

Technical Data

4.17 MSK100B Technical Data

Description	Symbol	Unit	MSK100B-0200-NN	MSK100B-0300-NN	MSK100B-0400-NN	MSK100B-0450-NN
Continuous torque at standstill, 60K	$M_{0,60}$	Nm	28,0			
Continuous current at standstill, 60K	$I_{0,60(\text{eff})}$	A	14,7	17,4	23,7	24,6
Continuous torque at standstill, 100K	$M_{0,100}$	Nm	33,0			
Continuous current at standstill, 100K	$I_{0,100(\text{eff})}$	A	17,3	20,5	30,8	32,0
Continuous torque at standstill, surface	$M_{0,S}$	Nm	42,0			
Continuous current at standstill, surface	$I_{0,S(\text{eff})}$	A	22,1	26,1	37,8	36,9
Maximum torque	M_{max}	Nm	102,0			
Maximum current	$I_{\text{max}(\text{eff})}$	A	66,2	78,3	106,7	110,7
Torque constant at 20°C	$K_{M,N}$	Nm/A	2,10	1,77	1,30	1,14
Constant voltage at 20°C	$K_{\text{EMK},1000}$	V/min ⁻¹	129,5	108,5	80,0	70,0
Winding resistance at 20°C	R_{12}	Ohm	0,58	0,43	0,23	0,17
Winding inductivity	L_{12}	mH	7,600	5,500	3,100	2,200
Leakage capacitance of the component	C_{ab}	nF	10,3	9,3	10,3	
Number of pole pairs	p	-	4			
Moment of inertia of rotor without brake ¹⁾	J_{rot}	kg*m ²	0,01920			
Thermal time constant	T_{th}	min	40,0			
Maximum speed	n_{max}	min ⁻¹	4100	4750	4500	
Sound pressure level	L_p	dB[A]	<75			
Ambient temperature during operation	T_{um}	°C	0 ... 40			
Degree of protection		-	IP65			
Insulation class EN 60034-1		-	F			

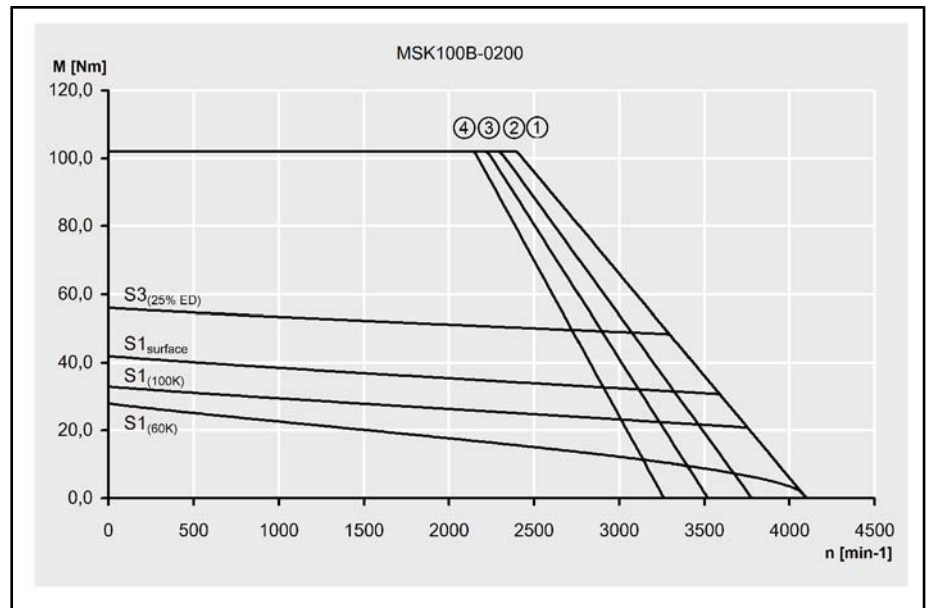
1) Specified without brake. If necessary, add the moment of inertia brake.
Fig.4-83: MSK - Technical Data (natural and surface cooling)

Description	Symbol	Unit	BREMSE-276088	BREMSE-296482
Holding torque	M_4	Nm	70,0	32,0
Rated voltage ±10%	U_N	V	24	
Rated current	I_N	A	1,29	0,93

Description	Symbol	Unit	BREMSE-276088	BREMSE-296482
Connection time	t_1	ms	53	15
Disconnection time	t_2	ms	97	115
Moment of inertia brake	J_{rot}	kg*m2	0,003000	0,001242
Mass brake	M_{Br}	kg	3,8	2,4

Fig.4-84: MSK100: Holding brake - Technical data (optional)

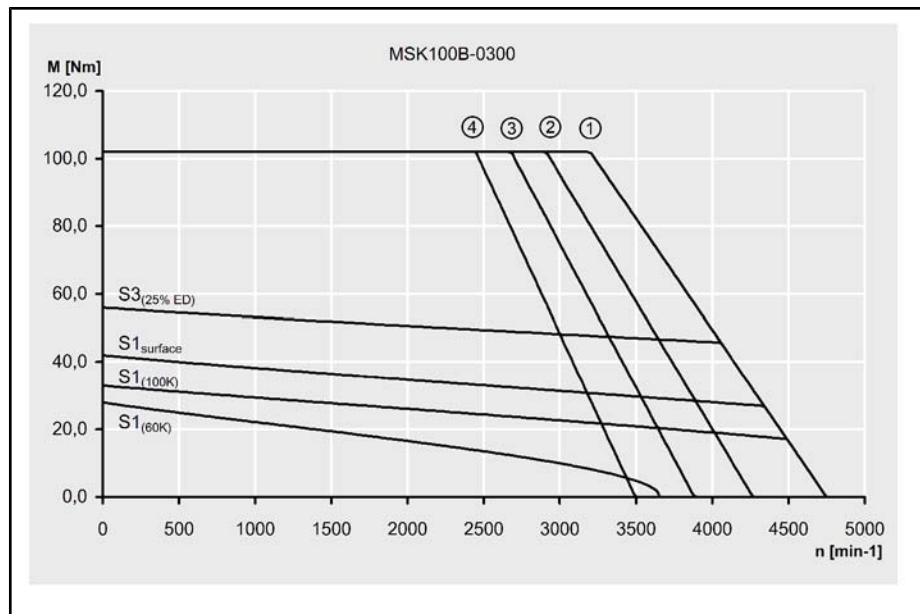
Speed-torque characteristics



- ① Mmax for IndraDrive, controlled feed, 3x AC 400V
- ② Mmax for IndraDrive, uncontrolled feed, 3x AC 480V
- ③ Mmax for IndraDrive, uncontrolled feed, 3x AC 440V
- ④ Mmax for IndraDrive, uncontrolled feed, 3x AC 400V

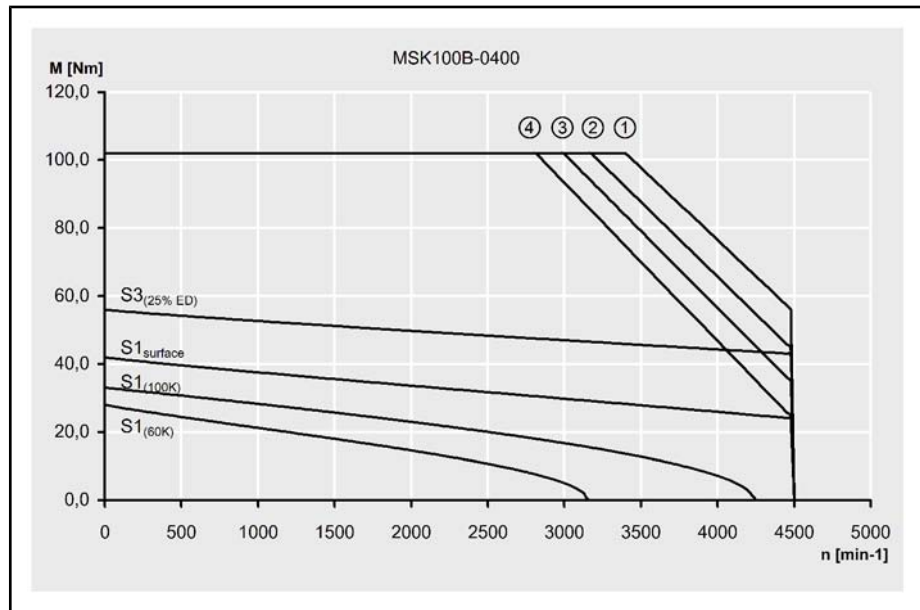
Fig.4-85: Speed-torque characteristic of MSK100B-0200

Technical Data



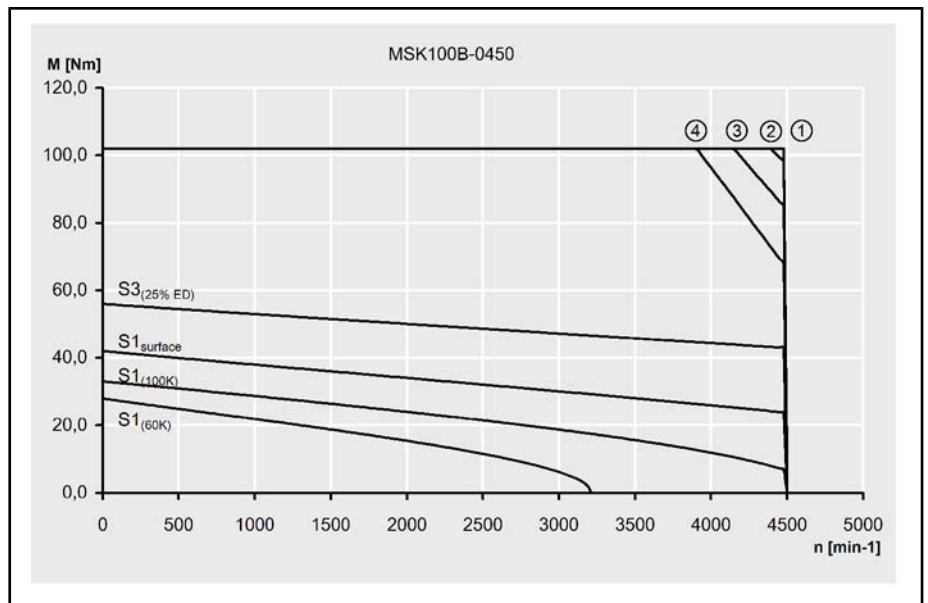
- ① Mmax for IndraDrive, controlled feed, 3x AC 400V
- ② Mmax for IndraDrive, uncontrolled feed, 3x AC 480V
- ③ Mmax for IndraDrive, uncontrolled feed, 3x AC 440V
- ④ Mmax for IndraDrive, uncontrolled feed, 3x AC 400V

Fig.4-86: Speed-torque characteristic of MSK100B-0300



- ① Mmax for IndraDrive, controlled feed, 3x AC 400V
- ② Mmax for IndraDrive, uncontrolled feed, 3x AC 480V
- ③ Mmax for IndraDrive, uncontrolled feed, 3x AC 440V
- ④ Mmax for IndraDrive, uncontrolled feed, 3x AC 400V

Fig.4-87: Speed-torque characteristic of MSK100B-0400



- ① Mmax for IndraDrive, controlled feed, 3x AC 400V
- ② Mmax for IndraDrive, uncontrolled feed, 3x AC 480V
- ③ Mmax for IndraDrive, uncontrolled feed, 3x AC 440V
- ④ Mmax for IndraDrive, uncontrolled feed, 3x AC 400V

Fig.4-88: Speed-torque characteristic of MSK100B-0450

Shaft load

Diagram for determining the maximum permissible radial force F_{radial} .

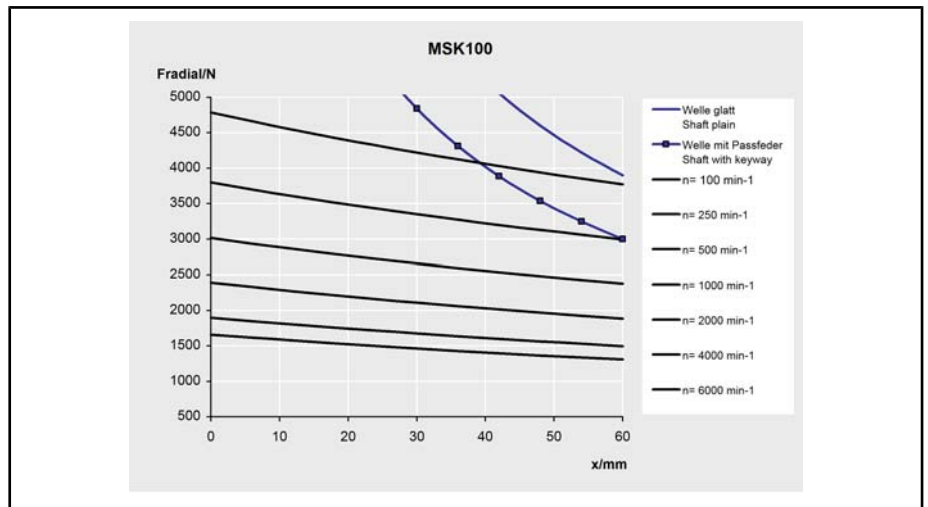


Fig.4-89: permissible radial force of MSK100 - Motors (shaft and bearing load)

The maximum permissible axial force F_{axial} is 500 N.

For additional information about permissible radial and axial forces, see [chapter 9.7 "Bearing and Shaft Load"](#) on page 164.

