

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14494124	
		Catalog # :	01012OT3E256TC-W40	
Frame	: 254/6TC	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>2</sup>	: 282 lb	
Protection degree	: IP23	Moment of inertia (J)	: 3.53 sq.ft.lb	
Design	: B			
Output [HP]	10	10	10	10
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	25.6/12.8	15.0	14.6	14.3
L. R. Amperes [A]	174/87.0	88.5	93.4	94.4
LRC [A]	6.8x(Code H)	5.9x(Code G)	6.4x(Code H)	6.6x(Code H)
No load current [A]	12.2/6.10	6.10	6.50	6.80
Rated speed [RPM]	1180	970	975	975
Slip [%]	1.67	3.00	2.50	2.50
Rated torque [ft.lb]	44.5	54.1	53.9	53.9
Locked rotor torque [%]	229	190	210	229
Breakdown torque [%]	300	229	260	280
Service factor	1.25	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	30s (cold) 17s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	59.0 dB(A)			
Efficiency (%)	25%	89.4	88.3	88.3
	50%	90.2	88.6	88.6
	75%	91.0	89.0	89.0
	100%	91.7	89.1	89.1
Power Factor	25%	0.37	0.44	0.41
	50%	0.62	0.70	0.66
	75%	0.74	0.80	0.78
	100%	0.80	0.85	0.83
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6209 Z C3	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction Max. compression		
Lubrication interval	: 20000 h 20000 h			
Lubricant amount	: 13 g 9 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 28.3A SF 1.15 SFA 32.6A				
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

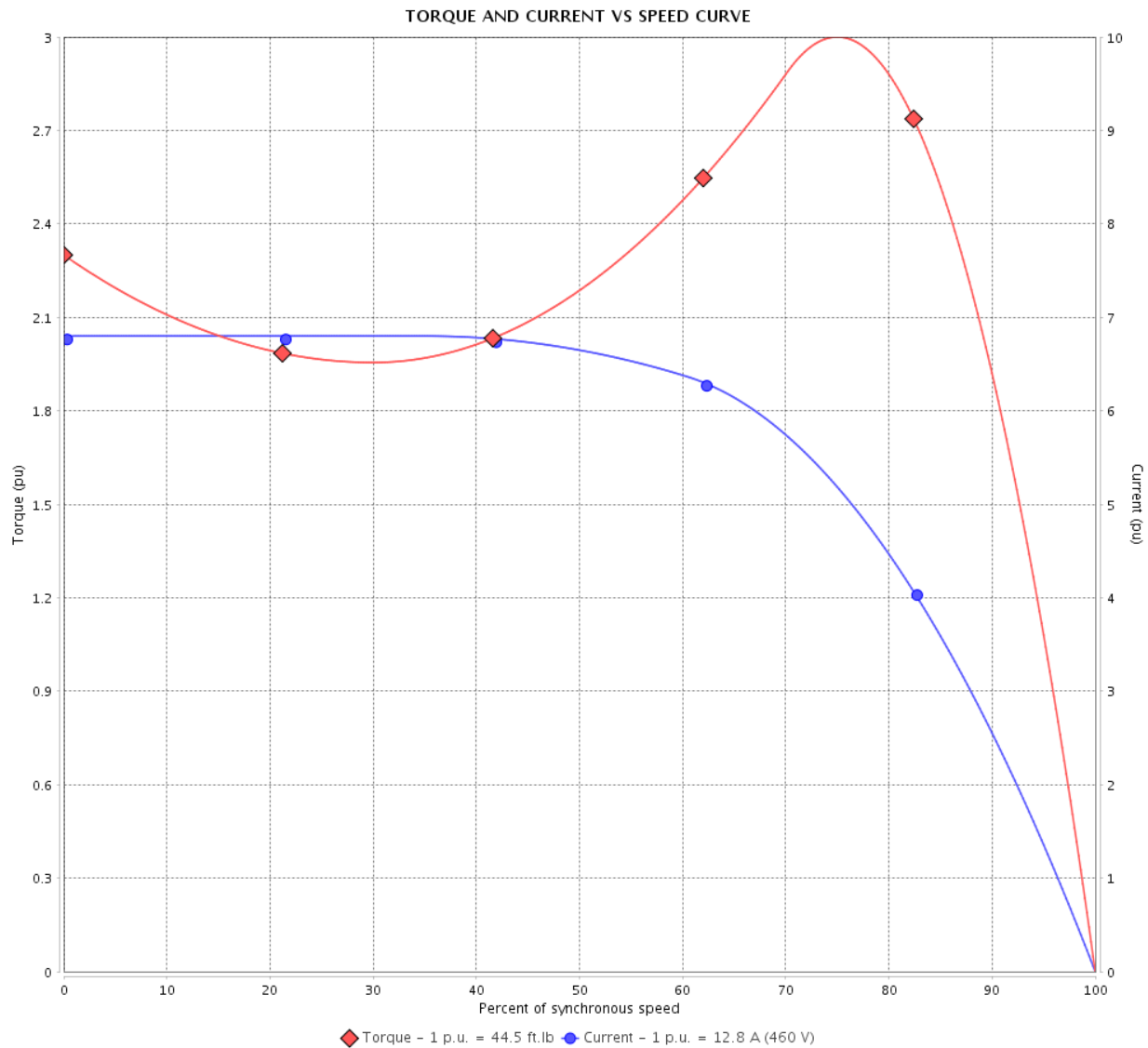


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 010120T3E256TC-W40



Performance : 230/460 V 60 Hz 6P

Rated current	: 25.6/12.8 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 44.5 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1180 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



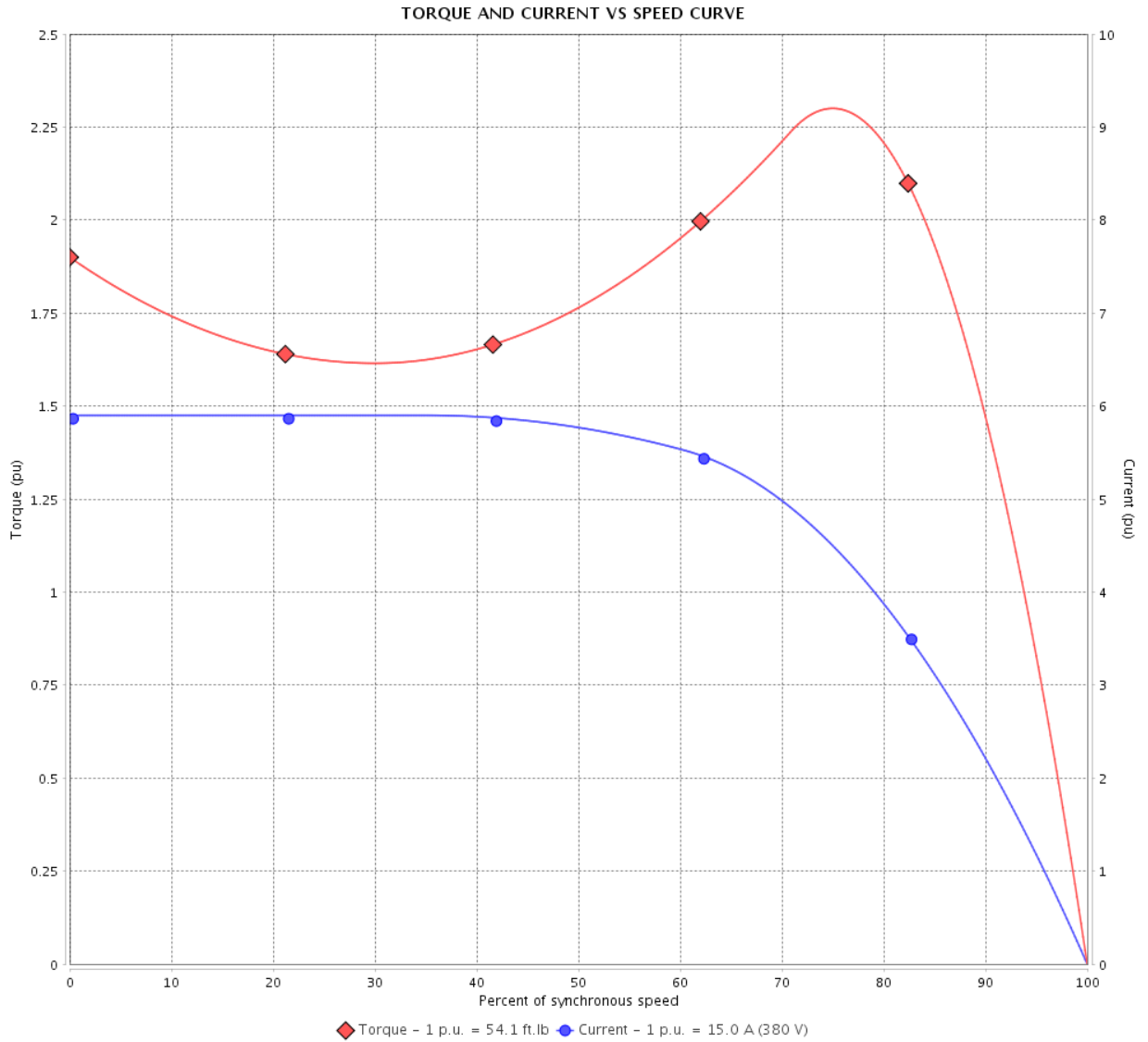
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current	: 15.0 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 54.1 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



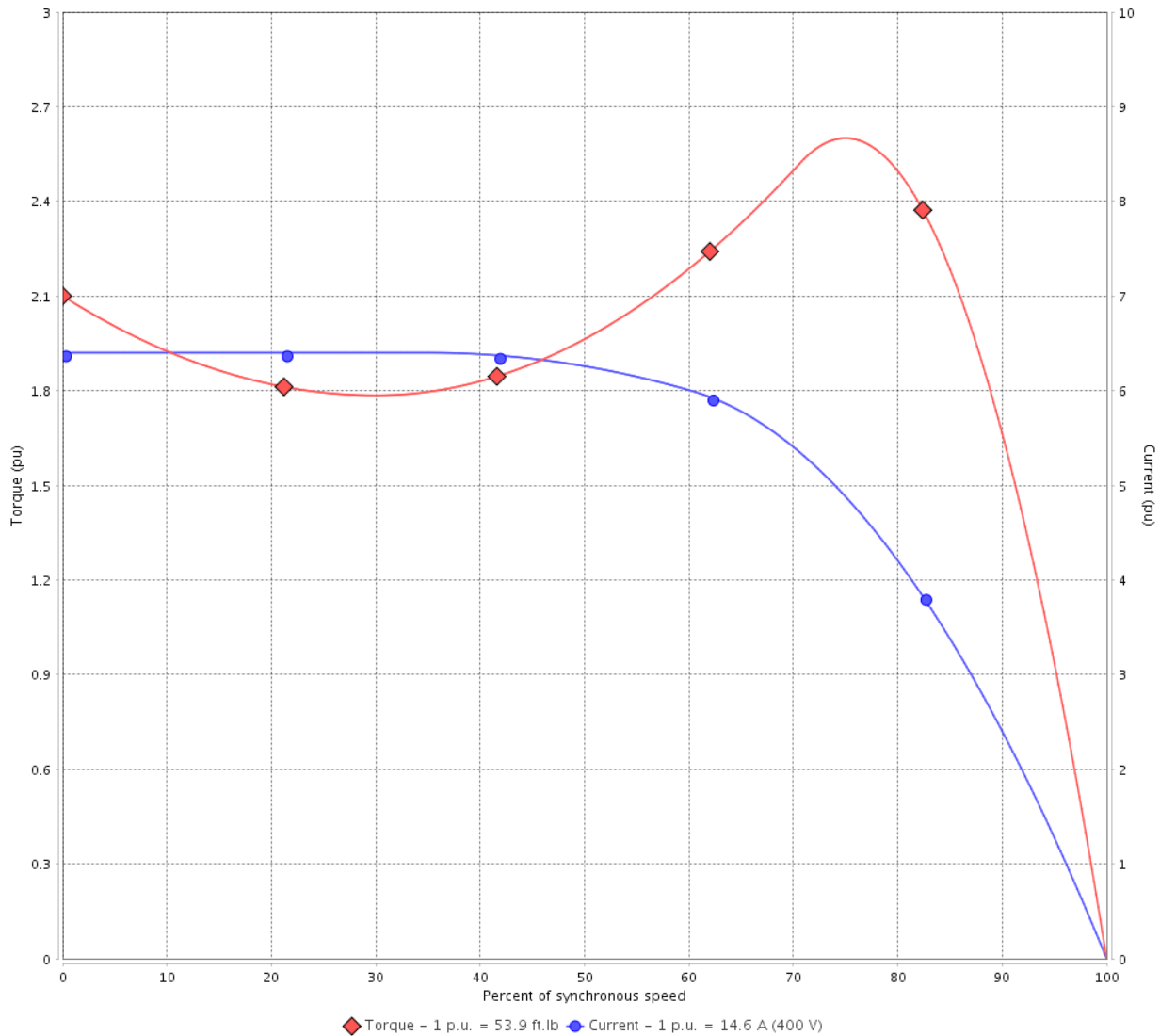
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 010120T3E256TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 14.6 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



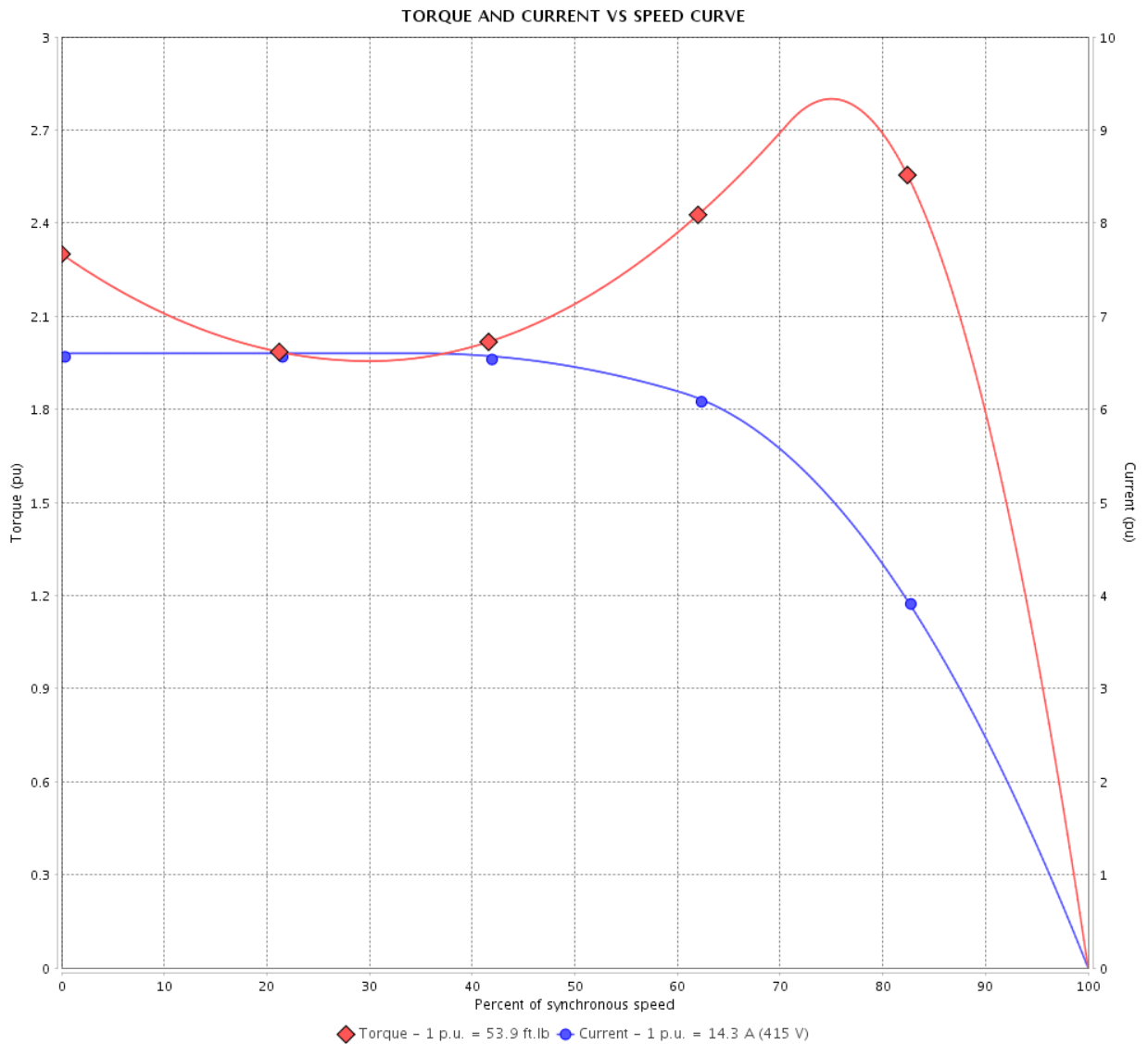
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40



Performance : 415 V 50 Hz 6P IE3

Rated current	: 14.3 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



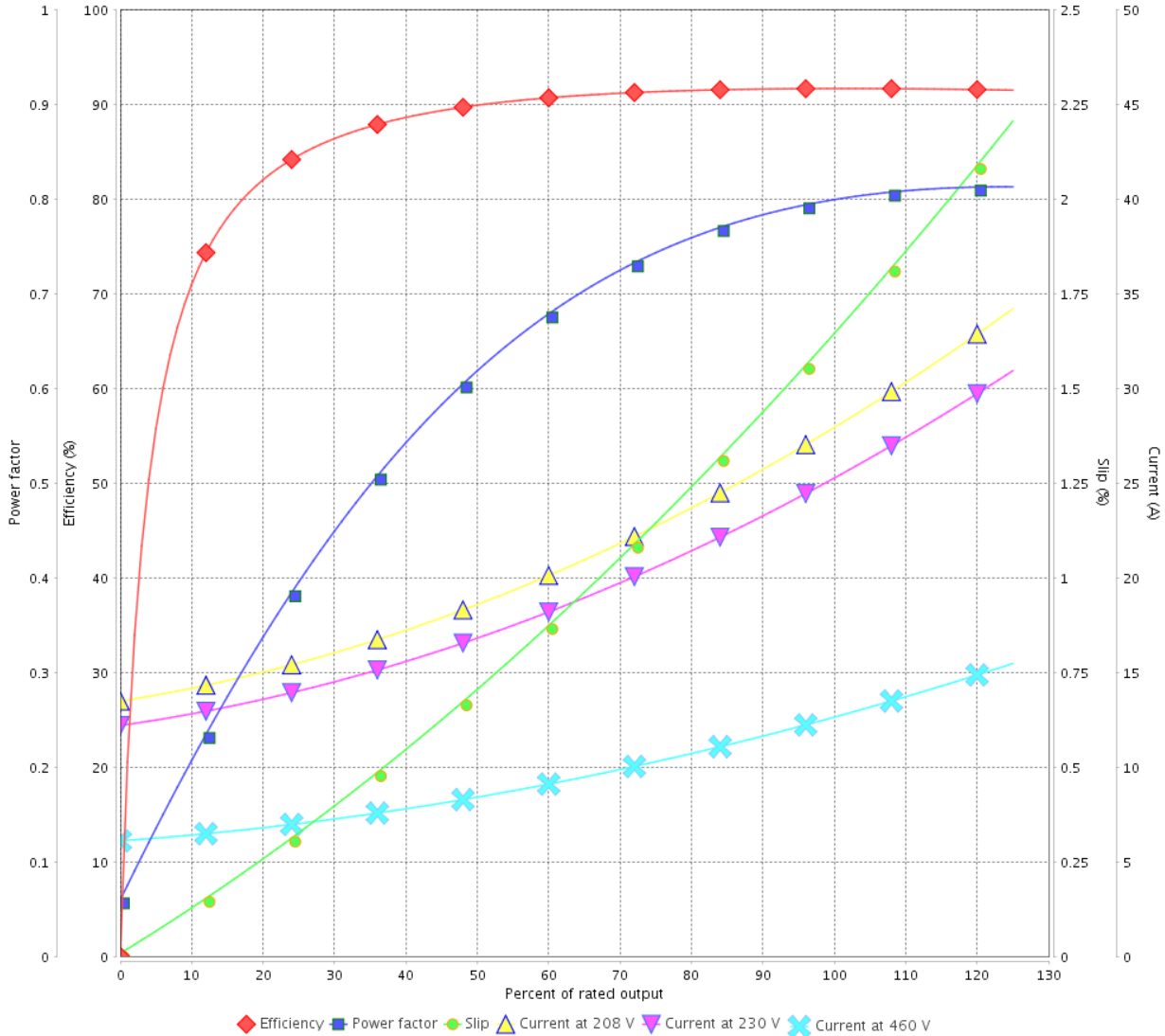
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14494124

Catalog # : 010120T3E256TC-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 25.6/12.8 A  
 LRC : 6.8  
 Rated torque : 44.5 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 300 %  
 Rated speed : 1180 rpm

Moment of inertia (J) : 3.53 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

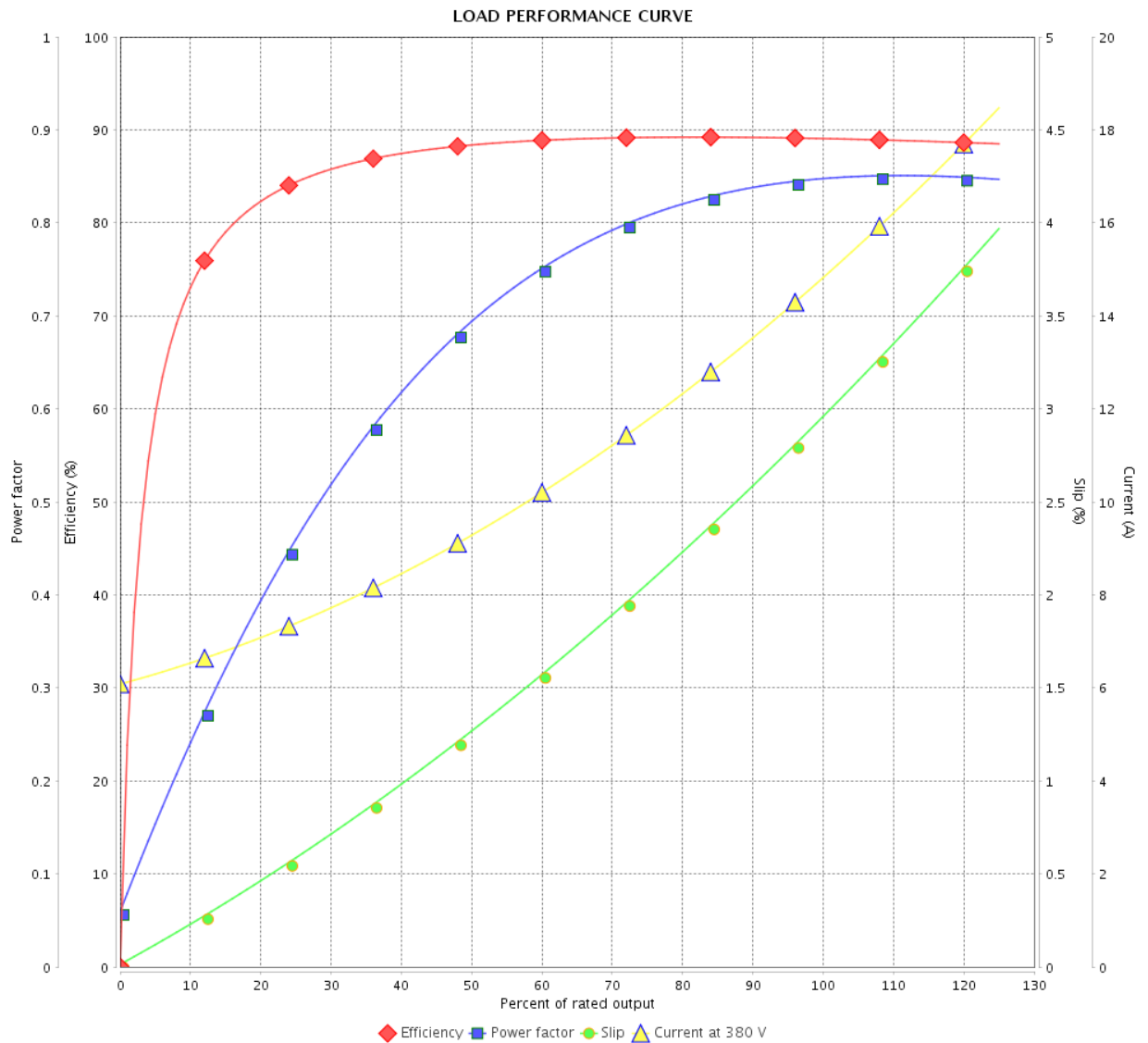


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 15.0 A  
 LRC : 5.9  
 Rated torque : 54.1 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 3.53 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



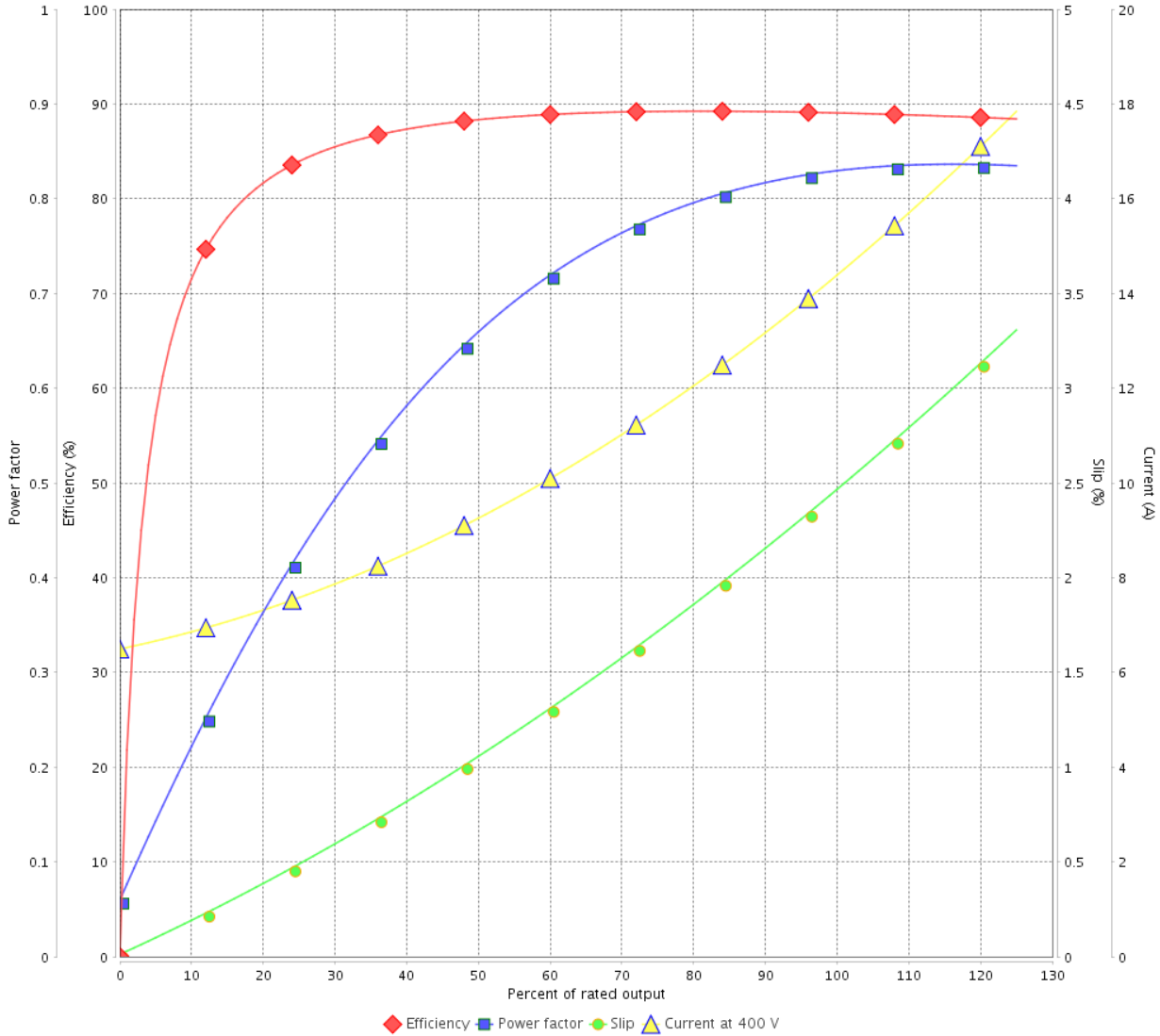
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14494124

Catalog # : 010120T3E256TC-W40

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 14.6 A  
 LRC : 6.4  
 Rated torque : 53.9 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 260 %  
 Rated speed : 975 rpm

Moment of inertia (J) : 3.53 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

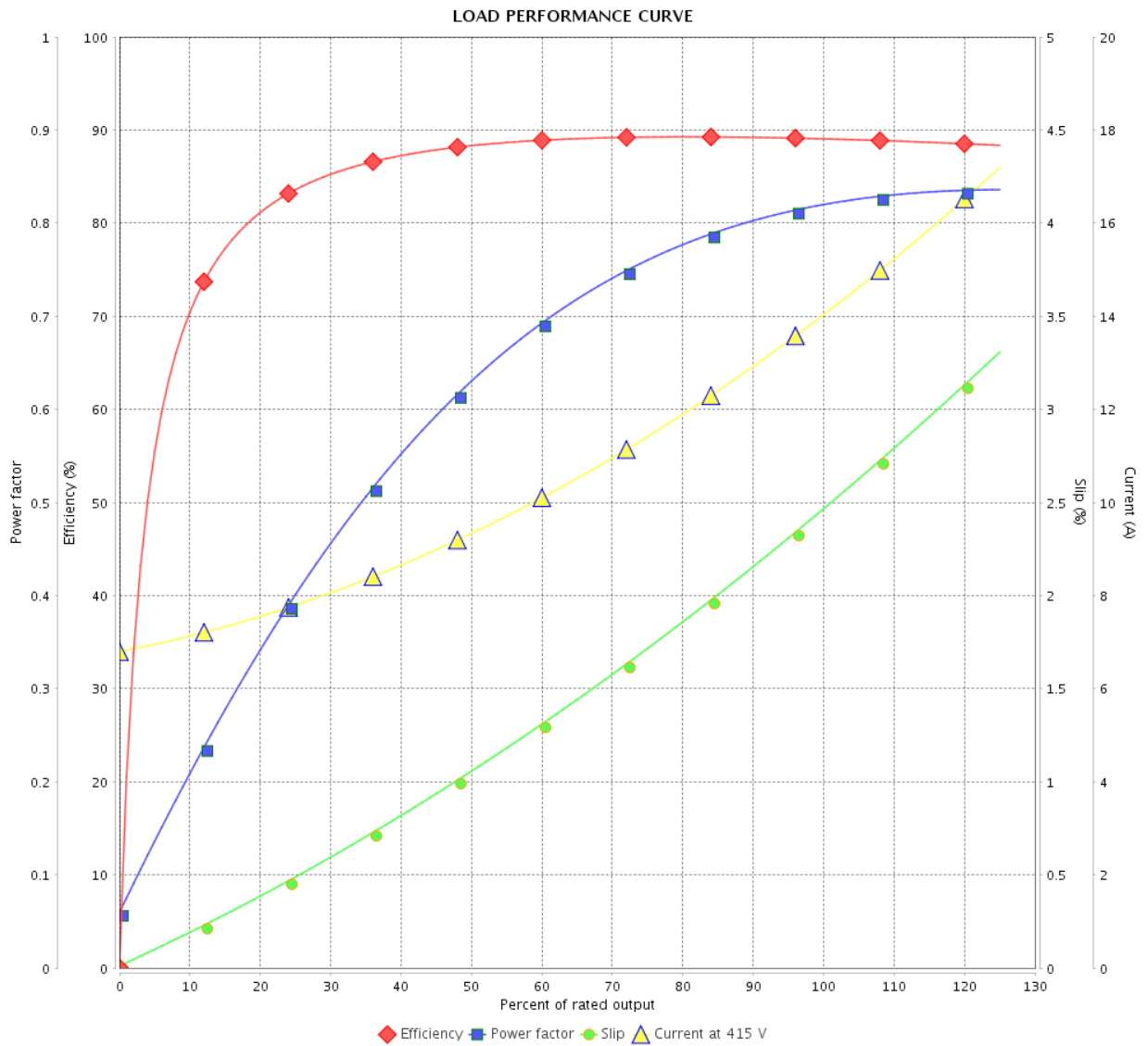


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40



Performance : 415 V 50 Hz 6P IE3

Rated current : 14.3 A  
 LRC : 6.6  
 Rated torque : 53.9 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 975 rpm

Moment of inertia (J) : 3.53 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

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40

Performance : 230/460 V 60 Hz 6P

Rated current : 25.6/12.8 A  
LRC : 6.8  
Rated torque : 44.5 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 300 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 3.53 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

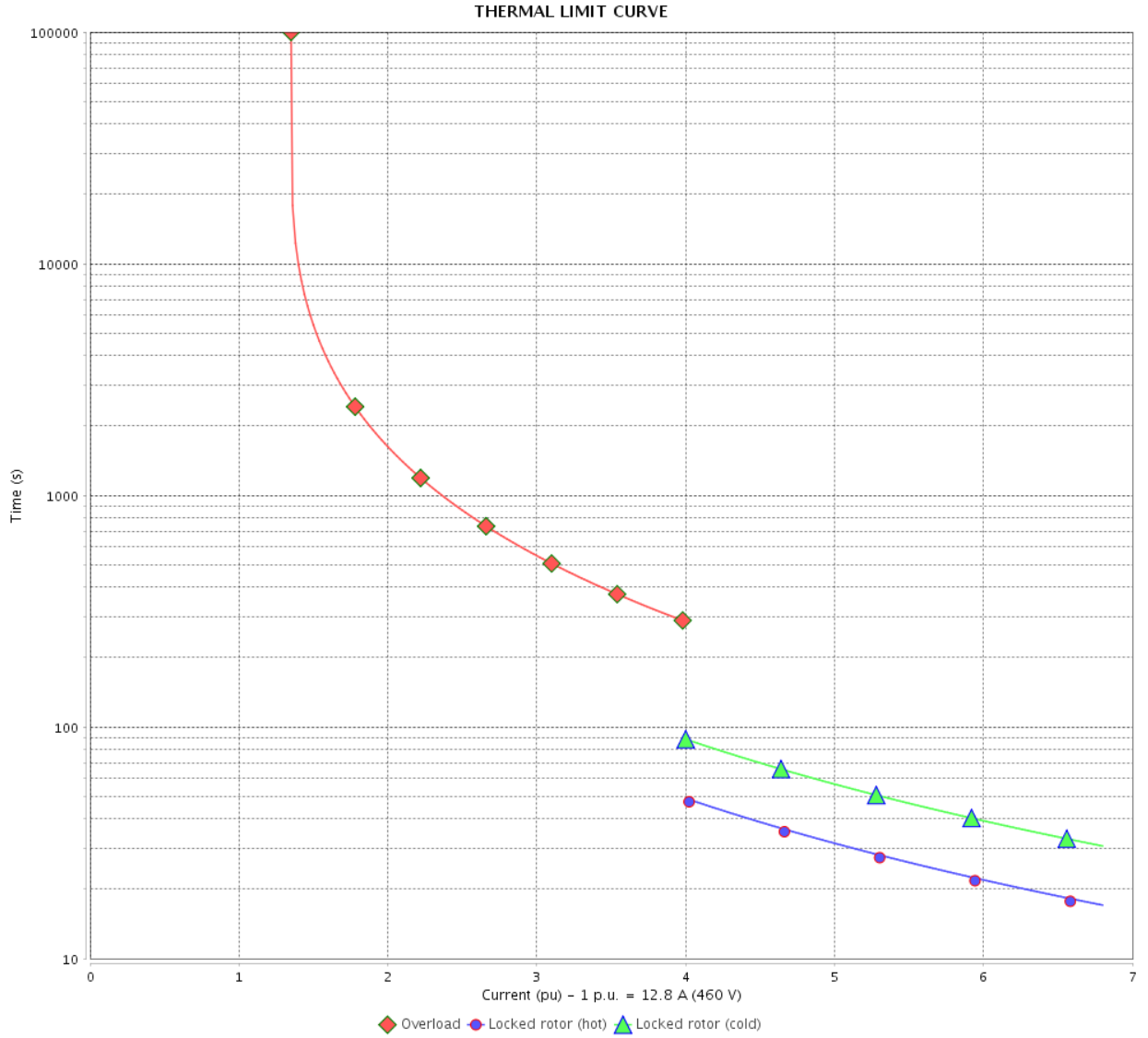
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40

Performance : 380 V 50 Hz 6P IE3

Rated current : 15.0 A	Moment of inertia (J) : 3.53 sq.ft.lb
LRC : 5.9	Duty cycle : Cont.(S1)
Rated torque : 54.1 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 970 rpm	Design : B

Heating constant

Cooling constant

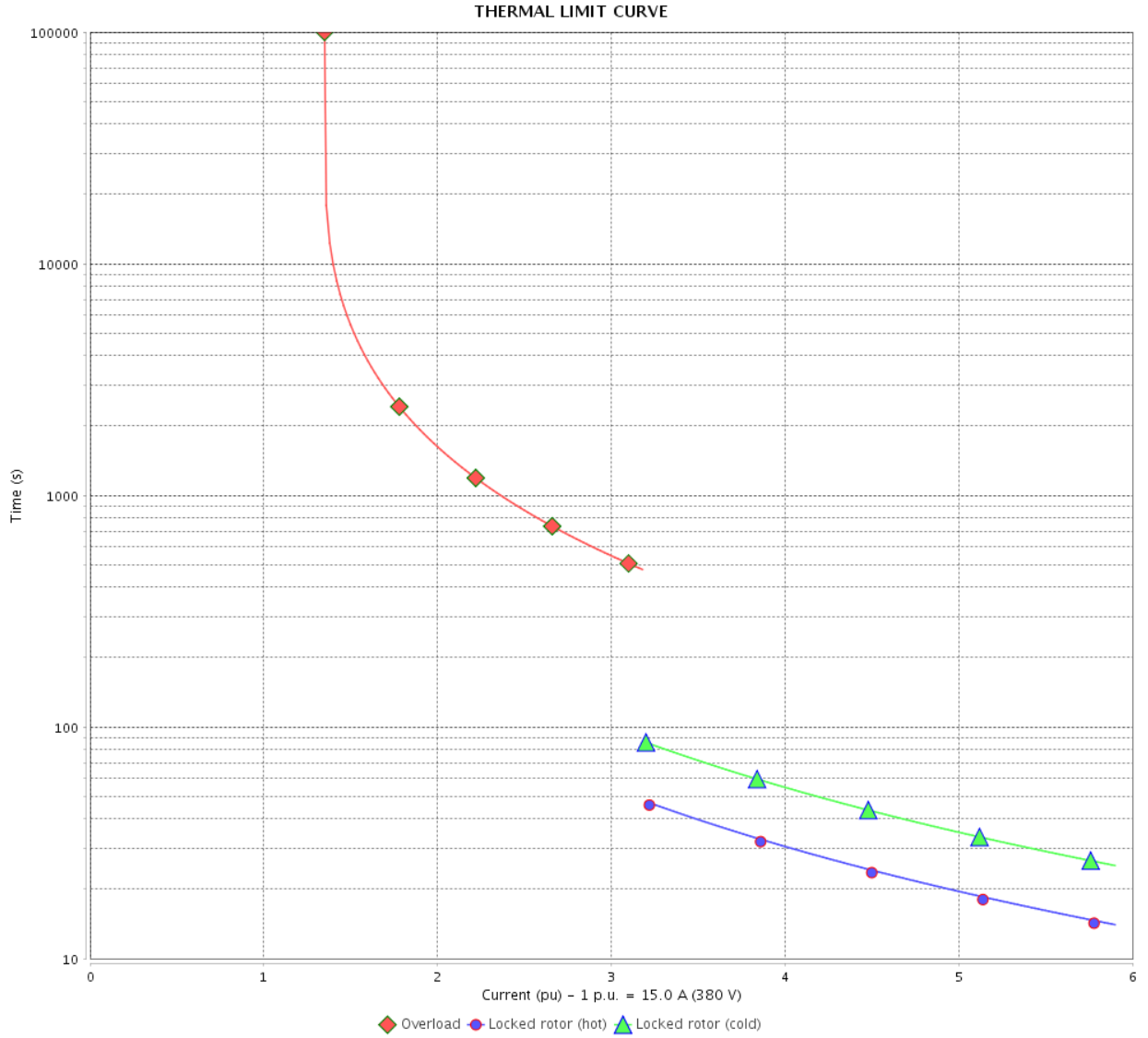
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage

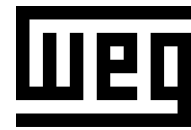


Customer : \_\_\_\_\_



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40

Performance : 400 V 50 Hz 6P IE3

Rated current : 14.6 A  
LRC : 6.4  
Rated torque : 53.9 ft.lb  
Locked rotor torque : 210 %  
Breakdown torque : 260 %  
Rated speed : 975 rpm

Moment of inertia (J) : 3.53 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

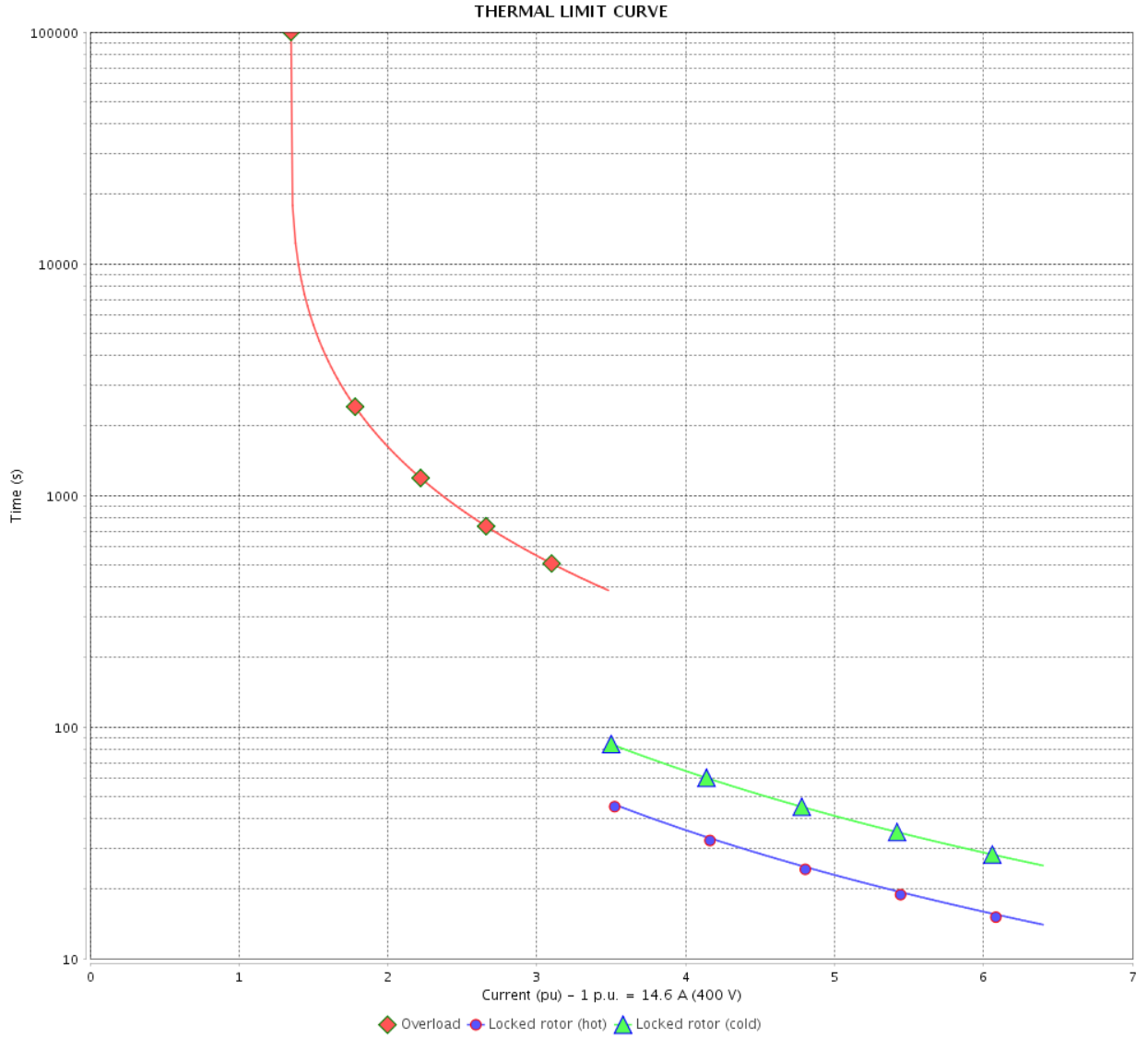
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40

Performance : 415 V 50 Hz 6P IE3

Rated current	: 14.3 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Heating constant

Cooling constant

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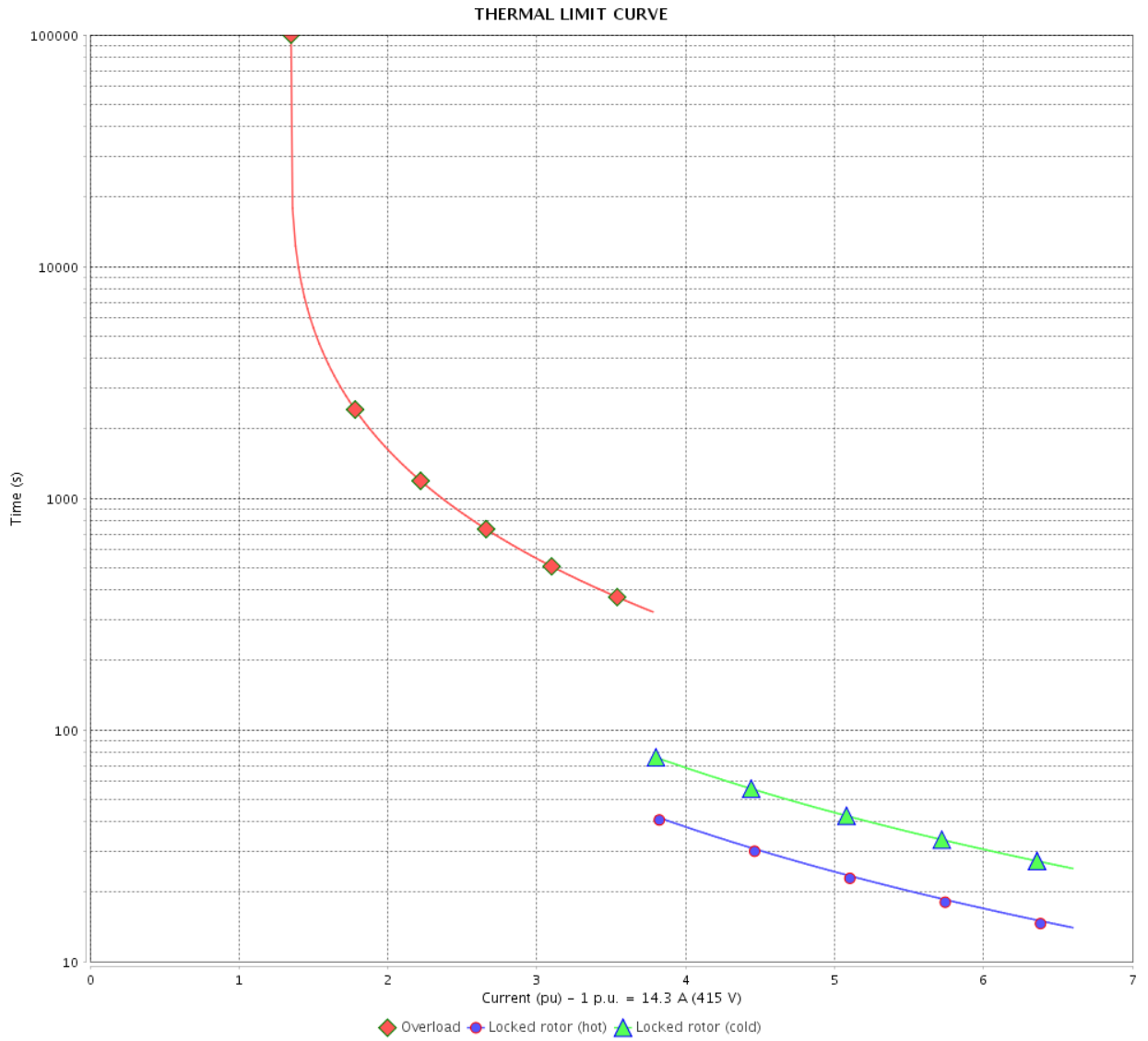


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



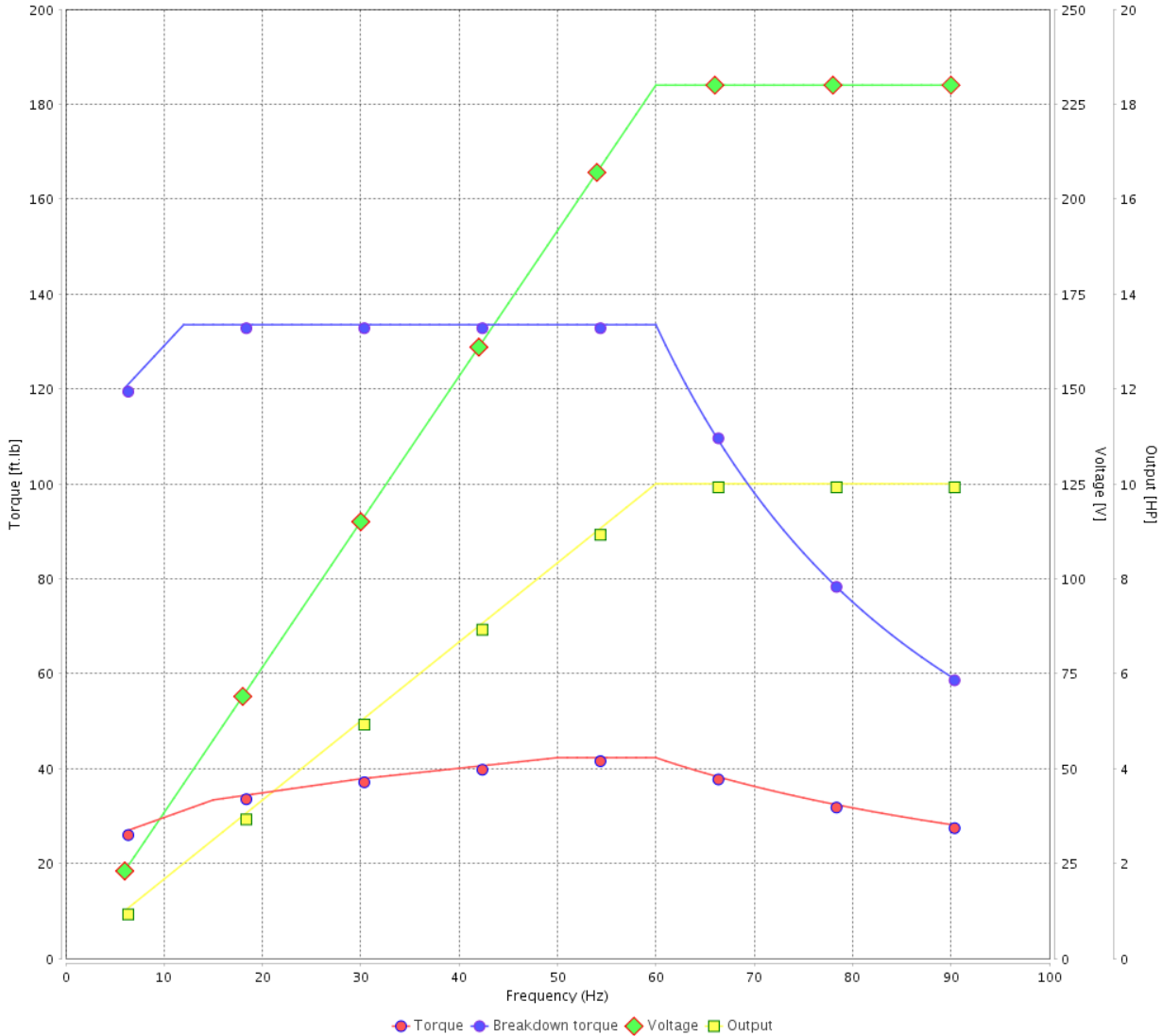
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14494124

Catalog # : 010120T3E256TC-W40

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 25.6/12.8 A  
 LRC : 6.8  
 Rated torque : 44.5 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 300 %  
 Rated speed : 1180 rpm

Moment of inertia (J) : 3.53 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

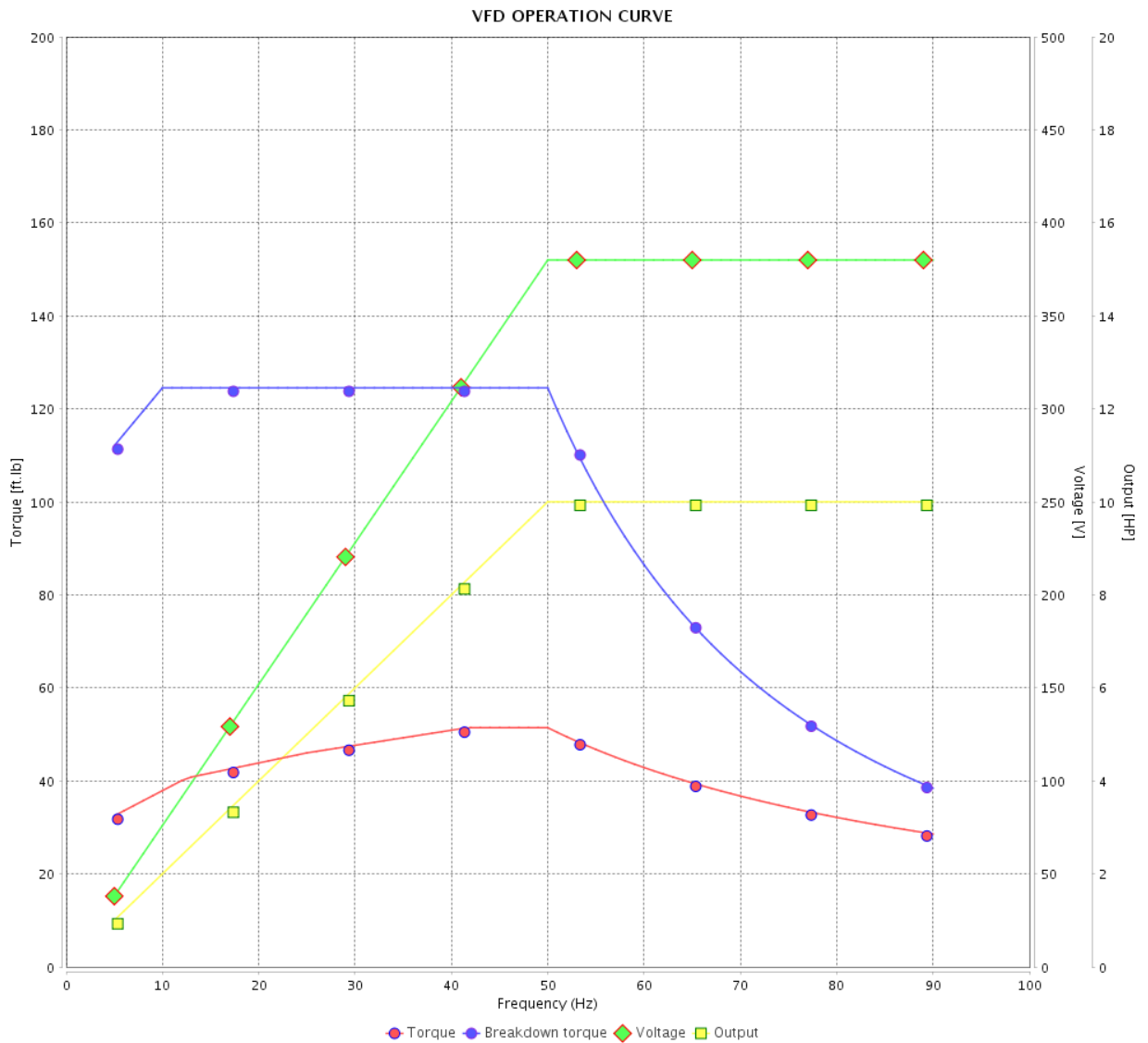


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 15.0 A  
 LRC : 5.9  
 Rated torque : 54.1 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 3.53 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



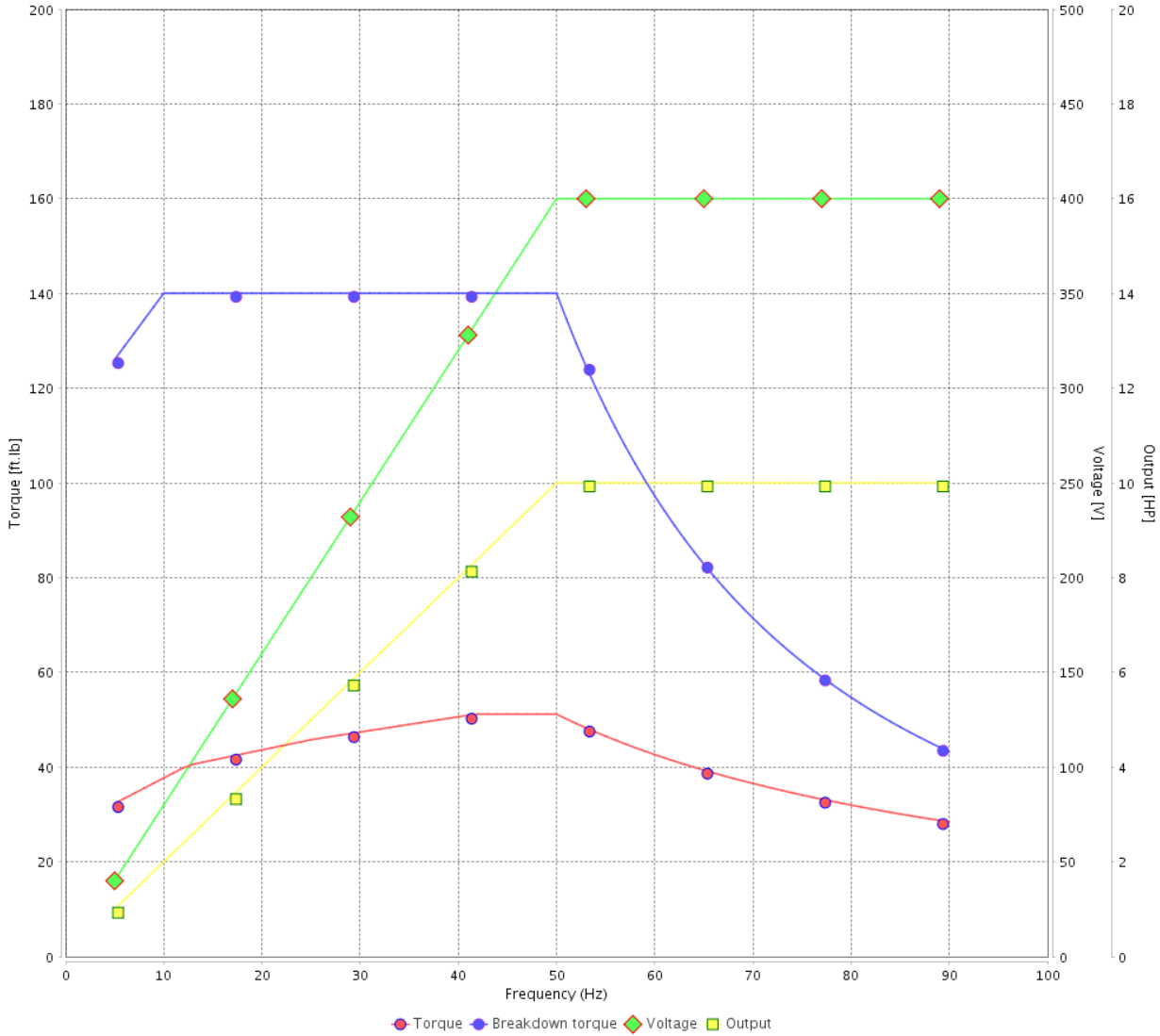
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 010120T3E256TC-W40

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 14.6 A  
LRC : 6.4  
Rated torque : 53.9 ft.lb  
Locked rotor torque : 210 %  
Breakdown torque : 260 %  
Rated speed : 975 rpm

Moment of inertia (J) : 3.53 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

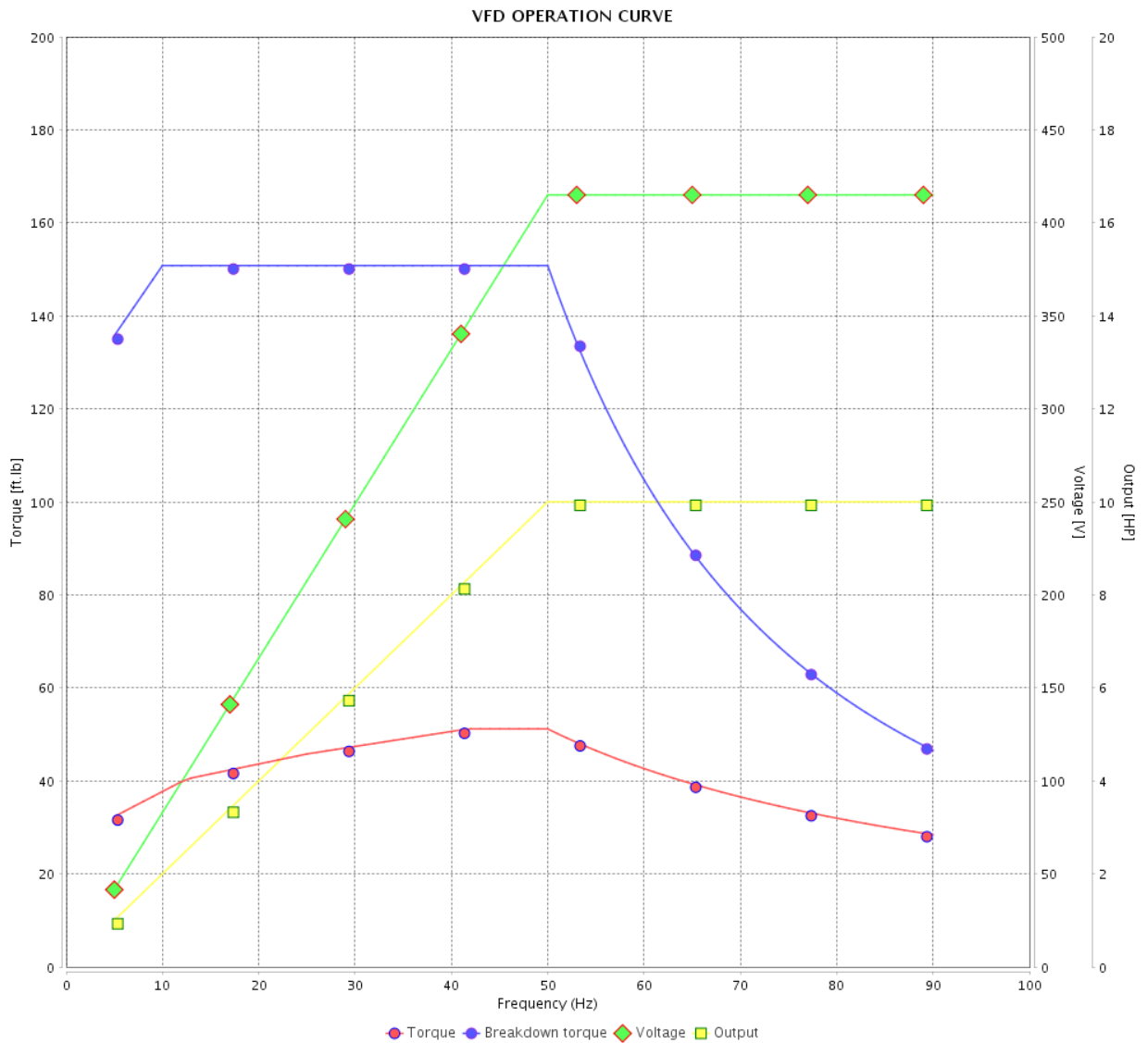


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494124

Catalog # : 01012OT3E256TC-W40

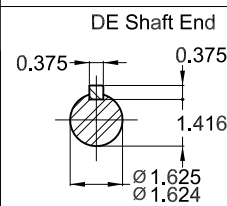
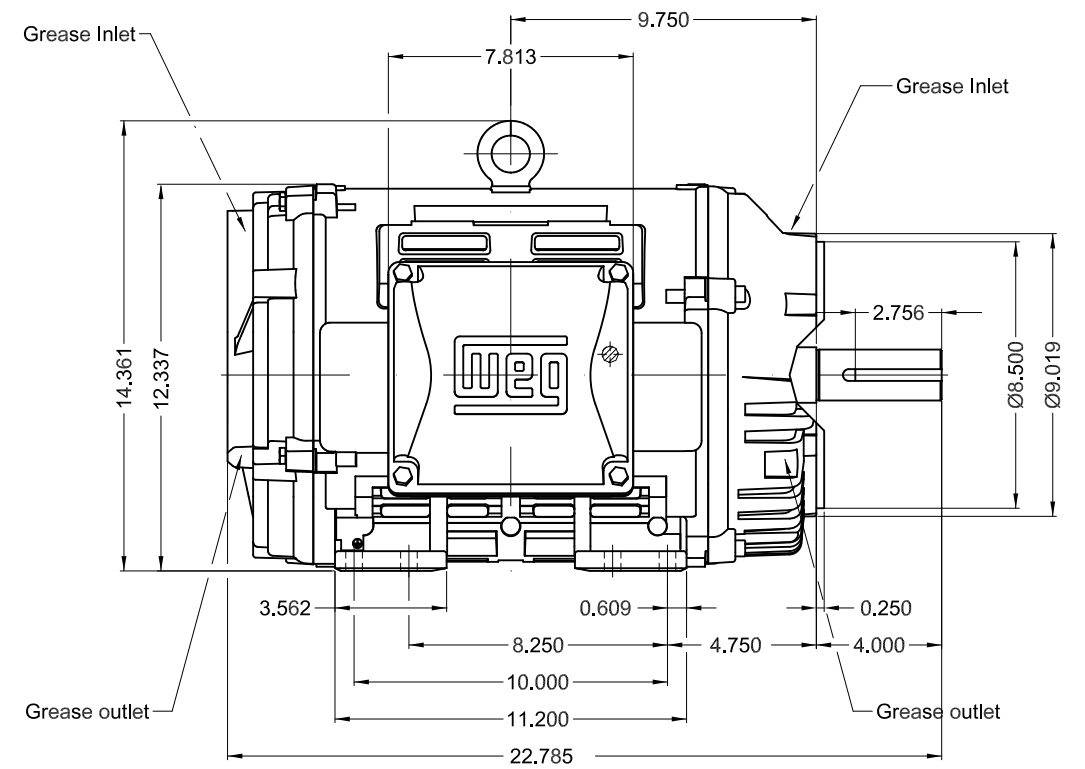
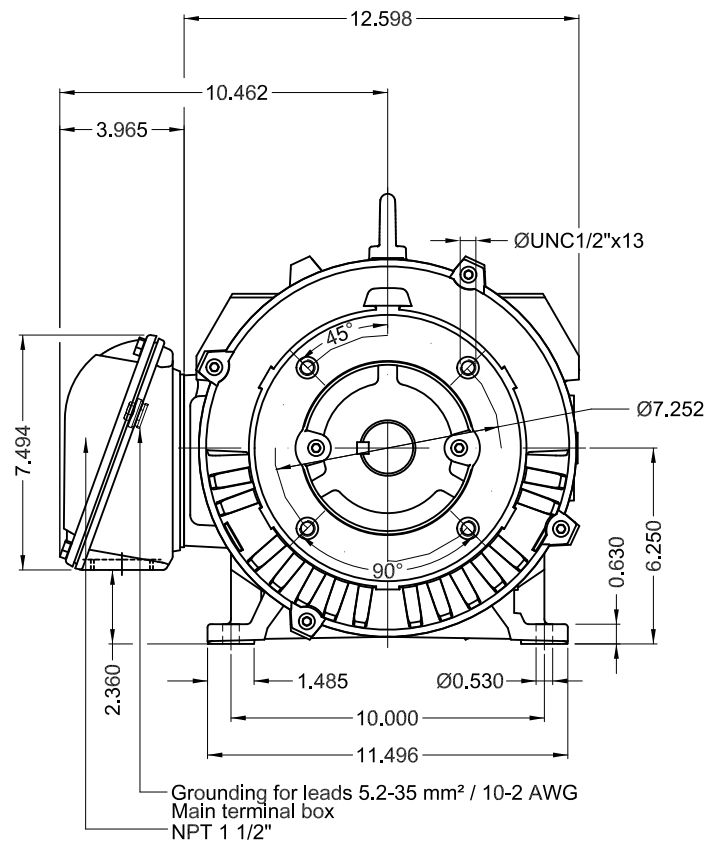


Performance : 415 V 50 Hz 6P IE3

Rated current : 14.3 A  
 LRC : 6.6  
 Rated torque : 53.9 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 975 rpm

Moment of inertia (J) : 3.53 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)

10 HP 06 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

