

IRONCORE LINEAR MOTOR

LMA22-070

PERFORMANCE		Winding codes	3TA	3TB
		UNIT	FREE AIR CONVECTION	
F _p	Peak force	N	2560	2560
F _c	Continuous force	N	705	705
F _s	Stall force	N	535	535
K _t	Force constant	N/Arms	210	105
K _u	Back EMF constant (*)	Vrms/(m/s)	122	60.8
K _m	Motor constant	N·V/W	57.2	57.2
R ₂₀	Electrical resistance at 20°C (*)	Ohm	9.01	2.25
L ₁	Electrical inductance (*)	mH	113	28.2
I _p	Peak current	Arms	20.2	40.5
I _c	Continuous current	Arms	3.49	6.97
I _s	Stall current	Arms	2.64	5.28
P _c	Max. continuous power dissipation	W	235	235

SPECIFICATIONS		UNIT	3TA	3TB
U _{dc}	Nominal input voltage	VDC	600	600
τ_{th}	Thermal time constant	s	1870	1870
R _{th}	Thermal resistance	K/W	0.468	0.468
2 τ_p	Magnetic period	mm	32	32
M _w	Magnetic way mass	kg/m	8.12	8.12
M _m	Motor mass (magnetic way excluded)	kg	8.58	8.58
F _a	Attraction force	N	5500	5500
F _d	Max. detent force (average to peak)	N	19	19
v _s	Stall speed	mm/s	0.17	0.17
G _m	Mechanical gap	mm	0.80	0.80

Notes: (*) terminal to terminal.

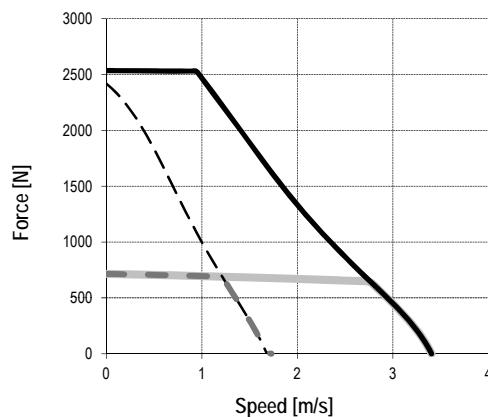
Ambient temperature = 20 °C. Max. coil temperature = 130 °C.

Hypothesis and tolerances are in ETEL's Handbook.

Carriage's dissipation area is 0.13 m² and minimal stroke is 2 times the motor length.

Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TA



Force = f(speed) for 3TB

