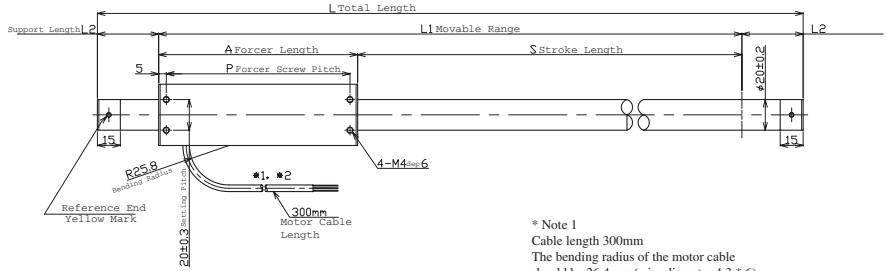


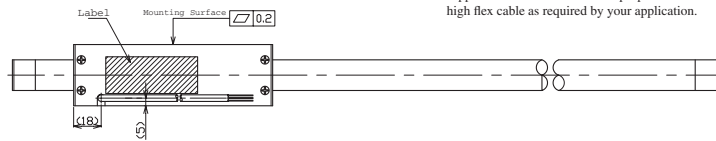
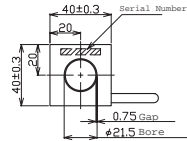
Unless Otherwise Specified:
Dimensions are in mm
Tolerances are as follows:

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

L = See Shaft Length
L1 = Usable Stroke + A
L2 = See Shaft Support Length
A = See Moving Coil Length
P = See Moving Coil Screw Pitch



* Note 1
Cable length 300mm
The bending radius of the motor cable should be 26.4mm (wire diameter 4.3 * 6) as suggested by the wire manufacturer. This radius should be maintained. Use supplied connector to attach the proper high flex cable as required by your application.



Electrical Specs	S200D	S200T	S200Q
Continuous Force ¹	18N	28N	38N
Continuous Current ¹	0.6Arms	0.6Arms	0.6Arms
Acceleration Force ²	72N	112N	152N
Acceleration Current ²	2.4Arms	2.4Arms	2.4Arms
Force Constant (K _f)	31N/Arms	47N/Arms	64N/Arms
Back EMF (K _e)	10V/m/s	16V/m/s	21V/m/s
Resistance 25°C, ³	28.7Ω	43Ω	56Ω
Inductance ³	19.3mH	29mH	39mH
Electric Time Constant	0.67ms	0.67ms	0.70ms
Rated Voltage (AC)	240V	240V	240V
Fundamental Motor Constant (K _m)	5.70N√W	7.24N√W	8.61N√W
Magnetic Pitch (North-North)	72mm	72mm	72mm

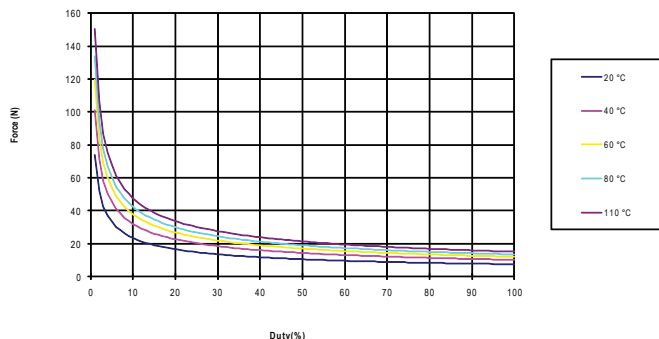
All specifications are for reference only. Specifications may change depending on servo driver selected. Consult Nippon Pulse.
1) Based on a temp rise of coil surface of 110°K over 25°C ambient temperature stalled forcer, and no external cooling or heat sinking. Addition of 25 cm x 25 cm x 2.5 cm aluminum heat sink increases continuous force by 20%
2) Can be maintained for a maximum of 40 seconds, higher forces and current possible for short periods of time, consult Nippon Pulse
3) All winding parameters listed are measured line-to-line (phase-to-phase)

Thermal Specs	S200D	S200T	S200Q
Max Phase Temperature ⁴	135°C	135°C	135°C
Thermal Resistance (Coil) (K _q)	11°C/W	7.3°C/W	5.6°C/W

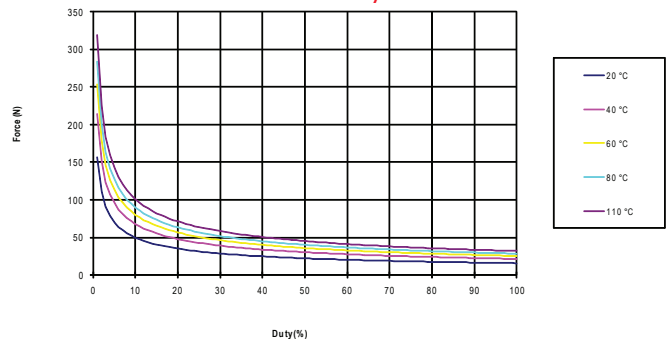
4) The standard temperature difference between the coil and the forcer surface is 20°C

Forcer Specs	S200D	S200T	S200Q
Forcer Length (A)	94mm	130mm	166mm
Forcer Width	40mm	40mm	40mm
Forcer Screw Pitch (P)	84mm	120mm	156mm
Forcer Weight	0.30kg	0.50kg	0.70kg
Gap	0.75mm	0.75mm	0.75mm

S200D Force Duty Curve



S200Q Force Duty Curve



Shaft Length (mm)

Stroke	S200D	S200T	S200Q
100	244	280	316
150	294	330	366
200	344	380	416
250	394	430	466
300	444	480	516
350	494	530	566
400	544	580	616
450	594	630	666
500	644	680	716
550	694	730	766
600	744	780	816
650	794	830	866
700	844	880	916
750	894	930	966
800	944	980	1016
850	994	1030	1066
900	1044	1080	1116
950	1094	1130	1166
1000	1144	1180	1216
1050	1194	1230	1266
1100	1244	1280	1316
1150	1294	1330	1366
1200	1344	1380	1416
1250	1394	1430	1466
1300	1444	1480	1516
1350	1494	1530	1566
1400	1544	1580	1616
1450	1594	1630	1666
1500	1644	1680	1716
1550	1694	1730	1766
1600	1744	1780	1816
1650	1794	1830	1866
1700	1844	1880	1916
1750	1894	1930	1966
1800	1944	1980	2016
1850	1994	2030	2066
1900	2044	2080	2116
1950	2094	2130	2166
2000	2144	2180	2216
2050	2194	2230	2266
2100	2244	2280	2316

Shaft Mass (kg)

Stroke	S200D	S200T	S200Q
100	0.5	0.6	0.6
150	0.6	0.7	0.7
200	0.7	0.8	0.9
250	0.8	0.9	1
300	0.9	1	1.1
350	1.1	1.1	1.2
400	1.2	1.2	1.3
450	1.3	1.4	1.4
500	1.4	1.5	1.5
550	1.5	1.6	1.6
600	1.6	1.7	1.8
650	1.7	1.8	1.9
700	1.8	1.9	2
750	2	2	2.1
800	2.1	2.2	2.2
850	2.2	2.3	2.3
900	2.3	2.4	2.5
950	2.4	2.5	2.6
1000	2.5	2.6	2.7
1050	2.6	2.7	2.8
1100	2.7	2.8	2.9
1150	2.8	2.9	3
1200	3	3	3.1
1250	3.1	3.1	3.2
1300	3.2	3.3	3.3
1350	3.3	3.4	3.4
1400	3.4	3.5	3.6
1450	3.5	3.6	3.7
1500	3.6	3.7	3.8
1550	3.7	3.8	3.9
1600	3.8	3.9	4
1650	3.9	4	4.1
1700	4.1	4.1	4.2
1750	4.2	4.2	4.3
1800	4.3	4.4	4.4
1850	4.4	4.5	4.5
1900	4.5	4.6	4.7
1950	4.6	4.7	4.8
2000	4.7	4.8	4.9

S200 Linear Shaft Motor

Lead Wire

Wire Type	UL 2464FA
Wire AWG	25
U Phase	Red
V Phase	White
W Phase	Black

300mm lead wire bare leads
The bending radius of the motor cable should be 26.4mm as suggested by the wire manufacturer.

Connector (Motor Cable)

Receptacle Housing	XMR-03V
Plug Housing	XMP-03V
Retainer	XMS-03V
Pin Contact	SXM-001T-P0.6
Socket Contact	SXA-001T-P0.6

To be installed by the user

CE Type Motor Cable

300mm lead wire bare leads. The bending radius of the motor cable should be 16.96mm as suggested by the wire manufacturer.

Wire Type	UL 1330
Wire AWG	24
U Phase	Red
V Phase	White
W Phase	Black

Ground Wire	CE
Wire Type	UL 1330
Wire AWG	20
Frame Ground	Green/Yellow

Support and Bending

Stroke	Support Length	Max. bending
0~300	25mm	0.00mm
301~700	40mm	0.30mm
701~1000	60mm	0.70mm
1001~max	60mm	0.90mm

Shaft Diameter (D) - 20mm ±0.2

Total Length (L)=Stroke (S)+Forcer Length (A)+(Support Length (L2)x2)

Stroke lengths available up to 2700mm. Contact Nippon Pulse for more information.

Hall Effect Specs

Sensor Cable Specs

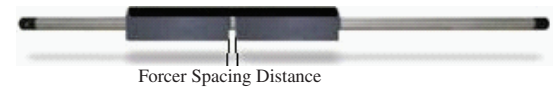
Wire Type	UL 758
Wire AWG	28
VCC	White/Red
GND	White/Black
Sensor 1	Orange/Red
Sensor 2	Orange/Black
Sensor 3	Gray/Red

* Note 1
The bending radius of the motor cable should be R26.4mm (wire diameter 4.6 * 6) as suggested by the wire manufacturer. This radius should be maintained. Use supplied connector to attach the proper high flex cable as required by your application.

Part Numbering System

S	Shaft Size (D) 200	Forcer Size (A) X	Parallel Option XX	Usable Stroke XXXXSL 100-2000mm	Options XX	Options XX	# of Forcers XX Two or more
		D: Double (2) windings T: Triple (3) windings Q: Quadruple (4) windings	Blank: Single Motor PL: Parallel Motors		Blank: Standard WP: Water Resistant HA: Digital Hall Effect CE: CE type motor	Blank: Standard FO: Forcer Only SO: Shaft Only	

Tandem Forcer



Forcer Spacing Distance

Spec	S200T	S200Q
Forcer Spacing Distance	14mm	14mm
Pole (N/S) Distance	36mm	36mm
Forcer Length	130mm	166mm
Flip Forcers	No	Yes

Tandem S200D forcers are possible, but are equivalent to one (1) S200Q forcer and thus are not listed above.