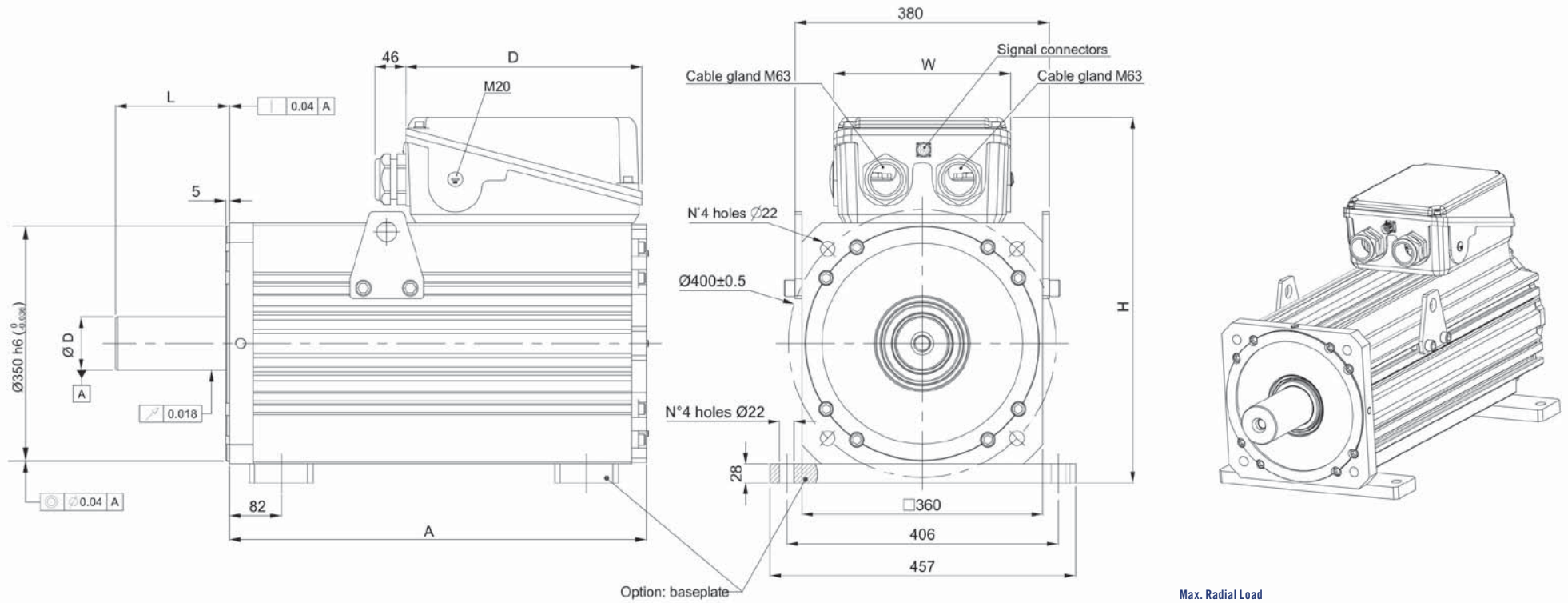


# U318N Models

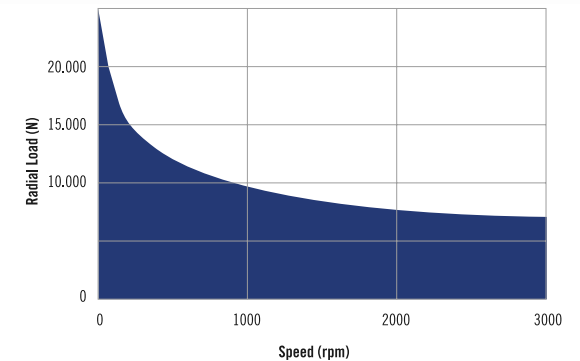


Max. Radial Load applicable in the middle of the shaft extension

## DIMENSIONS

MOTOR TYPE	A	Shaft Dimensions	
		Ø D * L <sup>(1)</sup>	Ø D * L with key
U318N35	515	60m6*140	60m6*140
U318N70	707	60m6*140	60m6*140
U318N100	835	60m6*140	60m6*140

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



## Natural Convection Cooling - For inverter rated Voltage 380Vac to 480Vac

Motor Type	35				70		100	
Rated Speed	nM	[rpm]	1000	2000	1000	2000	1000	2000
Stall Torque 1)	Md0	[Nm]	300		560		730	
Current @ Stall Torque 1)	Id0	[A]	53	106	99	197	145	290
Number of Poles	2p		12					

Nominal Rating								
Rated Torque 1)	MdN	[Nm]	200	n.a. 2)	300	n.a. 2)	290	n.a. 2)
Rated Current 1)	IdN	[A]	35	n.a. 2)	53	n.a. 2)	57	n.a. 2)
Rated Power	PdN	[kW]	21	n.a. 2)	31	n.a. 2)	30	n.a. 2)
Voltage Constant (+/- 10%)	Ke20°C	[Vrms/1000rpm]	390	195	390	195	347	173
Torque Constant (+/- 10%)	Kt20°C	[Nm/A]	6,45	3,23	6,45	3,23	5,74	2,86
Winding Resistance (+/- 10%)	Ru-v	[Ω]	0,16	0,042	0,059	0,015	0,032	0,009
Winding Inductance (+/- 10%)	Lu-v	[mH]	2,2	0,55	1,1	0,28	0,65	0,16
Derating Temp. Coeff. Of Back EMF	Dke/Dt	[%/°C]	-0,11					
Nominal Voltage	Vn	[V]	396	n.a. 2)	393	n.a. 2)	349	n.a. 2)
Minimum Flow Rate	Flow	[L/min]	n.a.					
Losses	Loss	[kW]	0,97	1,01	1,24	1,26	1,44	1,63
Efficiency	Eff	[%]	95	94	94	94	95	95
Knee Speed @ 380Vac	nknee1	[rpm]	959	n.a. 2)	966	n.a. 2)	1090	n.a. 2)
Knee Speed @ 480Vac	nknee2	[rpm]	1215	n.a. 2)	1222	n.a. 2)	1378	n.a. 2)
Knee Speed 380Vac and Mmax	nknee3	[rpm]	795	1658	822	1688	924	1900
Knee Speed 480Vac and Mmax	nknee4	[rpm]	1023	2114	1052	2146	1180	2414

Maximum Values								
Max. Torque	Mmax	[Nm]	1300		2500		3500	
Max. Current (peak value)	Imax	[A]	252	504	484	969	762	1529
Max. Saturation Speed @ 380Vac	nmax1	[rpm]	974	1949	974	1949	1095	2197
Max. Saturation Speed @ 480Vac	nmax2	[rpm]	1231	2462	1231	2462	1383	2775
Max. Mechanical Speed	nmax	[rpm]	4000					

Mechanical Data (+/- 10%)								
Inertia	Jm	[kgcm <sup>2</sup> ]	2820		5340		7010	
Mass	M	[kg]	290		360		431	

Technical Data of the holding brake								
Holding Torque	MBr	[Nm]	n.a.					
Rated Voltage (±10%)	UBr	[Vdc]	n.a.					
Rated Current 1)	IBr	[A]	n.a.					
Mass	MBr	[kg]	n.a.					
Inertia	JBr	[kgcm <sup>2</sup> ]	n.a.					
Additional motor length	Length	[mm]	n.a.					

Box connection	Type	D	D	D

For Box dimensions see page 8-9

## Test Condition

- 1) Motor flanged (Tflange = 30°C), to use on baseplate derate -30% of the Md0; Chopper frequency minimum required 4kHz
- 2) Not available in S1 duty and DT100°C