

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 JM Pump NEMA Premium Efficiency Three-Phase		Product code : 14436466	
				Catalog # : 01518OT3E254JM-W40	
Frame : 254JM		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 ² : 253 lb			
Protection degree : IP23		Moment of inertia (J) : 2.72 sq.ft.lb			
Design : B					
Output [HP]	15	10	10	10	10
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	35.0/17.5	15.3	14.9	14.7	14.7
L. R. Amperes [A]	224/112	101	101	103	103
LRC [A]	6.4x(Code G)	6.6x(Code H)	6.8x(Code H)	7.0x(Code J)	7.0x(Code J)
No load current [A]	13.6/6.80	7.00	7.30	7.80	7.80
Rated speed [RPM]	1775	1475	1480	1480	1480
Slip [%]	1.39	1.67	1.33	1.33	1.33
Rated torque [ft.lb]	44.4	35.6	35.5	35.5	35.5
Locked rotor torque [%]	220	240	280	310	310
Breakdown torque [%]	260	300	330	360	360
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	61s (cold) 34s (hot)	66s (cold) 37s (hot)	59s (cold) 33s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)
Noise level ²	62.0 dB(A)				
Efficiency (%)	25%	91.0	88.9	89.0	89.0
	50%	91.7	89.2	89.2	89.2
	75%	92.4	91.0	91.0	91.0
	100%	93.0	91.0	91.0	91.0
Power Factor	25%	0.43	0.38	0.35	0.32
	50%	0.66	0.62	0.58	0.55
	75%	0.78	0.75	0.72	0.69
	100%	0.85	0.82	0.80	0.78
Bearing type	: Drive end : 6309 Z C3	: Non drive end : 6209 Z C3	Foundation loads		
Sealing	: Without	: Without	Max. traction		
	: Bearing Seal	: Bearing Seal	Max. compression		
Lubrication interval	: 20000 h	: 20000 h			
Lubricant amount	: 13 g	: 9 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 38.7A SF 1.15 SFA 44.5A					
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	13/04/2022			1 / 21	

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



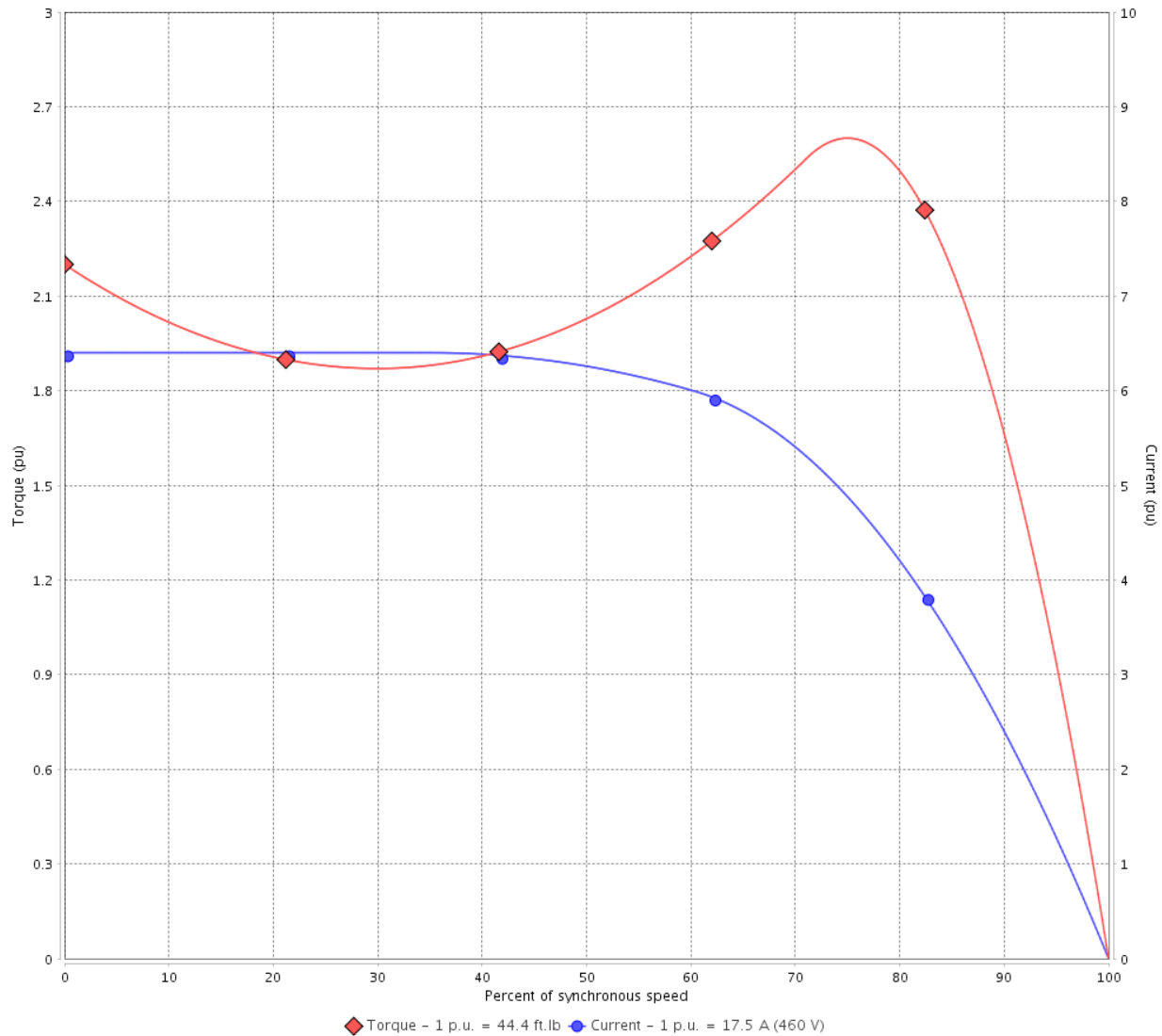
Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14436466

Catalog # : 01518OT3E254JM-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 35.0/17.5 A	Moment of inertia (J)	: 2.72 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 44.4 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1775 rpm	Design	: B

Locked rotor time : 61s (cold) 34s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 21	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



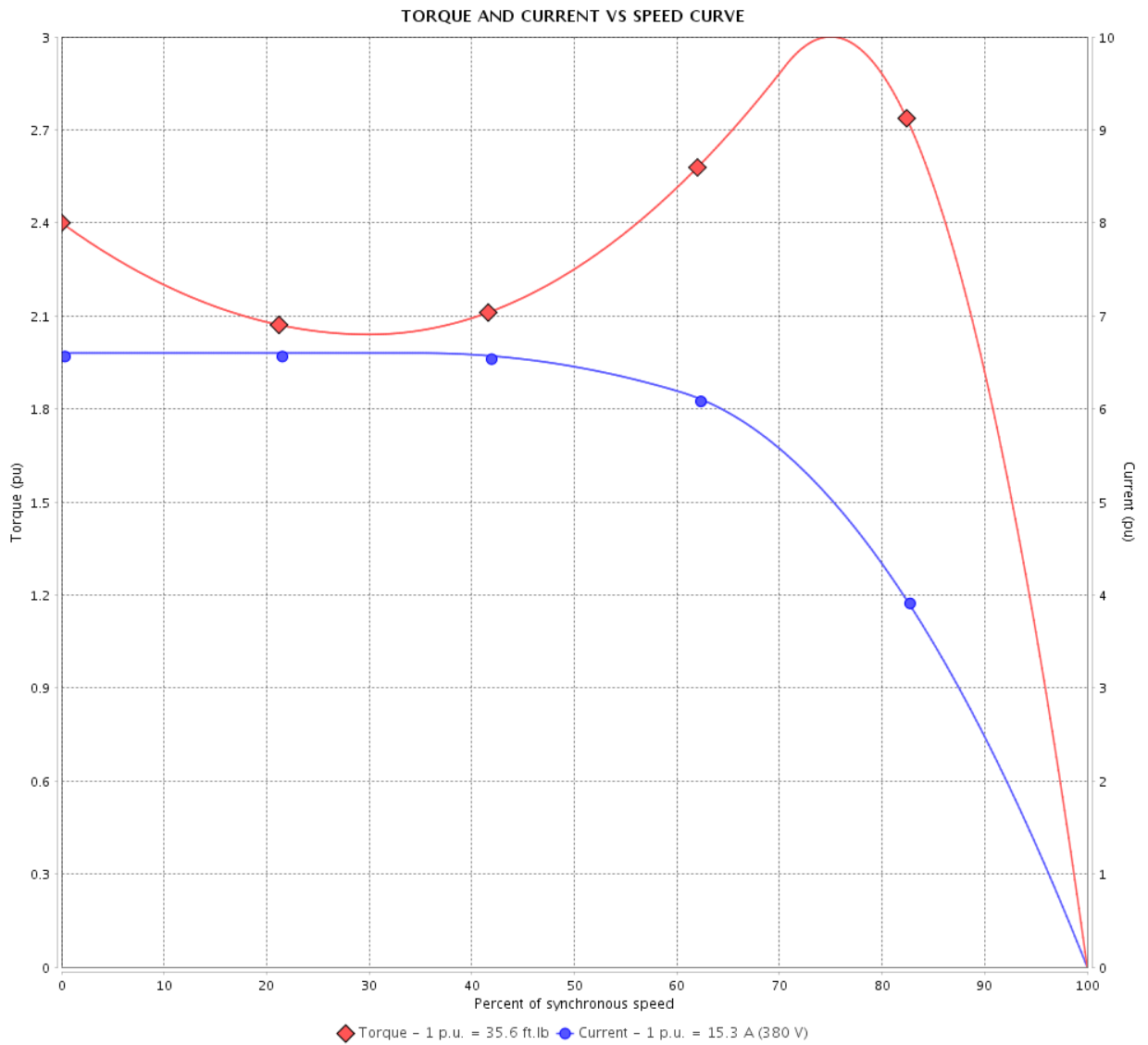
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14436466

Catalog # : 01518OT3E254JM-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 15.3 A	Moment of inertia (J)	: 2.72 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 35.6 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 66s (cold) 37s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			3 / 21	
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



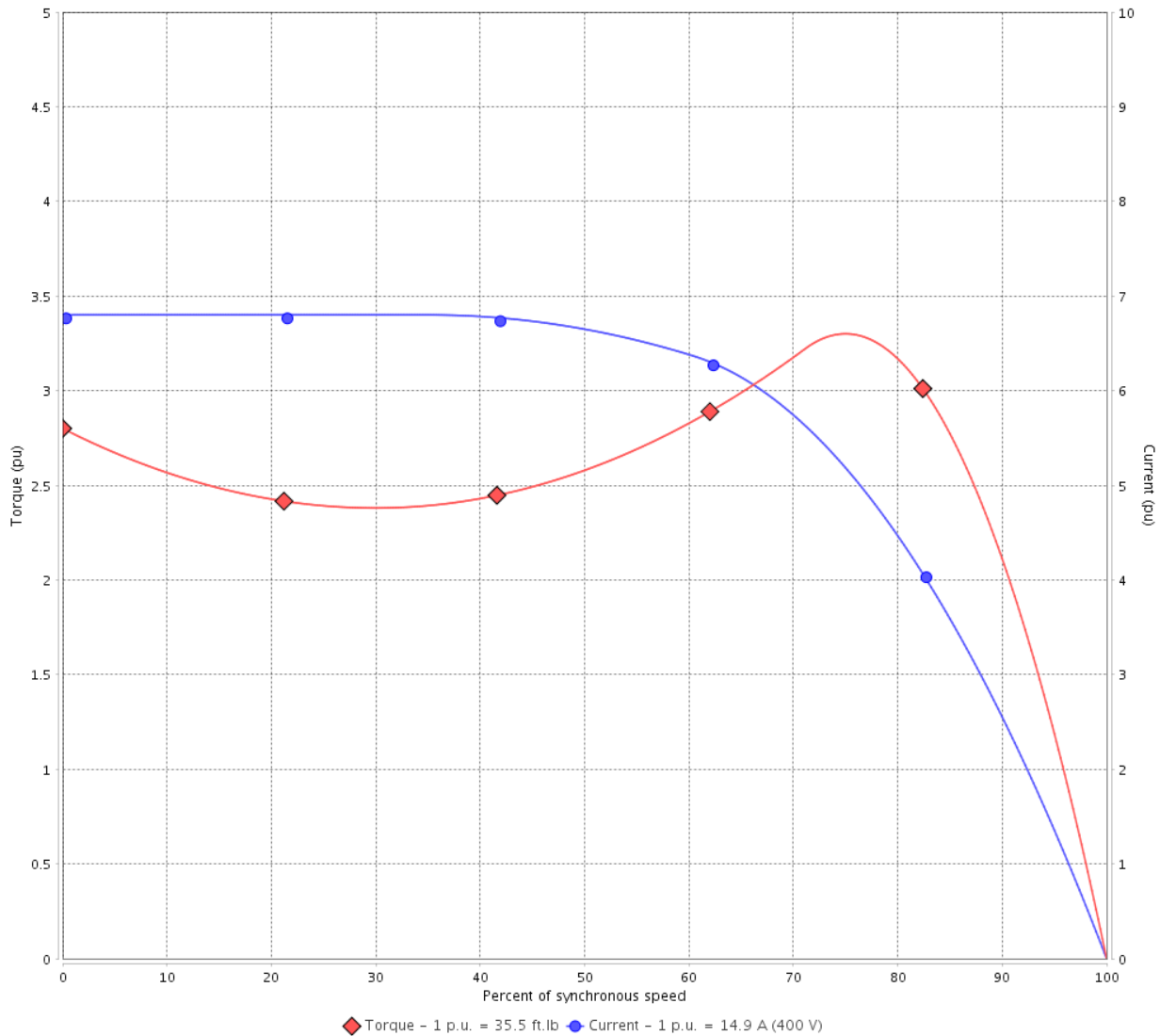
Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14436466

Catalog # : 01518OT3E254JM-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 14.9 A	Moment of inertia (J)	: 2.72 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 35.5 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 59s (cold) 33s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 21	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



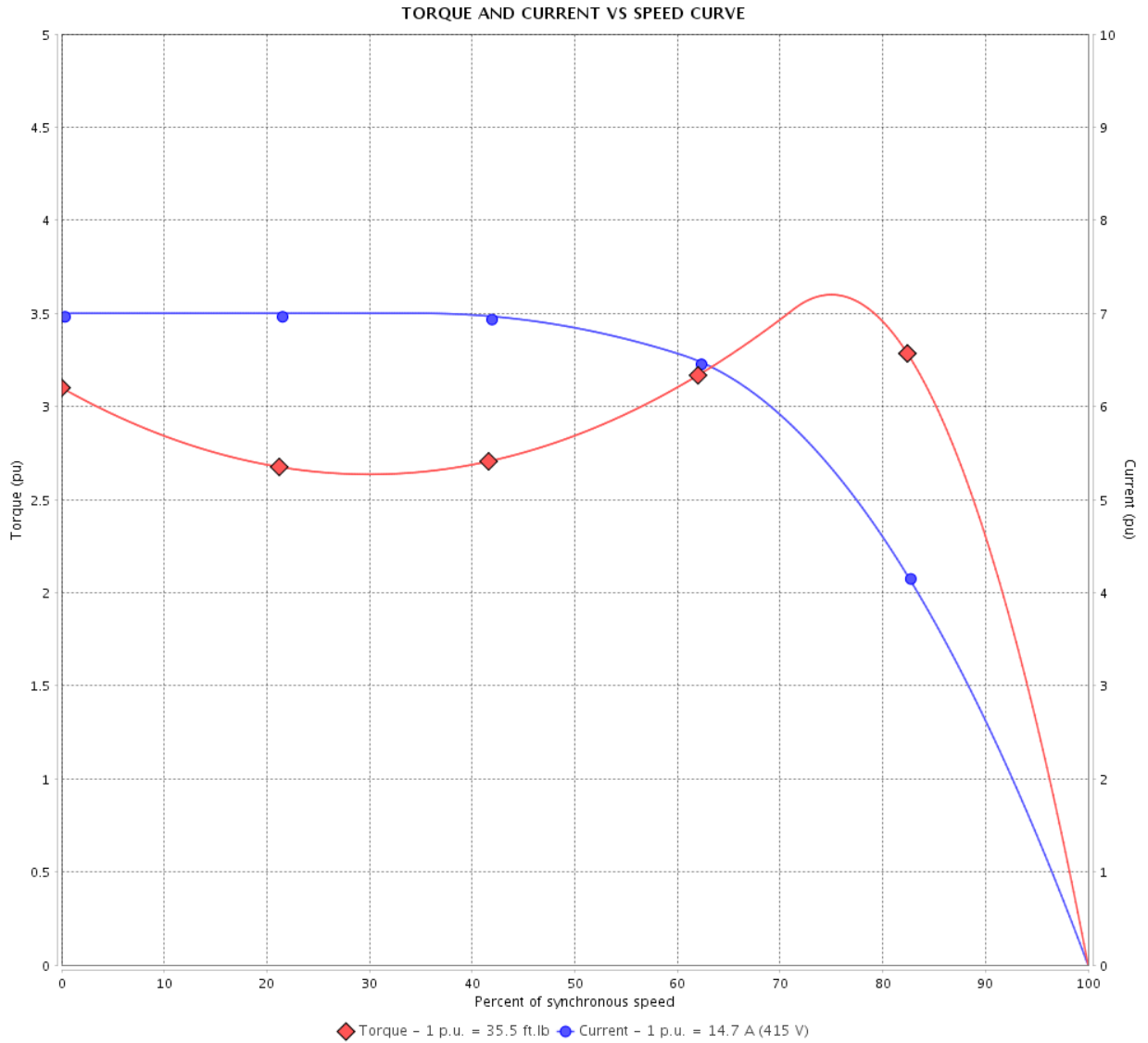
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14436466

Catalog # : 01518OT3E254JM-W40



Performance : 415 V 50 Hz 4P IE3

Rated current	: 14.7 A	Moment of inertia (J)	: 2.72 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 35.5 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 21	Revision
Checked by				
Date	13/04/2022			

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Three Phase Induction Motor - Squirrel Cage

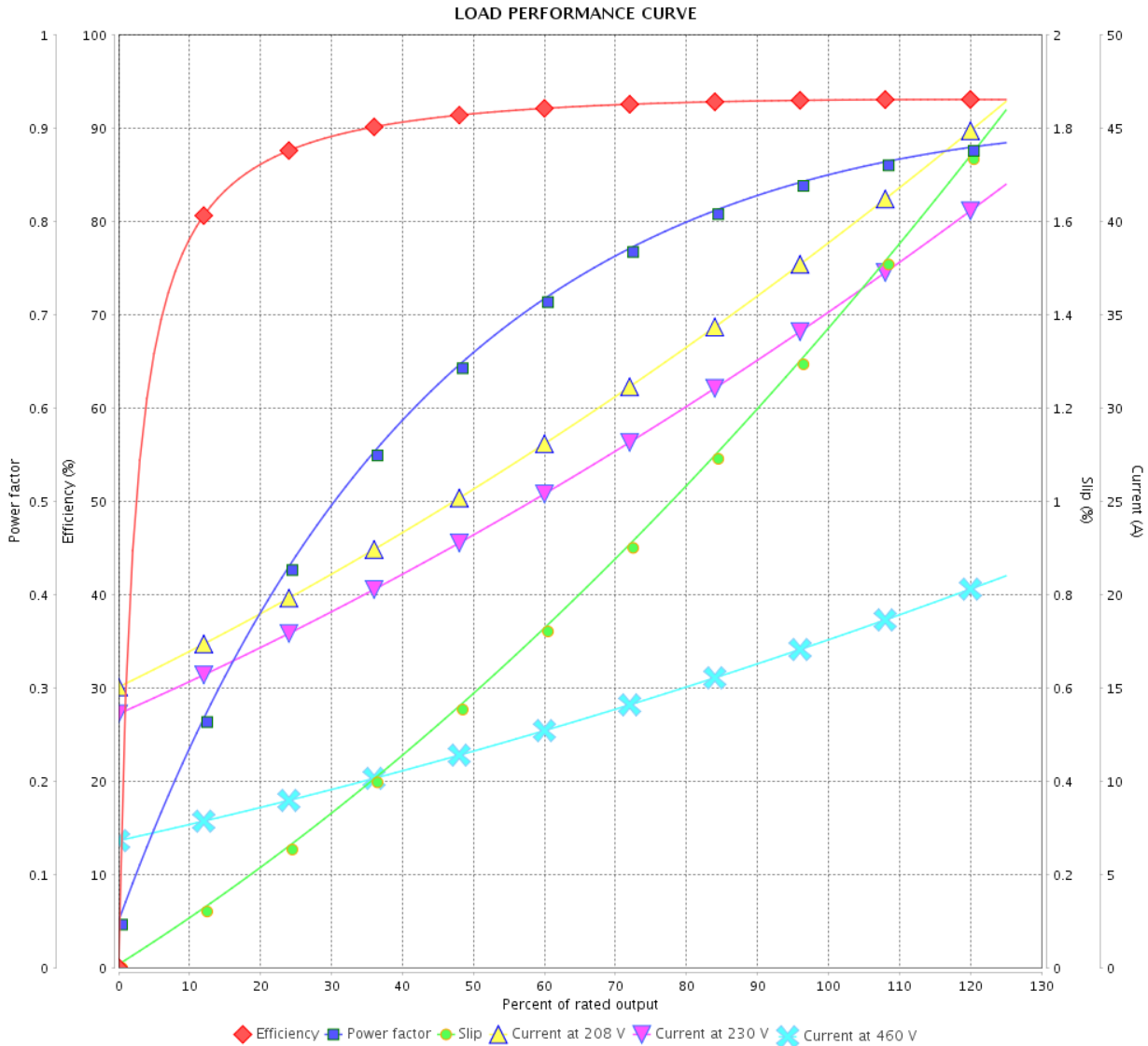


Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14436466

Catalog # : 01518OT3E254JM-W40



Performance : 230/460 V 60 Hz 4P

Rated current : 35.0/17.5 A
 LRC : 6.4
 Rated torque : 44.4 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 2.72 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 6 / 21	Revision
Checked by				
Date	13/04/2022			

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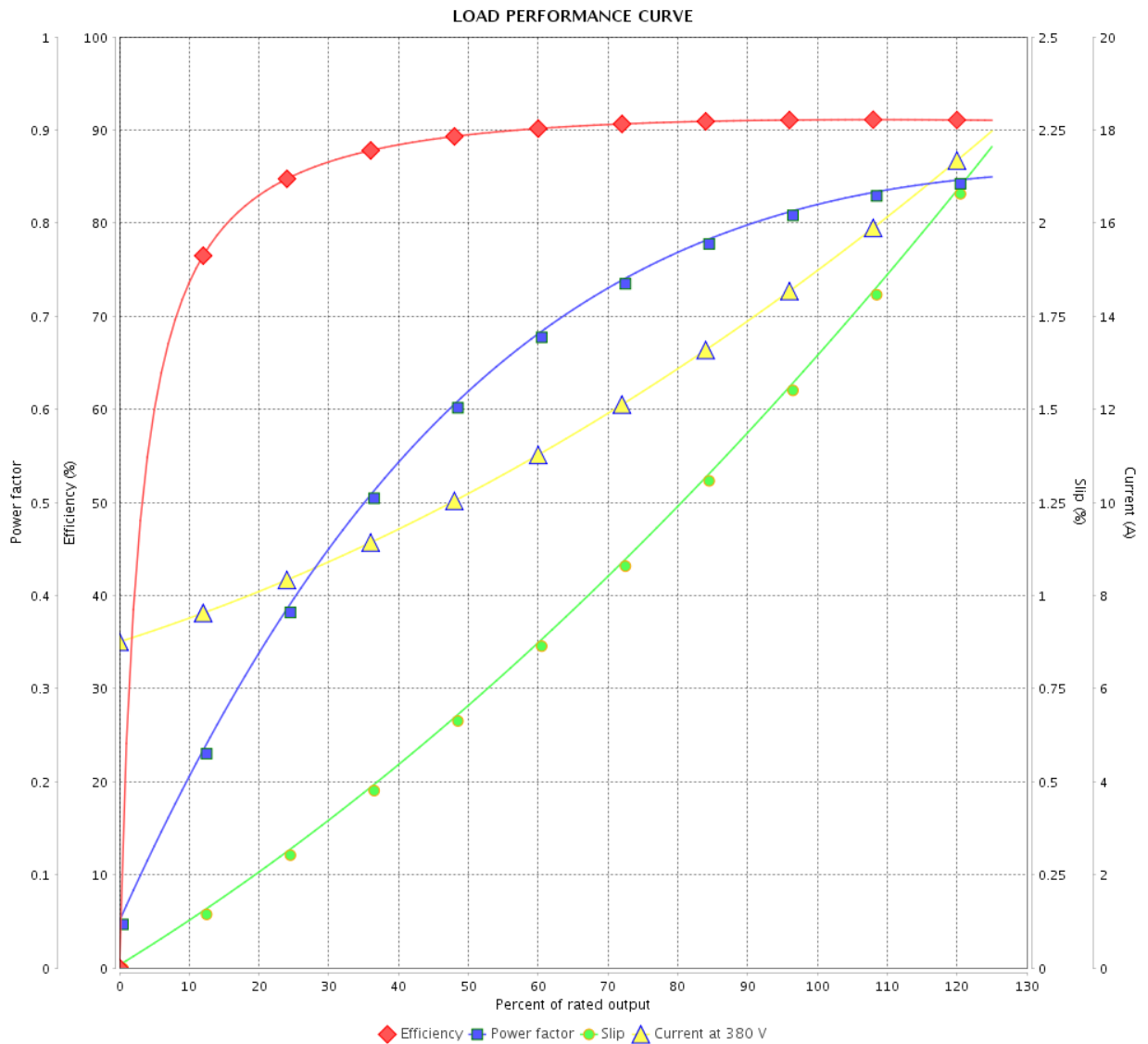


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Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14436466

Catalog # : 01518OT3E254JM-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 15.3 A
 LRC : 6.6
 Rated torque : 35.6 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 300 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		7 / 21		

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Three Phase Induction Motor - Squirrel Cage



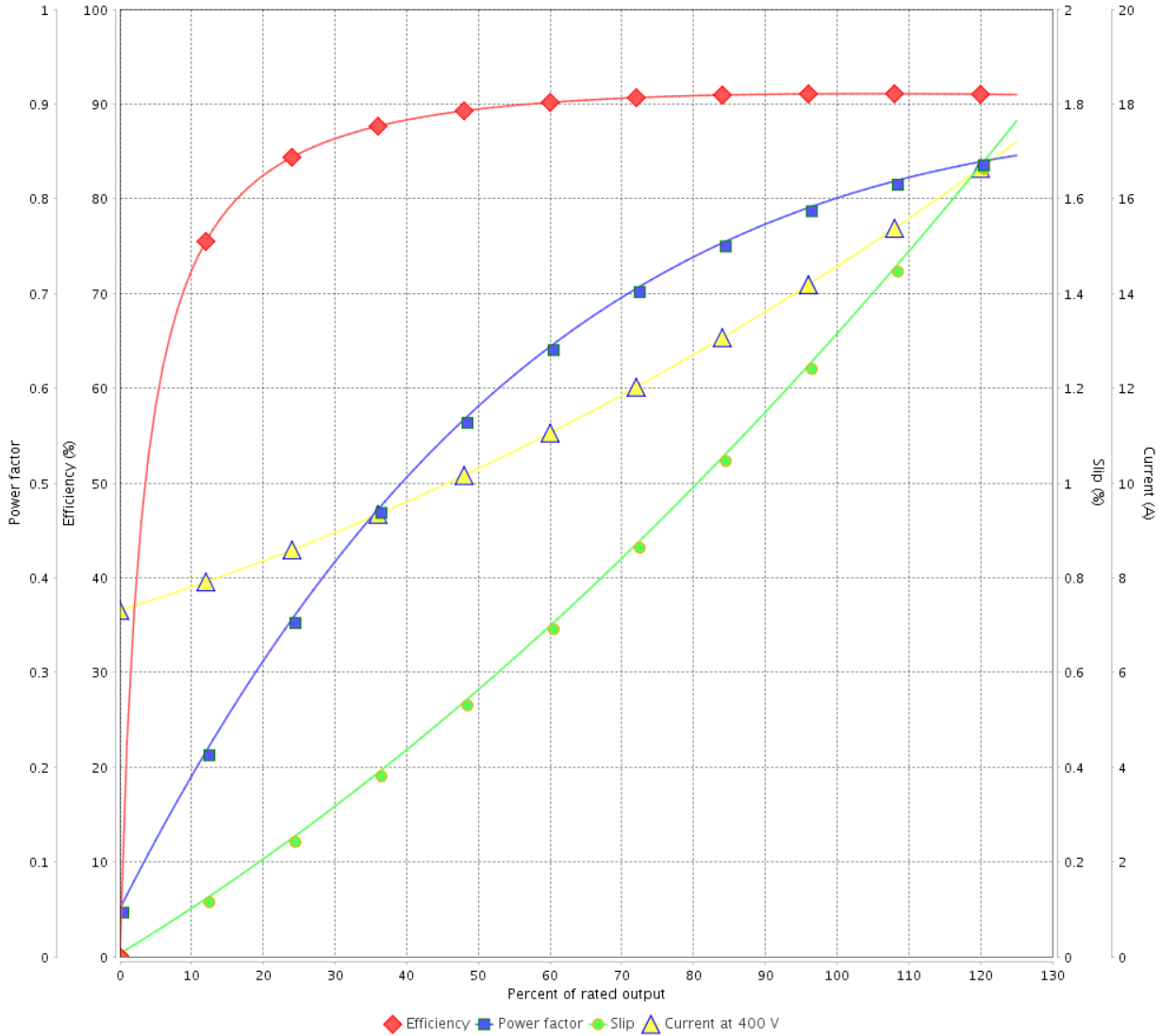
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 14.9 A
 LRC : 6.8
 Rated torque : 35.5 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 21	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

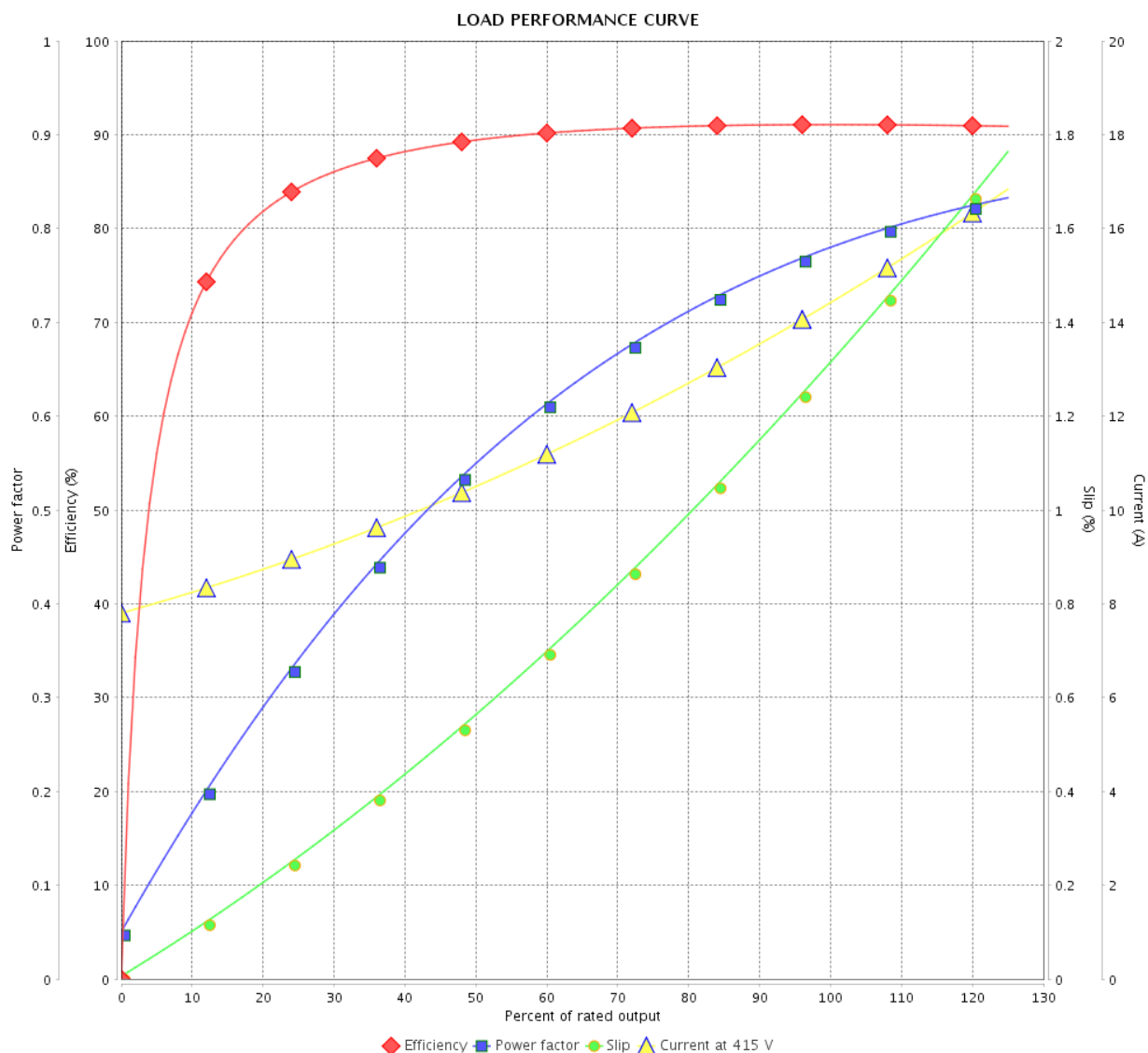


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 Locked rotor torque : 310 %
 Breakdown torque : 360 %
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
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THERMAL LIMIT CURVE



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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

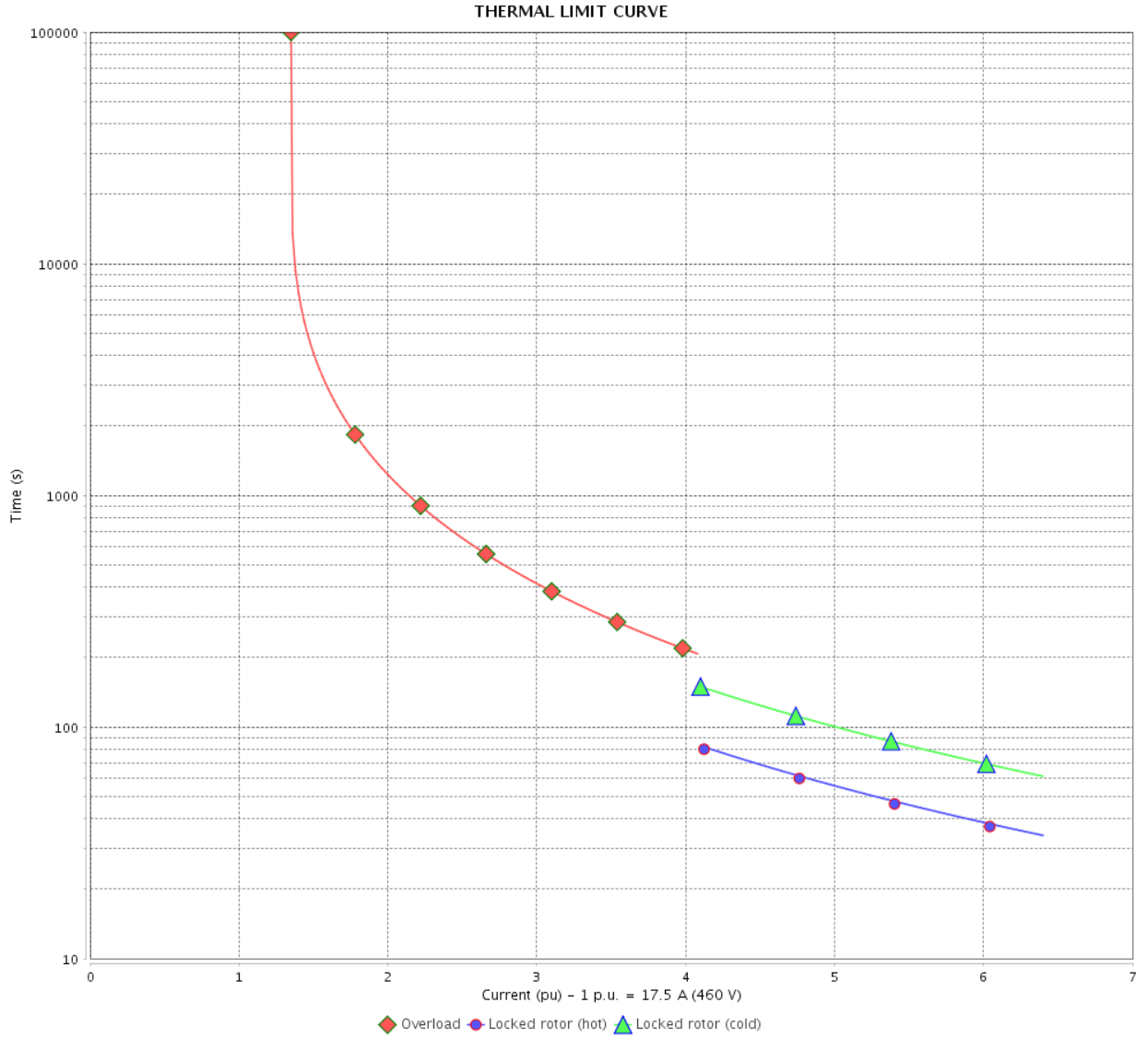
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		10 / 21	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 21		
Date		13/04/2022		

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Performance : 380 V 50 Hz 4P IE3

Rated current	: 15.3 A	Moment of inertia (J)	: 2.72 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 35.6 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

Heating constant

Cooling constant

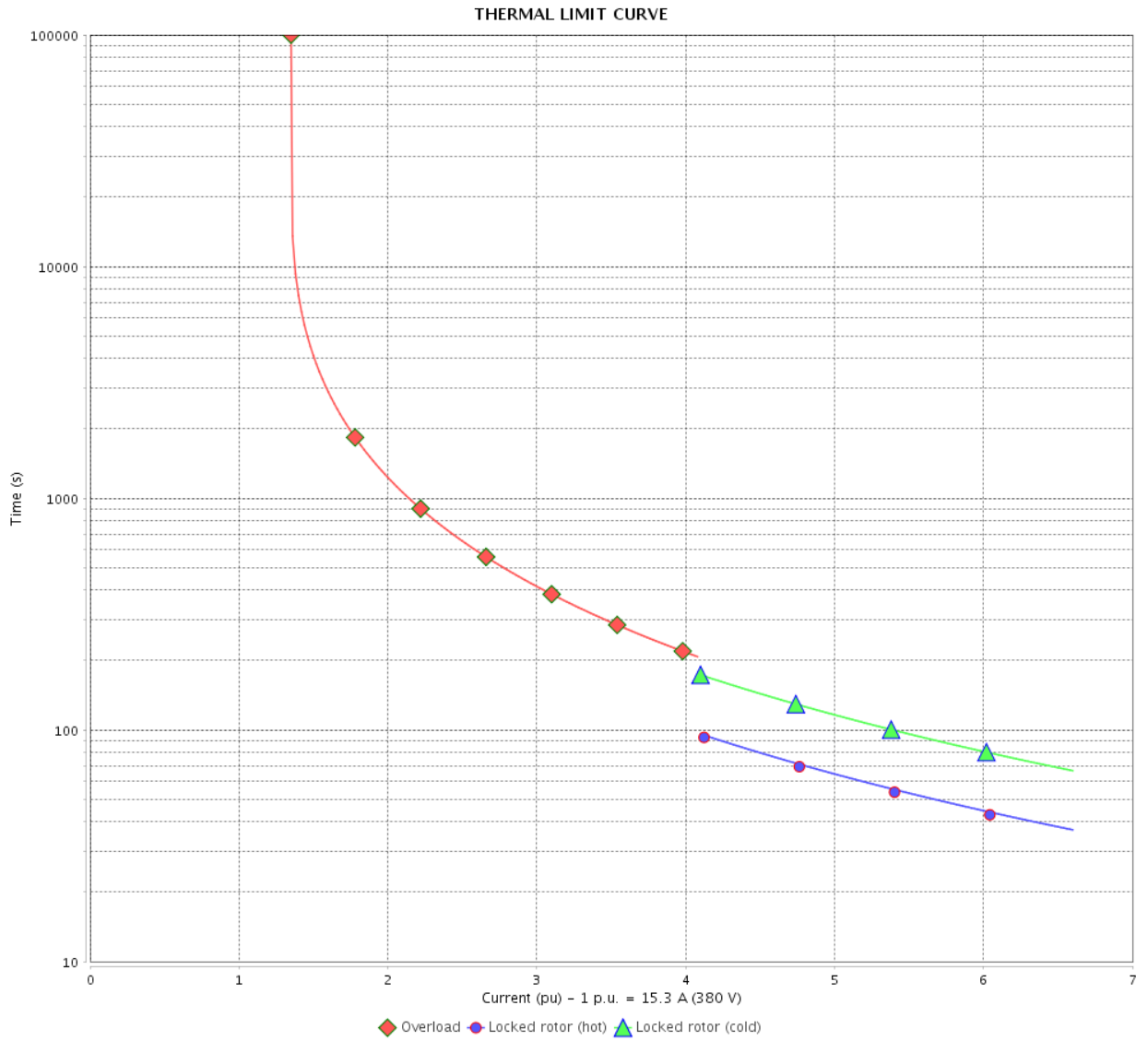
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Checked by			Page	Revision
Date	13/04/2022		12 / 21	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 13 / 21		Revision
Checked by				
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Performance : 400 V 50 Hz 4P IE3

Rated current	: 14.9 A	Moment of inertia (J)	: 2.72 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 35.5 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

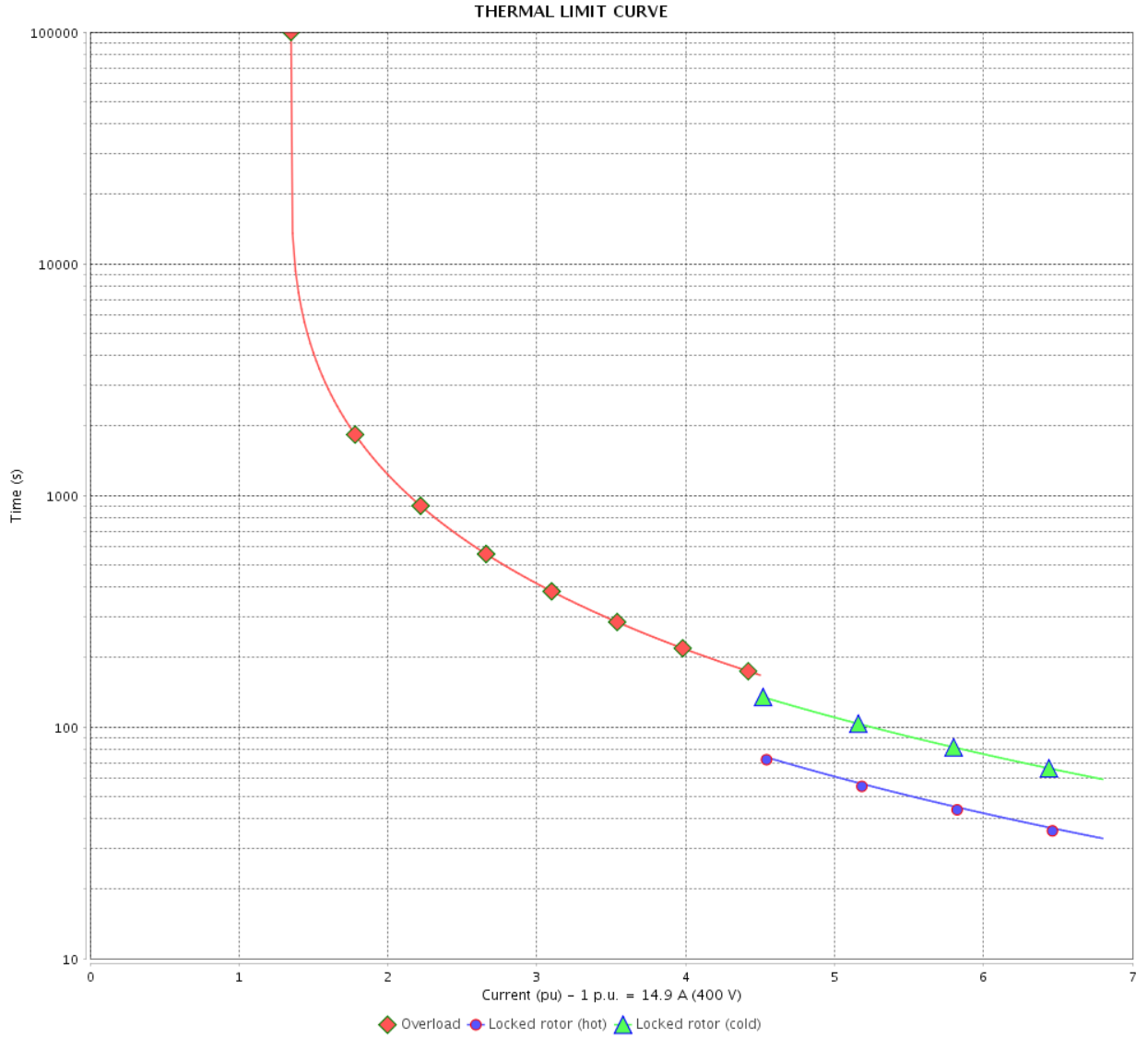
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Date	13/04/2022		14 / 21	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by				
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Date				
		Page	Revision	
		15 / 21		

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Catalog # : 01518OT3E254JM-W40

Performance : 415 V 50 Hz 4P IE3

Rated current	: 14.7 A	Moment of inertia (J)	: 2.72 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 35.5 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

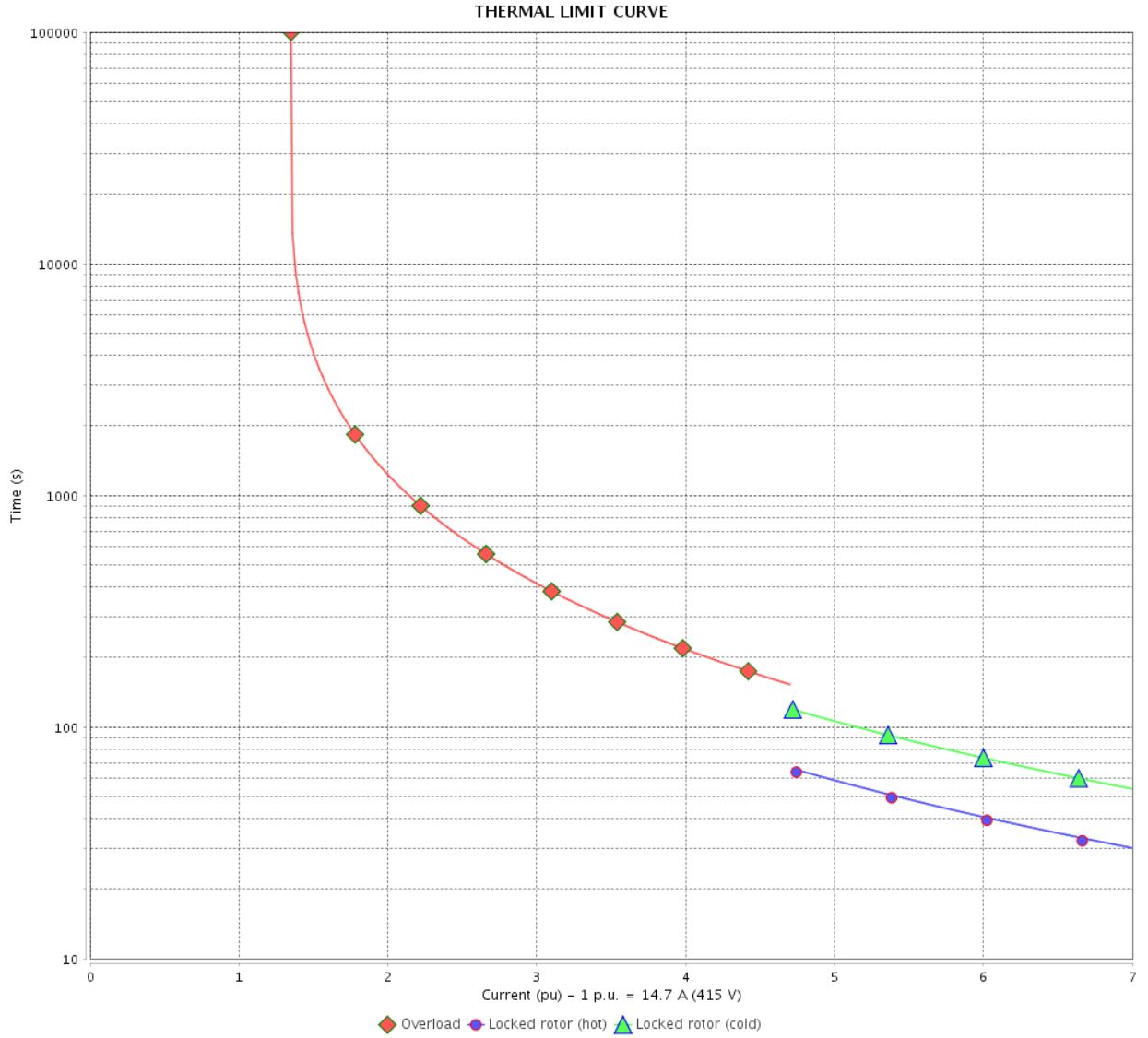
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Performed by				
Checked by			Page	Revision
Date	13/04/2022		16 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page Revision 17 / 21		
Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



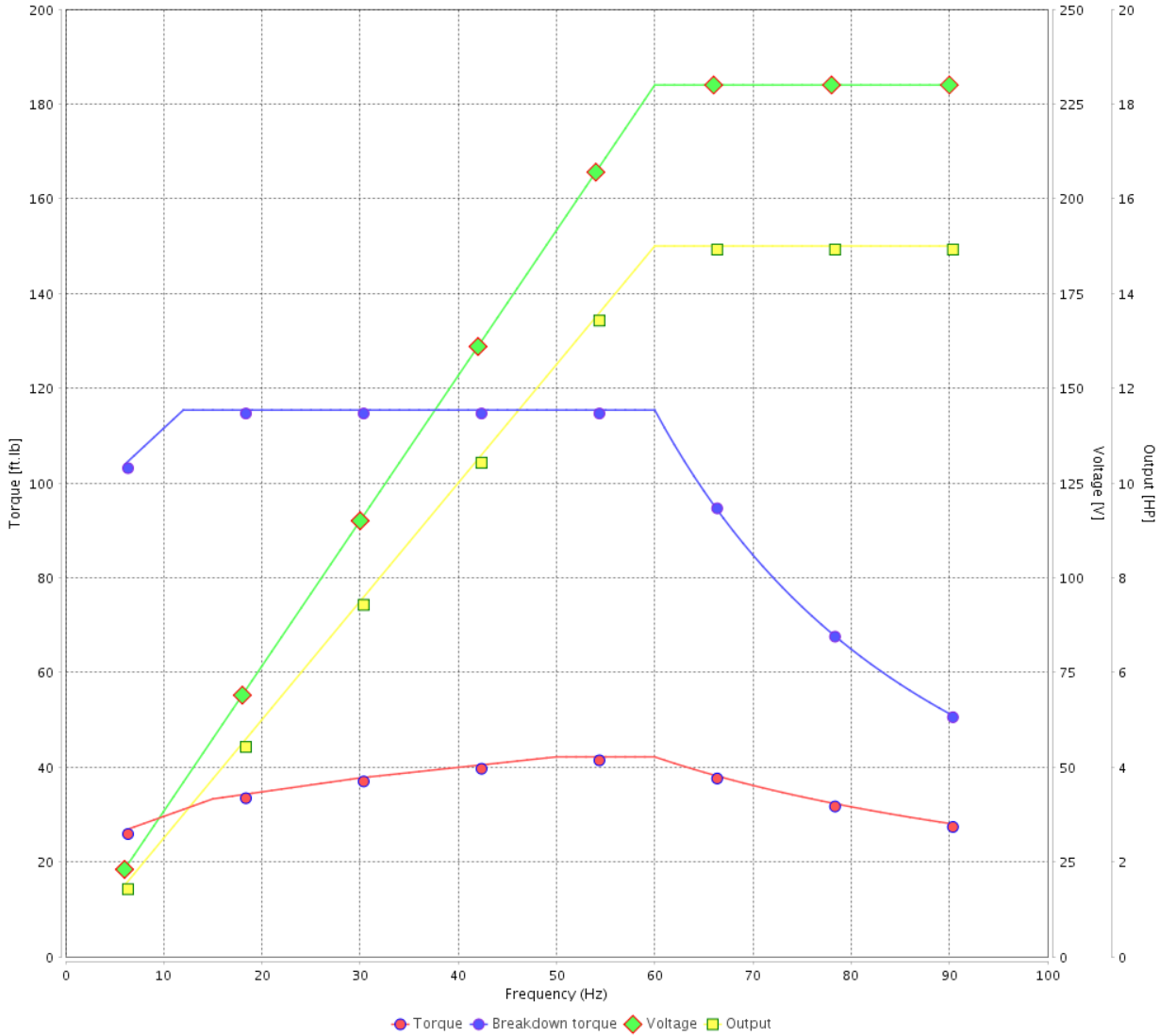
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VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 35.0/17.5 A
 LRC : 6.4
 Rated torque : 44.4 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 2.72 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 18 / 21	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

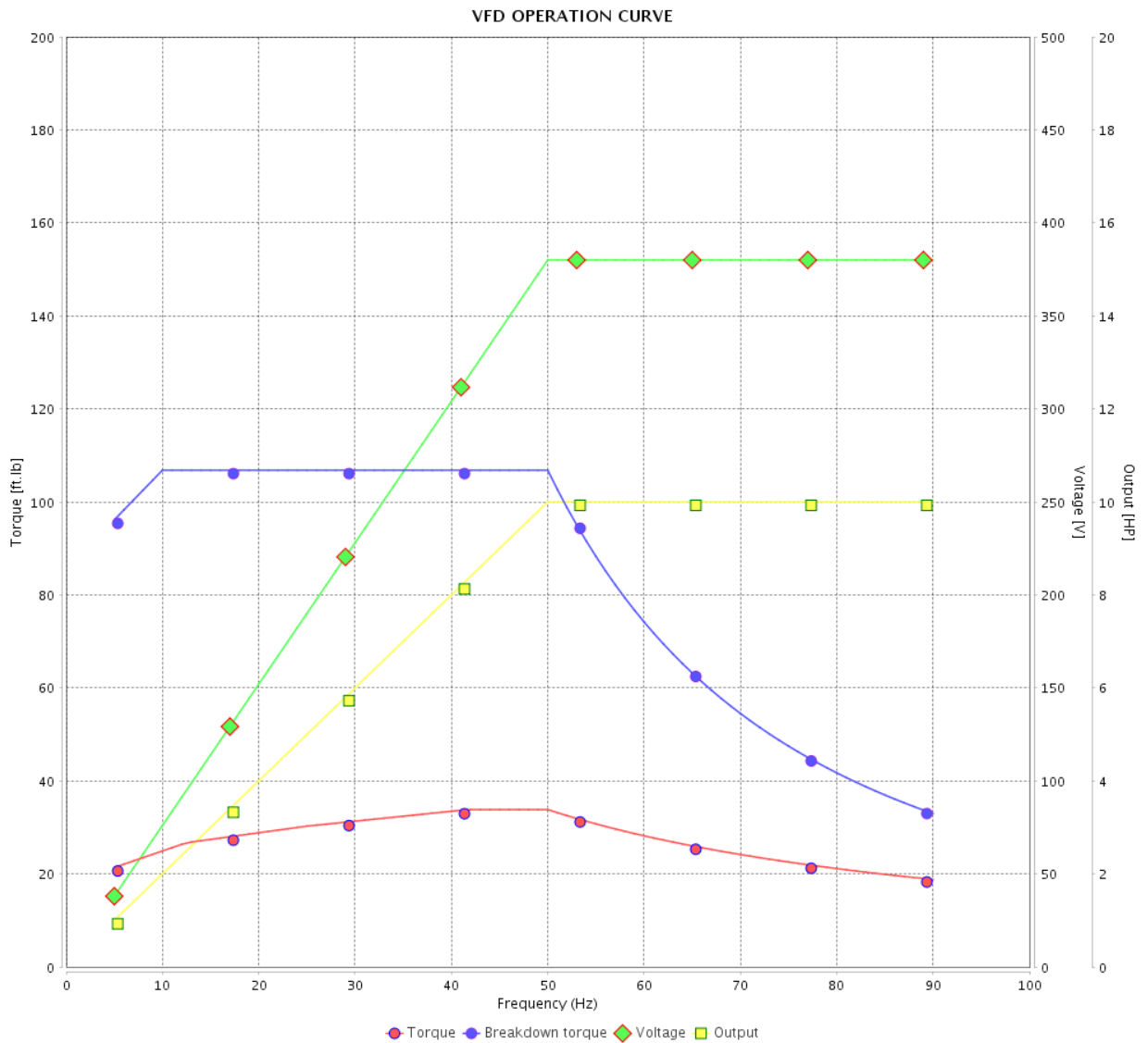


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Catalog # : 01518OT3E254JM-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 15.3 A
 LRC : 6.6
 Rated torque : 35.6 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 300 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
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Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 19 / 21
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



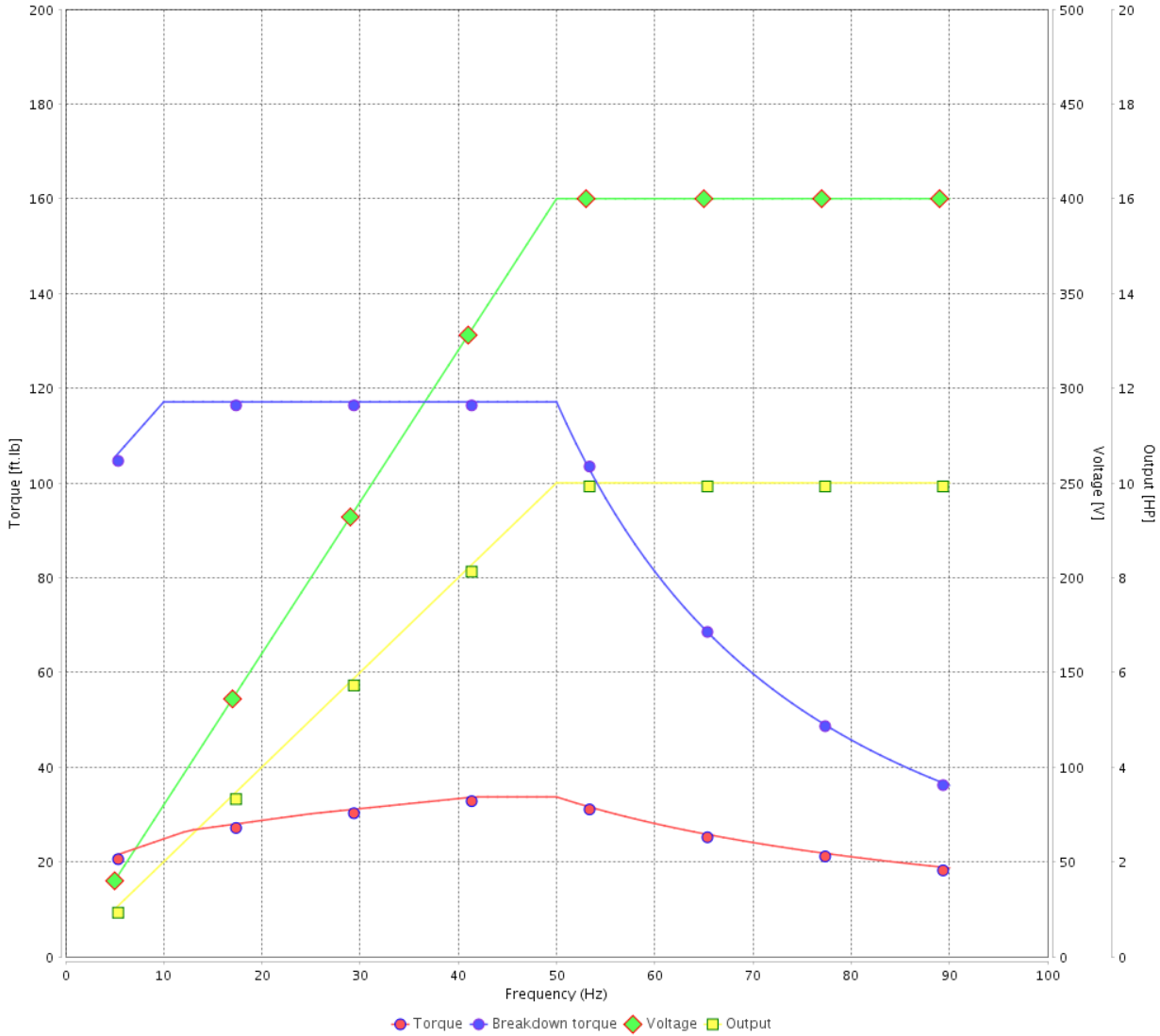
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 14.9 A
 LRC : 6.8
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 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 1480 rpm

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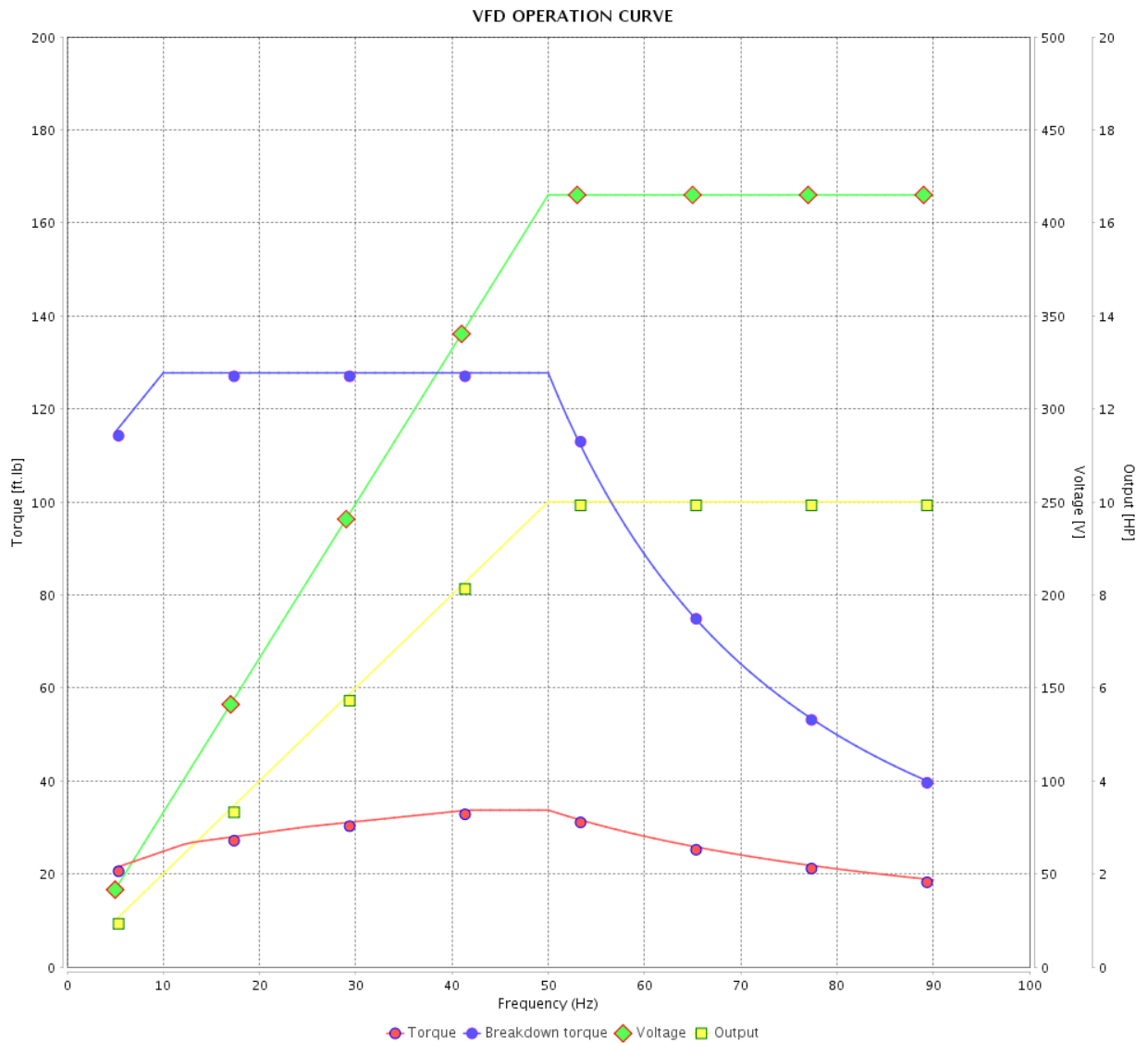


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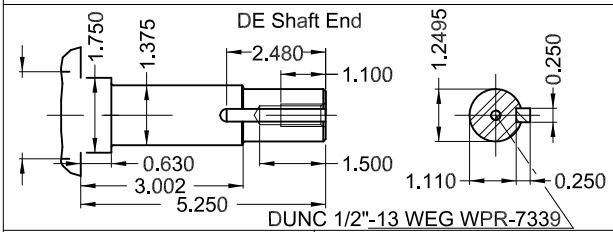
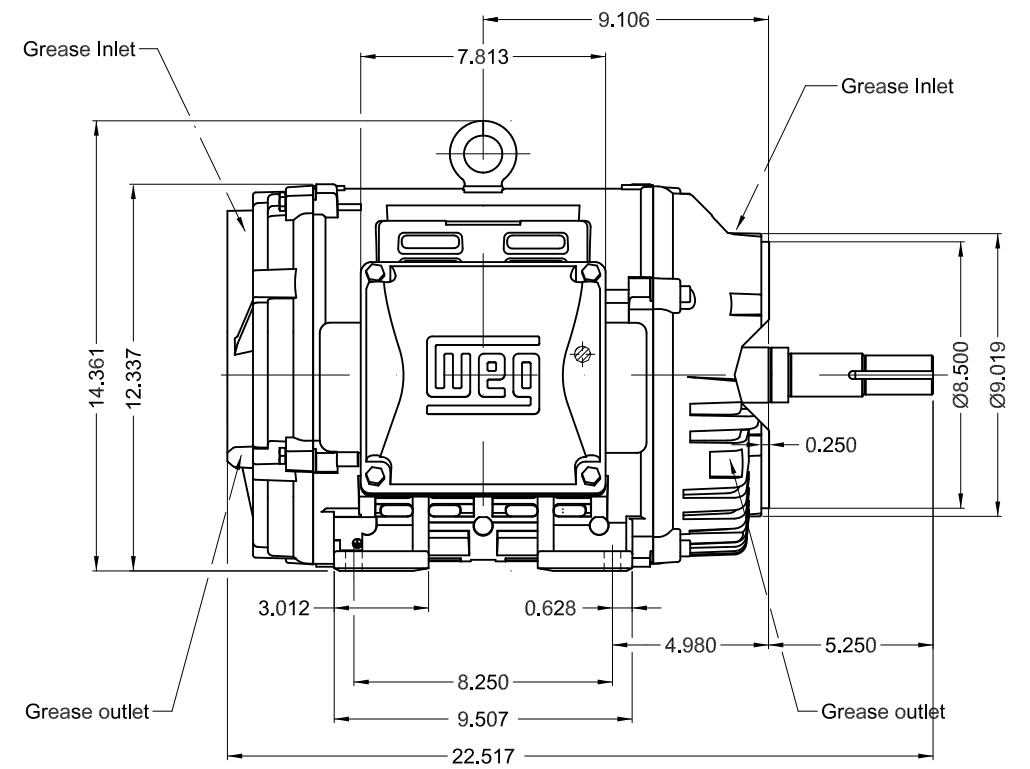
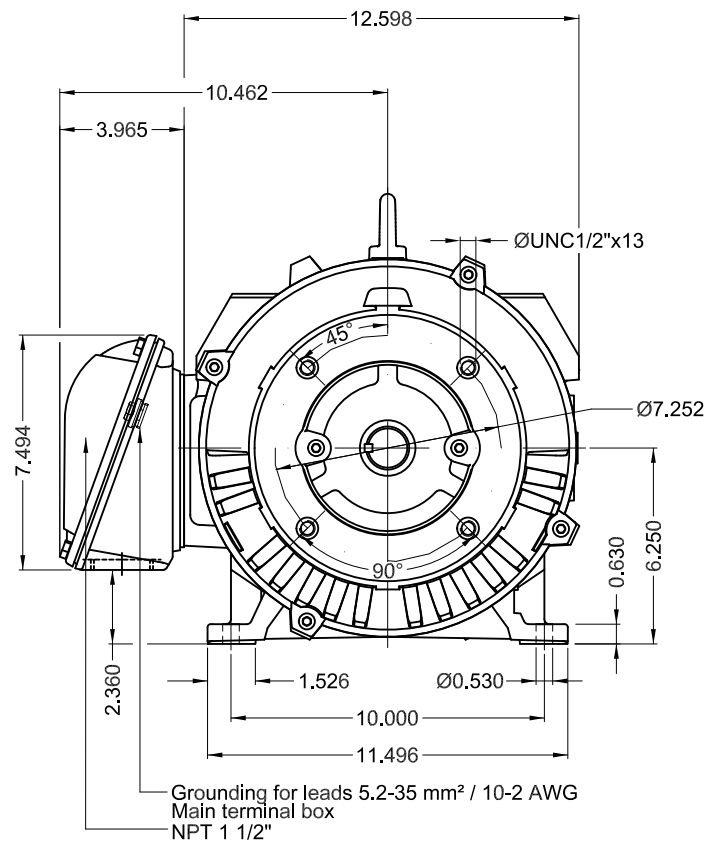


Performance : 415 V 50 Hz 4P IE3

Rated current : 14.7 A
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 Rated torque : 35.5 ft.lb
 Locked rotor torque : 310 %
 Breakdown torque : 360 %
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 Insulation class : F
 Service factor : 1.00
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		21 / 21		
Date	13/04/2022			



15 HP 04 Poles 60 Hz

A

1:6

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 CLOSE COUPLED PUMP JM TYPE PREM-EST.					
CHECKED		FRAME 254JM IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

Color RAL 5009
 Painting plan 203A
 Mounting NEMA F-1
 Mounting B34R(D)

PREVIEW
 WDD



WEG **W40 NEMA**
CC029A Premium
Inverter Duty Motor



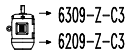
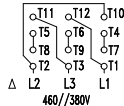
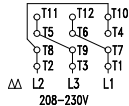
IEC 60034-1
 MOD.T01#FOXON



For 60Hz use on PWM, VT 1000:1, CT 3:1, 1.0SF

MODEL 015180T3E254JM-W40
 MADE IN BRAZIL
 14436466

PH 3	FR 254JM	HP(kW) 15.0(11.0)	Hz 60
V 230/460	A 35.0/17.5	RPM 1775	DES B
NEMA NOM EFF 93.0 %	INS. CL. F Δ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.85	SF 1.25	SFA 43.8/21.9
USABLE @208V	38.7 A	SF 1.15	SFA 44.5
10HP 7.5kW 50Hz 380V 15.3A 1475RPM SF1.00 EFF 91.0% (IE3)	ALT 1000 m.a.s.l.		



→ 6309-Z-C3
 → 6209-Z-C3

MOBIL POLYREX EM
 13 g 20000 h

254 Lbs