

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line		: ODP High Efficiency Three-Phase	Product code :	13659279
Frame	: 254TC	Cooling method	: IC01 - ODP	
Insulation class	: F	Mounting	: F-1	
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)	
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line	
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>3</sup>	: 94.3 kg	
Protection degree	: IP23	Moment of inertia (J)	: 0.0338 kgm <sup>2</sup>	
Design	: B			
Output [HP]	20	20	20	20
Poles	2	2	2	2
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	48.6/24.3	30.3	29.4	28.7
L. R. Amperes [A]	282/141	127	135	144
LRC [A]	5.8x(Code G)	4.2x(Code D)	4.6x(Code E)	5.0x(Code F)
No load current [A]	16.4/8.20	8.63	10.4	12.1
Rated speed [RPM]	3525	2890	2905	2920
Slip [%]	2.08	3.67	3.17	2.67
Rated torque [kgfm]	4.12	5.02	5.00	4.97
Locked rotor torque [%]	160	130	140	160
Breakdown torque [%]	250	200	210	229
Service factor	1.15	1.00	1.15	1.15
Temperature rise	105 K	105 K	105 K	105 K
Locked rotor time	18s (cold) 10s (hot)	18s (cold) 10s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)
Noise level <sup>2</sup>	66.0 dB(A)			
Efficiency (%)	25%			
	50%	89.5	86.5	87.5
	75%	90.2	87.5	87.5
	100%	90.2	86.5	87.5
Power Factor	25%			
	50%	0.74	0.77	0.66
	75%	0.83	0.85	0.78
	100%	0.86	0.87	0.83
Bearing type	: Drive end : 6309 Z C3 Non drive end : 6209 Z C3	Foundation loads		
Sealing	: Without Bearing Seal	Max. traction : 132 kgf		
Lubrication interval	: 20000 h	Max. compression : 227 kgf		
Lubricant amount	: 13 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 53.7A SF 1.15 SFA 61.8A				
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
Performed by				
Checked by				
Date	01/04/2025		Page	Revision
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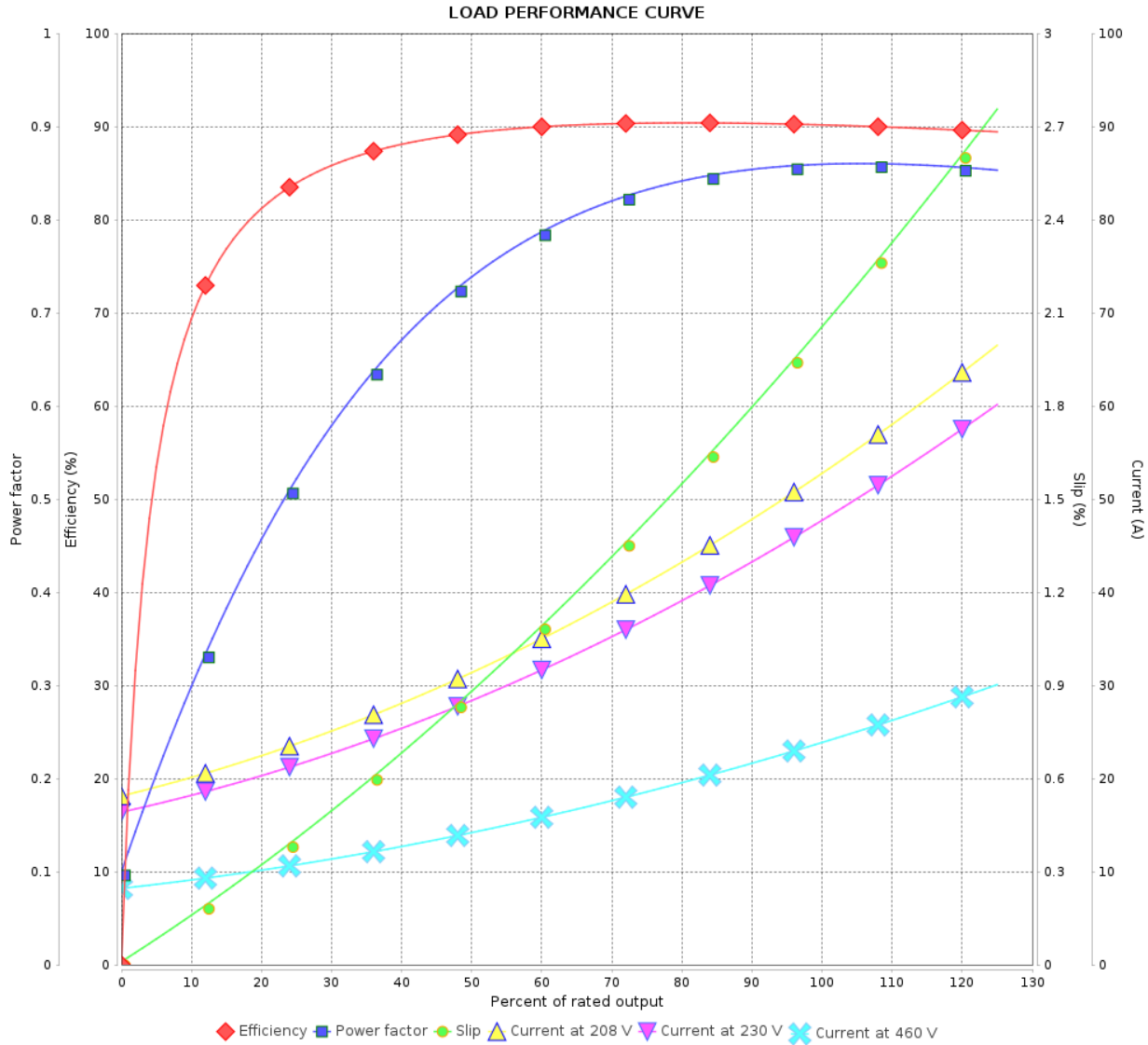
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : ODP High Efficiency Three-Phase Product code : 13659279



Performance : 230/460 V 60 Hz 2P

Rated current : 48.6/24.3 A  
 LRC : 5.8  
 Rated torque : 4.12 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 250 %  
 Rated speed : 3525 rpm

Moment of inertia (J) : 0.0338 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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Date	01/04/2025			

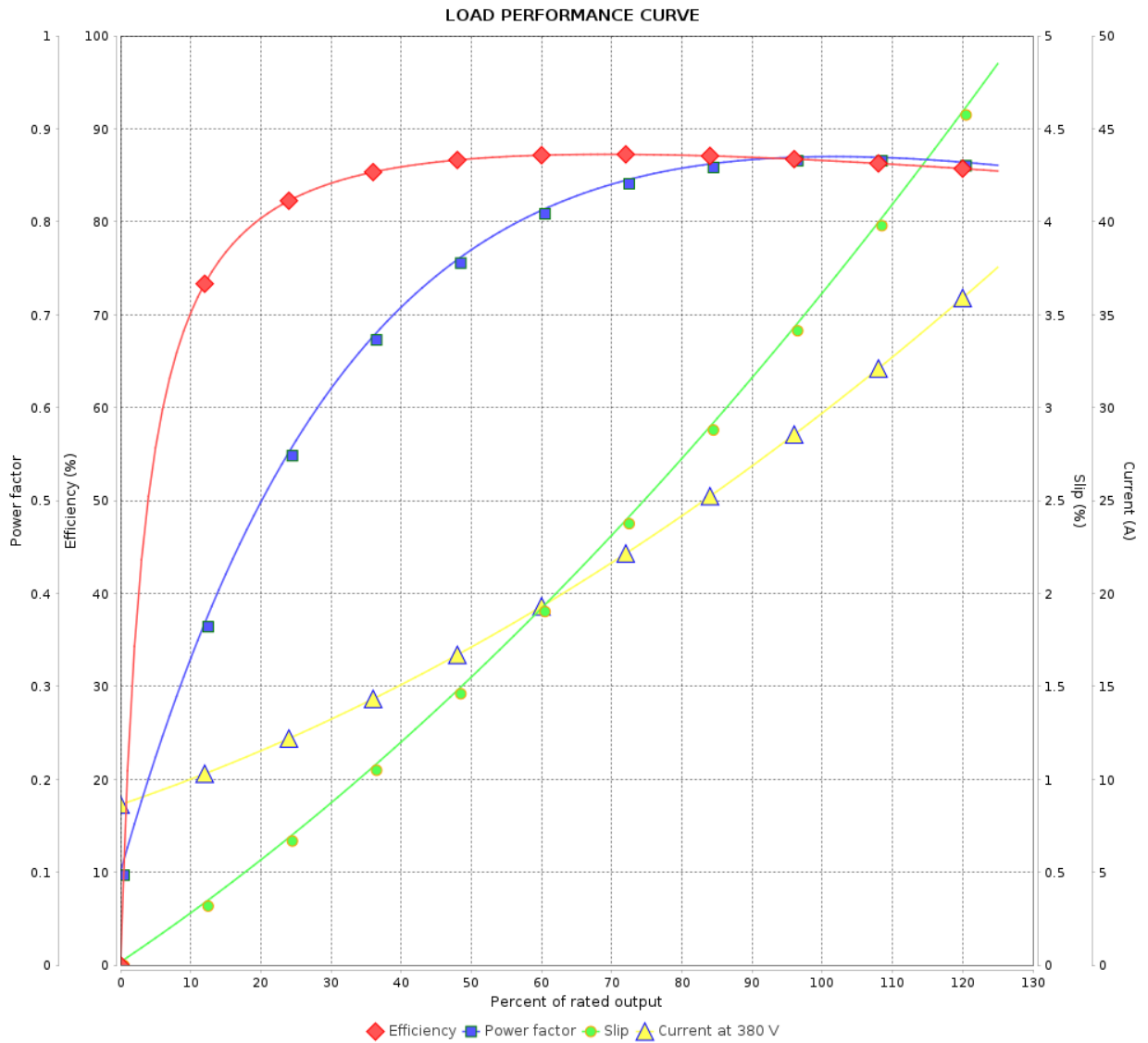
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : ODP High Efficiency Three-Phase Product code : 13659279



Performance : 380 V 50 Hz 2P

Rated current	: 30.3 A	Moment of inertia (J)	: 0.0338 kgm <sup>2</sup>
LRC	: 4.2	Duty cycle	: Cont.(S1)
Rated torque	: 5.02 kgfm	Insulation class	: F
Locked rotor torque	: 130 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 2890 rpm	Design	: B

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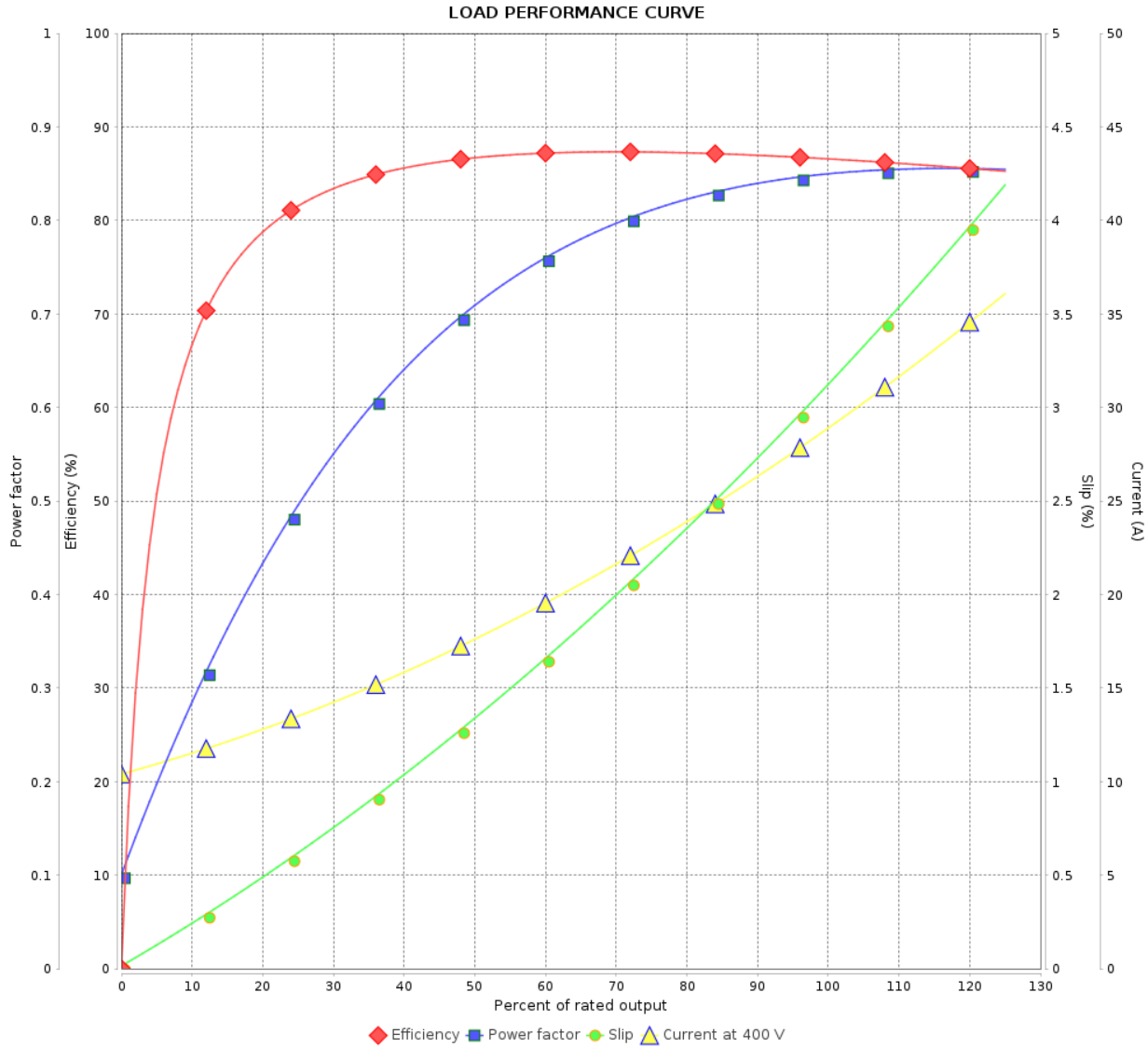
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : ODP High Efficiency Three-Phase      Product code : 13659279



Performance : 400 V 50 Hz 2P

Rated current : 29.4 A  
 LRC : 4.6  
 Rated torque : 5.00 kgfm  
 Locked rotor torque : 140 %  
 Breakdown torque : 210 %  
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.0338 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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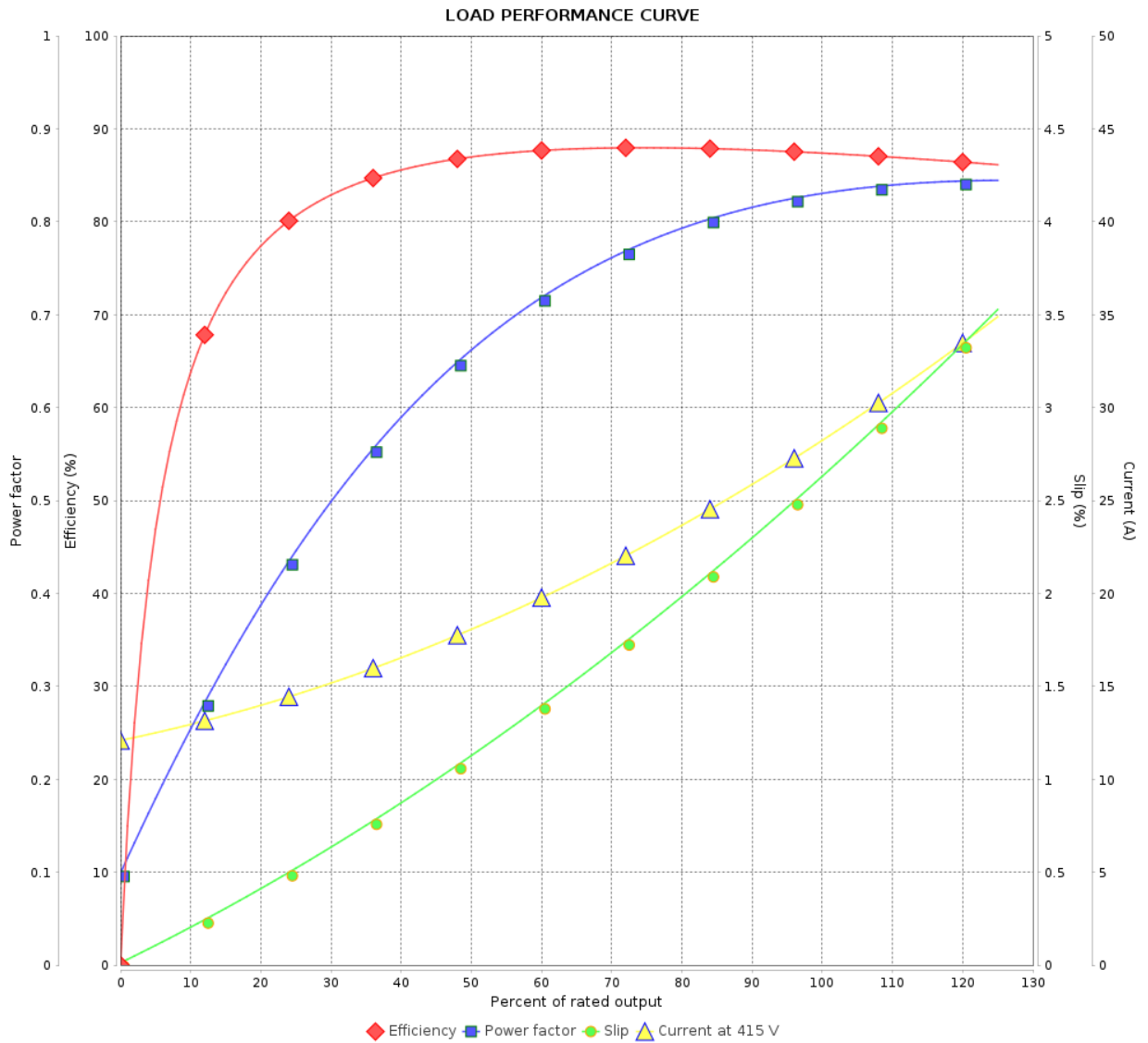
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

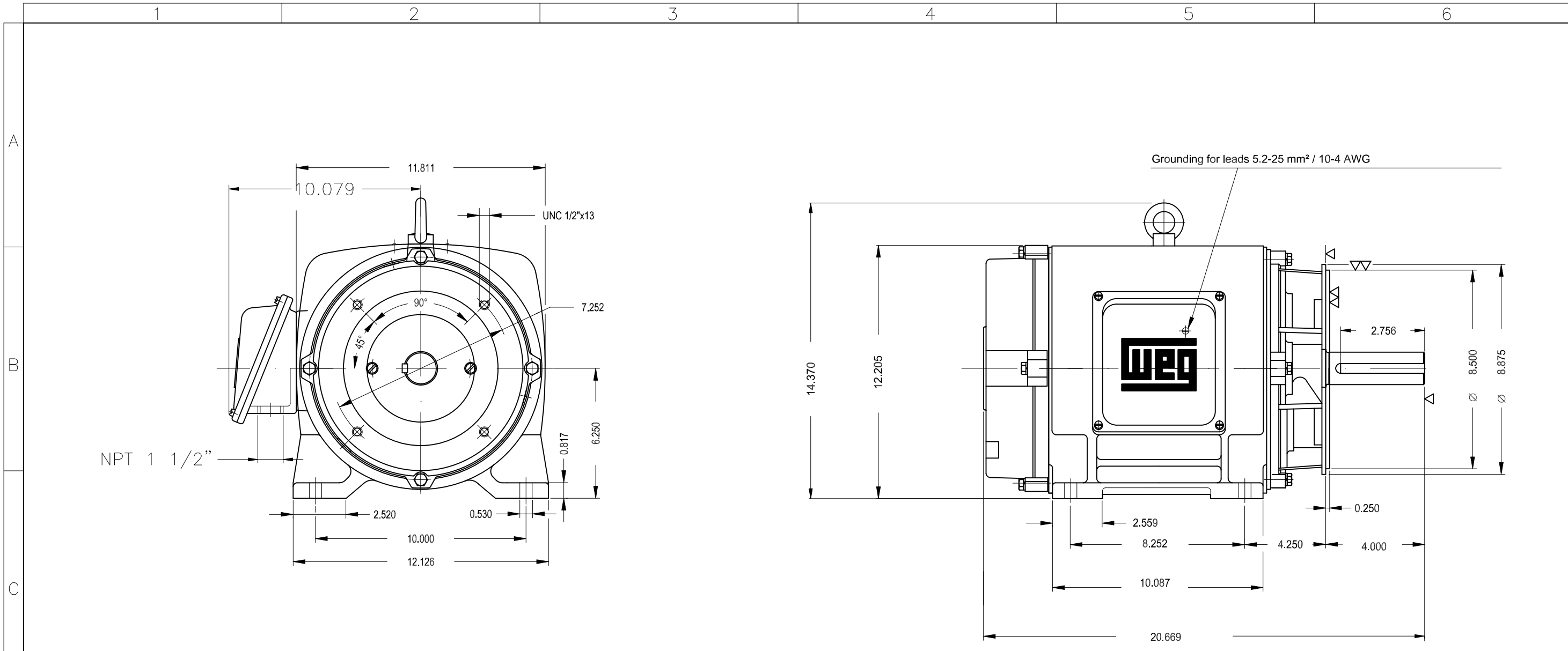
Product line : ODP High Efficiency Three-Phase Product code : 13659279



Performance : 415 V 50 Hz 2P

Rated current	: 28.7 A	Moment of inertia (J)	: 0.0338 kgm <sup>2</sup>
LRC	: 5.0	Duty cycle	: Cont.(S1)
Rated torque	: 4.97 kgfm	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 2920 rpm	Design	: B

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Date	01/04/2025			



A

B

C

D

E

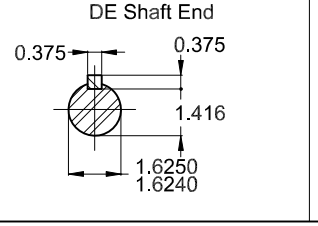
Certification UL/FIRE PUMP

Color RAL 5009

Painting plan 203A

Mounting NEMA F-1

Mounting B34D



20 HP 02 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER	THREE PH. MOTOR GENERAL HIGH EFF.					
CHECKED		FRAME 254TC IP23 ODP					
RELEASED							
REL. DATE		WMO Jaragua do Sul					

HYBRISUSER					00
PREVIEW		WDD		00	
SHEET		1 / 1			

Dimensions in inches

XME A3