

Iron Core Linear Motor

- Iron Core Technology
- Ultra-low Cogging Force
- High Thrust
- High Rigidity



Mover Model Number Designation System

WKM	50	A
Series	Mover Width	Mover Length
WKM	71mm	1 : 112mm      2 : 196mm 3 : 364mm      4 : 532mm

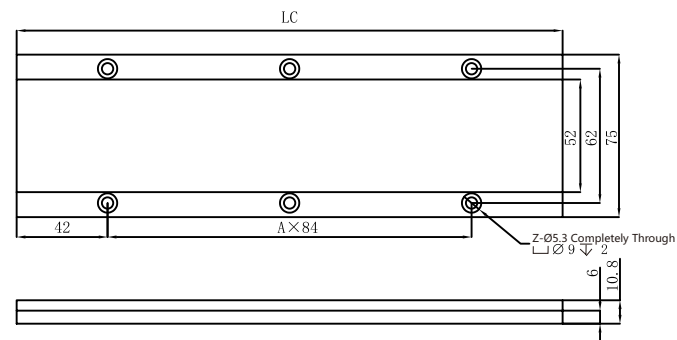
Stator Model Number Designation System

DKM	050	-	L168
Series	Stator Width	Stator Length	
DKM	050: 75mm	L168: 168mm L252: 252mm L420: 420mm	

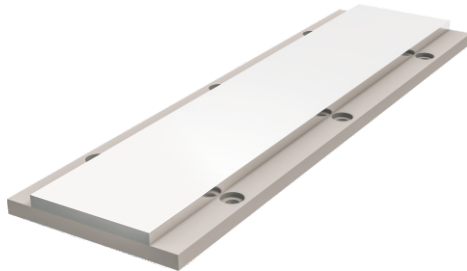
Stator Model	Length LC	Width	Height	A	Z	Pole Pitch	Weight
Unit	mm	mm	mm	PCS	PCS	mm	Kg/m
WKM50-168	168	75	10.8	1	4	42	5.0
WKM50-252	252	75	10.8	2	6	42	5.0
WKM50-420	420	75	10.8	4	10	42	5.0

\* The movers of the WKM050 series can be freely paired with WKM050-L168, WKM050-L252, or WKM050-420.

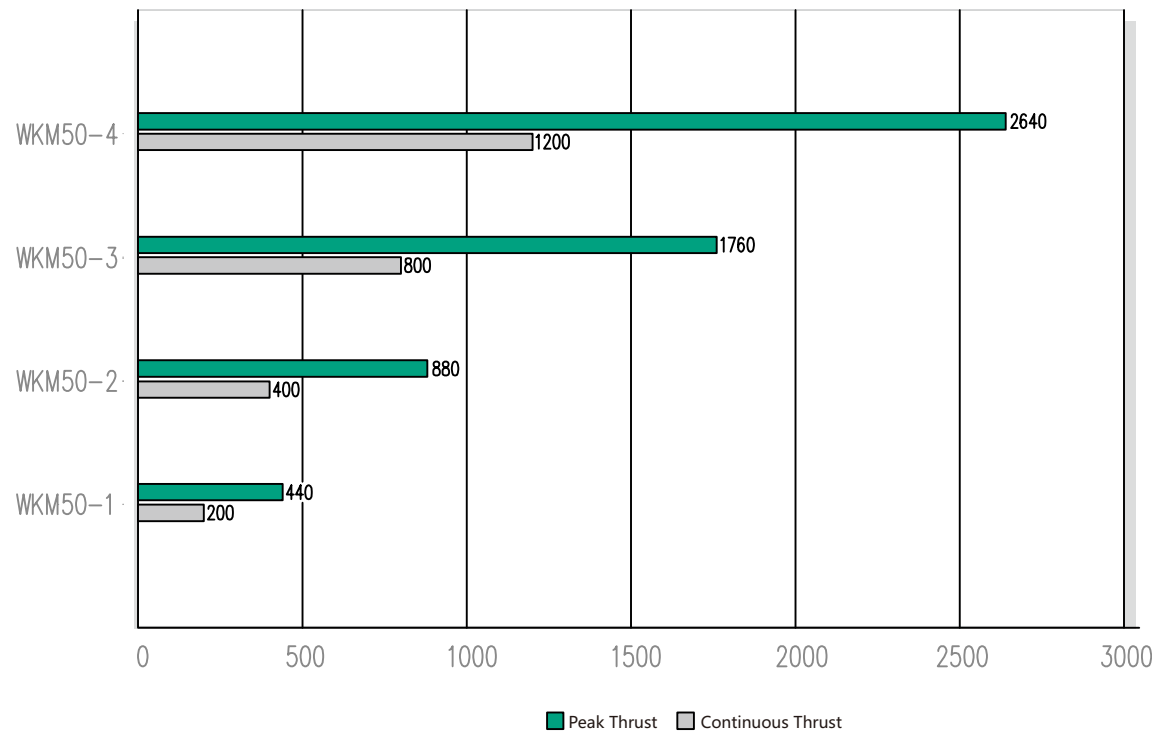
Stator Size



\* For special length requirements, please consult our sales team.



Thrust Graph



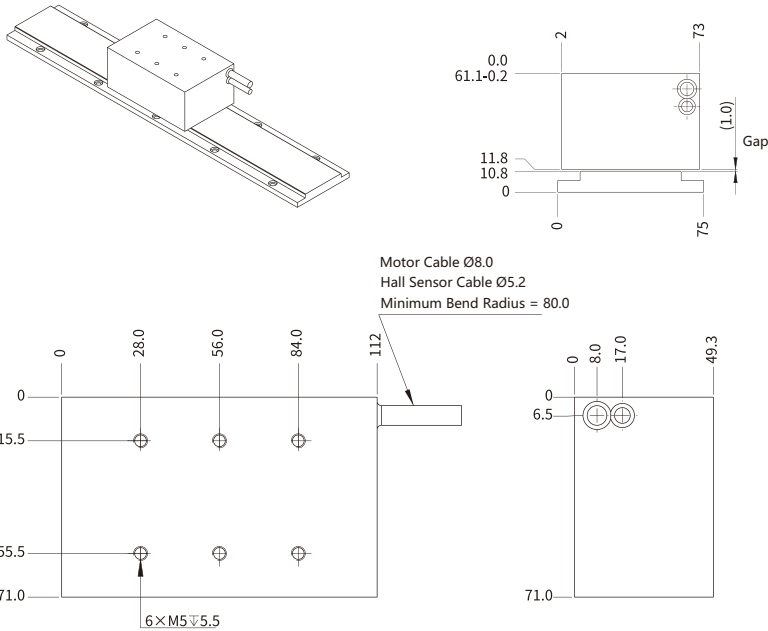
Specification Parameters

	Symbol	Unit	WKM50-1	WKM50-2	WKM50-3	WKM50-4
Continuous Thrust	$F_c$	N	200	400	800	1200
Continuous Current	$I_c$	$A_{rms}$	4.5	4.5	9	13.5
Peak Thrust [1s]	$F_p$	N	440	880	1760	2640
Limiting Current [1s]	$I_u$	$A_{rms}$	13.5	13.5	27	40
Thrust Constant	$K_f$	$N/A_{rms}$	44.5	89	89	89
Attractive Force Between Mover & Stator	$F_a$	N	0.7	1.3	2.7	4.2
Max. Coil Temperature	$T_{max}$	$^{\circ}C$	100	100	100	100
Electrical Time Constant	$K_e$	ms	21	21	21	21
Resistance [Phase-to-Phase, 25 $^{\circ}C$ ]	$R_{25}$	$\Omega$	1.7	3.4	1.7	1.2
Inductance [Phase-to-Phase, 25 $^{\circ}C$ ]	$L$	mH	37.5	75	37.5	25
Pole Pitch	$2\tau$	mm	42	42	42	42
Back EMF Constant	$K_v$	$V_{rms}/[m/s]$	36.3	72.6	72.6	72.6
Continuous Thermal Power (Natural Cooling) @ 100 $^{\circ}C$	$P_{CN}$	W	69	138	276	438
Motor Constant [25 $^{\circ}C$ ]	$K_m$	$N/\sqrt{W}$	27.8	39.4	55.7	66.3
Thermal Dissipation Constant (Natural Cooling)	$R_{TH}$	$W/^{\circ}C$	0.9	1.9	3.7	5.8
Thermal Sensor Switch	-	-	P100	P100	P100	P100
Max. Operating Voltage	-	$V_{DC}$	600	600	600	600
Mover Mass	$M_f$	kg	2.2	4.1	8	11.8
Stator Unit Mass	$M_s$	kg/m	5	5	5	5

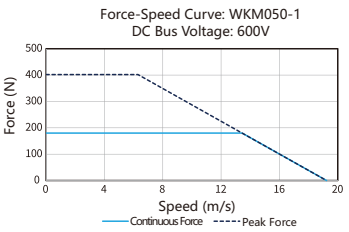
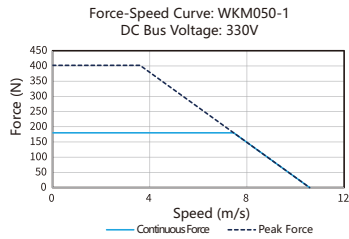
Note: All data in this table is measured at an ambient temperature of 25 $^{\circ}C$  and represents values obtained without forced cooling. Except for dimensional specifications, all other specifications have a tolerance of  $\pm 10\%$ . Our company reserves the right to make changes, and relevant parameters are subject to change without prior notice.

WKM050-1 Series: Dimensions

Made-to-Order Please contact our sales team for lead time.  
The lead time is subject to change during special periods. Please consult our sales team.

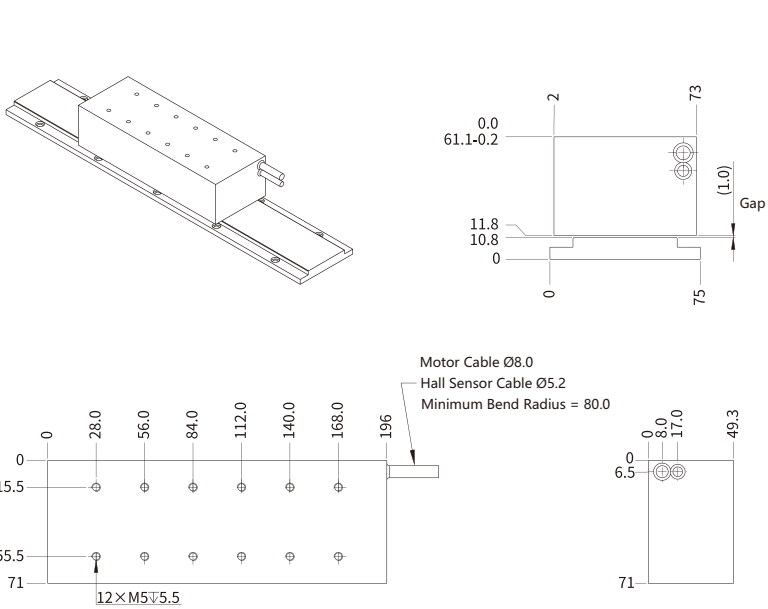


Force-Speed Curve

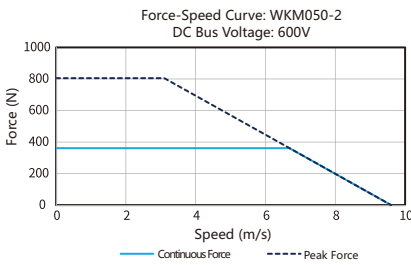
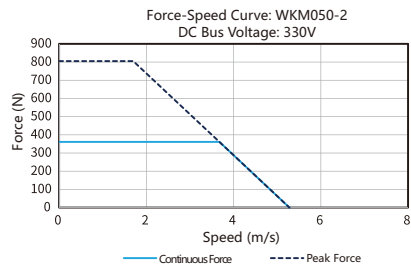


WKM050-2 Series: Dimensions

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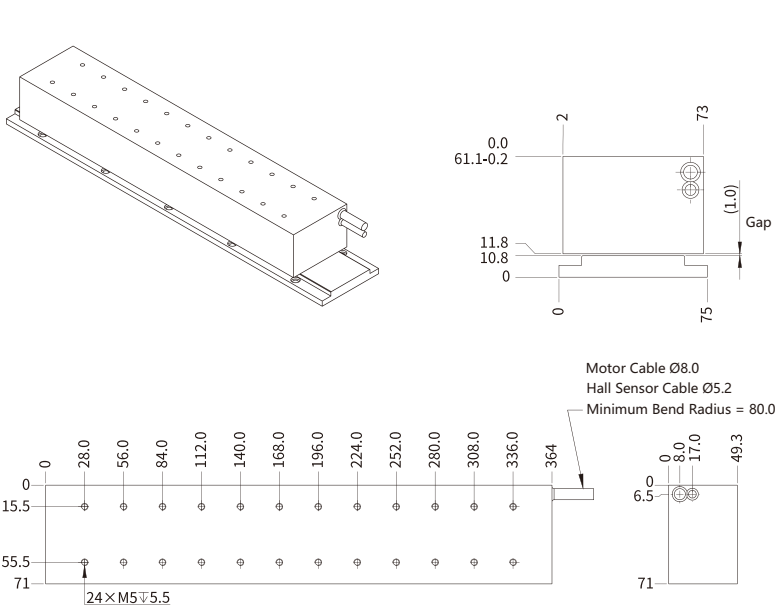


Force-Speed Curve

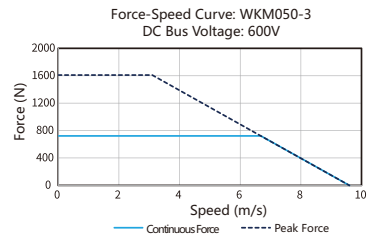
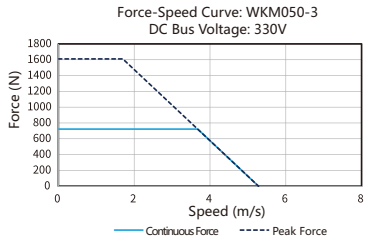


WKM050-3 Series: Dimensions

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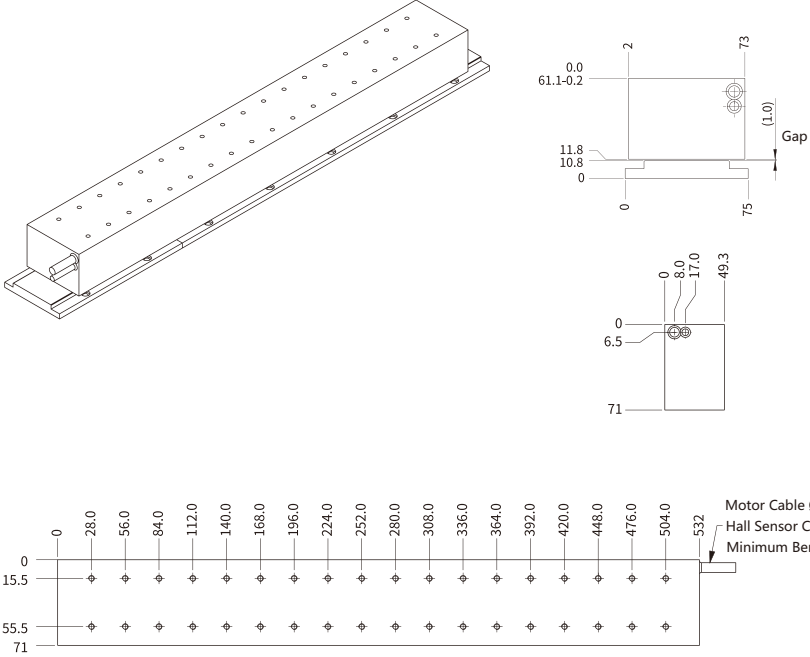


Force-Speed Curve



WKM050-4 Series: Dimensions

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Force-Speed Curve

