

8KSC8/8KSD8

Technical data



8KSC82.ee011ffgg-0 8KSC82.ee016ffgg-0 8KSC82.ee020ffgg-0 8KSC82.ee025ffgg-0 8KSC82.ee030ffgg-0 8KSC84.ee011ffgg-0 8KSC84.ee016ffgg-0 8KSC84.ee020ffgg-0 8KSC84.ee025ffgg-0 8KSC84.ee030ffgg-0

Motor

	1100	1600	2000	2500	3000	1100	1600	2000	2500	3000	
Nominal speed n_N [rpm]	1100	1600	2000	2500	3000	1100	1600	2000	2500	3000	
Number of pole pairs						3					
Nominal torque M_N [Nm]	120	115	115	110	105	160	150	145	140	130	
Nominal power P_N [W]	13823	19268	24086	28798	32987	18431	25133	30369	36652	40841	
Nominal current I_N [A]	27.3	37.6	46.3	54	58	35.7	46.5	57	67	74	
Stall torque M_0 [Nm]	130	130	130	130	130	175	175	175	175	175	
Stall current I_0 [A]	29.3	41.8	53	65	73	39	53	68	84	98	
Maximum torque M_{max} [Nm]	305	305	305	305	305	405	405	405	405	405	
Maximum current I_{max} [A]	76	108	138	170	190	101	138	175	215	250	
Maximum speed n_{max} [rpm]	1800	2600	3300	4050	4300	1800	2500	3150	3900	4300	
Torque constant K_T [Nm/A]	4.63	3.24	2.55	2.08	1.85	4.61	3.38	2.66	2.15	1.84	
Voltage constant K_E [V/1000 rpm]	300	210	165	135	120	300	220	173	140	120	
Stator resistance R_{zph} [Ω]	0.64	0.32	0.2	0.13	0.1	0.42	0.22	0.14	0.09	0.07	
Stator inductance L_{zph} [mH]	19.4	9.6	6	4	3.1	14.6	7.8	4.8	3.2	2.3	
Electrical time constant t_{el} [ms]	31.66	31	30.6	34.17	32.4	35.67	36.64	35.71	32.6	40	
Thermal time constant t_{therm} [min]						0					
Moment of inertia J [kgcm ²]	450	450	450	450	450	580	580	580	580	580	
Weight without brake m [kg]	175	175	175	175	175	200	200	200	200	200	

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	1320	1640	1640	128M	128M	1640	1640	128M	128M	128M
ACOPOSmulti inverter module 8BV1...	0330	0660	0660	0880	0880	0440	0660	0880	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



	8KSC85.ee011ffgg-0	8KSC85.ee016ffgg-0	8KSC85.ee020ffgg-0	8KSC85.ee025ffgg-0	8KSC85.ee030ffgg-0	8KSC86.ee011ffgg-0	8KSC86.ee016ffgg-0	8KSC86.ee020ffgg-0	8KSC86.ee025ffgg-0	8KSC86.ee030ff00-0
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Motor

	1100	1600	2000	2500	3000	1100	1600	2000	2500	3000
Nominal speed n_N [rpm]	1100	1600	2000	2500	3000	1100	1600	2000	2500	3000
Number of pole pairs	3									
Nominal torque M_N [Nm]	195	185	175	165	155	230	215	205	190	175
Nominal power P_N [W]	22462	30997	36652	43197	48695	26494	36024	42935	49742	54978
Nominal current I_N [A]	40.4	55	68	79	90	52	69	81	91	99
Stall torque M_0 [Nm]	215	215	215	215	215	260	260	260	260	260
Stall current I_0 [A]	45	65	84	103	125	59	84	103	125	146
Maximum torque M_{max} [Nm]	505	505	505	505	505	610	605	605	605	605
Maximum current I_{max} [A]	117	170	215	265	325	150	215	265	325	380
Maximum speed n_{max} [rpm]	1650	2450	3150	3850	4300	1800	2600	3200	3000	3600
Torque constant K_T [Nm/A]	4.99	3.46	2.69	2.18	1.79	4.61	3.23	2.61	2.15	1.84
Voltage constant K_E [V/1000 rpm]	325	225	175	141	116	300	210	170	140	120
Stator resistance R_{2ph} [Ω]	0.36	0.17	0.1	0.07	0.05	0.24	0.12	0.08	0.05	0.038
Stator inductance L_{2ph} [mH]	13.6	6.5	4	2.5	1.74	9.6	4.6	3.1	2.09	1.53
Electrical time constant t_{el} [ms]	38.72	37.11	40.4	44	45	41	40.17	39.5	35.67	39.5
Thermal time constant t_{therm} [min]	0									
Moment of inertia J [kgcm ²]	710	710	710	710	710	840	840	840	840	840
Weight without brake m [kg]	225	225	225	225	225	250	250	250	250	250

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	1640	128M	128M	128M	-	128M	128M	128M	-	128M
ACOPOSmulti inverter module 8BVI...	0660	0880	1650	1650	1650	0660	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

8KSC8/8KSD8

Technical data



	8KSD82.ee011ffgg-0	8KSD82.ee016ffgg-0	8KSD82.ee020ffgg-0	8KSD82.ee025ffgg-0	8KSD82.ee030ffgg-0	8KSD84.ee011ffgg-0	8KSD84.ee016ffgg-0	8KSD84.ee020ffgg-0	8KSD84.ee025ffgg-0	8KSD84.ee030ffgg-0
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Motor

	1100	1600	2000	2500	3000	1100	1600	2000	2500	3000	
Nominal speed n_N [rpm]	1100	1600	2000	2500	3000	1100	1600	2000	2500	3000	
Number of pole pairs						3					
Nominal torque M_N [Nm]	120	115	115	110	105	160	150	145	140	130	
Nominal power P_N [W]	13823	19268	24086	28798	32987	18431	25133	30369	36652	40841	
Nominal current I_N [A]	27.3	37.6	46.3	54	58	35.7	46.5	57	67	74	
Stall torque M_0 [Nm]	130	130	130	130	130	175	175	175	175	175	
Stall current I_0 [A]	29.3	41.8	53	65	73	39	53	68	84	98	
Maximum torque M_{max} [Nm]	305	305	305	305	305	405	405	405	405	405	
Maximum current I_{max} [A]	76	108	138	170	190	101	138	175	215	250	
Maximum speed n_{max} [rpm]	1800	2600	3300	4050	4300	1800	2500	3150	3900	4300	
Torque constant K_T [Nm/A]	4.63	3.24	2.55	2.08	1.85	4.61	3.38	2.66	2.15	1.84	
Voltage constant K_E [V/1000 rpm]	300	210	165	135	120	300	220	173	140	120	
Stator resistance R_{zph} [Ω]	0.64	0.32	0.2	0.13	0.1	0.42	0.22	0.14	0.09	0.07	
Stator inductance L_{zph} [mH]	19.4	9.6	6	4	3.1	14.6	7.8	4.8	3.2	2.3	
Electrical time constant t_{el} [ms]	31.66	31	30.6	34.17	32.4	35.67	36.64	35.71	32.6	40	
Thermal time constant t_{therm} [min]						0					
Moment of inertia J [kgcm ²]	450	450	450	450	450	580	580	580	580	580	
Weight without brake m [kg]	175	175	175	175	175	200	200	200	200	200	

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	1320	1640	1640	128M	128M	1640	1640	128M	128M	128M
ACOPOSmulti inverter module 8BV1...	0330	0660	0660	0880	0880	0440	0660	0880	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



	8KSD85.ee011ffgg-0	8KSD85.ee016ffgg-0	8KSD85.ee020ffgg-0	8KSD85.ee025ffgg-0	8KSD85.ee030ffgg-0	8KSD86.ee011ffgg-0	8KSD86.ee016ffgg-0	8KSD86.ee020ffgg-0	8KSD86.ee025ffgg-0	8KSD86.ee030ffgg-0
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Motor

	1100	1600	2000	2500	3000	1100	1600	2000	2500	3000
Nominal speed n_N [rpm]	1100	1600	2000	2500	3000	1100	1600	2000	2500	3000
Number of pole pairs	3									
Nominal torque M_N [Nm]	195	185	175	165	155	230	215	205	190	175
Nominal power P_N [W]	22462	30997	36652	43197	48695	26494	36024	42935	49742	54978
Nominal current I_N [A]	40.4	55	68	79	90	52	69	81	91	99
Stall torque M_0 [Nm]	215	215	215	215	215	260	260	260	260	260
Stall current I_0 [A]	45	65	84	103	125	59	84	103	125	146
Maximum torque M_{max} [Nm]	505	505	505	505	505	610	605	605	605	605
Maximum current I_{max} [A]	117	170	215	265	325	150	215	265	325	380
Maximum speed n_{max} [rpm]	1650	2450	3150	3850	4300	1800	2600	3200	3000	3600
Torque constant K_T [Nm/A]	4.99	3.46	2.69	2.18	1.79	4.61	3.23	2.61	2.15	1.84
Voltage constant K_E [V/1000 rpm]	325	225	175	141	116	300	210	170	140	120
Stator resistance R_{2ph} [Ω]	0.36	0.17	0.1	0.07	0.05	0.24	0.12	0.08	0.05	0.04
Stator inductance L_{2ph} [mH]	13.6	6.5	4	2.5	1.74	9.6	4.6	3.1	2.09	1.53
Electrical time constant t_{el} [ms]	38.72	37.11	40.4	44	45	41	40.17	39.5	35.67	39.5
Thermal time constant t_{therm} [min]	0									
Moment of inertia J [kgcm ²]	710	710	710	710	710	840	840	840	840	840
Weight without brake m [kg]	225	225	225	225	225	250	250	250	250	250

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	1640	128M	128M	128M	-	128M	128M	128M	-	-
ACOPOSmulti inverter module 8BVI...	0660	0880	1650	1650	1650	0660	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.

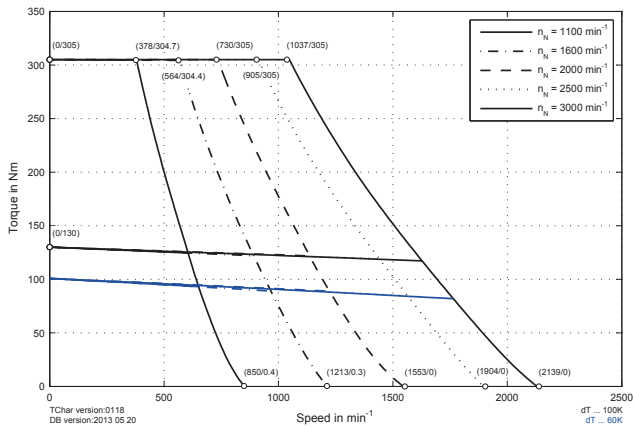
The cable cross section depends on the cabling method used (see relevant standards and regulations) and the recommendations from the respective manufacturer, among other things.

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

8KSC8/8KSD8

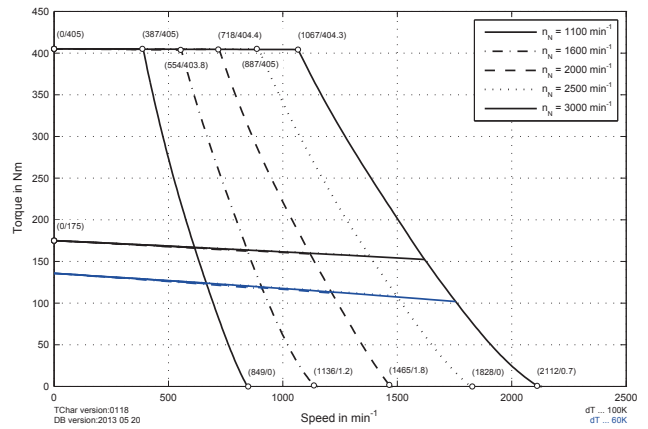
Speed-torque characteristics for DC bus voltage of 325 VDC

ACOPOS



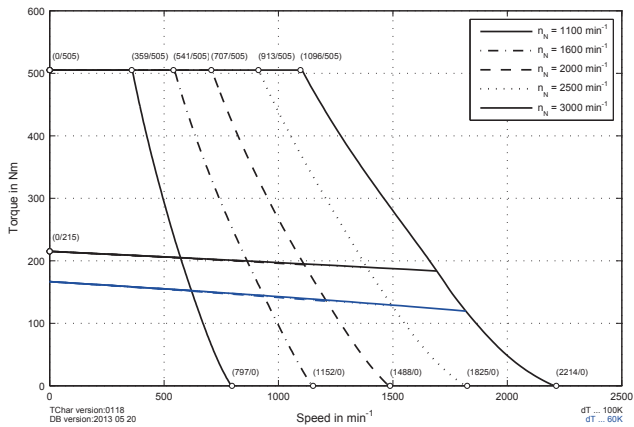
8KSC82.eennffgg-0 / 8KSD82.eennffgg-0

ACOPOS



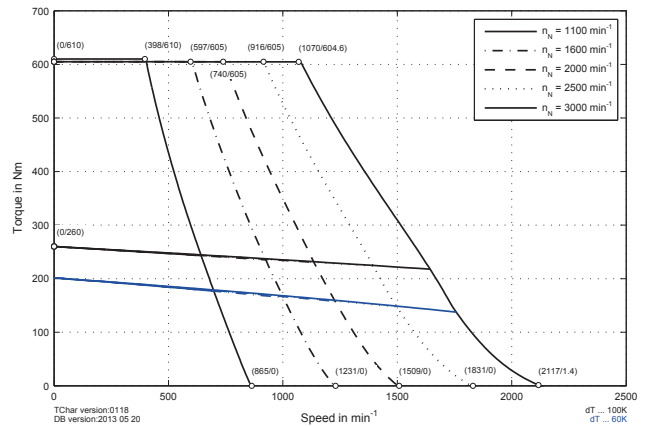
8KSC84.eennffgg-0 / 8KSD84.eennffgg-0

ACOPOS



8KSC85.eennffgg-0 / 8KSD85.eennffgg-0

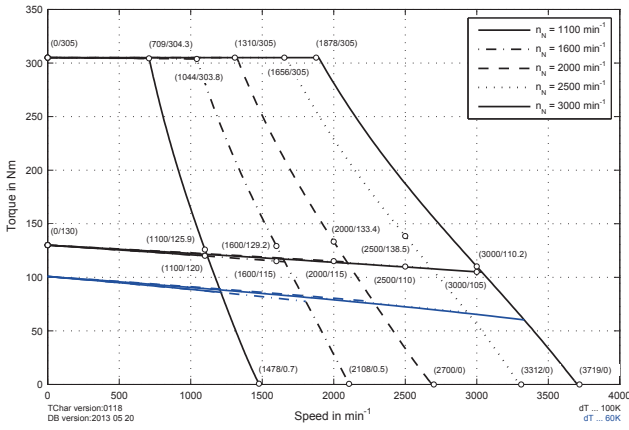
ACOPOS



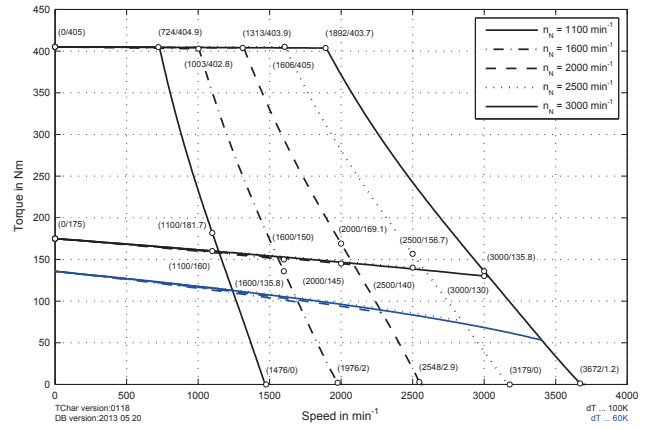
8KSC86.eennffgg-0 / 8KSD86.eennffgg-0

Speed-torque characteristics for DC bus voltage of 560 VDC

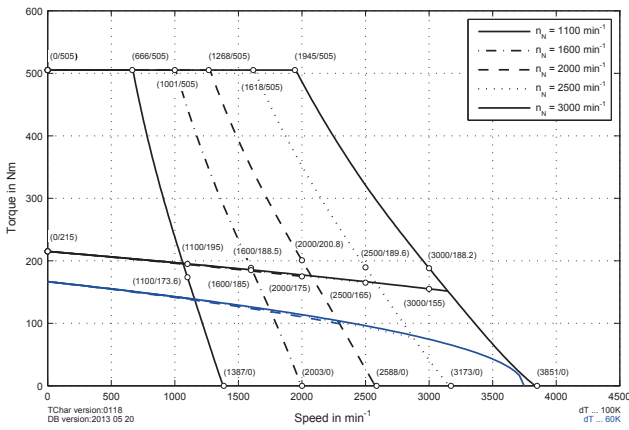
ACOPOS



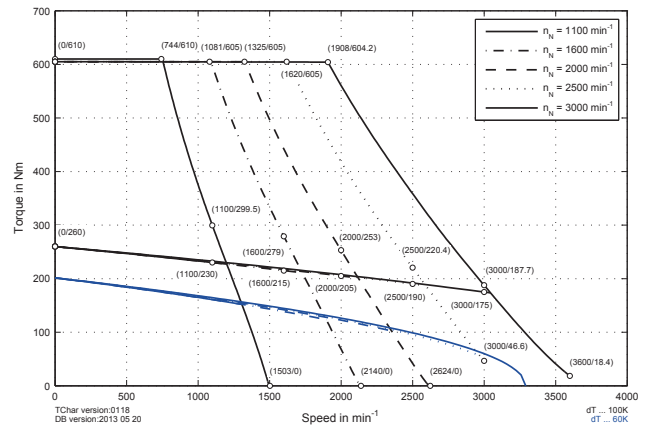
ACOPOS



ACOPOS



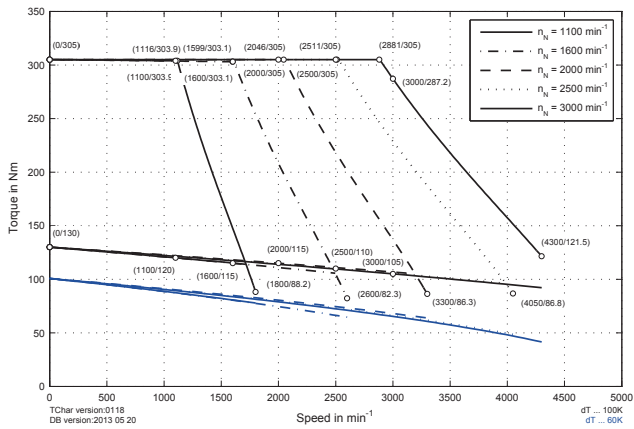
ACOPOS



8KSC8/8KSD8

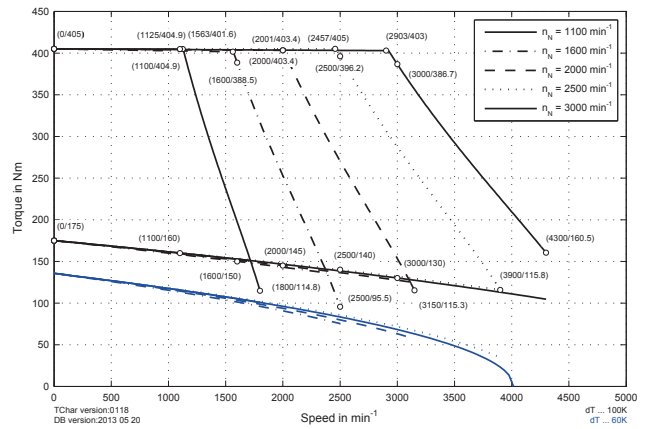
Speed-torque characteristics for DC bus voltage of 750 VDC

ACOPOSmulti



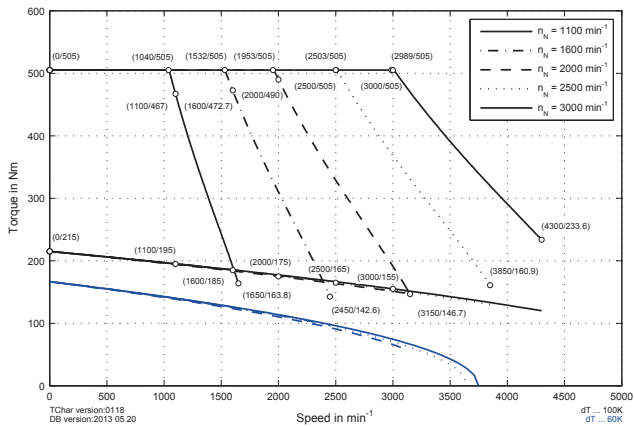
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ACOPOSmulti



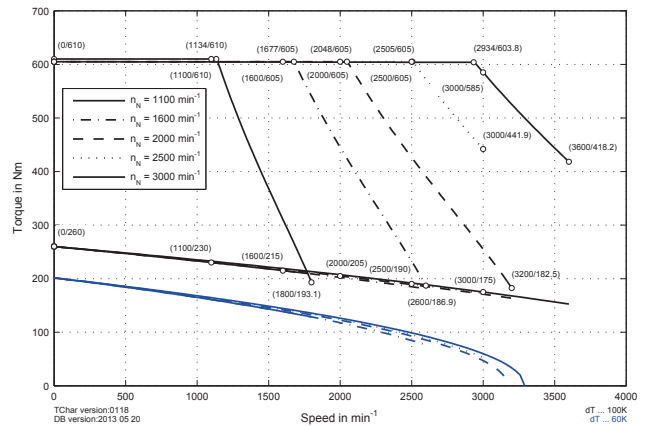
8KSC84.eennffgg-0 / 8KSD84.eennffgg-0

ACOPOSmulti

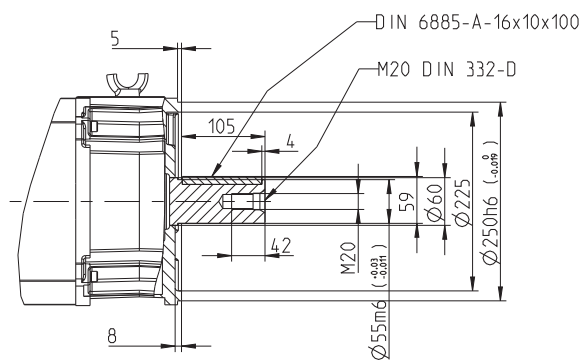
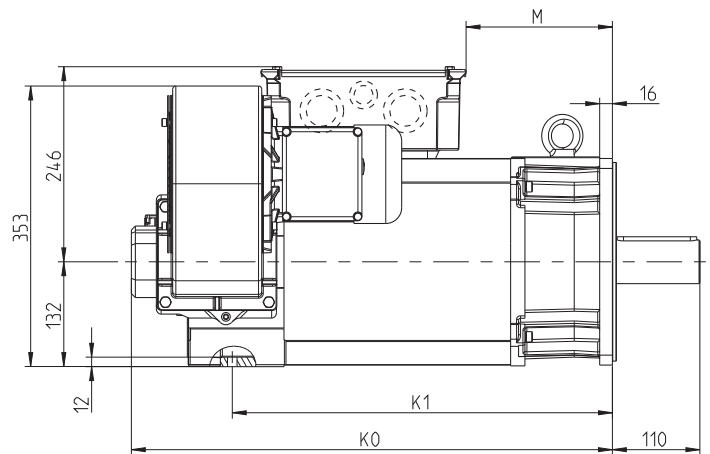
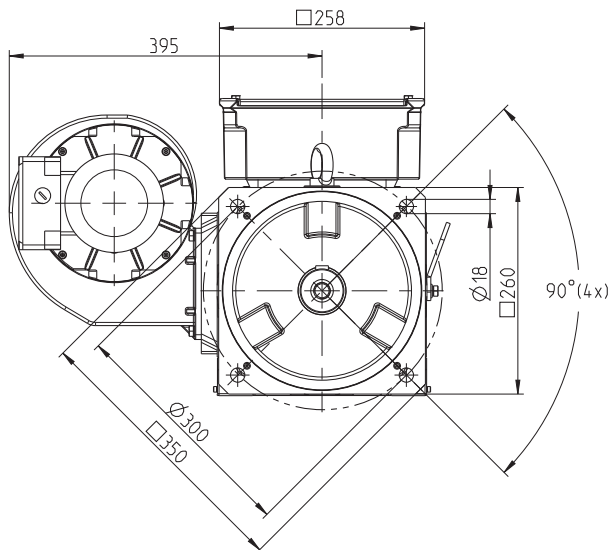


8KSC85.eennffgg-0 / 8KSD85.eennffgg-0

ACOPOSmulti



8KSC86.eennffgg-0 / 8KSD86.eennffgg-0

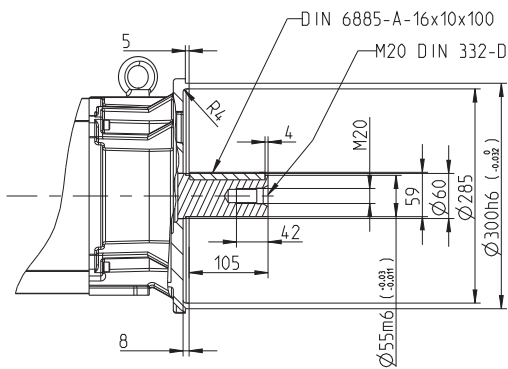
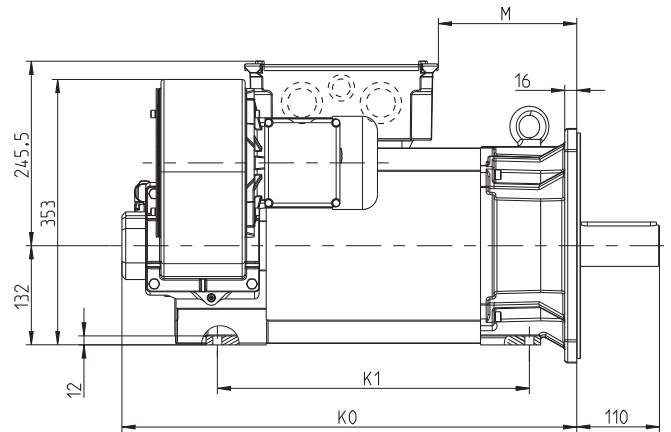
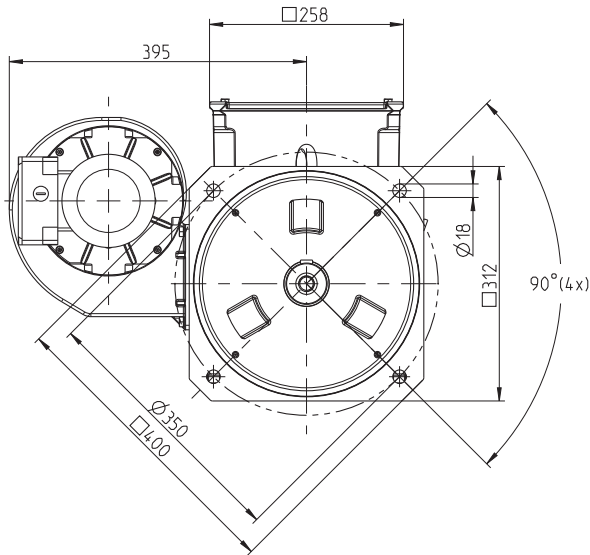


8KSC8 dimensions

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
8KSC82.eennffgg-0	556	428	134	108
8KSC84.eennffgg-0	606	478	184	108
8KSC85.eennffgg-0	656	528	234	108
8KSC86.eennffgg-0	706	578	284	108

8KSC8/8KSD8

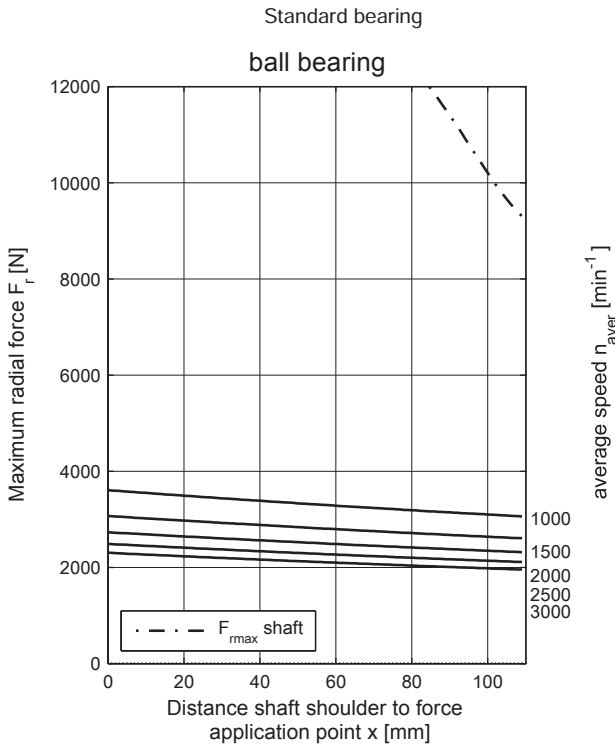


8KSD8 dimensions

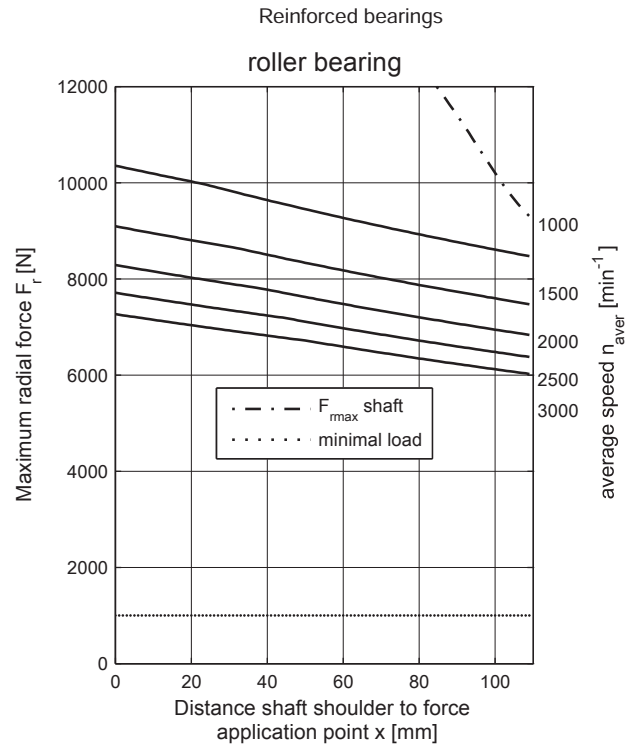
Model number	K_0	K_1	M	Extension of K_0 or K_1 with brake
8KSD82.eennffgg-0	556	365	134	108
8KSD84.eennffgg-0	606	415	184	108
8KSD85.eennffgg-0	656	465	234	108
8KSD86.eennffgg-0	706	515	284	108

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