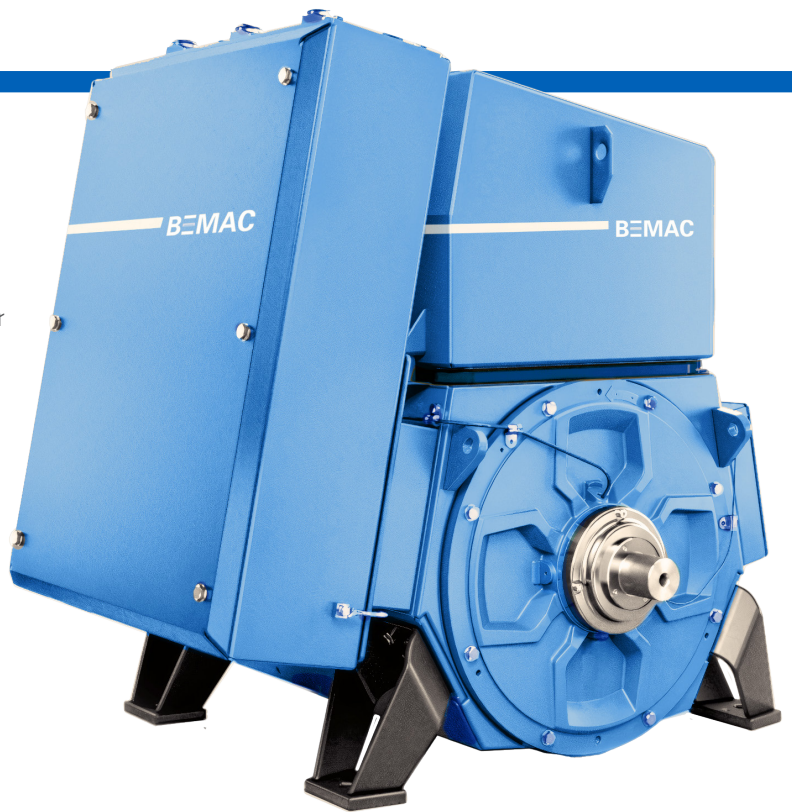
SOLID ROTOR STANDALONE MACHINE SRS0400

Built for a wide range of high-speed applications

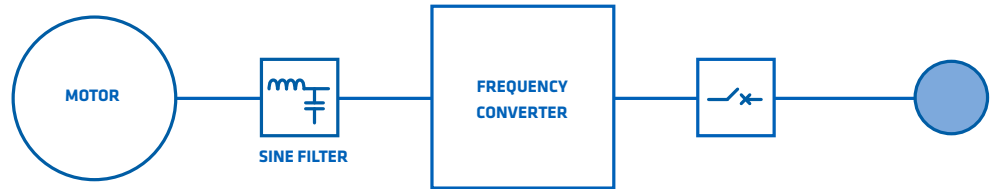
Switch up to rugged drive train technology for high-speed applications. Reach speeds of up to 15,000 rpm with power ranging from 300-1,500 kW. This is now possible with our proprietary solid rotor technology, which is now available also as standardized packages.

With our robust solid rotor motor, you get rid of the gearbox, while allowing the application to reach higher speeds and unmatched energy efficiency.

The structure is more compact and lighter in weight, requiring up to 50% less space than a conventional design. The solid rotor construction provides high mechanical integrity and rigidity. Without the gearbox, you can reach higher system efficiencies.

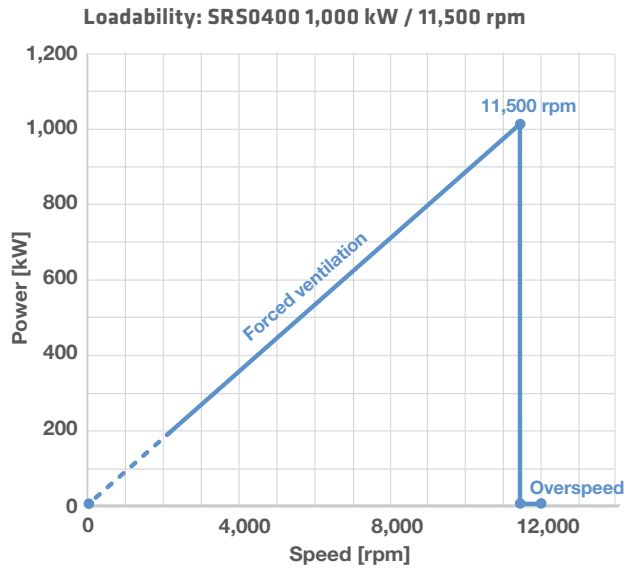
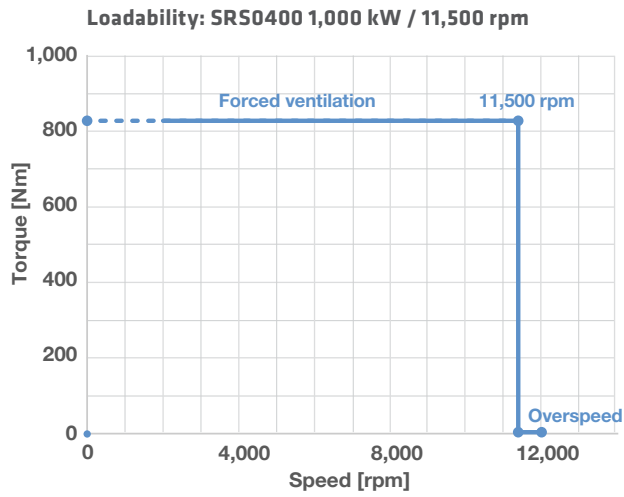


Our high-speed drive system consists of solid rotor motors together with our variable frequency drive technology. Together with the frequency converter, you get full control and variable speed over the entire operating range.



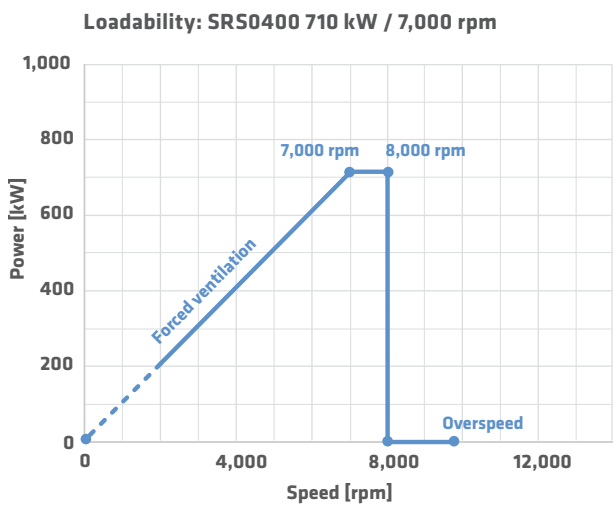
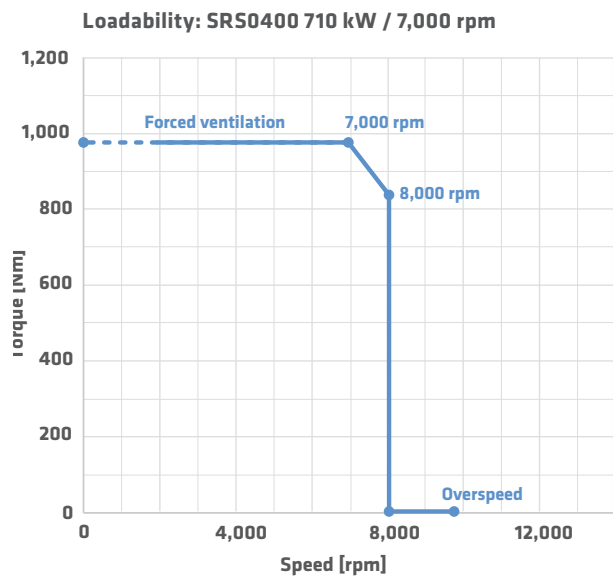
Machine designation	SRS400		Description
Machine type	Solid rotor standalone machine		
Rated speed [rpm]	7,000 (maximum 8,000)		400 V
Rated speed [rpm]	11,500		690 V
Overspeed [rpm]	Maximum 12,000		No load
Number of phases	3		
Winding connection	Delta		External terminals
VFD output requirements	See specification DN0210		
Number of poles	2		
Mass [kg]	2,100		
Mounting direction	Horizontal		
Mounting types	IM1001 (B3)	IM2001 (B35)	
Temperature rise class	IEC 155		
Insulation class	IEC 180		
Duty cycle	S1		Continuous duty
Cooling types	IC3A7		IEC 60034-6
Rotation direction	Bi-direction		
Maximum cooling medium inlet temperature [°C]	Air +40		
Required flow rate [l/s]	750		At P_mech 1,000 kW
Cooling circuit pressure drop [kPa]	3.0		The machine requires an external cooling fan
IP class	IP23		Also the external cooling system to be designed according to IP23
Dimension drawing	10039201		Available in PDF format
Maximum ambient temperature [°C]	+40		
Minimum ambient temperature [°C]	+5		
Maximum humidity [%]	95		
Bearings	Spindle bearings		
Bearing insulation	Ceramic rolling elements		
Lubrication	Oil + air		
External vibration [g]	Maximum 0.2		
Maximum external axial forces to shaft [N]	+650 / -325		+ = towards motor
Coupling half mass [kg]	Maximum 30		At the end of the motor shaft
Machine vibration class	Grade A		IEC 60034-14
Bearing lifetime	> 43,800 h (5 years)		L _{10mth} ISO/TS 16281
Power terminal location	Side terminal box, entry from the top		Blind gland plate
Position of the terminal box	Left	Right	To be specified in the purchase order
Stator thermal protection	2 x 3 PT100		2 sensors / phase
Bearings thermal protection	2 x 1 PT100		1 sensor / bearing
Shaft height [mm]	400		Can be tailored
Shaft end diameter [mm]	d85 h6 as standard		Can be tailored up to d115
Design standard	EN 60034		

690 V grid



P [kW]	n [rpm]	Connection	T [Nm]	Terminal voltage (V)	I [A]	Cos φ	Efficiency
1,000	11,500	D	830	630	1,030	0.76	96.3
900			747		931	0.74	96
800			664		832	0.72	95.7
710			590		745	0.69	95.2

400 V grid



P [kW]	n [rpm]	Connection	T [Nm]	Terminal voltage (V)	I [A]	Cos φ	Efficiency
710	7,000	D	969	360	1,355	0.82	96.4
630			859		1,206	0.81	96.3
560			764		1,079	0.80	96.1
500			682		974	0.78	96.0

Technical drawings – main dimensions for IC3A7 cooling

