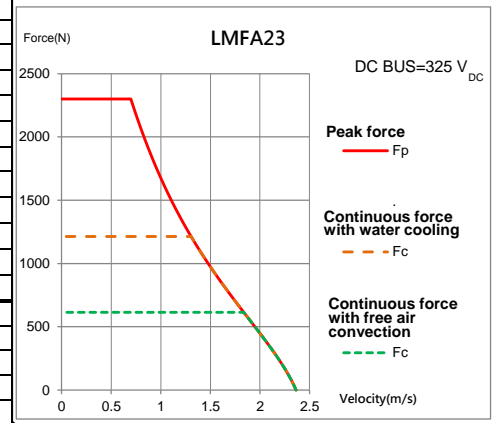
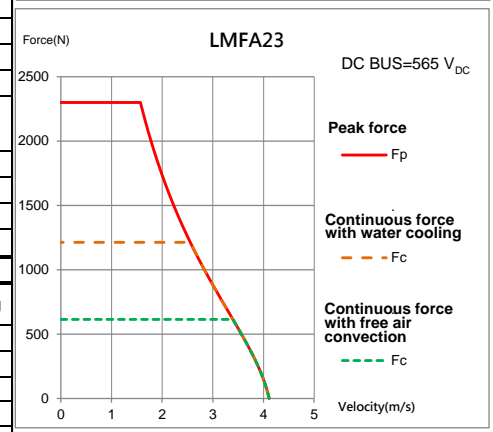
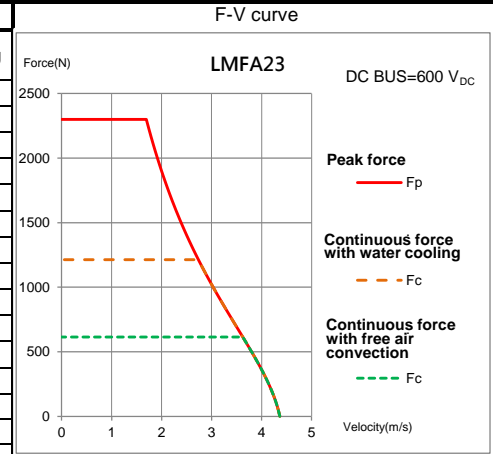


LMFA23

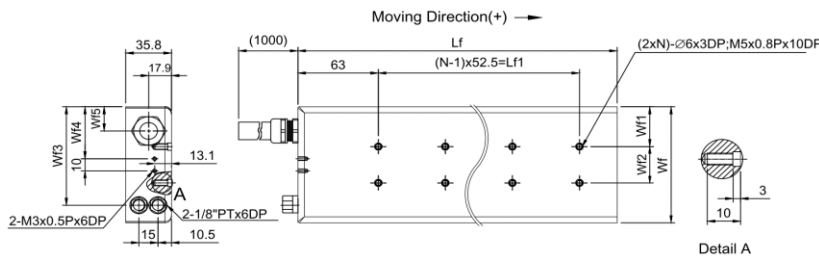
Linear Motor

Electrical specifications				
	Symbol	Unit	Free air convection	Water cooling
Continuous force	F_c	N	614	1228
Continuous current	I_c	A_{rms}	4.1	8.1
Stall force	F_0	N	-	860
Stall current	I_0	A_{rms}	-	5.7
Peak force (1s)	F_p	N	-	2328
Peak current (1s)	I_p	A_{rms}	-	25.1
Force constant	K_f	N/A_{rms}	-	151.6
Attraction force	F_a	N	-	3777
Max. winding temperature	T_{max}	$^{\circ}C$	-	120
Electrical time constant	K_e	ms	-	7.2
Resistance (line to line · 25 $^{\circ}C$)	R_{25}	Ω	-	8.3
Resistance (line to line · 120 $^{\circ}C$)	R_{120}	Ω	-	10.9
Inductance (line to line)	L	mH	-	59.5
Pole pair pitch	2τ	mm	-	30
Back emf constant(line to line)	K_v	$V_{rms}/(m/s)$	-	87.5
Motor constant (25 $^{\circ}C$)	K_m	N/\sqrt{W}	-	43.1
Thermal resistance	R_{th}	$^{\circ}C/W$	0.35	0.09
Thermal time constant	t_{th}	s	-	150
Thermal switch			1 x Pt1000 + 1 x (3 PTC SNM 120 In Series)	
Maximum velocity at maximum force	$V_{MAX,FP}$	m/s	-	2.21
Maximum electric power input	$P_{EL,MAX}$	W	-	15455
Maximum dissipated heat output	$Q_{P,H,MAX}$	W	-	1073
Max. DC bus voltage	V_{DC}	V	-	750

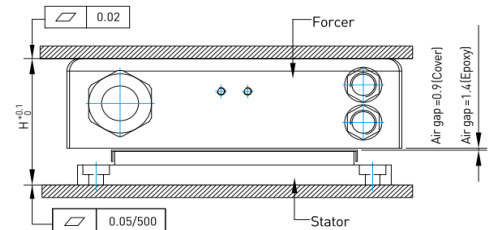
Mechanical specifications					
	Symbol	Unit	Free air convection	Water cooling	
Mass offorcer	M_f	kg	-	8	
Unit mass of stator	M_s	kg	-	9.8	
Total installation height	H	mm	-	50.5	
Minimum flow rate		L/min	-	4	
Temperature of cooling water		$^{\circ}C$	-	20	
Pressure drop	ΔP	bar	-	2.5	
Water temperture difference	$\Delta\theta_{P,H}$	K	-	3.8	
L_f	mm	355	$Wf3$	mm	111.5
L_{f1}	mm	262.5	$Wf4$	mm	58
W_f	mm	126	$Wf5$	mm	20
$Wf1$	mm	40.5	N	mm	6
$Wf2$	mm	45	n	mm	-



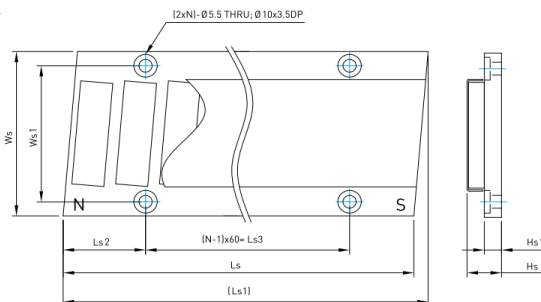
Focer dimensions



Mounting tolerance



Stator dimensions



Type	L_s	L_{s1}	L_{s2}	L_{s3}	H_s	H_{s1}	W_s	W_{s1}	N
LMF2S1	120	123.09	30.4	60	13.8	7.9	118	104	2
LMF2S1E	120	123.09	30.4	60	13.3	7.7	118	104	2
LMF2S2	180	183.09	30.4	120	13.8	7.9	118	104	3
LMF2S2E	180	183.09	30.4	120	13.3	7.7	118	104	3
LMF2S3	300	303.09	30.4	240	13.8	7.9	118	104	5
LMF2S3E	300	303.09	30.4	240	13.3	7.7	118	104	5

Except dimensions, all the specifications in the table are in $\pm 10\%$ of tolerance

Version: 2.00

Date: 2020/5/8