

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 NEMA Premium Efficiency Three-Phase		Product code : 14495932	
				Catalog # : 03036OT3E284TS-W40	
Frame		: 284TS		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> : 302 lb	
Protection degree		: IP23		Moment of inertia (J) : 1.59 sq.ft.lb	
Design		: B			
Output [HP]	30	25	25	25	25
Poles	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	70.0/35.0	35.0	34.0	33.6	33.6
L. R. Amperes [A]	441/221	231	238	225	225
LRC [A]	6.3x(Code G)	6.6x(Code G)	7.0x(Code H)	6.7x(Code H)	6.7x(Code H)
No load current [A]	25.8/12.9	11.0	13.0	14.0	14.0
Rated speed [RPM]	3550	2940	2950	2955	2955
Slip [%]	1.39	2.00	1.67	1.50	1.50
Rated torque [ft.lb]	44.4	44.7	44.5	44.4	44.4
Locked rotor torque [%]	180	170	190	200	200
Breakdown torque [%]	260	240	260	270	270
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	18s (cold) 10s (hot)	12s (cold) 7s (hot)	12s (cold) 7s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)
Noise level <sup>2</sup>	73.0 dB(A)				
Efficiency (%)	25%	90.0	88.0	88.2	88.3
	50%	90.2	89.7	89.8	89.8
	75%	91.7	90.7	90.8	90.8
	100%	91.7	92.4	92.4	92.4
Power Factor	25%	0.47	0.51	0.45	0.42
	50%	0.73	0.75	0.70	0.66
	75%	0.82	0.83	0.80	0.77
	100%	0.86	0.87	0.85	0.83
Bearing type	: Drive end : 6311 Z C3	Non drive end : 6211 Z C3	Foundation loads		
Sealing	: Without	Without	Max. traction		
	Bearing Seal	Bearing Seal	Max. compression		
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 18 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 77.4A SF 1.15 SFA 89.0A					
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



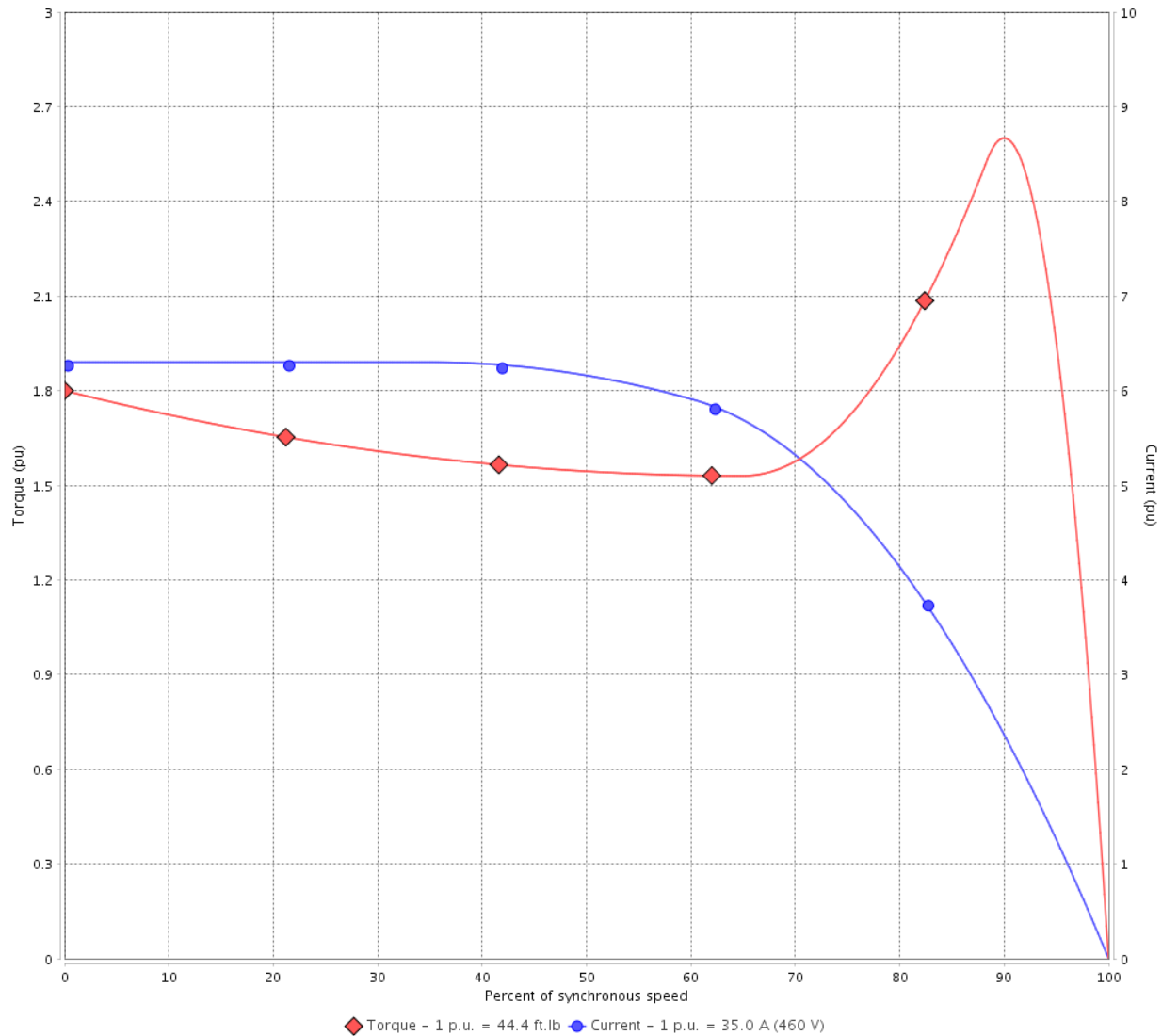
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current	: 70.0/35.0 A	Moment of inertia (J)	: 1.59 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 44.4 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 3550 rpm	Design	: B

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

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Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



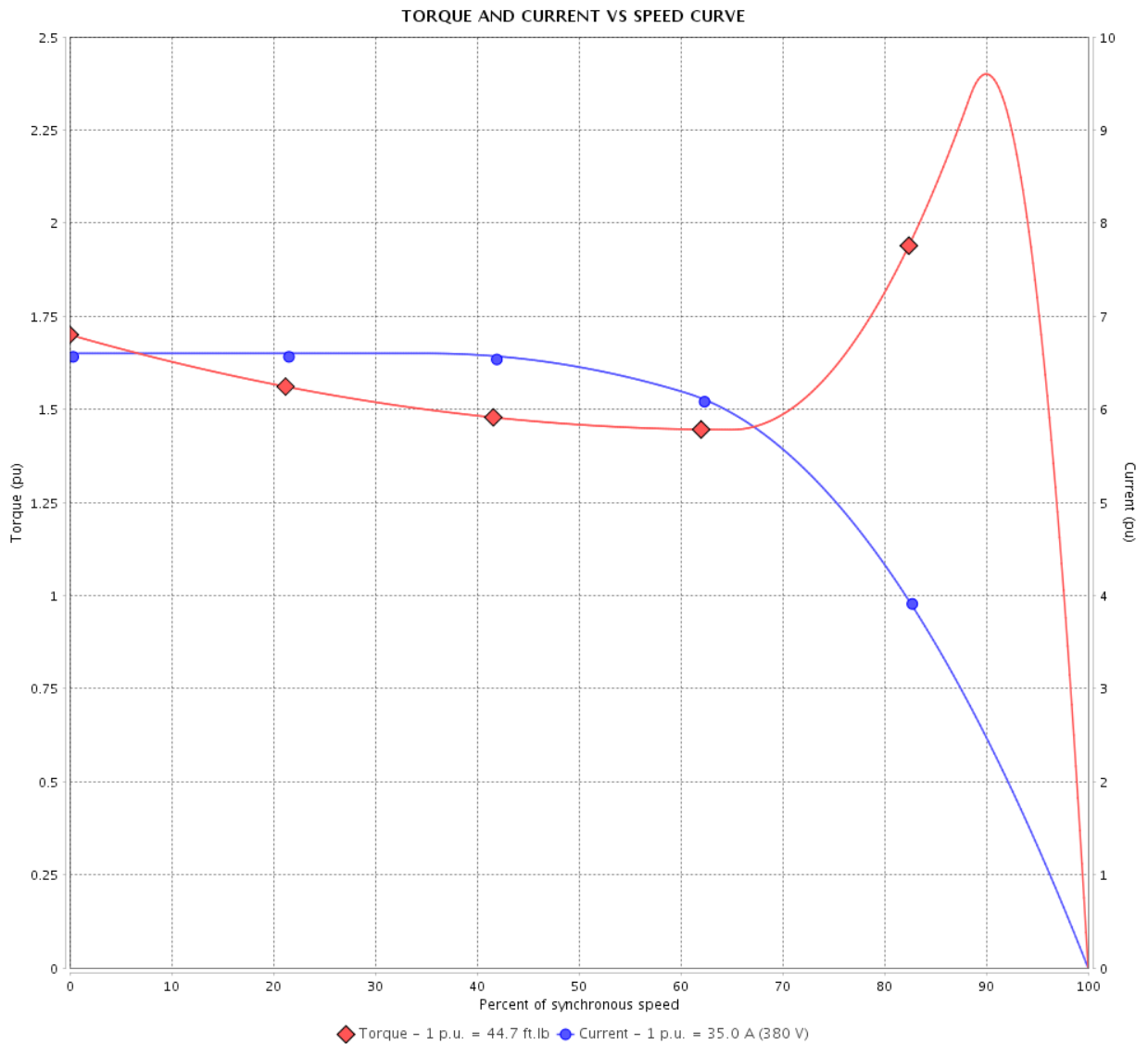
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 35.0 A  
LRC : 6.6  
Rated torque : 44.7 ft.lb  
Locked rotor torque : 170 %  
Breakdown torque : 240 %  
Rated speed : 2940 rpm

Moment of inertia (J) : 1.59 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Locked rotor time : 12s (cold) 7s (hot)

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Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

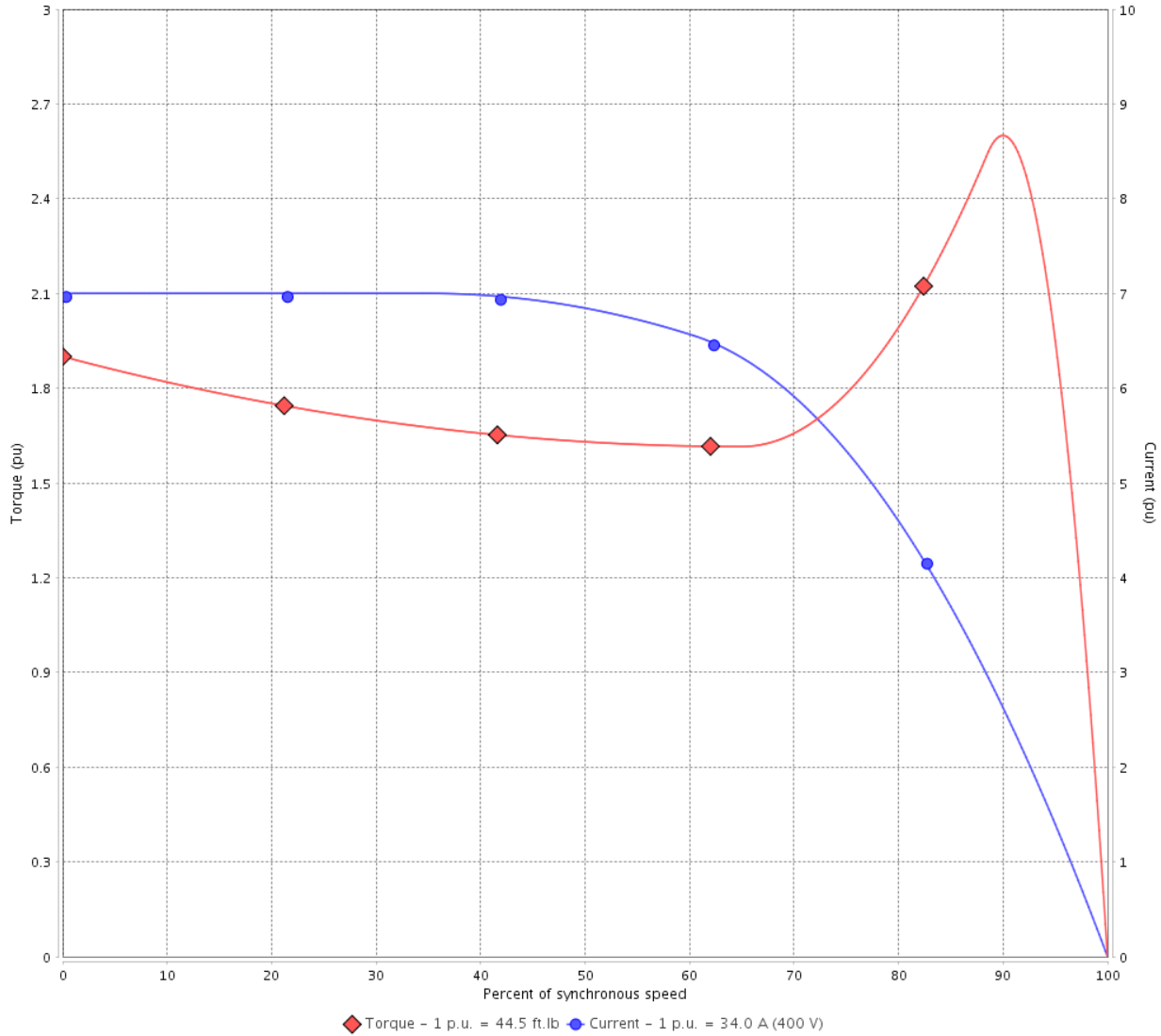
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 34.0 A	Moment of inertia (J)	: 1.59 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 44.5 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 2950 rpm	Design	: B

Locked rotor time : 12s (cold) 7s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



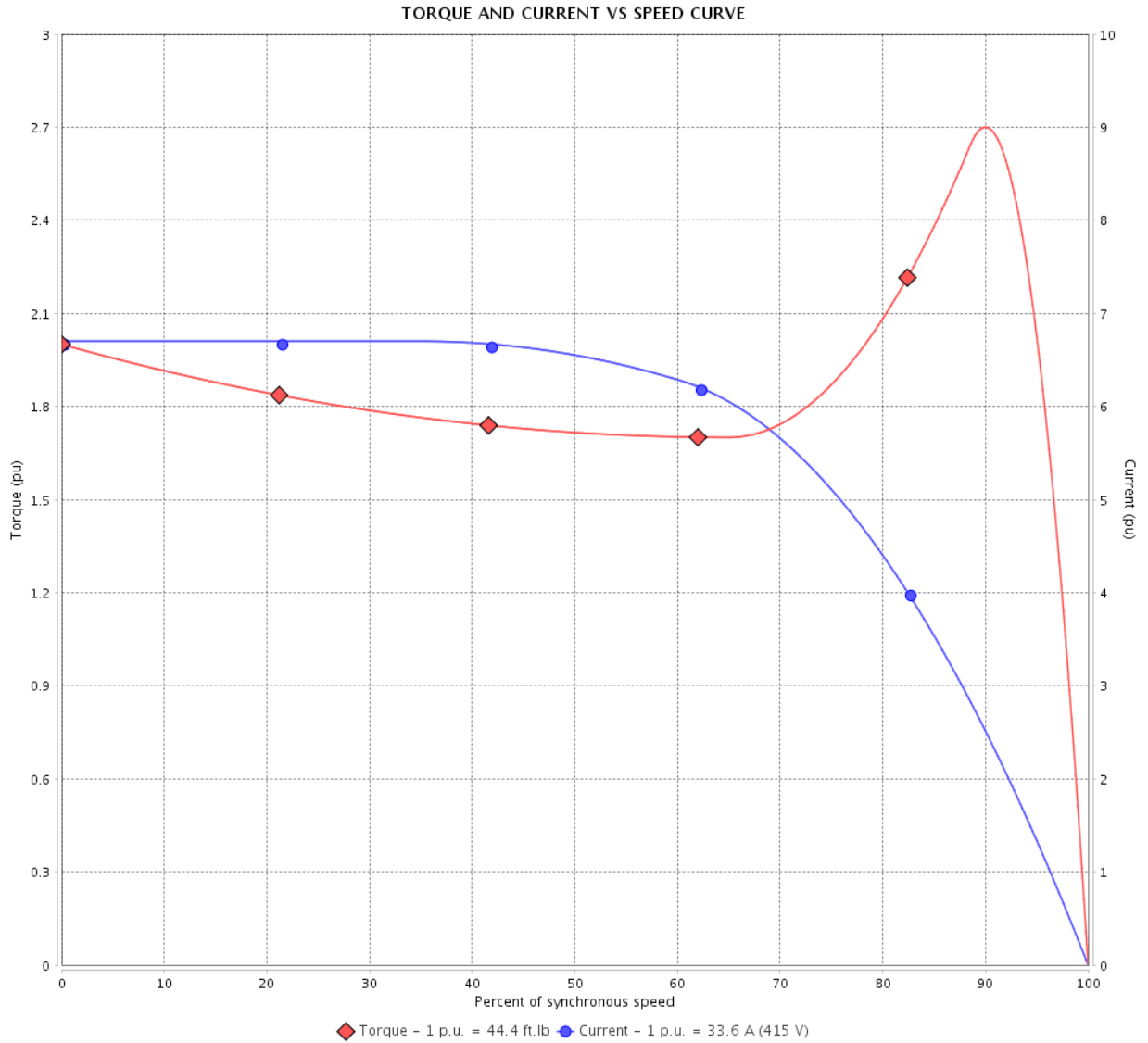
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40



Performance : 415 V 50 Hz 2P IE3

Rated current : 33.6 A  
LRC : 6.7  
Rated torque : 44.4 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 270 %  
Rated speed : 2955 rpm

Moment of inertia (J) : 1.59 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Locked rotor time : 16s (cold) 9s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

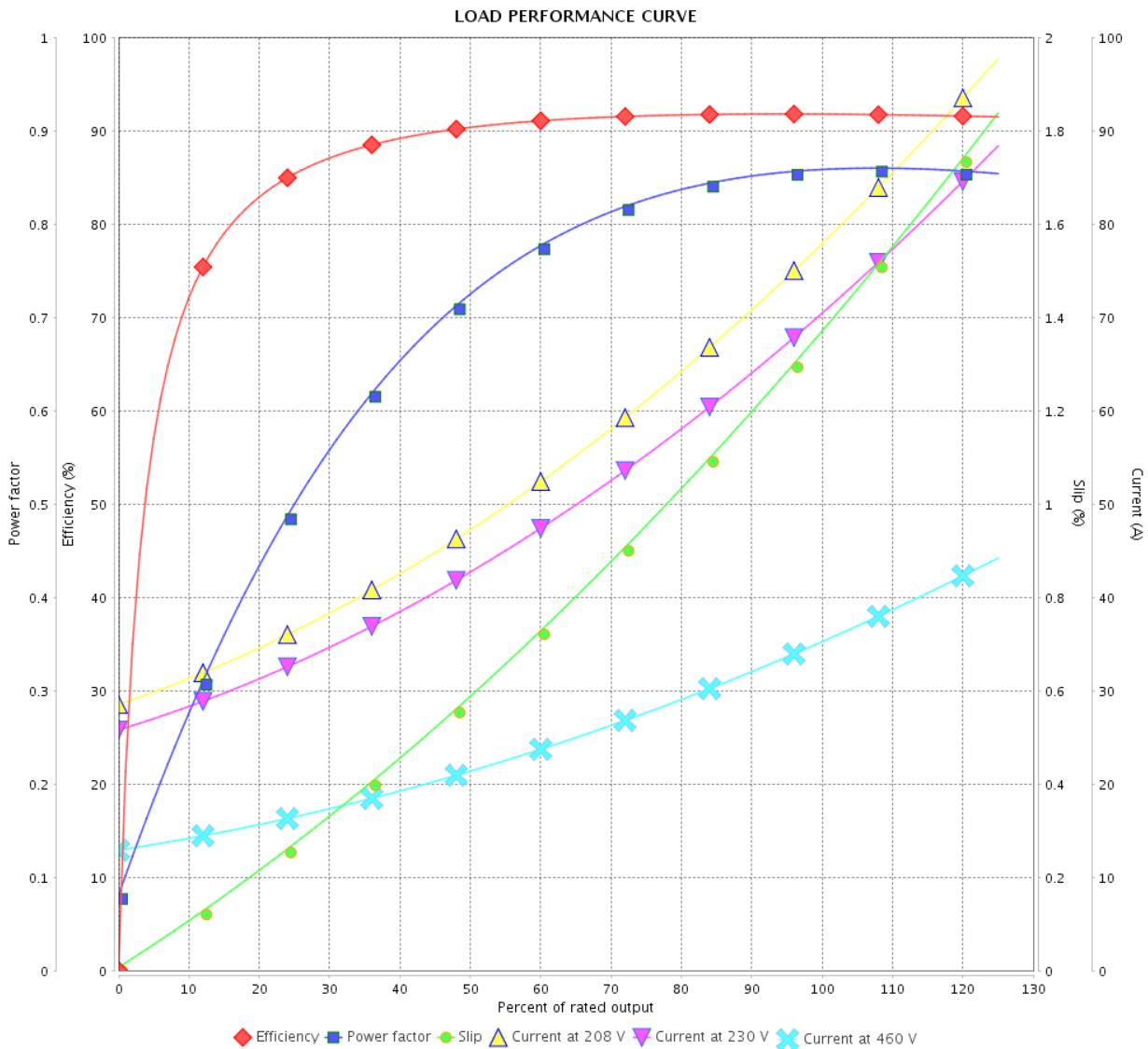


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40



Performance : 230/460 V 60 Hz 2P

Rated current : 70.0/35.0 A  
 LRC : 6.3  
 Rated torque : 44.4 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 260 %  
 Rated speed : 3550 rpm

Moment of inertia (J) : 1.59 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

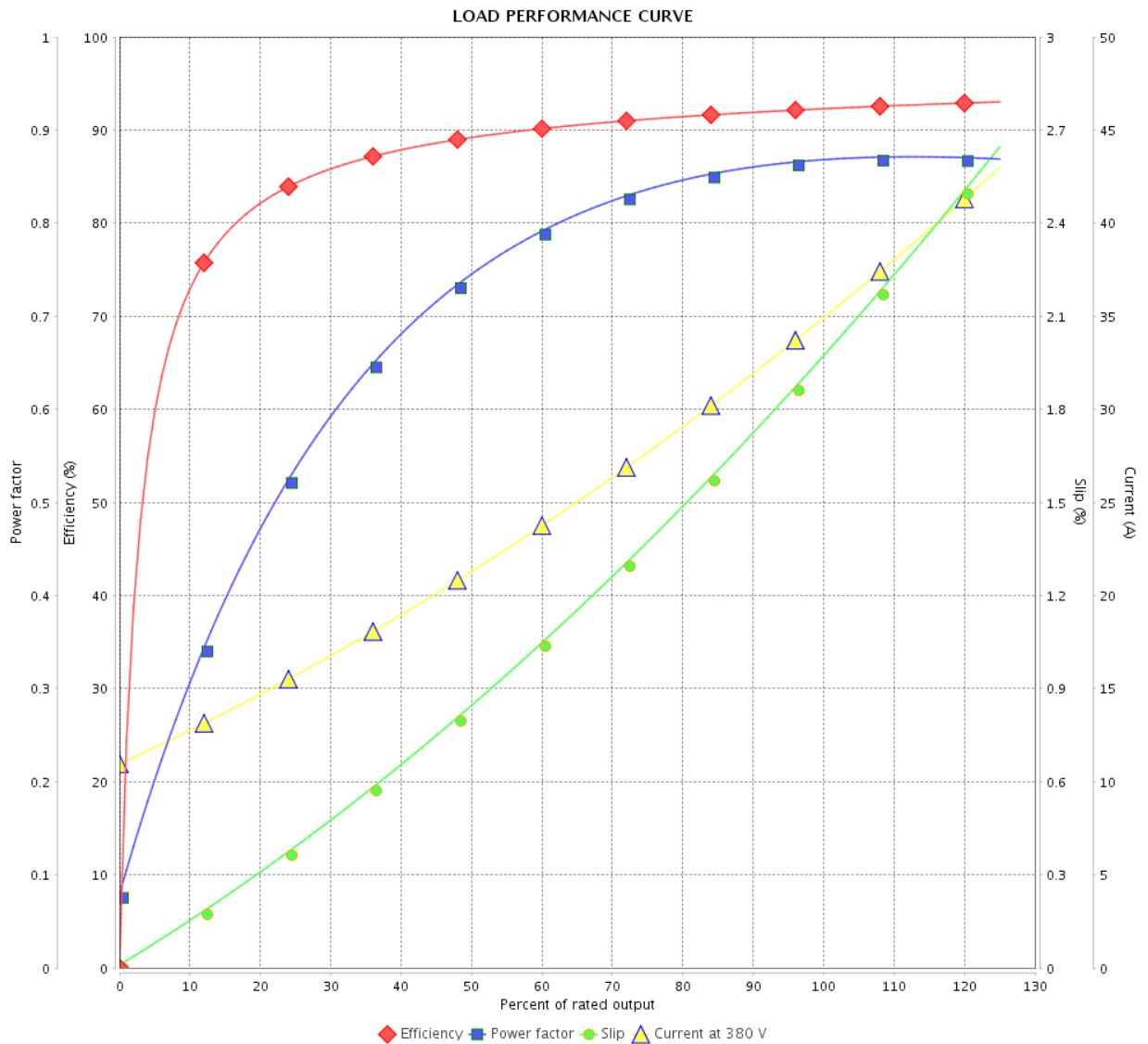


Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 35.0 A  
 LRC : 6.6  
 Rated torque : 44.7 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 240 %  
 Rated speed : 2940 rpm

Moment of inertia (J) : 1.59 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



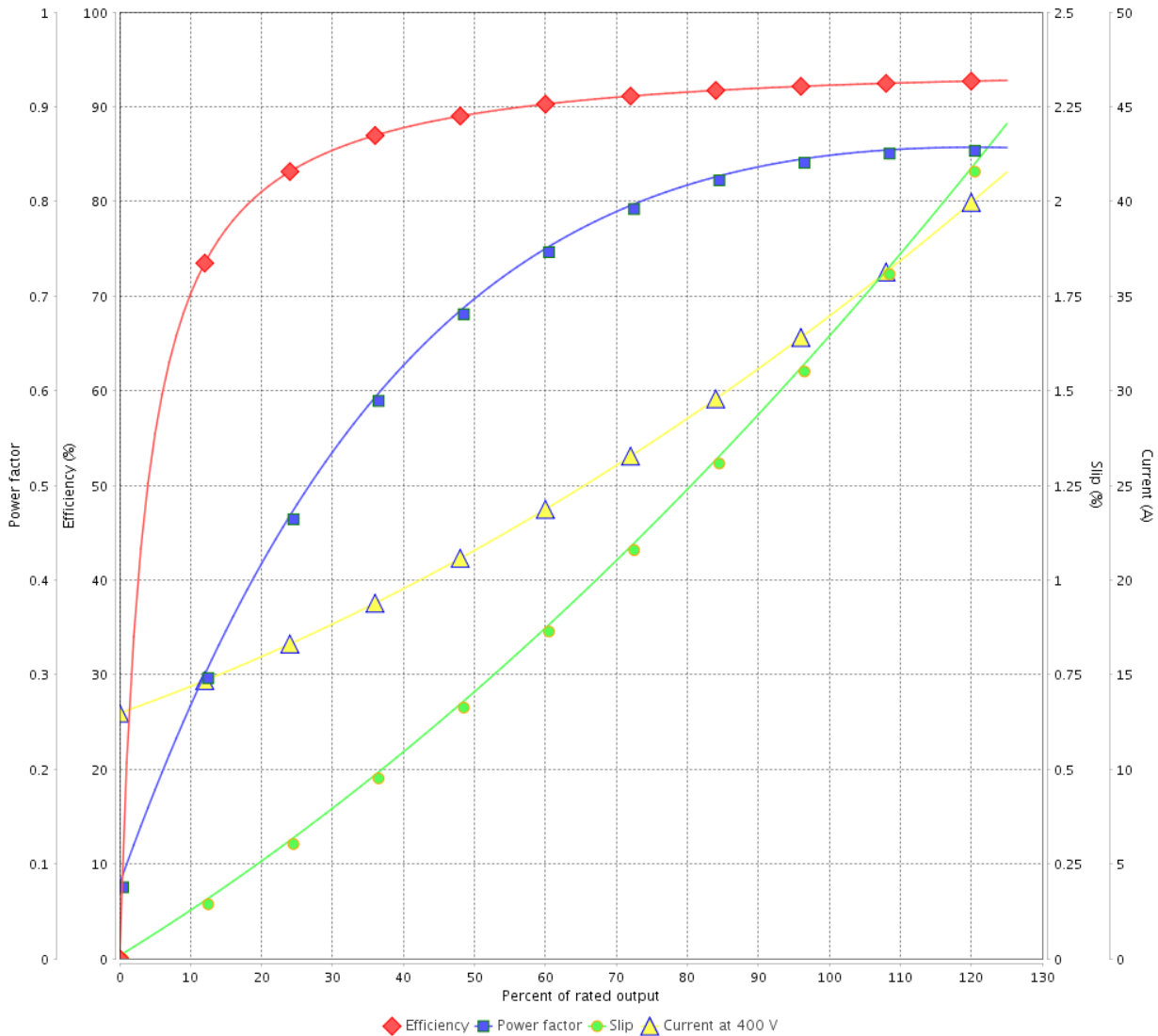
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current : 34.0 A  
 LRC : 7.0  
 Rated torque : 44.5 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 260 %  
 Rated speed : 2950 rpm

Moment of inertia (J) : 1.59 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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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

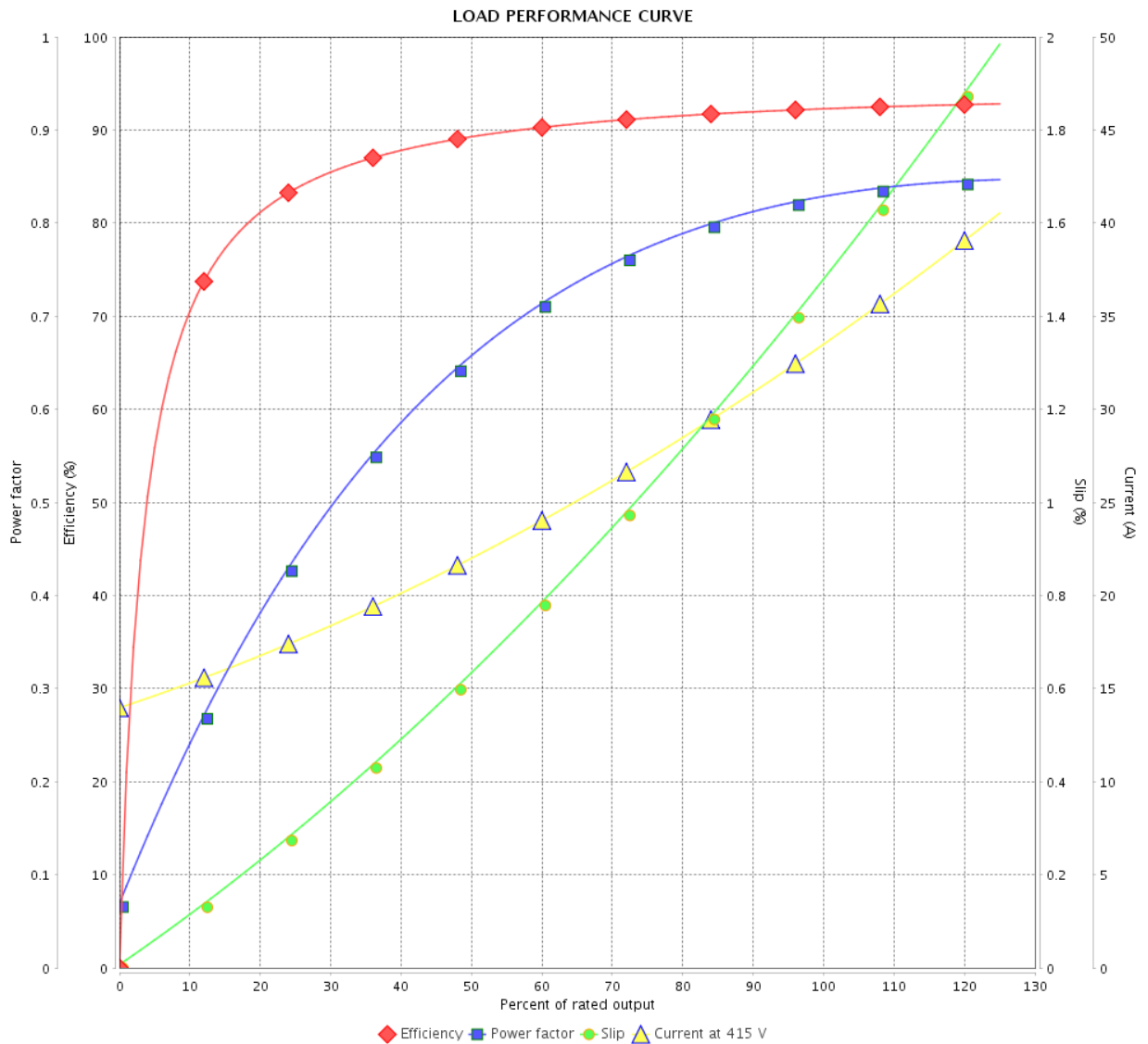


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40



Performance : 415 V 50 Hz 2P IE3

Rated current : 33.6 A  
LRC : 6.7  
Rated torque : 44.4 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 270 %  
Rated speed : 2955 rpm

Moment of inertia (J) : 1.59 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 : 14495932

Catalog # : 03036OT3E284TS-W40

Performance : 230/460 V 60 Hz 2P

Rated current : 70.0/35.0 A  
LRC : 6.3  
Rated torque : 44.4 ft.lb  
Locked rotor torque : 180 %  
Breakdown torque : 260 %  
Rated speed : 3550 rpm

Moment of inertia (J) : 1.59 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

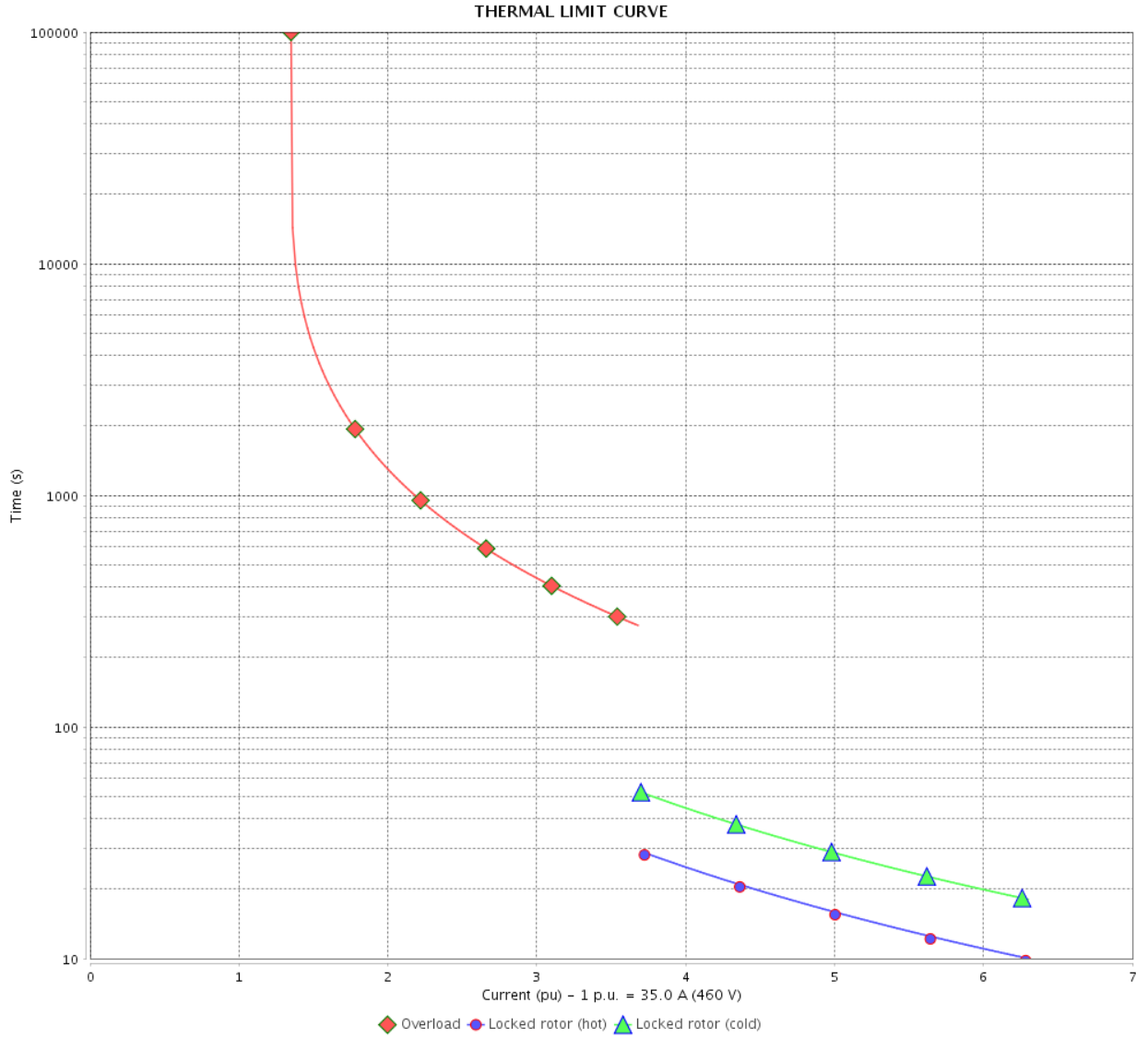
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date		14/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40

Performance : 380 V 50 Hz 2P IE3

Rated current	: 35.0 A	Moment of inertia (J)	: 1.59 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 44.7 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2940 rpm	Design	: B

Heating constant

Cooling constant

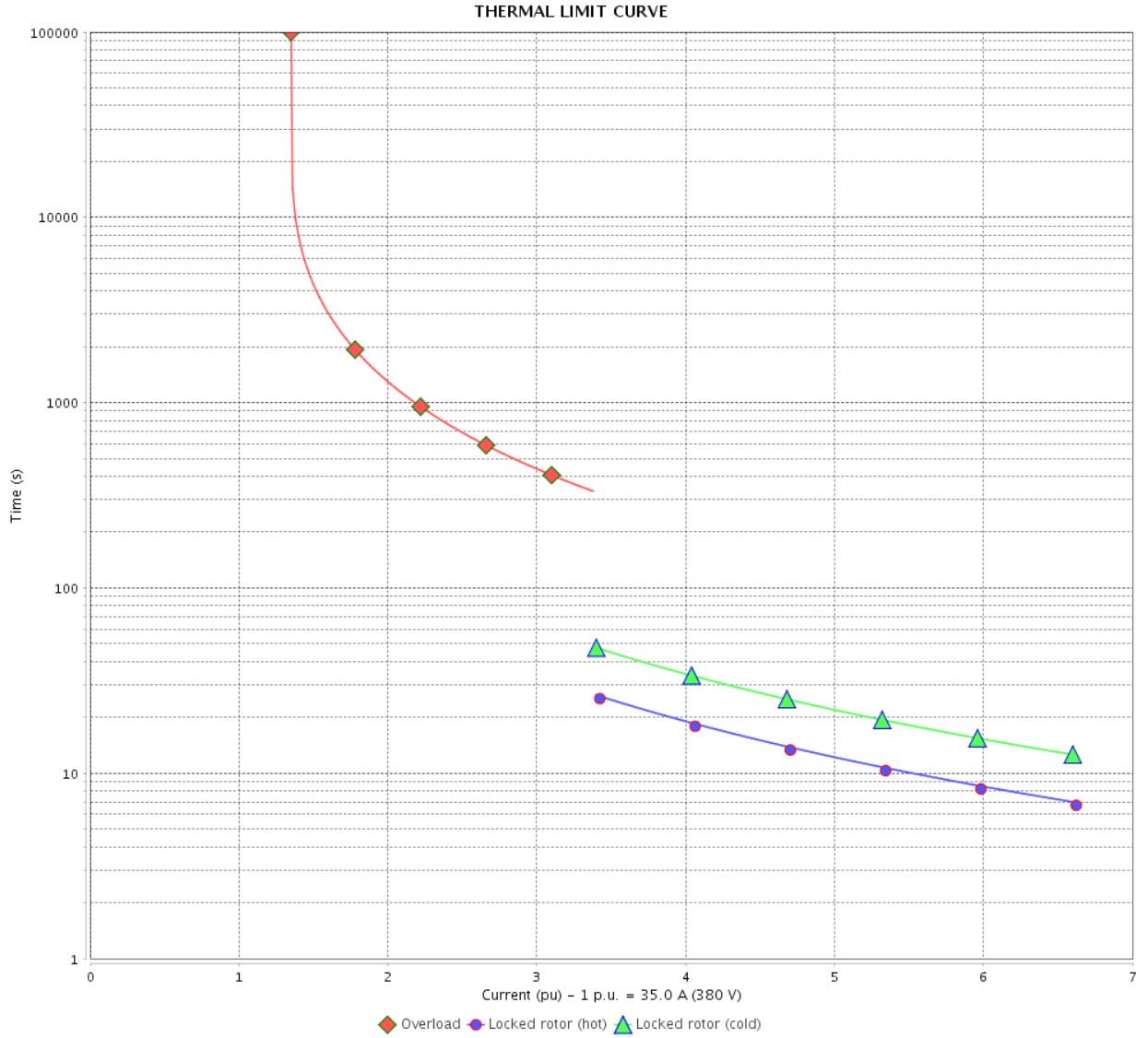
Rev.	Changes Summary	Performed	Checked	Date
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Date	14/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Performed by				
Checked by				
Date				
		Page	Revision	
		13 / 21		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40

Performance : 400 V 50 Hz 2P IE3

Rated current	: 34.0 A	Moment of inertia (J)	: 1.59 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 44.5 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 2950 rpm	Design	: B

Heating constant

Cooling constant

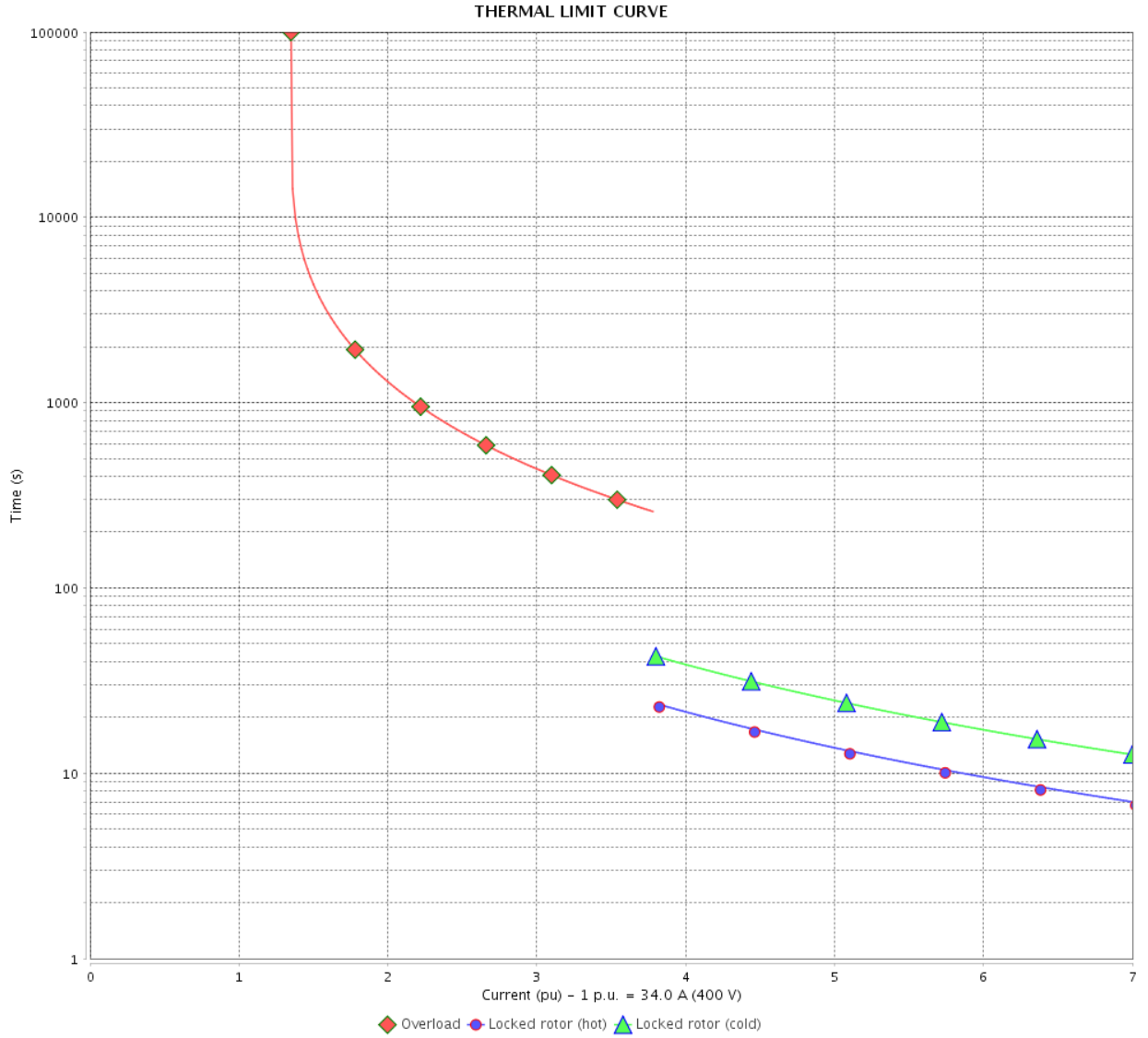
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
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# THERMAL LIMIT CURVE

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 : 14495932

Catalog # : 03036OT3E284TS-W40

Performance : 415 V 50 Hz 2P IE3

Rated current	: 33.6 A	Moment of inertia (J)	: 1.59 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 44.4 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: B

Heating constant

Cooling constant

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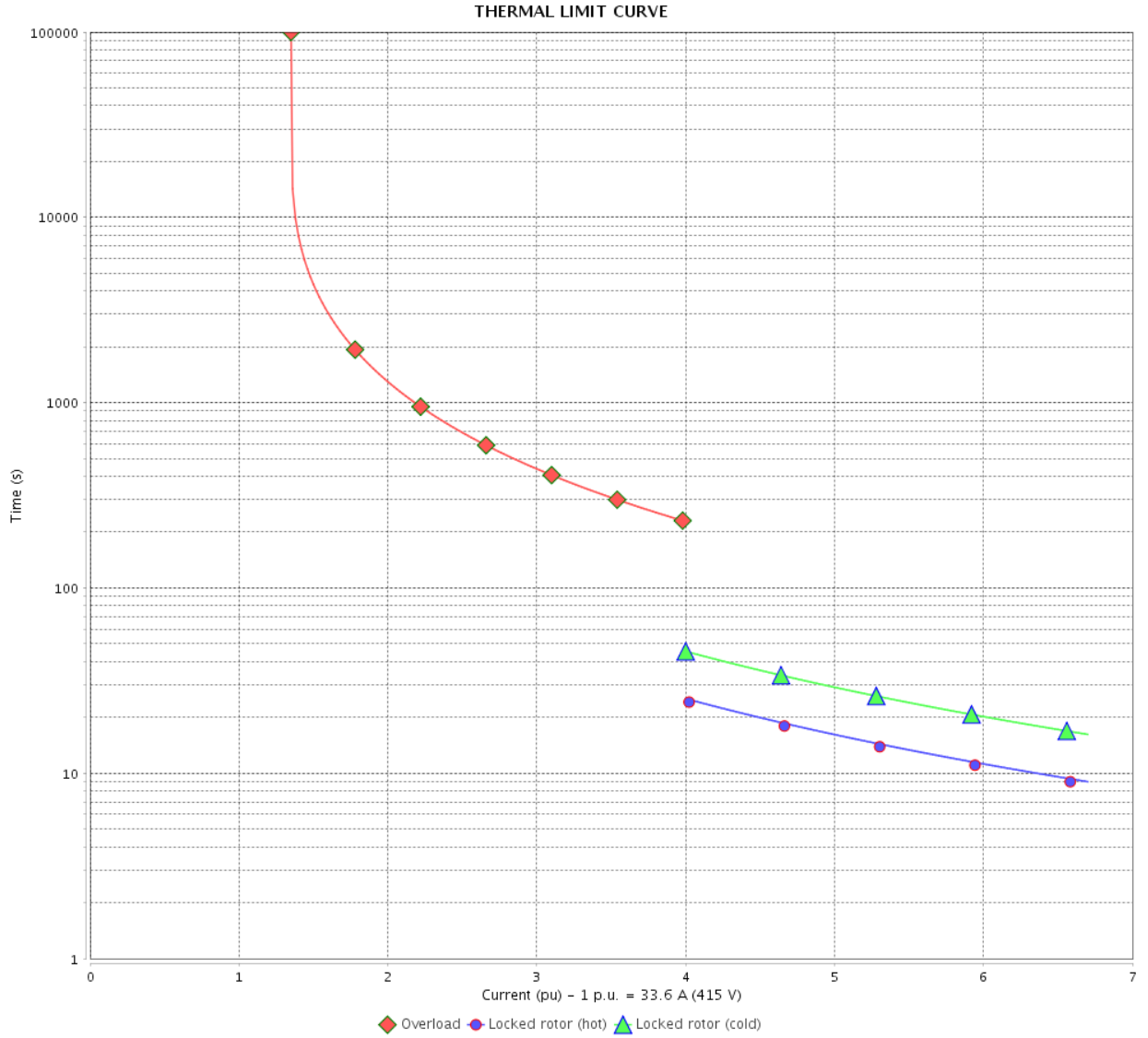


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



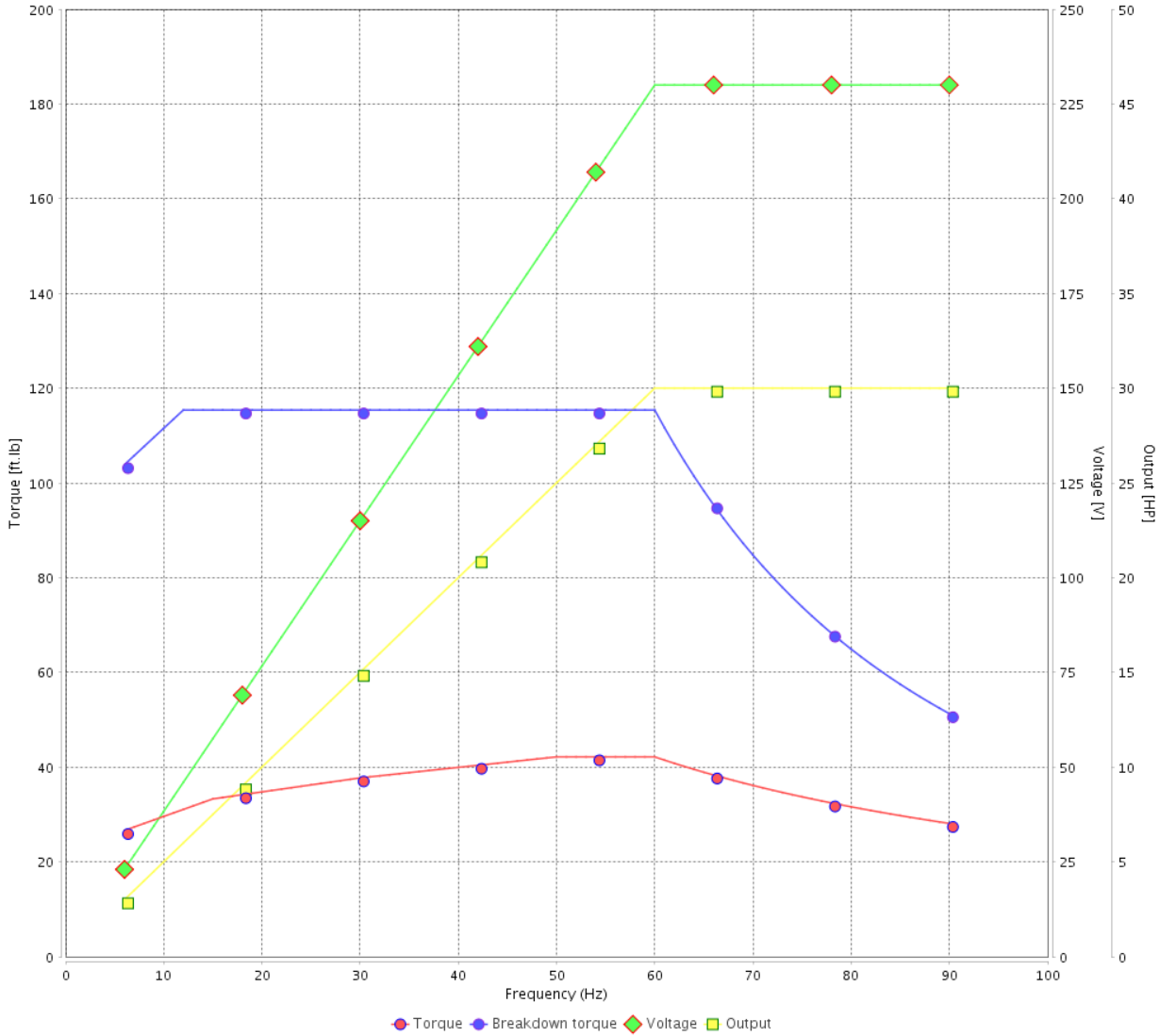
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 70.0/35.0 A  
 LRC : 6.3  
 Rated torque : 44.4 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 260 %  
 Rated speed : 3550 rpm

Moment of inertia (J) : 1.59 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

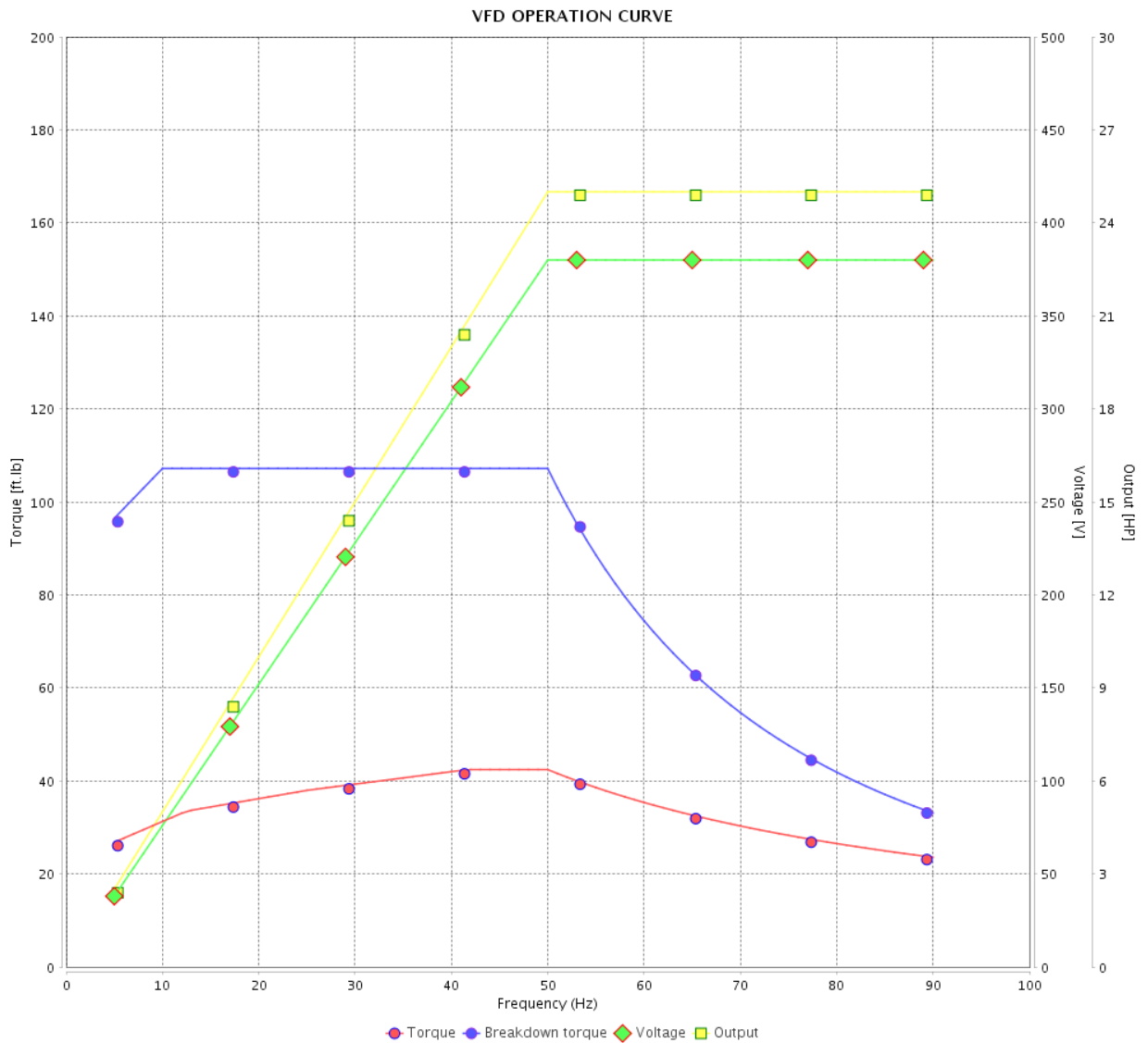


Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 35.0 A  
LRC : 6.6  
Rated torque : 44.7 ft.lb  
Locked rotor torque : 170 %  
Breakdown torque : 240 %  
Rated speed : 2940 rpm

Moment of inertia (J) : 1.59 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



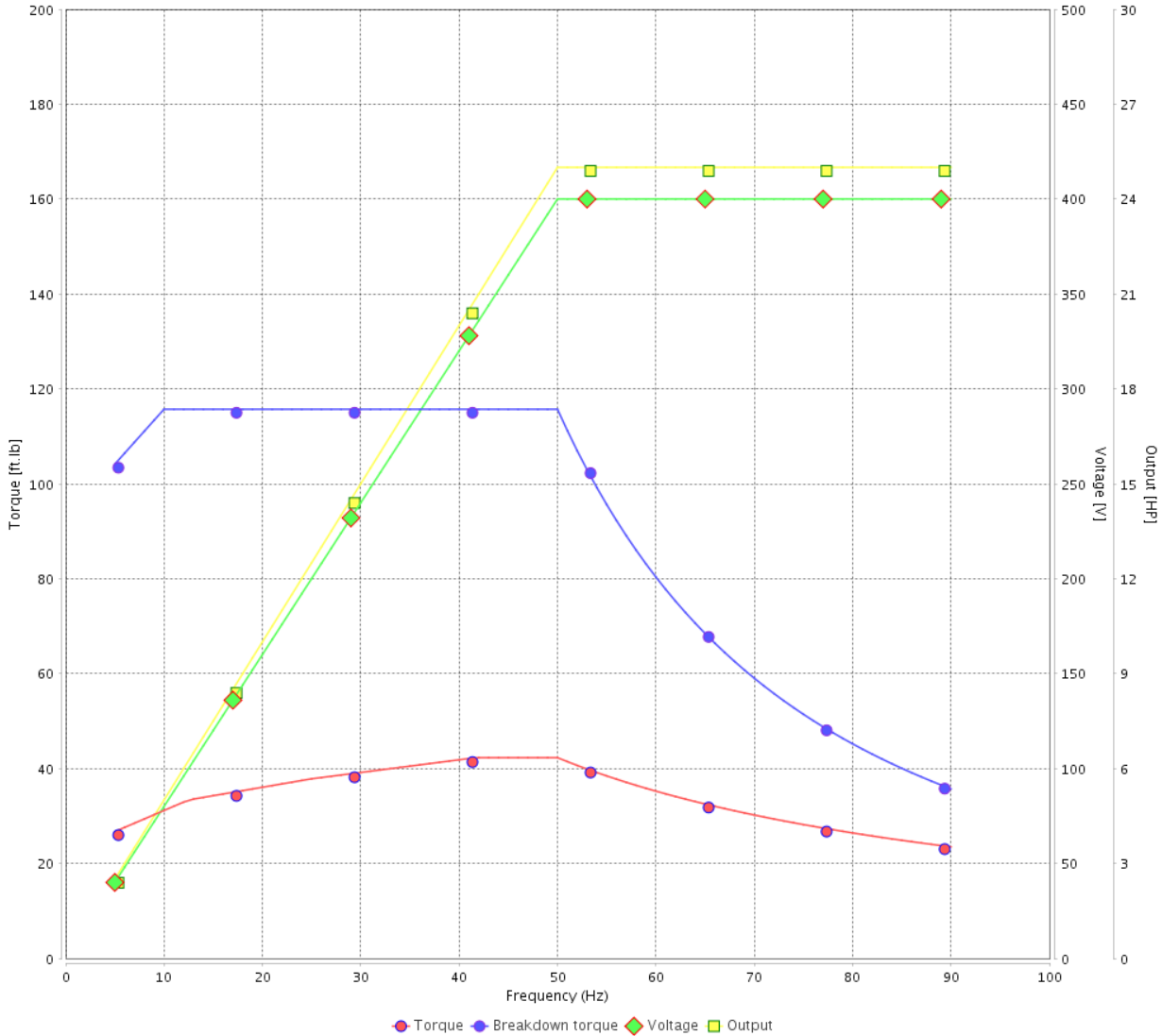
Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14495932

Catalog # : 03036OT3E284TS-W40

VFD OPERATION CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current : 34.0 A  
LRC : 7.0  
Rated torque : 44.5 ft.lb  
Locked rotor torque : 190 %  
Breakdown torque : 260 %  
Rated speed : 2950 rpm

Moment of inertia (J) : 1.59 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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Date 14/04/2022				

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

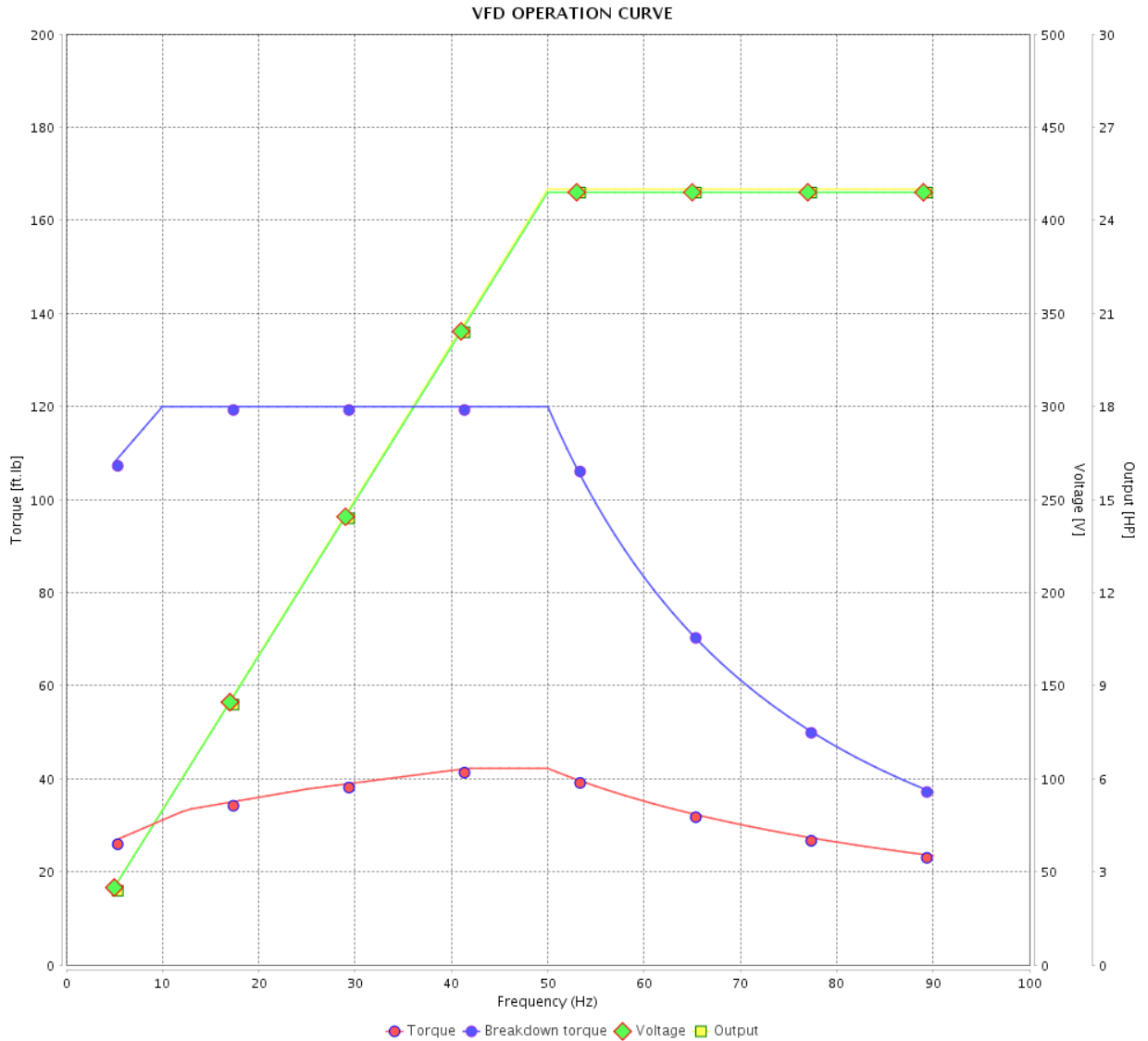


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Product line : W40 NEMA Premium Efficiency  
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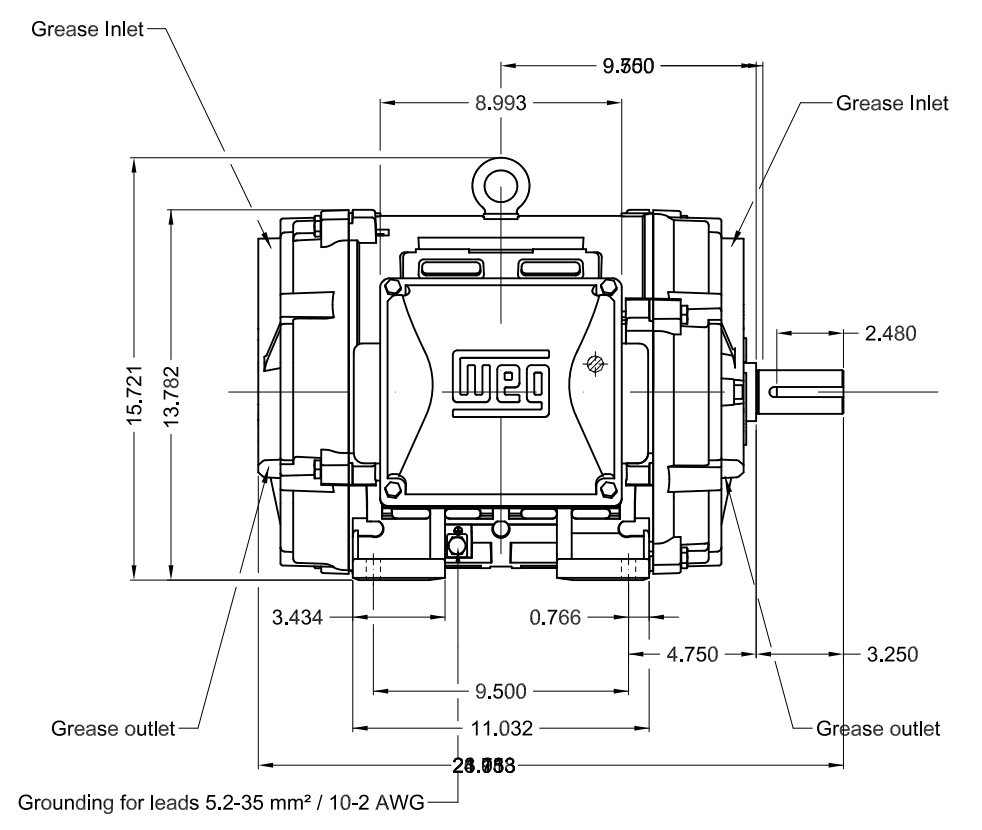
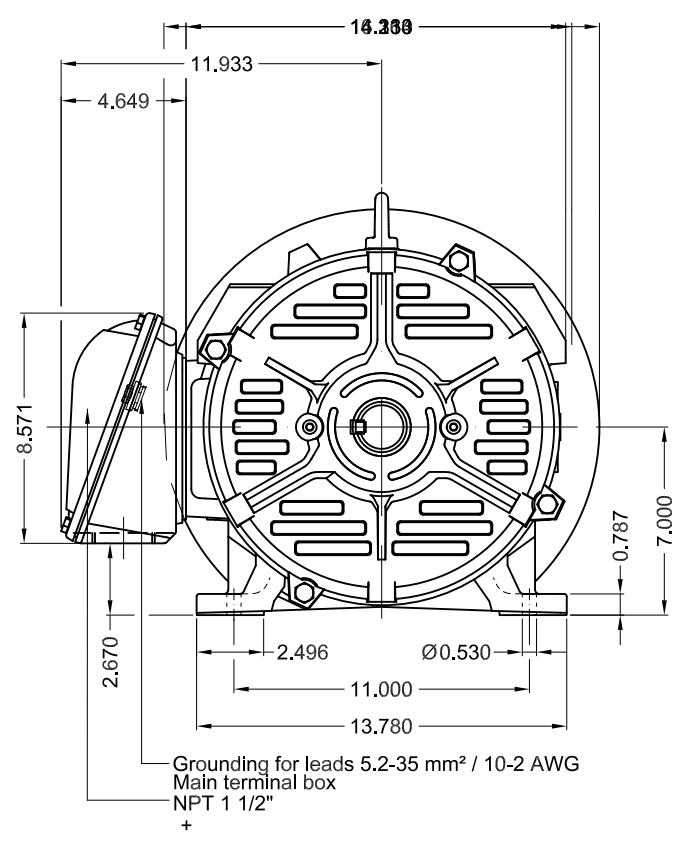


Performance : 415 V 50 Hz 2P IE3

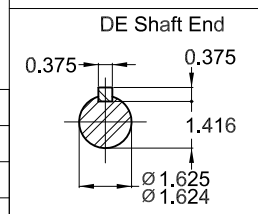
Rated current : 33.6 A  
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 Rated torque : 44.4 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 270 %  
 Rated speed : 2955 rpm

Moment of inertia (J) : 1.59 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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Color RAL 5009  
Painting plan 203A  
Mounting NEMA F-1  
Mounting B3R(D)



30 HP 02 Poles 60 Hz

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 284TS IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
WDD



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



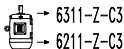
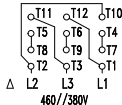
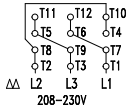
IEC 60034-1  
 MOD.T01#FOXON



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

MODEL 030360T3E284TS-W40  
 MADE IN BRAZIL  
 14495932

PH 3	FR 284TS	HP(kW) 30.0(22.0)	Hz 60
V 230/460	A 70.0/35.0	RPM 3550	DES B
NEMA NOM EFF 91.7 %	INS. CL. F $\Delta$ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.86	SF 1.25	SFA 87.5/43.8
USABLE @208V 77.4 A	SF 1.15	SFA 89.0	
25HP 18.5kW 50Hz 380V 35.0A 2940RPM SF1.00 EFF 92.4% (IE3)	ALT 1000 m.a.s.l.	302 Lbs	



MOBIL POLYREX EM  
 18 g 20000 h