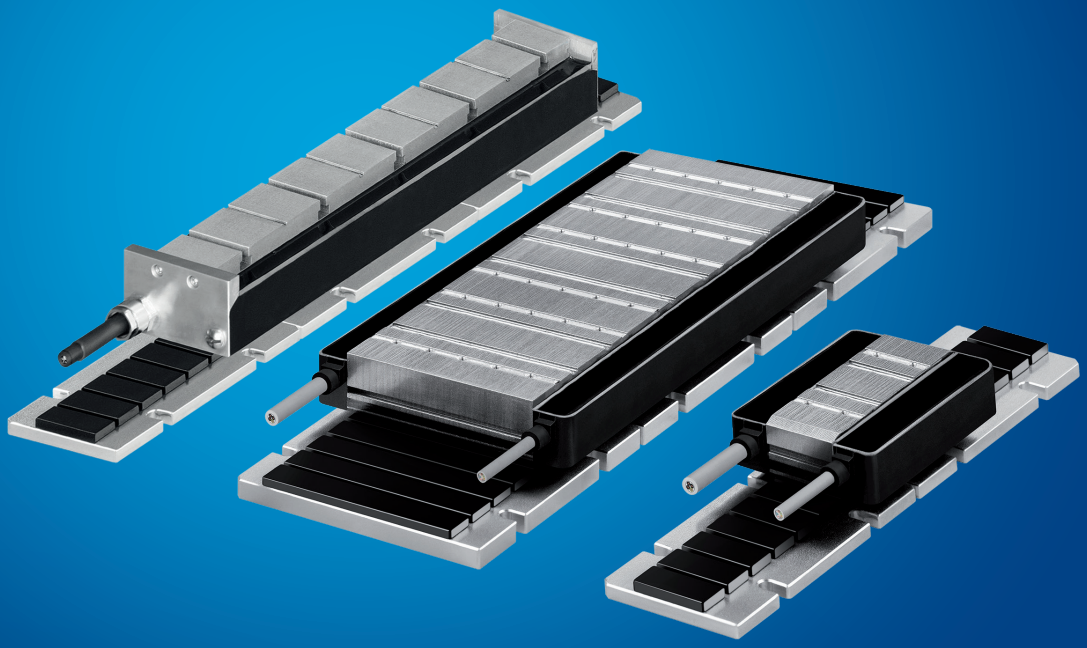

Linear Motors

LMS DATA SHEETS

ETEL

		Winding codes	3QA	3TA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	273	273		
Fc	Continuous force	N	82.8	84.5		
Fs	Standstill force	N	63.8	65.3		
Ip	Peak current	Arms	16.3	30.6		
Ic	Continuous current	Arms	2.13	4.10		
Is	Standstill current	Arms	1.61	3.10		
vs	Rated low speed	mm/s	0.18	0.18		
Pc	Power dissipation @ Ic	W	51.4	51.8		
Fd	Max. detent force (average to peak)	N	7.4	7.4		
Fa	Attraction force	N	581	581		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	41.5	22.1		
Ku	Back EMF constant (*)	Vrms/(m/s)	25.2	13.4		
Km	Motor constant	N/√W	14.7	15.0		
R20	Electrical resistance at 20°C (*)	Ohm	5.29	1.44		
L	Electrical inductance (*)	mH	43.8	12.3		
τth	Thermal time constant	s	1770	1790		
Rth	Thermal resistance	K/W	2.13	2.11		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	3.51	3.51		
mm	Motor mass	kg	0.793	0.810		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.01	0.01		
x	Assumed stroke	m	0.29	0.29		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

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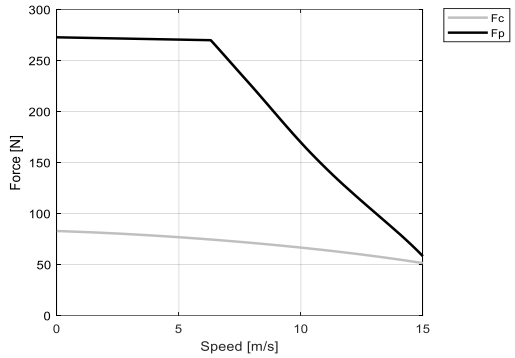
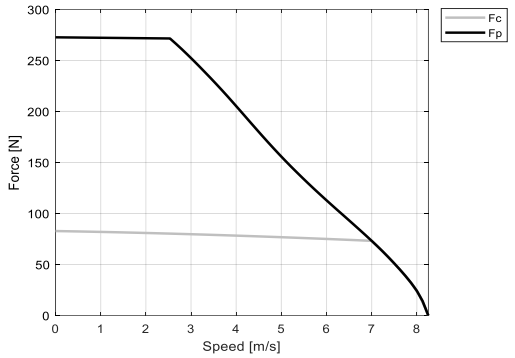
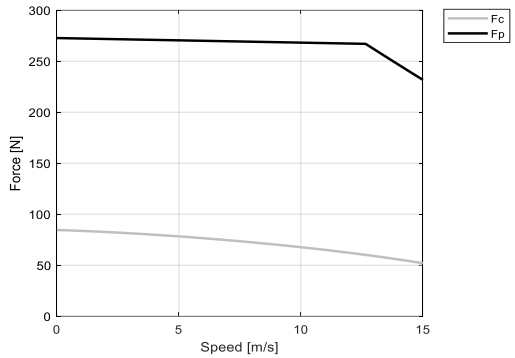
3QA - FREE AIR COOLING - 600V



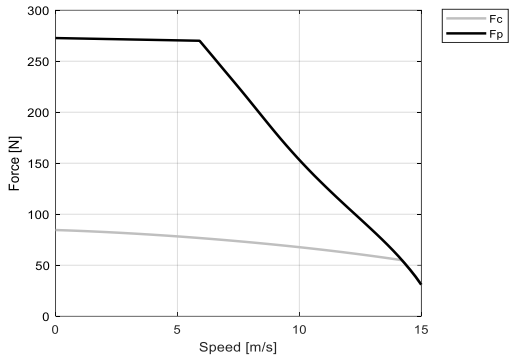
3QA - FREE AIR COOLING - 300V



3TA - FREE AIR COOLING - 600V



3TA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS05-050

		Winding codes	3QA	3TA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	482	482		
Fc	Continuous force	N	132	133		
Fs	Standstill force	N	100	101		
Ip	Peak current	Arms	16.3	31.9		
Ic	Continuous current	Arms	2.00	3.94		
Is	Standstill current	Arms	1.52	2.99		
vs	Rated low speed	mm/s	0.16	0.16		
Pc	Power dissipation @ Ic	W	63.6	63.8		
Fd	Max. detent force (average to peak)	N	12	12		
Fa	Attraction force	N	978	978		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	69.5	35.6		
Ku	Back EMF constant (*)	Vrms/(m/s)	41.9	21.4		
Km	Motor constant	N/√W	20.9	21.0		
R20	Electrical resistance at 20°C (*)	Ohm	7.41	1.92		
L	Electrical inductance (*)	mH	68.4	17.9		
τth	Thermal time constant	s	2020	2030		
Rth	Thermal resistance	K/W	1.72	1.71		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	6.19	6.19		
mm	Motor mass	kg	1.18	1.19		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.01	0.01		
x	Assumed stroke	m	0.29	0.29		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

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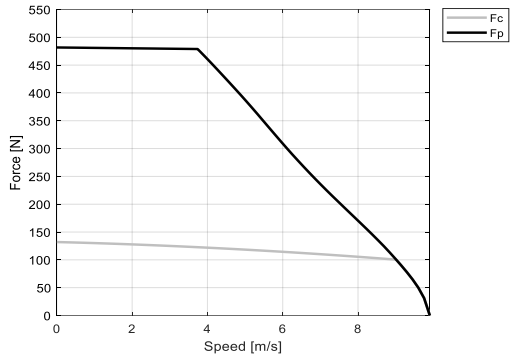
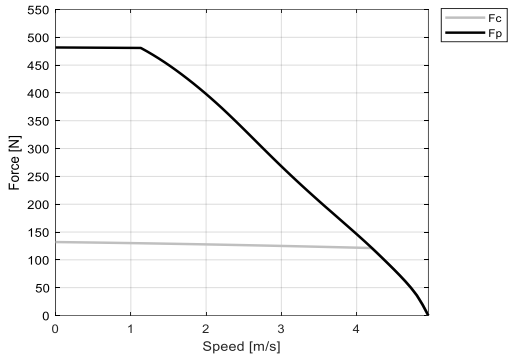
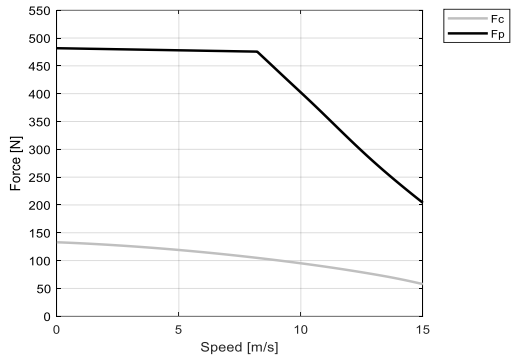
3QA - FREE AIR COOLING - 600V



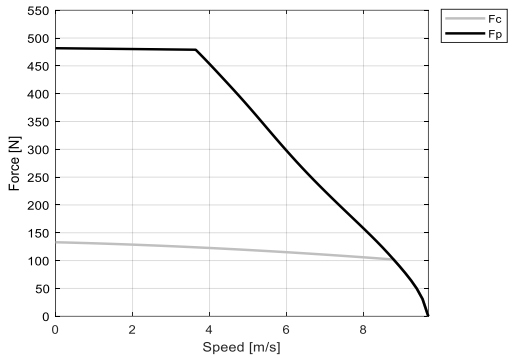
3QA - FREE AIR COOLING - 300V



3TA - FREE AIR COOLING - 600V



3TA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS05-070

		Winding codes	3QA	3TA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	692	692		
Fc	Continuous force	N	178	184		
Fs	Standstill force	N	135	139		
Ip	Peak current	Arms	16.3	30.6		
Ic	Continuous current	Arms	1.92	3.73		
Is	Standstill current	Arms	1.46	2.83		
vs	Rated low speed	mm/s	0.15	0.14		
Pc	Power dissipation @ Ic	W	75.6	75.9		
Fd	Max. detent force (average to peak)	N	17	17		
Fa	Attraction force	N	1300	1300		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	97.7	52.0		
Ku	Back EMF constant (*)	Vrms/(m/s)	58.9	31.4		
Km	Motor constant	N/√W	25.8	26.6		
R20	Electrical resistance at 20°C (*)	Ohm	9.53	2.54		
L	Electrical inductance (*)	mH	96.2	27.1		
τth	Thermal time constant	s	2190	2210		
Rth	Thermal resistance	K/W	1.44	1.44		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	7.96	7.96		
mm	Motor mass	kg	1.56	1.59		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.02	0.02		
x	Assumed stroke	m	0.29	0.29		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

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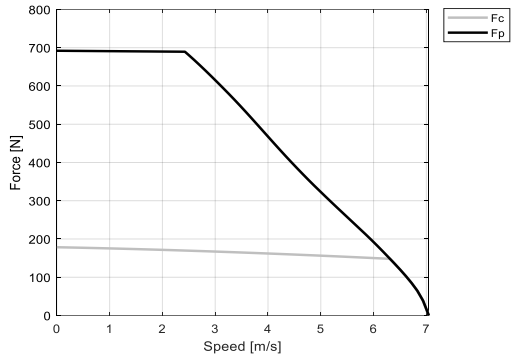
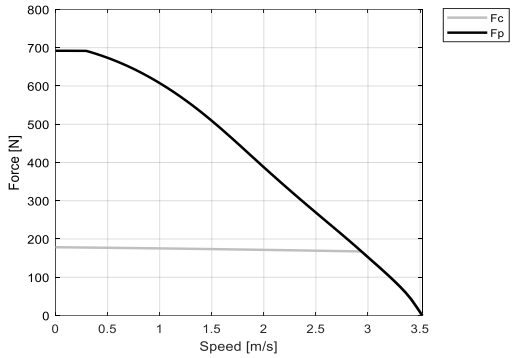
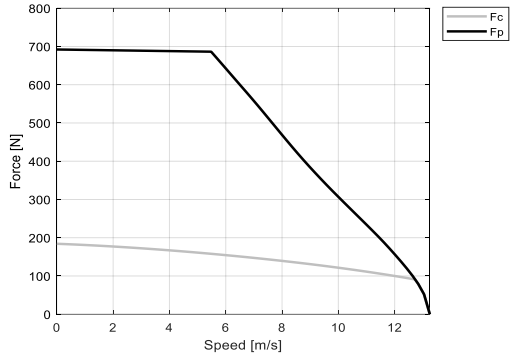
3QA - FREE AIR COOLING - 600V



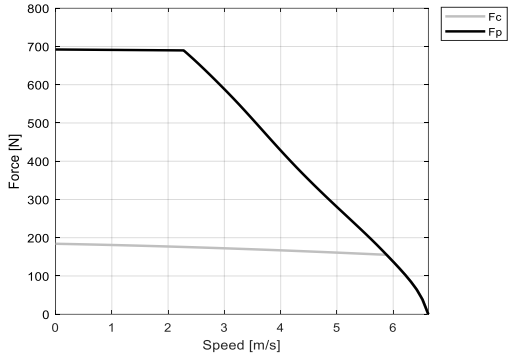
3QA - FREE AIR COOLING - 300V



3TA - FREE AIR COOLING - 600V



3TA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS10-030

		Winding codes	3RA	3TA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	511	511		
Fc	Continuous force	N	156	156		
Fs	Standstill force	N	121	121		
Ip	Peak current	Arms	18.6	28.5		
Ic	Continuous current	Arms	2.48	3.82		
Is	Standstill current	Arms	1.88	2.89		
vs	Rated low speed	mm/s	0.16	0.16		
Pc	Power dissipation @ Ic	W	89.9	90.0		
Fd	Max. detent force (average to peak)	N	7.9	7.9		
Fa	Attraction force	N	1000	1000		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	67.0	43.7		
Ku	Back EMF constant (*)	Vrms/(m/s)	40.1	26.2		
Km	Motor constant	N/√W	20.9	21.0		
R20	Electrical resistance at 20°C (*)	Ohm	6.81	2.88		
L	Electrical inductance (*)	mH	58.6	24.9		
τth	Thermal time constant	s	1990	2000		
Rth	Thermal resistance	K/W	1.22	1.22		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	3.51	3.51		
mm	Motor mass	kg	1.50	1.52		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.02	0.02		
x	Assumed stroke	m	0.47	0.47		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

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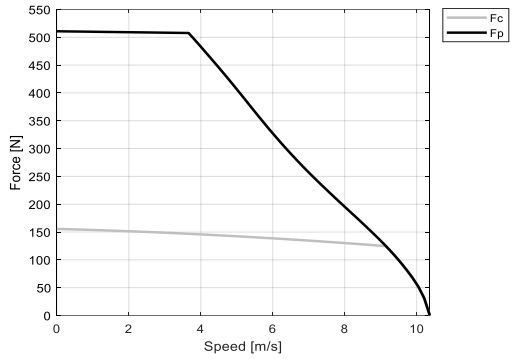
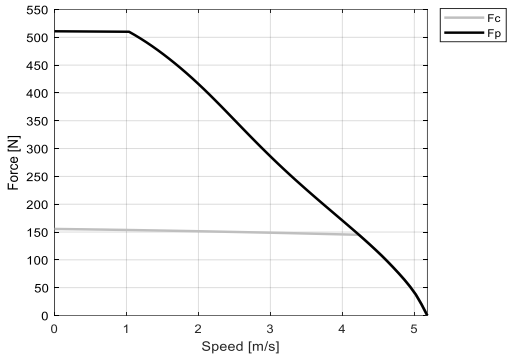
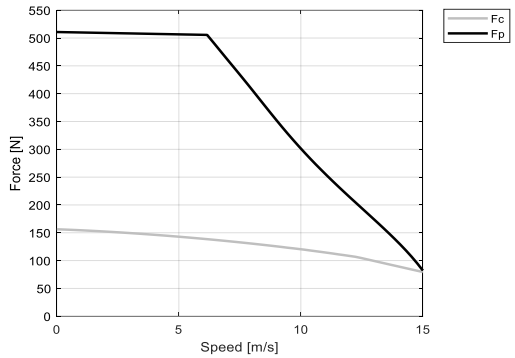
3RA - FREE AIR COOLING - 600V



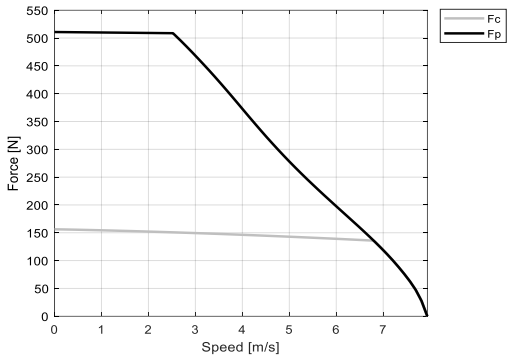
3RA - FREE AIR COOLING - 300V



3TA - FREE AIR COOLING - 600V



3TA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS10-050

		Winding codes	3RA	3TA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	896	896		
Fc	Continuous force	N	244	242		
Fs	Standstill force	N	186	184		
Ip	Peak current	Arms	18.6	29.6		
Ic	Continuous current	Arms	2.30	3.62		
Is	Standstill current	Arms	1.74	2.74		
vs	Rated low speed	mm/s	0.14	0.14		
Pc	Power dissipation @ Ic	W	108	108		
Fd	Max. detent force (average to peak)	N	13	13		
Fa	Attraction force	N	1800	1800		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	112	70.4		
Ku	Back EMF constant (*)	Vrms/(m/s)	67.1	42.1		
Km	Motor constant	N/√W	29.7	29.4		
R20	Electrical resistance at 20°C (*)	Ohm	9.54	3.83		
L	Electrical inductance (*)	mH	91.6	36.1		
τth	Thermal time constant	s	2300	2300		
Rth	Thermal resistance	K/W	1.02	1.02		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	6.19	6.19		
mm	Motor mass	kg	2.22	2.23		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.03	0.03		
x	Assumed stroke	m	0.47	0.47		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

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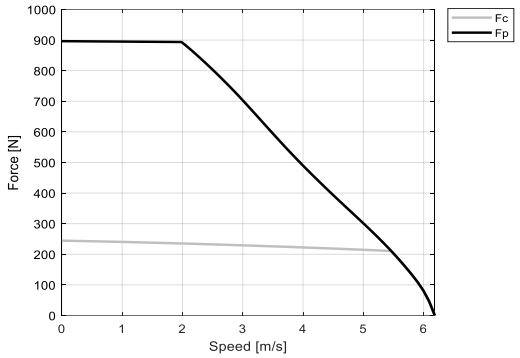
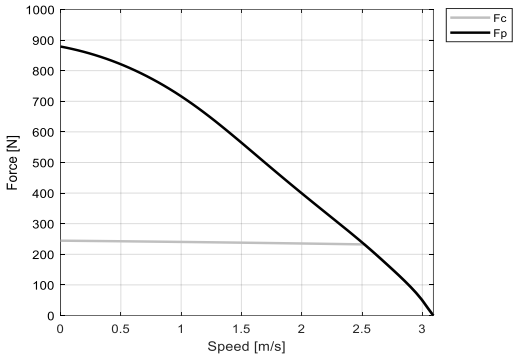
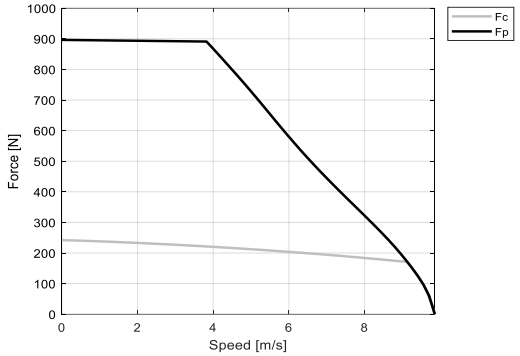
3RA - FREE AIR COOLING - 600V



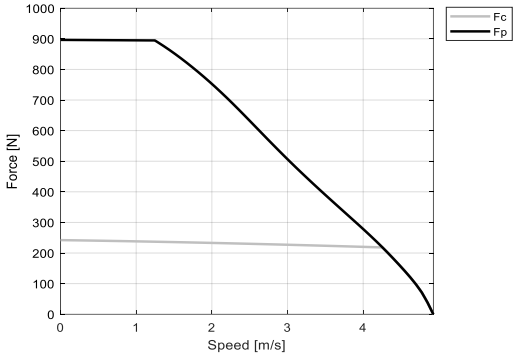
3RA - FREE AIR COOLING - 300V



3TA - FREE AIR COOLING - 600V



3TA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS10-070

		Winding codes	3TA	3VA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	1280	1280		
Fc	Continuous force	N	348	328		
Fs	Standstill force	N	263	248		
Ip	Peak current	Arms	28.5	48.9		
Ic	Continuous current	Arms	3.55	5.75		
Is	Standstill current	Arms	2.69	4.35		
vs	Rated low speed	mm/s	0.13	0.13		
Pc	Power dissipation @ Ic	W	138	137		
Fd	Max. detent force (average to peak)	N	19	19		
Fa	Attraction force	N	2500	2500		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	103	60.0		
Ku	Back EMF constant (*)	Vrms/(m/s)	61.7	36.0		
Km	Motor constant	N/√W	37.3	35.2		
R20	Electrical resistance at 20°C (*)	Ohm	5.08	1.94		
L	Electrical inductance (*)	mH	54.6	18.7		
τth	Thermal time constant	s	2430	2410		
Rth	Thermal resistance	K/W	0.794	0.796		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	7.96	7.96		
mm	Motor mass	kg	2.98	2.91		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.04	0.04		
x	Assumed stroke	m	0.47	0.47		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

Notes: (*) terminal to terminal.
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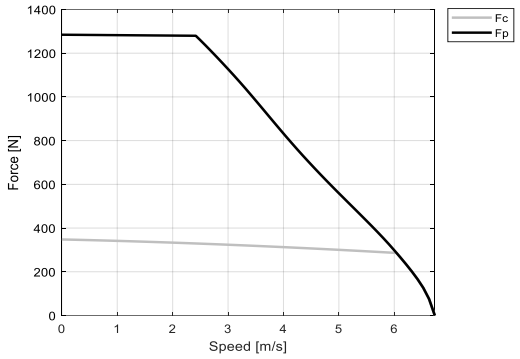
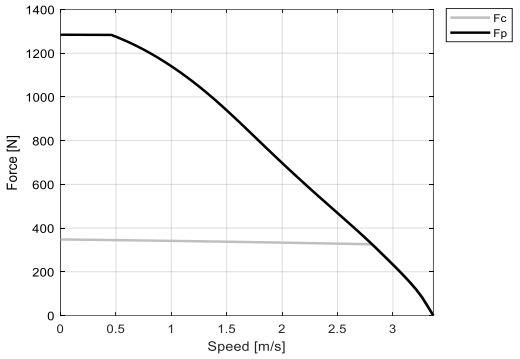
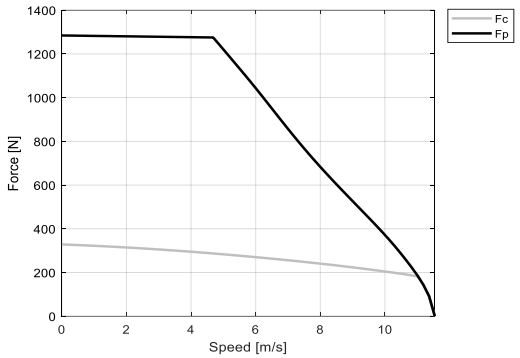
3TA - FREE AIR COOLING - 600V



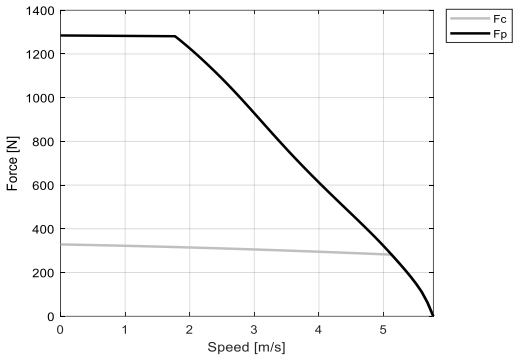
3TA - FREE AIR COOLING - 300V



3VA - FREE AIR COOLING - 600V



3VA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS10-100

		Winding codes	3TA	3VA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	1870	1870		
Fc	Continuous force	N	458	439		
Fs	Standstill force	N	345	331		
Ip	Peak current	Arms	28.5	49.1		
Ic	Continuous current	Arms	3.28	5.41		
Is	Standstill current	Arms	2.48	4.10		
vs	Rated low speed	mm/s	0.12	0.12		
Pc	Power dissipation @ Ic	W	155	155		
Fd	Max. detent force (average to peak)	N	26	26		
Fa	Attraction force	N	3600	3600		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	148	85.8		
Ku	Back EMF constant (*)	Vrms/(m/s)	88.6	51.4		
Km	Motor constant	N/√W	46.5	44.6		
R20	Electrical resistance at 20°C (*)	Ohm	6.74	2.47		
L	Electrical inductance (*)	mH	78.7	26.7		
τth	Thermal time constant	s	2760	2740		
Rth	Thermal resistance	K/W	0.704	0.705		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	12.6	12.6		
mm	Motor mass	kg	4.08	3.98		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.04	0.04		
x	Assumed stroke	m	0.47	0.47		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

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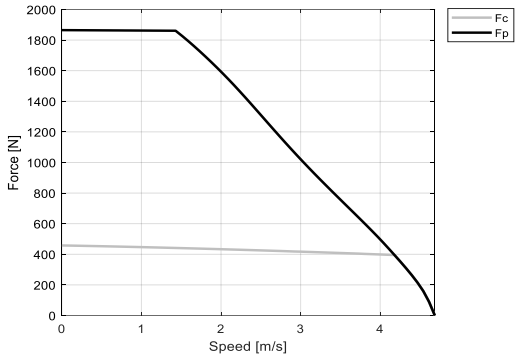
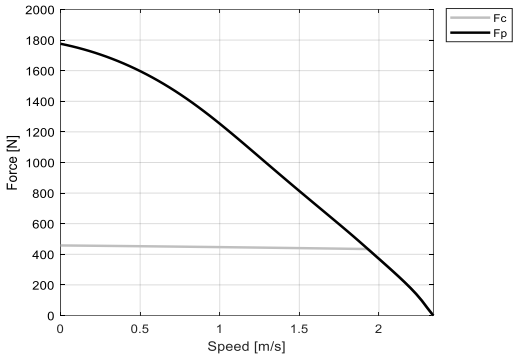
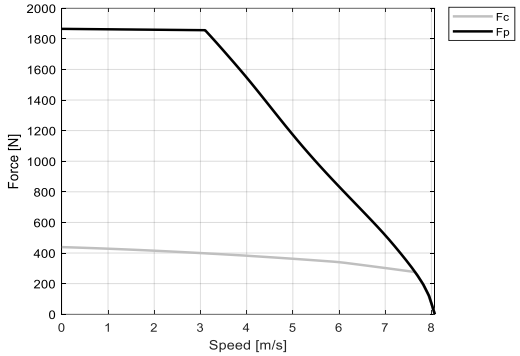
3TA - FREE AIR COOLING - 600V



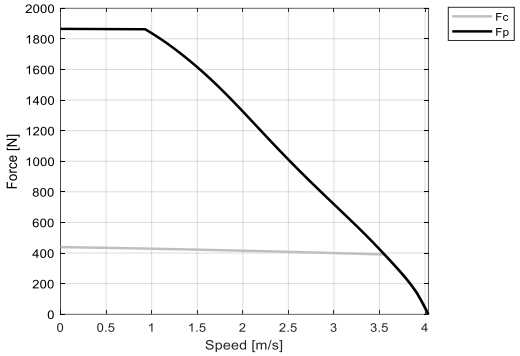
3TA - FREE AIR COOLING - 300V



3VA - FREE AIR COOLING - 600V



3VA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS15-030

		Winding codes	3RA	3TA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	748	748		
Fc	Continuous force	N	220	221		
Fs	Standstill force	N	170	171		
Ip	Peak current	Arms	17.7	27.1		
Ic	Continuous current	Arms	2.34	3.61		
Is	Standstill current	Arms	1.77	2.73		
vs	Rated low speed	mm/s	0.15	0.15		
Pc	Power dissipation @ Ic	W	120	120		
Fd	Max. detent force (average to peak)	N	9.8	9.8		
Fa	Attraction force	N	1600	1600		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	100	65.4		
Ku	Back EMF constant (*)	Vrms/(m/s)	60.0	39.2		
Km	Motor constant	N/√W	25.6	25.7		
R20	Electrical resistance at 20°C (*)	Ohm	10.2	4.31		
L	Electrical inductance (*)	mH	83.4	35.5		
τth	Thermal time constant	s	2130	2140		
Rth	Thermal resistance	K/W	0.913	0.912		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	3.51	3.51		
mm	Motor mass	kg	2.19	2.23		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.03	0.03		
x	Assumed stroke	m	0.51	0.51		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

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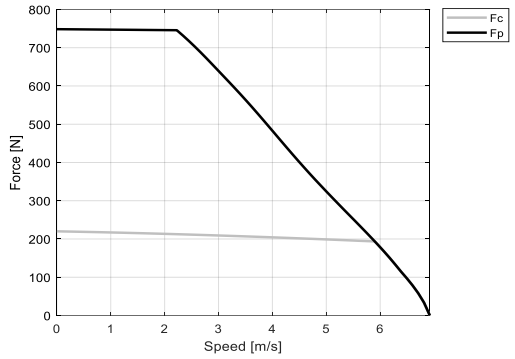
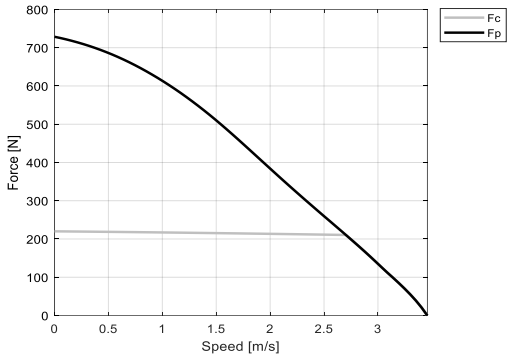
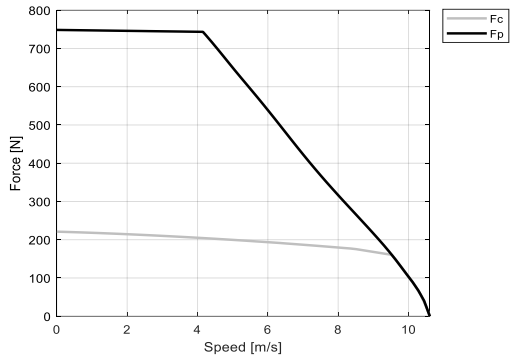
3RA - FREE AIR COOLING - 600V



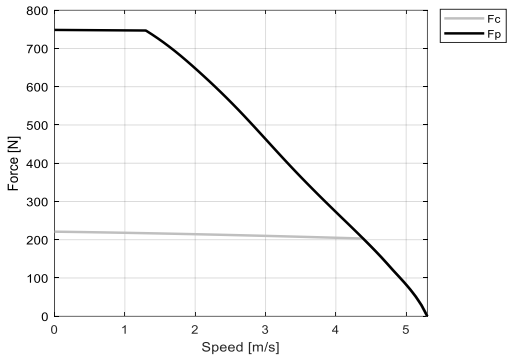
3RA - FREE AIR COOLING - 300V



3TA - FREE AIR COOLING - 600V



3TA - FREE AIR COOLING - 300V



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		Winding codes	3RA	3TA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	1310	1310		
Fc	Continuous force	N	356	353		
Fs	Standstill force	N	271	268		
Ip	Peak current	Arms	17.7	28.2		
Ic	Continuous current	Arms	2.24	3.53		
Is	Standstill current	Arms	1.69	2.67		
vs	Rated low speed	mm/s	0.13	0.13		
Pc	Power dissipation @ Ic	W	154	153		
Fd	Max. detent force (average to peak)	N	17	17		
Fa	Attraction force	N	2600	2600		

MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	169	106		
Ku	Back EMF constant (*)	Vrms/(m/s)	101	63.4		
Km	Motor constant	N/√W	36.4	36.1		
R20	Electrical resistance at 20°C (*)	Ohm	14.3	5.75		
L	Electrical inductance (*)	mH	140	55.1		
τth	Thermal time constant	s	2420	2420		
Rth	Thermal resistance	K/W	0.713	0.713		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	6.19	6.19		
mm	Motor mass	kg	3.25	3.26		

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.04	0.04		
x	Assumed stroke	m	0.51	0.51		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

Notes: (*) terminal to terminal.
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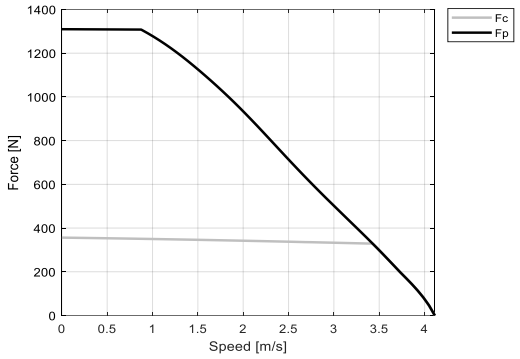
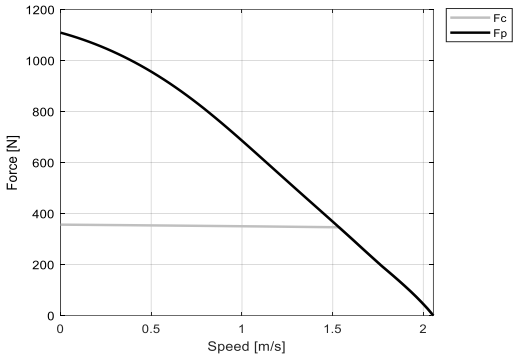
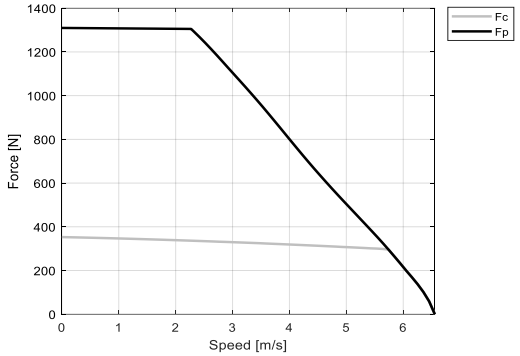
3RA - FREE AIR COOLING - 600V



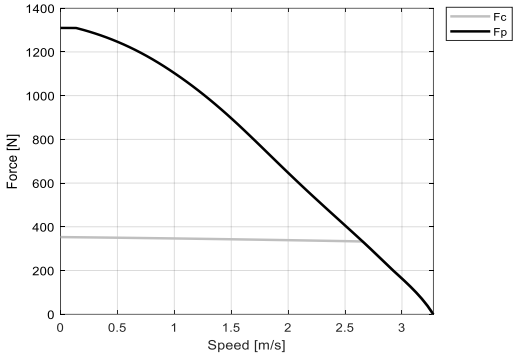
3RA - FREE AIR COOLING - 300V



3TA - FREE AIR COOLING - 600V



3TA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR LMS15-070

		Winding codes	3TA	3VA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	1870	1870		
Fc	Continuous force	N	497	470		
Fs	Standstill force	N	376	354		
Ip	Peak current	Arms	27.1	46.5		
Ic	Continuous current	Arms	3.38	5.47		
Is	Standstill current	Arms	2.56	4.15		
vs	Rated low speed	mm/s	0.12	0.12		
Pc	Power dissipation @ Ic	W	187	187		
Fd	Max. detent force (average to peak)	N	23	23		
Fa	Attraction force	N	3600	3600		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	155	90.6		
Ku	Back EMF constant (*)	Vrms/(m/s)	92.8	54.1		
Km	Motor constant	N/√W	45.9	43.4		
R20	Electrical resistance at 20°C (*)	Ohm	7.63	2.91		
L	Electrical inductance (*)	mH	83.4	28.5		
τth	Thermal time constant	s	2590	2570		
Rth	Thermal resistance	K/W	0.584	0.585		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	7.96	7.96		
mm	Motor mass	kg	4.36	4.26		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.05	0.05		
x	Assumed stroke	m	0.51	0.51		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

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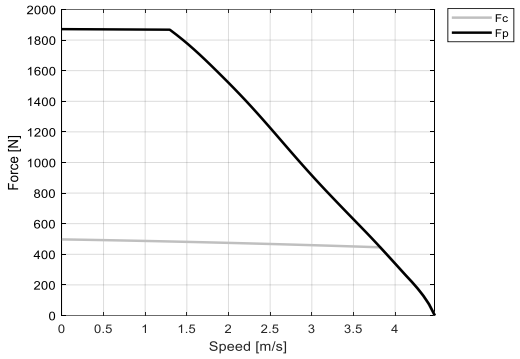
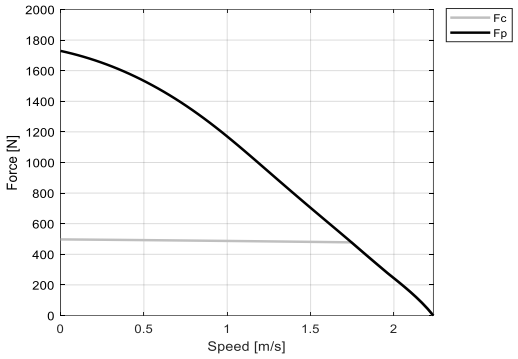
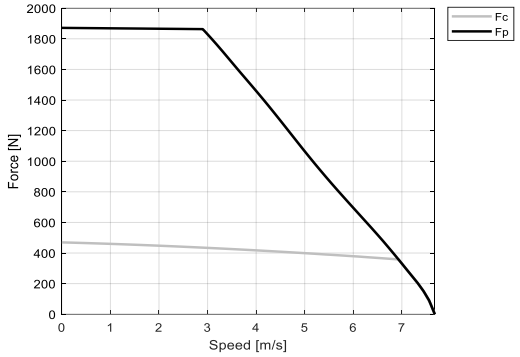
3TA - FREE AIR COOLING - 600V



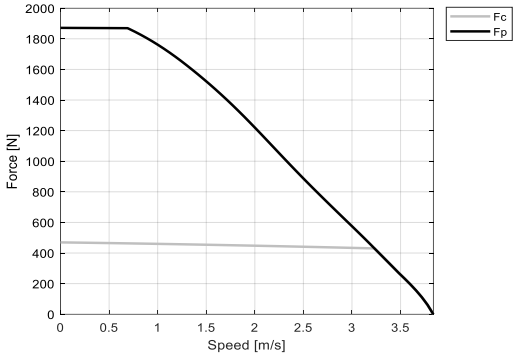
3TA - FREE AIR COOLING - 300V



3VA - FREE AIR COOLING - 600V



3VA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS15-100

		Winding codes	3TA	3VA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	2720	2720		
Fc	Continuous force	N	672	644		
Fs	Standstill force	N	507	485		
Ip	Peak current	Arms	27.1	46.7		
Ic	Continuous current	Arms	3.23	5.33		
Is	Standstill current	Arms	2.44	4.04		
vs	Rated low speed	mm/s	0.11	0.11		
Pc	Power dissipation @ Ic	W	226	225		
Fd	Max. detent force (average to peak)	N	33	33		
Fa	Attraction force	N	5200	5200		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	222	129		
Ku	Back EMF constant (*)	Vrms/(m/s)	132	76.9		
Km	Motor constant	N/√W	57.1	54.8		
R20	Electrical resistance at 20°C (*)	Ohm	10.1	3.70		
L	Electrical inductance (*)	mH	120	40.5		
τth	Thermal time constant	s	2900	2880		
Rth	Thermal resistance	K/W	0.484	0.485		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	12.6	12.6		
mm	Motor mass	kg	5.97	5.83		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.06	0.06		
x	Assumed stroke	m	0.51	0.51		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

Notes: (*) terminal to terminal.
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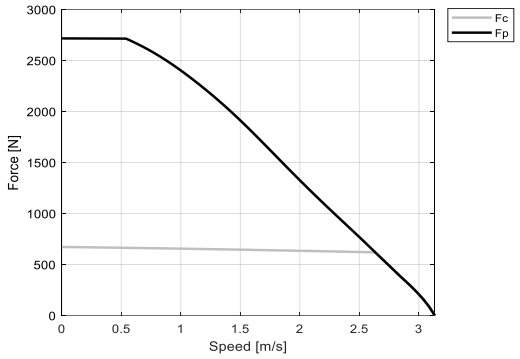
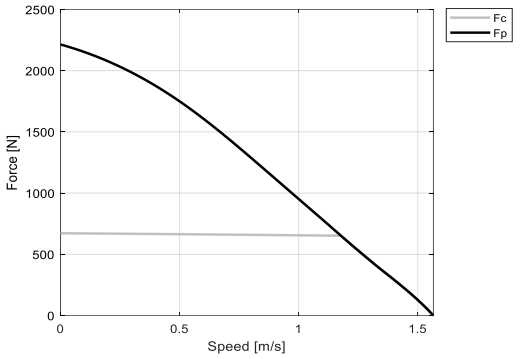
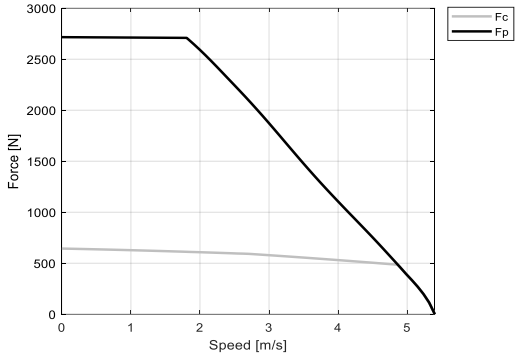
3TA - FREE AIR COOLING - 600V



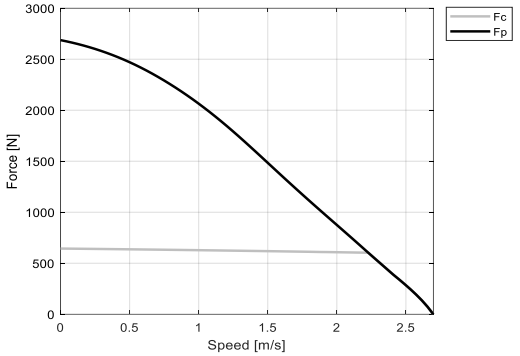
3TA - FREE AIR COOLING - 300V



3VA - FREE AIR COOLING - 600V



3VA - FREE AIR COOLING - 300V



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		Winding codes	3TA	3VA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	1790	1790		
Fc	Continuous force	N	475	464		
Fs	Standstill force	N	360	351		
Ip	Peak current	Arms	28.2	46.5		
Ic	Continuous current	Arms	3.58	5.75		
Is	Standstill current	Arms	2.71	4.36		
vs	Rated low speed	mm/s	0.13	0.13		
Pc	Power dissipation @ Ic	W	210	210		
Fd	Max. detent force (average to peak)	N	20	20		
Fa	Attraction force	N	3410	3410		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	141	85.6		
Ku	Back EMF constant (*)	Vrms/(m/s)	84.9	51.5		
Km	Motor constant	N/√W	41.6	40.6		
R20	Electrical resistance at 20°C (*)	Ohm	7.66	2.96		
L	Electrical inductance (*)	mH	72.7	26.8		
τth	Thermal time constant	s	2440	2430		
Rth	Thermal resistance	K/W	0.520	0.520		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	6.19	6.19		
mm	Motor mass	kg	4.30	4.24		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.06	0.06		
x	Assumed stroke	m	0.69	0.69		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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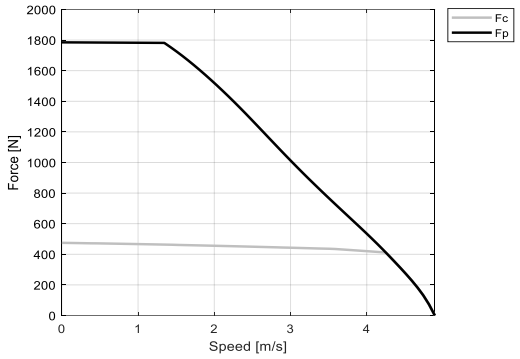
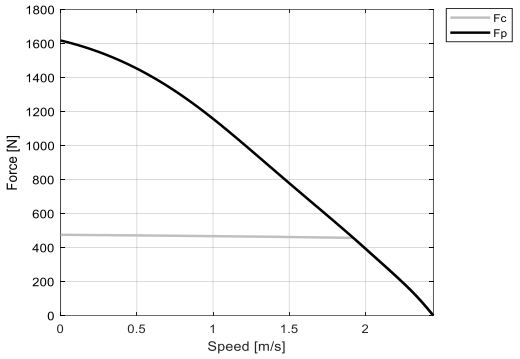
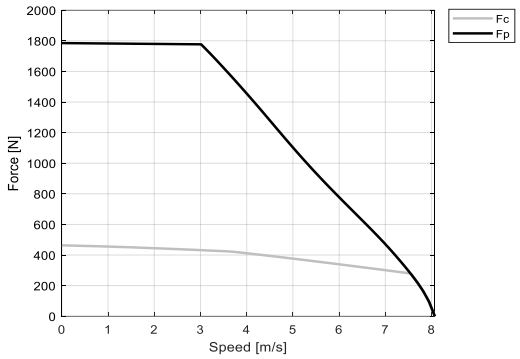
3TA - FREE AIR COOLING - 600V



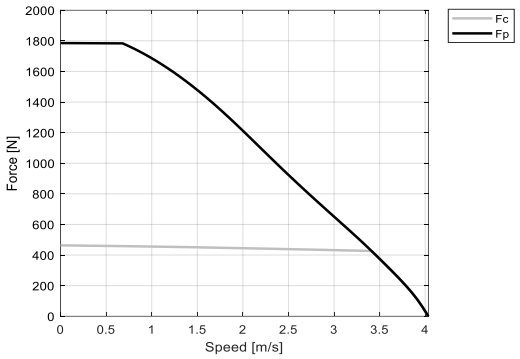
3TA - FREE AIR COOLING - 300V



3VA - FREE AIR COOLING - 600V



3VA - FREE AIR COOLING - 300V



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IRONCORE LINEAR MOTOR

LMS20-070

		Winding codes	3RB	3TB		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	2560	2560		
Fc	Continuous force	N	656	666		
Fs	Standstill force	N	495	503		
Ip	Peak current	Arms	35.4	54.2		
Ic	Continuous current	Arms	4.43	6.89		
Is	Standstill current	Arms	3.36	5.22		
vs	Rated low speed	mm/s	0.12	0.12		
Pc	Power dissipation @ Ic	W	258	258		
Fd	Max. detent force (average to peak)	N	28	28		
Fa	Attraction force	N	4770	4770		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	158	103		
Ku	Back EMF constant (*)	Vrms/(m/s)	95.1	62.1		
Km	Motor constant	N/√W	52.2	52.9		
R20	Electrical resistance at 20°C (*)	Ohm	6.13	2.54		
L	Electrical inductance (*)	mH	64.7	27.5		
τth	Thermal time constant	s	2630	2640		
Rth	Thermal resistance	K/W	0.424	0.423		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	7.96	7.96		
mm	Motor mass	kg	5.67	5.75		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.08	0.08		
x	Assumed stroke	m	0.69	0.69		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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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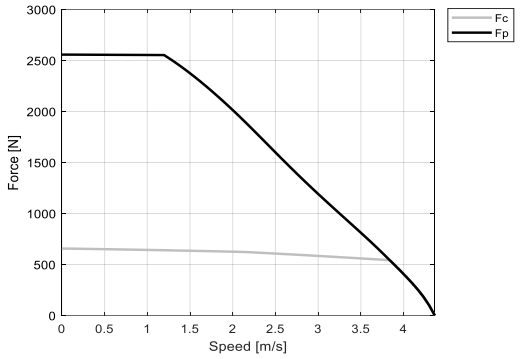
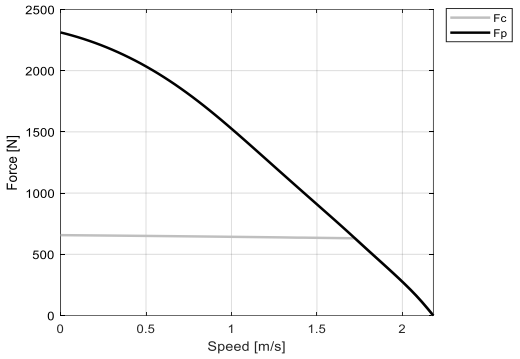
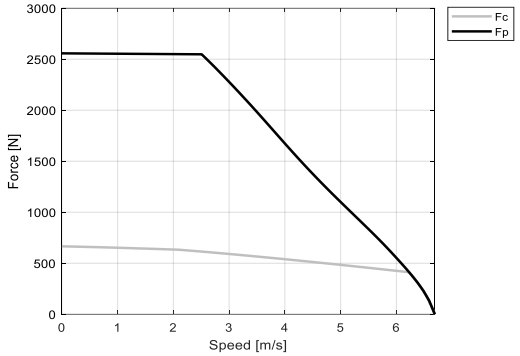
3RB - FREE AIR COOLING - 600V



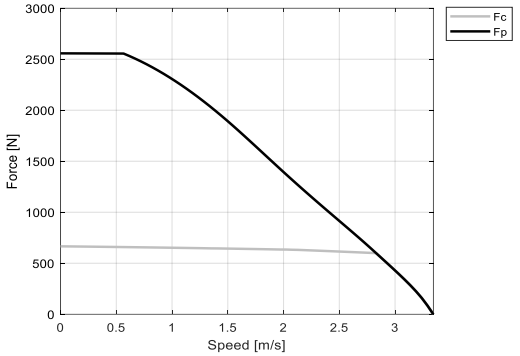
3RB - FREE AIR COOLING - 300V



3TB - FREE AIR COOLING - 600V



3TB - FREE AIR COOLING - 300V



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		Winding codes	3TB			
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING			
Fp	Peak force	N	3640			
Fc	Continuous force	N	908			
Fs	Standstill force	N	685			
Ip	Peak current	Arms	54.2			
Ic	Continuous current	Arms	6.58			
Is	Standstill current	Arms	4.98			
vs	Rated low speed	mm/s	0.11			
Pc	Power dissipation @ Ic	W	312			
Fd	Max. detent force (average to peak)	N	40			
Fa	Attraction force	N	6820			

MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	148			
Ku	Back EMF constant (*)	Vrms/(m/s)	88.5			
Km	Motor constant	N/√W	65.8			
R20	Electrical resistance at 20°C (*)	Ohm	3.37			
L	Electrical inductance (*)	mH	39.6			
τth	Thermal time constant	s	2910			
Rth	Thermal resistance	K/W	0.349			
2τp	Magnetic period	mm	32			
mw	Magnetic way mass	kg/m	12.6			
mm	Motor mass	kg	7.86			

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600			
Gm	Mechanical gap	mm	0.90			
Ss	Stator exchange surface	m²	0.09			
x	Assumed stroke	m	0.69			
θamb	Ambient temperature	°C	20			
θmax	Maximum coil temperature	°C	130			

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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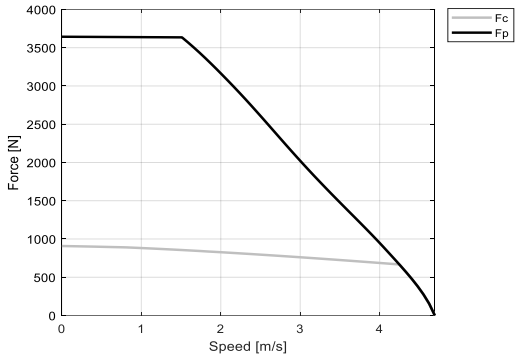
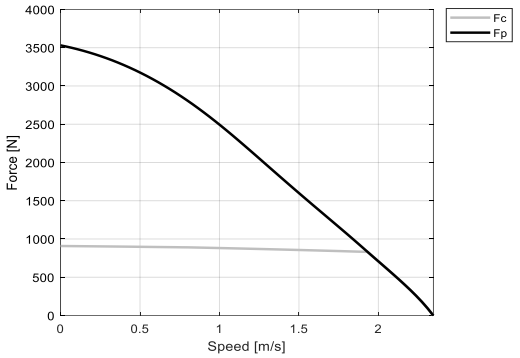
3TB - FREE AIR COOLING - 600V



3TB - FREE AIR COOLING - 300V



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