IRONLESS LINEAR MOTOR

ILF+06-030

		Winding codes	KB	KB	NB	NB
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FORCED AIR COOLING	FREE AIR COOLING	FORCED AIR COOLING
Fp	Peak force	N	196	196	193	193
Fc	Continuous force	N	40.9	51.8	40.8	51.6
Fs	Standstill force	N	30.9	38.9	30.8	38.7
Ip	Peak current	Arms	6.97	6.97	15.1	15.1
Ic	Continuous current	Arms	1.42	1.79	3.11	3.92
Is	Standstill current	Arms	1.07	1.35	2.35	2.95
vs	Rated low speed	mm/s	1.1	2.4	1.2	2.5
Pc	Power dissipation @ Ic	W	49.8	77.5	49.4	76.8
Fd	Max. detent force (average to peak)	N	0	0	0	0
Fa	Attraction force	N	0.0	0.0	0.0	0.0
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	29.5	29.5	13.4	13.4
Ku	Back EMF constant (*)	Vrms/(m/s)	17.9	17.9	8.17	8.17
Km	Motor constant	N/√W	7.05	7.05	7.06	7.06
R20	Electrical resistance at 20°C (*)	Ohm	11.6	11.6	2.41	2.41
L	Electrical inductance (*)	mH	6.13	6.13	1.27	1.27
τth	Thermal time constant	s	283	131	276	129
Rth	Thermal resistance	K/W	2.20	1.39	2.22	1.40
2τp	Magnetic period	mm	32	32	32	32
mw	Magnetic way mass	kg/m	8.16	8.16	8.16	8.16
mm	Motor mass	kg	0.194	0.326	0.187	0.319
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600	600	600
Ss	Stator exchange surface	m²	0.05	0.05	0.05	0.05
x	Assumed stroke	m	0.38	0.38	0.38	0.38
θamb	Ambient temperature	°C	20	20	20	20
θmax	Maximum coil temperature	°C	130	130	130	130
θa	Inlet air temperature	°C	N/A	20	N/A	20
qa	Minimum air flow	l/min	N/A	33	N/A	33
Δpa	Minimum inlet air gauge pressure	bar	N/A	0.3	N/A	0.3

Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

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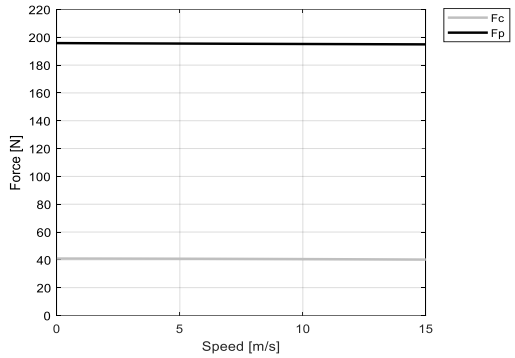
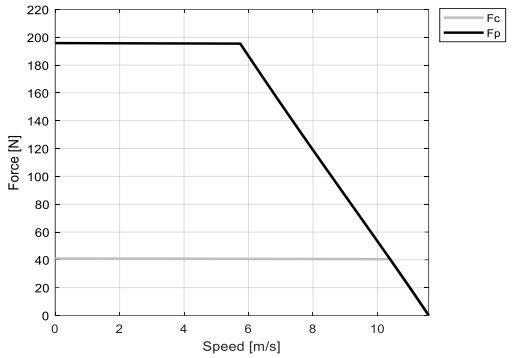
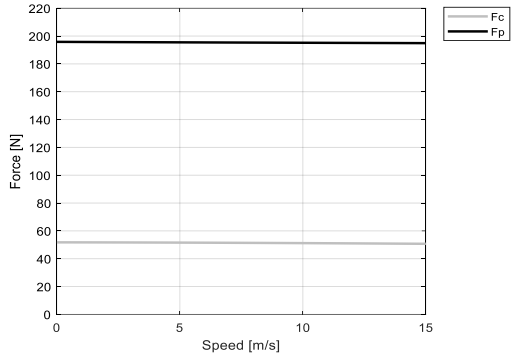
KB - FREE AIR COOLING - 600V



KB - FREE AIR COOLING - 300V



KB - FORCED AIR COOLING - 600V



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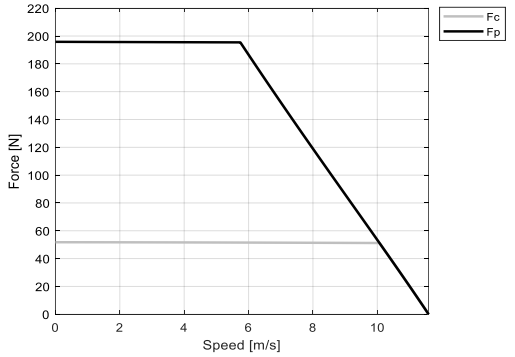

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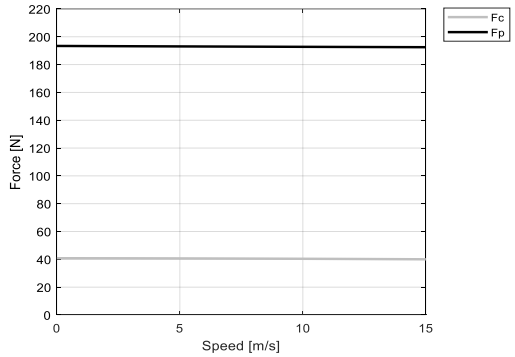

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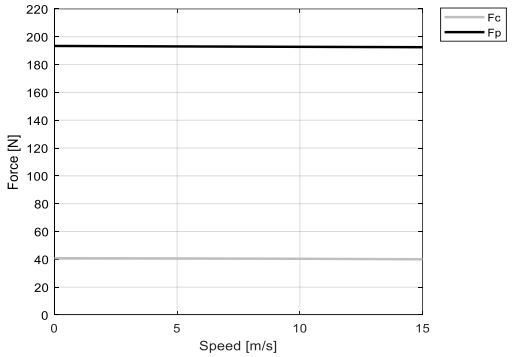

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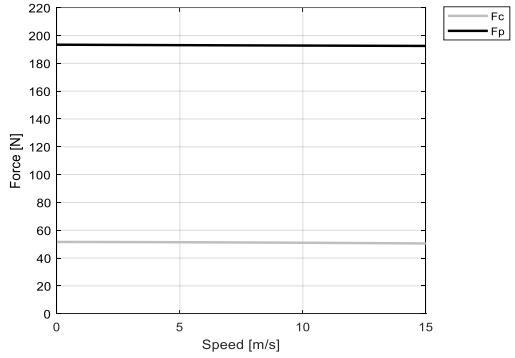

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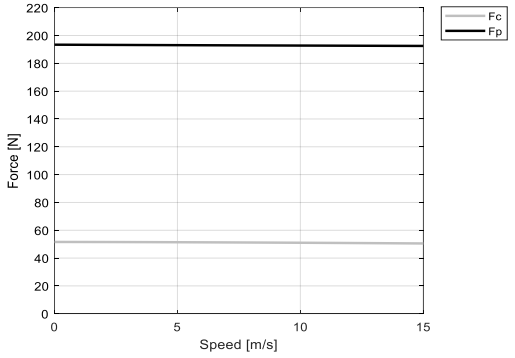

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