

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line : W40 NEMA Premium Efficiency Three-Phase		Product code : 14495157		Catalog # : 02536OT3E256TC-W40
Frame : 254/6TC		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 : 243 lb		
Protection degree : IP23		Moment of inertia (J) : 1.13 sq.ft.lb		
Design : B				
Output [HP]	25	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]	57.6/28.8	28.2	27.4	27.0
L. R. Amperes [A]	374/187	192	186	200
LRC [A]	6.5x(Code G)	6.8x(Code H)	6.8x(Code H)	7.4x(Code J)
No load current [A]	17.0/8.50	8.20	9.10	10.0
Rated speed [RPM]	3535	2935	2945	2950
Slip [%]	1.81	2.17	1.83	1.67
Rated torque [ft.lb]	37.1	35.8	35.7	35.6
Locked rotor torque [%]	200	200	220	229
Breakdown torque [%]	280	260	300	320
Service factor	1.25	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	19s (cold) 11s (hot)	14s (cold) 8s (hot)	18s (cold) 10s (hot)	14s (cold) 8s (hot)
Noise level ²				
Efficiency (%)	25%	90.8	87.6	87.9
	50%	91.0	89.5	89.6
	75%	91.7	89.9	90.1
	100%	91.7	91.9	91.9
Power Factor	25%	0.53	0.54	0.49
	50%	0.77	0.77	0.73
	75%	0.85	0.85	0.82
	100%	0.88	0.88	0.86
Bearing type : <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6209 Z C3		Foundation loads		
Sealing : Without Without		Max. traction		
Lubrication interval : 20000 h 20000 h		Max. compression		
Lubricant amount : 13 g 9 g				
Lubricant type : Mobil Polyrex EM				
Notes USABLE @208V 63.7A SF 1.15 SFA 73.2A				
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.		
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



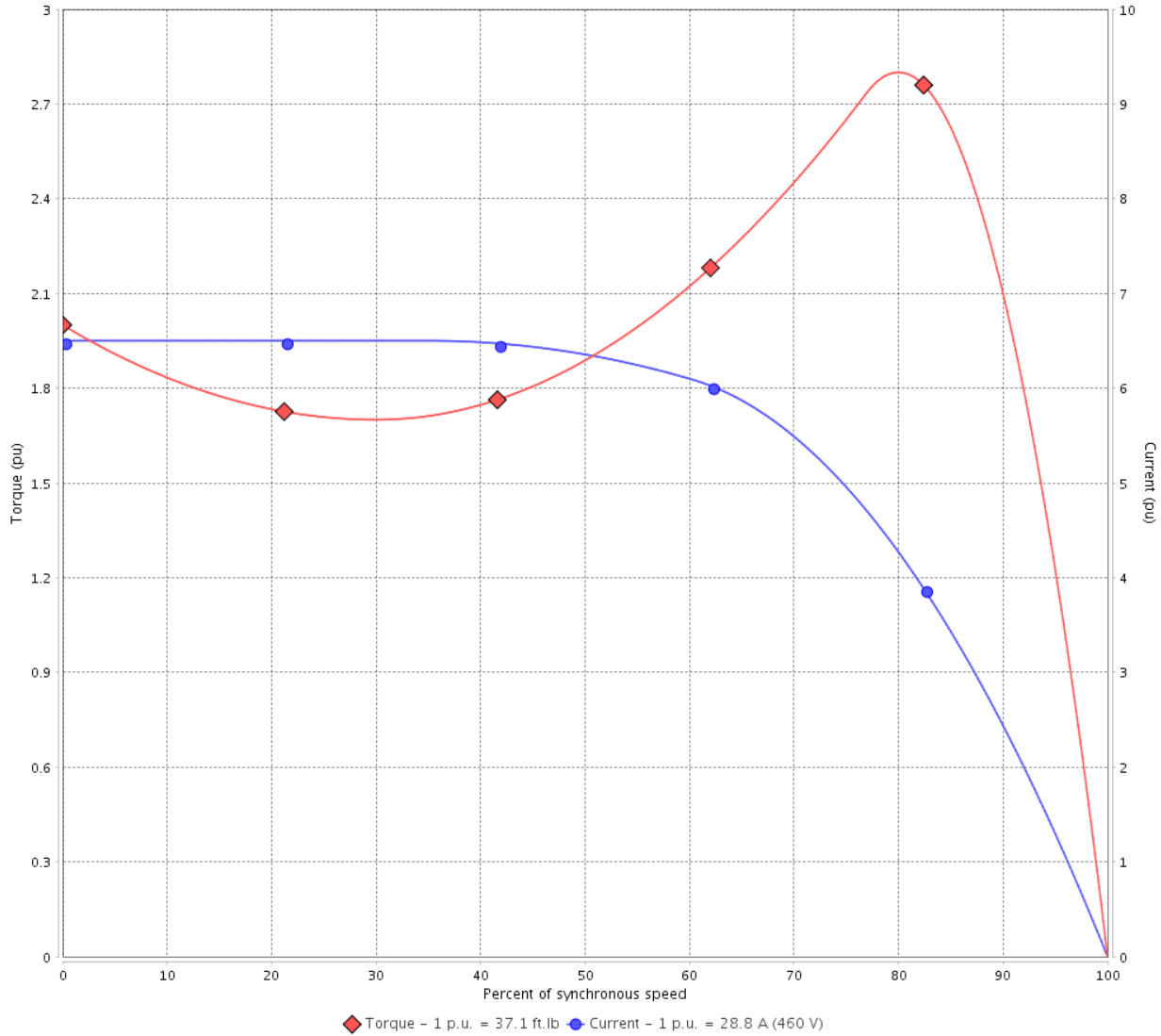
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current	: 57.6/28.8 A	Moment of inertia (J)	: 1.13 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 37.1 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 3535 rpm	Design	: B

Locked rotor time : 19s (cold) 11s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



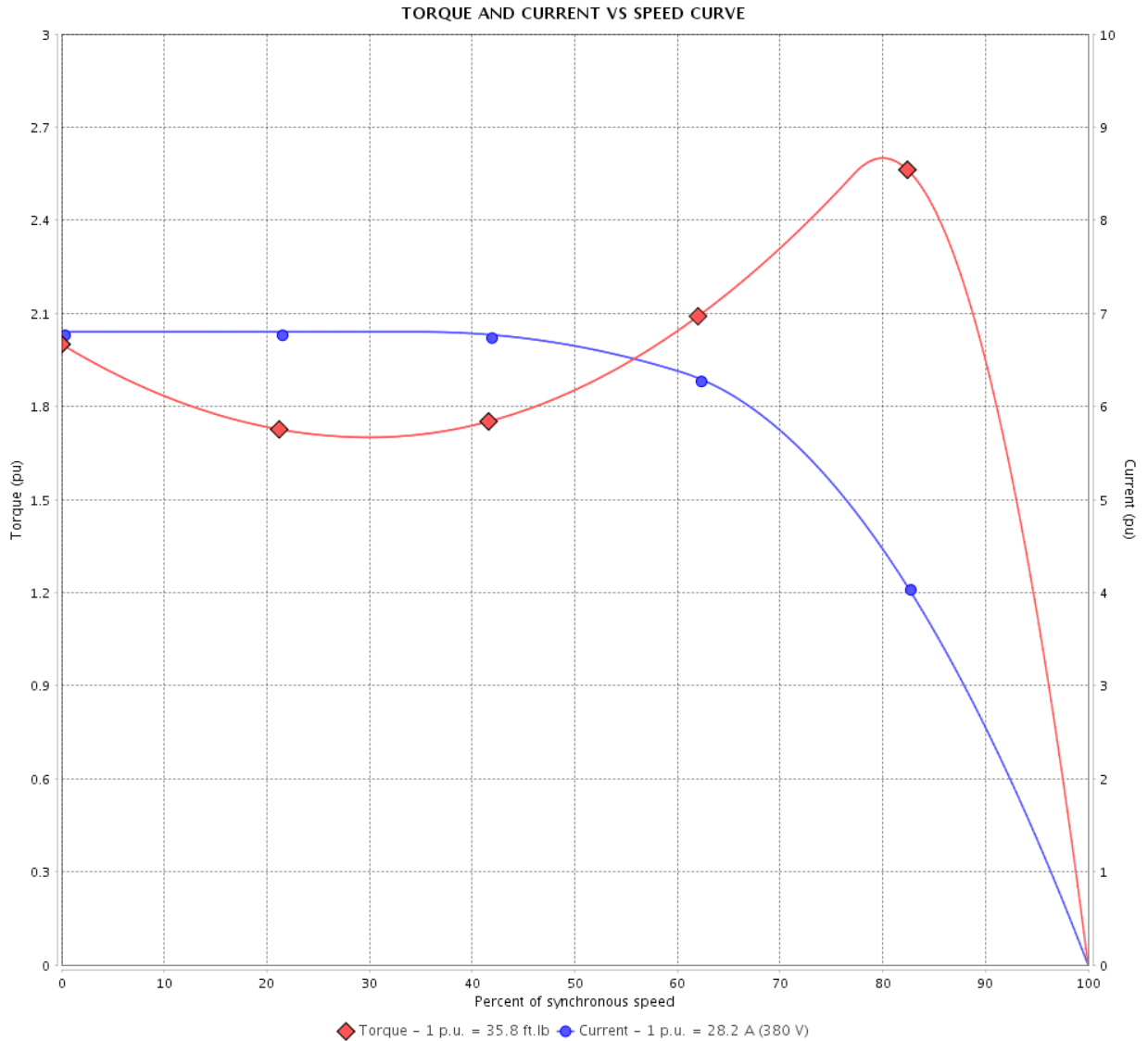
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 28.2 A
LRC : 6.8
Rated torque : 35.8 ft.lb
Locked rotor torque : 200 %
Breakdown torque : 260 %
Rated speed : 2935 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Locked rotor time : 14s (cold) 8s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



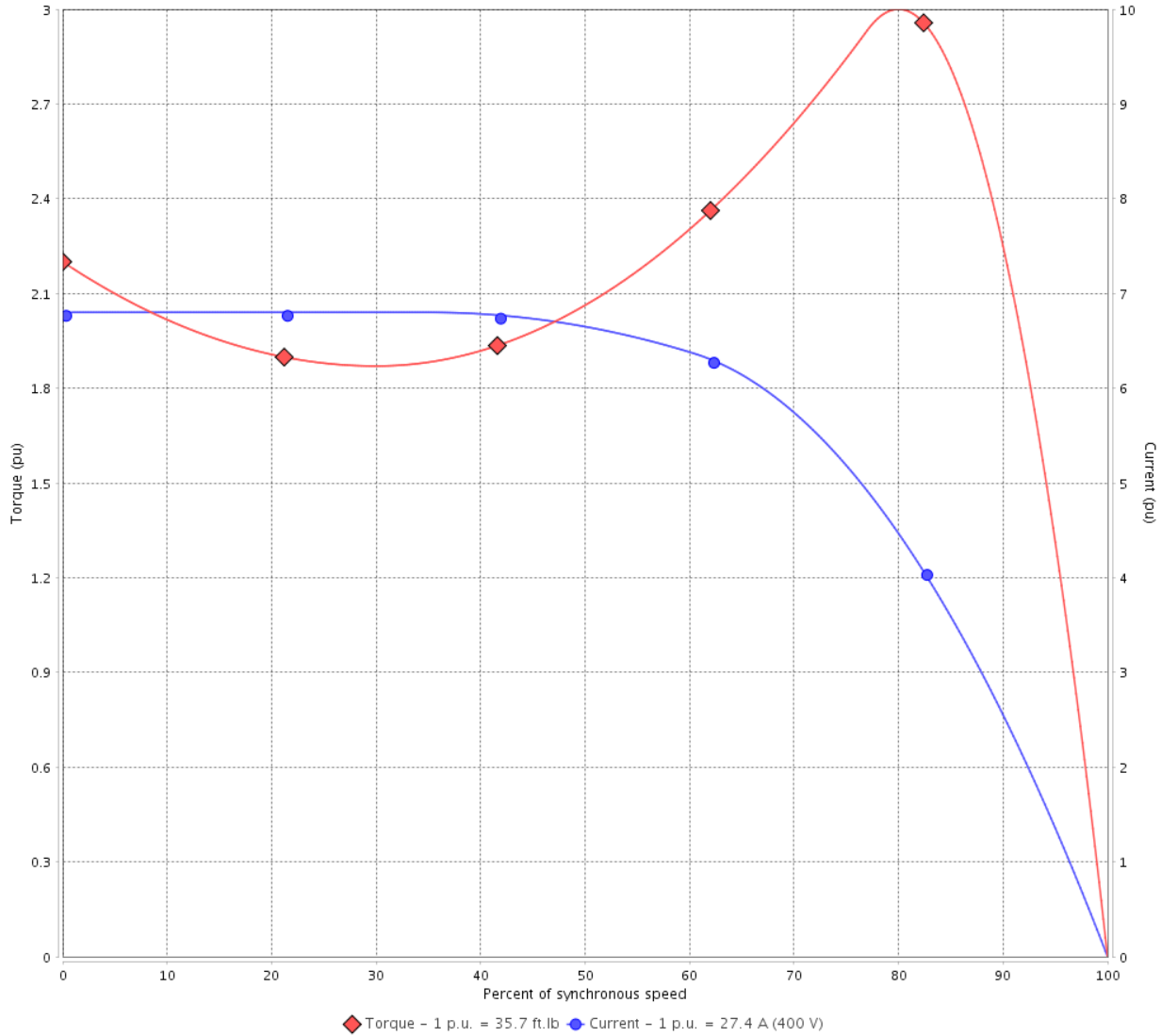
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 27.4 A	Moment of inertia (J)	: 1.13 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 35.7 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2945 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



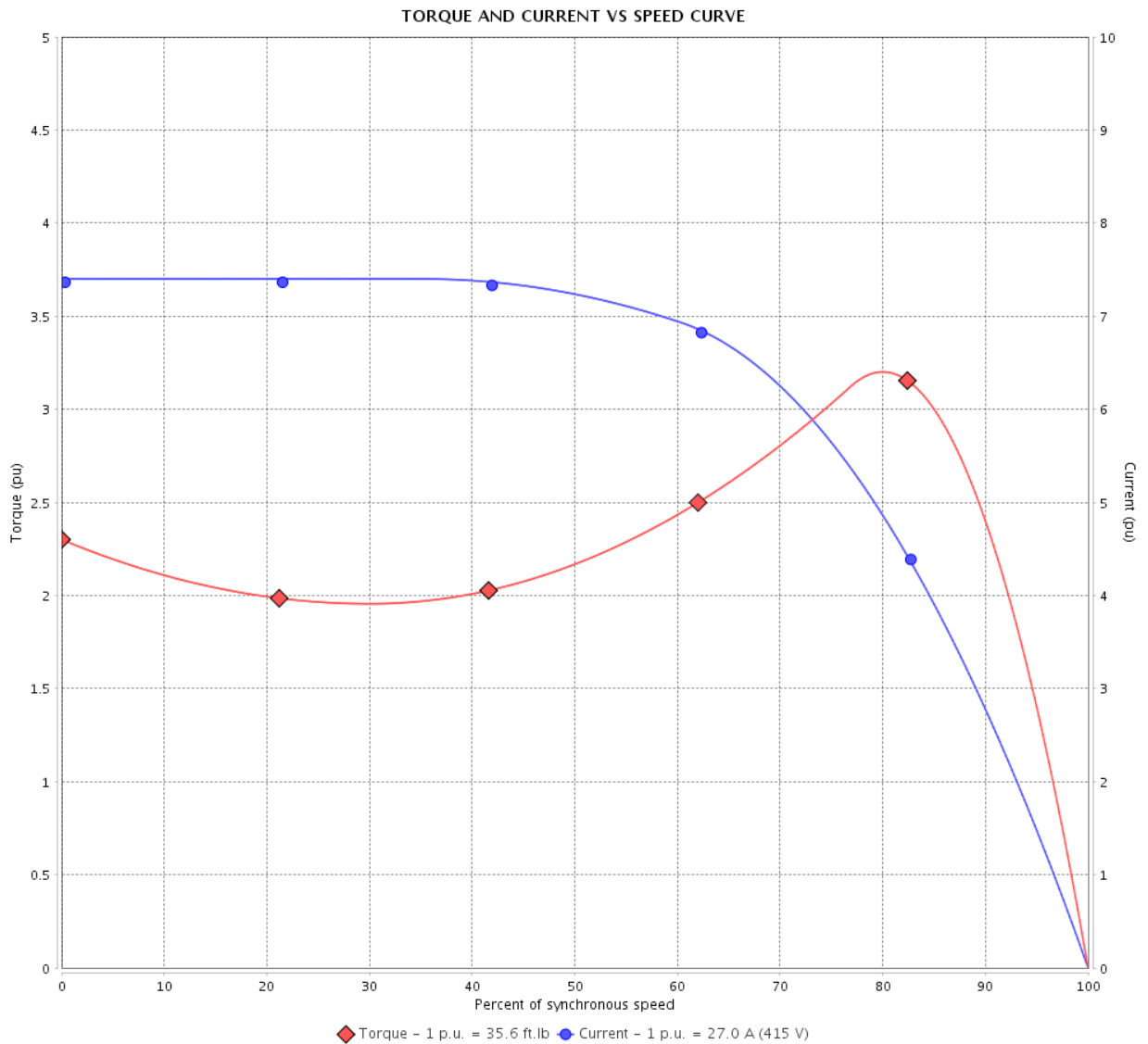
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40



Performance : 415 V 50 Hz 2P IE3

Rated current	: 27.0 A	Moment of inertia (J)	: 1.13 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 35.6 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 2950 rpm	Design	: B

Locked rotor time : 14s (cold) 8s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

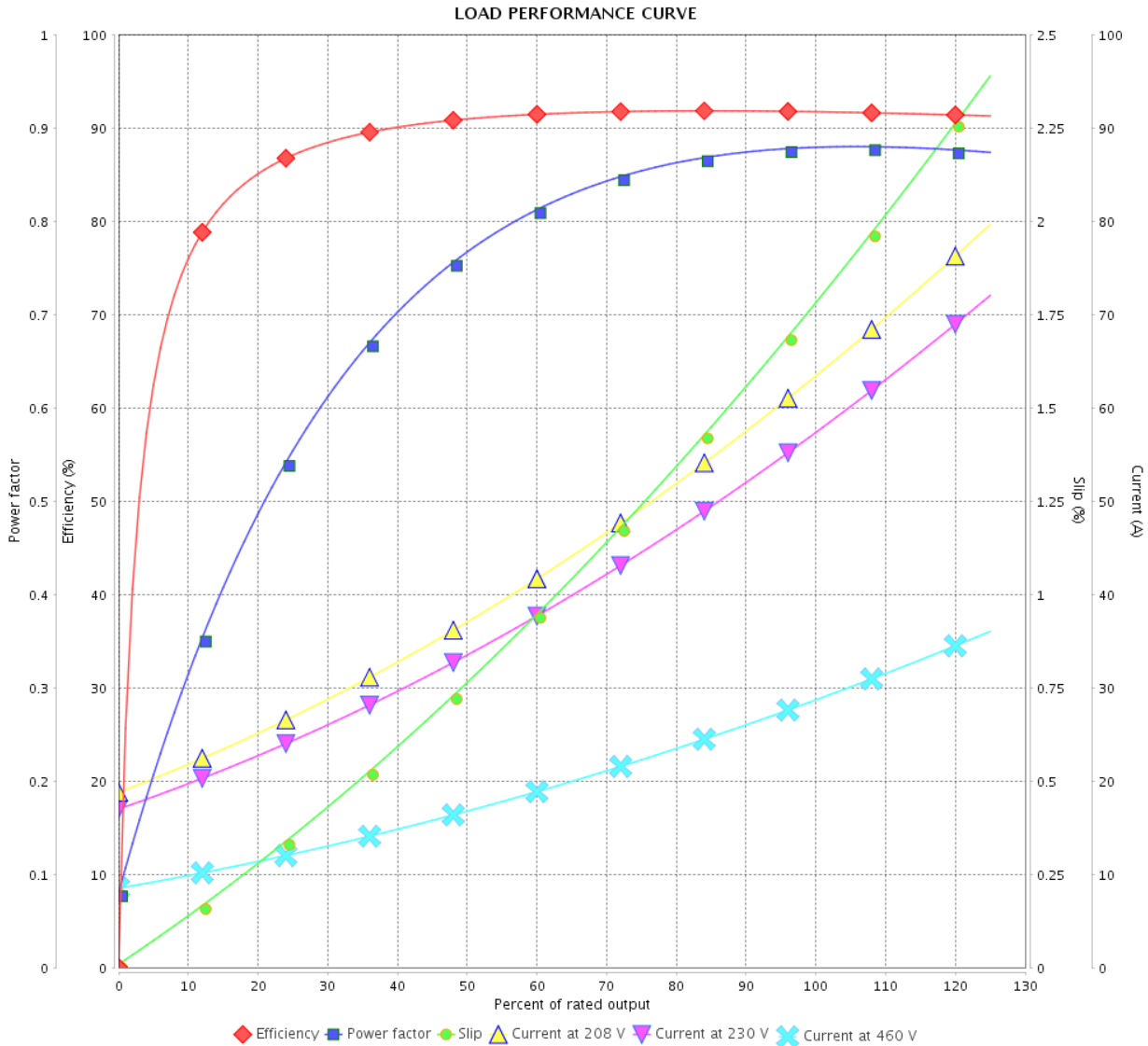


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40



Performance : 230/460 V 60 Hz 2P

Rated current : 57.6/28.8 A
 LRC : 6.5
 Rated torque : 37.1 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 280 %
 Rated speed : 3535 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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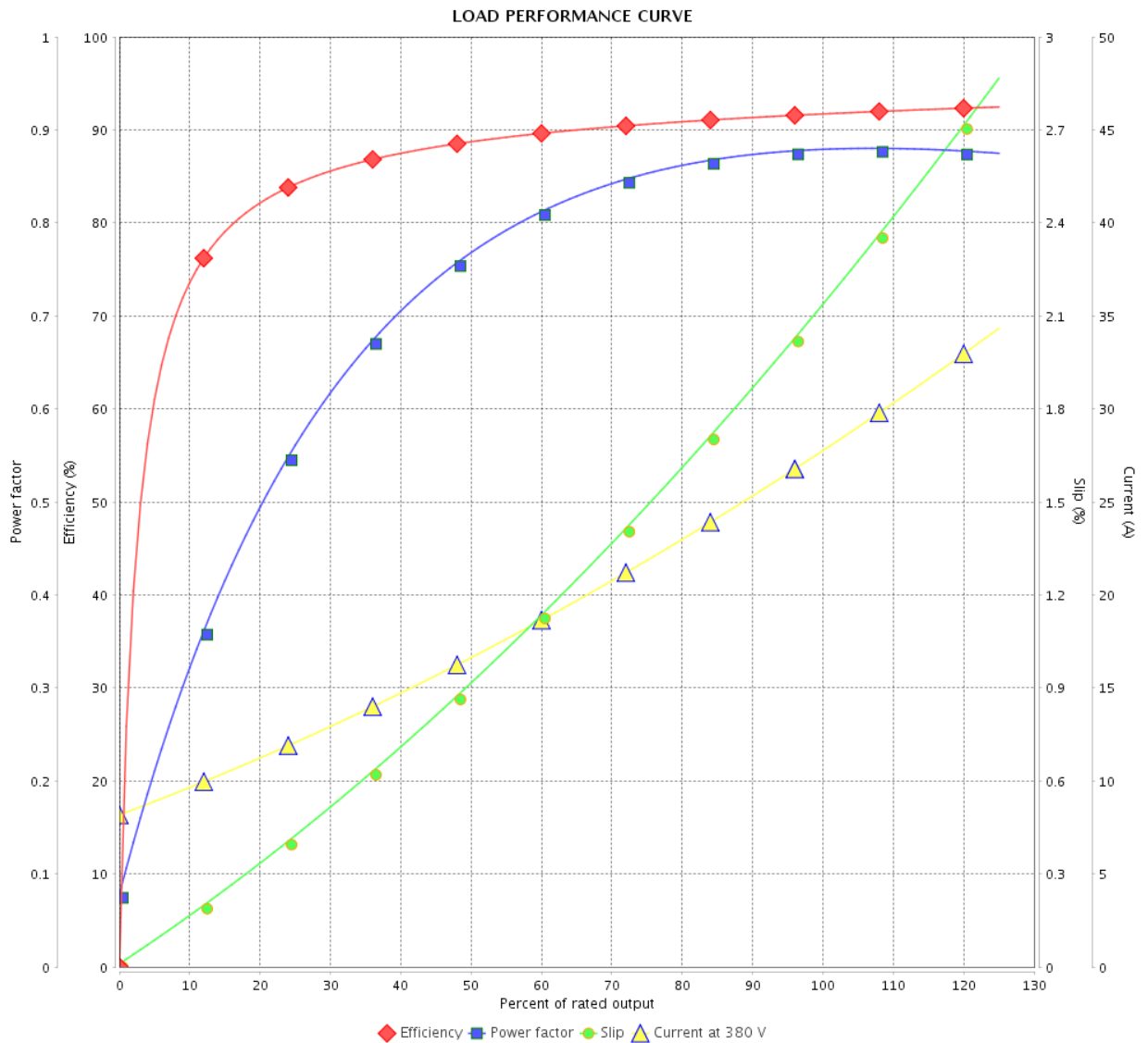


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 28.2 A
 LRC : 6.8
 Rated torque : 35.8 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 260 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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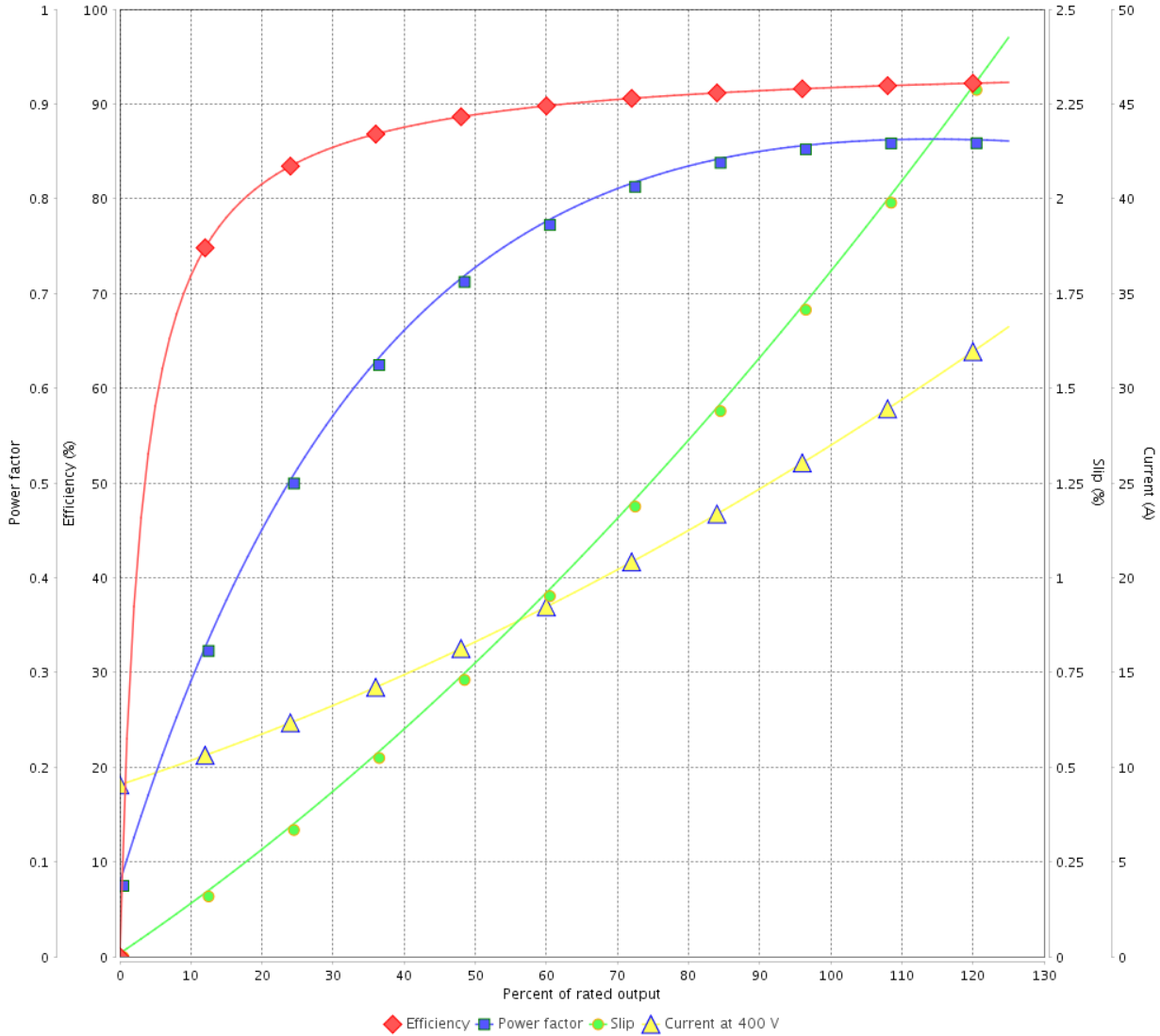
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current : 27.4 A
 LRC : 6.8
 Rated torque : 35.7 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 300 %
 Rated speed : 2945 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

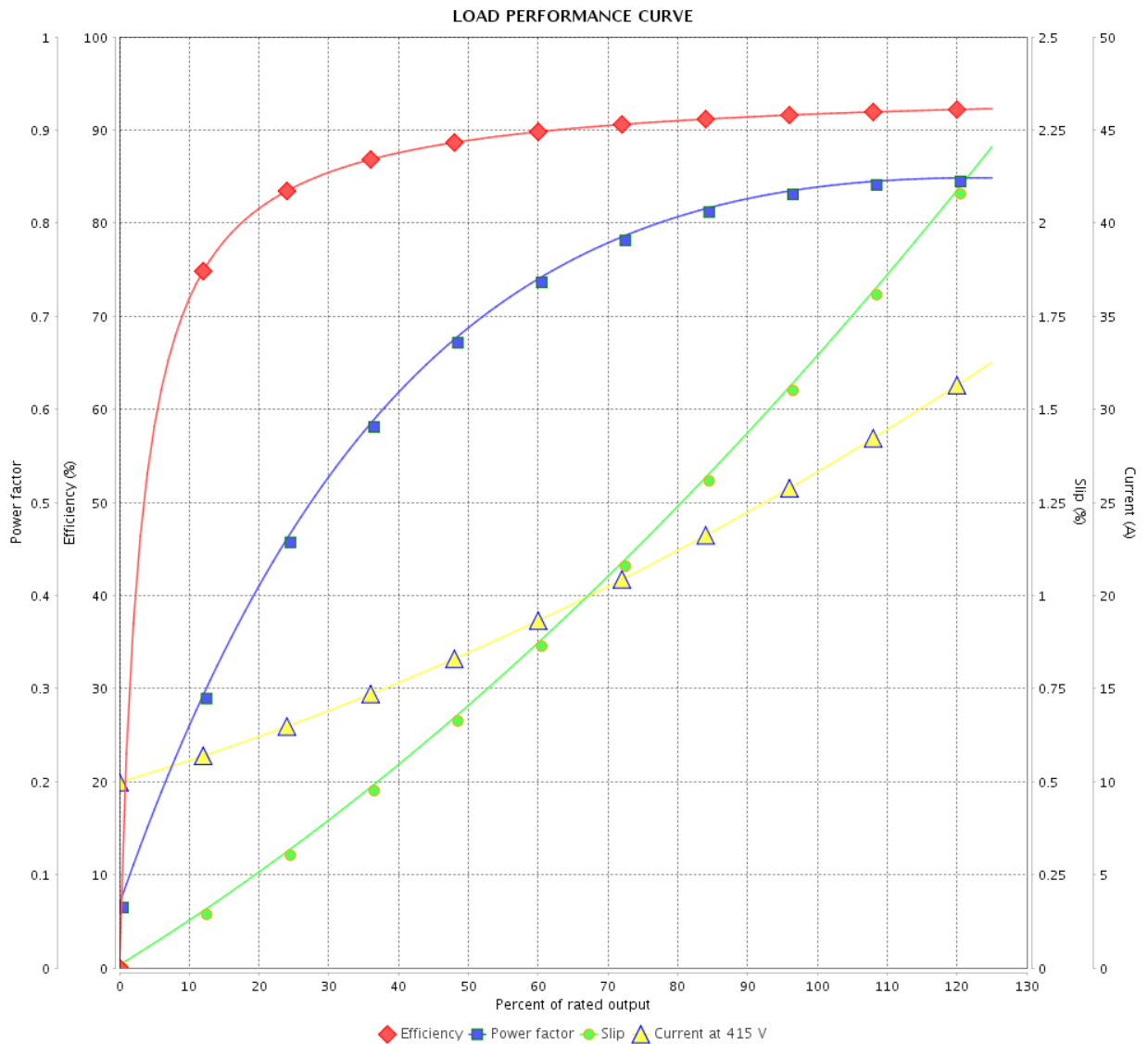


Customer :

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Product code : 14495157

Catalog # : 02536OT3E256TC-W40



Performance : 415 V 50 Hz 2P IE3

Rated current : 27.0 A
 LRC : 7.4
 Rated torque : 35.6 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 320 %
 Rated speed : 2950 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Product code : 14495157
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Performance : 230/460 V 60 Hz 2P

Rated current	: 57.6/28.8 A	Moment of inertia (J)	: 1.13 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 37.1 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 3535 rpm	Design	: B

Heating constant

Cooling constant

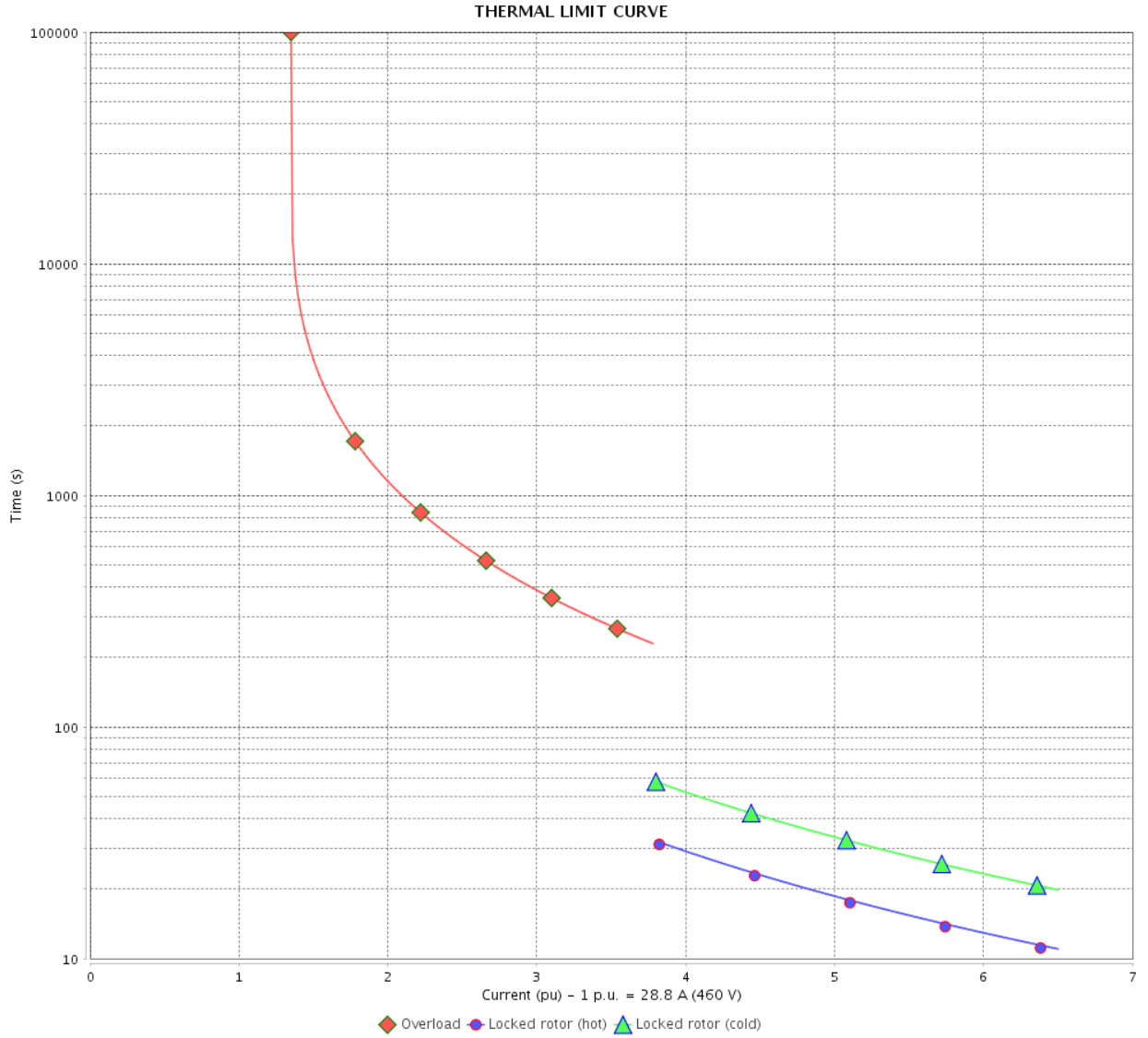
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Rated current : 28.2 A
LRC : 6.8
Rated torque : 35.8 ft.lb
Locked rotor torque : 200 %
Breakdown torque : 260 %
Rated speed : 2935 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

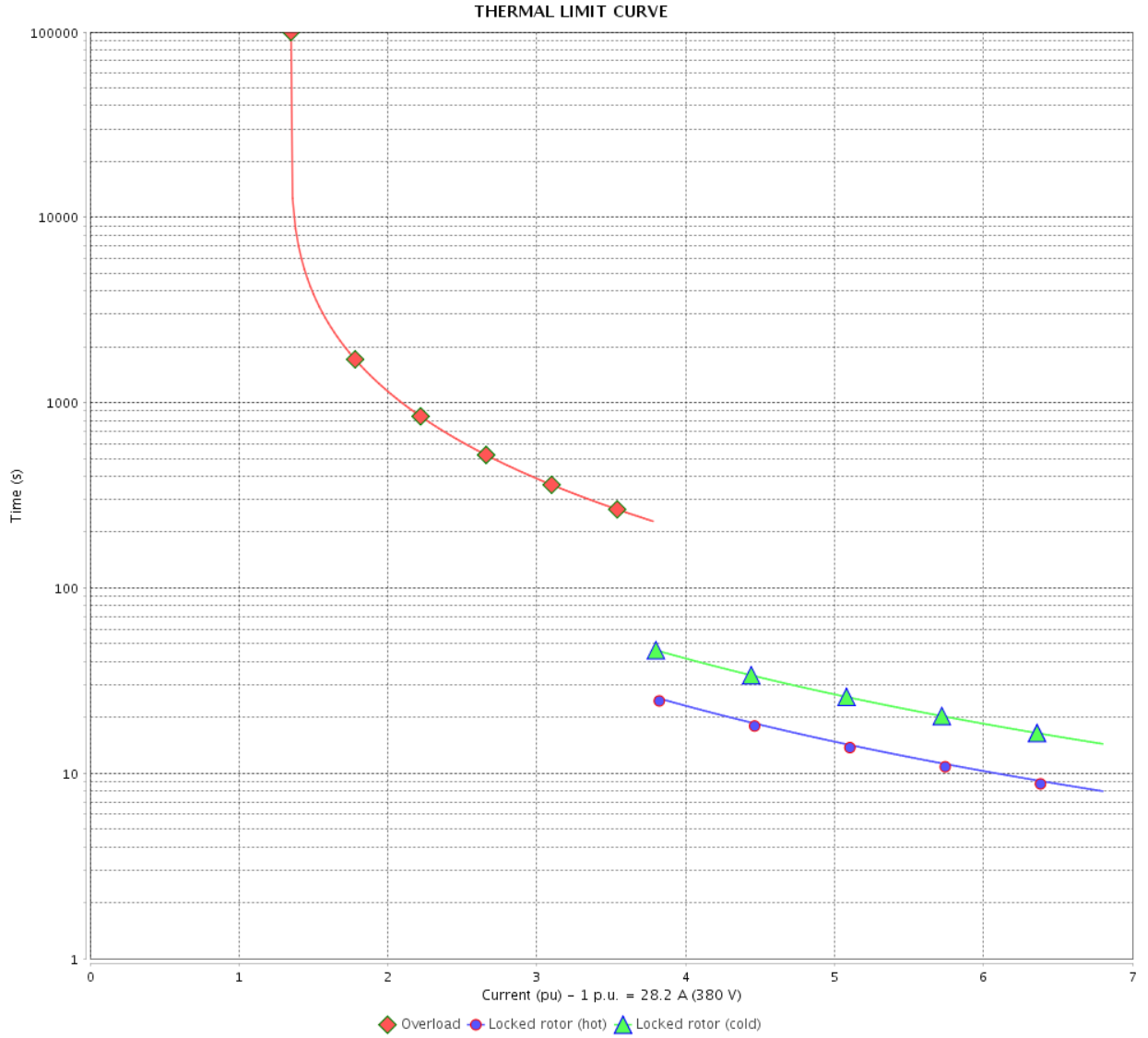
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40

Performance : 400 V 50 Hz 2P IE3

Rated current : 27.4 A
LRC : 6.8
Rated torque : 35.7 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 300 %
Rated speed : 2945 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

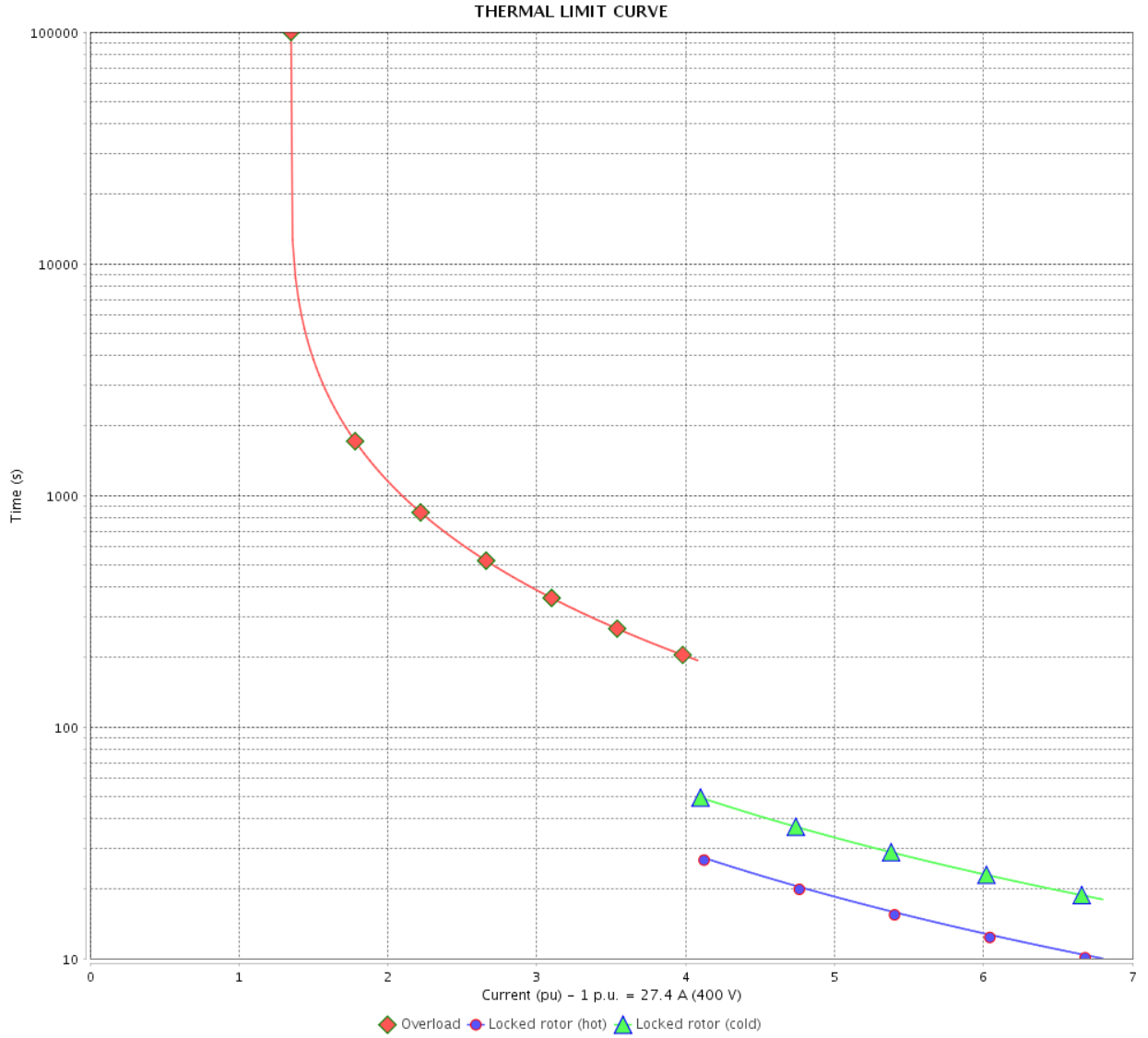
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

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Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40

Performance : 415 V 50 Hz 2P IE3

Rated current : 27.0 A
LRC : 7.4
Rated torque : 35.6 ft.lb
Locked rotor torque : 229 %
Breakdown torque : 320 %
Rated speed : 2950 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

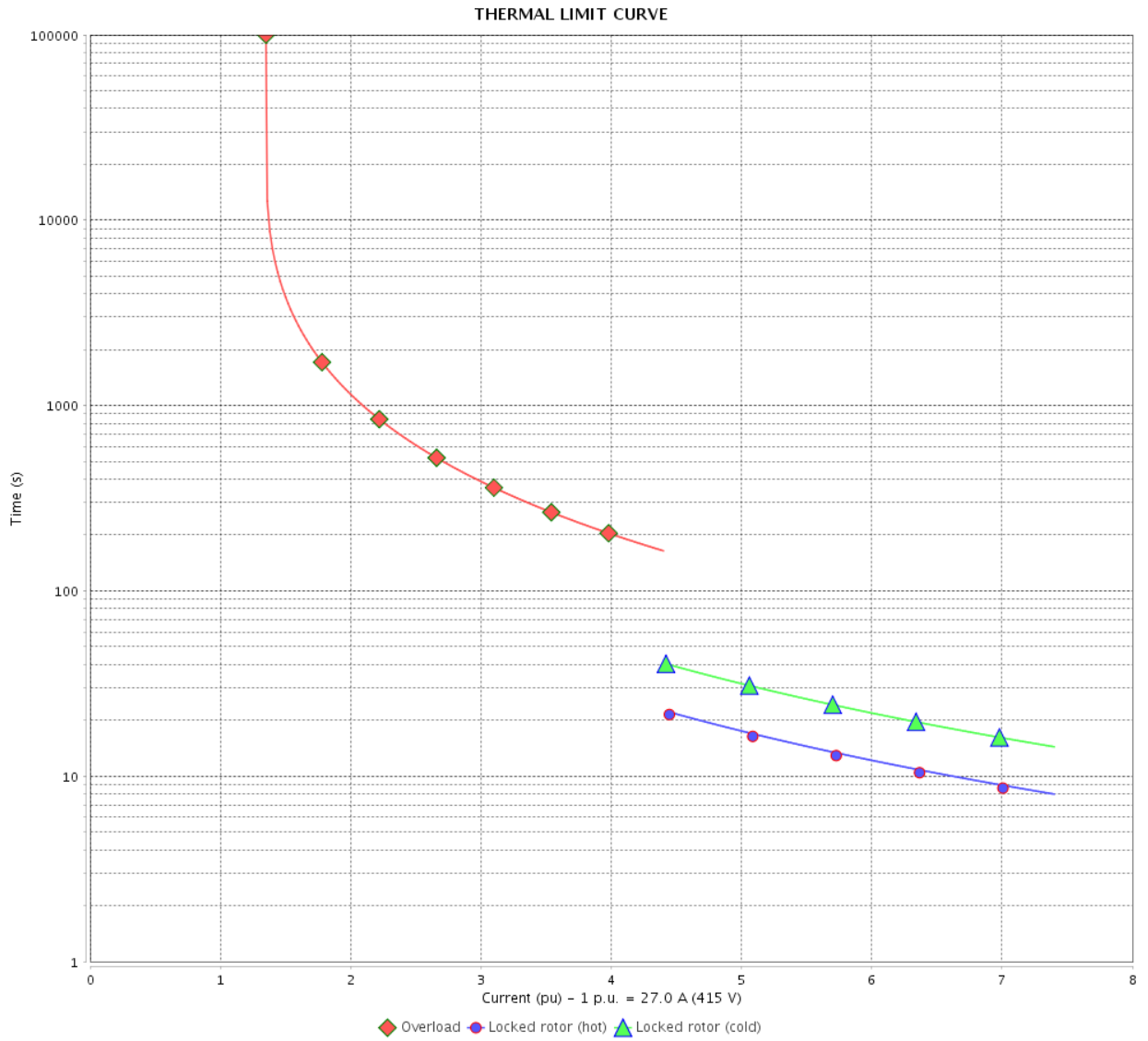
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Checked by			Page	Revision
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



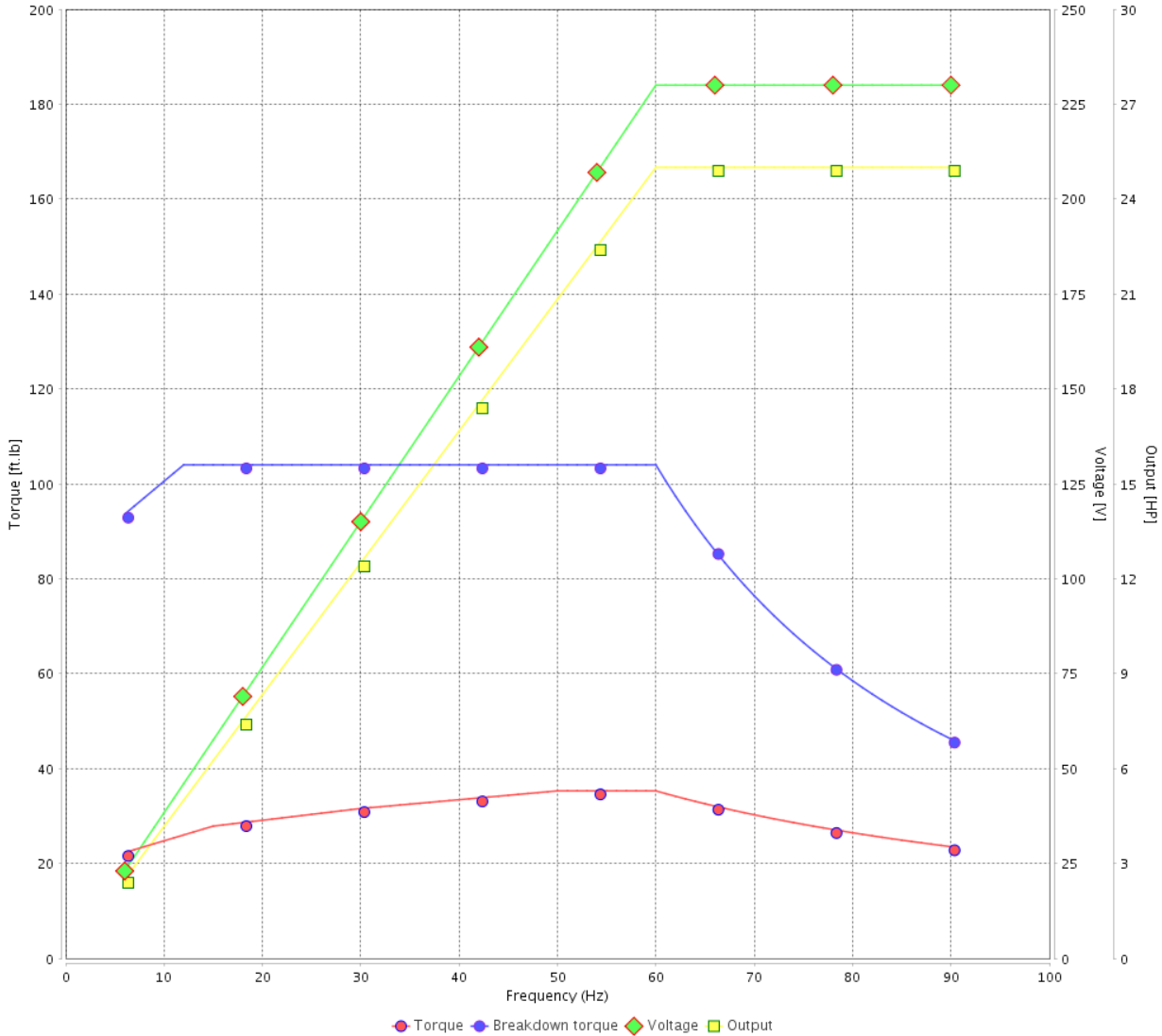
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 57.6/28.8 A
 LRC : 6.5
 Rated torque : 37.1 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 280 %
 Rated speed : 3535 rpm

Moment of inertia (J) : 1.13 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
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

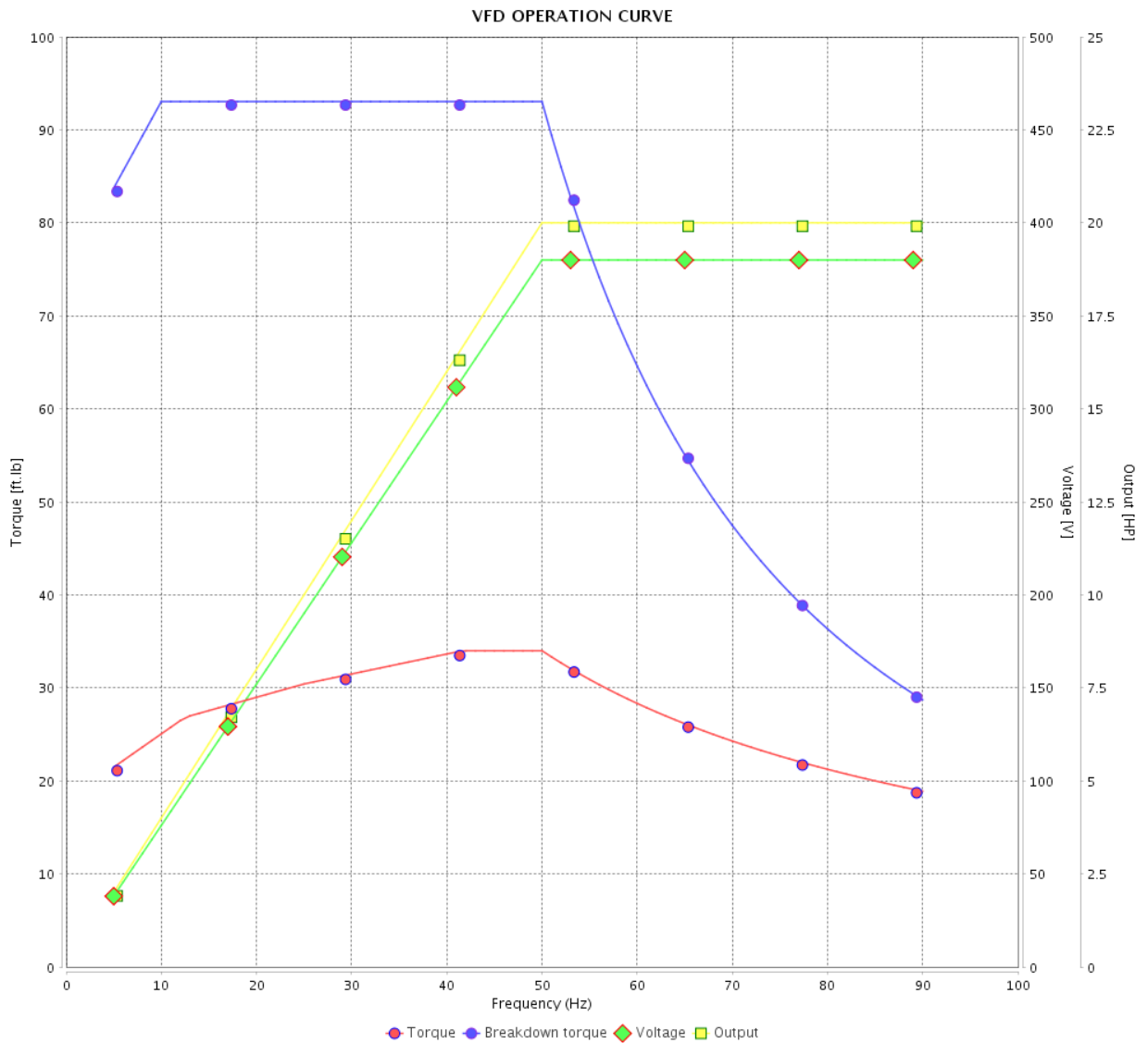


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 28.2 A
LRC : 6.8
Rated torque : 35.8 ft.lb
Locked rotor torque : 200 %
Breakdown torque : 260 %
Rated speed : 2935 rpm

Moment of inertia (J) : 1.13 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
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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



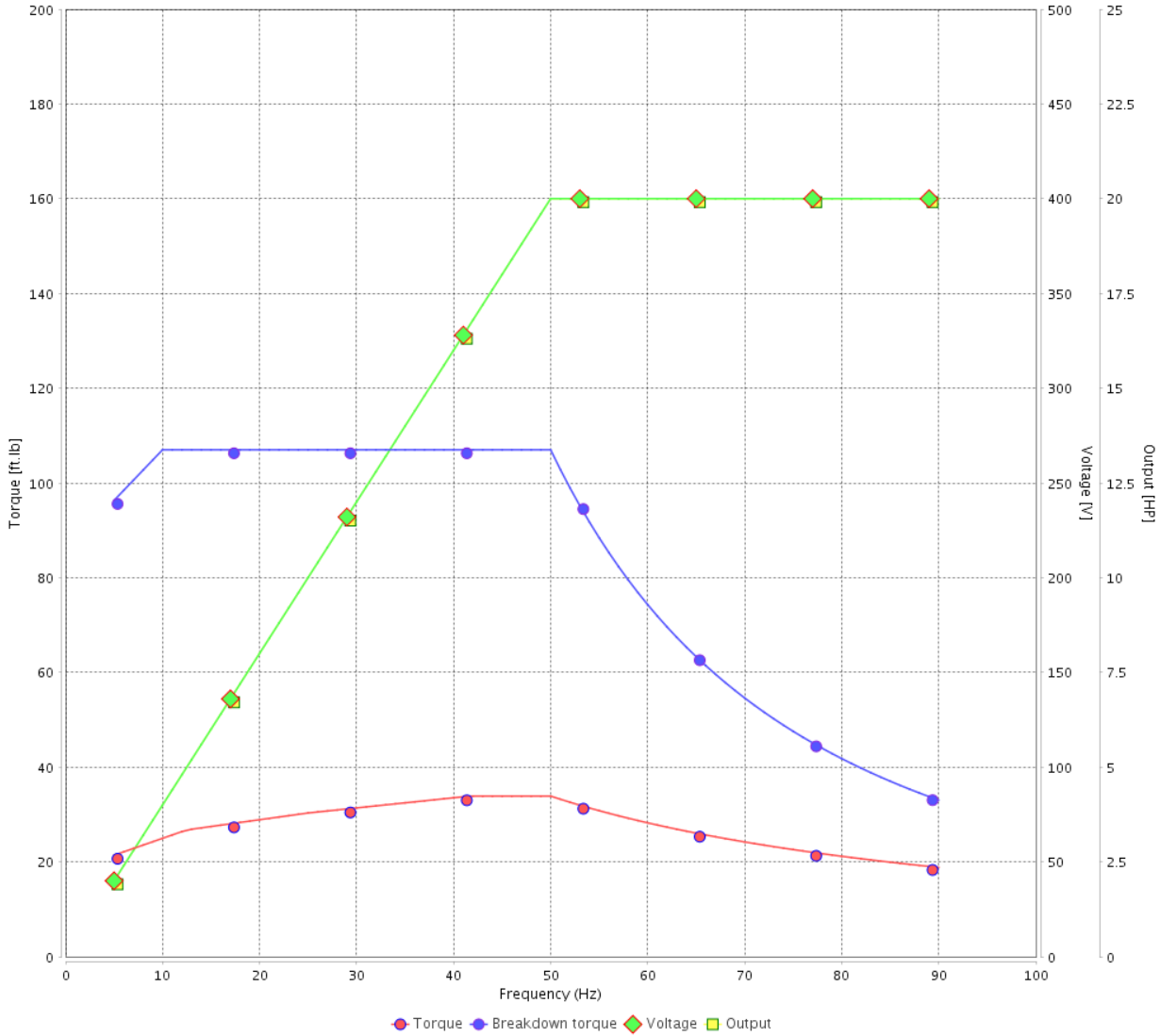
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14495157

Catalog # : 02536OT3E256TC-W40

VFD OPERATION CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current : 27.4 A
LRC : 6.8
Rated torque : 35.7 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 300 %
Rated speed : 2945 rpm

Moment of inertia (J) : 1.13 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
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

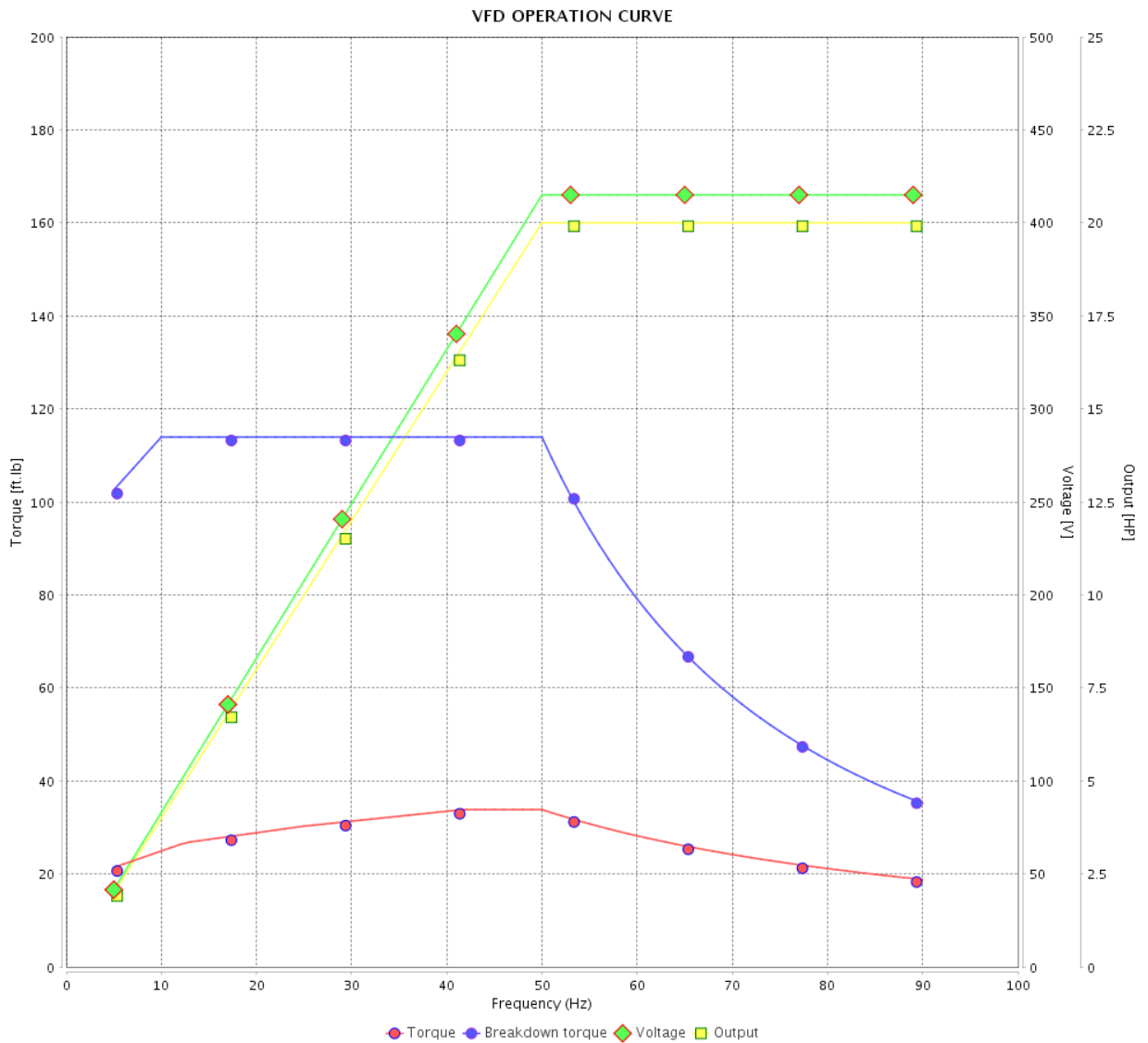


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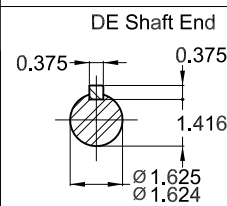
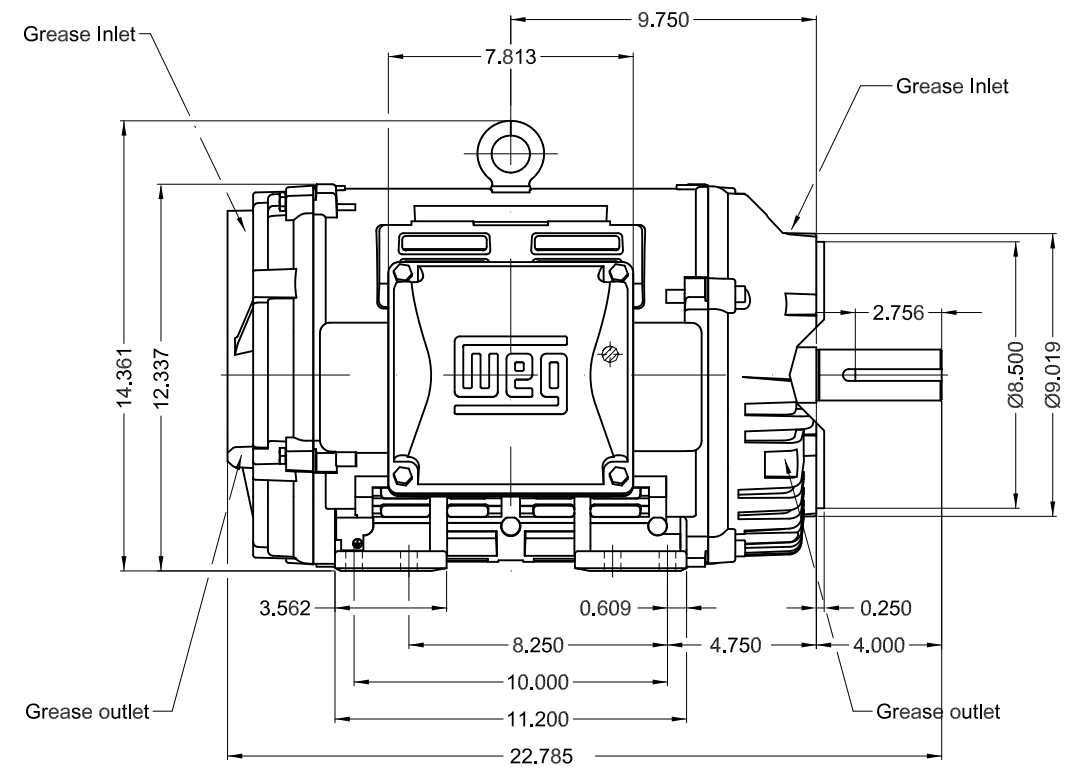
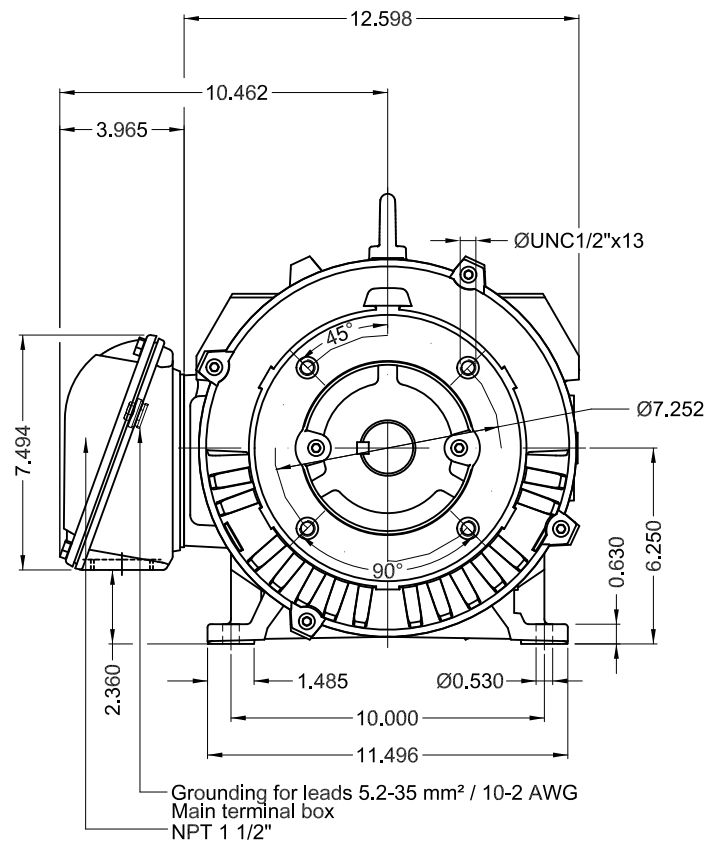


Performance : 415 V 50 Hz 2P IE3

Rated current : 27.0 A
LRC : 7.4
Rated torque : 35.6 ft.lb
Locked rotor torque : 229 %
Breakdown torque : 320 %
Rated speed : 2950 rpm

Moment of inertia (J) : 1.13 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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

25 HP 02 Poles 60 Hz A

1:6

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 254/6TC IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



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



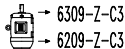
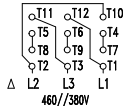
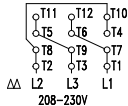
IEC 60034-1
 MOD.T01#FOXON



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

MODEL 025360T3E256TC-W40
 MADE IN BRAZIL
 14495157

PH 3	FR 254/6TC	HP(kW) 25.0(18.5)	Hz 60
V 230/460	A 57.6/28.8	RPM 3535	DES B
NEMA NOM EFF 91.7 %	INS. CL. F Δ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.88	SF 1.25	SFA 72.0/36.0
USABLE @208V	63.7 A	SF 1.15	SFA 73.3
20HP 15kW 50Hz 380V 28.2A 2935RPM SF1.00 EFF 91.9% (IE3)	ALT 1000 m.a.s.l.		



MOBIL POLYREX EM
 13 g 20000 h

ALT 1000 m.a.s.l. 243 Lbs