

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer : WEG GERMANY GMBH

Product line : W22Xec Increased Safety - Premium Efficiency IE3

Frame	: 315L	Locked rotor time	: 30 s (hot) 54 s (cold)
Output	: 200 kW (270 HP)	Temperature rise ⁴	: 80 K
Poles	: 2	Duty cycle	: S1
Frequency	: 50 Hz	Ambient temperature	: -20 °C to +40 °C
Rated voltage	: 400 V	Altitude	: 1000 m.a.s.l
Rated current	: 339 A	Degree of protection	: IP55
L. R. Amperes	: 2576 A	Cooling method	: IC411 - TEFC
LRC (p.u.)	: 7.6	Mounting	: B3T
No load current	: 80.0 A	Direct of rotation ¹	: Both
Rated speed	: 2977 rpm	Noise level ²	: 78.0 dB(A)
Slip	: 0.77 %	Starting method	: VFD
Rated torque	: 642 Nm	Approx. weight ³	: 1200 kg
Locked rotor torque	: 210 %	Design	: N
Pull up torque	: 175 %		
Breakdown torque	: 240 %		
Insulation class	: F		
Service factor	: 1.00		
Moment of inertia (J)	: 2.68 kgm ²		

Output	Start	50%	75%	100%	Load type	: Constant torque
Efficiency (%)	-	95.0	95.5	95.8	Load torque	: 593 Nm
Power factor	0.36	0.82	0.88	0.89	Load inertia (J=GD ² /4)	: 2.68 kgm ²

Operation limits with inverter
 25 Hz up to 50 Hz (Constant torque): 593 Nm
 Maximum peak voltage phase-to-phase <= 1600 V
 dV/dt <= 5200 V/μs
 Rise time >= 0,1 μs

	Drive end	Non drive end	Foundation loads
Bearing type	6314-C3	6314-C3	Maximum traction : 6247 N
Lubrication interval	5000 h	5000 h	Maximum compression : 18015 N
Lubricant amount	27 g	27 g	
Lubricant type	MOBIL POLYREX EM		

Notes:
 See notes on page 2.

Losses at normative operating points (speed;torque), in percentage of rated output power

P1 (0,9;1,0)	P2 (0,5;1,0)	P3 (0,25;1,0)	P4 (0,9;0,5)	P5 (0,5;0,5)	P6 (0,5;0,25)	P7 (0,25;0,25)
4.4	3.4	3.0	2.2	1.4	0.9	0.5

Standards	Specification	: IEC 60034-1	Vibration	: IEC 60034-14
	Tests	: IEC 60034-2	Tolerance	: IEC 60034-1
	Noise	: IEC 60034-9		

This revision replaces and cancels the previous one, which must be eliminated.

- (1) When viewed from the drive end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At the rated point.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in IEC 60034-1.

Rev.	Summary of changes		Performed	Checked	Date
Performed by	hsteinebach			294157/2022	
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Notes:

Motor suitable for operation at 1000 m.a.s.l, 40°C of ambient temperature, load torque of 60.5 kgfm and service factor of 1.00.

ATEX: II 3G Ex ec IIC T3 Gc

Suitable for VSD application with maximum load of 185 kW.

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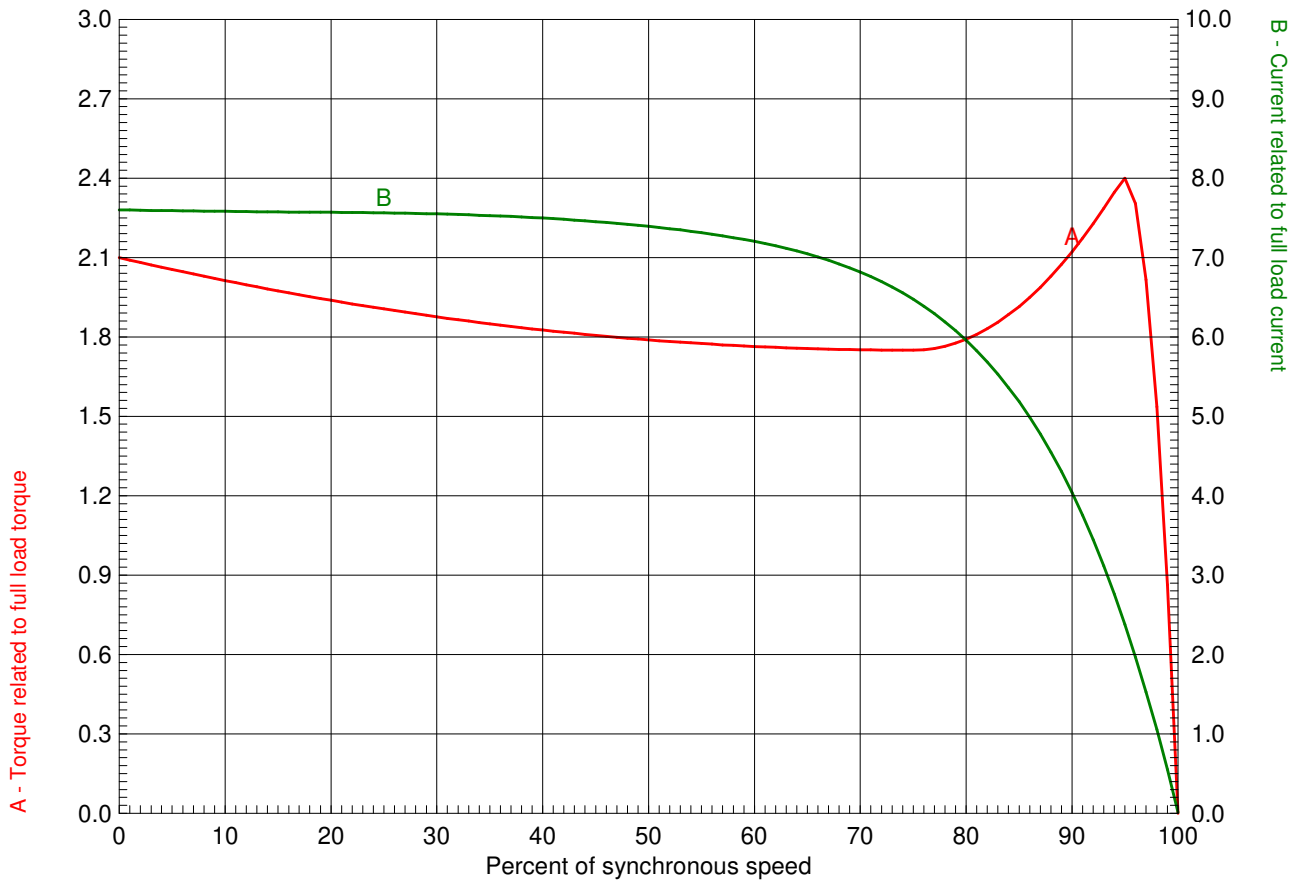
TORQUE AND CURRENT X SPEED CURVE



Three Phase Induction Motor - Squirrel Cage

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Performance : 200 kW (270 HP) 400 V 50 Hz 2P 315L

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LRC (p.u.)	: 7.6	Duty cycle	: S1
Rated torque	: 642 Nm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2977 rpm	Design	: N

Locked rotor time 100%	: 30 s (hot) 54 s (cold)
Allowable run up time 100%	: 24 s (hot) 43 s (cold)
Load inertia (J=GD ² /4)	: 2.68 kgm ²

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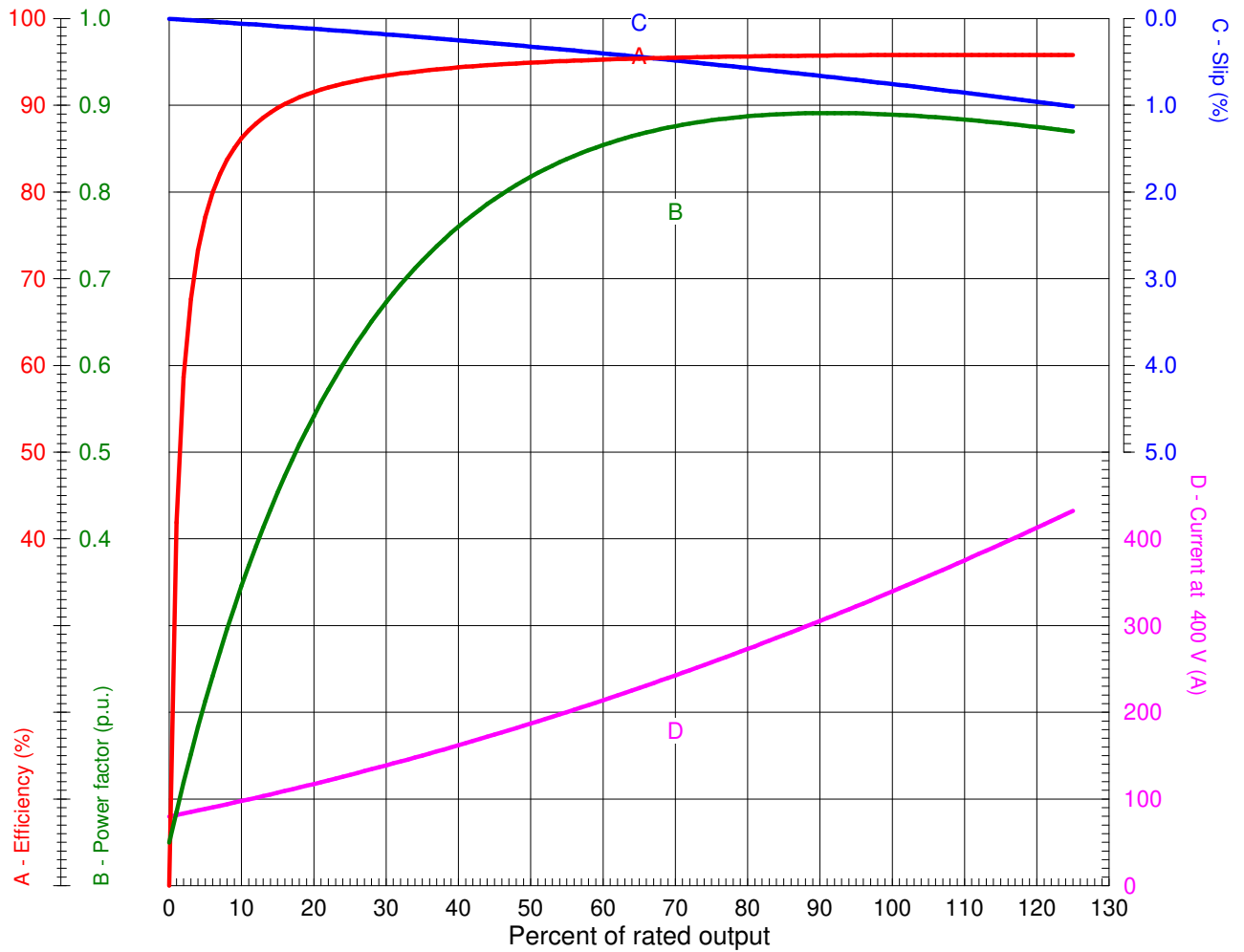
LOAD PERFORMANCE CURVE



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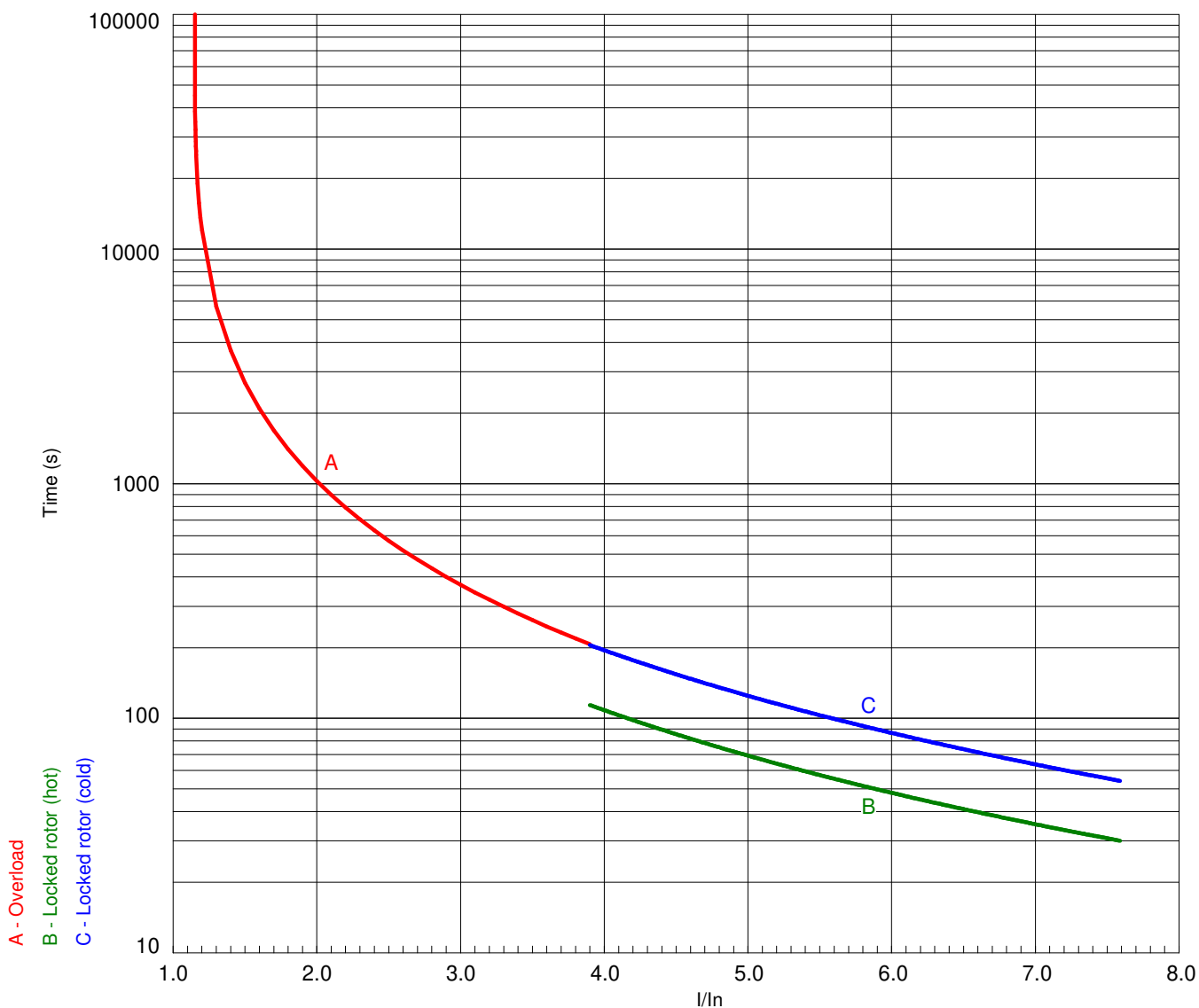
THERMAL LIMIT CURVE



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Rated torque	: 642 Nm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2977 rpm	Design	: N

Heating constant : 49.7 min
Cooling constant : 149.1 min

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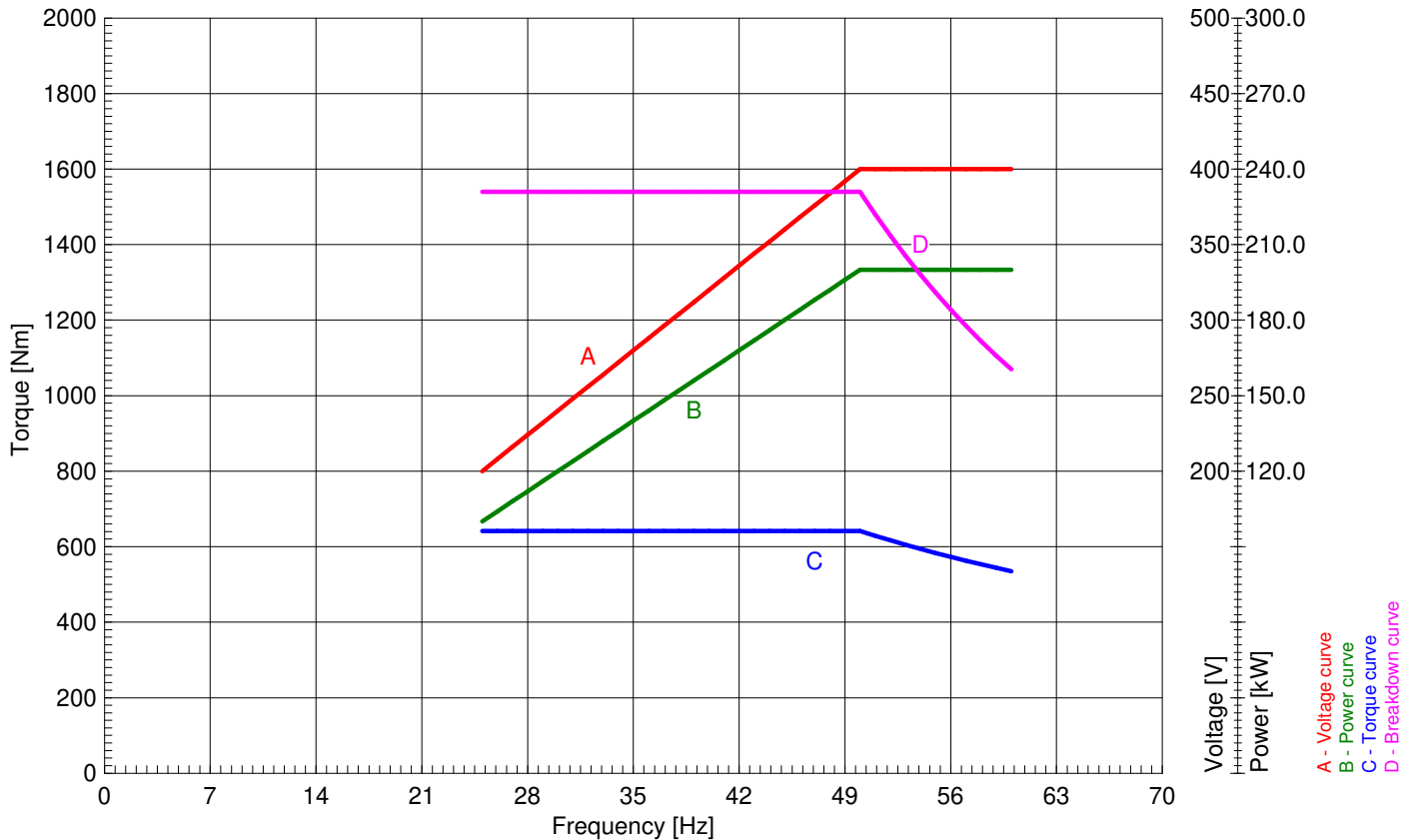
VFD OPERATION CURVE



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LRC (p.u.) : 7.6	Duty cycle : S1
Rated torque : 642 Nm	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 2977 rpm	Design : N

Operation limits with inverter	Maximum peak voltage phase-to-phase <= 1600 V
25 Hz up to 50 Hz (Constant torque): 593 Nm	dV/dt <= 5200 V/μs
	Rise time >= 0,1 μs

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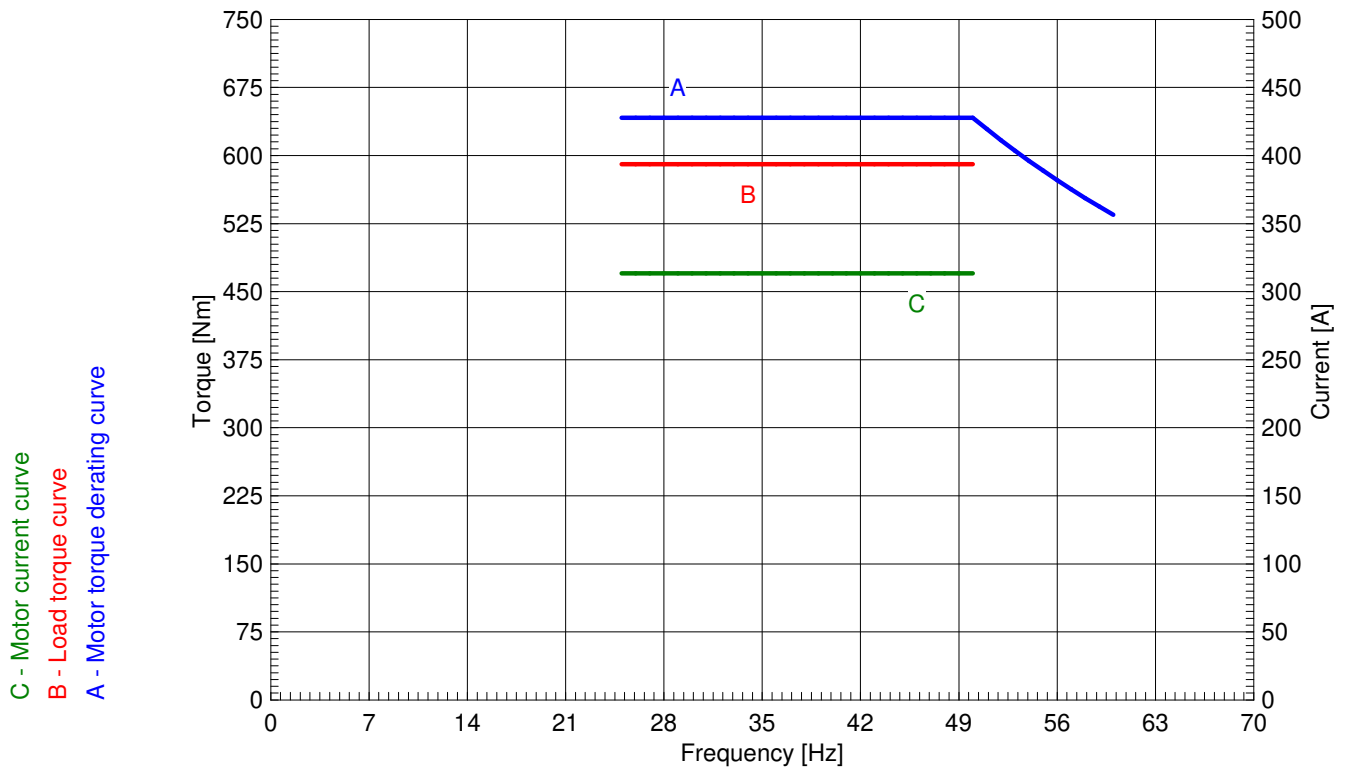
INVERTER CURVE WITH LOAD TORQUE



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Rated torque	: 642 Nm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2977 rpm	Design	: N
Maximum absorbed power	: 185 kW	Maximum torque	: 593 Nm
Minimum frequency	: 25 Hz	Minimum speed	: 1500 rpm
Maximum frequency	: 50 Hz	Maximum speed	: 3000 rpm

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