

Ironless Linear Motor

- Ironless Technology
- Compact Size, Suitable for Vertical Axes
- Excellent Dynamic Motion Characteristics

Linear Motion

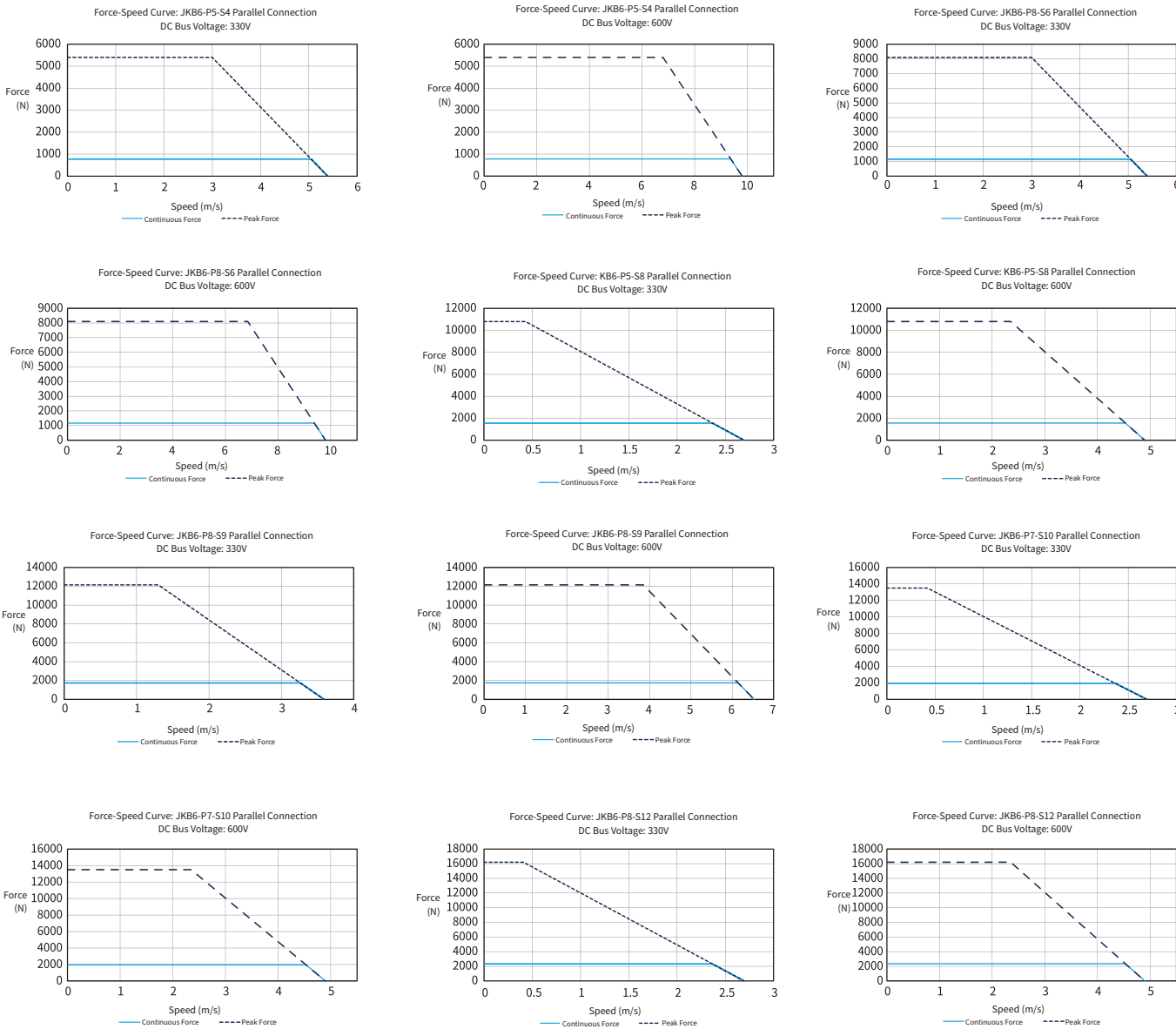
Vertical Axis

Angular

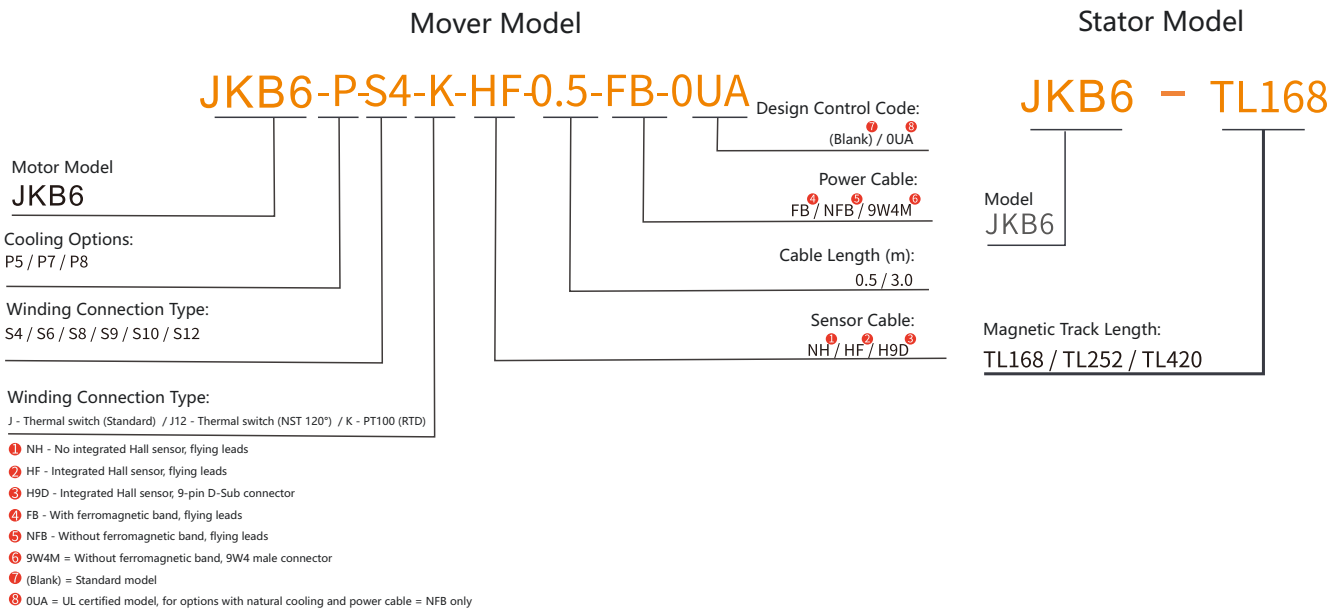
Rotary

Vertical & Rotary

JKB6 Series: Thrust Graph



Model Number Designation System



Linear Motor Specifications Overview

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			JKB6-P5-S4	JKB6-P8-S6	JKB6-P5-S8	JKB6-P8-S9	JKB6-P7-S10	JKB6-P8-S12
Performance Parameters	Symbol	Unit	P5	P8	P5	P8	P7	P8
Continuous Thrust (Natural Cooling) @100°C	F <sub>cn</sub>	N	780	1170	1560	1755	1950	2340
Peak Thrust	F <sub>pk</sub>	N	5400	8100	10800	12150	13500	16200
Force Constant ±10%	K <sub>f</sub>	N/Arms	75.0	75.0	150.0	112.5	150.0	150.0
Back EMF Constant ±10%	K <sub>e</sub>	Vpeak/(m/s)	61.2	61.2	122.5	91.9	122.5	122.5
Motor Constant @25°C	K <sub>m</sub>	N/Sqrt(W)	48.9	59.9	69.2	73.4	77.3	84.7
Phase-to-Phase Resistance @25°C ±10%	R <sub>25</sub>	Ω	1.57	1.05	3.14	1.57	2.52	2.10
Phase-to-Phase Inductance ±40%	L	mH	2.65	1.71	5.30	2.65	4.24	3.53
Electrical Time Constant	T <sub>e</sub>	ms	1.68	1.68	1.69	1.68	1.69	1.68
Continuous Current (Natural Cooling) @100°C	I <sub>cn</sub>	Arms	10.4	15.6	10.4	15.6	13.0	15.6
Peak Current	I <sub>pk</sub>	Arms	72.0	108.0	72.0	108.0	90.0	108.0
Continuous Thermal Power (Natural Cooling) @ 100°C	P <sub>cn</sub>	W	329	495	657	741	822	987
Max. Coil Temperature	t <sub>max</sub>	°C	100	100	100	100	100	100
Thermal Dissipation Constant (Natural Cooling)	K <sub>thn</sub>	W/°C	4.4	6.6	8.8	9.9	11.0	13.2
Max. Bus Voltage	U <sub>bus</sub>	Vdc	600	600	600	600	600	600
Electromagnetic Period	T <sub>NN</sub>	mm	84	84	84	84	84	84
Magnetic Attraction Force	F <sub>a</sub>	kN	0	0	0	0	0	0
Mechanical Parameters								
Coil Mass (Natural Cooling)	m <sub>cn</sub>	kg	4.50	6.75	9.00	10.13	11.25	13.50
Coil Length (Natural Cooling)	L <sub>cn</sub>	mm	337.0	505.0	673.0	757.0	841.0	1009.0
Magnetic Track Mass (per meter)	m <sub>track</sub>	kg/m	66.67	66.67	66.67	66.67	66.67	66.67
Other Information								
Insulation Level		Class B (130°C)						
Protection Grade		IP00						
Compliance Standards		RoHS, CE, UL (option)						
Ambient Temperature	Operating	0°C - 40°C (no icing)						
	Storage	-15°C to 70°C (no icing)						
Ambient Humidity	Operating	10% to 80% RH (no condensation)						
	Storage	10% to 90% RH (no condensation)						
Recommended Operating Environment		Indoor (no direct sunlight) Free from corrosive gases, flammable gases, oil mist, or dust						

① Measured at 25°C room temperature, depending on heat dissipation conditions.

② Resistance measured with DC current, including 0.5m standard cable.

③ Inductance measured at 1kHz. The wide tolerance range (±40%) for JKB series is due to differences in three-phase inductance. The catalog value represents the average of maximum and minimum values, with each phase having ±20% tolerance.

Relevant parameters are subject to change without prior notice.

Linear Motor Specifications Overview

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• JKB6: Dimensions Lead Time: 15-20 Days  
The lead time is subject to change during special periods. Please consult our sales team.

Motor Coil			
Coil Model	Coil Length	G	H
JKB6-TL168	167.5	2	2
JKB6-TL252	251.5	3	3
JKB6-TL420	419.5	5	5

Motor Magnetic Track		
Track Model	Track Length	E
JKB6 -P5-S4	337.0	9
JKB6 -P8-S6	505.0	13
JKB6 -P5-S8	673.0	17
JKB6 -P8-S9	757.0	19
JKB6-P7-S10	841.0	21
JKB6-P8-S12	1009.0	25