BRUSHLESS MOTOR

TKA202HS

ELECTRONIC DRIVE

Drive 20/100 Arms

No UL certification

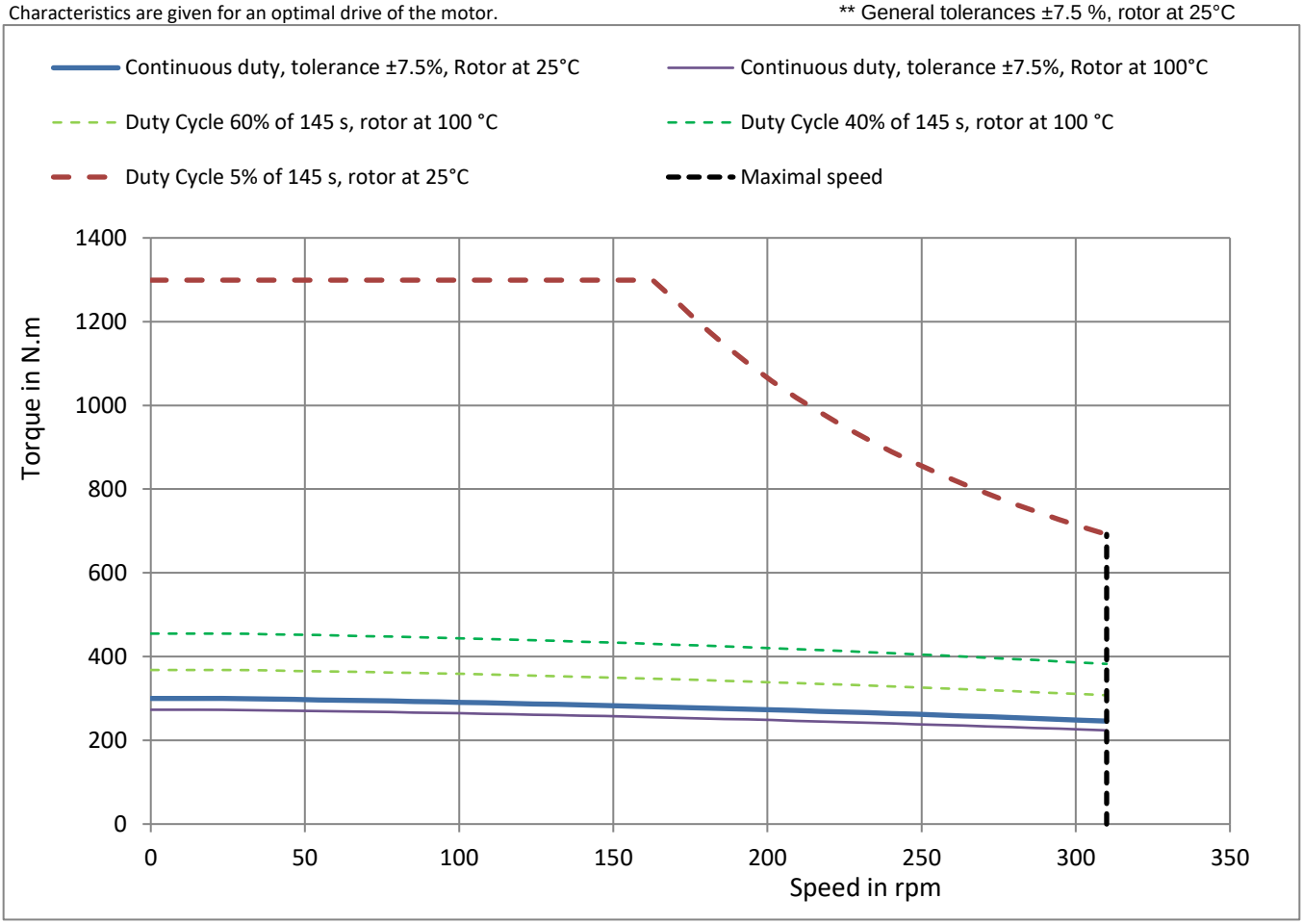
Pn	**Rated power ****	7.98	*kW*	
Mn	**Rated torque ****	246	*Nm*	**Cooling type :**
Nn	**Rated speed**	310	*rpm*	Natural Air Cooling
In	**Rated current**	15.1	A_{rms}	Exchange Surface 0.44 m²
Un	**Rated voltage ***	342	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	300	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	17.8	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	1300	*Nm*	Altitude : < 1000 m
I_p	Max. current	99.5	A_{rms}	Thermal class : F
N_p	Max. speed	310	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	0.18	*kg.m²*	Number of poles : 60
Ke	Back emf constant at 1000 rpm (25°C)*	1090	V_{rms}	Electrical frequency @Np 155 Hz
Kt	Torque sensitivity (rotor 25°C)	16.8	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	1.14	*Ω*	at rated torque : 90.7 %
L	Winding inductance *	9.02	*mH*	at 75% of rated torque : 91.4 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA202HS Parameters

ELECTRONIC DRIVE

Drive 20/100 Arms

No UL certification

Main characteristics

*Rated power ** *	7.98	*kW*	*Ps1*
*Peak power ** *	22.5	*kW*	*Ps6*
*Low speed torque ** *	300	*N.m*	*Mo*
*Low speed peak torque ** *	1300	*N.m*	*MoS6*
Nominal speed (S1)	310	*rpm*	*Nb*
*Max speed **** *	310	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	17.8	*Arms*	*Io*
S6 current at low speed	99.5	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	0.18	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	310	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	60		
*Winding resistance (25°C) **	1.14	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	1090	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	10.4	*Vrms / (rad/s)*	*ku*
Torque constant	16.8	*N.m / Arms*	*Kt*
Short circuit current	43.8	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	9.02	*mH*	*Lq*
*Inductance Ld **	9.15	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.135	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	370	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	0.44 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

BRUSHLESS MOTOR

TKA204HV

ELECTRONIC DRIVE

Drive 25/122 Arms

No UL certification

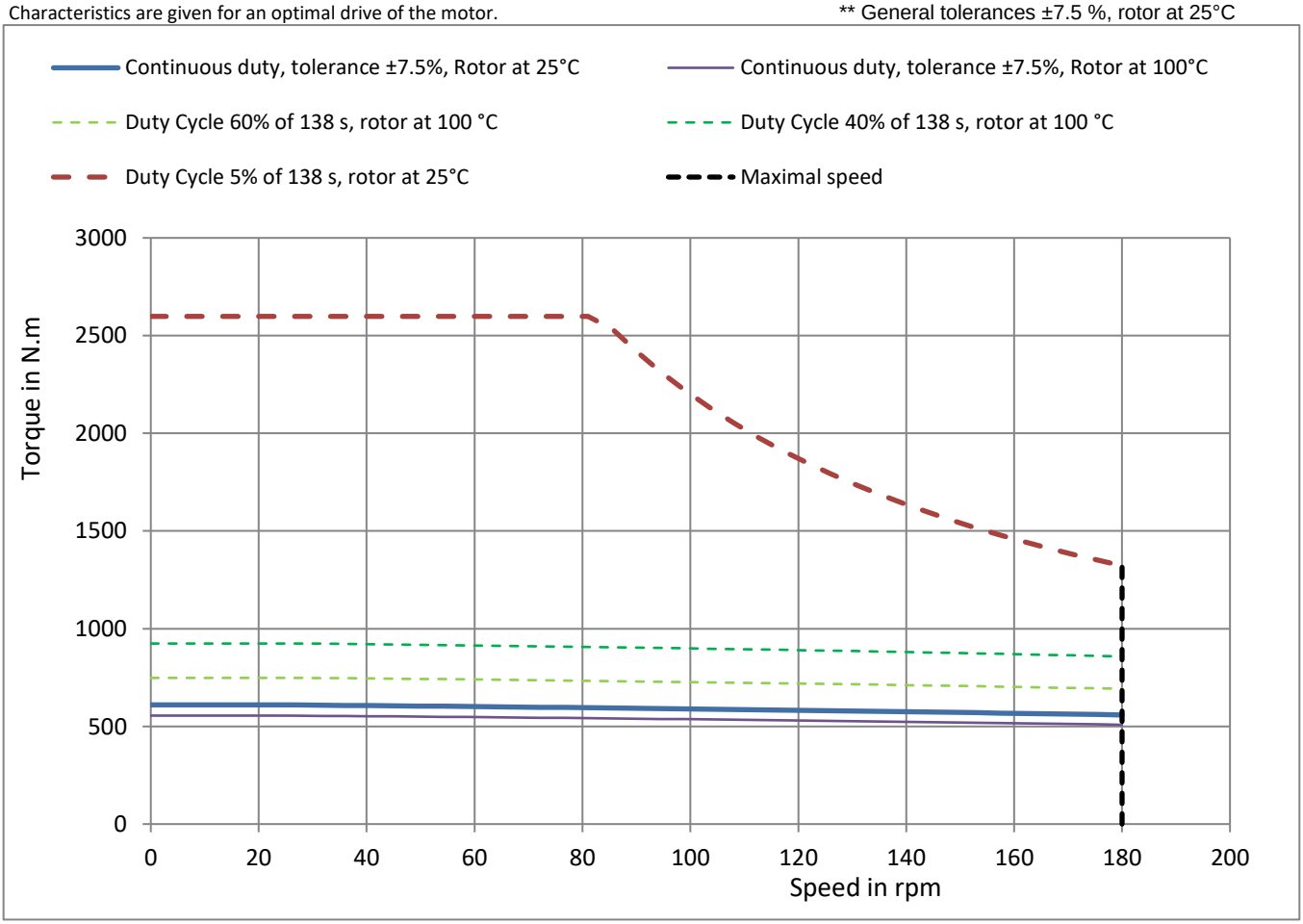
Pn	**Rated power ****	10.5	*kW*	
Mn	**Rated torque ****	558	*Nm*	**Cooling type :**
Nn	**Rated speed**	180	*rpm*	Natural Air Cooling
In	**Rated current**	20.7	A_{rms}	Exchange Surface 0.82 m²
Un	**Rated voltage ***	342	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	610	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	22.2	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	2600	*Nm*	Altitude : < 1000 m
I_p	Max. current	122	A_{rms}	Thermal class : F
N_p	Max. speed	180	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	0.35	*kg.m²*	Number of poles : 60
Ke	Back emf constant at 1000 rpm (25°C)*	1780	V_{rms}	Electrical frequency @Np 90 Hz
Kt	Torque sensitivity (rotor 25°C)	27.4	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	1.35	*Ω*	at rated torque : 87.6 %
L	Winding inductance *	11.9	*mH*	at 75% of rated torque : 89.9 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA204HV Parameters

ELECTRONIC DRIVE

Drive 25/122 Arms

No UL certification

Main characteristics

*Rated power ***	10.5	*kW*	*Ps1*
*Peak power ***	24.9	*kW*	*Ps6*
*Low speed torque ***	610	*N.m*	*Mo*
*Low speed peak torque ***	2600	*N.m*	*MoS6*
Nominal speed (S1)	180	*rpm*	*Nb*
*Max speed *****	180	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	22.2	*Arms*	*Io*
S6 current at low speed	122	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	0.35	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	180	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	60		
*Winding resistance (25°C) **	1.35	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	1780	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	17	*Vrms / (rad/s)*	*ku*
Torque constant	27.4	*N.m / Arms*	*Kt*
Short circuit current	54	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	11.9	*mH*	*Lq*
*Inductance Ld **	12.1	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0745	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	350	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	0.82 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

BRUSHLESS MOTOR

TKA206HS

ELECTRONIC DRIVE

Drive 40/195 Arms

No UL certification

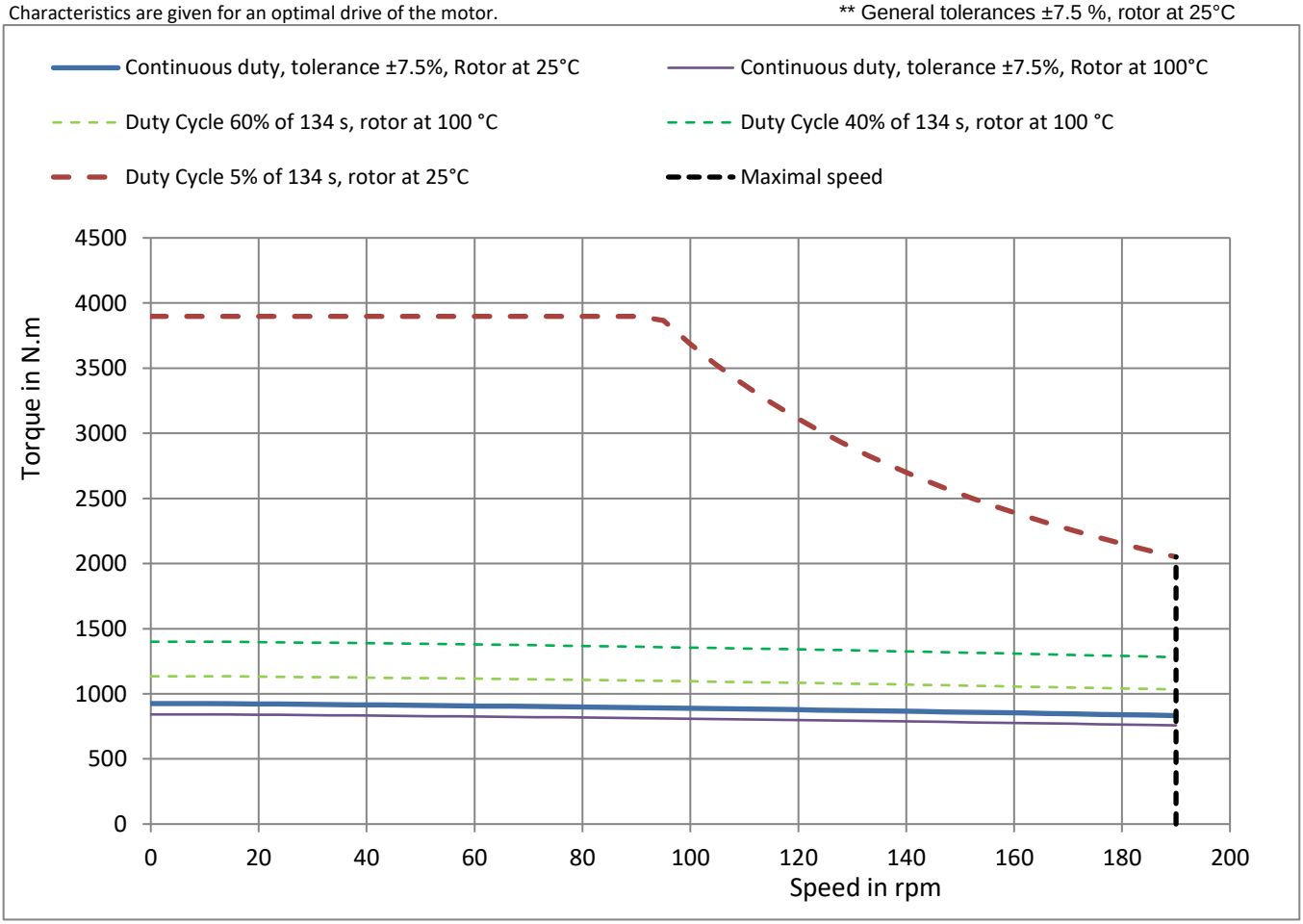
Pn	**Rated power ****	16.6	*kW*	
Mn	**Rated torque ****	832	*Nm*	**Cooling type :**
Nn	**Rated speed**	190	*rpm*	Natural Air Cooling
In	**Rated current**	32.7	A_{rms}	Exchange Surface 1.2 m²
Un	**Rated voltage ***	338	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	925	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	35.7	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	3900	*Nm*	Altitude : < 1000 m
I_p	Max. current	195	A_{rms}	Thermal class : F
N_p	Max. speed	190	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	0.52	*kg.m²*	Number of poles : 60
Ke	Back emf constant at 1000 rpm (25°C)*	1670	V_{rms}	Electrical frequency @Np 95 Hz
Kt	Torque sensitivity (rotor 25°C)	25.9	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	0.779	*Ω*	at rated torque : 88.3 %
L	Winding inductance *	7.08	*mH*	at 75% of rated torque : 90.3 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA206HS Parameters

ELECTRONIC DRIVE

Drive 40/195 Arms

No UL certification

Main characteristics

*Rated power ** *	16.6	*kW*	*Ps1*
*Peak power ** *	40.8	*kW*	*Ps6*
*Low speed torque ** *	925	*N.m*	*Mo*
*Low speed peak torque ** *	3900	*N.m*	*MoS6*
Nominal speed (S1)	190	*rpm*	*Nb*
*Max speed **** *	190	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	35.7	*Arms*	*Io*
S6 current at low speed	195	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	0.52	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	190	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	60		
*Winding resistance (25°C) **	0.779	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	1670	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	15.9	*Vrms / (rad/s)*	*ku*
Torque constant	25.9	*N.m / Arms*	*Kt*
Short circuit current	85.9	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	7.08	*mH*	*Lq*
*Inductance Ld **	7.16	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0514	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	340	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	1.2 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

BRUSHLESS MOTOR

TKA302HP

ELECTRONIC DRIVE

Drive 25/86 Arms

No UL certification

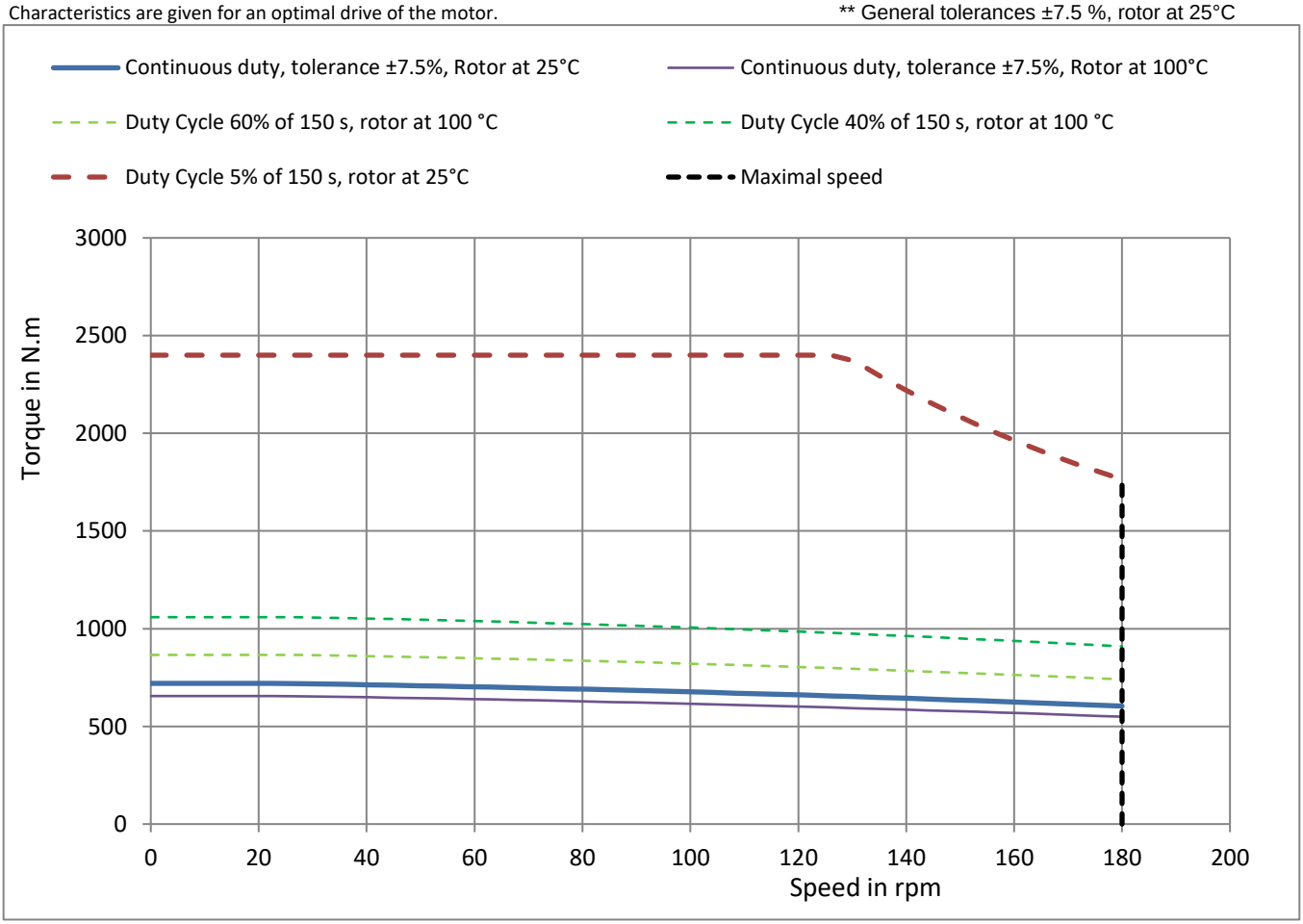
Pn	**Rated power ****	11.4	*kW*	
Mn	**Rated torque ****	604	*Nm*	**Cooling type :**
Nn	**Rated speed**	180	*rpm*	Natural Air Cooling
In	**Rated current**	20.5	A_{rms}	Exchange Surface 0.64 m²
Un	**Rated voltage ***	355	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	720	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	24	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	2400	*Nm*	Altitude : < 1000 m
I_p	Max. current	85.9	A_{rms}	Thermal class : F
N_p	Max. speed	180	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	1.2	*kg.m²*	Number of poles : 90
Ke	Back emf constant at 1000 rpm (25°C)*	1880	V_{rms}	Electrical frequency @Np 135 Hz
Kt	Torque sensitivity (rotor 25°C)	30	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	0.88	*Ω*	at rated torque : 90.9 %
L	Winding inductance *	6.58	*mH*	at 75% of rated torque : 91.6 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA302HP Parameters

ELECTRONIC DRIVE

Drive 25/86 Arms

No UL certification

Main characteristics

*Rated power ***	11.4	*kW*	*Ps1*
*Peak power ***	33.3	*kW*	*Ps6*
*Low speed torque ***	720	*N.m*	*Mo*
*Low speed peak torque ***	2400	*N.m*	*MoS6*
Nominal speed (S1)	180	*rpm*	*Nb*
*Max speed *****	180	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	24	*Arms*	*Io*
S6 current at low speed	85.9	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	1.2	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	180	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	90		
*Winding resistance (25°C) **	0.88	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	1880	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	18	*Vrms / (rad/s)*	*ku*
Torque constant	30	*N.m / Arms*	*Kt*
Short circuit current	68.8	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	6.58	*mH*	*Lq*
*Inductance Ld **	6.71	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0903	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	380	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	0.64 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

BRUSHLESS MOTOR

TKA304HN

ELECTRONIC DRIVE

Drive 45/157 Arms

No UL certification

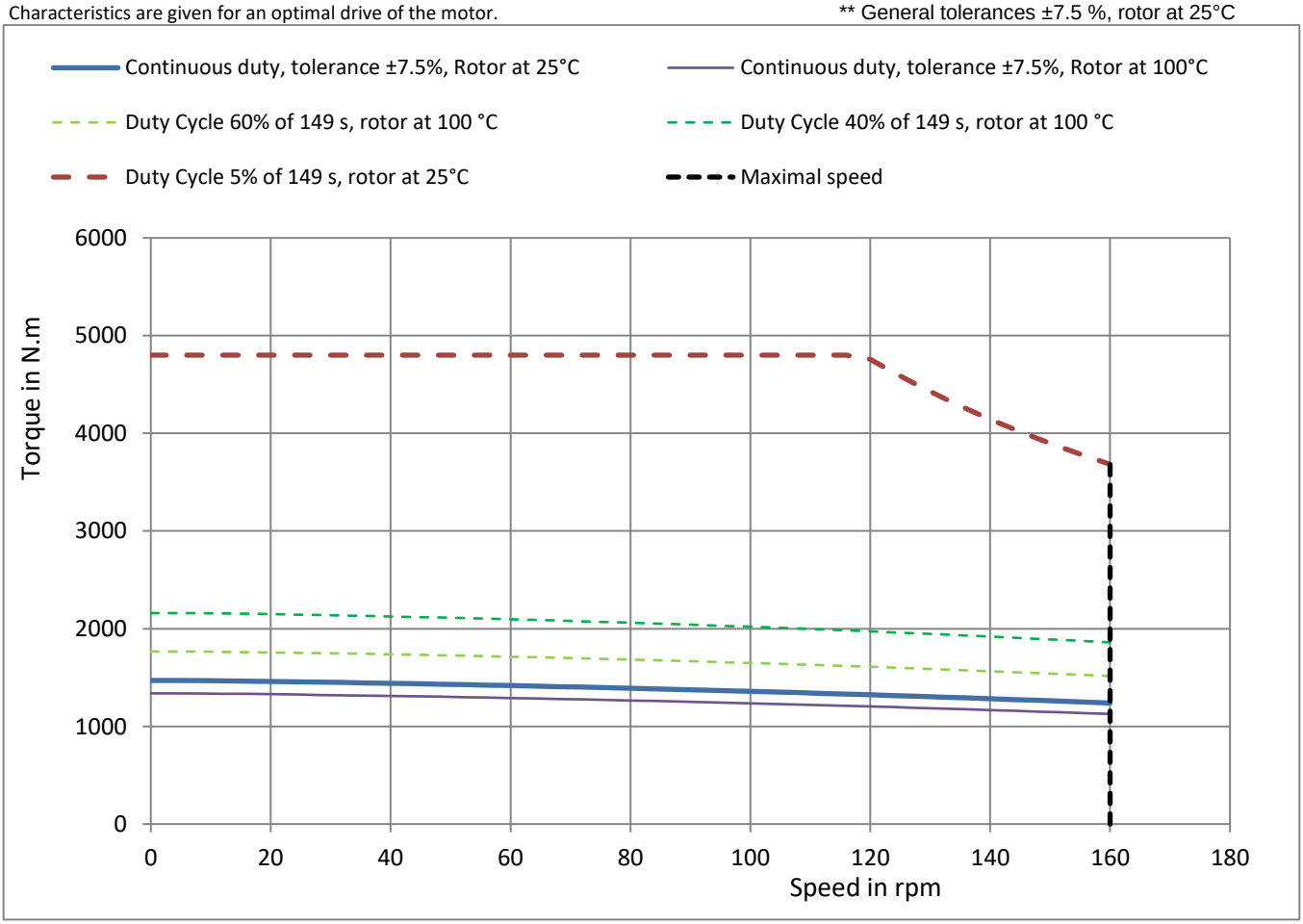
Pn	**Rated power ****	20.8	*kW*	
Mn	**Rated torque ****	1240	*Nm*	**Cooling type :**
Nn	**Rated speed**	160	*rpm*	Natural Air Cooling
In	**Rated current**	38.3	A_{rms}	Exchange Surface 1.2 m²
Un	**Rated voltage ***	346	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	1470	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	44.6	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	4800	*Nm*	Altitude : < 1000 m
I_p	Max. current	157	A_{rms}	Thermal class : F
N_p	Max. speed	160	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	2.3	*kg.m²*	Number of poles : 90
Ke	Back emf constant at 1000 rpm (25°C)*	2070	V_{rms}	Electrical frequency @Np 120 Hz
Kt	Torque sensitivity (rotor 25°C)	33	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	0.452	*Ω*	at rated torque : 91.2 %
L	Winding inductance *	3.96	*mH*	at 75% of rated torque : 92 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA304HN Parameters

ELECTRONIC DRIVE

Drive 45/157 Arms

No UL certification

Main characteristics

*Rated power ** *	20.8	*kW*	*Ps1*
*Peak power ** *	61.7	*kW*	*Ps6*
*Low speed torque ** *	1470	*N.m*	*Mo*
*Low speed peak torque ** *	4800	*N.m*	*MoS6*
Nominal speed (S1)	160	*rpm*	*Nb*
*Max speed **** *	160	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	44.6	*Arms*	*Io*
S6 current at low speed	157	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	2.3	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	160	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	90		
*Winding resistance (25°C) **	0.452	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	2070	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	19.8	*Vrms / (rad/s)*	*ku*
Torque constant	33	*N.m / Arms*	*Kt*
Short circuit current	126	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	3.96	*mH*	*Lq*
*Inductance Ld **	4.03	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0503	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	380	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	1.2 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

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BRUSHLESS MOTOR

TKA306HM

ELECTRONIC DRIVE

Drive 55/190 Arms

No UL certification

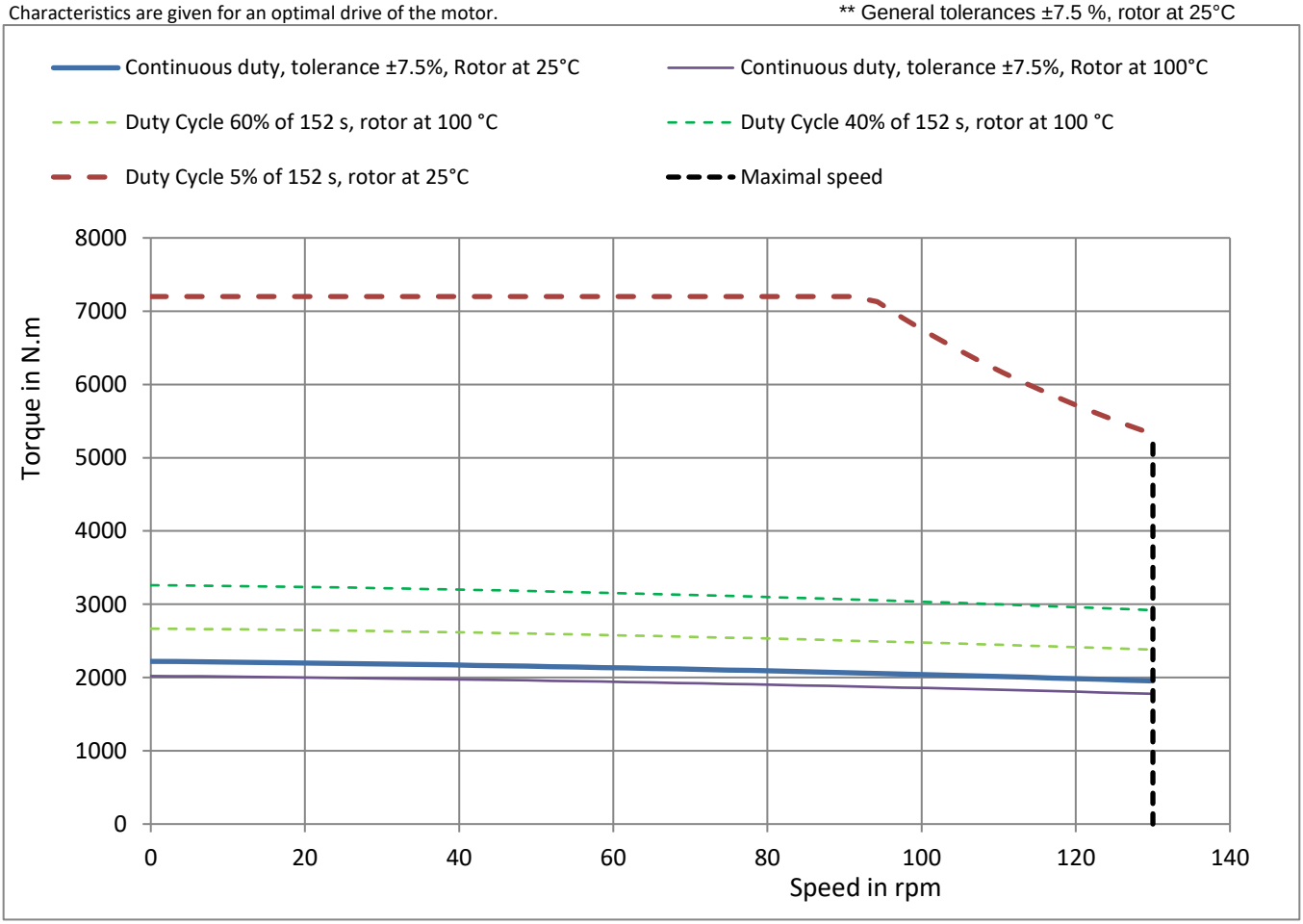
Pn	**Rated power ****	26.6	*kW*	
Mn	**Rated torque ****	1950	*Nm*	**Cooling type :**
Nn	**Rated speed**	130	*rpm*	Natural Air Cooling
In	**Rated current**	48.6	A_{rms}	Exchange Surface 1.7 m²
Un	**Rated voltage ***	352	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	2220	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	54.5	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	7200	*Nm*	Altitude : < 1000 m
I_p	Max. current	190	A_{rms}	Thermal class : F
N_p	Max. speed	130	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	3.4	*kg.m²*	Number of poles : 90
Ke	Back emf constant at 1000 rpm (25°C)*	2550	V_{rms}	Electrical frequency @Np 98 Hz
Kt	Torque sensitivity (rotor 25°C)	40.7	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	0.424	*Ω*	at rated torque : 90.5 %
L	Winding inductance *	4.03	*mH*	at 75% of rated torque : 91.8 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA306HM Parameters

ELECTRONIC DRIVE

Drive 55/190 Arms

No UL certification

Main characteristics

*Rated power ** *	26.6	*kW*	*Ps1*
*Peak power ** *	72.5	*kW*	*Ps6*
*Low speed torque ** *	2220	*N.m*	*Mo*
*Low speed peak torque ** *	7200	*N.m*	*MoS6*
Nominal speed (S1)	130	*rpm*	*Nb*
*Max speed **** *	130	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	54.5	*Arms*	*Io*
S6 current at low speed	190	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	3.4	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	130	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	90		
*Winding resistance (25°C) **	0.424	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	2550	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	24.4	*Vrms / (rad/s)*	*ku*
Torque constant	40.7	*N.m / Arms*	*Kt*
Short circuit current	153	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	4.03	*mH*	*Lq*
*Inductance Ld **	4.1	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0349	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	380	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	1.7 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

BRUSHLESS MOTOR

TKA402HP

ELECTRONIC DRIVE

Drive 50/241 Arms

No UL certification

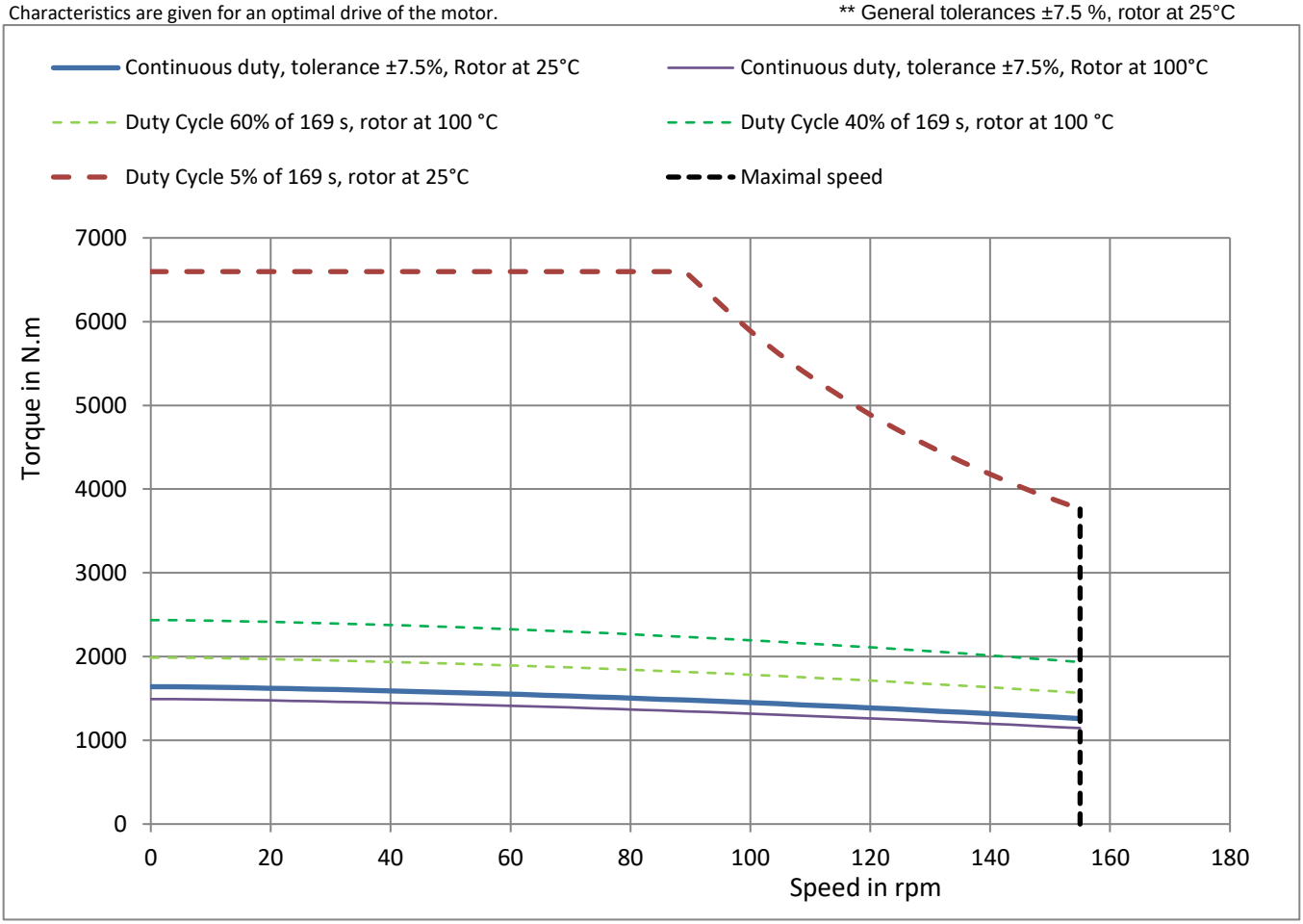
Pn	**Rated power ****	20.4	*kW*	
Mn	**Rated torque ****	1260	*Nm*	**Cooling type :**
Nn	**Rated speed**	155	*rpm*	Natural Air Cooling
In	**Rated current**	37.8	A_{rms}	Exchange Surface 0.94 m²
Un	**Rated voltage ***	344	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	1640	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	47.6	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	6600	*Nm*	Altitude : < 1000 m
I_p	Max. current	241	A_{rms}	Thermal class : F
N_p	Max. speed	155	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	3.5	*kg.m²*	Number of poles : 120
Ke	Back emf constant at 1000 rpm (25°C)*	2190	V_{rms}	Electrical frequency @Np 155 Hz
Kt	Torque sensitivity (rotor 25°C)	34.5	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	0.337	*Ω*	at rated torque : 92.1 %
L	Winding inductance *	3.46	*mH*	at 75% of rated torque : 92.2 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA402HP Parameters

ELECTRONIC DRIVE

Drive 50/241 Arms

No UL certification

Main characteristics

*Rated power ** *	20.4	*kW*	*Ps1*
*Peak power ** *	61.8	*kW*	*Ps6*
*Low speed torque ** *	1640	*N.m*	*Mo*
*Low speed peak torque ** *	6600	*N.m*	*MoS6*
Nominal speed (S1)	155	*rpm*	*Nb*
*Max speed **** *	155	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	47.6	*Arms*	*Io*
S6 current at low speed	241	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	3.5	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	155	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	120		
*Winding resistance (25°C) **	0.337	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	2190	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	20.9	*Vrms / (rad/s)*	*ku*
Torque constant	34.5	*N.m / Arms*	*Kt*
Short circuit current	115	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	3.46	*mH*	*Lq*
*Inductance Ld **	3.49	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0587	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	430	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	0.94 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

BRUSHLESS MOTOR

TKA404HR

ELECTRONIC DRIVE

Drive 70/333 Arms

No UL certification

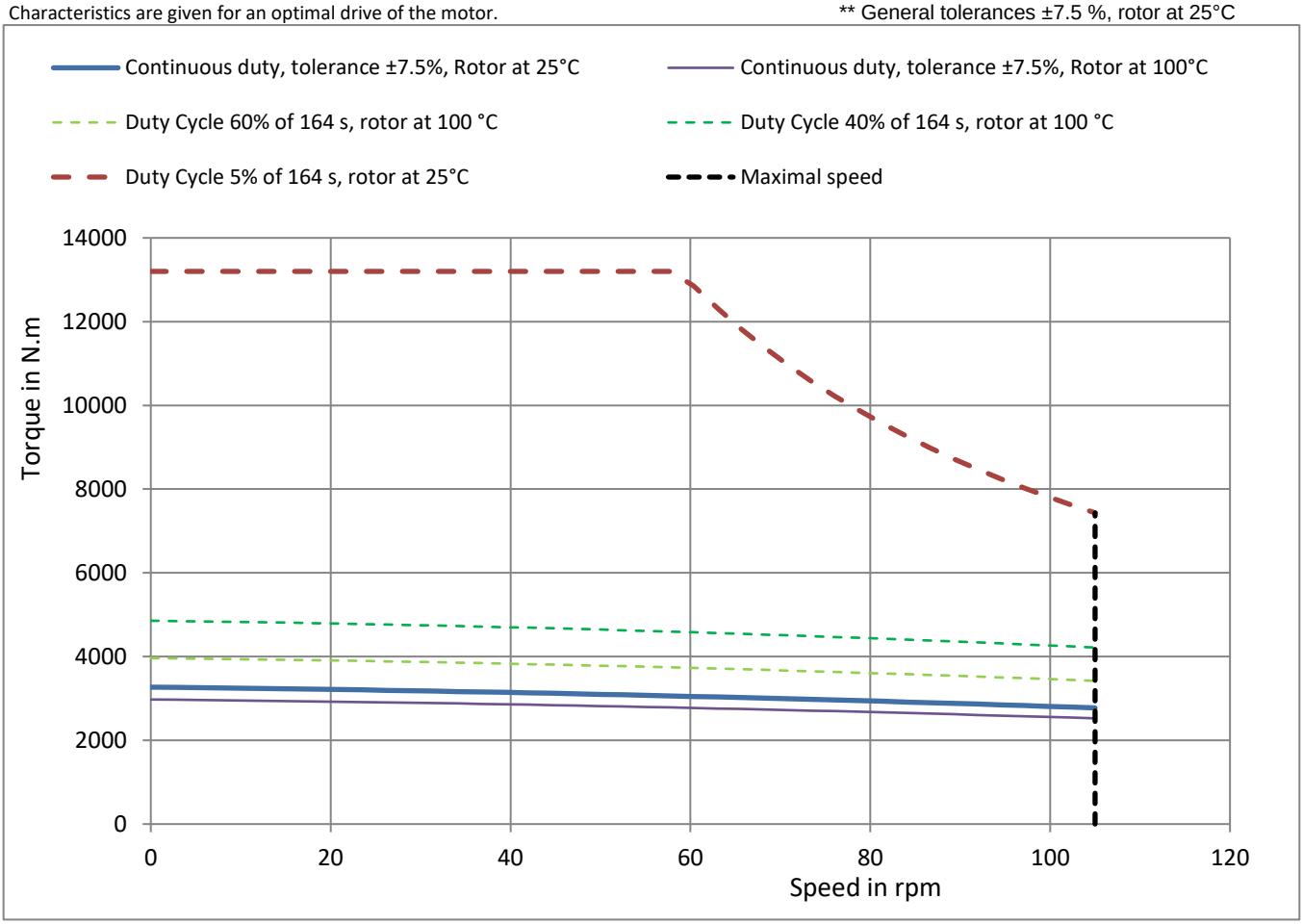
Pn	**Rated power ****	30.5	*kW*	
Mn	**Rated torque ****	2770	*Nm*	**Cooling type :**
Nn	**Rated speed**	105	*rpm*	Natural Air Cooling
In	**Rated current**	56.9	A_{rms}	Exchange Surface 1.7 m²
Un	**Rated voltage ***	346	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	3270	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	65.7	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	13200	*Nm*	Altitude : < 1000 m
I_p	Max. current	333	A_{rms}	Thermal class : F
N_p	Max. speed	105	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	6.8	*kg.m²*	Number of poles : 120
Ke	Back emf constant at 1000 rpm (25°C)*	3160	V_{rms}	Electrical frequency @Np 105 Hz
Kt	Torque sensitivity (rotor 25°C)	49.8	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	0.319	*Ω*	at rated torque : 90.9 %
L	Winding inductance *	3.61	*mH*	at 75% of rated torque : 91.9 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA404HR Parameters

ELECTRONIC DRIVE

Drive 70/333 Arms

No UL certification

Main characteristics

*Rated power ***	30.5	*kW*	*Ps1*
*Peak power ***	81.7	*kW*	*Ps6*
*Low speed torque ***	3270	*N.m*	*Mo*
*Low speed peak torque ***	13200	*N.m*	*MoS6*
Nominal speed (S1)	105	*rpm*	*Nb*
*Max speed *****	105	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	65.7	*Arms*	*Io*
S6 current at low speed	333	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	6.8	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	105	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	120		
*Winding resistance (25°C) **	0.319	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	3160	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	30.2	*Vrms / (rad/s)*	*ku*
Torque constant	49.8	*N.m / Arms*	*Kt*
Short circuit current	160	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	3.61	*mH*	*Lq*
*Inductance Ld **	3.63	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0342	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	410	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	1.7 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

BRUSHLESS MOTOR

TKA406HP

ELECTRONIC DRIVE

Drive 80/394 Arms

No UL certification

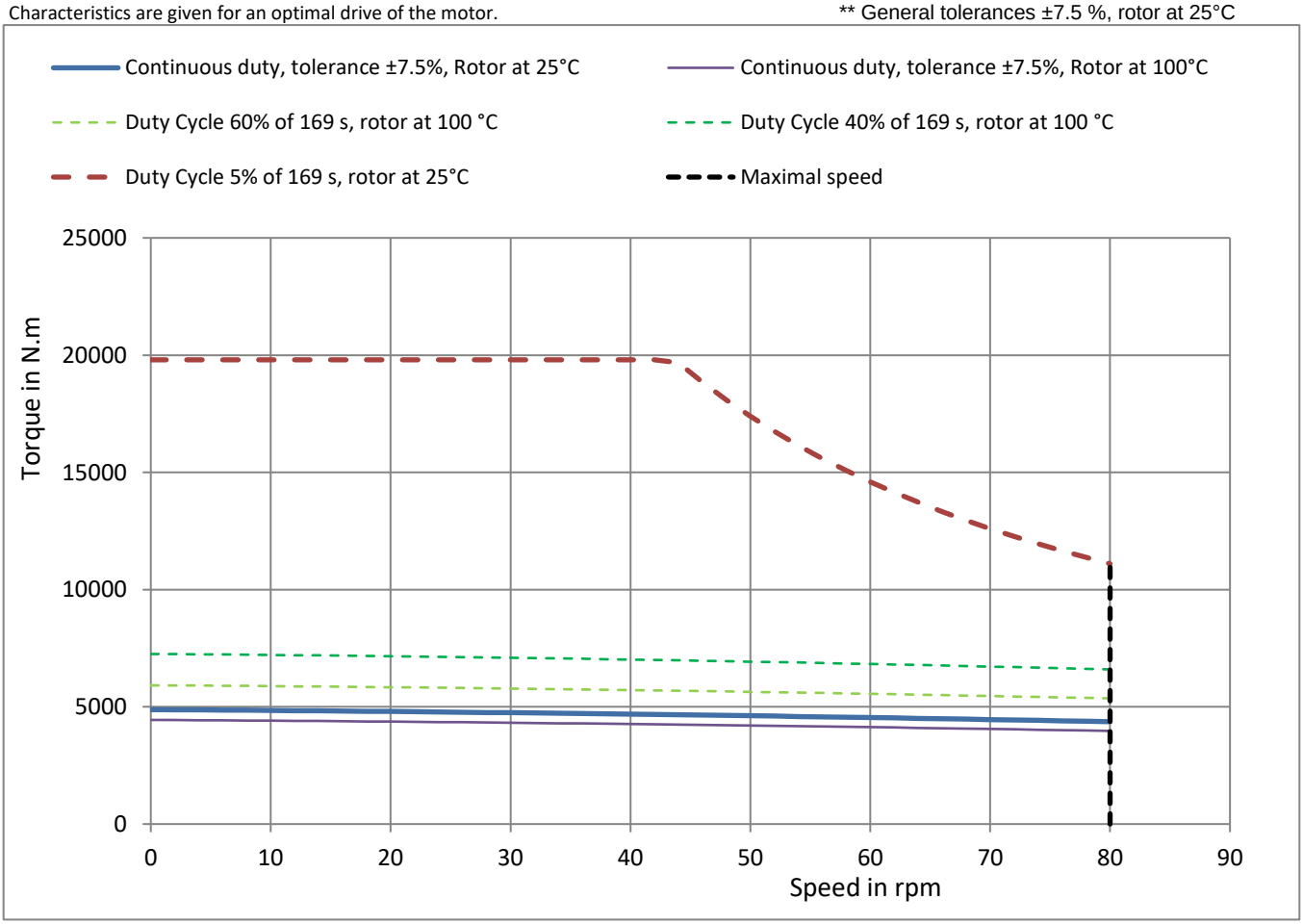
Pn	**Rated power ****	36.6	*kW*	
Mn	**Rated torque ****	4370	*Nm*	**Cooling type :**
Nn	**Rated speed**	80	*rpm*	Natural Air Cooling
In	**Rated current**	70.2	A_{rms}	Exchange Surface 2.4 m²
Un	**Rated voltage ***	341	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	4880	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	77.3	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	19800	*Nm*	Altitude : < 1000 m
I_p	Max. current	394	A_{rms}	Thermal class : F
N_p	Max. speed	80	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	10.1	*kg.m²*	Number of poles : 120
Ke	Back emf constant at 1000 rpm (25°C)*	4010	V_{rms}	Electrical frequency @Np 80 Hz
Kt	Torque sensitivity (rotor 25°C)	63.1	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	0.318	*Ω*	at rated torque : 89.8 %
L	Winding inductance *	3.87	*mH*	at 75% of rated torque : 91.3 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA406HP Parameters

ELECTRONIC DRIVE

Drive 80/394 Arms

No UL certification

Main characteristics

*Rated power ** *	36.6	*kW*	*Ps1*
*Peak power ** *	93	*kW*	*Ps6*
*Low speed torque ** *	4880	*N.m*	*Mo*
*Low speed peak torque ** *	19800	*N.m*	*MoS6*
Nominal speed (S1)	80	*rpm*	*Nb*
*Max speed **** *	80	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	77.3	*Arms*	*Io*
S6 current at low speed	394	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	10.1	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	80	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	120		
*Winding resistance (25°C) **	0.318	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	4010	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	38.3	*Vrms / (rad/s)*	*ku*
Torque constant	63.1	*N.m / Arms*	*Kt*
Short circuit current	189	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	3.87	*mH*	*Lq*
*Inductance Ld **	3.9	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0241	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	430	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	2.4 m²		

Thermal class according to IEC 60034-1 F

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C

BRUSHLESS MOTOR

TKA40CHK

ELECTRONIC DRIVE

Drive 120/578 Arms

No UL certification

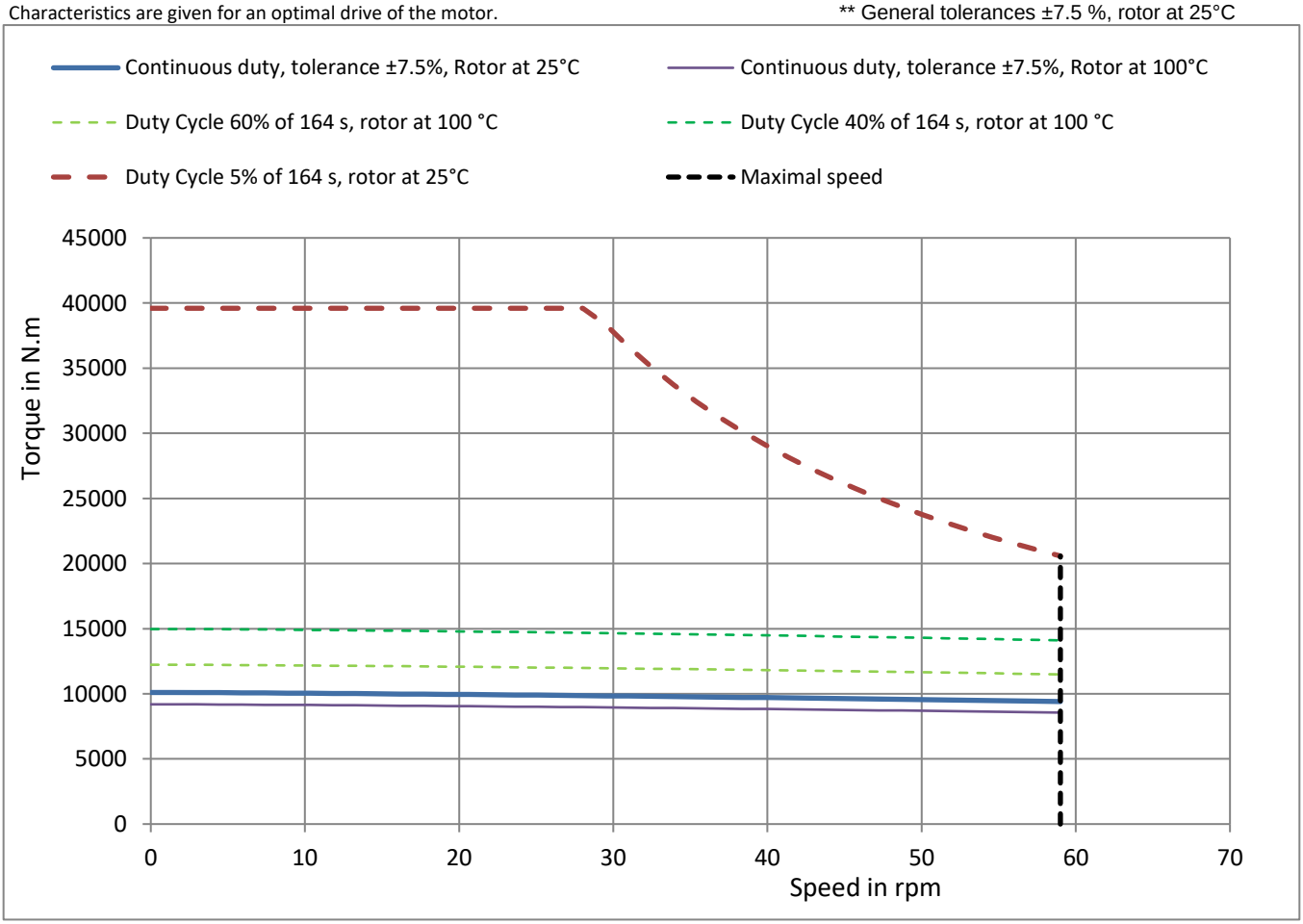
Pn	**Rated power ****	58.1	*kW*	
Mn	**Rated torque ****	9400	*Nm*	**Cooling type :**
Nn	**Rated speed**	59	*rpm*	Natural Air Cooling
In	**Rated current**	110	A_{rms}	Exchange Surface 4.6 m²
Un	**Rated voltage ***	358	V_{rms}	
UR	**Voltage of the mains**	400	*Vrms*	
U	DC voltage supply when motor is loaded	540	*V*	
M_o	**Low speed torque ****	10100	*N.m*	**Environment :**
I_o	**Permanent current at low speed**	117	A_{rms}	Ambient temperature : 40°C MAX
M_p	Max. torque **	39600	*Nm*	Altitude : < 1000 m
I_p	Max. current	578	A_{rms}	Thermal class : F
N_p	Max. speed	59	*rpm*	(according to IEC 60034-1)
J	Rotor inertia	20	*kg.m²*	Number of poles : 120
Ke	Back emf constant at 1000 rpm (25°C)*	5470	V_{rms}	Electrical frequency @Np 59 Hz
Kt	Torque sensitivity (rotor 25°C)	86.3	Nm/A_{rms}	**Efficiency :**
Rb	Winding resistance(25°C) *	0.291	*Ω*	at rated torque : 86.8 %
L	Winding inductance *	3.6	*mH*	at 75% of rated torque : 89.6 %

All data are given in typical values under standard conditions.

Characteristics are given for an optimal drive of the motor.

* Phase to Phase

** General tolerances ±7.5 %, rotor at 25°C



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BRUSHLESS MOTOR

TKA40CHK Parameters

ELECTRONIC DRIVE

Drive 120/578 Arms

No UL certification

Main characteristics

*Rated power ***	58.1	*kW*	*Ps1*
*Peak power ***	127	*kW*	*Ps6*
*Low speed torque ***	10100	*N.m*	*Mo*
*Low speed peak torque ***	39600	*N.m*	*MoS6*
Nominal speed (S1)	59	*rpm*	*Nb*
*Max speed *****	59	*rpm*	*Nmax*
DC voltage supply when motor is loaded	540	*Vdc*	*Û*
Permanent current at low speed	117	*Arms*	*Io*
S6 current at low speed	578	*Arms*	*IoS6*

Mechanical parameters

Rotor inertia	20	*kg.m²*	*J*
Motor mass	--	*kg*	*M*
Maximum speed with Drive	59	*rpm*	*Nmax*
Maximum mechanical speed	-	*rpm*	*Nmec*

Electrical parameters

Number of poles	120		
*Winding resistance (25°C) **	0.291	*Ω*	*Rb*
*Back EMF voltage/ 1000 rpm **	5470	*Vrms / 1000 rpm*	*ke*
*Back EMF voltage / (rad/s) **	52.2	*Vrms / (rad/s)*	*ku*
Torque constant	86.3	*N.m / Arms*	*Kt*
Short circuit current	277	*Arms*	*Icc*
*Inductance Lq (Back EMF voltage axis) **	3.6	*mH*	*Lq*
*Inductance Ld **	3.62	*mH*	*Ld*
Optimal phasing at permanent current	10	*electrical degree*	*ψo*
Optimal phasing at S6 current	20	*electrical degree*	*ψm*

Thermal parameters

Motor thermal resistance	0.0128	*K/W*	*Rth*
Motor thermal time constant	--	*s*	*Tth*
Winding thermal time constant	410	*s*	*Tthw*
Natural Air Cooling / Exchange Surface	4.6 m²		
Thermal class according to IEC 60034-1	F		

* Phase to phase

** Tolerances ± 7.5% and rotor at 25°C