

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :							
Product line	: Close Coupled Pump NEMA Premium Efficiency Three-Phase	Product code :	11170049				
Frame	: 254JM	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>	: 110 kg				
Protection degree	: IP23	Moment of inertia (J)	: 0.0878 kgm <sup>2</sup>				
Design	: B						
Output [HP]	15	10	10	10	15	15	15
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	37.2/18.6	16.2	16.2	16.2	22.1	21.8	21.8
L. R. Amperes [A]	249/125	110	110	113	119	124	131
LRC [A]	6.7x(Code H)	6.8x(Code J)	6.8x(Code J)	7.0x(Code K)	5.4x(Code F)	5.7x(Code G)	6.0x(Code G)
No load current [A]	18.0/9.00	9.20	10.1	10.9	9.20	10.4	11.6
Rated speed [RPM]	1775	1480	1480	1485	1470	1470	1475
Slip [%]	1.39	1.33	1.33	1.00	2.00	2.00	1.67
Rated torque [kgfm]	6.13	4.90	4.90	4.89	7.41	7.41	7.38
Locked rotor torque [%]	290	270	280	300	180	190	210
Breakdown torque [%]	300	370	390	400	280	310	340
Service factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	25s (cold) 14s (hot)	37s (cold) 21s (hot)	34s (cold) 19s (hot)	30s (cold) 17s (hot)	37s (cold) 21s (hot)	34s (cold) 19s (hot)	30s (cold) 17s (hot)
Noise level <sup>2</sup>	59.0 dB(A)						
Efficiency (%)	25%						
	50%	91.7	86.4	86.2	85.9	88.5	88.5
	75%	92.4	89.2	89.3	89.3	89.5	89.5
	100%	93.0	90.4	90.5	90.6	91.0	91.0
Power Factor	25%						
	50%	0.60	0.56	0.52	0.50	0.66	0.61
	75%	0.72	0.70	0.66	0.62	0.77	0.73
	100%	0.80	0.78	0.74	0.71	0.83	0.80
Bearing type	: Drive end : 6309 Z C3	Non drive end : 6209 Z C3	Foundation loads				
Sealing	: Without	Without	Max. traction : 339 kgf				
	Bearing Seal Bearing Seal		Max. compression : 450 kgf				
Lubrication interval	: 20000 h	20000 h					
Lubricant amount	: 13 g	9 g					
Lubricant type	: Mobil Polyrex EM						
Notes USABLE @208V 41.1A SF 1.15 SFA 47.3A							
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							
Checked by						Page	Revision
Date	23/10/2024					1 / 8	

# LOAD PERFORMANCE CURVE

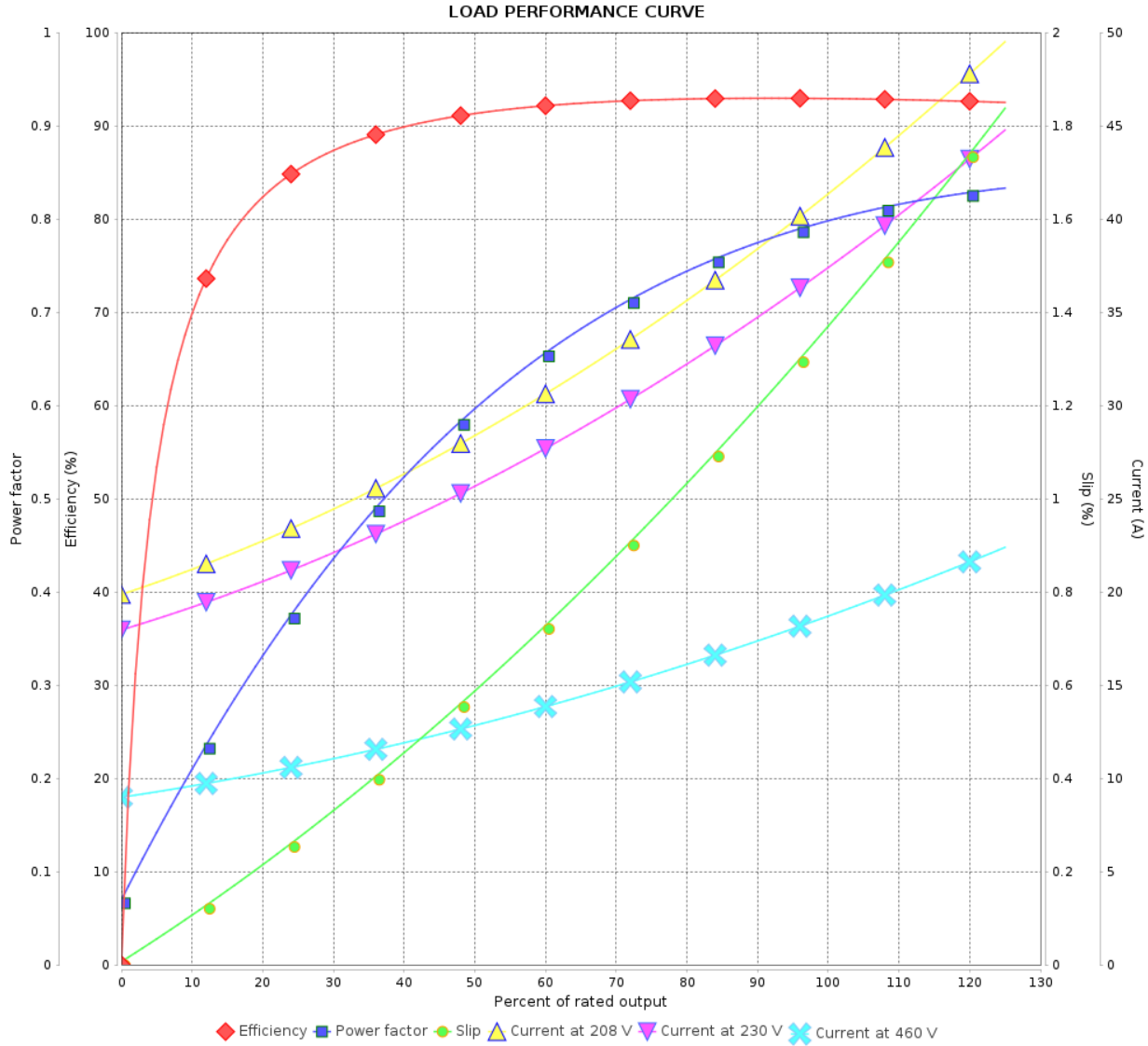
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA  
Premium Efficiency Three-Phase

Product code : 11170049



Performance : 230/460 V 60 Hz 4P

Rated current : 37.2/18.6 A  
LRC : 6.7  
Rated torque : 6.13 kgfm  
Locked rotor torque : 290 %  
Breakdown torque : 300 %  
Rated speed : 1775 rpm

Moment of inertia (J) : 0.0878 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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Performed by			Page	Revision
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Date				

# LOAD PERFORMANCE CURVE

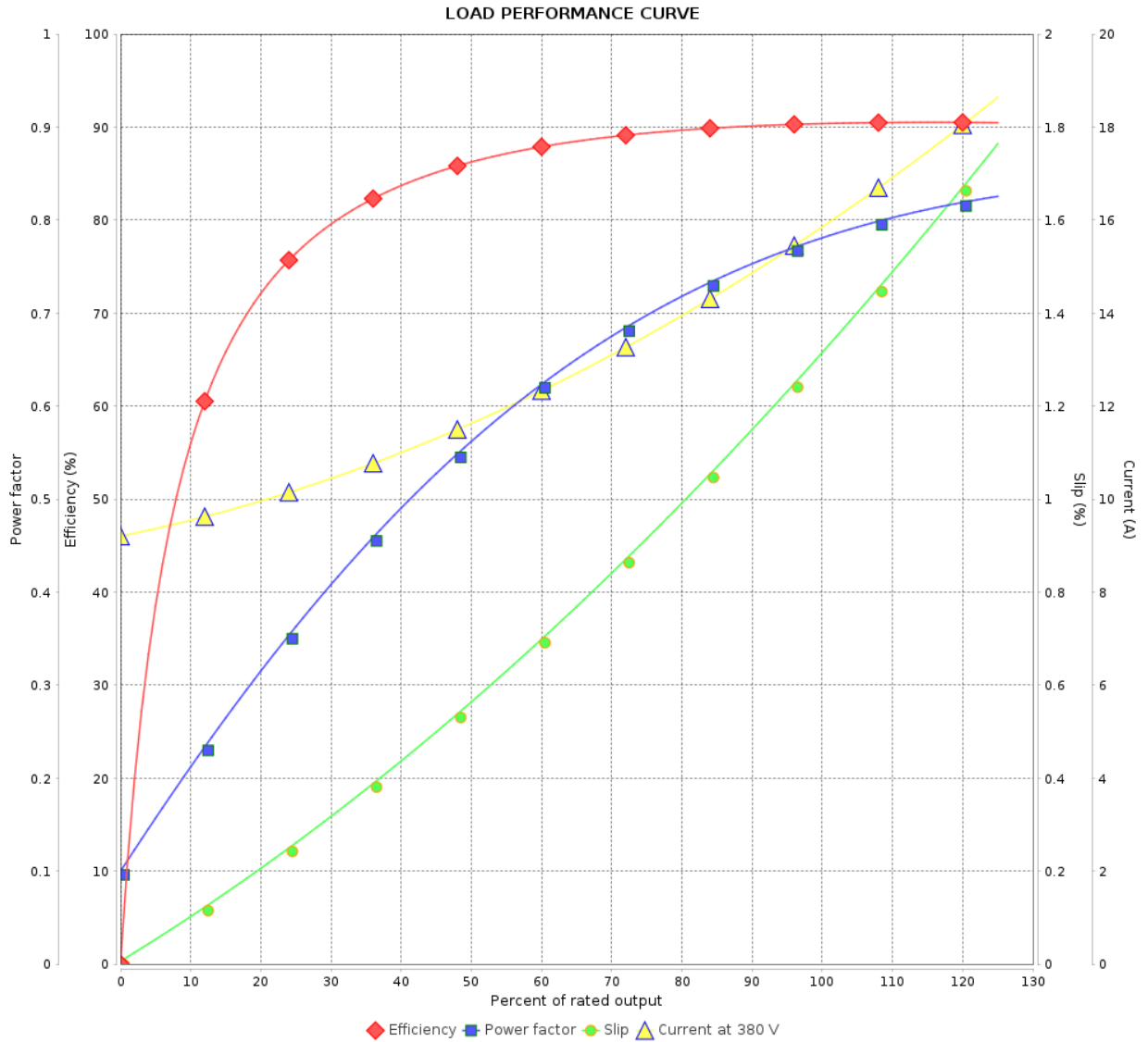
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA  
Premium Efficiency Three-Phase

Product code : 11170049



Performance : 380 V 50 Hz 4P IE3

Rated current : 16.2 A  
 LRC : 6.8  
 Rated torque : 4.90 kgfm  
 Locked rotor torque : 270 %  
 Breakdown torque : 370 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 0.0878 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

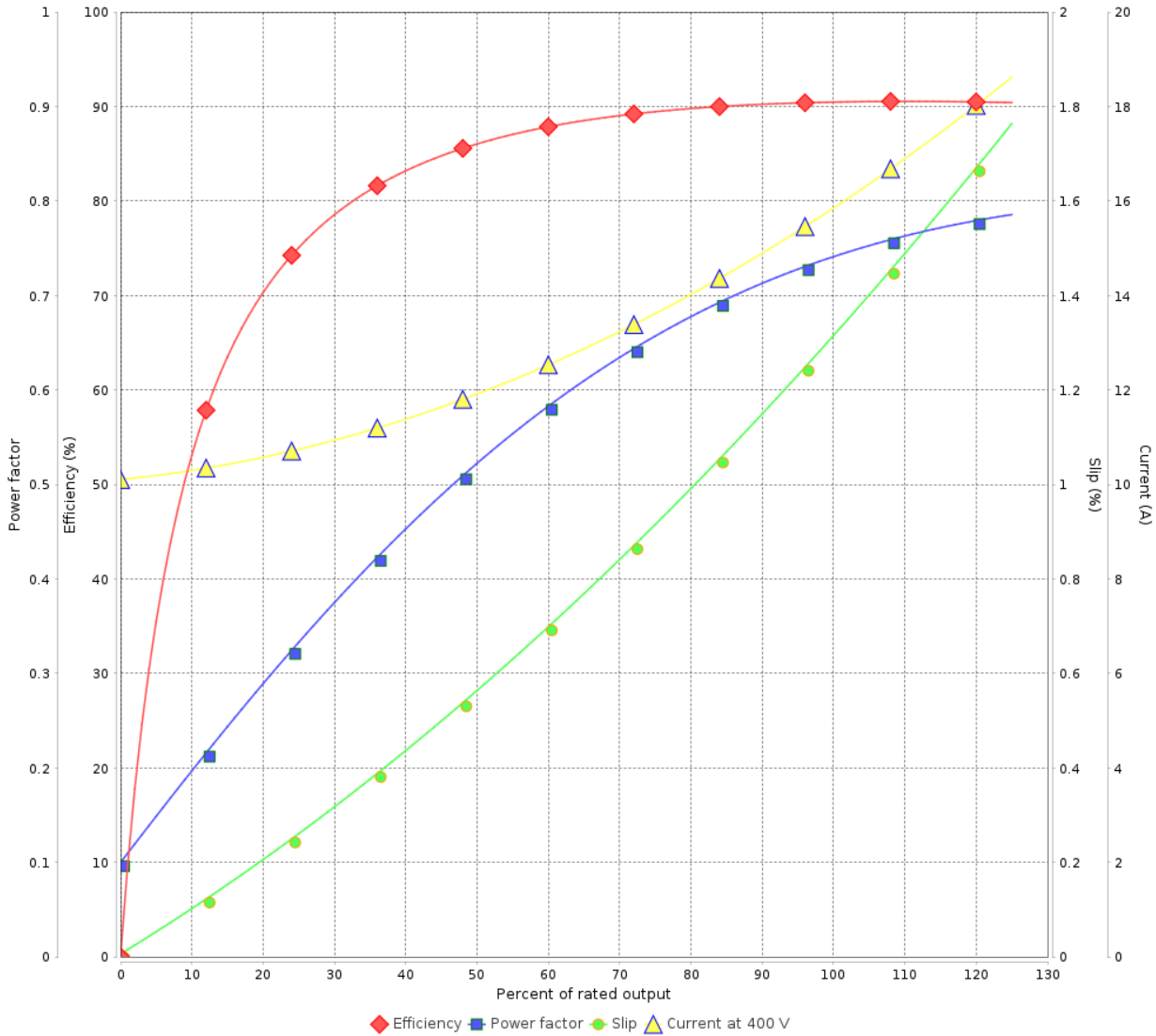


Customer : \_\_\_\_\_

Product line : Close Coupled Pump NEMA  
Premium Efficiency Three-Phase

Product code : 11170049

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 16.2 A  
LRC : 6.8  
Rated torque : 4.90 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 390 %  
Rated speed : 1480 rpm

Moment of inertia (J) : 0.0878 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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# LOAD PERFORMANCE CURVE

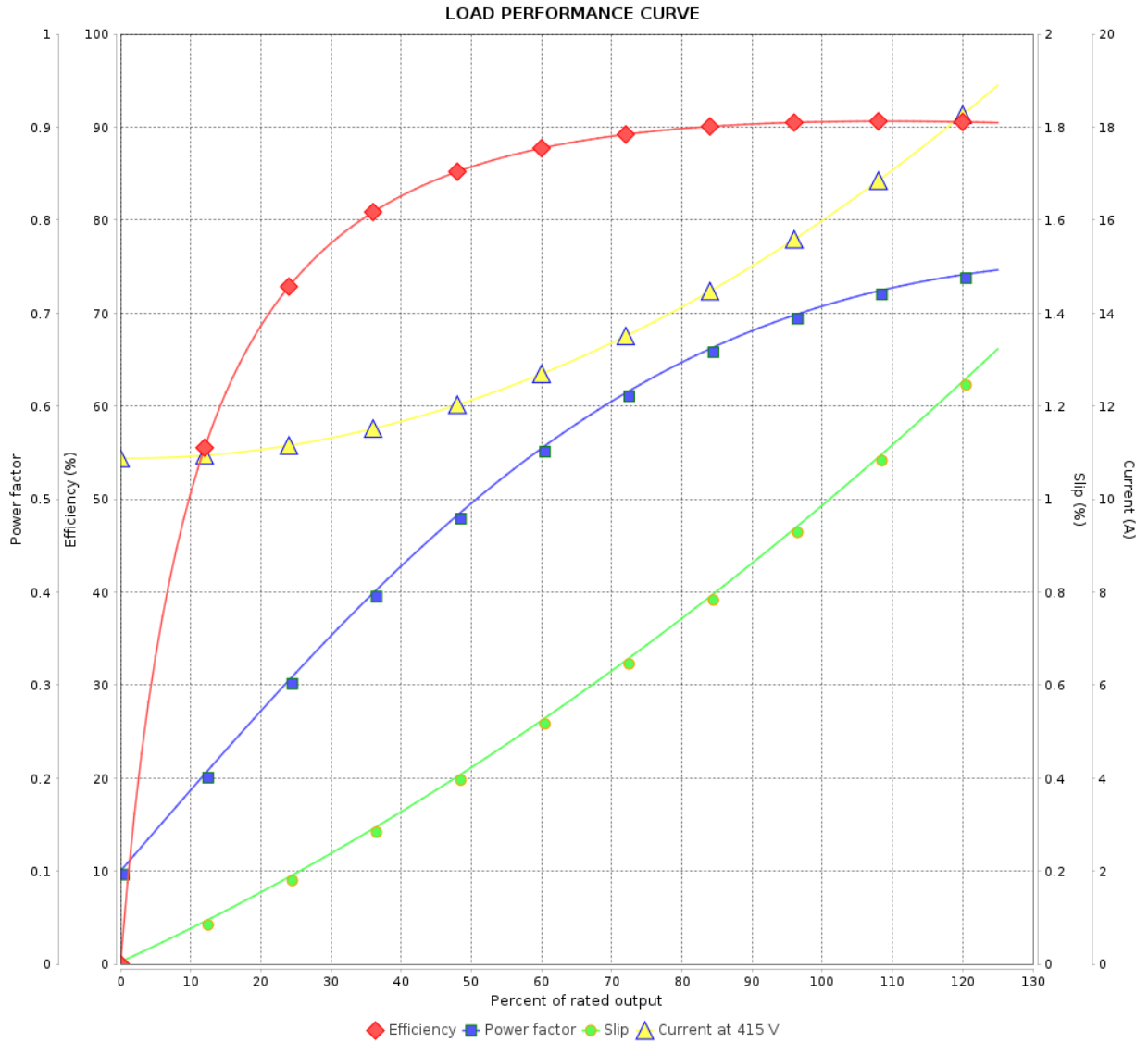
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA  
Premium Efficiency Three-Phase

Product code : 11170049



Performance : 415 V 50 Hz 4P IE3

Rated current : 16.2 A  
LRC : 7.0  
Rated torque : 4.89 kgfm  
Locked rotor torque : 300 %  
Breakdown torque : 400 %  
Rated speed : 1485 rpm

Moment of inertia (J) : 0.0878 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

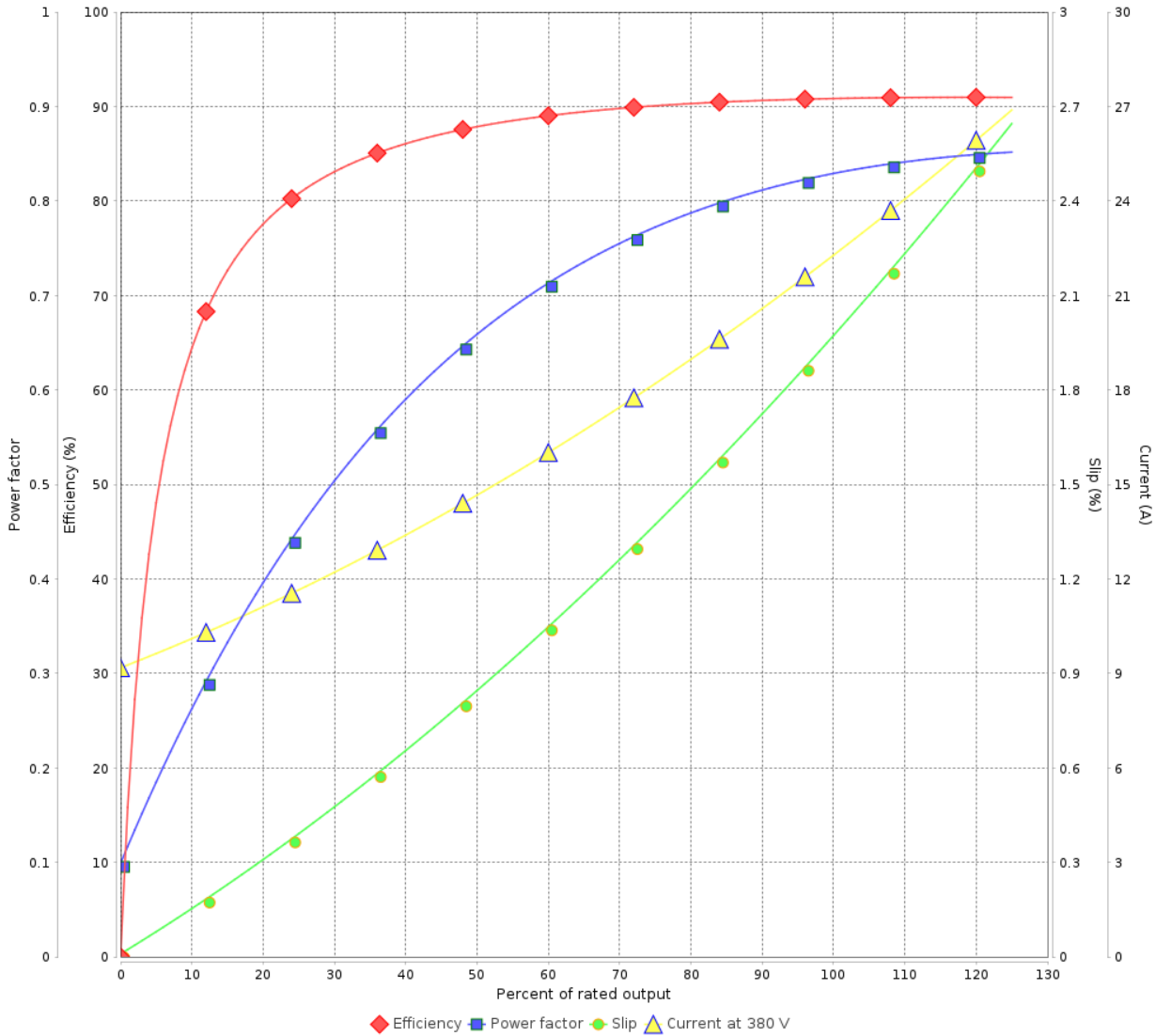


Customer :

Product line : Close Coupled Pump NEMA  
Premium Efficiency Three-Phase

Product code : 11170049

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current : 22.1 A  
LRC : 5.4  
Rated torque : 7.41 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 280 %  
Rated speed : 1470 rpm

Moment of inertia (J) : 0.0878 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

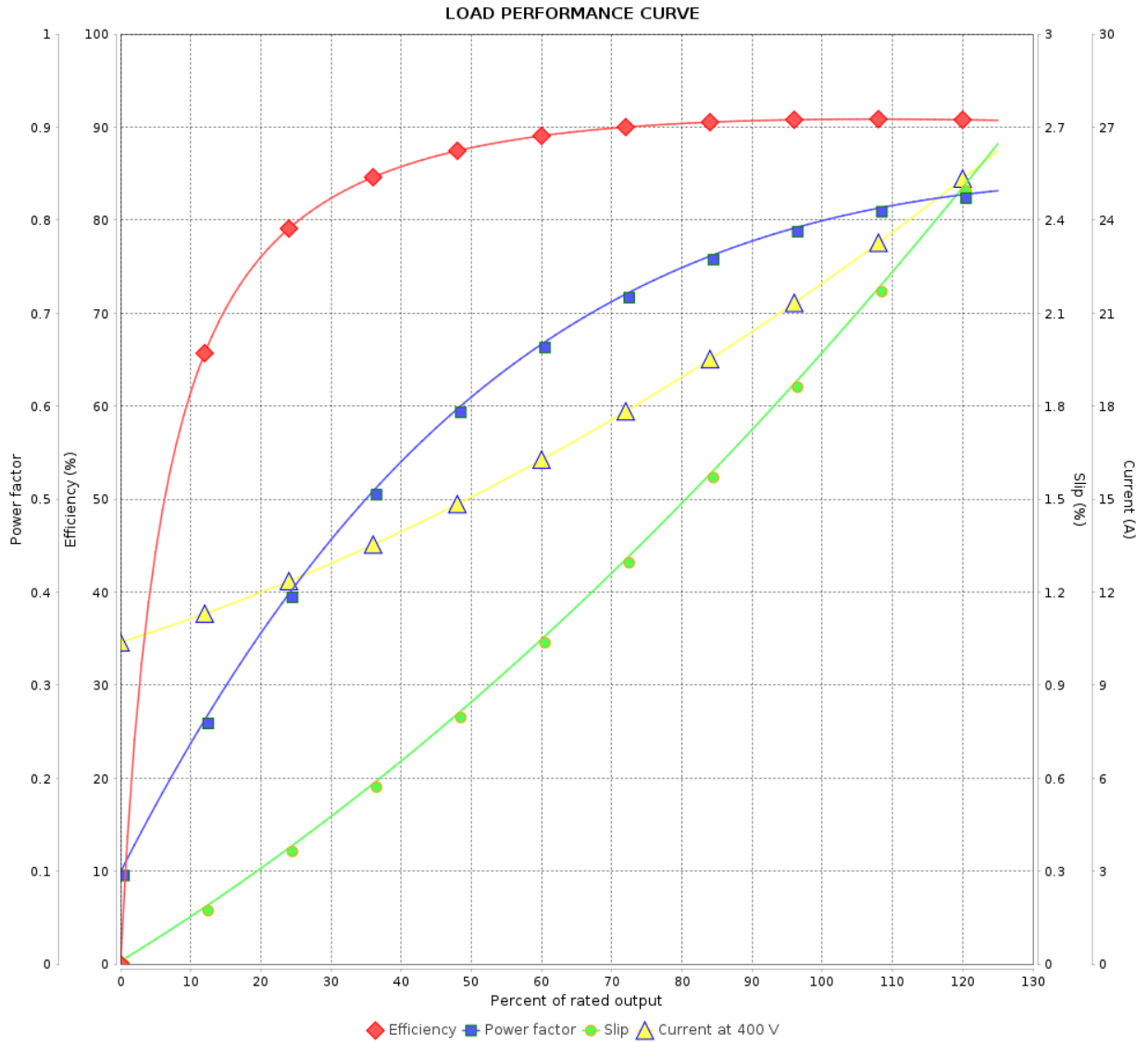
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA  
Premium Efficiency Three-Phase

Product code : 11170049



Performance : 400 V 50 Hz 4P IE2

Rated current : 21.8 A  
 LRC : 5.7  
 Rated torque : 7.41 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 310 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 0.0878 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

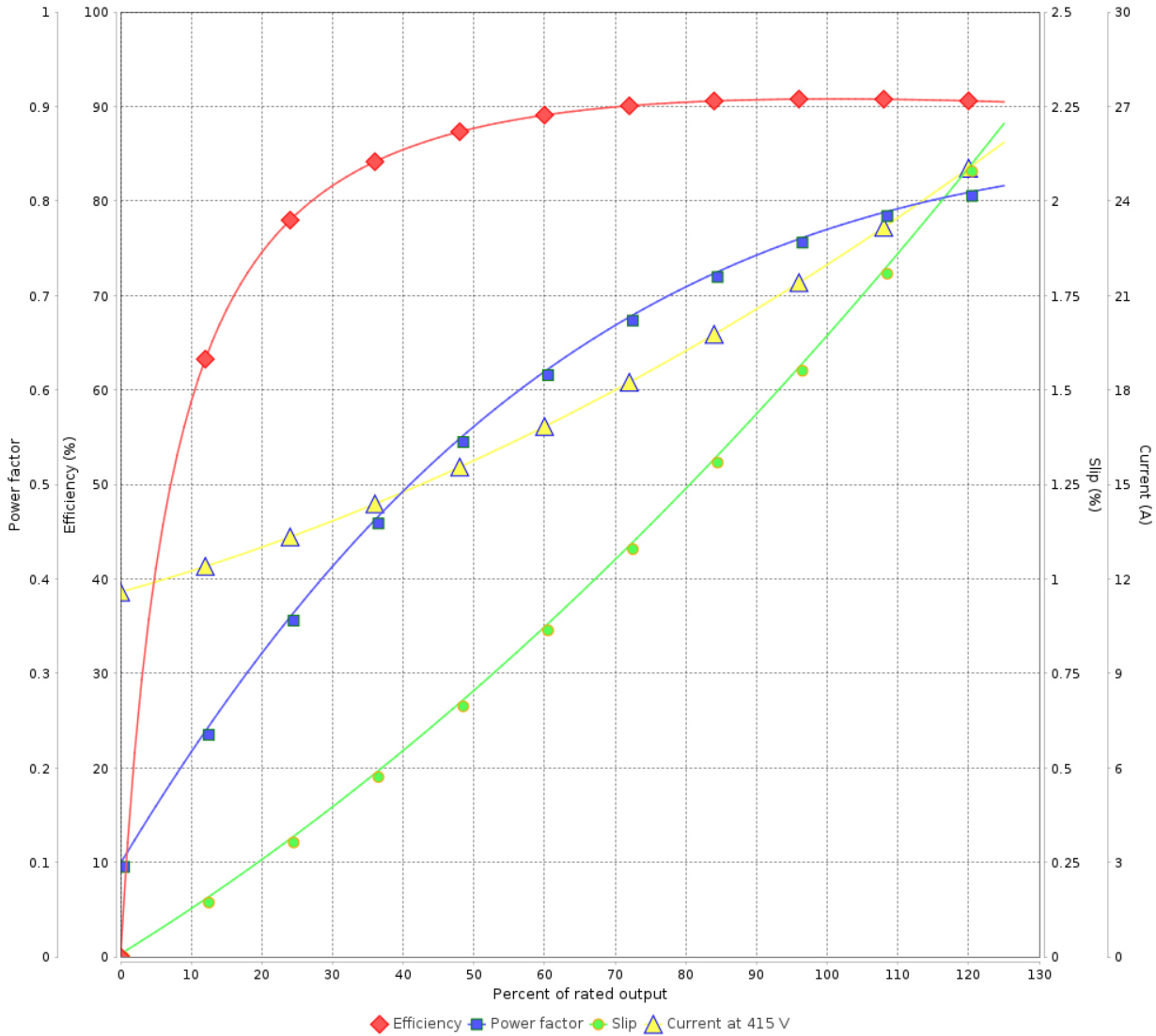


Customer :

Product line : Close Coupled Pump NEMA  
Premium Efficiency Three-Phase

Product code : 11170049

LOAD PERFORMANCE CURVE



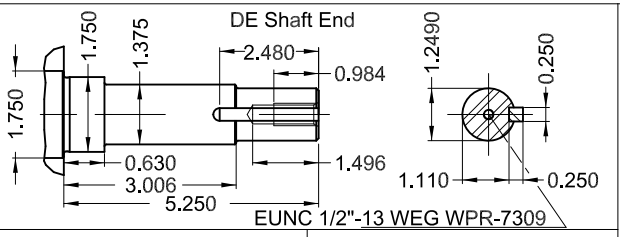
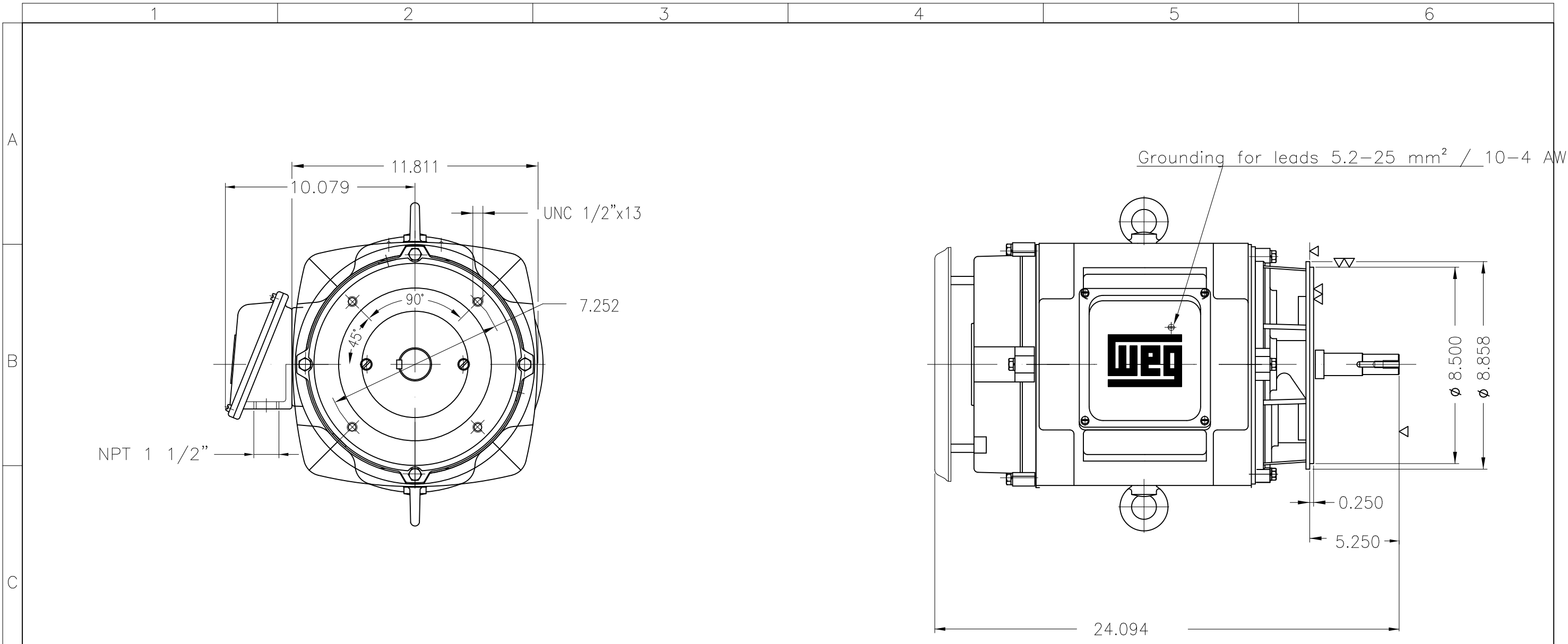
Performance : 415 V 50 Hz 4P IE2

Rated current : 21.8 A  
LRC : 6.0  
Rated torque : 7.38 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 340 %  
Rated speed : 1475 rpm

Moment of inertia (J) : 0.0878 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Without switch off thermal protection	
Color RAL 5009	
Painting plan 203A	
Mounting B14R(D)	

15 HP 04 Poles 60 Hz	
HYBRISUSER	
ECM	LOC
EXECUTED	HYBRISUSER
CHECKED	
RELEASED	
REL. DATE	WMO Jaraguá do Sul

SUMMARY OF MODIFICATIONS						THREE PH. MOTOR JM/JP/JET PUMP NEMA PREM. EFF. FRAME 254JM IP23 ODP	
EXECUTED						PREVIEW	
CHECKED						WDD	00
RELEASED						SHEET 1 / 1	
REL. DATE						Product Engineering	

HYBRISUSER						00			
ECM	LOC	SUMMARY OF MODIFICATIONS			EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER	THREE PH. MOTOR JM/JP/JET PUMP NEMA PREM. EFF. FRAME 254JM IP23 ODP			EXECUTED	CHECKED	RELEASED	DATE	VER
CHECKED					EXECUTED	CHECKED	RELEASED	DATE	VER
RELEASED					EXECUTED	CHECKED	RELEASED	DATE	VER
REL. DATE		WMO Jaraguá do Sul			EXECUTED	CHECKED	RELEASED	DATE	VER

Dimensions in inches XME A3