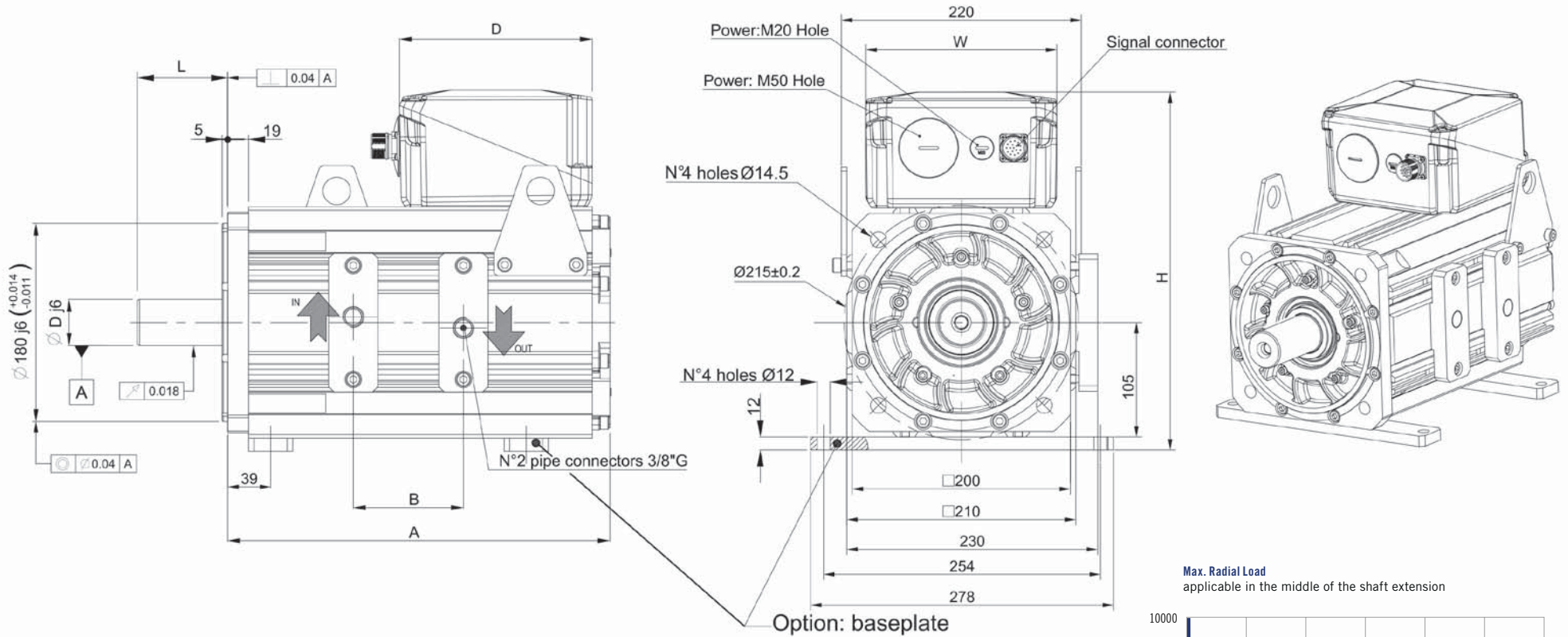


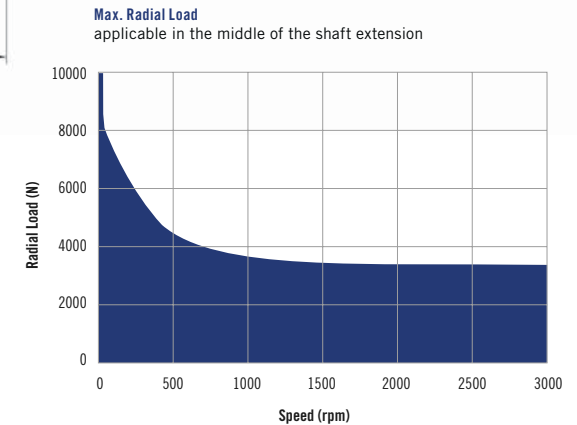
U310W Models



DIMENSIONS

MOTOR TYPE	A	A (with brake or inertia)	B	Shaft Dimensions	
				$\varnothing D \cdot L^{(1)}$	$\varnothing D \cdot L$ with key
U310W04	255	320	39	42*82	42*82
U310W07	327	329	110	42*82	42*82
U310W10	399	464	166	42*82	42*82
U310W13	471	536	220	42*82	42*82

1) Shaft dimension according to DIN 748-1 column (b): simultaneous transmission of torque and a know bending moment.



Water Cooling - For inverter rated Voltage 380Vac to 480Vac

Motor Type	04					07			10			13		
Rated Speed	nM	[rpm]	1000	2000	3000	1000	2000	3000	1000	2000	3000	1000	2000	3000
Stall Torque 1)	Md0	[Nm]	55			110			165			220		
Current @ Stall Torque 1)	Id0	[A]	13	26	35	28	50	67	39	78	112	49	96	128
Number of Poles	2p		8											

Nominal Rating														
Rated Torque 1)	MdN	[Nm]	54,0	53,0	53,0	109,0	108,0	108,0	164,0	163,0	160,0	219,0	219,0	219,0
Rated Current 1)	IdN	[A]	12,8	25,0	34,2	27,7	49,7	66,0	39,0	77,5	109,0	48,9	94,5	125,0
Rated Power	PdN	[kW]	5,7	11,1	16,6	11,4	22,7	34,0	17,2	34,1	50,2	22,9	45,9	69,0
Voltage Constant (+/- 10%)	Ke20°C	[Vrms/1000rpm]	275,7	139,1	101,6	257,6	147,0	110,0	275,7	137,8	96,1	293,2	154,0	115,0
Torque Constant (+/- 10%)	Kt20°C	[Nm/A]	4,6	2,3	1,7	4,3	2,4	1,8	4,6	2,3	1,6	4,9	2,5	1,9
Winding Resistance (+/- 10%)	Ru-v	[Ω]	3,4	0,9	0,5	1,1	0,4	0,2	0,8	0,2	0,1	0,6	0,2	0,9
Winding Inductance (+/- 10%)	Lu-v	[mH]	34,0	8,6	4,3	15,0	5,0	2,8	11,5	2,9	1,4	9,1	2,4	1,4
Derating Temp. Coeff. Of Back EMF	Dke/Dt	[%/°C]	-0,11											
Nominal Voltage	Vn	[V]	351	335	356	322	338	373	342	330	340	358	339	375
Motor Loss @ Nominal Power	Loss	[kW]	1,25	1,25	1,24	1,92	1,92	1,92	2,52	2,52	2,51	3,23	3,23	3,23
Minimum Flow Rate	Flow	[L/min]	2,5			4			5			7		
Efficiency	Eff	[%]	86	90	93	86	92	94	87	93	95	88	93	95
Knee Speed @ 380Vac	nknee1	[rpm]	1092	2282	3208	1194	2176	2942	1118	2311	3358	1066	2177	2950
Knee Speed @ 480Vac	nknee2	[rpm]	1407	2910	4080	1529	2785	3757	1431	2937	4259	1365	278	3753
Knee Speed 380Vac and Mmax	nknee3	[rpm]	730	1566	2270	811	1454	1985	770	1618	2349	754	1552	2109
Knee Speed 480Vac and Mmax	nknee4	[rpm]	952	2009	2901	1048	1872	2543	993	2063	2987	973	1992	2694

Maximum Values														
Max. Torque	Mmax	[Nm]	105			210			310			410		
Max. Current (peak value)	Imax	[A]	29	57	78	62	107	144	85	170	244	106	201	268
Max. Saturation Speed @ 380Vac	nmax1	[rpm]	1378	2733	3741	1475	2700	3680	1378	2757	3953	1296	2610	3465
Max. Saturation Speed @ 480Vac	nmax2	[rpm]	1741	3452	4726	1864	3420	4560	1741	3482	4993	1637	3300	4350
Max. Mechanical Speed	nmax	[rpm]	6000											

Mechanical Data (+/- 10%)														
Inertia	Jm	[kgcm ²]	50			90			130			170		
Mass	M	[kg]	36			50			58			71		

Technical Data of the holding brake														
Holding Torque	MBr	[Nm]	143											
Rated Voltage	UBr	[Vdc]	24											
Rated Current 1)	IBr	[A]	1,78											
Mass	MBr	[kg]	11											
Inertia	JBr	[kgcm ²]	48,6											
Additional motor length	Length	[mm]	65											

Box connection	type	B	B	B	C	B	C

For Box dimensions see page 8-9

Test Condition

1) Water inlet temperature max 20°C; Chopper frequency minimum required 4kHz