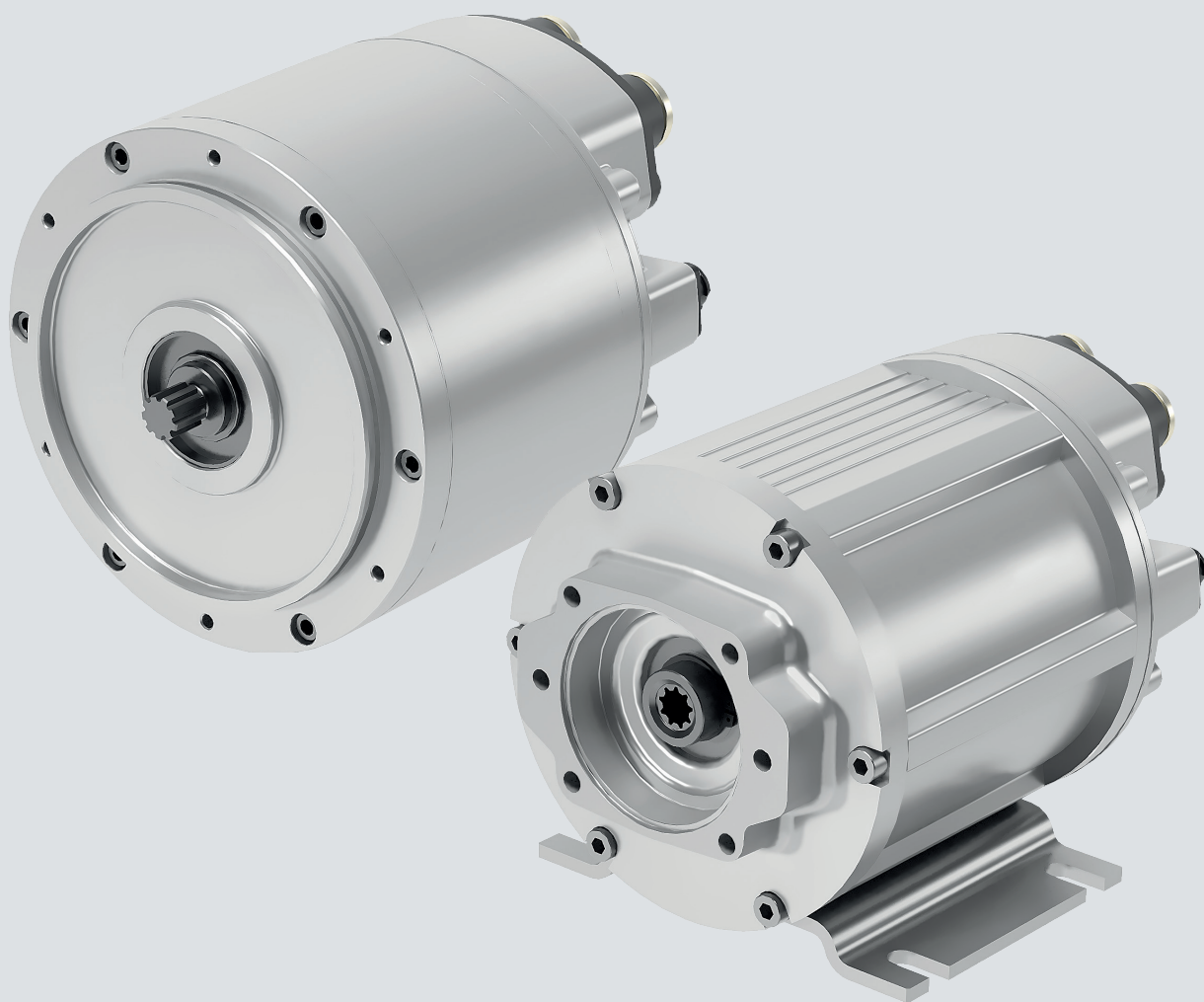


MSB Series

Electric motors



SIBONI
A BONDIOLI & PAVESI COMPANY

398SEM003EN02 - 02-09-2026

MSB Series	5
MSB 050	6
MSB 075	8
MSB 100	10
Dimensions	12
Flanges and shafts for motorwheels	14
Flanges and shafts for pumps	15
Brake - Connection - Thermal Sensor, Signal Pinout	16
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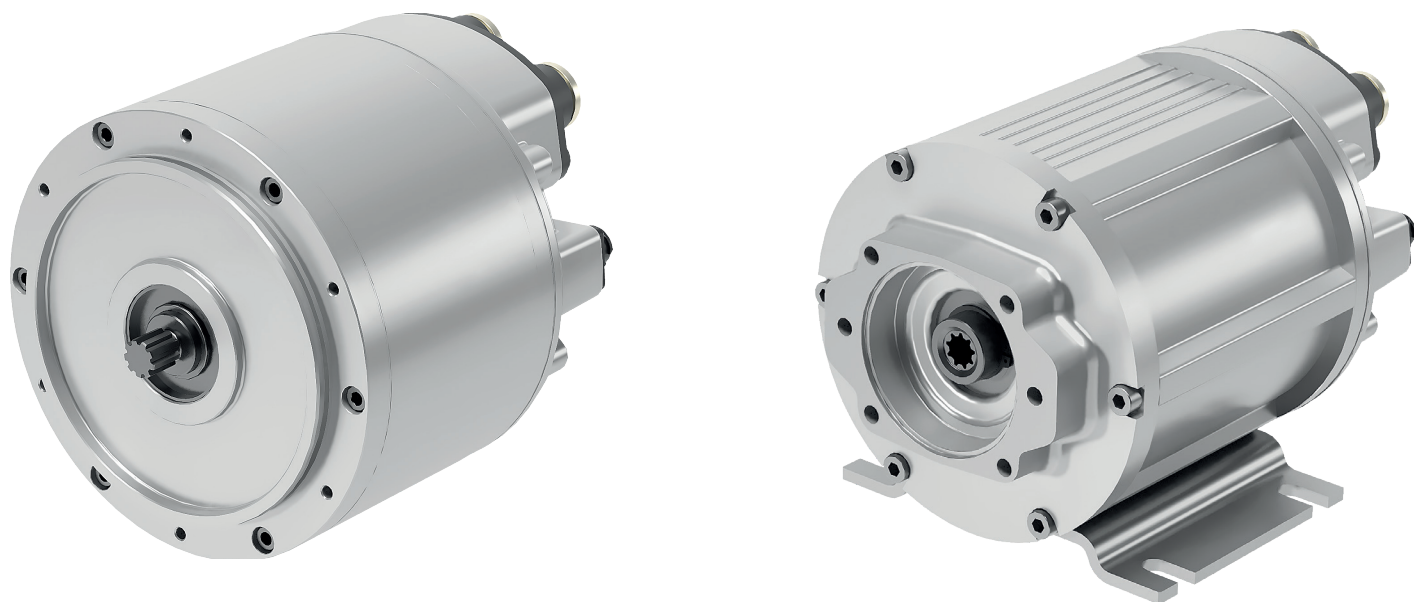
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Consequently data provided in previous publications may no longer be valid. Siboni reserves the right to change specifications without prior notice or obligation.



Brushless Motors for Off-Highway and Industrial Applications

Designed for rugged environments, our new range of **low-voltage brushless motors** (3.5 kW to 16 kW) is ideal for **off-highway vehicles**, **construction machinery**, and **industrial automation**. Featuring **IPM (Interior Permanent Magnet)** technology, the motors deliver high torque density, efficiency, and precision control.

With robust mechanical design, **reinforced connectors**, and **high IP protection**, these motors are built for harsh conditions: dust, moisture, vibration, and wide temperature swings. The **Sincos position sensor** ensures accurate, real-time feedback for advanced control, even in dynamic applications.

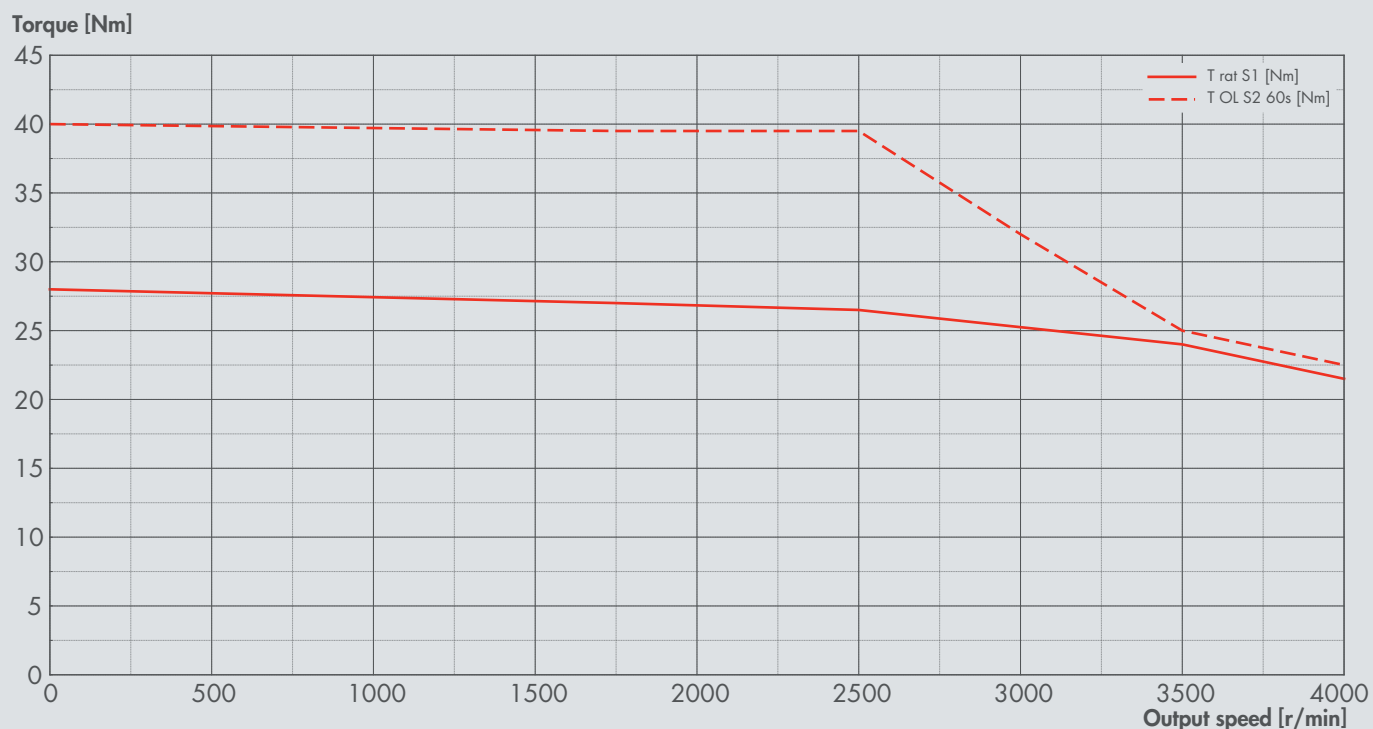
Available in **self-ventilated** or **liquid-cooled** versions, the motors can be paired with **gearboxes for traction** or **hydraulic pumps** for mobile applications—supporting both **motor** and **generator** use cases. Low-voltage compatibility (e.g., 48V) makes them perfect for battery-powered platforms.

Applications include **scissor lifts**, **telehandlers**, **harvesters**, and **electric power units**, where precision, power, and reliability are key. Their modular design supports integration with third-party inverters, enabling flexible system architecture.

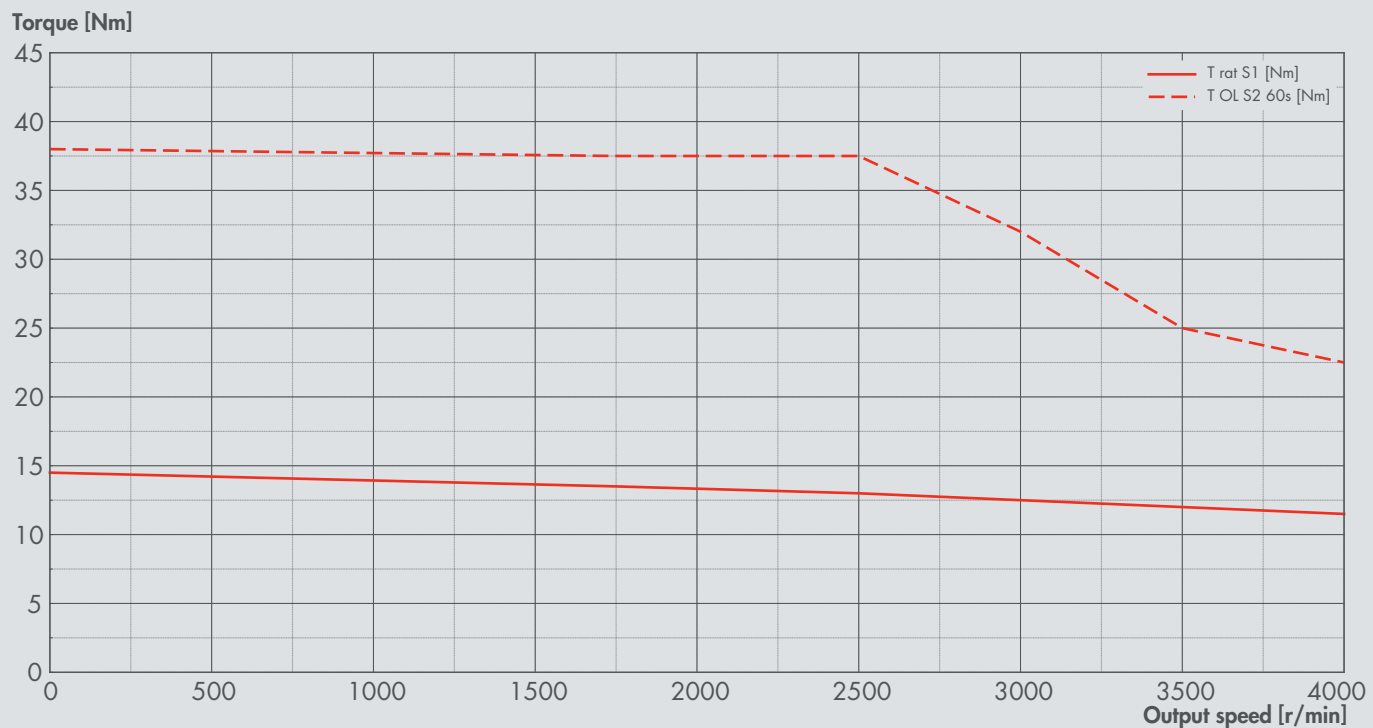
This motor family offers a rugged, scalable, and efficient solution for electrifying mobile and industrial equipment—where **medium-to-high power**, **position accuracy**, and **electromechanical integration** are needed.

Torque/Speed Characteristics

Liquid Cooling



Air Cooling

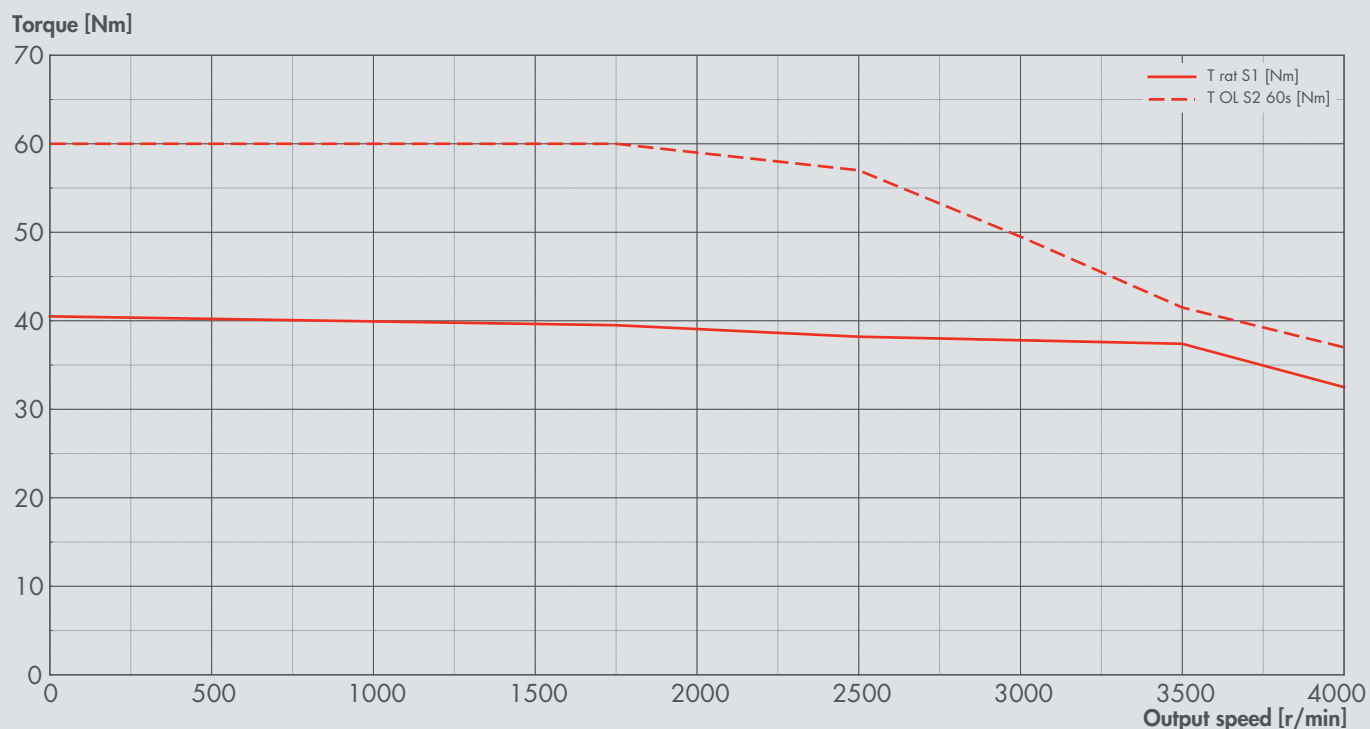


Performance and specifications

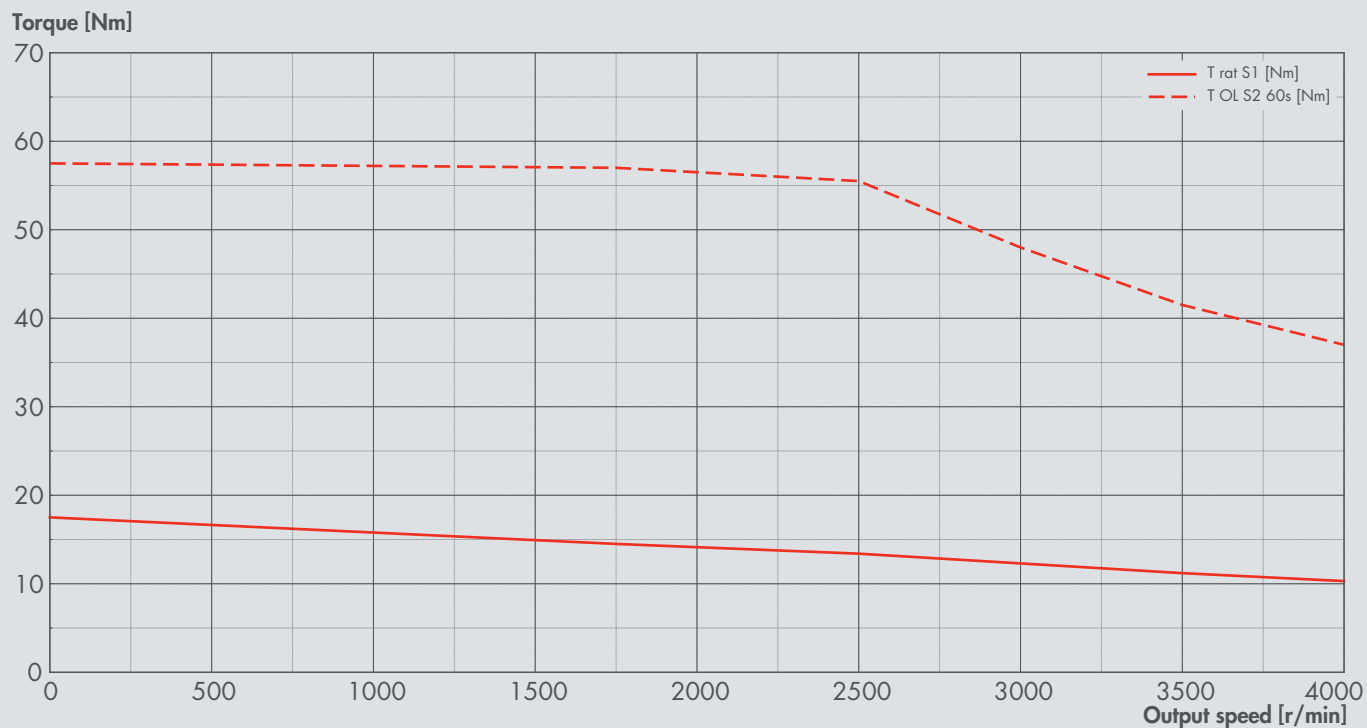
MOTOR MODEL		MSB 050	
Winding code		MSB187A	MSB182A
ELECTRICAL DATA			
Cooling		Liquid	Air
Voltage Supply	V _{dc}	48	
Stall torque	Nm	28	14
Stall current	A _{rms}	209	116
Rated power	kW	8	3,5
Rated speed	r/min	3000	
Rated torque	Nm	25	12
Rated current	A _{rms}	204	102
Peak torque	Nm	40	35
Peak current	A _{rms}	316	296
Torque constant ±5% (at 25°C)	Nm/A _{rms}	0,12	
Voltage constant ±5%	V _{rms} /[k(r/min)]	8	
Winding Resistance Phase Phase ±5% (at 25°C)	mOhm	8,6	
Winding Inductance Phase Phase ±5%	mH	0,1	
Pole number		10	
ΔT _{MAX} Winding	°C	105	
MECHANICAL DATA			
Rotor moment of inertia	Kg·m²x10 ⁻⁴	29	
Weight	kg	13	
PARKING BRAKE (option)			
Rated voltage +6 / -10%	V _{dc}	24	
Rated current at 20°C	A	1,1	
Moment of inertia	Kg·m²x10 ⁻⁴	5,5	
Weight	Kg	1,6	
Holding torque	Nm	37	
ROTOR POSITION SENSOR SIN-COS (single ended)			
Supply	V	5V +/- 5%	
Max current consumption	mA	30	
Internal serial impedance	Ohm	100	
Amplitude	V	2.2 +/- 0.2 Vpp	
Signal offset	V	2.5 +/- 1%	
THERMAL SENSOR PT1000			
Type		PT1000-R8/2-2F	
Resistance at 20° / Resistance at 100°	Ohm	1078 / 1385	
Precision	°C	+/- (0.3-0.005t)	

Torque/Speed Characteristics

Liquid Cooling



Air Cooling

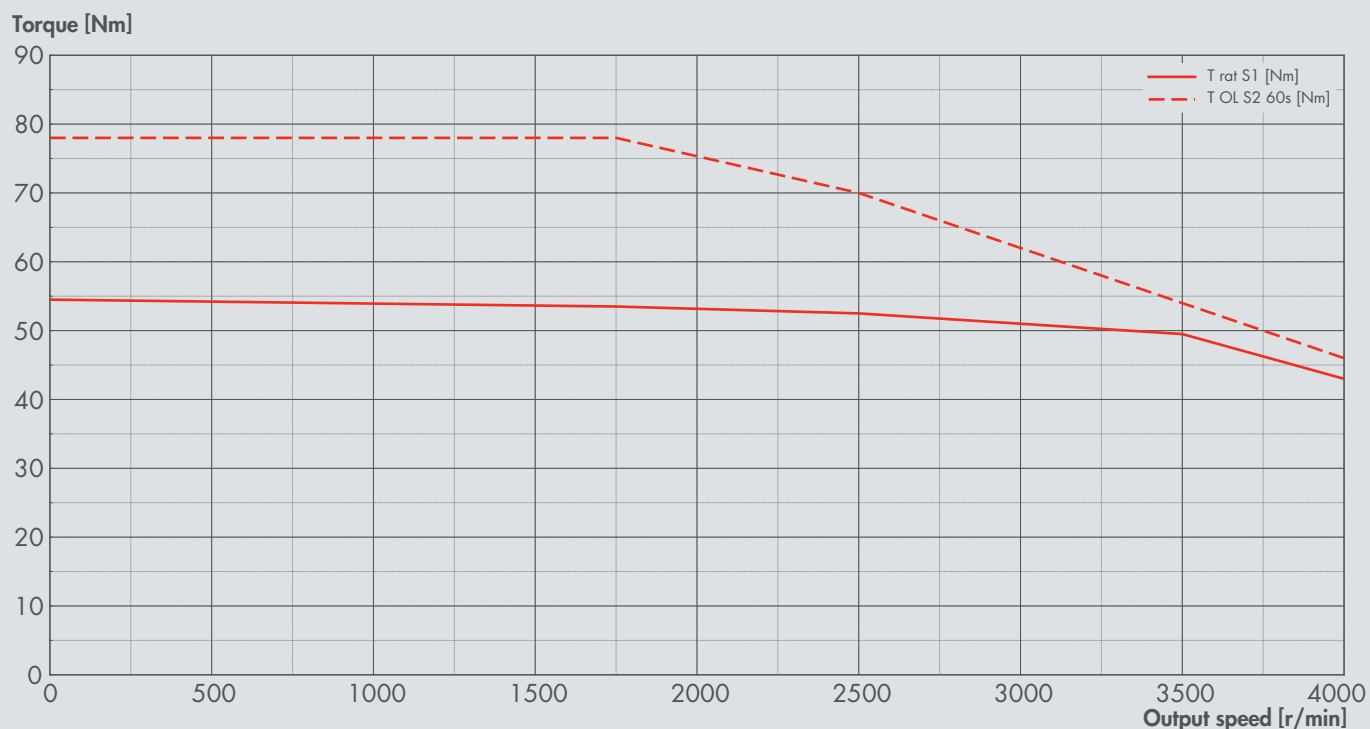


Performance and specifications

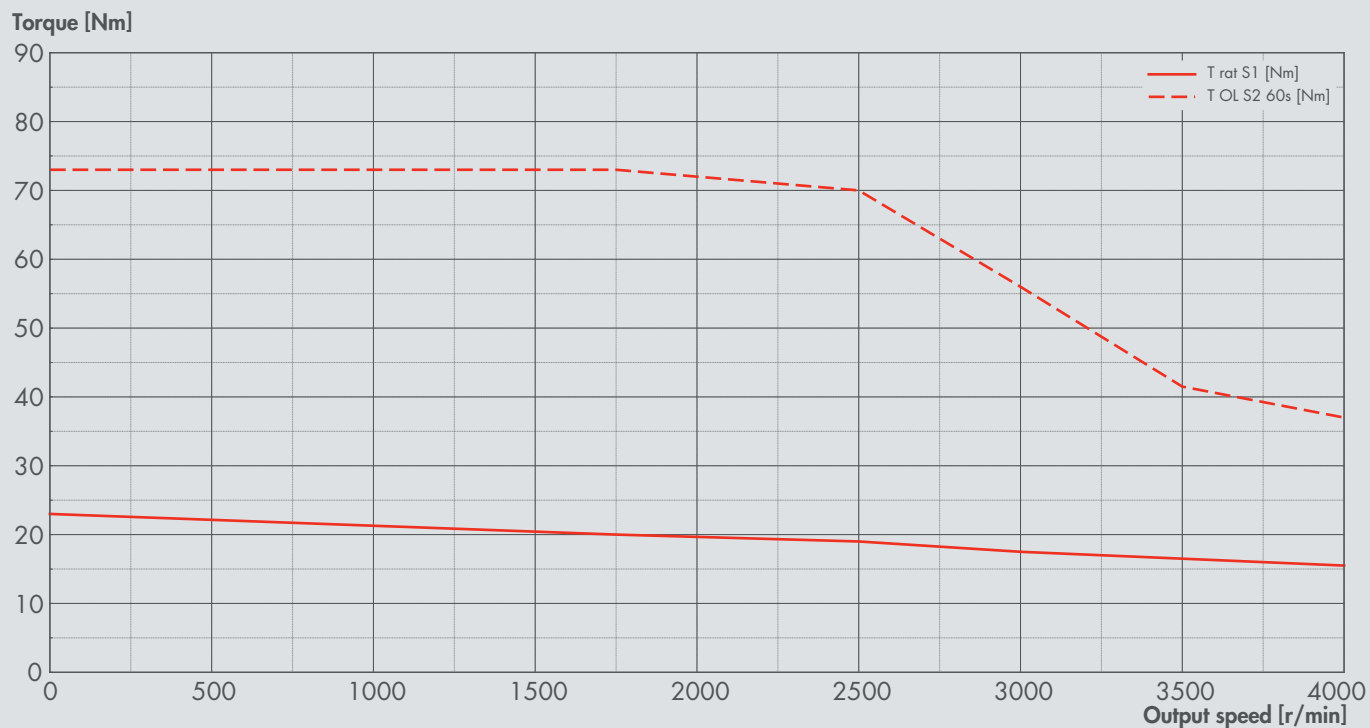
MOTOR MODEL		MSB 075	
Winding code		MSB188A	MSB183A
ELECTRICAL DATA			
Cooling		Liquid	Air
Voltage Supply	V _{dc}	48	
Stall torque	Nm	40	17
Stall current	A _{rms}	325	150
Rated power	kW	11	4
Rated speed	r/min	3000	
Rated torque	Nm	35	13
Rated current	A _{rms}	314	111
Peak torque	Nm	60	55
Peak current	A _{rms}	495	470
Torque constant ±5% (at 25°C)	Nm/A _{rms}	0,12	
Voltage constant ±5%	V _{rms} /[k(r/min)]	7,75	
Winding Resistance Phase Phase ±5% (at 25°C)	mOhm	4,9	
Winding Inductance Phase Phase ±5%	mH	0,06	
Pole number		10	
ΔT _{MAX} Winding	°C	105	
MECHANICAL DATA			
Rotor moment of inertia	Kg·m²x10 ⁻⁴	43	
Weight	kg	16	
PARKING BRAKE (option)			
Rated voltage +6 / -10%	V _{dc}	24	
Rated current at 20°C	A	1,1	
Moment of inertia	Kg·m²x10 ⁻⁴	5,5	
Weight	Kg	1,6	
Holding torque	Nm	37	
ROTOR POSITION SENSOR SIN-COS (single ended)			
Supply	V	5V +/- 5%	
Max current consumption	mA	30	
Internal serial impedance	Ohm	100	
Amplitude	V	2.2 +/- 0.2 Vpp	
Signal offset	V	2.5 +/- 1%	
THERMAL SENSOR PT1000			
Type		PT1000-R8/2-2F	
Resistance at 20° / Resistance at 100°	Ohm	1078 / 1385	
Precision	°C	+/- (0.3-0.005t)	

Torque/Speed Characteristics

Liquid Cooling



Air Cooling

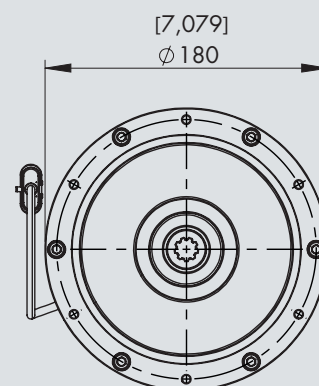
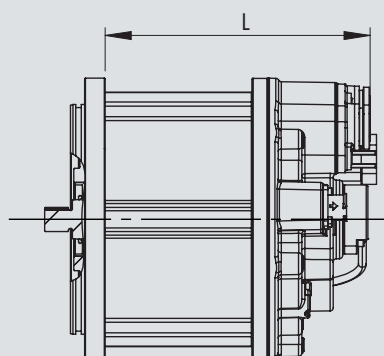
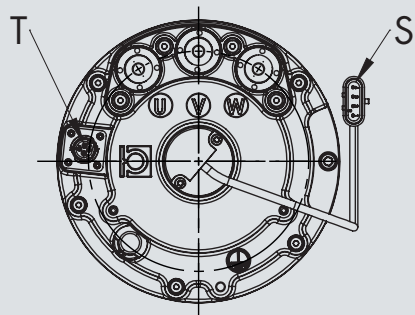


Performance and specifications

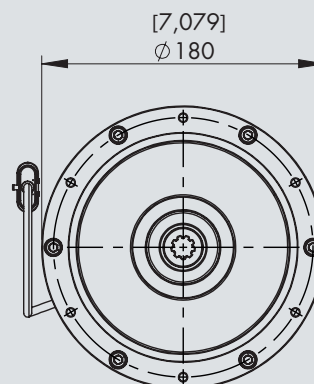
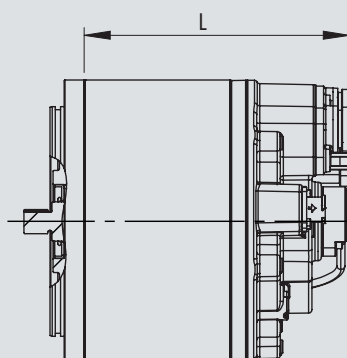
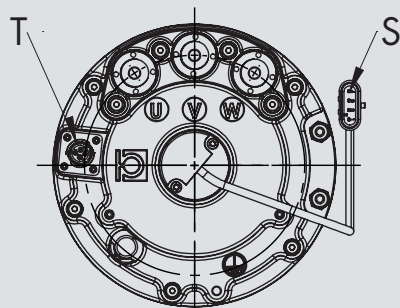
MOTOR MODEL		MSB 100	
Winding code		MSB189A	MSB184A
ELECTRICAL DATA			
Cooling		Liquid	Air
Voltage Supply	V _{dc}	48	
Stall torque	Nm	54	23
Stall current	A _{rms}	406	183
Rated power	kW	16	5,5
Rated speed	r/min	3000	
Rated torque	Nm	50	17
Rated current	A _{rms}	396	147
Peak torque	Nm	70	70
Peak current	A _{rms}	607	557
Torque constant ±5% (at 25°C)	Nm/A _{rms}	0,12	
Voltage constant ±5%	V _{rms} /[k(r/min)]	8,25	
Winding Resistance Phase Phase ±5% (at 25°C)	mOhm	3,8	
Winding Inductance Phase Phase ±5%	mH	0,05	
Pole number		10	
ΔT _{MAX} Winding	°C	105	
MECHANICAL DATA			
Rotor moment of inertia	Kg·m²x10 ⁻⁴	57	
Weight	kg	20	
PARKING BRAKE (option)			
Rated voltage +6 / -10%	V _{dc}	24	
Rated current at 20°C	A	1,1	
Moment of inertia	Kg·m²x10 ⁻⁴	5,5	
Weight	Kg	1,6	
Holding torque	Nm	37	
ROTOR POSITION SENSOR SIN-COS (single ended)			
Supply	V	5V +/- 5%	
Max current consumption	mA	30	
Internal serial impedance	Ohm	100	
Amplitude	V	2.2 +/- 0.2 Vpp	
Signal offset	V	2.5 +/- 1%	
THERMAL SENSOR PT1000			
Type		PT1000-R8/2-2F	
Resistance at 20° / Resistance at 100°	Ohm	1078 / 1385	
Precision	°C	+/- (0.3-0.005t)	

For motorwheels

AIR COOLING



LIQUID COOLING

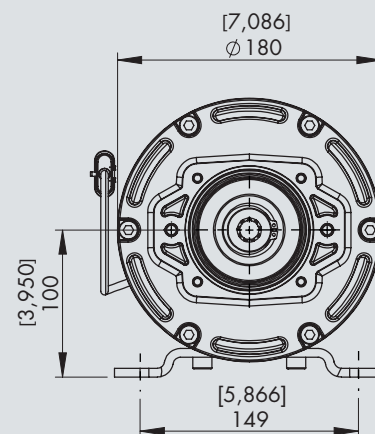
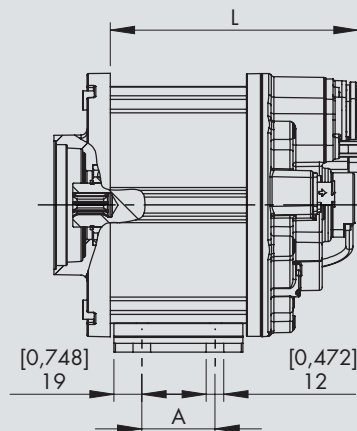
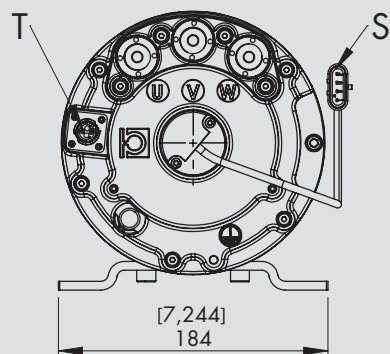


SIZE	L	
	mm	inch
MSB 050	168,5	6,628
MSB 075	193,4	7,613
MSB 100	218,4	8,597

For pumps

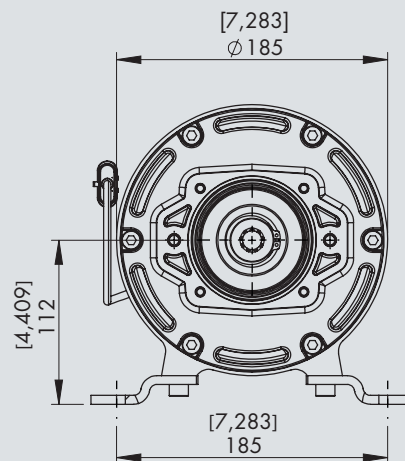
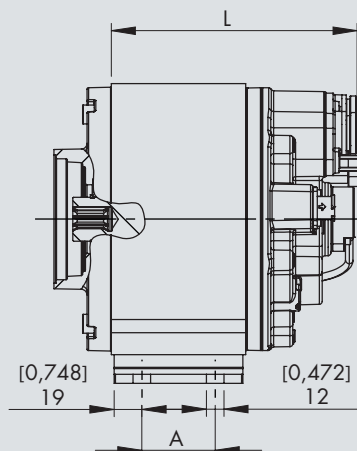
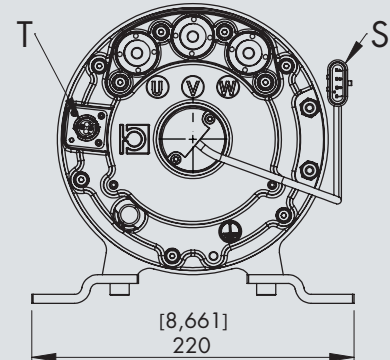
AIR COOLING

SAE A TYPE



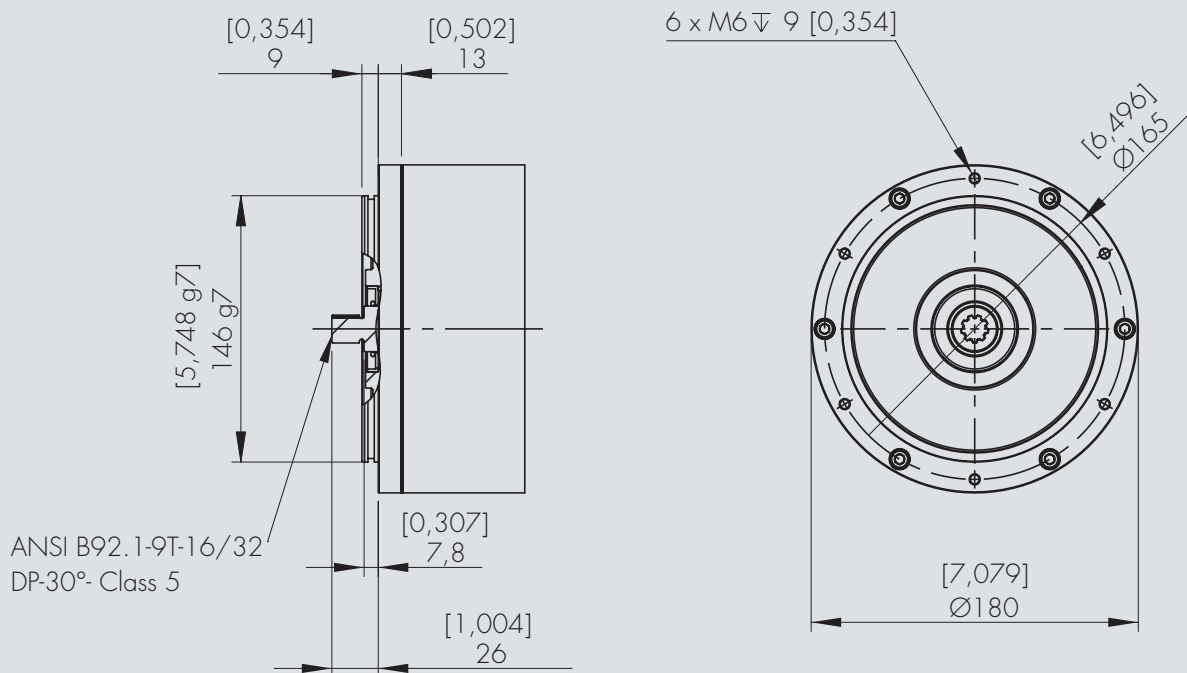
LIQUID COOLING

SAE A TYPE



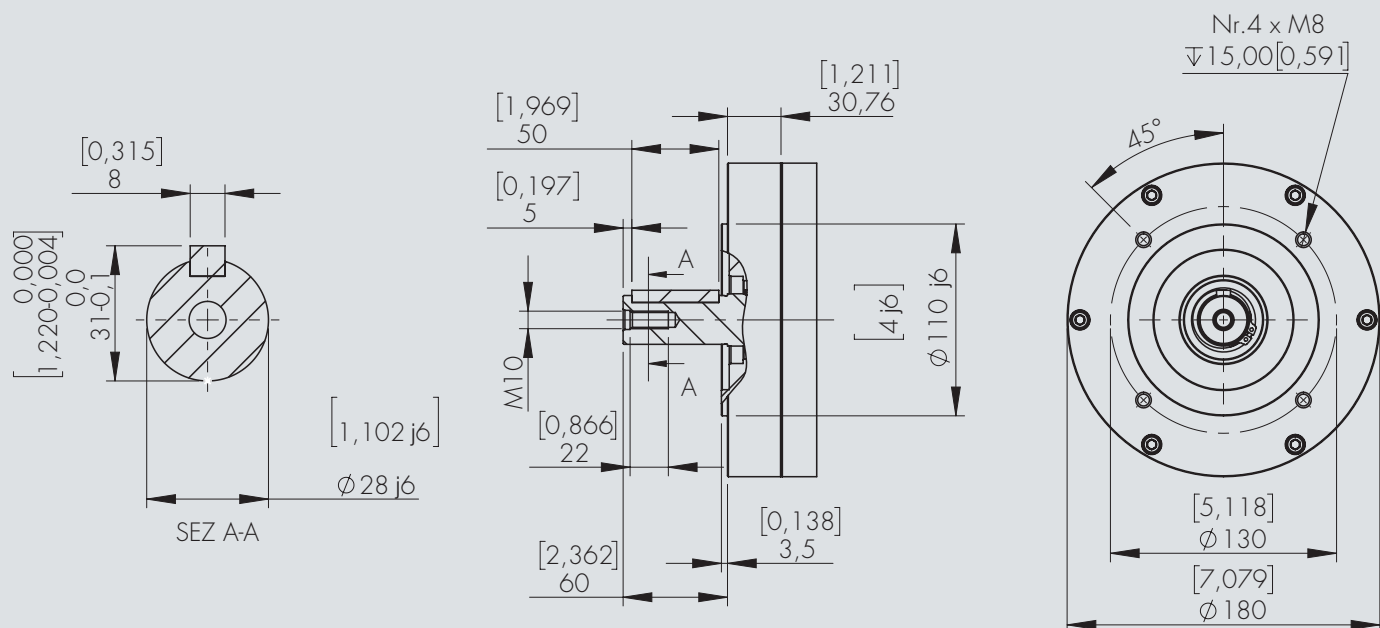
SIZE	L		A	
	mm	inch	mm	inch
MSB 050	168,5	6,628	50	1,969
MSB 075	193,4	7,613	75	2,953
MSB 100	218,4	8,597	100	1,969

0 146 - 165 6xM6 holes / **0** 9-tooth male

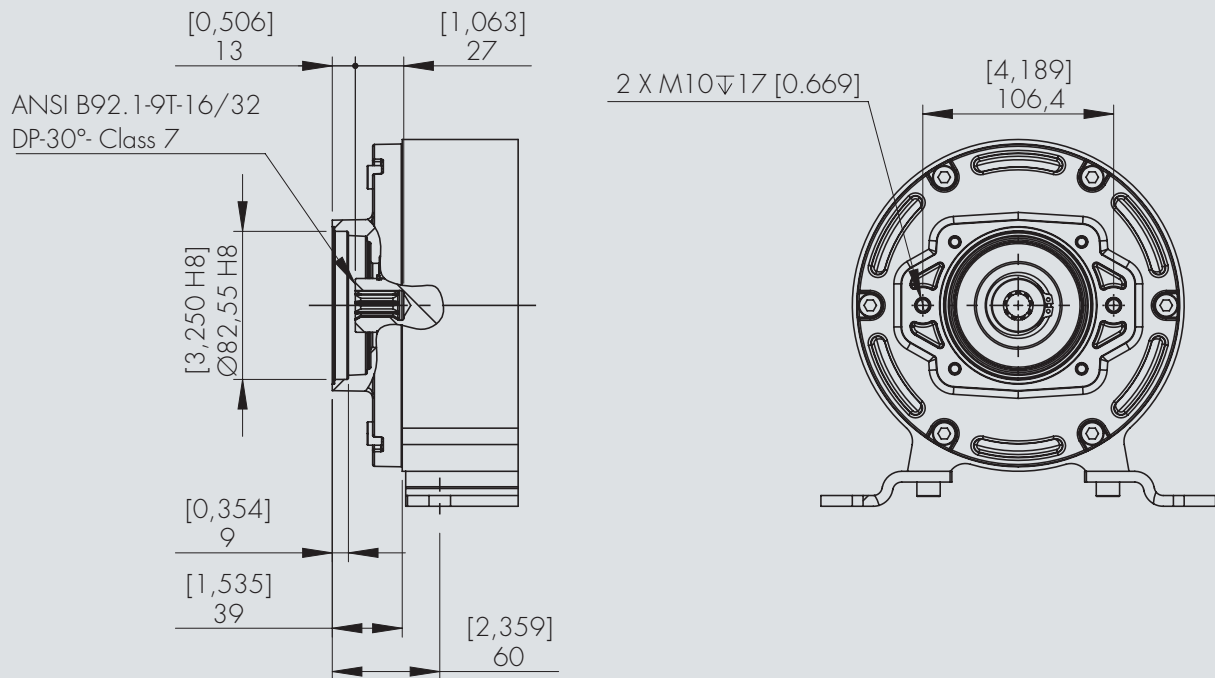


Use EP + MoS₂ additive high performance grease on spline joint

S Industrial B14-100 / **2** Industrial 28j6 x60

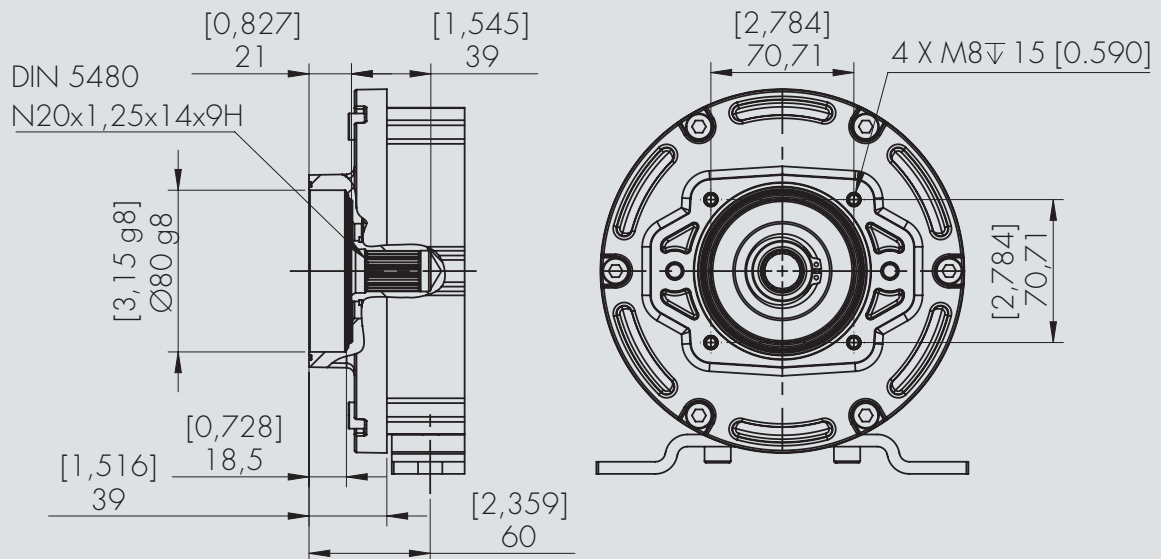


A SAE A / **V** 9-tooth female



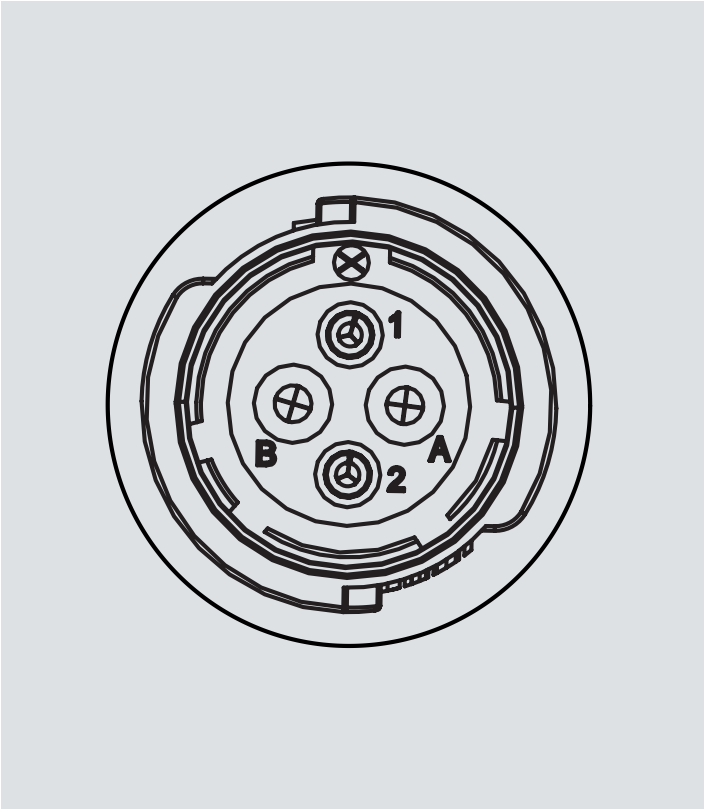
Use EP + MoS₂ additive high performance grease on spline joint
Mount 82.27x1.78 NBR o-ring between pump and motor

1 ISO 3019-2 / **1** 14-tooth female



Use EP + MoS₂ additive high performance grease on spline joint
Mount 82.27x1.78 NBR o-ring between pump and motor

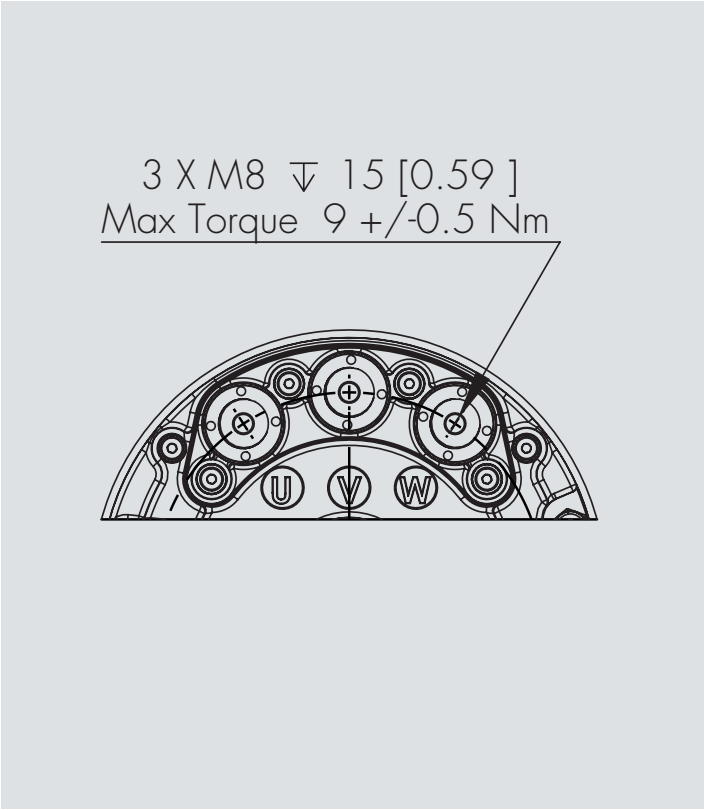
T connector



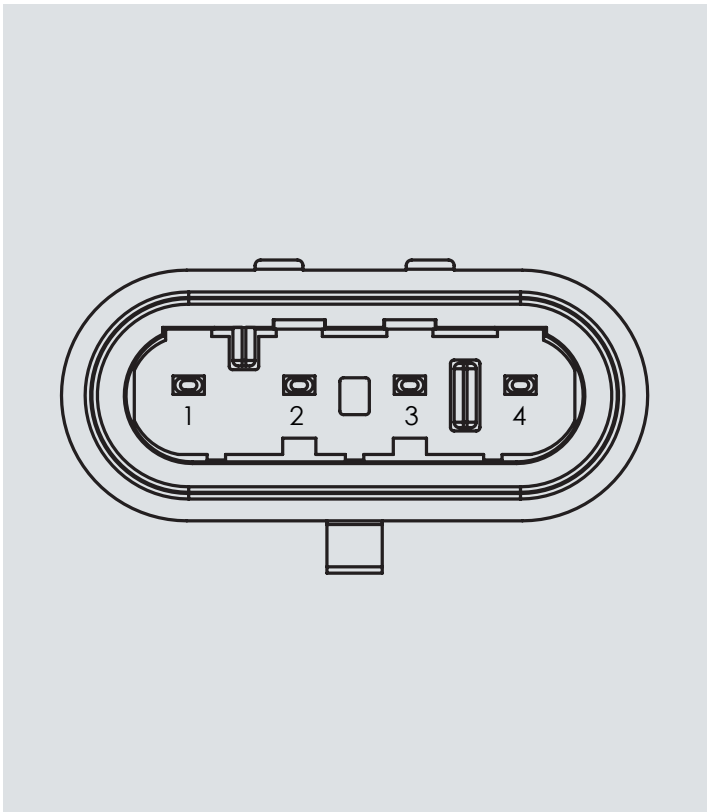
Pin	Signal	
1	1	PT1000
3		
A	A	Brake V+
B		

Mating kit for motors without brake MS5CON001R
Mating kit for motors with brake MS5CON002R

P connector



S connector



Pin	Signal
1	Vin+
2	COS out
3	SIN out
4	GND

Superseal 4 poles sin/cos encoder AMP 282106-1
Mating Female Plug Housing AMP 282088-1

MSB	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

1	2

Motor dimension

18

3

Motor/Cooling type

2 MSB 050 - air cooled	3 MSB 075 - air cooled	4 MSB 100 - air cooled	7 MSB 050 - liquid cooled
8 MSB 075 - liquid cooled	9 MSB 100 - liquid cooled		

4

Power configuration

A 48V

5

Encoder

1 Sin/Cos

6

Cable outlet

A Rear

7

Flange

0 146-165 6xM6 holes	5 Industrial IEC 60072-1 B14-100	A SAE A	1 ISO 3019-2
----------------------	----------------------------------	---------	--------------

8

Shaft

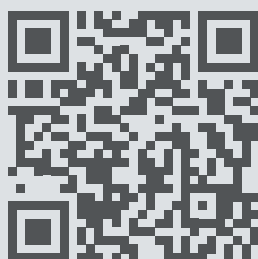
0 9-tooth male (only for motor/wheel connection)	2 Industrial IEC 60072-1 28j6 x60	V 9-tooth female (only for pump connection to SAE A flange)	1 14-tooth female (only for pump connection to ISO 3019-2 flange)
--	-----------------------------------	---	---

9

Brushless IP protection

1 IP67

10	Brake
A 36Nm EM N No brake	
11	Thermal sensor
1 PT1000	
12	Connection
A Standard (P-S-T connectors)	
13 14 15	Customization
001 No varnishing	



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