ETEL

IRONLESS LINEAR MOTOR

ILM+ Standard

ILM+06-060

		Winding codes	RB	RB	UB	UB
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FORCED AIR COOLING	FREE AIR COOLING	FORCED AIR COOLING
Fp	Peak force	N	1580	1580	1510	1510
Fc	Continuous force	N	244	272	235	263
Fs	Standstill force	N	184	205	178	198
Ip	Peak current	Arms	34.9	34.9	72.5	72.5
Ic	Continuous current	Arms	5.34	5.95	11.2	12.4
Is	Standstill current	Arms	4.03	4.48	8.43	9.36
vs	Rated low speed	mm/s	0.67	1.4	0.69	1.5
Pc	Power dissipation @ Ic	W	168	206	167	204
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	47.3	47.3	21.8	21.8
Ku	Back EMF constant (*)	Vrms/(m/s)	28.4	28.4	13.1	13.1
Km	Motor constant	N/√W	23.2	23.2	22.5	22.5
R20	Electrical resistance at 20°C (*)	Ohm	2.76	2.76	0.628	0.628
L	Electrical inductance (*)	mH	5.98	5.99	1.28	1.28
τth	Thermal time constant	s	955	451	925	435
Rth	Thermal resistance	K/W	0.654	0.531	0.659	0.535
2τp	Magnetic period	mm	64	64	64	64
mw	Magnetic way mass	kg/m	22.7	22.7	22.7	22.7
mm	Motor mass	kg	1.01	1.31	0.972	1.27
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600	600	600
Ss	Stator exchange surface	m²	0.16	0.16	0.16	0.16
x	Assumed stroke	m	0.63	0.63	0.63	0.63
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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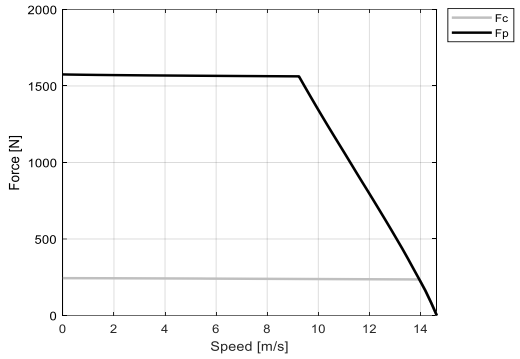
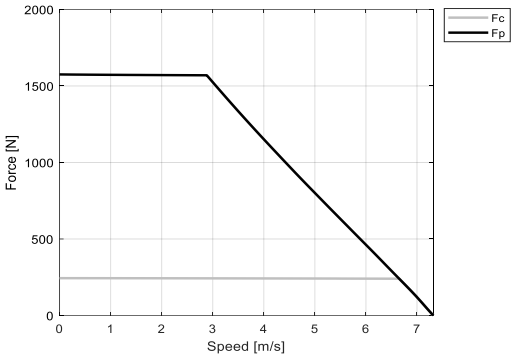
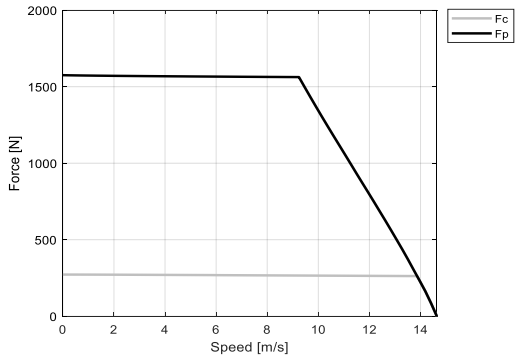
RB - FREE AIR COOLING - 600V



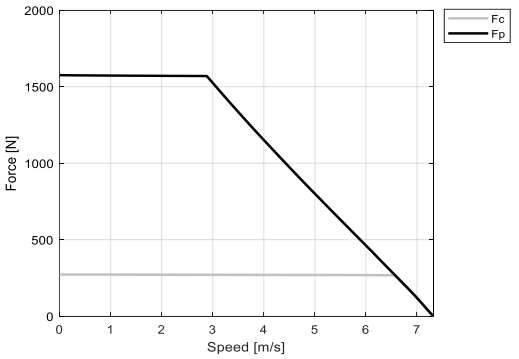
RB - FREE AIR COOLING - 300V



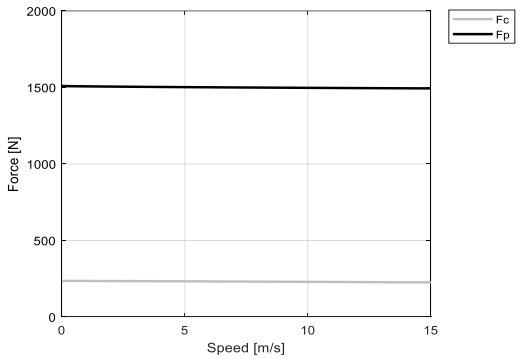
RB - FORCED AIR COOLING - 600V



RB - FORCED AIR COOLING - 300V



UB - FREE AIR COOLING - 600V



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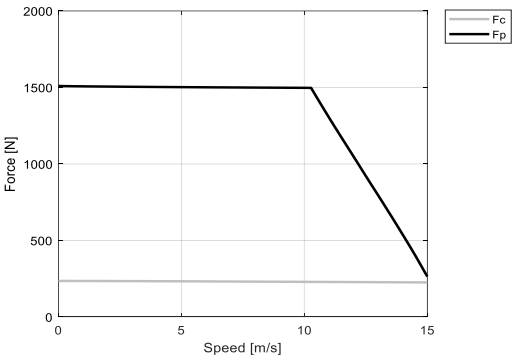

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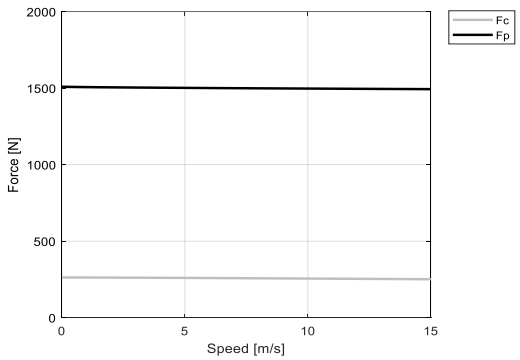
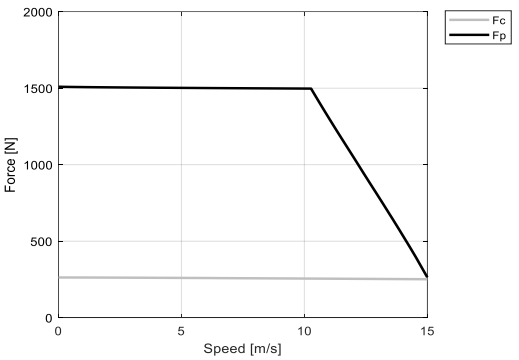


UB - FORCED AIR COOLING - 300V



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