

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 ¹	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight ³	: 94.3 kg
Protection degree	: IP23	Moment of inertia (J)	: 0.0338 kgm ²
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 ²	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	: Non drive end	Foundation loads
	: 6309 Z C3	: 6209 Z C3	
Sealing	: Without	: Without	Max. traction : 132 kgf
	: Bearing Seal	: Bearing Seal	Max. compression : 227 kgf
Lubrication interval	: 20000 h	: 20000 h	
Lubricant amount	: 13 g	: 9 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	Date
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Date	22/11/2024			

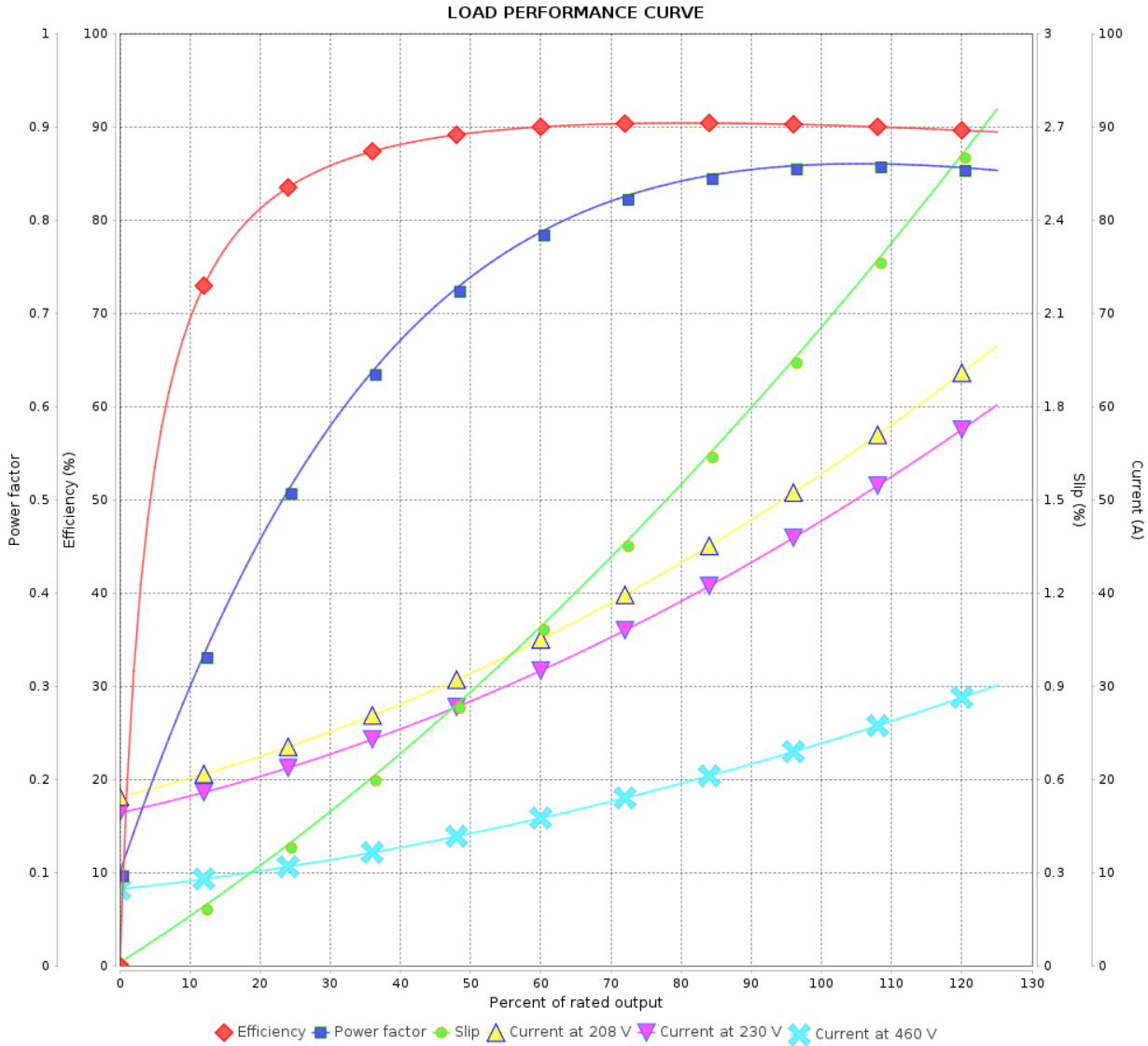
LOAD PERFORMANCE CURVE

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 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
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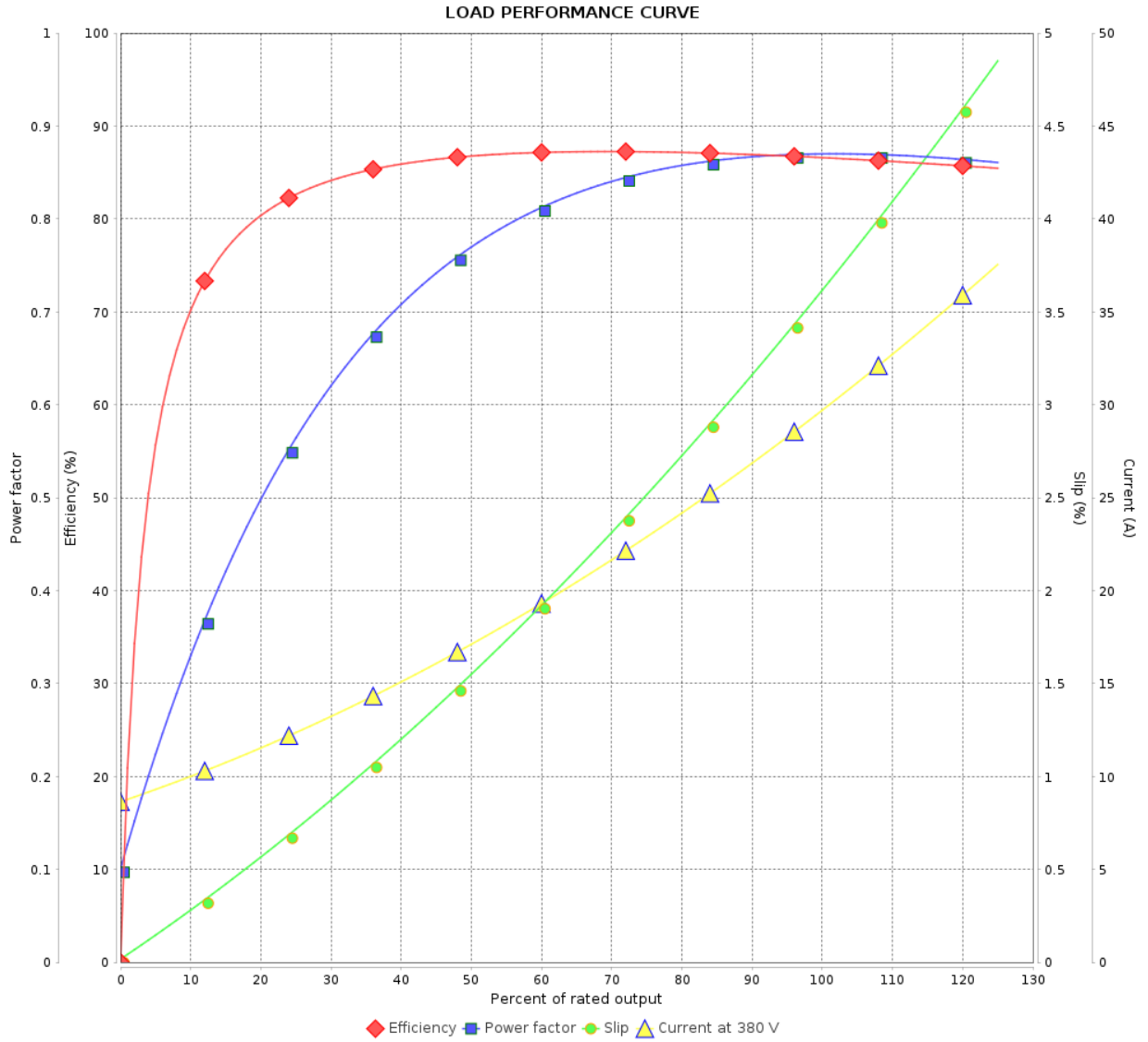
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Three Phase Induction Motor - Squirrel Cage



Customer :

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



Performance : 380 V 50 Hz 2P

Rated current : 30.3 A
 LRC : 4.2
 Rated torque : 5.02 kgfm
 Locked rotor torque : 130 %
 Breakdown torque : 200 %
 Rated speed : 2890 rpm

Moment of inertia (J) : 0.0338 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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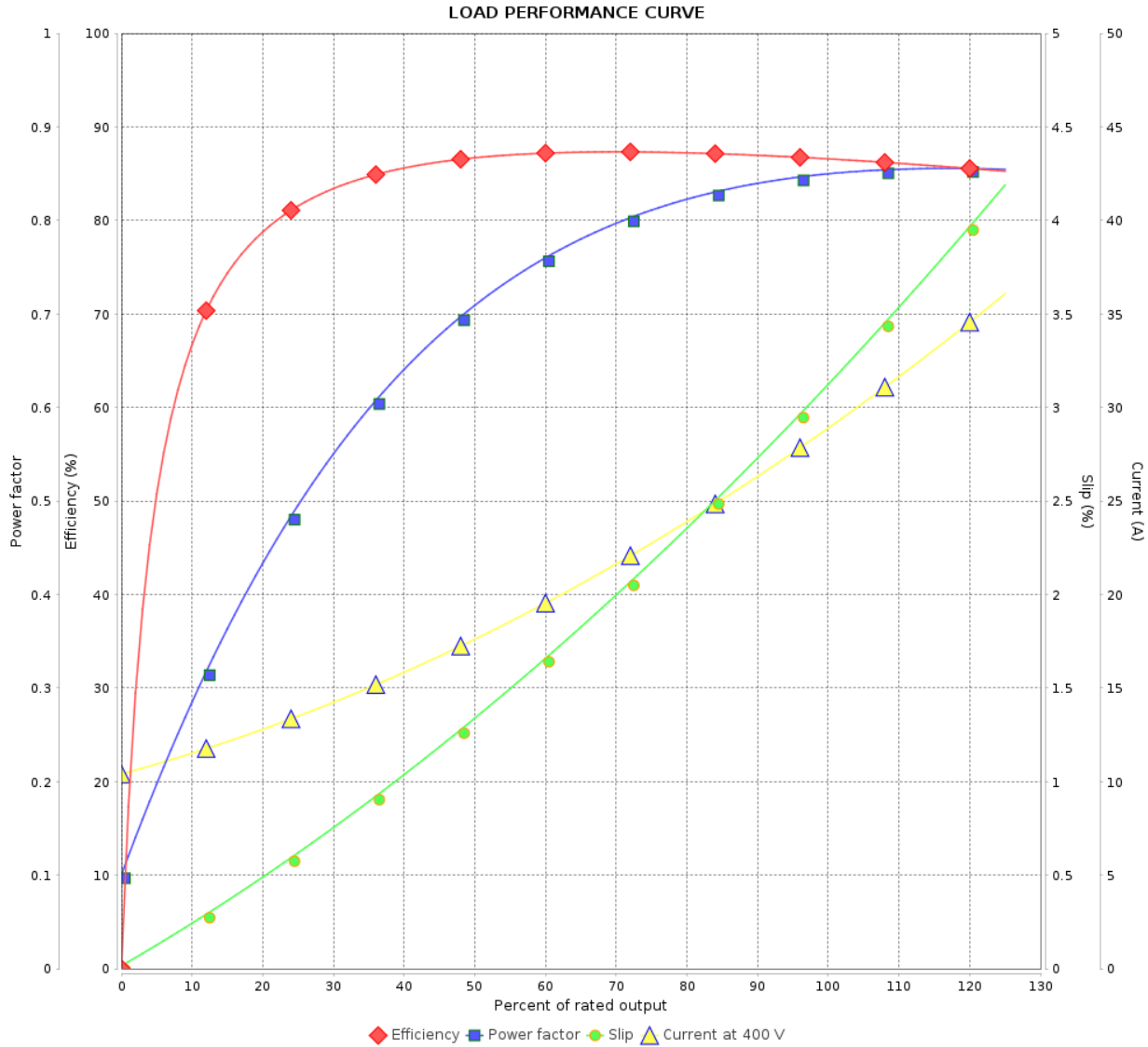
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Three Phase Induction Motor - Squirrel Cage



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 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 105 K
 Design : B

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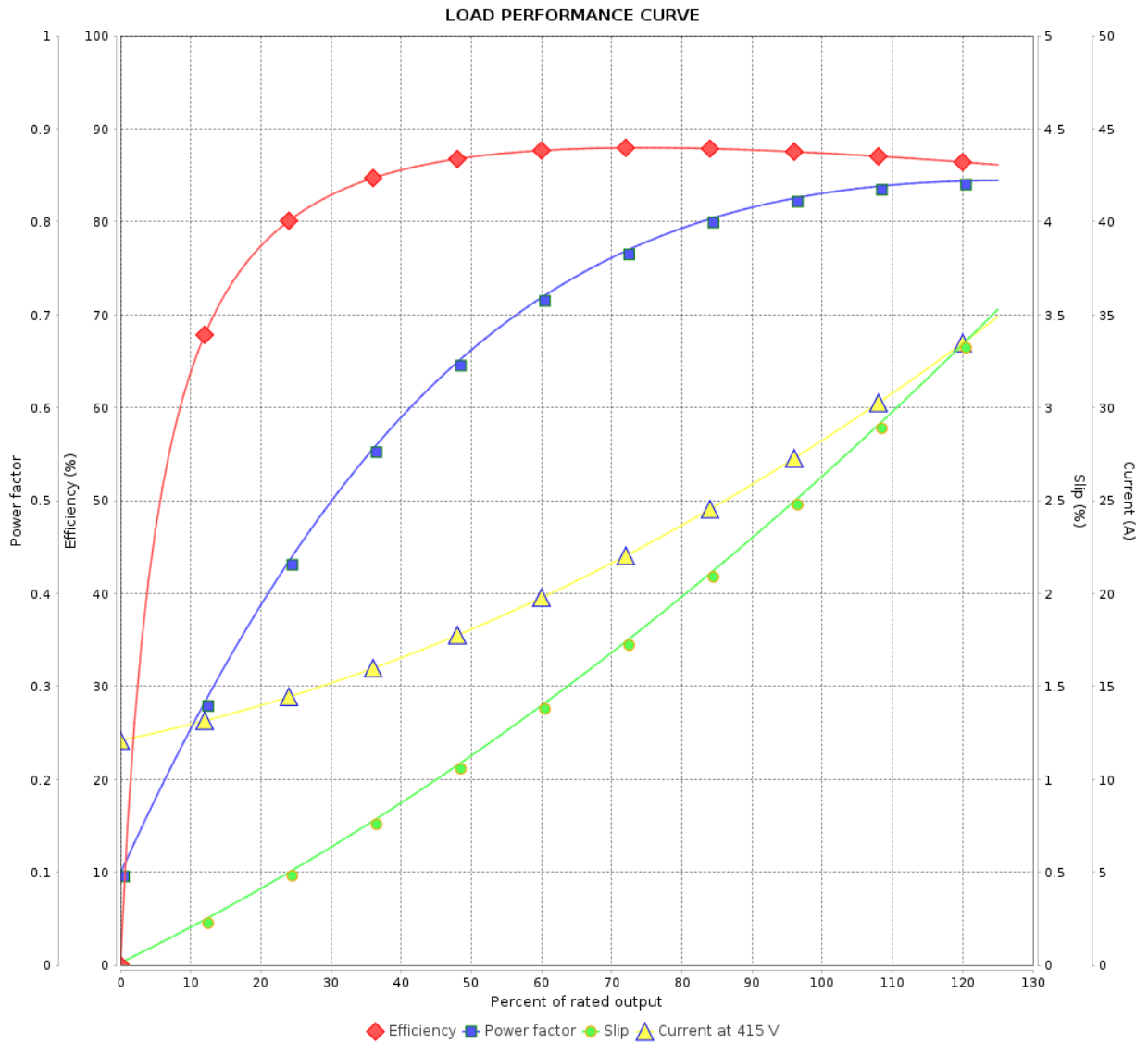
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Three Phase Induction Motor - Squirrel Cage



Customer :

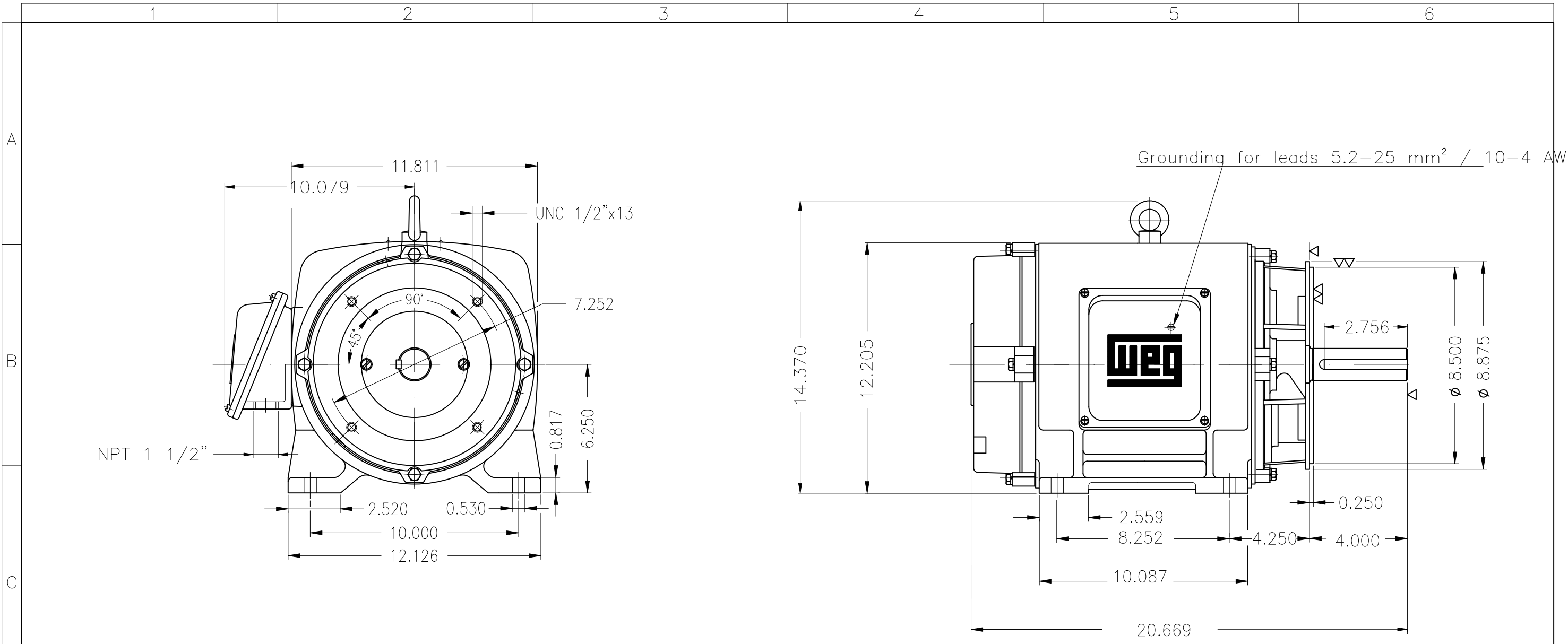
Product line : ODP High Efficiency Three-Phase Product code : 13659279



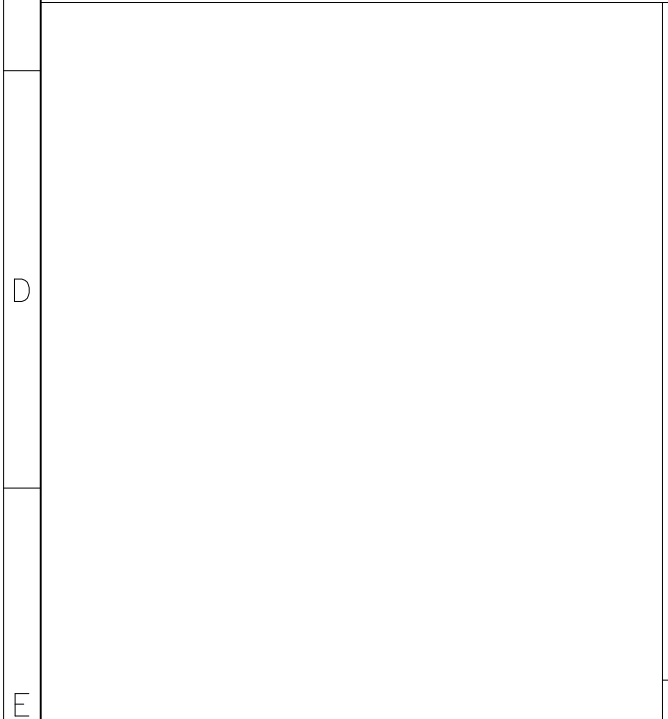
Performance : 415 V 50 Hz 2P

Rated current	: 28.7 A	Moment of inertia (J)	: 0.0338 kgm ²
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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Grounding for leads 5.2-25 mm² / 10-4 AWG



Certification UL/FIRE PUMP
Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B34R(D)

20 HP 02 Poles 60 Hz		A
ECM	LOC	
EXECUTED	HYBRISUSER	
CHECKED		
RELEASED		
REL. DATE		

SUMMARY OF MODIFICATIONS		EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER					00
CHECKED						
RELEASED						
REL. DATE	WMO	Jaragua do Sul	Product Engineering	SHEET 1 / 1		

PREVIEW

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