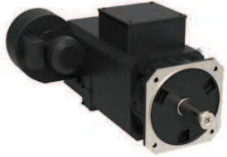


8KSC9

Technical data



	8KSC92.ee010ffgg-0	8KSC92.ee015ffgg-0	8KSC92.ee020ffgg-0	8KSC92.ee025ffgg-0	8KSC92.ee030ffgg-0	8KSC94.ee010ffgg-0	8KSC94.ee015ffgg-0	8KSC94.ee020ffgg-0	8KSC94.ee025ffgg-0	8KSC94.ee030ffgg-0
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Motor

	1000	1500	2000	2500	3000	1000	1500	2000	2500	3000	
Nominal speed n_N [rpm]	1000	1500	2000	2500	3000	1000	1500	2000	2500	3000	
Number of pole pairs						3					
Nominal torque M_N [Nm]	285	265	245	225	205	355	330	305	285	260	
Nominal power P_N [W]	29845	41626	51313	58905	64403	37176	51836	63879	74613	81681	
Nominal current I_N [A]	59	82	100	115	122	75	104	127	145	160	
Stall torque M_0 [Nm]	325	325	325	325	325	405	405	405	405	405	
Stall current I_0 [A]	68	103	134	170	195	85	127	165	205	245	
Maximum torque M_{max} [Nm]	700	700	700	700	700	875	875	875	875	875	
Maximum current I_{max} [A]	160	245	320	400	455	205	305	400	490	585	
Maximum speed n_{max} [rpm]	1600	2450	3200	3600	3600	1650	2400	3200	3600	3600	
Torque constant K_T [Nm/A]	4.92	3.27	2.51	2	1.75	4.87	3.28	2.49	2.02	1.7	
Voltage constant K_E [V/1000 rpm]	337	224	172	137	119	334	225	171	139	117	
Stator resistance R_{2ph} [Ω]	0.24	0.11	0.06	0.04	0.03	0.17	0.08	0.05	0.03	0.02	
Stator inductance L_{2ph} [mH]	10.6	4.7	2.8	1.74	1.33	8.3	3.7	2.2	1.42	1.01	
Electrical time constant t_{el} [ms]	42.36	42.59	42.31	43.05	43.73	46.62	46.25	46.26	46.47	45.09	
Thermal time constant t_{them} [min]						0					
Moment of inertia J [kgcm ²]	1500	1500	1500	1500	1500	1800	1800	1800	1800	1800	
Weight without brake m [kg]	230	230	230	230	230	255	255	255	255	255	

Holding brakes

Holding torque of the brake M_{Br} [Nm]	200
Weight of brake [kg]	13
Moment of inertia for the brake J_{Br} [kgcm ²]	40

Recommendations

ACOPOS servo drive 8Vxxx.00-x1	128M	128M	-	-	-	128M	-	-	-	-	
ACOPOSmulti inverter module 8BV1...	0880	1650	1650	-	-	1650	1650	-	-	-	
Connector type						Terminal box					

NOTE – Servo drive: The recommended servo drive / inverter module is designed for 1.1x the stall current. If more than double the amount is needed during the acceleration phase, the next larger servo drive should be selected. This recommendation is only a guideline, detailed inspection of the corresponding speed - torque characteristic curve can result in deviations of the servo drive size (one size larger or smaller).

NOTE – Cable cross section: No pre-assembled cables are offered for the 8KS motor.

The cable cross section depends on the cabling method used (see relevant standards and regulations) and the recommendations from the respective manufacturer, among other things.

NOTE – Thermal time constant: "0" is a place holder, values available on request

Technical data



8KSC95.ee010ffgg-0

8KSC95.ee015ffgg-0

8KSC95.ee020ffgg-0

8KSC95.ee025ffgg-0

8KSC96.ee010ffgg-0

8KSC96.ee015ffgg-0

8KSC96.ee020ffgg-0

Motor

	1000	1500	2000	2500	1000	1500	2000
Nominal speed n_N [rpm]	1000	1500	2000	2500	1000	1500	2000
Number of pole pairs	3						
Nominal torque M_N [Nm]	430	400	375	345	500	470	440
Nominal power P_N [W]	45029	62832	78540	90321	52360	73827	92153
Nominal current I_N [A]	90	130	147	175	107	139	175
Stall torque M_0 [Nm]	480	480	480	480	555	555	555
Stall current I_0 [A]	101	155	190	240	118	165	220
Maximum torque M_{max} [Nm]	1050	1050	1050	1050	1110	1110	1110
Maximum current I_{max} [A]	245	375	455	585	255	355	475
Maximum speed n_{max} [rpm]	1600	2500	3050	3600	1650	2300	3050
Torque constant K_T [Nm/A]	4.89	3.18	2.61	2.04	4.8	3.48	2.6
Voltage constant K_E [V/1000 rpm]	336	218	179	140	331	240	179
Stator resistance R_{2ph} [Ω]	0.14	0.06	0.04	0.02	0.11	0.06	0.03
Stator inductance L_{2ph} [mH]	6.9	2.9	1.96	1.2	5.7	3	1.66
Electrical time constant t_{el} [ms]	49.82	49.45	48.3	49.17	51.85	52.5	51.19
Thermal time constant t_{therm} [min]	0						
Moment of inertia J [kgcm ²]	2200	2200	2200	2200	2500	2500	2500
Weight without brake m [kg]	285	285	285	285	310	310	310

Holding brakes

Holding torque of the brake M_{Br} [Nm]	200
Weight of brake [kg]	13
Moment of inertia for the brake J_{Br} [kgcm ²]	40

Recommendations

ACOPOS servo drive 8Vxxxx.00-x1	128M	-	-	-	-	-	-
ACOPOSmulti inverter module 8BVI...	1650	-	-	-	1650	-	-
Connector type	Terminal box						

NOTE – Servo drive: The recommended servo drive / inverter module is designed for 1.1x the stall current. If more than double the amount is needed during the acceleration phase, the next larger servo drive should be selected. This recommendation is only a guideline, detailed inspection of the corresponding speed - torque characteristic curve can result in deviations of the servo drive size (one size larger or smaller).

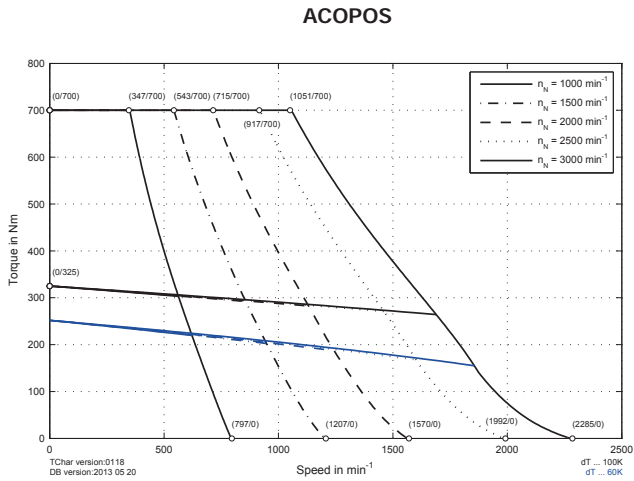
NOTE – Cable cross section: No pre-assembled cables are offered for the 8KS motor.

The cable cross section depends on the cabling method used (see relevant standards and regulations) and the recommendations from the respective manufacturer, among other things.

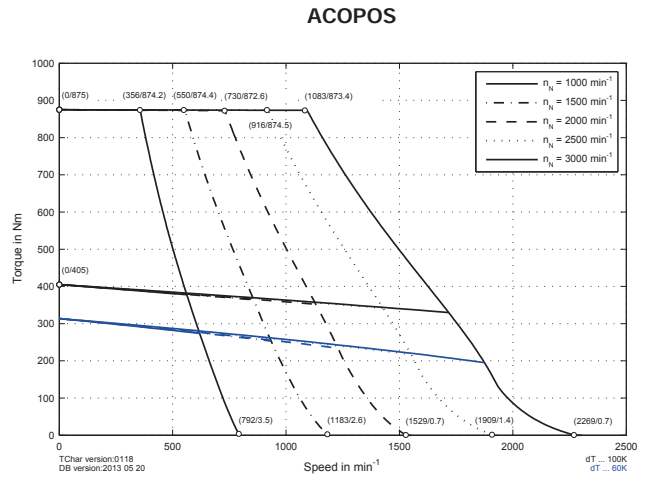
NOTE – Thermal time constant: "0" is a place holder, values available on request

8KSC9

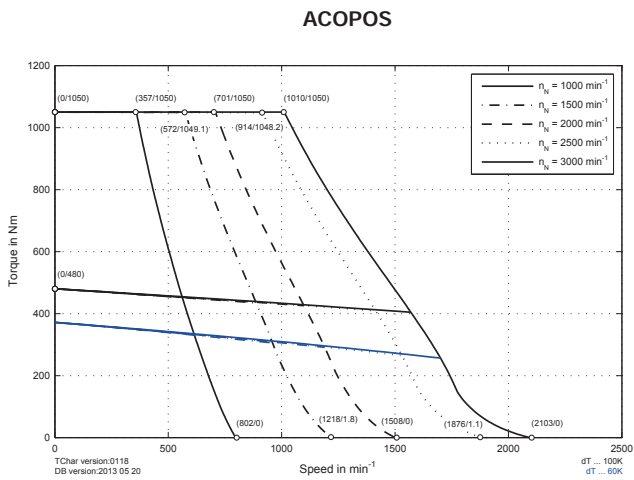
Speed-torque characteristics for DC bus voltage of 325 VDC



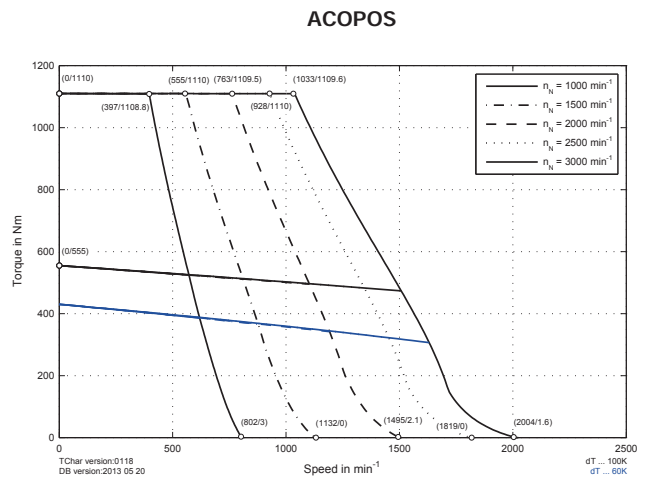
8KSC92.eennffgg-0



8KSC94.eennffgg-0



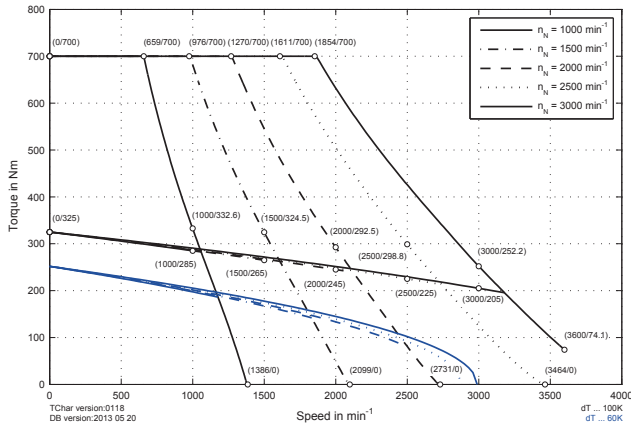
8KSC95.eennffgg-0



8KSC96.eennffgg-0

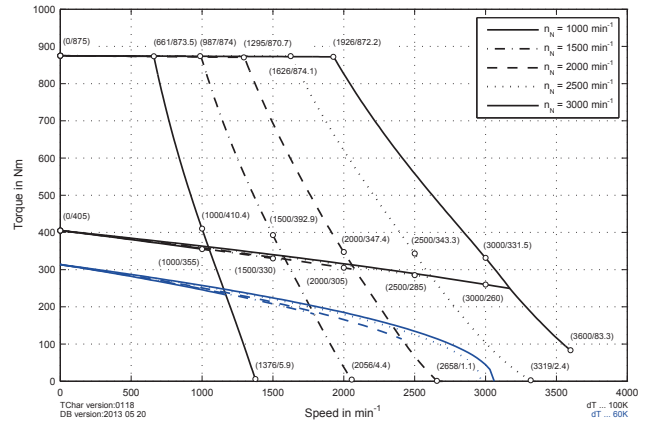
Speed-torque characteristics for DC bus voltage of 560 VDC

ACOPOS



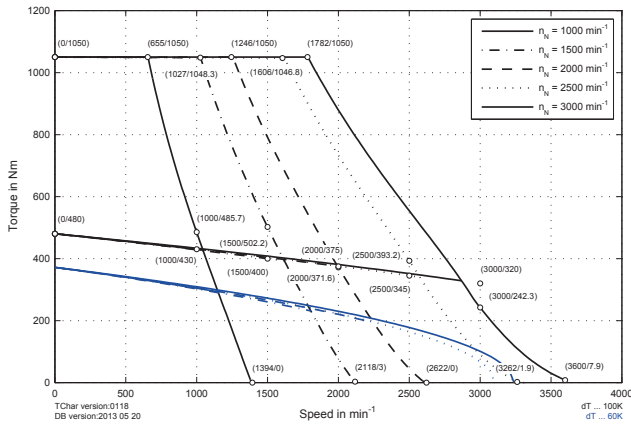
8KSC92.eennffgg-0

ACOPOS



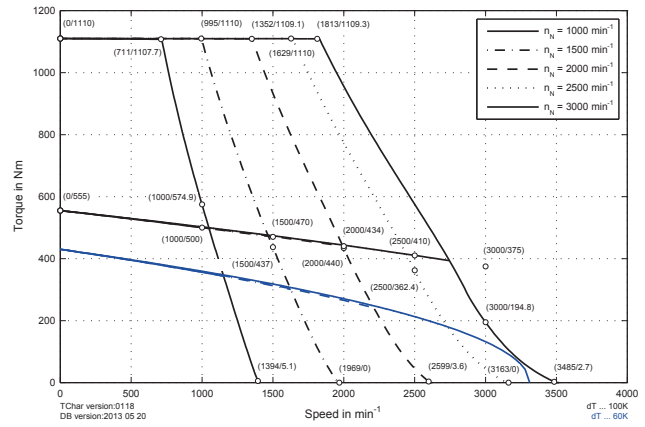
8KSC94.eennffgg-0

ACOPOS



8KSC95.eennffgg-0¹)

ACOPOS



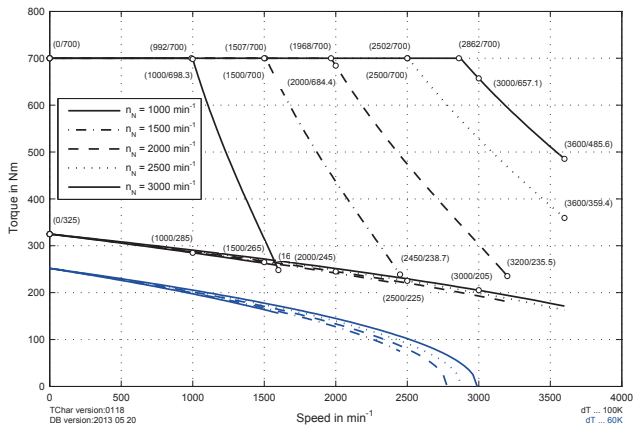
8KSC96.eennffgg-0¹)

¹) At some speeds, the nominal values are only achieved with field weakening or with 750 VDC!

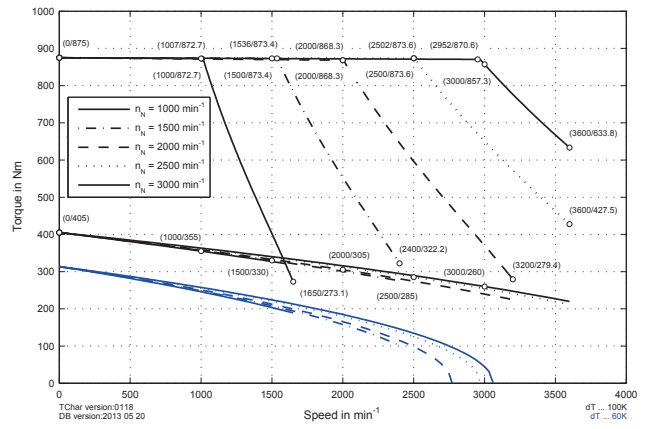
8KSC9

Speed-torque characteristics for DC bus voltage of 750 VDC

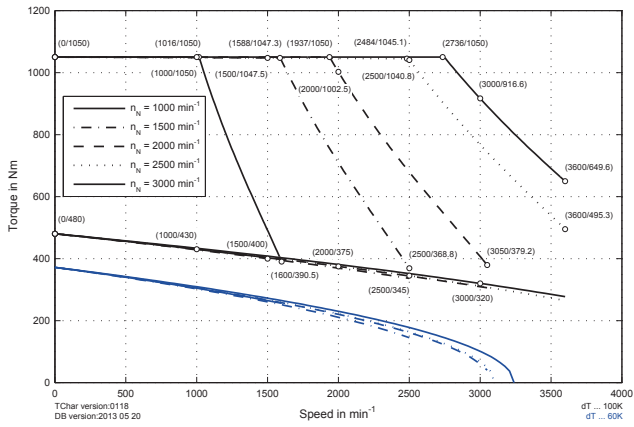
ACOPOSmulti



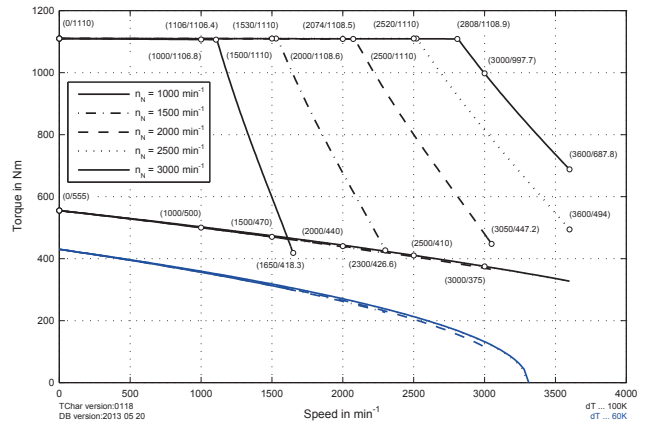
ACOPOSmulti

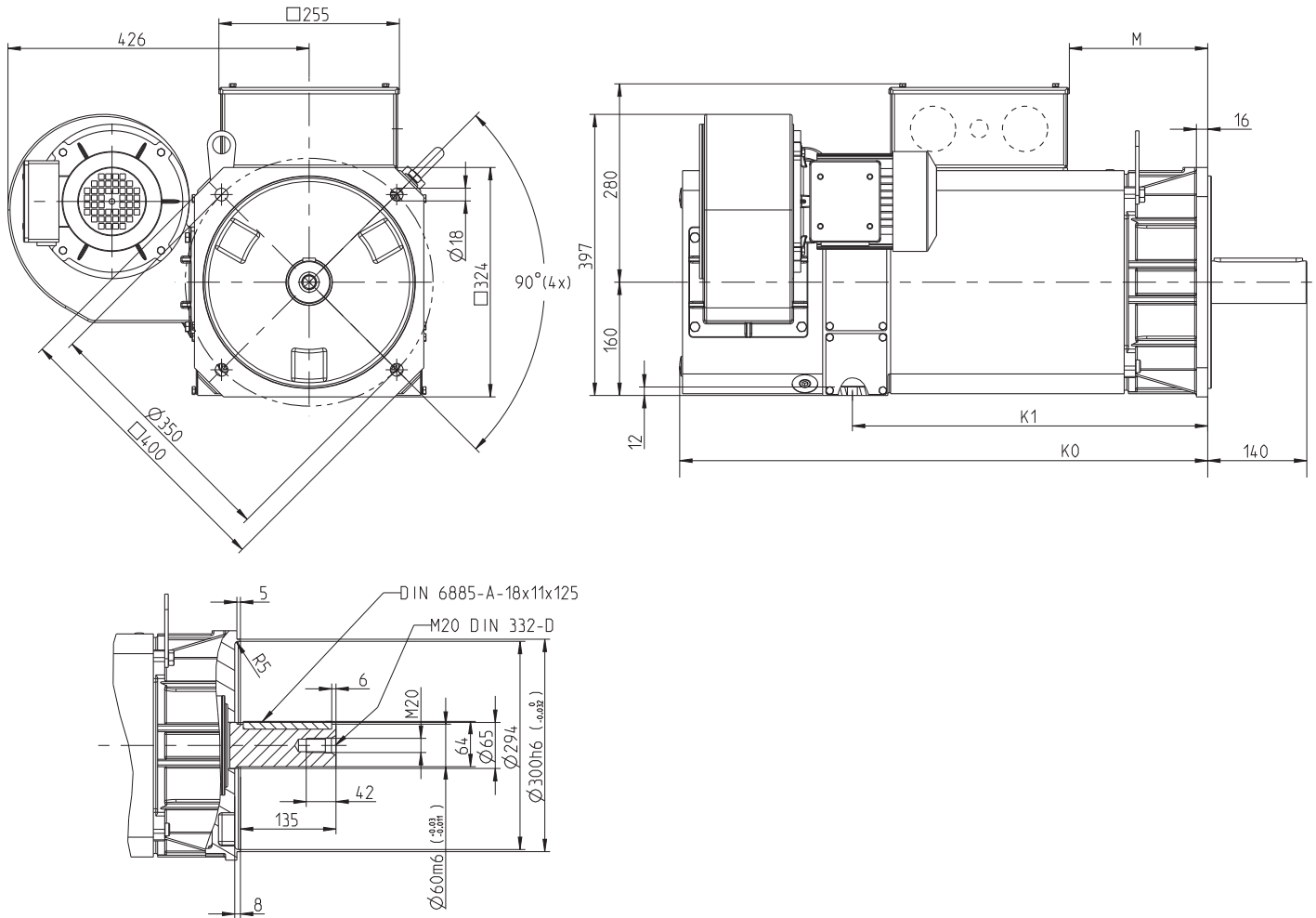


ACOPOSmulti



ACOPOSmulti





8KSC9 dimensions

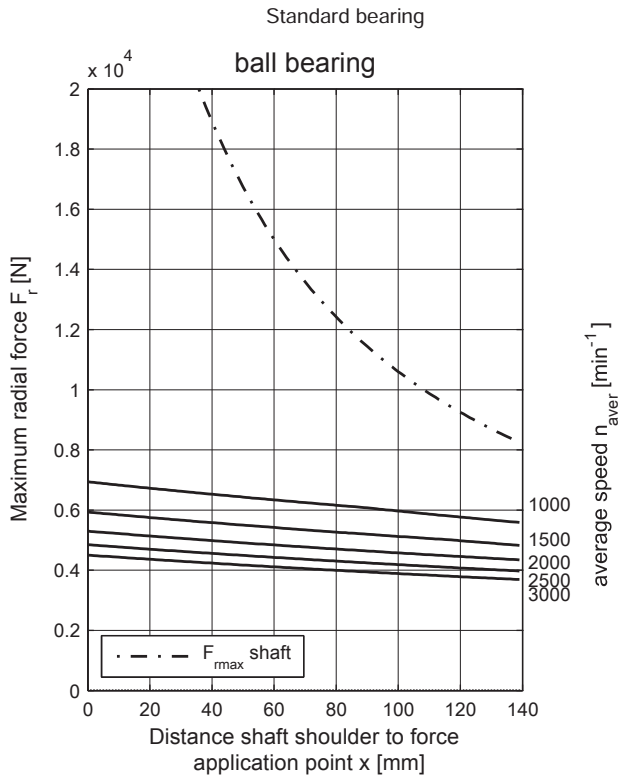
The dimensions for fan right (position B) are the same as for fan left (position A).

Model number	K ₀	K ₁	M	Extension of K ₀ or K ₁ with brake
8KSC92.eennnffgg-0	696	452	Depending on the terminal box ¹⁾	On request
8KSC94.eennnffgg-0	746	502	Depending on the terminal box ¹⁾	On request
8KSC95.eennnffgg-0	796	552	Depending on the terminal box ¹⁾	On request
8KSC96.eennnffgg-0	846	602	Depending on the terminal box ¹⁾	On request

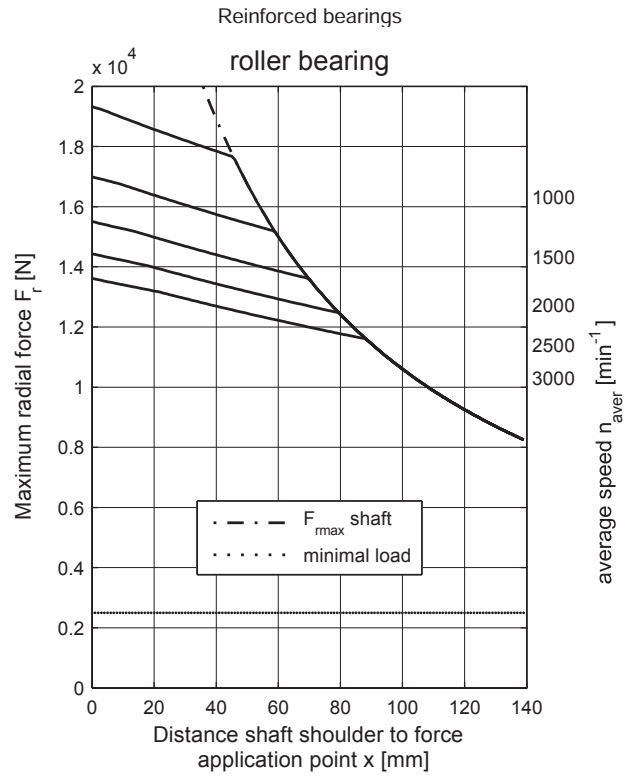
¹⁾ Different terminal boxes are used depending on the nominal speed, please request the step file

Maximum shaft load

The values in the diagram below are based on a mechanical lifespan of the bearings of 20,000 operating hours.



Shaft Strength durability for maximal motor torque



Shaft Strength durability for maximal motor torque