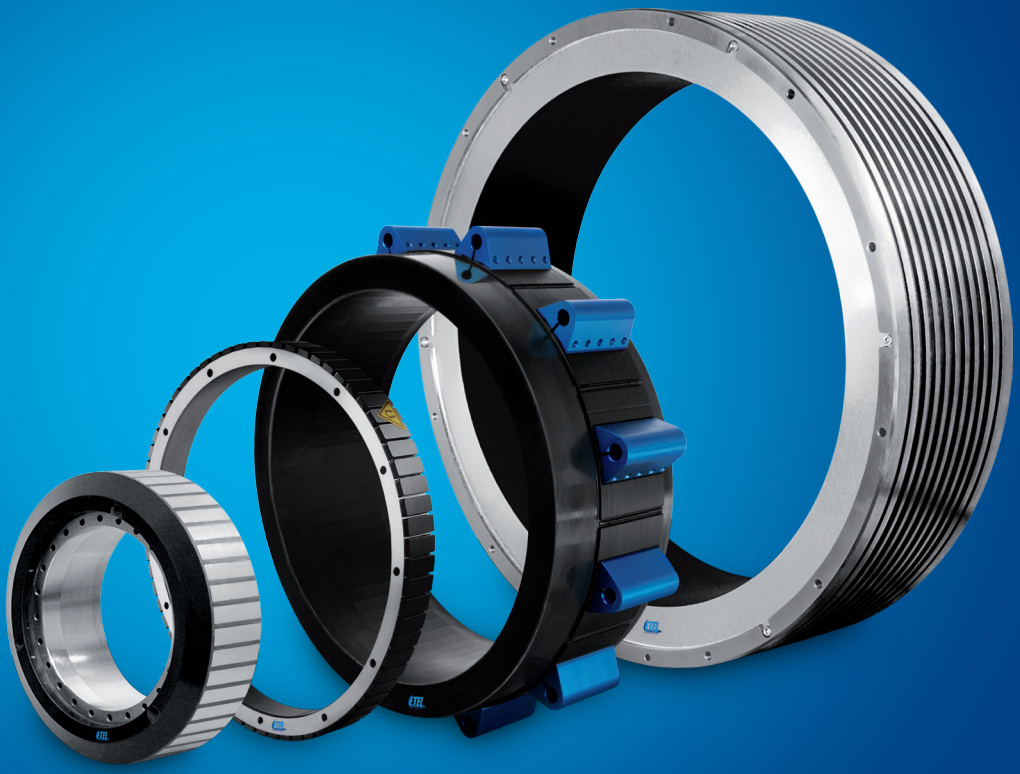
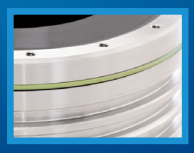
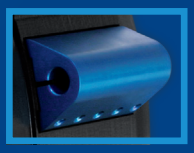






Torque **Motors**

TML DATA SHEETS

ETEL
MOTION TECHNOLOGY

Standard

TORQUE MOTOR TML0210-030

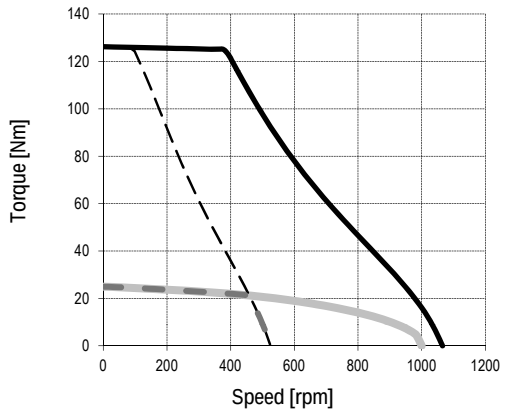
PERFORMANCE		Winding codes	3TAS	3TBS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	127	127
Tc	Continuous torque	Nm	24.5	24.5
Ts	Stall torque	Nm	18.6	18.6
Kt	Torque constant	Nm/Arms	6.41	3.21
Ku	Back EMF constant (*)	Vrms/(rad/s)	3.71	1.85
Km	Motor constant	Nm/√W	2.46	2.46
R20	Electrical resistance at 20°C (*)	Ohm	4.53	1.13
L1	Electrical inductance (*)	mH	17.3	4.32
Ip	Peak current	Arms	28.1	56.2
Ic	Continuous current	Arms	3.88	7.76
Is	Stall current	Arms	2.94	5.88
Pc	Max. continuous power dissipation	W	141	141

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2240	2240
Rth	Thermal resistance	K/W	0.684	0.684
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.00854	0.00854
Mr	Rotor mass	kg	1.43	1.43
Ms	Stator mass	kg	3.80	3.80
Td	Max. detent torque (average to peak)	Nm	0.60	0.60
ns	Stall speed	rpm	0.012	0.012

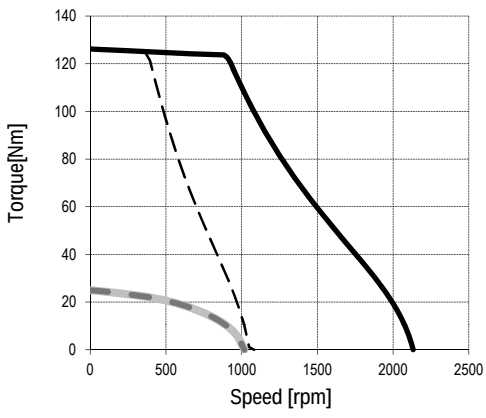
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.06 m² and rotor to a total surface of 0.038 m²

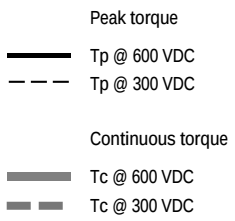
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TAS



Force = f(speed) for 3TBS





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Standard

TORQUE MOTOR TML0210-050

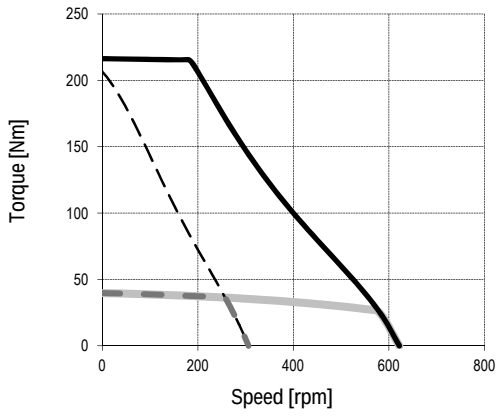
PERFORMANCE		Winding codes	3TAS	3TBS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	218	218
Tc	Continuous torque	Nm	39.1	39.1
Ts	Stall torque	Nm	29.5	29.5
Kt	Torque constant	Nm/Arms	11.0	5.49
Ku	Back EMF constant (*)	Vrms/(rad/s)	6.35	3.18
Km	Motor constant	Nm/√W	3.56	3.56
R20	Electrical resistance at 20°C (*)	Ohm	6.36	1.59
L1	Electrical inductance (*)	mH	29.6	7.41
Ip	Peak current	Arms	28.1	56.2
Ic	Continuous current	Arms	3.60	7.20
Is	Stall current	Arms	2.73	5.46
Pc	Max. continuous power dissipation	W	170	170

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2430	2430
Rth	Thermal resistance	K/W	0.564	0.564
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0146	0.0146
Mr	Rotor mass	kg	2.45	2.45
Ms	Stator mass	kg	5.60	5.60
Td	Max. detent torque (average to peak)	Nm	1.0	1.0
ns	Stall speed	rpm	0.011	0.011

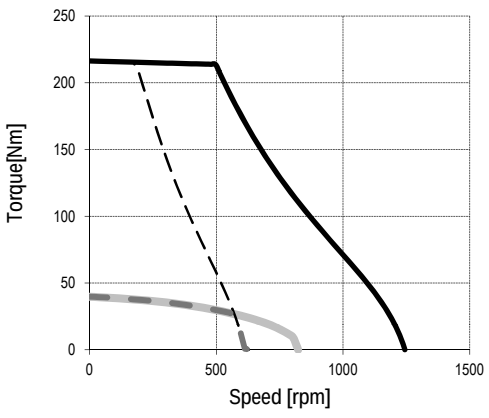
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.10 m² and rotor to a total surface of 0.056 m²

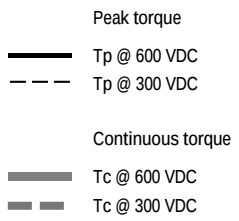
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TAS



Force = f(speed) for 3TBS





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TORQUE MOTOR TML0210-070

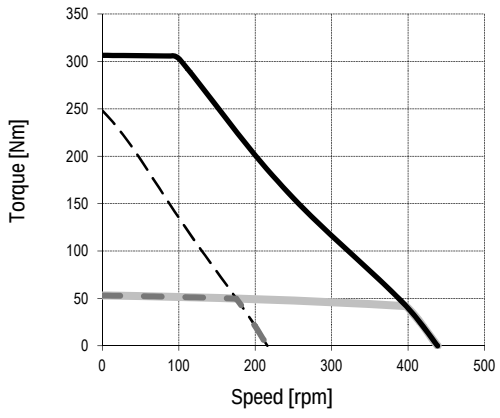
PERFORMANCE		Winding codes	3TAN	3TBS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	309	309
Tc	Continuous torque	Nm	52.1	52.1
Ts	Stall torque	Nm	39.3	39.3
Kt	Torque constant	Nm/Arms	15.6	7.78
Ku	Back EMF constant (*)	Vrms/(rad/s)	9.00	4.50
Km	Motor constant	Nm/√W	4.44	4.44
R20	Electrical resistance at 20°C (*)	Ohm	8.19	2.05
L1	Electrical inductance (*)	mH	42.0	10.5
Ip	Peak current	Arms	28.1	56.2
Ic	Continuous current	Arms	3.39	6.78
Is	Stall current	Arms	2.57	5.14
Pc	Max. continuous power dissipation	W	194	194

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2650	2650
Rth	Thermal resistance	K/W	0.493	0.493
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0207	0.0207
Mr	Rotor mass	kg	3.48	3.48
Ms	Stator mass	kg	7.41	7.41
Td	Max. detent torque (average to peak)	Nm	1.5	1.5
ns	Stall speed	rpm	0.010	0.010

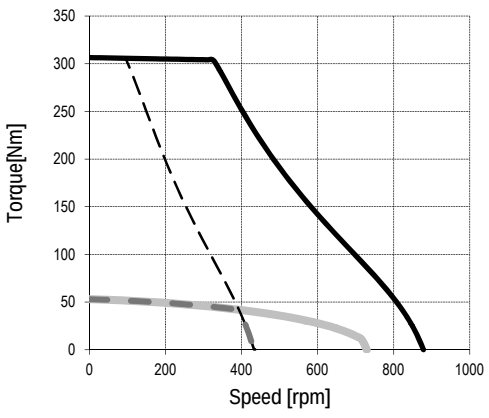
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.14 m² and rotor to a total surface of 0.074 m²

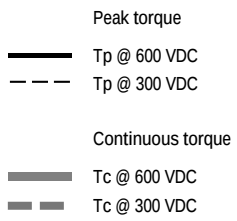
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TAN



Force = f(speed) for 3TBS





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Standard

TORQUE MOTOR TML0210-100

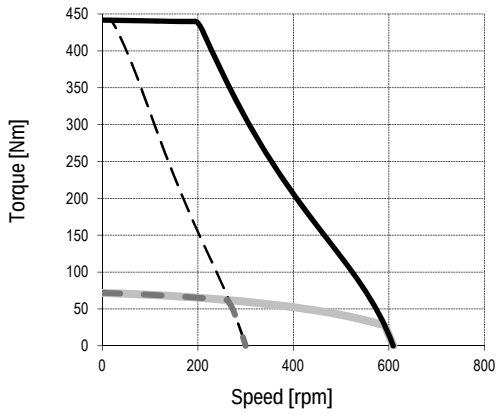
PERFORMANCE		Winding codes	3TBN	3UBS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	445	445
Tc	Continuous torque	Nm	70.4	67.0
Ts	Stall torque	Nm	53.0	50.3
Kt	Torque constant	Nm/Arms	11.2	8.41
Ku	Back EMF constant (*)	Vrms/(rad/s)	6.49	4.86
Km	Motor constant	Nm/√W	5.54	5.27
R20	Electrical resistance at 20°C (*)	Ohm	2.73	1.70
L1	Electrical inductance (*)	mH	15.1	8.52
Ip	Peak current	Arms	56.2	74.9
Ic	Continuous current	Arms	6.36	8.07
Is	Stall current	Arms	4.82	6.12
Pc	Max. continuous power dissipation	W	228	228

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2920	2920
Rth	Thermal resistance	K/W	0.419	0.419
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0299	0.0299
Mr	Rotor mass	kg	5.01	5.01
Ms	Stator mass	kg	10.1	10.1
Td	Max. detent torque (average to peak)	Nm	2.1	2.1
ns	Stall speed	rpm	0.0094	0.0094

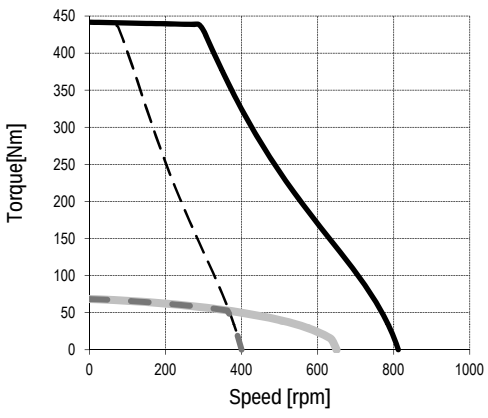
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.20 m² and rotor to a total surface of 0.100 m²

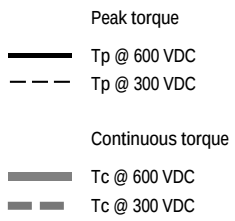
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TBN



Force = f(speed) for 3UBS





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Standard

TORQUE MOTOR TML0210-150

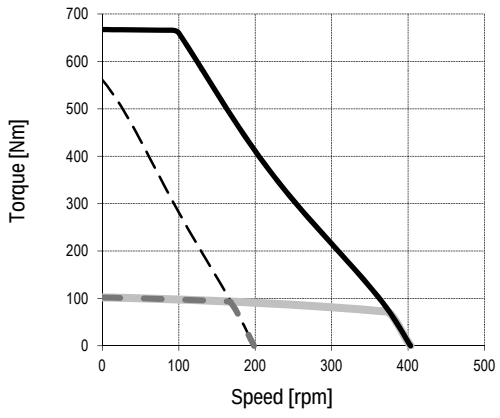
		Winding codes	3TBN	3UBS
PERFORMANCE		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	672	672
Tc	Continuous torque	Nm	99.9	95.0
Ts	Stall torque	Nm	75.1	71.3
Kt	Torque constant	Nm/Arms	16.9	12.7
Ku	Back EMF constant (*)	Vrms/(rad/s)	9.79	7.35
Km	Motor constant	Nm/√W	7.03	6.69
R20	Electrical resistance at 20°C (*)	Ohm	3.87	2.40
L1	Electrical inductance (*)	mH	22.9	12.9
Ip	Peak current	Arms	56.2	74.9
Ic	Continuous current	Arms	5.98	7.59
Is	Stall current	Arms	4.53	5.75
Pc	Max. continuous power dissipation	W	286	286

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3210	3210
Rth	Thermal resistance	K/W	0.333	0.333
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0451	0.0451
Mr	Rotor mass	kg	7.57	7.57
Ms	Stator mass	kg	14.6	14.6
Td	Max. detent torque (average to peak)	Nm	3.2	3.2
ns	Stall speed	rpm	0.0085	0.0085

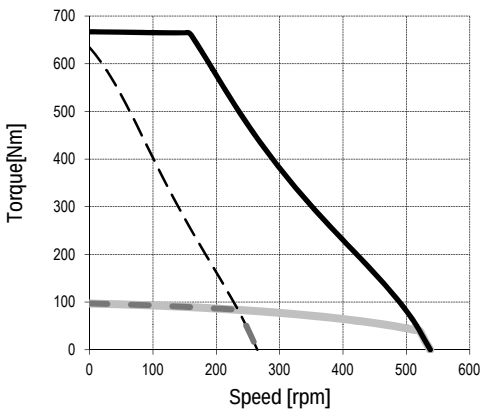
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.30 m² and rotor to a total surface of 0.140 m²

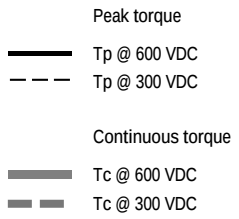
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TBN



Force = f(speed) for 3UBS





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Standard

TORQUE MOTOR TML0291-030

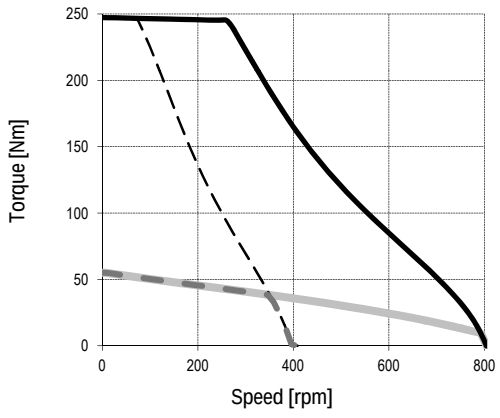
PERFORMANCE		Winding codes	3TBS	3TDS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	249	249
Tc	Continuous torque	Nm	54.3	54.3
Ts	Stall torque	Nm	41.3	41.3
Kt	Torque constant	Nm/Arms	8.50	4.25
Ku	Back EMF constant (*)	Vrms/(rad/s)	4.92	2.46
Km	Motor constant	Nm/√W	4.27	4.27
R20	Electrical resistance at 20°C (*)	Ohm	2.64	0.661
L1	Electrical inductance (*)	mH	17.5	4.37
Ip	Peak current	Arms	46.0	91.9
Ic	Continuous current	Arms	6.68	13.4
Is	Stall current	Arms	5.06	10.1
Pc	Max. continuous power dissipation	W	253	253

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3250	3250
Rth	Thermal resistance	K/W	0.434	0.434
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0237	0.0237
Mr	Rotor mass	kg	2.07	2.07
Ms	Stator mass	kg	8.58	8.58
Td	Max. detent torque (average to peak)	Nm	1.1	1.1
ns	Stall speed	rpm	0.0084	0.0084

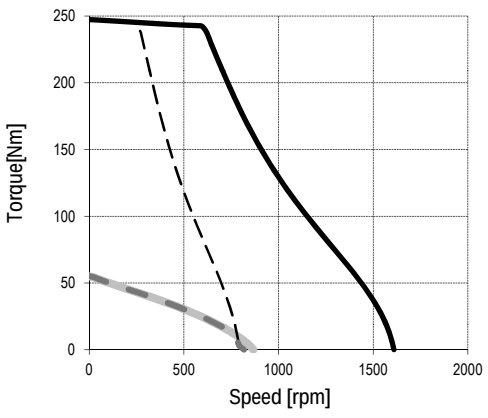
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.08 m² and rotor to a total surface of 0.056 m²

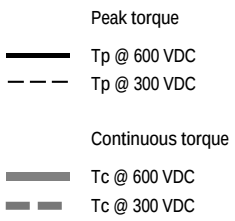
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TBS



Force = f(speed) for 3TDS





Standard

TORQUE MOTOR TML0291-050

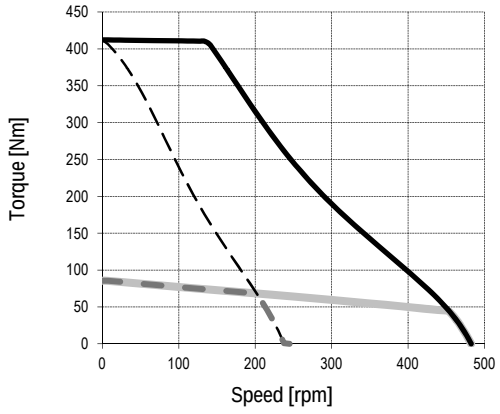
PERFORMANCE		Winding codes	3TBN	3TDS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	416	416
Tc	Continuous torque	Nm	84.4	84.4
Ts	Stall torque	Nm	64.1	64.1
Kt	Torque constant	Nm/Arms	14.2	7.08
Ku	Back EMF constant (*)	Vrms/(rad/s)	8.20	4.10
Km	Motor constant	Nm/√W	6.11	6.11
R20	Electrical resistance at 20°C (*)	Ohm	3.58	0.895
L1	Electrical inductance (*)	mH	29.1	7.27
Ip	Peak current	Arms	46.0	91.9
Ic	Continuous current	Arms	6.22	12.4
Is	Stall current	Arms	4.71	9.42
Pc	Max. continuous power dissipation	W	297	297

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3470	3470
Rth	Thermal resistance	K/W	0.370	0.370
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0395	0.0395
Mr	Rotor mass	kg	3.46	3.46
Ms	Stator mass	kg	12.2	12.2
Td	Max. detent torque (average to peak)	Nm	1.9	1.9
ns	Stall speed	rpm	0.0079	0.0079

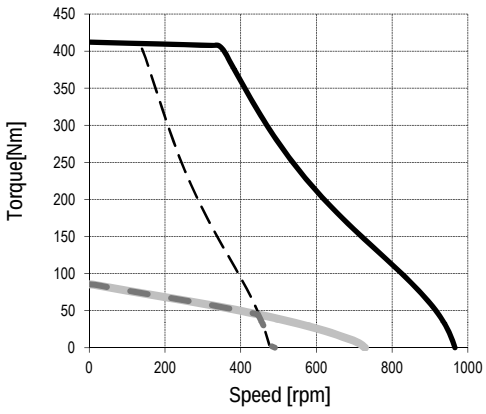
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.14 m² and rotor to a total surface of 0.082 m²

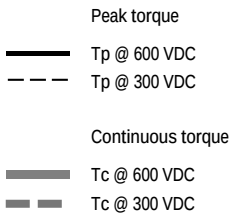
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TBN



Force = f(speed) for 3TDS





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Standard

TORQUE MOTOR TML0291-070

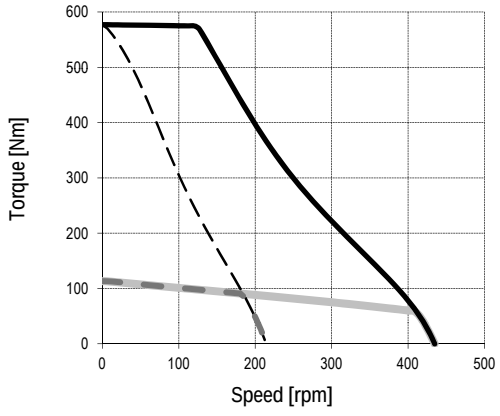
		Winding codes	3UBN	3TDS
PERFORMANCE		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	582	582
Tc	Continuous torque	Nm	112	112
Ts	Stall torque	Nm	84.8	84.6
Kt	Torque constant	Nm/Arms	15.7	9.92
Ku	Back EMF constant (*)	Vrms/(rad/s)	9.09	5.74
Km	Motor constant	Nm/√W	7.64	7.62
R20	Electrical resistance at 20°C (*)	Ohm	2.82	1.13
L1	Electrical inductance (*)	mH	25.6	10.2
Ip	Peak current	Arms	58.0	91.9
Ic	Continuous current	Arms	7.42	11.7
Is	Stall current	Arms	5.62	8.89
Pc	Max. continuous power dissipation	W	334	334

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3730	3730
Rth	Thermal resistance	K/W	0.330	0.330
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0553	0.0553
Mr	Rotor mass	kg	4.84	4.84
Ms	Stator mass	kg	15.8	15.8
Td	Max. detent torque (average to peak)	Nm	2.6	2.6
ns	Stall speed	rpm	0.0073	0.0073

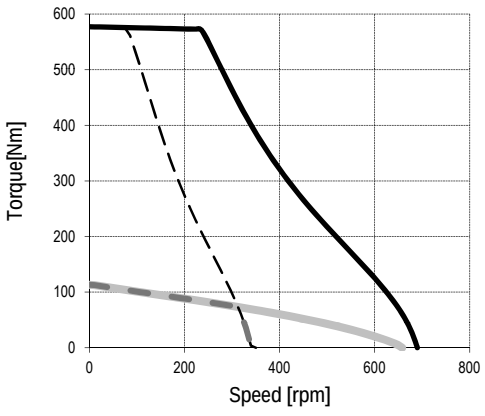
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.20 m² and rotor to a total surface of 0.110 m²

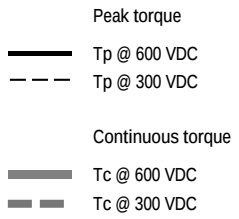
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3UBN



Force = f(speed) for 3TDS





Standard

TORQUE MOTOR TML0291-100

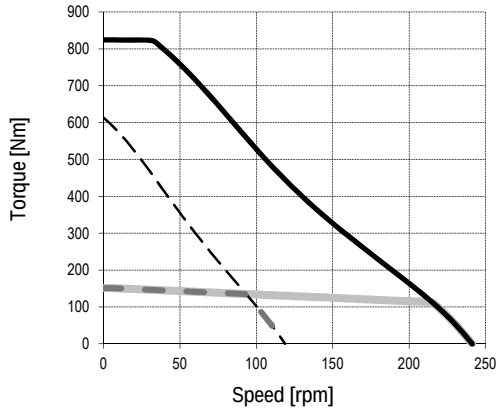
PERFORMANCE		Winding codes	3TBN	3TDS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	831	831
Tc	Continuous torque	Nm	149	149
Ts	Stall torque	Nm	113	113
Kt	Torque constant	Nm/Arms	28.3	14.2
Ku	Back EMF constant (*)	Vrms/(rad/s)	16.4	8.20
Km	Motor constant	Nm/√W	9.46	9.46
R20	Electrical resistance at 20°C (*)	Ohm	5.98	1.50
L1	Electrical inductance (*)	mH	58.2	14.5
Ip	Peak current	Arms	46.0	91.9
Ic	Continuous current	Arms	5.48	11.0
Is	Stall current	Arms	4.15	8.30
Pc	Max. continuous power dissipation	W	385	385

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	4050	4050
Rth	Thermal resistance	K/W	0.286	0.286
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0791	0.0791
Mr	Rotor mass	kg	6.91	6.91
Ms	Stator mass	kg	21.3	21.3
Td	Max. detent torque (average to peak)	Nm	3.8	3.8
ns	Stall speed	rpm	0.0067	0.0067

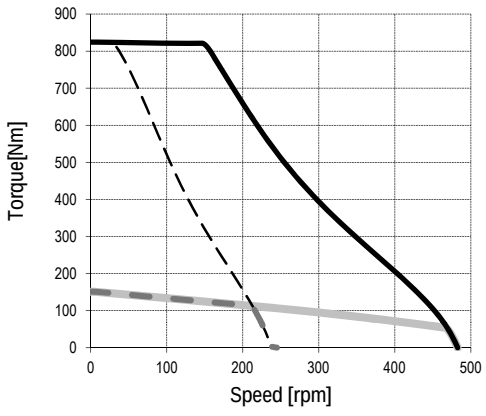
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.28 m² and rotor to a total surface of 0.140 m²

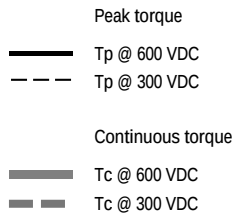
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TBN



Force = f(speed) for 3TDS





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Standard

TORQUE MOTOR TML0291-150

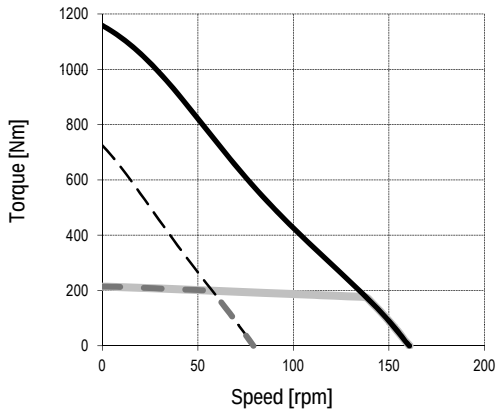
PERFORMANCE		Winding codes	3TBN	3TDN
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	1250	1250
Tc	Continuous torque	Nm	211	211
Ts	Stall torque	Nm	160	160
Kt	Torque constant	Nm/Arms	42.5	21.3
Ku	Back EMF constant (*)	Vrms/(rad/s)	24.6	12.3
Km	Motor constant	Nm/√W	12.1	12.1
R20	Electrical resistance at 20°C (*)	Ohm	8.26	2.06
L1	Electrical inductance (*)	mH	87.2	21.8
Ip	Peak current	Arms	46.0	91.9
Ic	Continuous current	Arms	5.17	10.3
Is	Stall current	Arms	3.91	7.83
Pc	Max. continuous power dissipation	W	473	473

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	4420	4420
Rth	Thermal resistance	K/W	0.232	0.232
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.119	0.119
Mr	Rotor mass	kg	10.4	10.4
Ms	Stator mass	kg	30.3	30.3
Td	Max. detent torque (average to peak)	Nm	5.6	5.6
ns	Stall speed	rpm	0.0062	0.0062

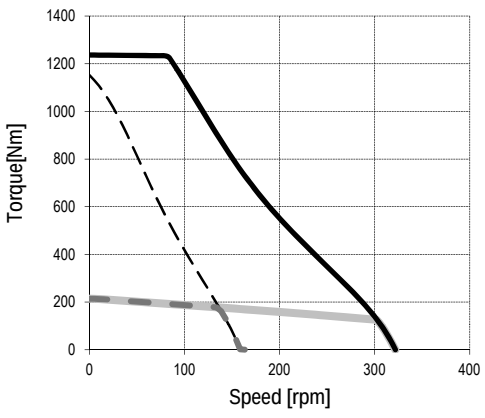
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.42 m² and rotor to a total surface of 0.210 m²

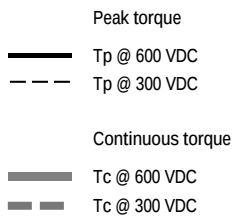
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3TBN



Force = f(speed) for 3TDN





Standard

TORQUE MOTOR TML0360-030

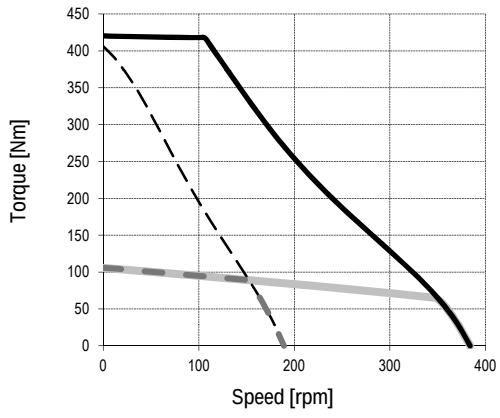
		Winding codes	3VAS	3VBS
PERFORMANCE		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	424	424
Tc	Continuous torque	Nm	104	104
Ts	Stall torque	Nm	79.8	79.8
Kt	Torque constant	Nm/Arms	17.8	8.90
Ku	Back EMF constant (*)	Vrms/(rad/s)	10.3	5.14
Km	Motor constant	Nm/√W	6.72	6.72
R20	Electrical resistance at 20°C (*)	Ohm	4.68	1.17
L1	Electrical inductance (*)	mH	27.4	6.85
Ip	Peak current	Arms	37.9	75.7
Ic	Continuous current	Arms	5.98	12.0
Is	Stall current	Arms	4.53	9.06
Pc	Max. continuous power dissipation	W	348	348

	SPECIFICATIONS	UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2710	2710
Rth	Thermal resistance	K/W	0.284	0.284
2p	Number of poles	-	66	66
J	Rotor inertia	$kg.m^2$	0.0655	0.0655
Mr	Rotor mass	kg	3.30	3.30
Ms	Stator mass	kg	10.0	10.0
Td	Max. detent torque (average to peak)	Nm	2.6	2.6
ns	Stall speed	rpm	0.0067	0.0067

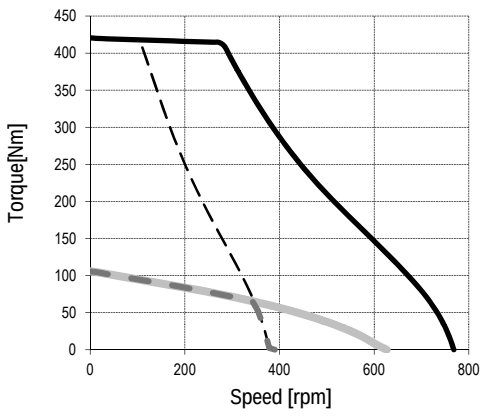
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.10 m² and rotor to a total surface of 0.079 m²

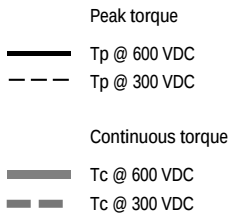
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VAS



Force = f(speed) for 3VBS





Standard

TORQUE MOTOR TML0360-050

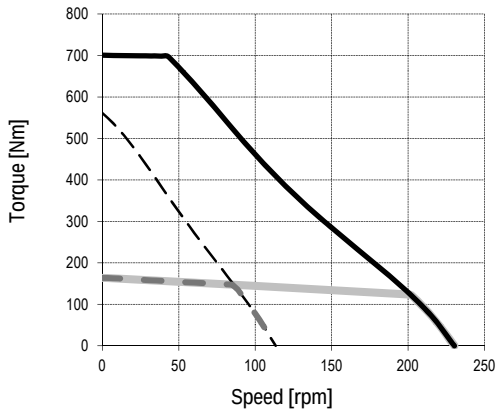
PERFORMANCE		Winding codes	3VAN	3XBS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	707	707
Tc	Continuous torque	Nm	161	164
Ts	Stall torque	Nm	123	125
Kt	Torque constant	Nm/Arms	29.7	9.64
Ku	Back EMF constant (*)	Vrms/(rad/s)	17.1	5.57
Km	Motor constant	Nm/√W	9.51	9.68
R20	Electrical resistance at 20°C (*)	Ohm	6.48	0.660
L1	Electrical inductance (*)	mH	45.6	4.82
Ip	Peak current	Arms	37.9	117
Ic	Continuous current	Arms	5.53	17.3
Is	Stall current	Arms	4.19	13.1
Pc	Max. continuous power dissipation	W	413	413

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2820	2820
Rth	Thermal resistance	K/W	0.239	0.239
2p	Number of poles	-	66	66
J	Rotor inertia	$kg.m^2$	0.109	0.109
Mr	Rotor mass	kg	5.50	5.50
Ms	Stator mass	kg	14.2	14.2
Td	Max. detent torque (average to peak)	Nm	4.4	4.4
ns	Stall speed	rpm	0.0065	0.0065

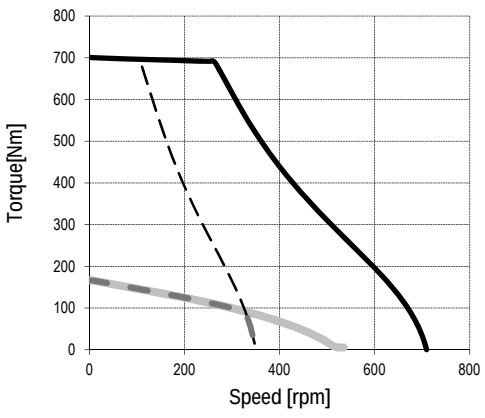
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.17 m² and rotor to a total surface of 0.110 m²

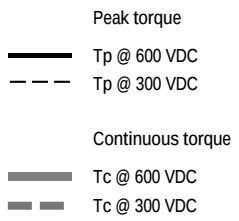
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VAN



Force = f(speed) for 3XBS





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TORQUE MOTOR TML0360-070

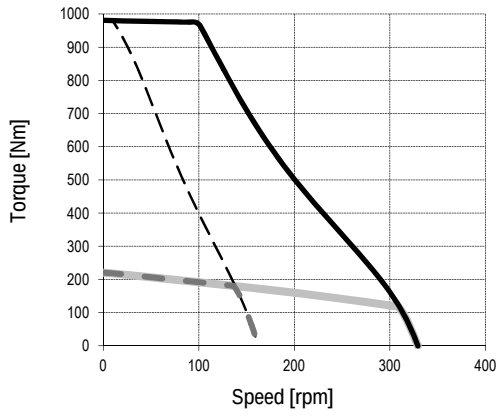
PERFORMANCE		Winding codes	3VBN	3XBS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	990	990
Tc	Continuous torque	Nm	217	216
Ts	Stall torque	Nm	165	165
Kt	Torque constant	Nm/Arms	20.8	13.5
Ku	Back EMF constant (*)	Vrms/(rad/s)	12.0	7.80
Km	Motor constant	Nm/√W	11.9	11.8
R20	Electrical resistance at 20°C (*)	Ohm	2.04	0.870
L1	Electrical inductance (*)	mH	16.0	6.74
Ip	Peak current	Arms	75.7	117
Ic	Continuous current	Arms	10.6	16.2
Is	Stall current	Arms	8.04	12.3
Pc	Max. continuous power dissipation	W	477	477

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2900	2890
Rth	Thermal resistance	K/W	0.207	0.207
2p	Number of poles	-	66	66
J	Rotor inertia	$kg.m^2$	0.153	0.153
Mr	Rotor mass	kg	7.71	7.71
Ms	Stator mass	kg	18.3	18.4
Td	Max. detent torque (average to peak)	Nm	6.1	6.1
ns	Stall speed	rpm	0.0063	0.0063

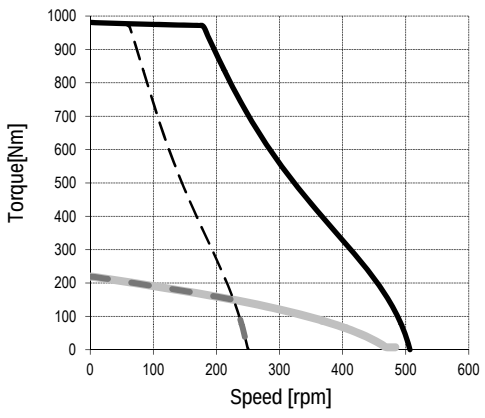
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.24 m² and rotor to a total surface of 0.150 m²

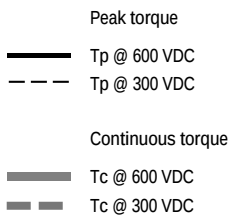
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3XBS





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TORQUE MOTOR TML0360-100

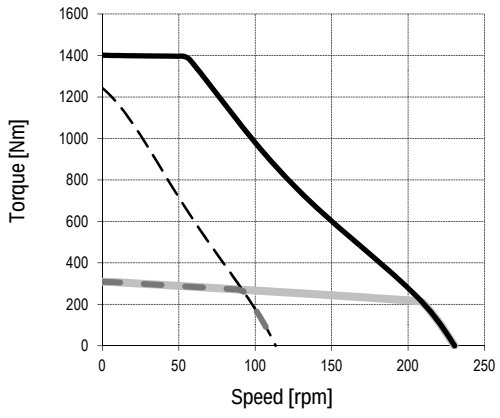
		Winding codes	3VBN	3TFS
PERFORMANCE		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	1410	1410
Tc	Continuous torque	Nm	304	315
Ts	Stall torque	Nm	232	240
Kt	Torque constant	Nm/Arms	29.7	16.1
Ku	Back EMF constant (*)	Vrms/(rad/s)	17.1	9.29
Km	Motor constant	Nm/√W	14.7	15.2
R20	Electrical resistance at 20°C (*)	Ohm	2.73	0.747
L1	Electrical inductance (*)	mH	22.8	6.69
Ip	Peak current	Arms	75.7	140
Ic	Continuous current	Arms	10.4	19.9
Is	Stall current	Arms	7.88	15.1
Pc	Max. continuous power dissipation	W	616	616

	SPECIFICATIONS	UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2750	2750
Rth	Thermal resistance	K/W	0.161	0.161
2p	Number of poles	-	66	66
J	Rotor inertia	$kg.m^2$	0.218	0.218
Mr	Rotor mass	kg	11.0	11.0
Ms	Stator mass	kg	24.6	24.6
Td	Max. detent torque (average to peak)	Nm	8.7	8.7
ns	Stall speed	rpm	0.0066	0.0066

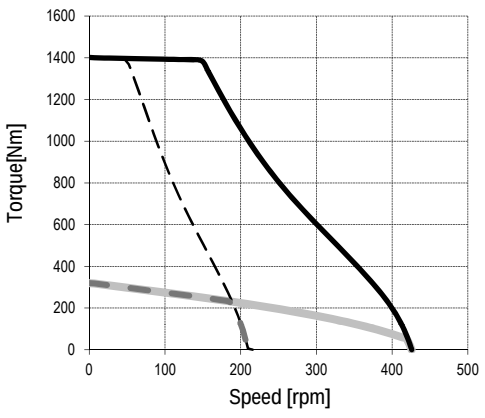
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.34 m² and rotor to a total surface of 0.200 m²

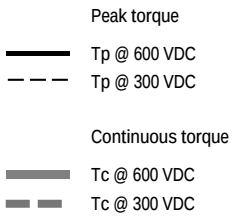
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3TFS





Standard

TORQUE MOTOR TML0360-150

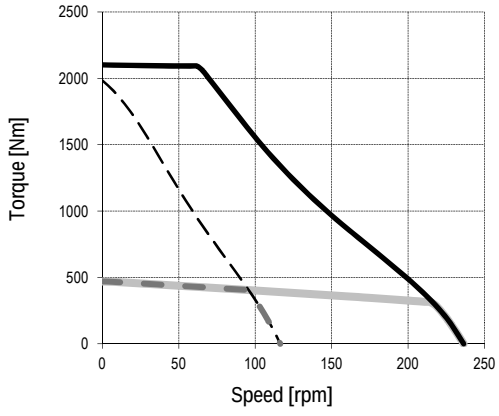
PERFORMANCE		Winding codes	3XBN	3UFN
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	2120	2120
Tc	Continuous torque	Nm	463	477
Ts	Stall torque	Nm	353	365
Kt	Torque constant	Nm/Arms	28.9	19.3
Ku	Back EMF constant (*)	Vrms/(rad/s)	16.7	11.1
Km	Motor constant	Nm/√W	18.7	19.4
R20	Electrical resistance at 20°C (*)	Ohm	1.59	0.661
L1	Electrical inductance (*)	mH	14.5	6.43
Ip	Peak current	Arms	117	175
Ic	Continuous current	Arms	16.3	25.2
Is	Stall current	Arms	12.3	19.1
Pc	Max. continuous power dissipation	W	874	874

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2530	2530
Rth	Thermal resistance	K/W	0.114	0.114
2p	Number of poles	-	66	66
J	Rotor inertia	$kg.m^2$	0.327	0.327
Mr	Rotor mass	kg	16.5	16.5
Ms	Stator mass	kg	35.1	35.1
Td	Max. detent torque (average to peak)	Nm	13	13
ns	Stall speed	rpm	0.0072	0.0072

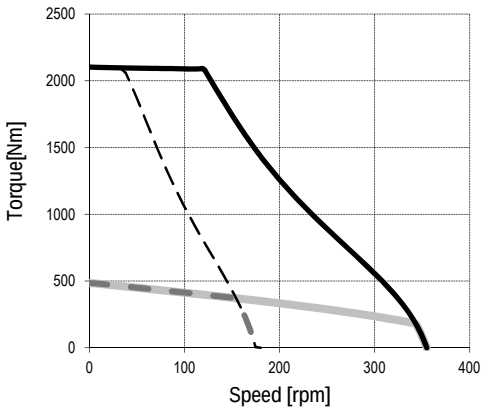
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.51 m² and rotor to a total surface of 0.280 m²

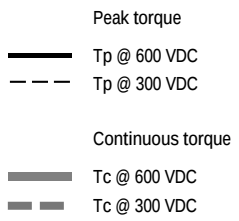
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3XBN



Force = f(speed) for 3UFN





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Standard

TORQUE MOTOR TML0450-030

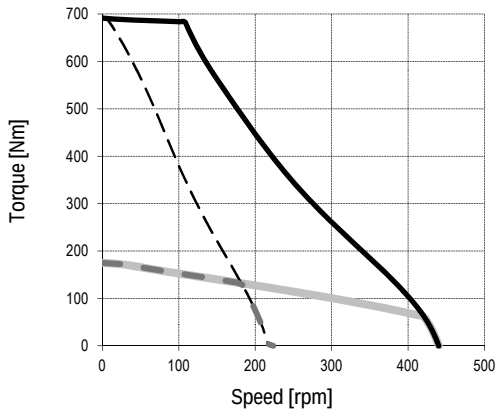
PERFORMANCE		Winding codes	3VBS	3VDS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	699	699
Tc	Continuous torque	Nm	172	172
Ts	Stall torque	Nm	132	132
Kt	Torque constant	Nm/Arms	15.5	7.76
Ku	Back EMF constant (*)	Vrms/(rad/s)	8.98	4.49
Km	Motor constant	Nm/√W	9.61	9.61
R20	Electrical resistance at 20°C (*)	Ohm	1.74	0.435
L1	Electrical inductance (*)	mH	11.5	2.87
Ip	Peak current	Arms	92.2	184
Ic	Continuous current	Arms	11.6	23.1
Is	Stall current	Arms	8.77	17.5
Pc	Max. continuous power dissipation	W	500	500

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2900	2900
Rth	Thermal resistance	K/W	0.220	0.220
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.162	0.162
Mr	Rotor mass	kg	4.89	4.89
Ms	Stator mass	kg	13.7	13.7
Td	Max. detent torque (average to peak)	Nm	4.5	4.5
ns	Stall speed	rpm	0.0047	0.0047

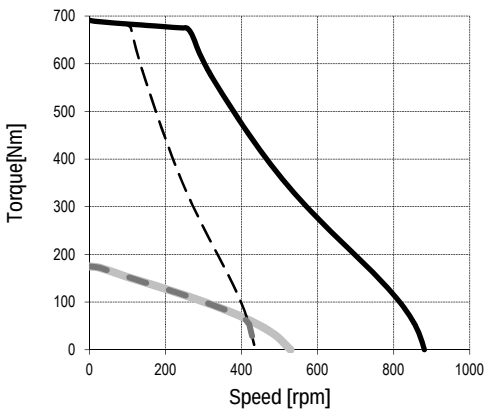
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.13 m² and rotor to a total surface of 0.110 m²

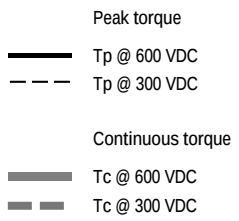
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBS



Force = f(speed) for 3VDS





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Standard

TORQUE MOTOR TML0450-050

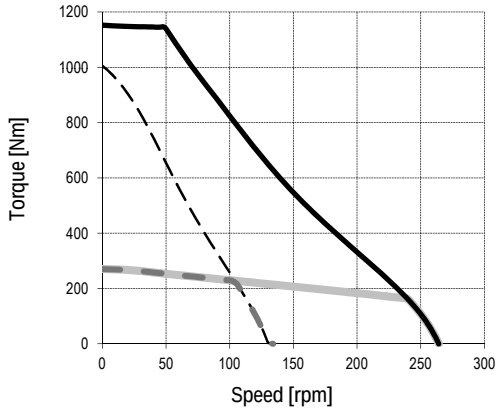
		Winding codes	3VBN	3VDS
PERFORMANCE		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	1160	1160
Tc	Continuous torque	Nm	266	266
Ts	Stall torque	Nm	204	204
Kt	Torque constant	Nm/Arms	25.9	12.9
Ku	Back EMF constant (*)	Vrms/(rad/s)	15.0	7.48
Km	Motor constant	Nm/√W	13.6	13.6
R20	Electrical resistance at 20°C (*)	Ohm	2.40	0.601
L1	Electrical inductance (*)	mH	19.1	4.77
Ip	Peak current	Arms	92.2	184
Ic	Continuous current	Arms	10.7	21.4
Is	Stall current	Arms	8.10	16.2
Pc	Max. continuous power dissipation	W	590	590

	SPECIFICATIONS	UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3010	3010
Rth	Thermal resistance	K/W	0.187	0.187
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.270	0.270
Mr	Rotor mass	kg	8.15	8.15
Ms	Stator mass	kg	19.3	19.3
Td	Max. detent torque (average to peak)	Nm	7.5	7.5
ns	Stall speed	rpm	0.0045	0.0045

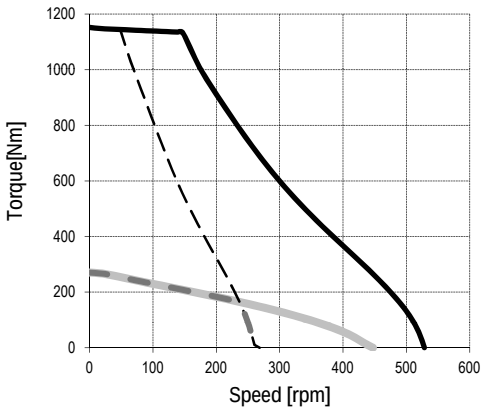
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.21 m² and rotor to a total surface of 0.150 m²

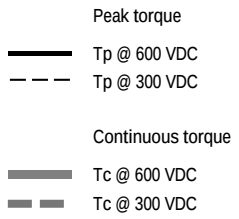
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3VDS





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Standard

TORQUE MOTOR TML0450-070

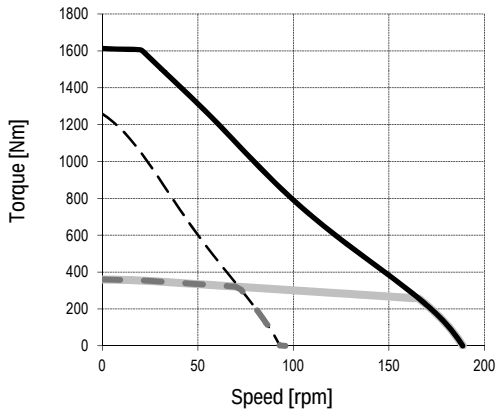
PERFORMANCE		Winding codes	3VBN	3VDS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	1630	1630
Tc	Continuous torque	Nm	354	354
Ts	Stall torque	Nm	271	271
Kt	Torque constant	Nm/Arms	36.2	18.1
Ku	Back EMF constant (*)	Vrms/(rad/s)	21.0	10.5
Km	Motor constant	Nm/√W	16.9	16.9
R20	Electrical resistance at 20°C (*)	Ohm	3.08	0.769
L1	Electrical inductance (*)	mH	26.7	6.68
Ip	Peak current	Arms	92.2	184
Ic	Continuous current	Arms	10.1	20.3
Is	Stall current	Arms	7.68	15.4
Pc	Max. continuous power dissipation	W	678	678

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3100	3100
Rth	Thermal resistance	K/W	0.162	0.162
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.378	0.378
Mr	Rotor mass	kg	11.4	11.4
Ms	Stator mass	kg	24.9	24.9
Td	Max. detent torque (average to peak)	Nm	11	11
ns	Stall speed	rpm	0.0044	0.0044

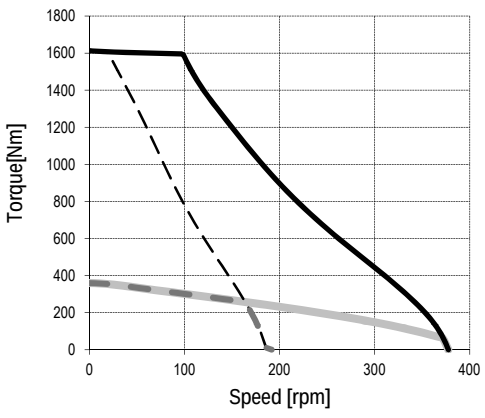
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.30 m² and rotor to a total surface of 0.200 m²

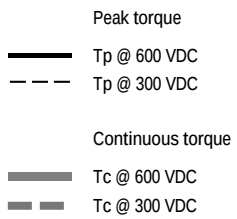
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3VDS





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Standard

TORQUE MOTOR TML0450-100

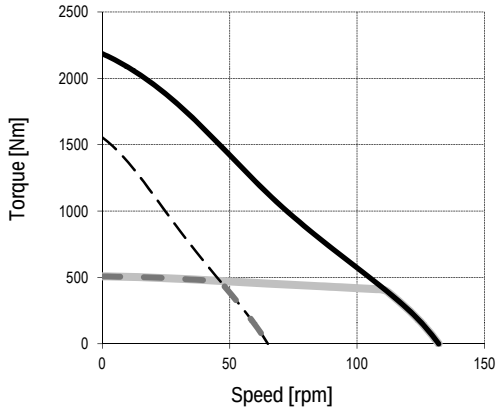
PERFORMANCE		Winding codes	3VBN	3VDN
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	2330	2330
Tc	Continuous torque	Nm	499	499
Ts	Stall torque	Nm	382	382
Kt	Torque constant	Nm/Arms	51.7	25.9
Ku	Back EMF constant (*)	Vrms/(rad/s)	29.9	15.0
Km	Motor constant	Nm/√W	21.0	21.0
R20	Electrical resistance at 20°C (*)	Ohm	4.04	1.01
L1	Electrical inductance (*)	mH	38.2	9.54
Ip	Peak current	Arms	92.2	184
Ic	Continuous current	Arms	10.0	20.0
Is	Stall current	Arms	7.58	15.2
Pc	Max. continuous power dissipation	W	867	867

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2950	2950
Rth	Thermal resistance	K/W	0.127	0.127
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.540	0.540
Mr	Rotor mass	kg	16.3	16.3
Ms	Stator mass	kg	33.2	33.2
Td	Max. detent torque (average to peak)	Nm	15	15
ns	Stall speed	rpm	0.0046	0.0046

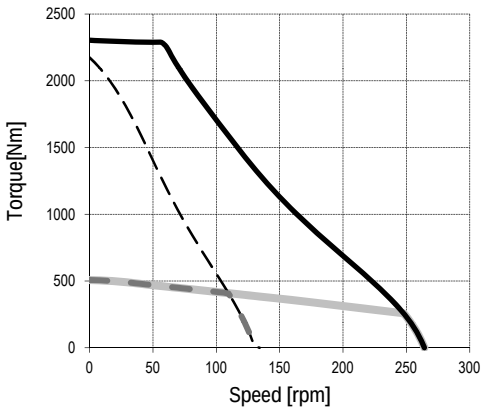
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.42 m² and rotor to a total surface of 0.260 m²

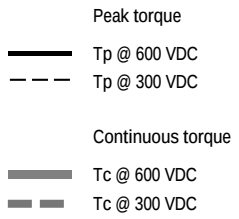
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3VDN





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Standard

TORQUE MOTOR TML0450-150

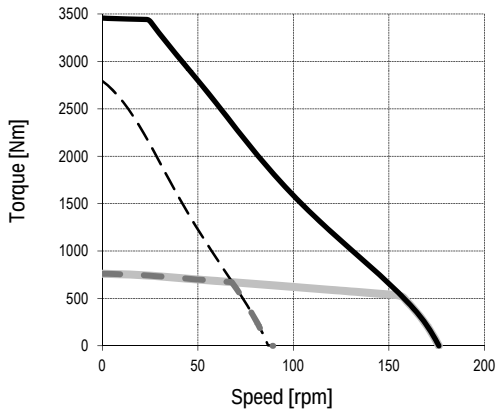
PERFORMANCE		Winding codes	3VDN	3VHS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	3490	3490
Tc	Continuous torque	Nm	748	748
Ts	Stall torque	Nm	571	571
Kt	Torque constant	Nm/Arms	38.8	19.4
Ku	Back EMF constant (*)	Vrms/(rad/s)	22.4	11.2
Km	Motor constant	Nm/√W	26.5	26.5
R20	Electrical resistance at 20°C (*)	Ohm	1.43	0.357
L1	Electrical inductance (*)	mH	14.3	3.58
Ip	Peak current	Arms	184	369
Ic	Continuous current	Arms	20.0	39.9
Is	Stall current	Arms	15.1	30.2
Pc	Max. continuous power dissipation	W	1220	1220

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2710	2710
Rth	Thermal resistance	K/W	0.0901	0.0901
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.810	0.810
Mr	Rotor mass	kg	24.5	24.5
Ms	Stator mass	kg	47.2	47.2
Td	Max. detent torque (average to peak)	Nm	23	23
ns	Stall speed	rpm	0.0050	0.0050

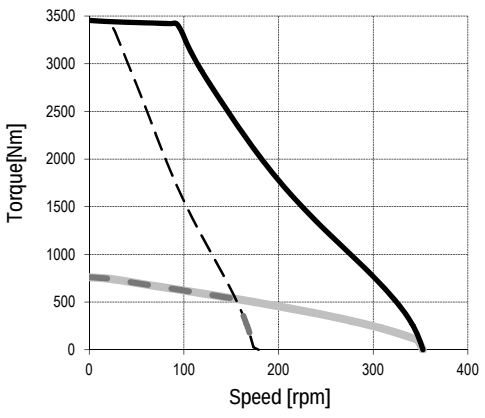
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.64 m² and rotor to a total surface of 0.370 m²

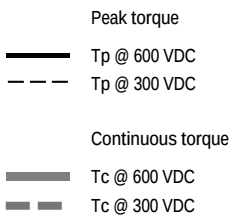
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VDN



Force = f(speed) for 3VHS





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Standard

TORQUE MOTOR TML0530-030

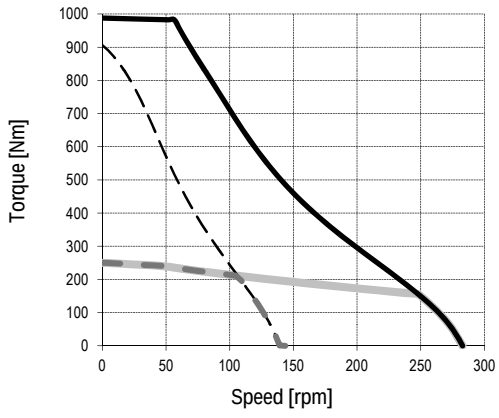
PERFORMANCE		Winding codes	3VBN	3VDS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	997	997
Tc	Continuous torque	Nm	247	247
Ts	Stall torque	Nm	189	189
Kt	Torque constant	Nm/Arms	24.2	12.1
Ku	Back EMF constant (*)	Vrms/(rad/s)	14.0	6.99
Km	Motor constant	Nm/√W	12.5	12.5
R20	Electrical resistance at 20°C (*)	Ohm	2.50	0.624
L1	Electrical inductance (*)	mH	23.2	5.79
Ip	Peak current	Arms	79.6	159
Ic	Continuous current	Arms	10.4	20.9
Is	Stall current	Arms	7.91	15.8
Pc	Max. continuous power dissipation	W	584	584

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3120	3120
Rth	Thermal resistance	K/W	0.188	0.188
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.276	0.276
Mr	Rotor mass	kg	5.75	5.75
Ms	Stator mass	kg	18.0	18.0
Td	Max. detent torque (average to peak)	Nm	8.5	8.5
ns	Stall speed	rpm	0.0044	0.0044

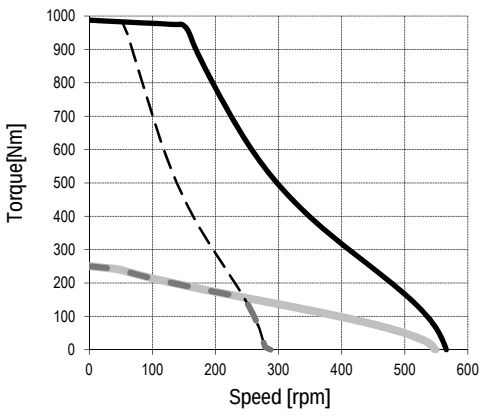
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.15 m² and rotor to a total surface of 0.130 m²

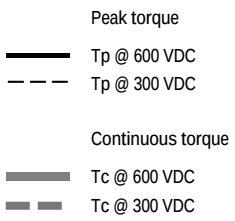
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3VDS





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Standard

TORQUE MOTOR TML0530-050

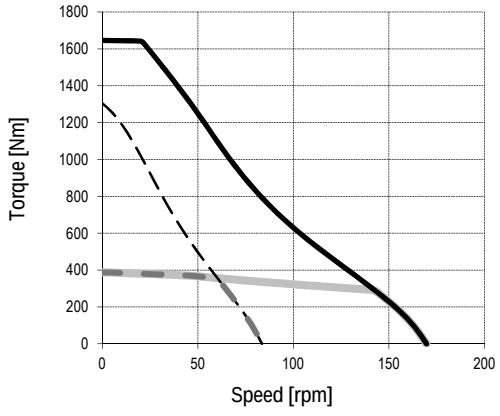
PERFORMANCE		Winding codes	3VBN	3VDN
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	1660	1660
Tc	Continuous torque	Nm	382	382
Ts	Stall torque	Nm	293	293
Kt	Torque constant	Nm/Arms	40.3	20.1
Ku	Back EMF constant (*)	Vrms/(rad/s)	23.3	11.7
Km	Motor constant	Nm/√W	17.8	17.8
R20	Electrical resistance at 20°C (*)	Ohm	3.40	0.850
L1	Electrical inductance (*)	mH	38.6	9.64
Ip	Peak current	Arms	79.6	159
Ic	Continuous current	Arms	9.66	19.3
Is	Stall current	Arms	7.32	14.6
Pc	Max. continuous power dissipation	W	681	681

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3260	3260
Rth	Thermal resistance	K/W	0.161	0.161
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.461	0.461
Mr	Rotor mass	kg	9.59	9.59
Ms	Stator mass	kg	25.4	25.4
Td	Max. detent torque (average to peak)	Nm	14	14
ns	Stall speed	rpm	0.0042	0.0042

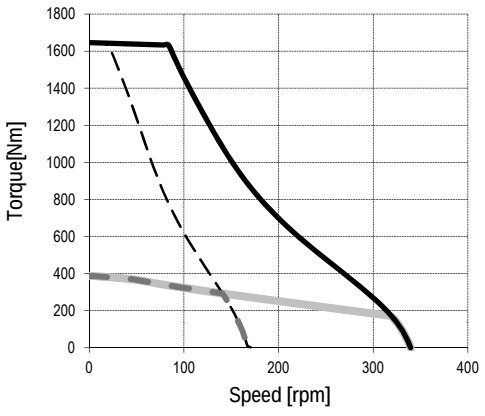
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.25 m² and rotor to a total surface of 0.180 m²

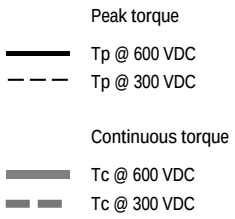
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3VDN





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Standard

TORQUE MOTOR TML0530-070

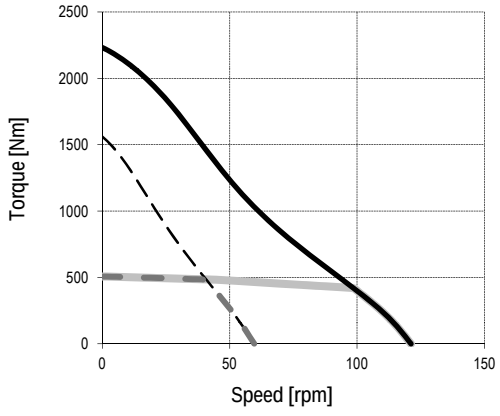
PERFORMANCE		Winding codes	3VBN	3VDN
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	2330	2330
Tc	Continuous torque	Nm	500	500
Ts	Stall torque	Nm	382	382
Kt	Torque constant	Nm/Arms	56.4	28.2
Ku	Back EMF constant (*)	Vrms/(rad/s)	32.6	16.3
Km	Motor constant	Nm/√W	21.8	21.8
R20	Electrical resistance at 20°C (*)	Ohm	4.48	1.12
L1	Electrical inductance (*)	mH	53.9	13.5
Ip	Peak current	Arms	79.6	159
Ic	Continuous current	Arms	8.99	18.0
Is	Stall current	Arms	6.81	13.6
Pc	Max. continuous power dissipation	W	778	778

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3360	3360
Rth	Thermal resistance	K/W	0.141	0.141
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.645	0.645
Mr	Rotor mass	kg	13.4	13.4
Ms	Stator mass	kg	33.0	33.0
Td	Max. detent torque (average to peak)	Nm	20	20
ns	Stall speed	rpm	0.0041	0.0041

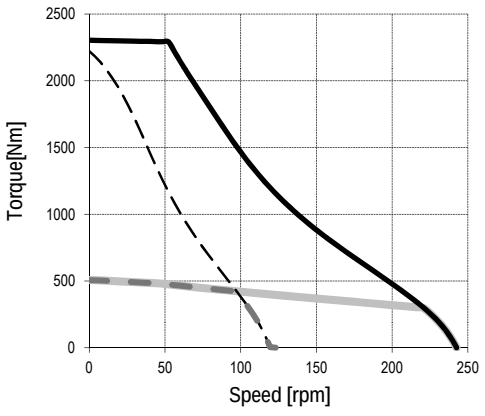
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.35 m² and rotor to a total surface of 0.240 m²

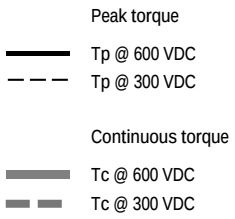
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3VDN





ETEL S.A. Zone Industrielle, CH-2112 Môtiers, Switzerland
T +41 (0)32 862 01 00 • F +41 (0)32 862 01 01 • etel@etel.ch • www.etel.ch

Standard

TORQUE MOTOR TML0530-100

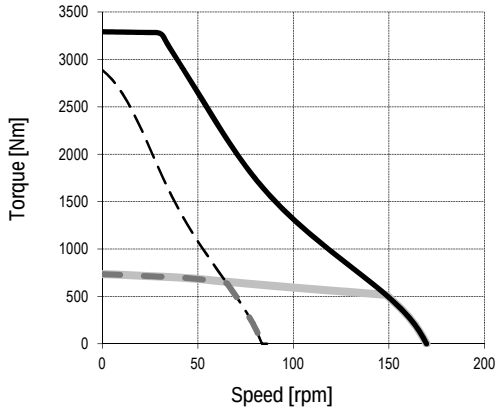
PERFORMANCE		Winding codes	3VDN	3VHS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	3320	3320
Tc	Continuous torque	Nm	724	724
Ts	Stall torque	Nm	553	553
Kt	Torque constant	Nm/Arms	40.3	20.1
Ku	Back EMF constant (*)	Vrms/(rad/s)	23.3	11.7
Km	Motor constant	Nm/√W	28.0	28.0
R20	Electrical resistance at 20°C (*)	Ohm	1.38	0.344
L1	Electrical inductance (*)	mH	19.3	4.82
Ip	Peak current	Arms	159	318
Ic	Continuous current	Arms	18.3	36.5
Is	Stall current	Arms	13.8	27.7
Pc	Max. continuous power dissipation	W	986	986

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3230	3230
Rth	Thermal resistance	K/W	0.112	0.112
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.921	0.921
Mr	Rotor mass	kg	19.2	19.2
Ms	Stator mass	kg	43.5	43.5
Td	Max. detent torque (average to peak)	Nm	28	28
ns	Stall speed	rpm	0.0042	0.0042

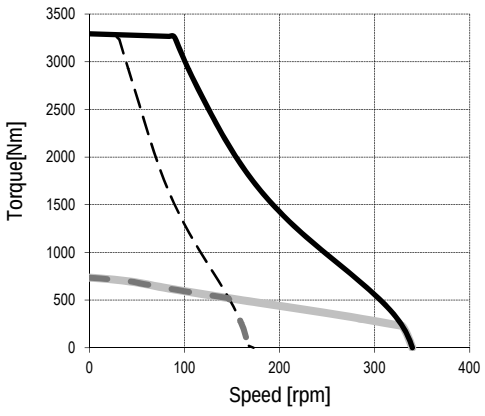
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.50 m² and rotor to a total surface of 0.320 m²

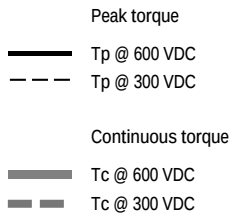
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VDN



Force = f(speed) for 3VHS





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Standard

TORQUE MOTOR TML0530-150

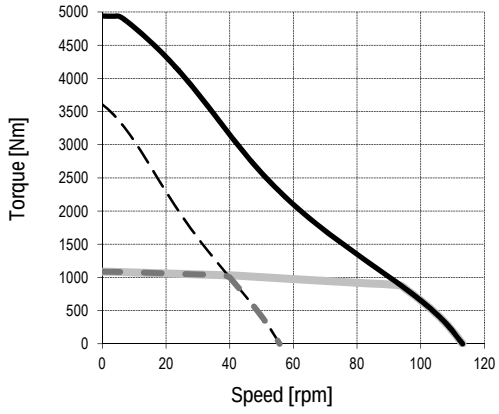
PERFORMANCE		Winding codes	3VDN	3VHN
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	4990	4990
Tc	Continuous torque	Nm	1070	1070
Ts	Stall torque	Nm	818	818
Kt	Torque constant	Nm/Arms	60.4	30.2
Ku	Back EMF constant (*)	Vrms/(rad/s)	35.0	17.5
Km	Motor constant	Nm/√W	35.1	35.1
R20	Electrical resistance at 20°C (*)	Ohm	1.98	0.494
L1	Electrical inductance (*)	mH	28.9	7.22
Ip	Peak current	Arms	159	318
Ic	Continuous current	Arms	18.0	36.0
Is	Stall current	Arms	13.6	27.3
Pc	Max. continuous power dissipation	W	1370	1370

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2980	2980
Rth	Thermal resistance	K/W	0.0801	0.0801
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	1.38	1.38
Mr	Rotor mass	kg	28.8	28.8
Ms	Stator mass	kg	62.1	62.1
Td	Max. detent torque (average to peak)	Nm	43	43
ns	Stall speed	rpm	0.0046	0.0046

Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.75 m² and rotor to a total surface of 0.450 m²

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 3VDN



Force = f(speed) for 3VHN