

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 14653999

Frame	: 404/5T	Locked rotor time	: 52s (cold) 29s (hot)
Output	: 50 HP (37 kW)	Temperature rise	: 80 K
Poles	: 8	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 230/460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 120/60.2 A	Protection degree	: IP55
L. R. Amperes	: 867/433 A	Cooling method	: IC411 - TEFC
LRC	: 7.2x(Code H)	Mounting	: F-1
No load current	: 49.0/24.5 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 880 rpm	Noise level ²	: 60.0 dB(A)
Slip	: 2.22 %	Starting method	: Direct On Line
Rated torque	: 298 ft.lb	Approx. weight ³	: 1012 lb
Locked rotor torque	: 170 %		
Breakdown torque	: 260 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 34.6 sq.ft.lb		
Design	: B		

Output	50%	75%	100%	Foundation loads	
Efficiency (%)	93.0	93.0	93.0	Max. traction	: 2162 lb
Power Factor	0.68	0.78	0.83	Max. compression	: 3274 lb

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)
7.3	6.3	6.3	3.0	2.2	1.3	0.9

		<u>Drive end</u>	<u>Non drive end</u>
Bearing type	:	NU-316 C3	6314 C3
Sealing	:	WSeal	WSeal
Lubrication interval	:	17000 h	20000 h
Lubricant amount	:	34 g	27 g
Lubricant type	:	Mobil Polyrex EM	

Notes

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

- (1) Looking the motor from the shaft end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At 100% of full load.

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 1 / 5 Revision		
Checked by				
Date	16/07/2026			

TORQUE AND CURRENT VS SPEED CURVE

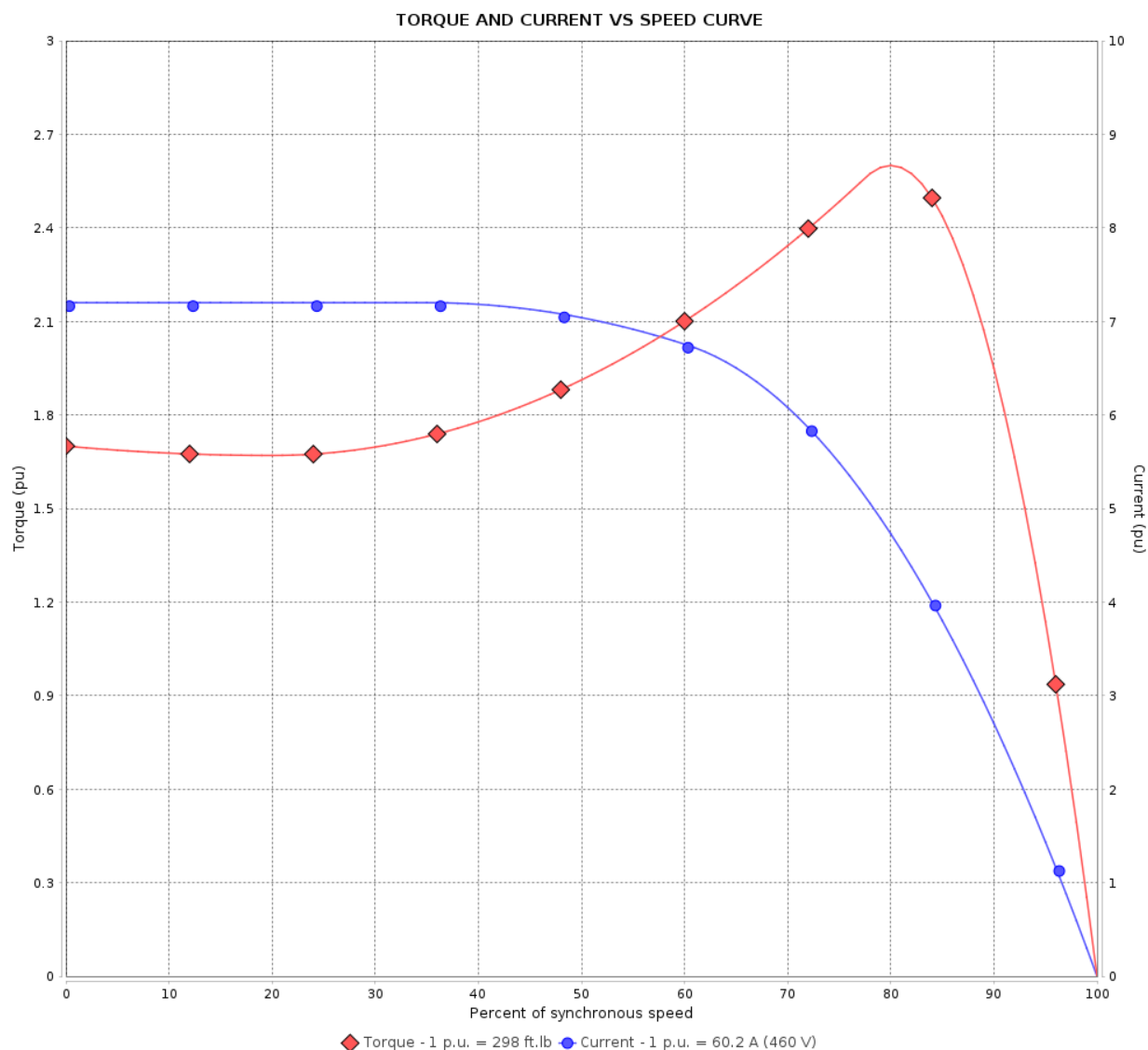
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999



Performance : 230/460 V 60 Hz 8P

Rated current : 120/60.2 A
LRC : 7.2
Rated torque : 298 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 260 %
Rated speed : 880 rpm

Moment of inertia (J) : 34.6 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Locked rotor time : 52s (cold) 29s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 2 / 5Revision		
Checked by				
Date	16/07/2026			

LOAD PERFORMANCE CURVE

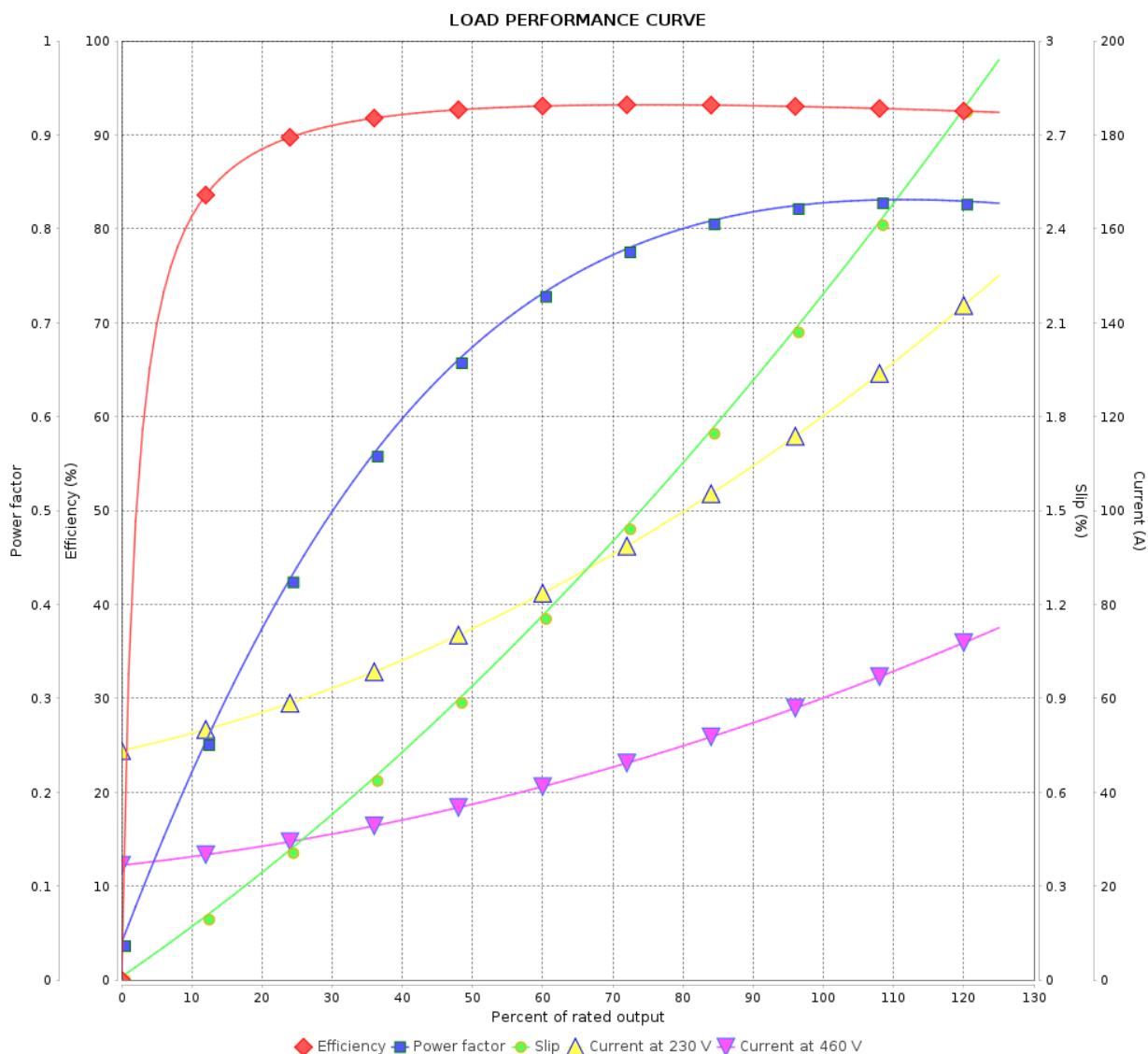
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999



Performance : 230/460 V 60 Hz 8P

Rated current : 120/60.2 A
LRC : 7.2
Rated torque : 298 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 260 %
Rated speed : 880 rpm

Moment of inertia (J) : 34.6 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 3 / 5Revision		
Checked by				
Date	16/07/2026			

THERMAL LIMIT CURVE

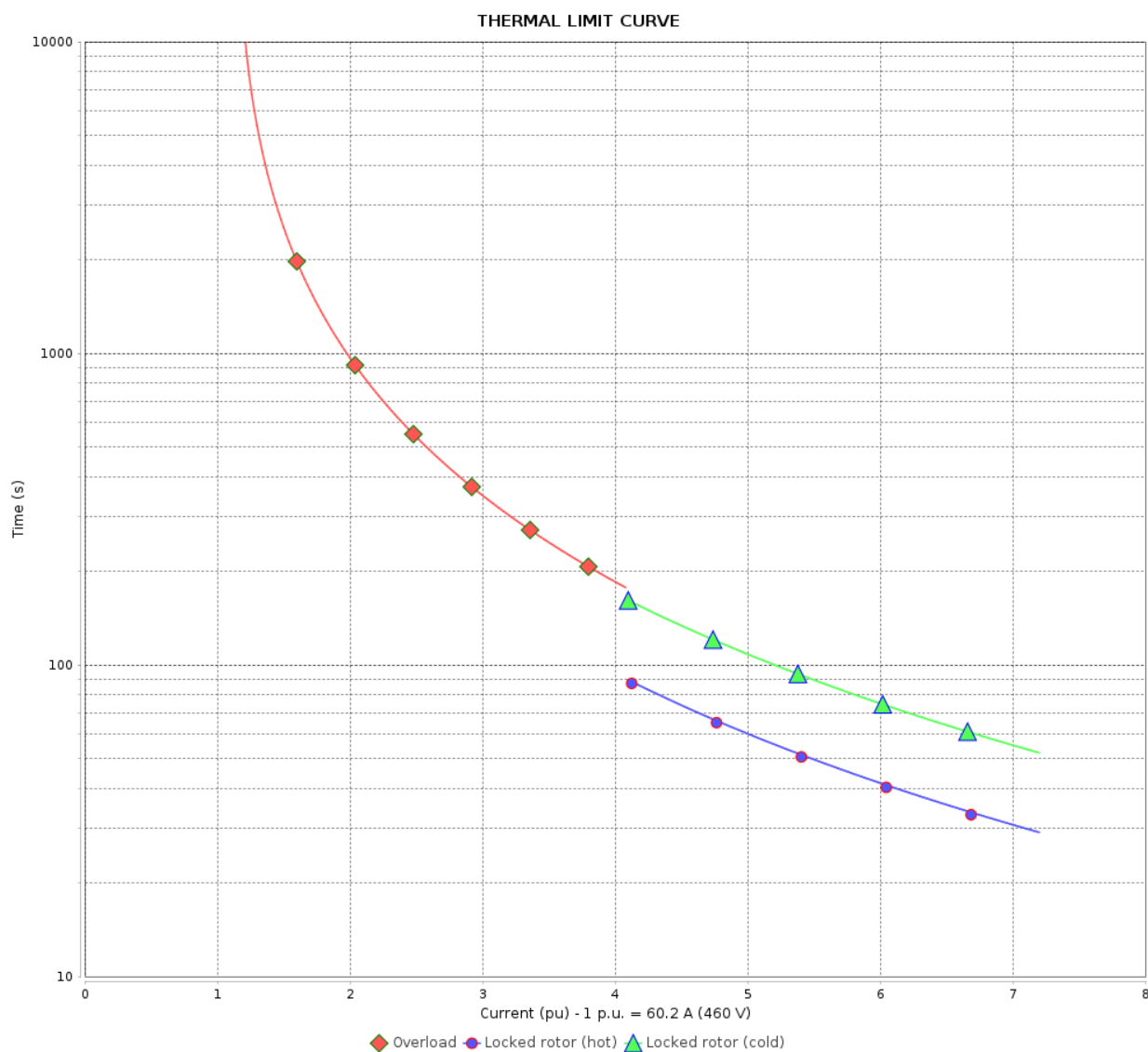
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999



Performance : 230/460 V 60 Hz 8P

Rated current : 120/60.2 A
LRC : 7.2
Rated torque : 298 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 260 %
Rated speed : 880 rpm

Moment of inertia (J) : 34.6 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

Rev.	Changes Summary		Performed	Checked	Date
Performed by		Page 4 / 5Revision			
Checked by					
Date	16/07/2026				

VFD OPERATION CURVE

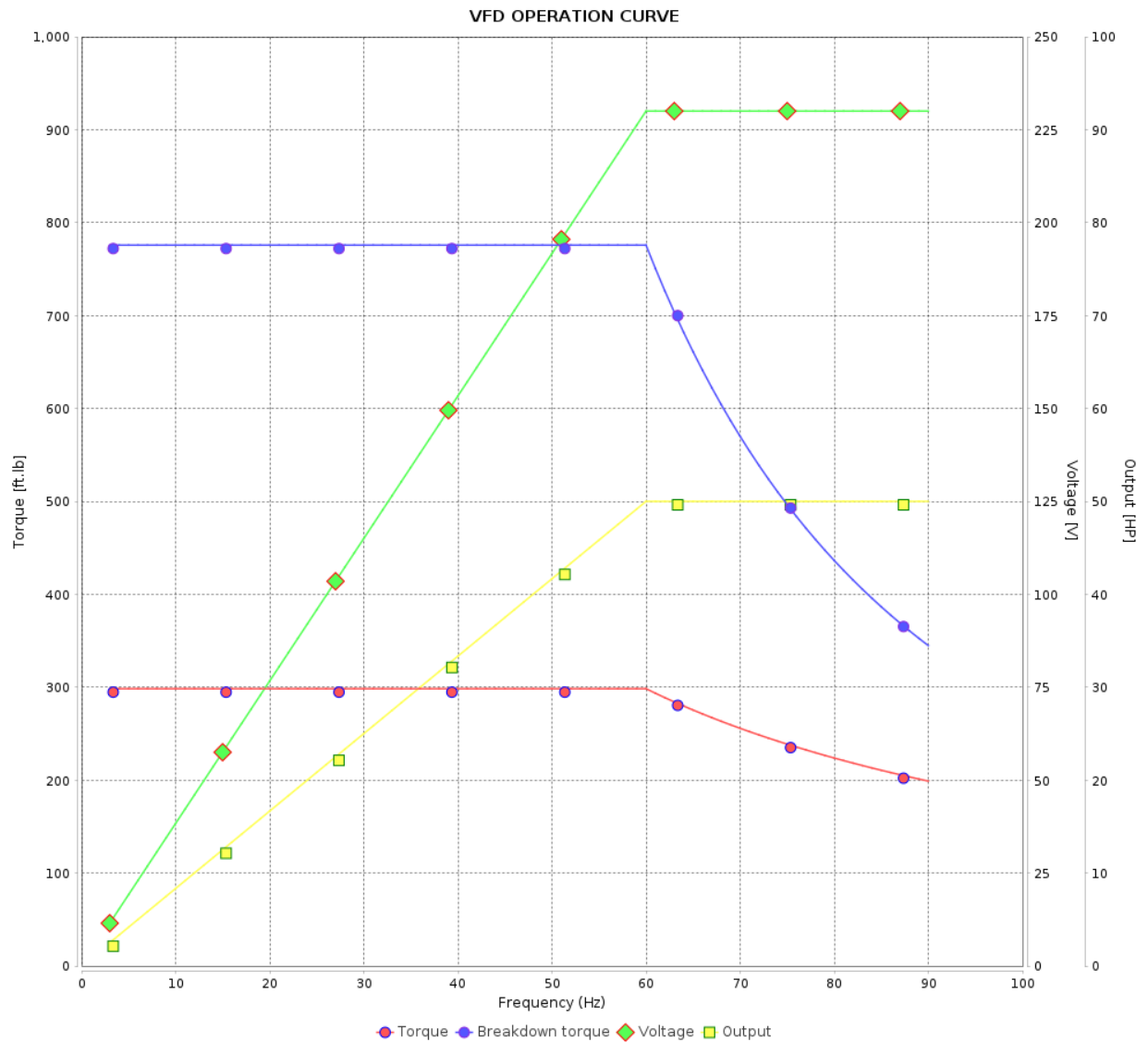
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999

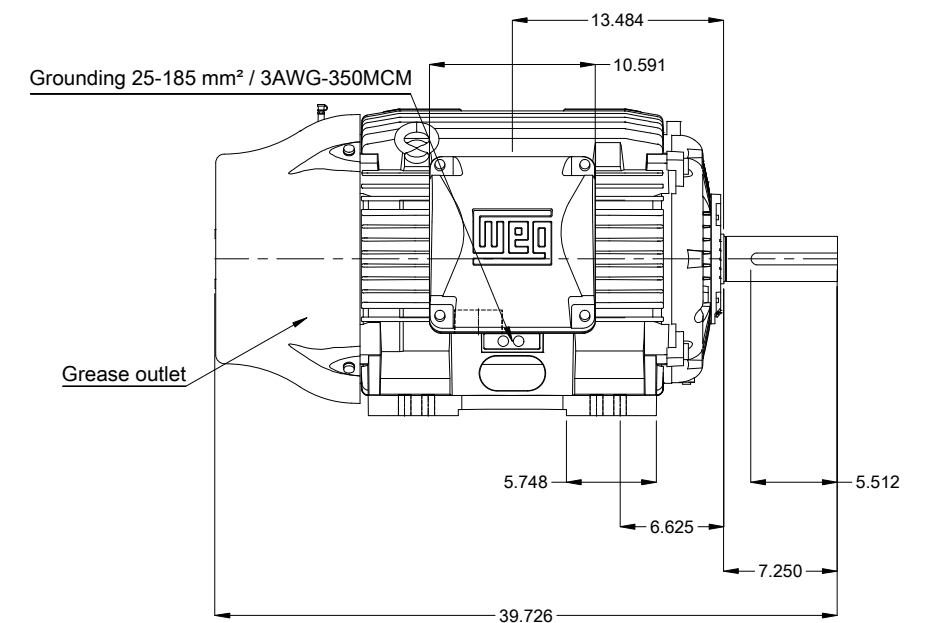
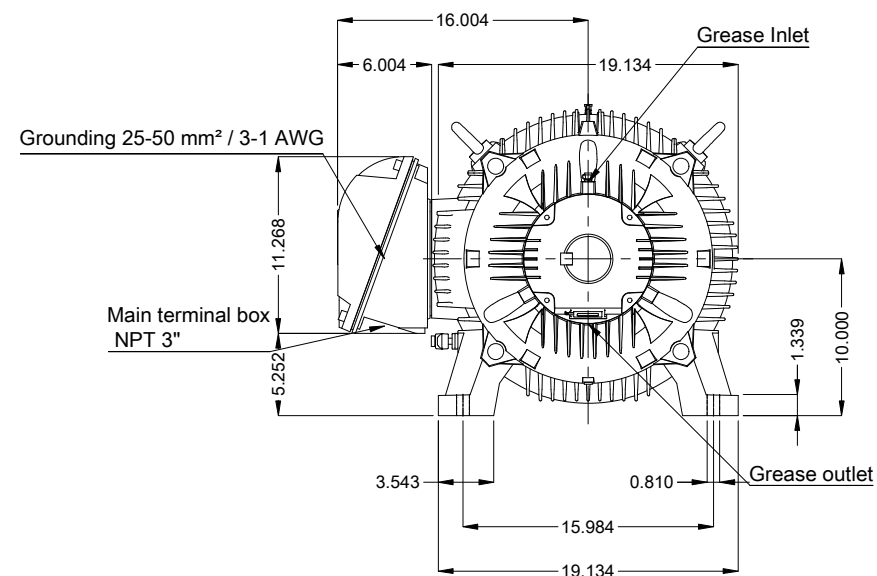
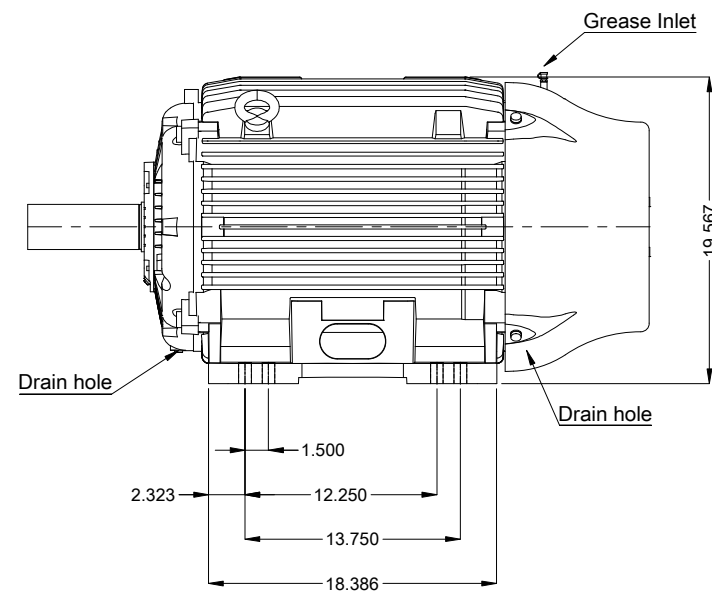


Performance : 230/460 V 60 Hz 8P

Rated current : 120/60.2 A
LRC : 7.2
Rated torque : 298 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 260 %
Rated speed : 880 rpm

Moment of inertia (J) : 34.6 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by		Page 5 / 5Revision			
Checked by					
Date	16/07/2026				



50 HP 08 Poles 60 Hz										A
						Scale				1 : 12
						HYBRISUSER				00
ECM		LOC		SUMMARY OF MODIFICATIONS		EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER		THREE PH. MOTOR W22 NEMA PREM. EFF. FRAME 404/5T IP55 TEFC			PREVIEW WDD 00				
CHECKED										
RELEASED										
REL. DATE										
						SHEET		1 / 1		