motor type   G4x2

These are calculated curves.
The actual motor performance might vary up to 5%

ideal motor characteristic;

input:

stack length	L	5,00	*0,1 inch
maximum Current	Imax [Arms]	18	Arms
connection of coils	D / S	S	
number of turns	#	11	
copper fill factor	Kcu	31,0%	
saturation at max. current	Satt	3,1%	
bus voltage	Udc	48	V
rated speed	Nn	6000	rpm
kt-variation factor	km	1,00	
ambiente temperature	Tu	25,00	°C
thermal resistance	Rth	2,969	°K/W

stall data
continuous data with:
Duty Cycle = 100 %
dT = 130 °K

continuous stall torque	① Mo [Nm]	0,22	Nm
continuous stall current	① Io [Arms]	4,67	Arms
peak stall torque	Mmax [Nm]	0,8	Nm
peak stall current	Imax [Arms]	18,0	Arms

nominal values

rated torque	② Mn [Nm]	0,18	Nm
rated current	② In [Arms]	3,77	Arms
rated power	② Pn [W]	110	W
rated speed	② Nn [rpm]	6000	rpm

other data

theoretical no load speed	③ Ntheo [rpm]	11900	rpm
maximum speed	④ Nmax [rpm]	89240	rpm
torque constant	kt [Nm/Arms]	0,047	Nm/Arms
EMK-constant	ke [Vpk/rad/s]	0,039	Vpk/rad/s
terminal to terminal resistance	⑤ Rtt [Ohm]	0,682	Ohm
terminal to terminal inductance	⑤ Ltt [mH]	0,452	mH
inductance Ld	⑤ Ld [mH]	0,224	mH
inductance Lq	⑤ Lq [mH]	0,233	mH
thermal resistance	⑤ Rth [°C/W]	2,969	°C / W
electr. time constant	⑤ T [ms]	0,662	ms
inertia w/o brake	J [kgcm²]	0,0827	kgcm²
mass w/o brake	m [kg]	0,98	kg

brake

inertia with small brake	J [kgcm²]	0,1027	kgcm²
inertia with big brake	J [kgcm²]	0,0827	kgcm²
mass with small brake	m [kg]	1,18	kg
mass with big brake	m [kg]	1,18	kg

① With motor mounted on a steel plate 300 x 300 x 12 mm and
   130 °K dT between windings and still air ambient
② nominal speed at maximum continuous output power
③ speed, where EMF is equal to bus voltage 48 V
④ speed, where EMF is 50 volts
⑤ measured at 25°C