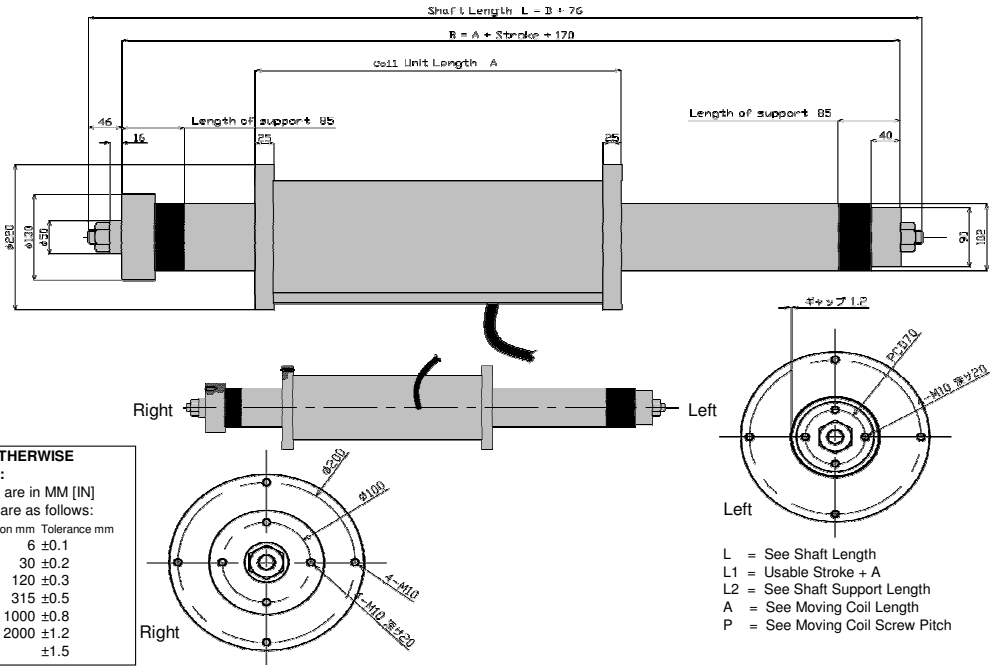
NPM S1000



UNLESS OTHERWISE SPECIFIED:
Dimensions are in MM [IN]
Tolerances are as follows:

Dimension mm	Tolerance mm
- 6	±0.1
7 - 30	±0.2
31 - 120	±0.3
121 - 315	±0.5
316 - 1000	±0.8
1001 - 2000	±1.2
2000 -	±1.5

Electrical Specifications

		S1000D	S1000T	S1000Q
Continuous Force[1]		1056N (267lbs)	1591N (358lbs)	2125N (488lbs)
Continuous Current[1]		7.9Arms	11.9Arms	15.9Arms
Peak Force[2]		4225N (950lbs)	6364N (1431lbs)	8503N (1912lbs)
Peak Current[2]		31.6Arms	47.6Arms	63.6Arms
Force Constant	Kf	133.7N/Arms (29.9lbs/Arms)	133.7N/Arms (29.9lbs/Arms)	133.7N/Arms (29.9lbs/Arms)
Back EMF		44.57V/m/s (1.31V/in/s)	44.57V/m/s (1.31V/in/s)	44.57V/m/s (1.31V/in/s)
Resistance 20℃, [3]		2.0Ω	1.3Ω	1.0Ω
Inductance[3]		9.8mH	6.5mH	4.9mH
Electrical Time Constant		4.9ms	5.0ms	4.9ms
Fundamental Motor Constant		94.54N√W	117.26N√W	133.7N√W
Magnetic Pitch (North-North)		270mm (10.6in)	270mm (10.6in)	270mm (10.6in)

All specifications are for reference only. Specifications may change depending on servo driver selected. Consult Nippon Pulse America.

1) Based on a temp rise of coil surface of 40℃K over 25℃ ambient temperature stalled forcer, and no external cooling or heat sinking.
Addition of 25 cm x 25 cm x 2.5 cm aluminum heat sink increases continuous force by 20%.

2) Can be maintained for a maximum of 40 seconds, consult Nippon Pulse America.

3) All winding parameters listed are measured line-to-line (phase-to-phase).

Thermal Specifications

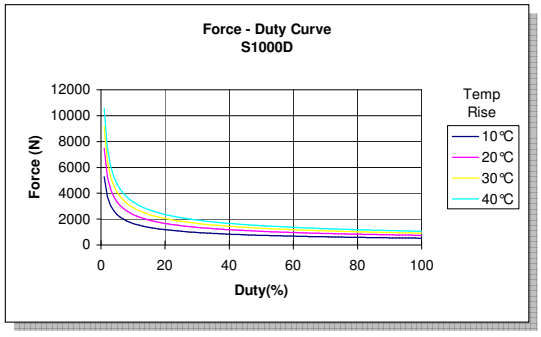
		S1000D	S1000T	S1000Q
Max phase temperature[4]		65℃ (149℉)	65℃ (149℉)	65℃ (149℉)
Thermal Resistance (Coil)	Kq	0.32℃/W	0.22℃/W	0.16℃/W

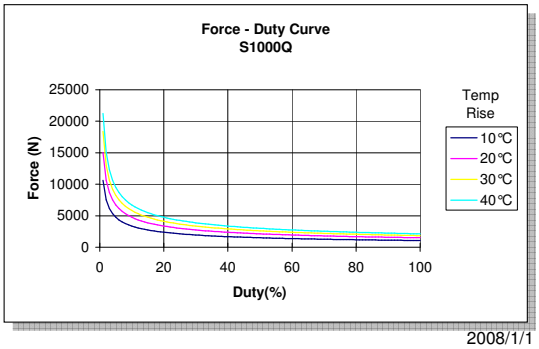
4) The standard temperature difference between the coil and the forcer surface is 40℃

Mechanical Specifications

Forcer

		S1000D	S1000T	S1000Q
Forcer Length	A	364mm (14.33in)	499mm (19.64in)	634mm (24.96in)
Forcer Width		200mm (7.87in)	200mm (7.87in)	200mm (7.87in)
Forcer Screw Pitch	P			
Forcer Weight		37kg (81.6lbs)	55kg (121lbs)	73kg (161lbs)
Gap		1.2mm (0.047in)	1.2mm (0.047in)	1.2mm (0.047in)





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