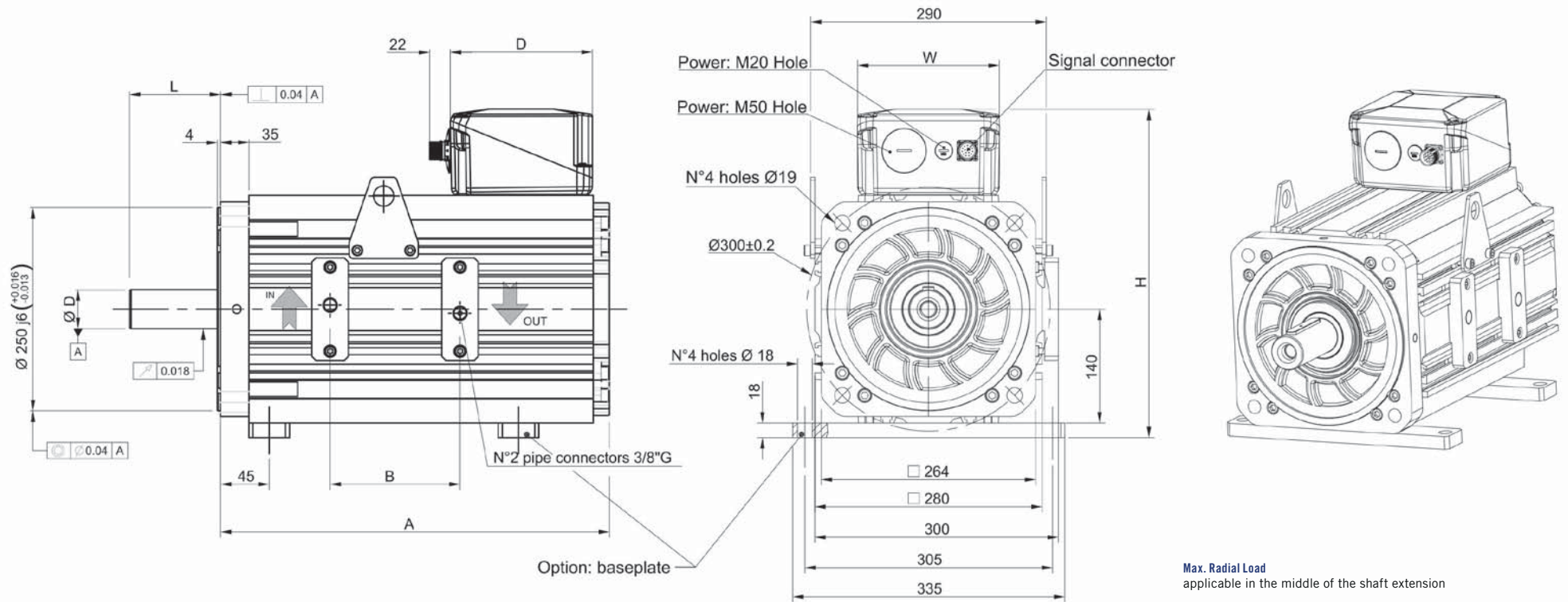


U313W Models



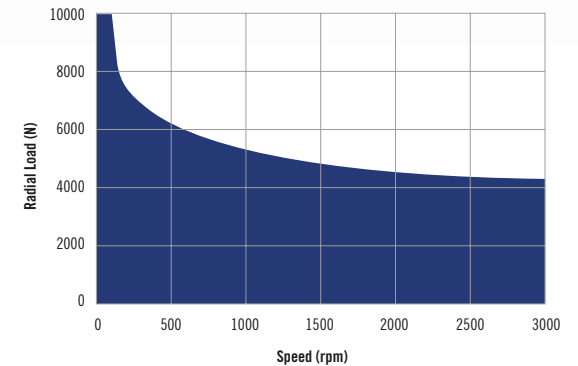
DIMENSIONS

MOTOR TYPE	A ⁽¹⁾	A ⁽¹⁾ (with brake or inertia)	B	Shaft Dimensions	
				$\varnothing D \times L$ ⁽²⁾	$\varnothing D \times L$ with key
U313W10	332	412	75	48k6*110	48k6*110
U313W20	439	519	170	48k6*110	48k6*110
U313W30	546	536	279	60m6*140	60m6*140
U313W40	653	733	385	60m6*140	60m6*140

1) Be carefully if $IdO > 150A + 40mm$ of additional length.

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

Max. Radial Load applicable in the middle of the shaft extension



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

Motor Type			10			20			30			40		
Rated Speed	nM	[rpm]	1000	2000	3000	1000	2000	3000	1000	2000	3000	1000	2000	3000
Stall Torque 1)	Md0	[Nm]	180			360			540			720		
Current @ Stall Torque 1) 2)	Id0	[A]	41	77	124	80	160	248	128	254	326	154	320	411
Number of Poles	2p		8											

Nominal Rating			10			20			30			40		
Rated Torque 1)	MdN	[Nm]	179	178	175	357	353	348	539	530	520	715	710	700
Rated Current 1)	IdN	[A]	41	77	120	79	157	238	128	250	315	153	315	402
Rated Power	PdN	[kW]	19	37	55	37	74	109	56	111	164	75	149	219
Voltage Constant (+/- 10%)	Ke20°C	[Vrms/1000rpm]	287	157	98	296	148	98	277	139	113	316	148	119
Torque Constant (+/- 10%)	Kt20°C	[Nm/A]	4,74	2,60	1,62	4,89	2,44	1,62	4,58	2,30	1,87	5,20	2,44	1,96
Winding Resistance (+/- 10%)	Ru-v	[Ω]	0,560	0,156	0,061	0,243	0,060	0,024	0,135	0,034	0,205	0,100	0,026	0,014
Winding Inductance (+/- 10%)	Lu-v	[mH]	12,50	4,29	1,67	7,10	1,80	0,72	4,20	1,05	0,68	3,65	0,97	0,51
Derating Temp. Coeff. Of Back EMF	Dke/Dt	[%/°C]	-0,11											
Nominal Voltage	Vn	[V]	358	380	350	373	366	330	351	343	460	364	375	424
Motor Loss @ Nominal Power	Loss	[kW]	2,05	2,04	2,07	3,34	3,31	3,10	4,76	4,75	4,80	5,52	5,63	5,63
Minimum Flow Rate	Flow	[L/min]	5			8			11			14		
Efficiency	Eff	[%]	86	94	96	92	96	97	92	96	97	94	96	97
Knee Speed @ 380Vac	nknee1	[rpm]	1064	1933	3153	1020	2079	3344	1087	2220	2815	1006	2029	2780
Knee Speed @ 480Vac	nknee2	[rpm]	1357	2463	4025	1299	2636	4270	1383	2813	3590	1283	2570	3525
Knee Speed 380Vac and Mmax	nknee3	[rpm]	809	1418	2306	773	1573	2570	821	1681	2130	775	1507	2150
Knee Speed 480Vac and Mmax	nknee4	[rpm]	1036	1808	2930	987	1997	3260	1047	2134	2700	990	1912	2730

Maximum Values			10			20			30			40		
Max. Torque	Mmax	[Nm]	280			550			830			1100		
Max. Current (peak value)	Imax	[A]	74	135	215	141	282	423	227	451	554	265	564	707
Max. Saturation Speed @ 380Vac	nmax1	[rpm]	1326	2520	4100	1285	2576	4100	1372	2733	3550	1300	2576	3350
Max. Saturation Speed @ 480Vac	nmax2	[rpm]	1675	3240	5160	1624	3254	5160	1733	3452	4500	1600	3254	4300
Max. Mechanical Speed	nmax	[rpm]	6000											

Mechanical Data (+/- 10%)			10			20			30			40		
Inertia	Jm	[kgcm ²]	200			390			590			780		
Mass	M	[kg]	83			117			151			183		

Technical Data of the holding brake			10			20			30			40		
Holding Torque	MBr	[Nm]	300											
Rated Voltage	UBr	[Vdc]	24											
Rated Current 1)	IBr	[A]	1,74											
Mass	MBr	[kg]	18											
Inertia	JBr	[kgcm ²]	200											
Additional motor length	Length	[mm]	80											

Box connection	type	B	C	B	C	C	D	C	D

For Box dimensions see page 8-9

Test Condition

- 1) Water inlet temperature max 20°C; Chopper frequency minimum required 4kHz
- 2) If Id0 >= 150: + 40mm of additional length