

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: W40 JP Pump NEMA Premium Efficiency Three-Phase		Product code :	14485015
				Catalog # :	02012OT3E286JP-W40
Frame		: 284/6JP		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	: 402 lb
Protection degree		: IP23		Moment of inertia (J)	: 6.89 sq.ft.lb
Design		: B			
Output [HP]	20	15	15	15	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	48.6/24.3	22.0	21.4	20.9	
L. R. Amperes [A]	311/156	158	161	157	
LRC [A]	6.4x(Code G)	7.2x(Code H)	7.5x(Code J)	7.5x(Code J)	
No load current [A]	18.8/9.40	9.30	10.0	10.5	
Rated speed [RPM]	1177	980	980	984	
Slip [%]	1.92	2.00	2.00	1.60	
Rated torque [ft.lb]	89.2	80.4	80.4	80.0	
Locked rotor torque [%]	229	270	310	340	
Breakdown torque [%]	260	280	320	340	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	27s (cold) 15s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	
Noise level ²	59.0 dB(A)				
Efficiency (%)	25%	91.5	89.7	89.7	89.7
	50%	91.7	89.9	89.9	89.9
	75%	92.4	90.3	90.3	90.3
	100%	92.4	90.3	90.3	90.3
Power Factor	25%	0.45	0.42	0.39	0.37
	50%	0.71	0.68	0.64	0.62
	75%	0.80	0.79	0.76	0.74
	100%	0.84	0.84	0.82	0.81
Bearing type	: Drive end	6311 Z C3	Non drive end	6211 Z C3	Foundation loads Max. traction Max. compression
Sealing	: Without		Without		
		Bearing Seal		Bearing Seal	
Lubrication interval	: 20000 h		20000 h		
Lubricant amount	: 18 g		11 g		
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 53.7A SF 1.15 SFA 61.8A					
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



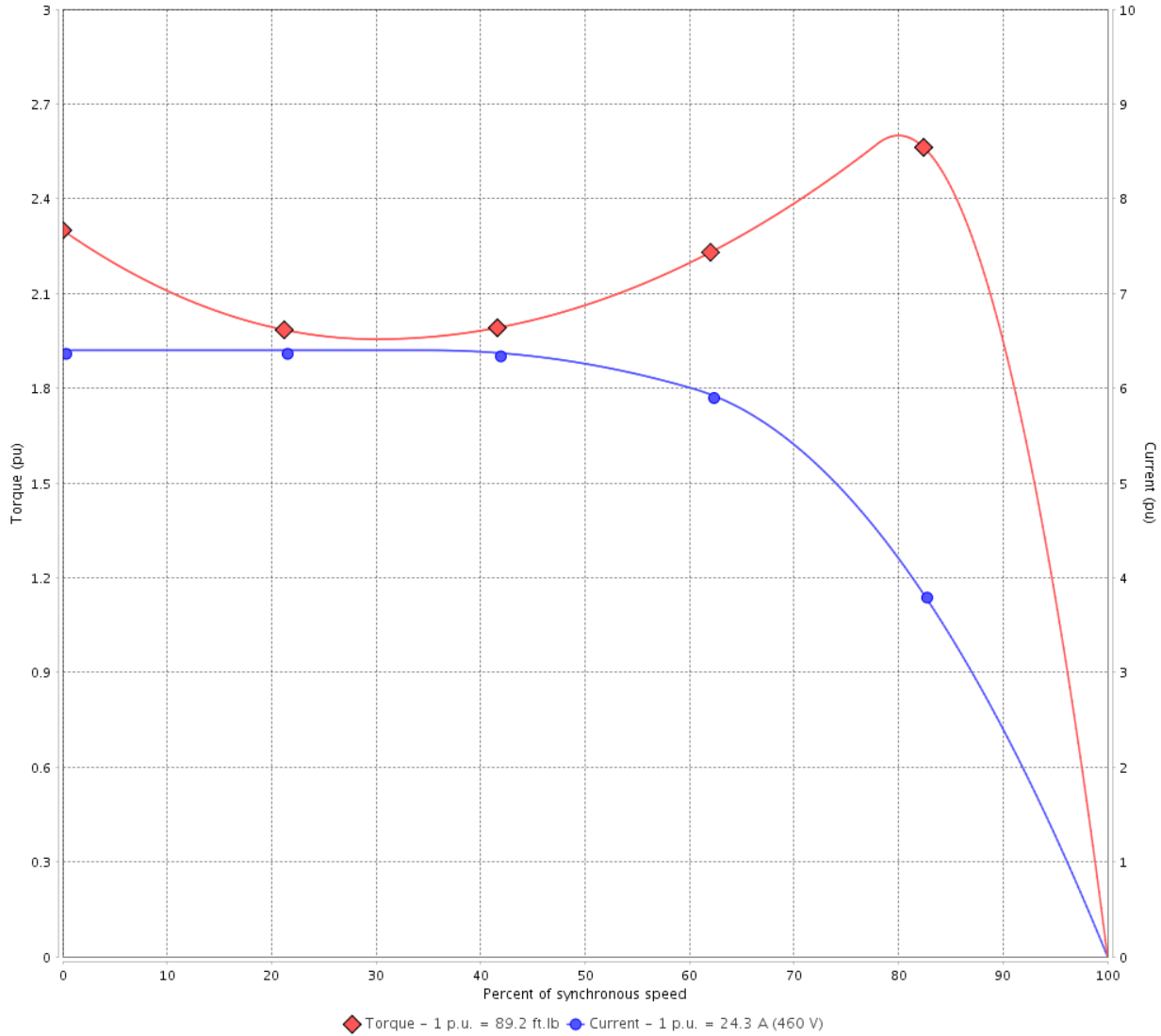
Customer :

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

Product code : 14485015

Catalog # : 02012OT3E286JP-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 48.6/24.3 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 89.2 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1177 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



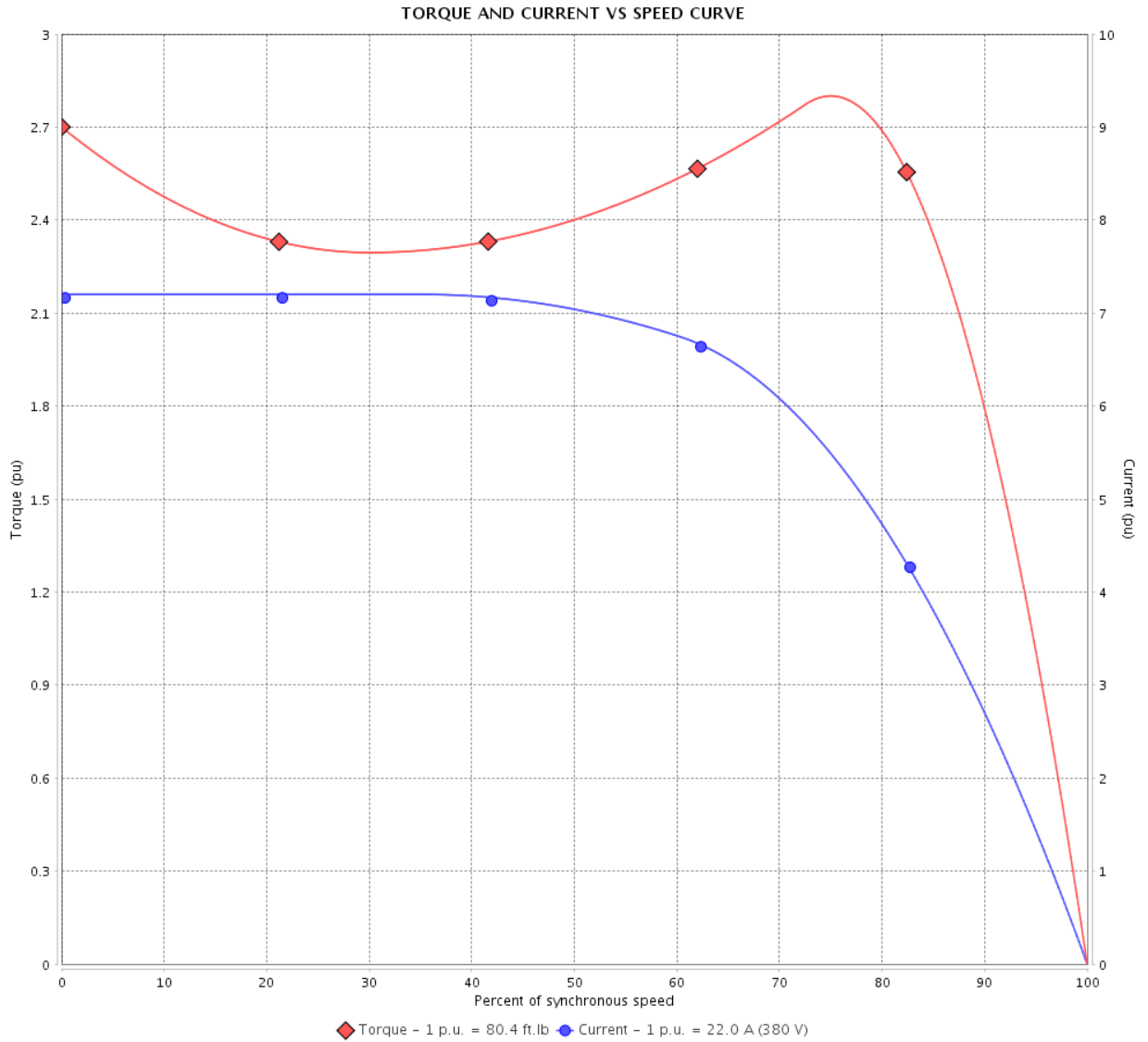
Three Phase Induction Motor - Squirrel Cage

Customer :

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

Product code : 14485015

Catalog # : 02012OT3E286JP-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 22.0 A
 LRC : 7.2
 Rated torque : 80.4 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 980 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



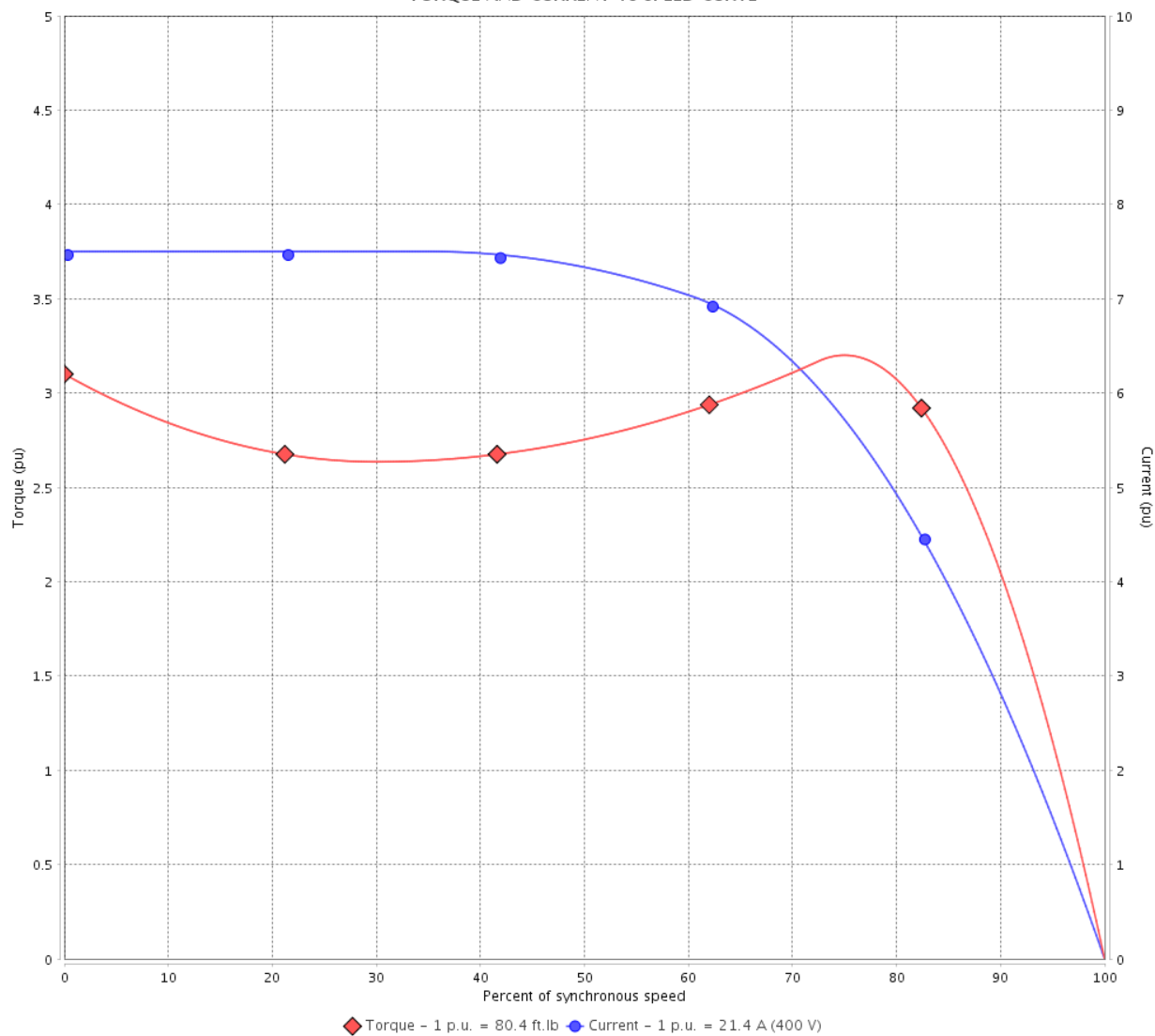
Customer :

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

Product code : 14485015

Catalog # : 02012OT3E286JP-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 21.4 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 80.4 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



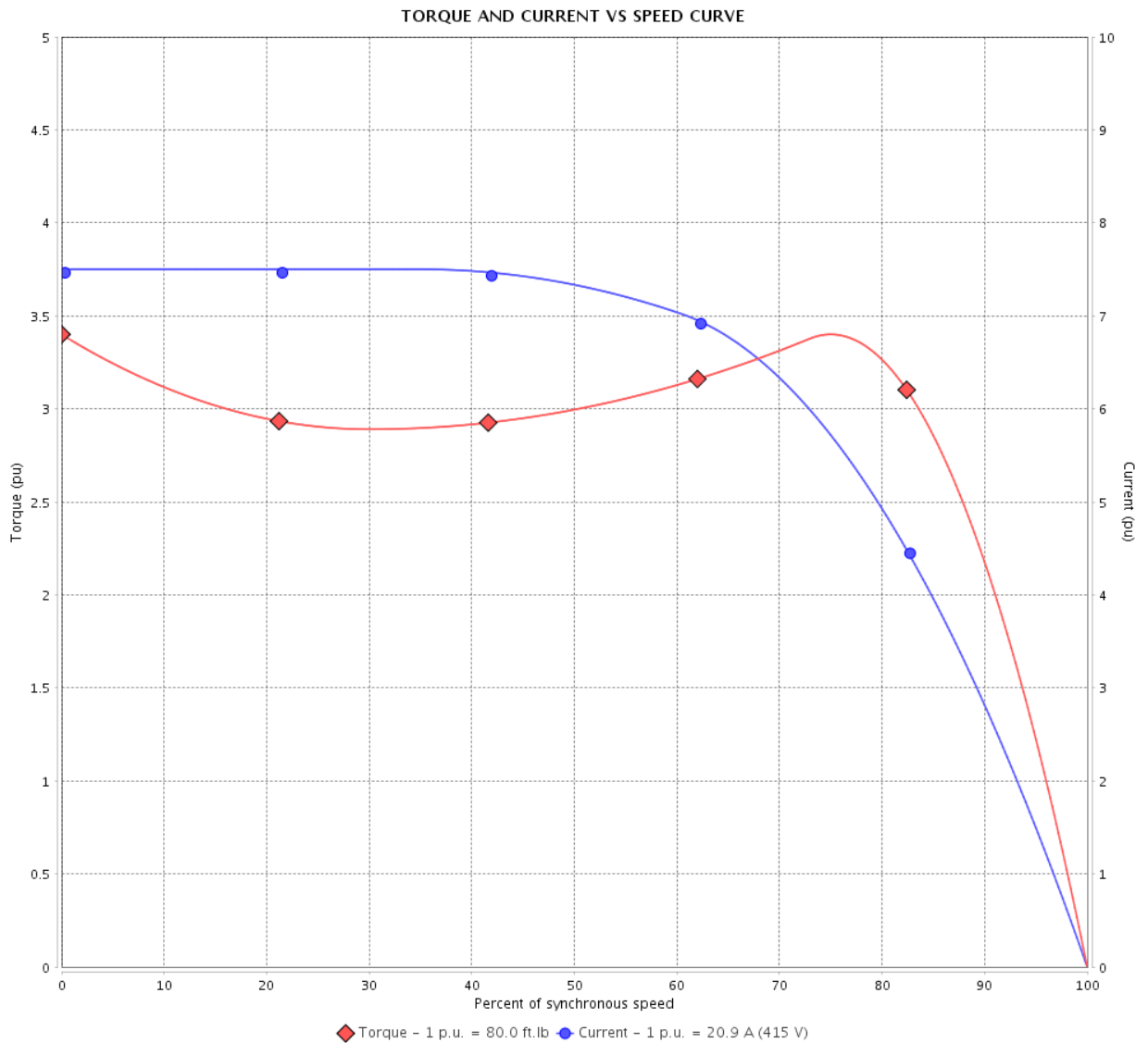
Three Phase Induction Motor - Squirrel Cage

Customer :

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

Product code : 14485015

Catalog # : 02012OT3E286JP-W40



Performance : 415 V 50 Hz 6P IE3

Rated current	: 20.9 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 80.0 ft.lb	Insulation class	: F
Locked rotor torque	: 340 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 984 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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LOAD PERFORMANCE CURVE

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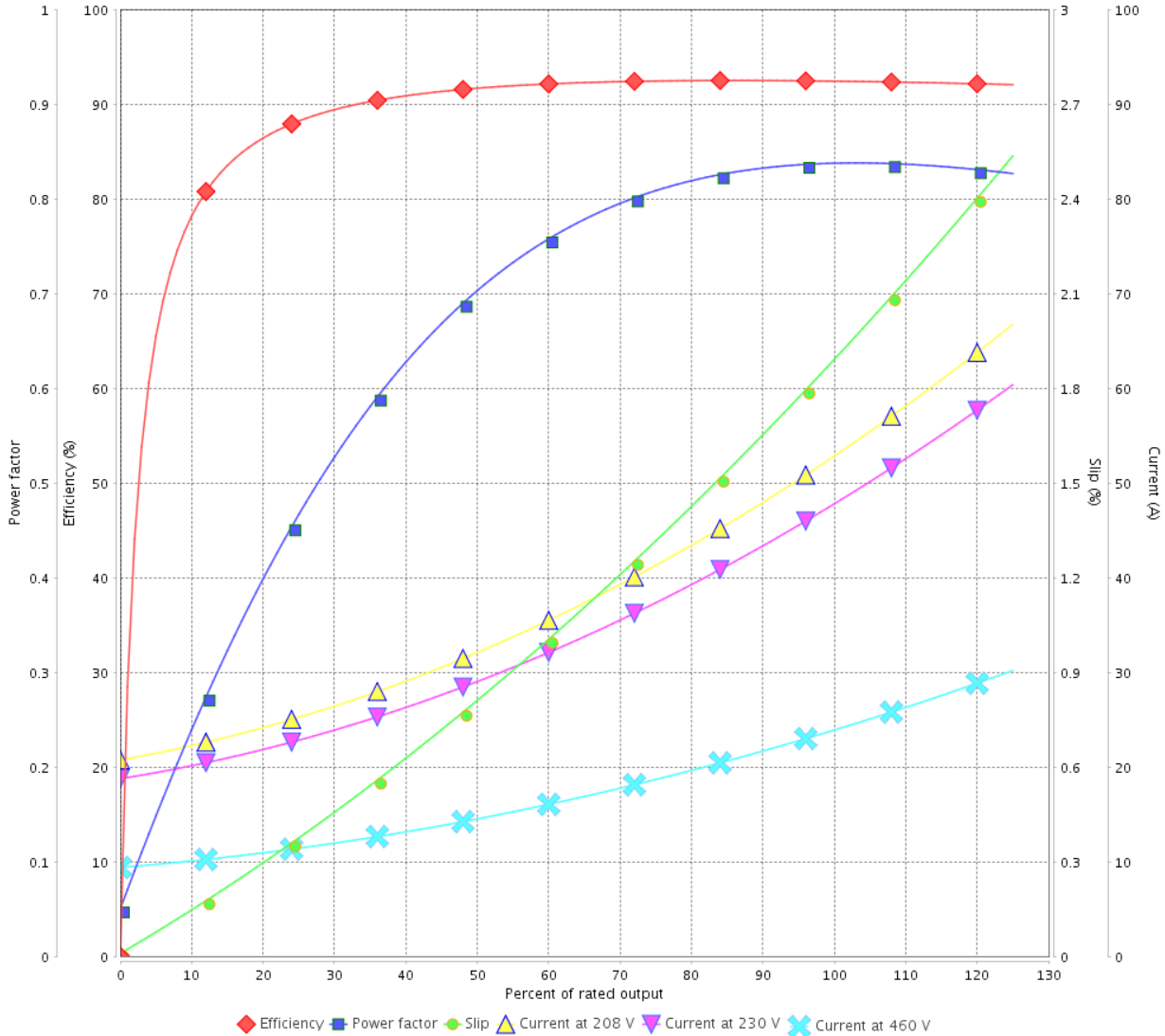
Customer :

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

Product code : 14485015

Catalog # : 020120T3E286JP-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 48.6/24.3 A
 LRC : 6.4
 Rated torque : 89.2 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1177 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

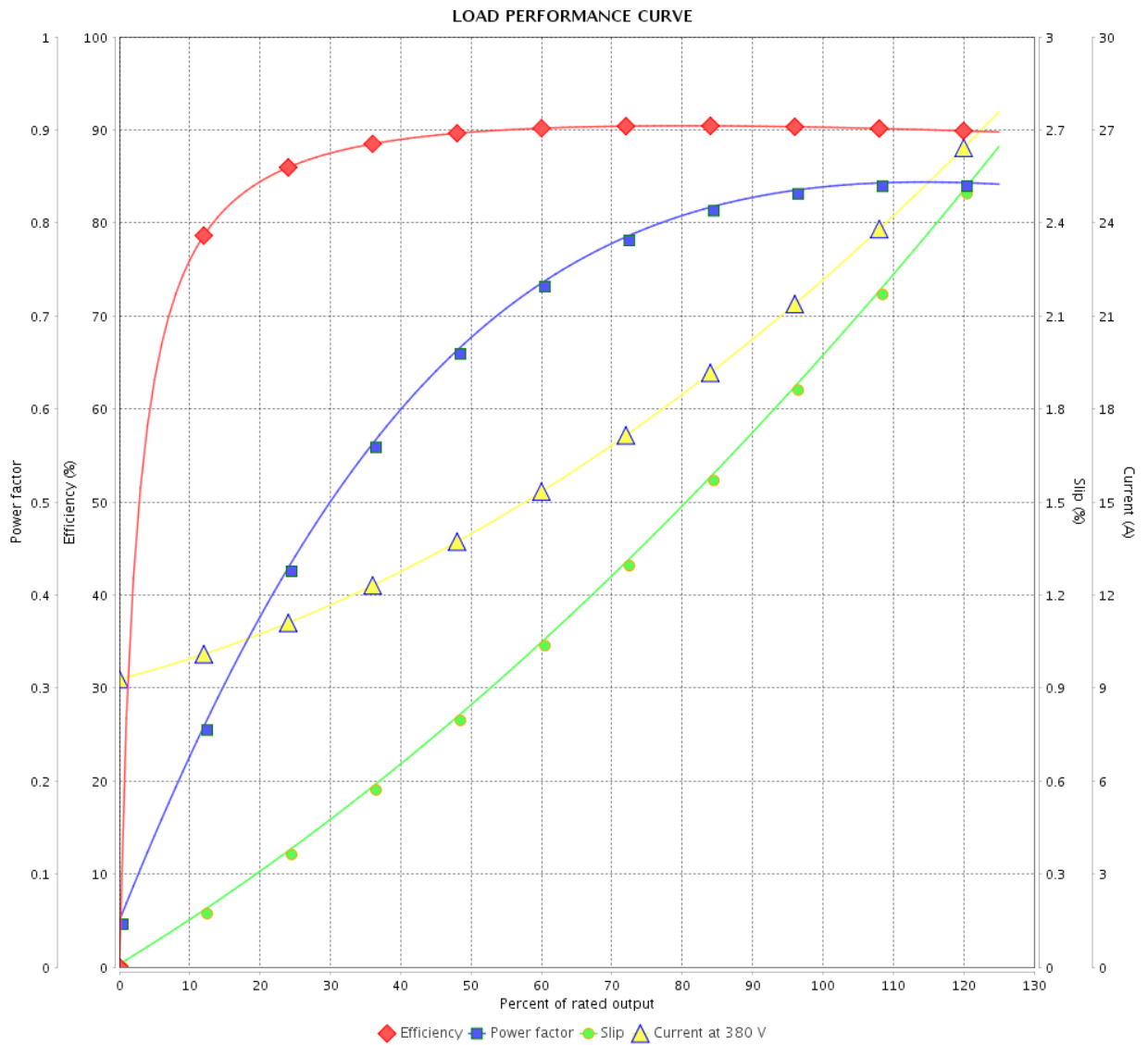


Customer :

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

Product code : 14485015

Catalog # : 02012OT3E286JP-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 22.0 A
 LRC : 7.2
 Rated torque : 80.4 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 980 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



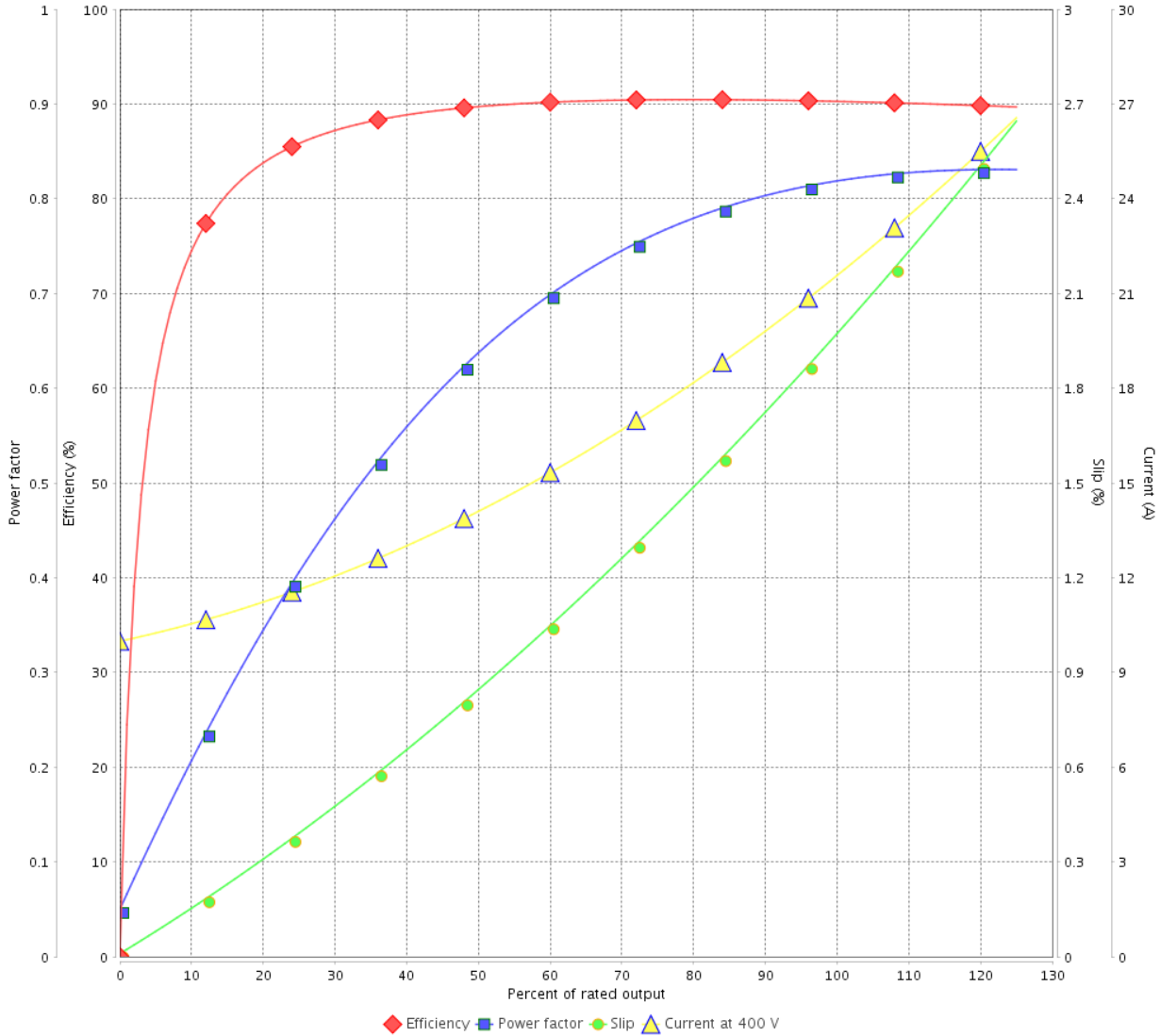
Customer :

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

Product code : 14485015

Catalog # : 02012OT3E286JP-W40

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 21.4 A
LRC : 7.5
Rated torque : 80.4 ft.lb
Locked rotor torque : 310 %
Breakdown torque : 320 %
Rated speed : 980 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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Three Phase Induction Motor - Squirrel Cage

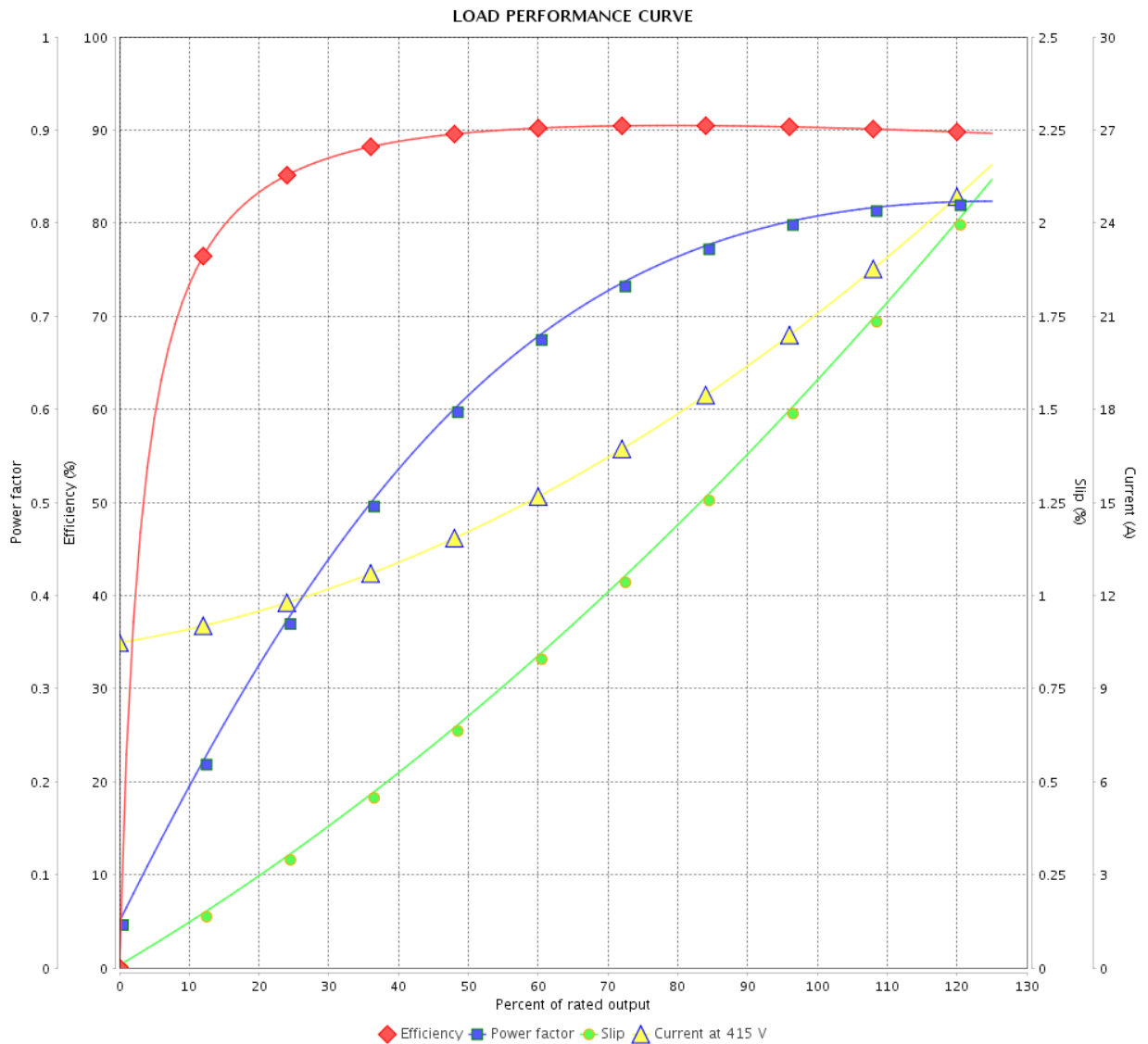


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Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14485015

Catalog # : 02012OT3E286JP-W40



Performance : 415 V 50 Hz 6P IE3

Rated current : 20.9 A
 LRC : 7.5
 Rated torque : 80.0 ft.lb
 Locked rotor torque : 340 %
 Breakdown torque : 340 %
 Rated speed : 984 rpm

Moment of inertia (J) : 6.89 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



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Rated speed : 1177 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

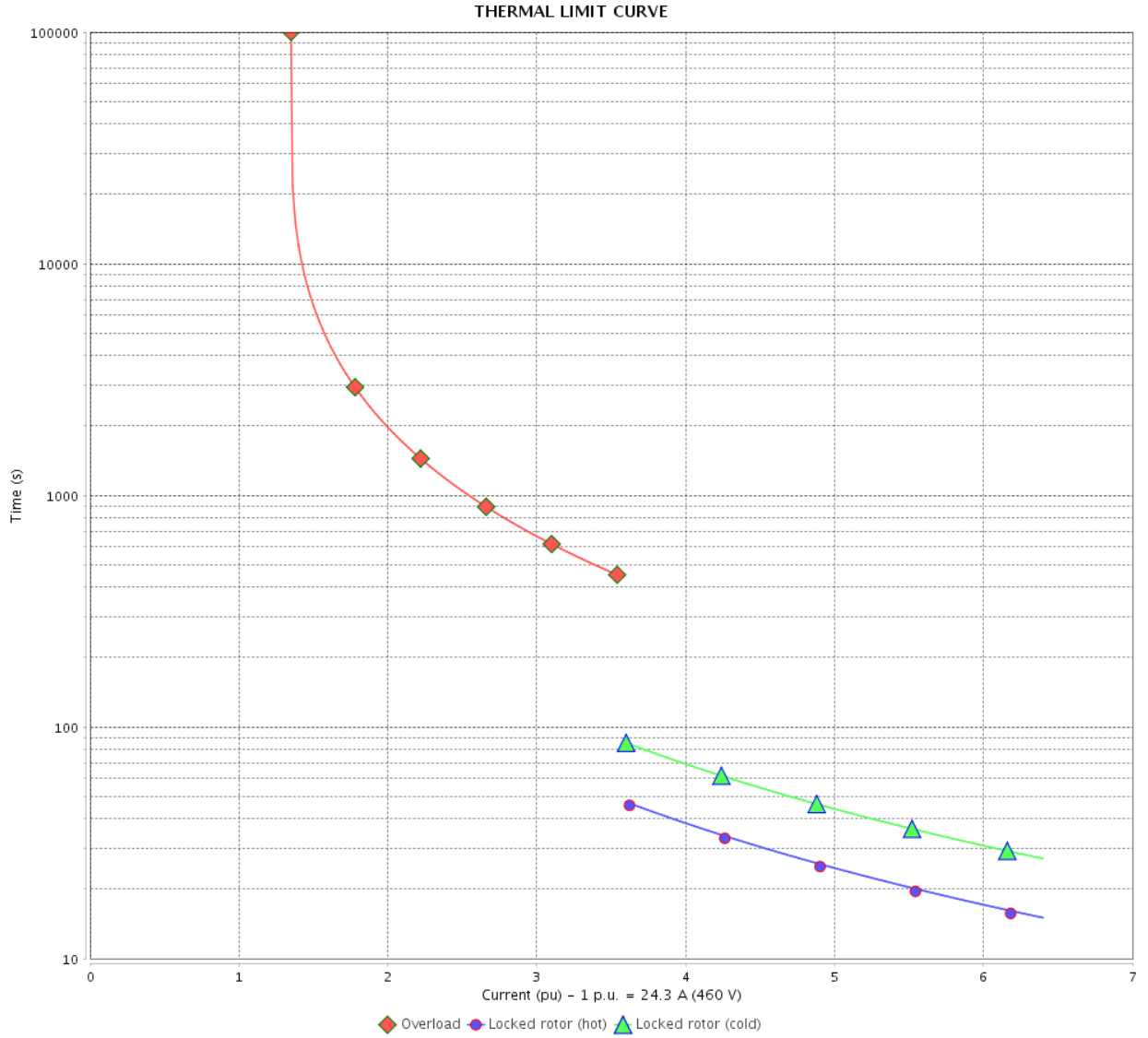
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 14485015

Catalog # : 02012OT3E286JP-W40

Performance : 380 V 50 Hz 6P IE3

Rated current	: 22.0 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 80.4 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Heating constant

Cooling constant

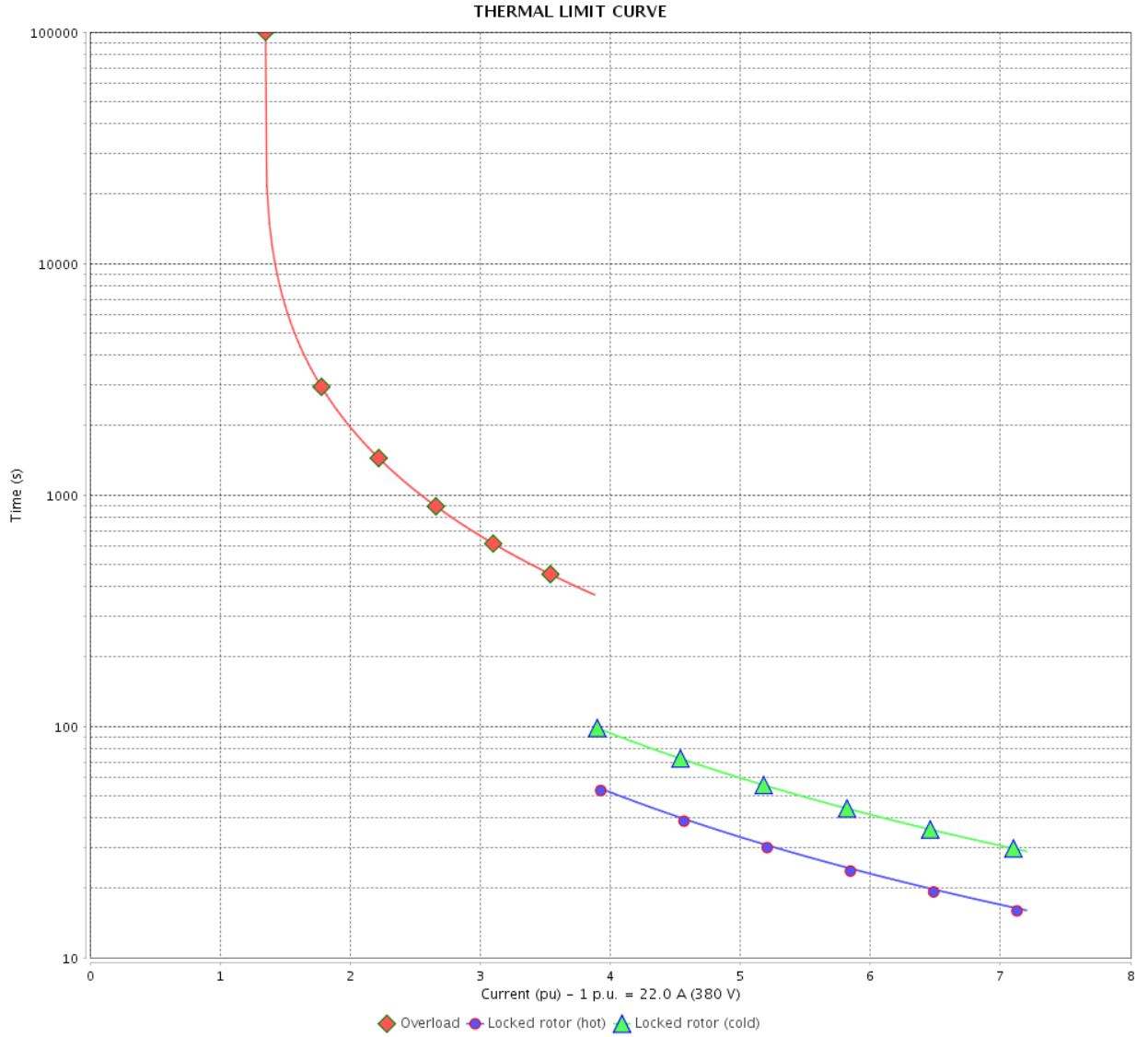
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Customer : _____



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Three Phase Induction Motor - Squirrel Cage

Customer :

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

Product code : 14485015

Catalog # : 02012OT3E286JP-W40

Performance : 400 V 50 Hz 6P IE3

Rated current	: 21.4 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 80.4 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Heating constant

Cooling constant

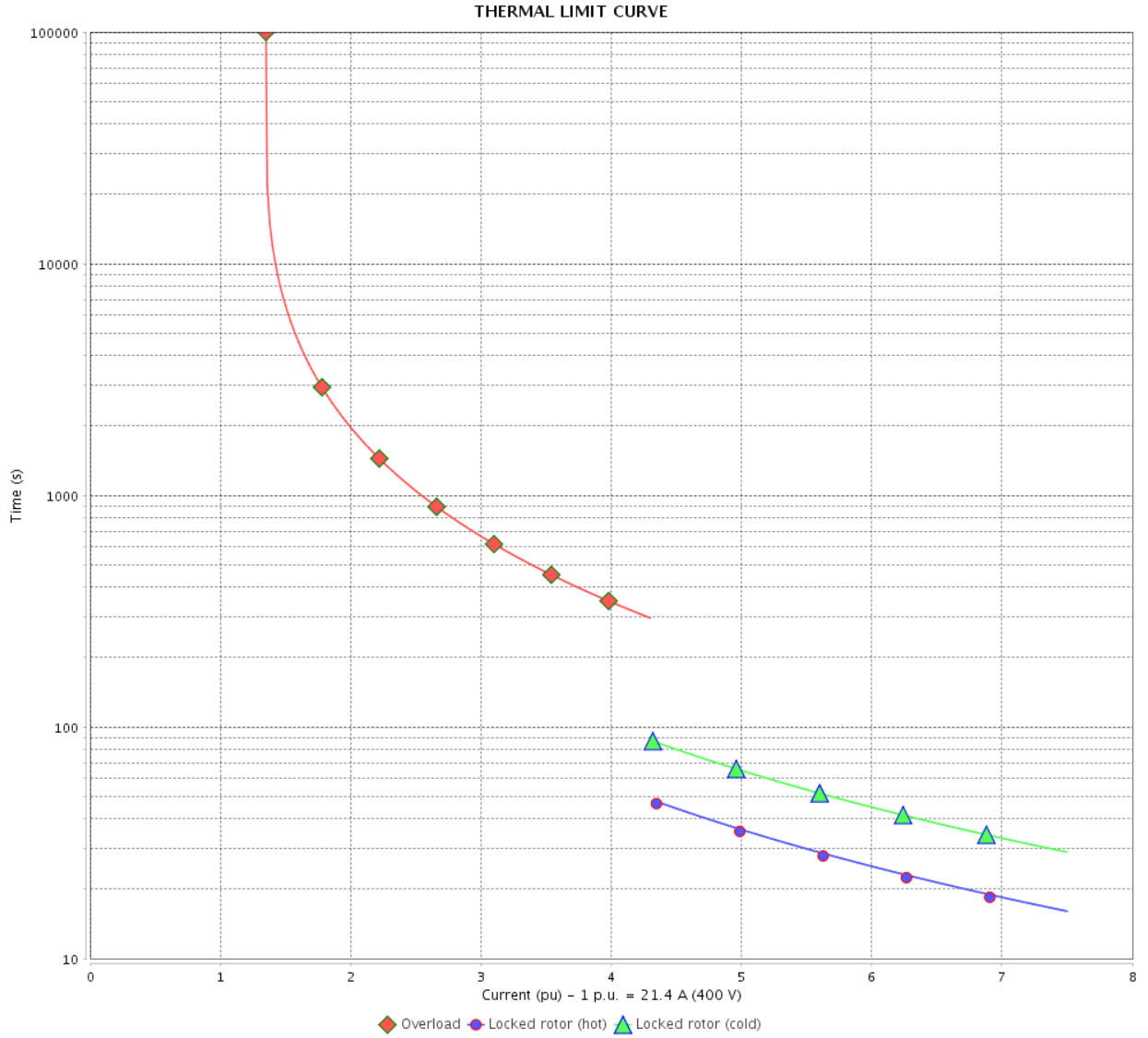
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



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Customer :

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Efficiency Three-Phase

Product code : 14485015

Catalog # : 02012OT3E286JP-W40

Performance : 415 V 50 Hz 6P IE3

Rated current : 20.9 A
LRC : 7.5
Rated torque : 80.0 ft.lb
Locked rotor torque : 340 %
Breakdown torque : 340 %
Rated speed : 984 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

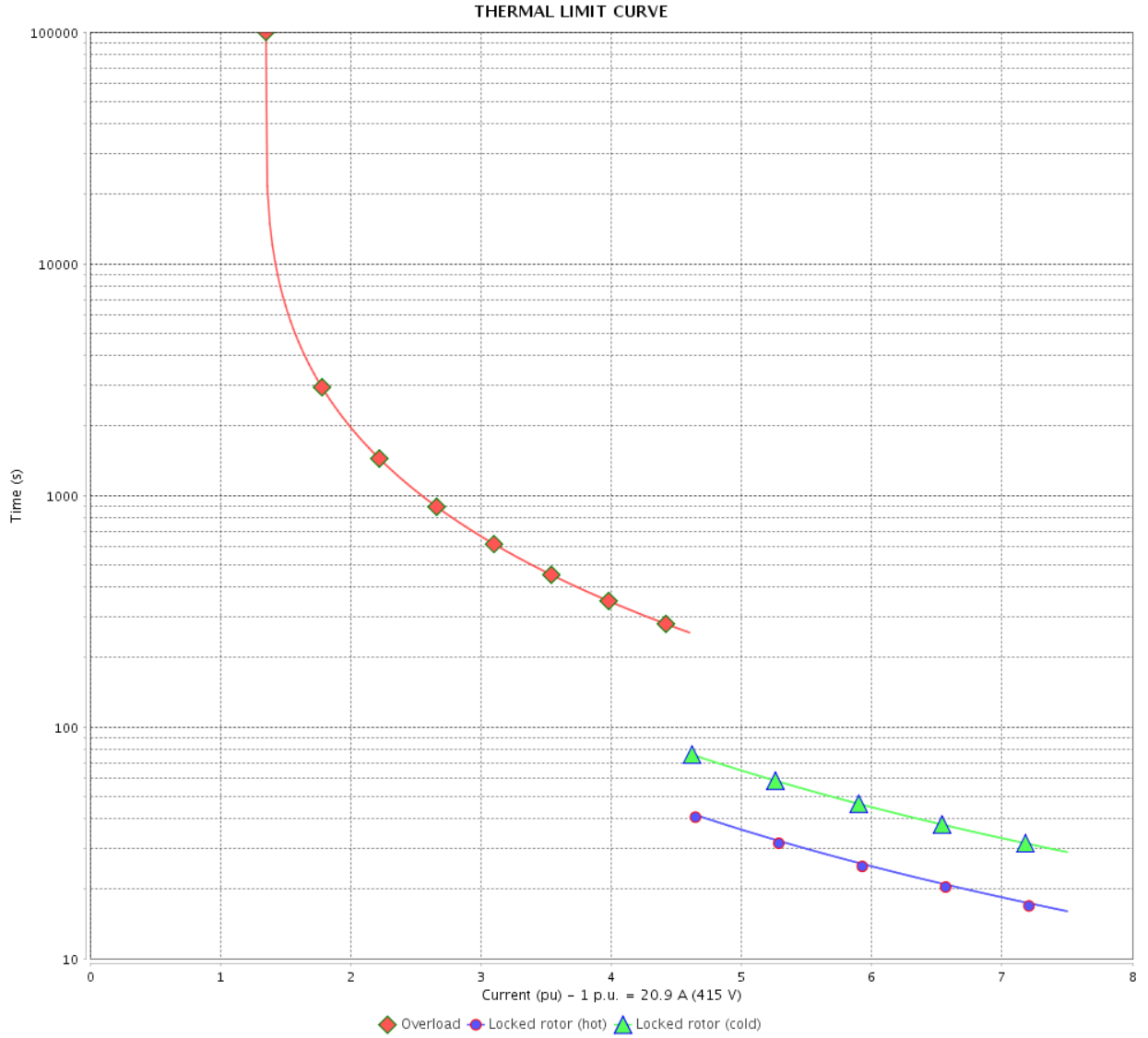
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

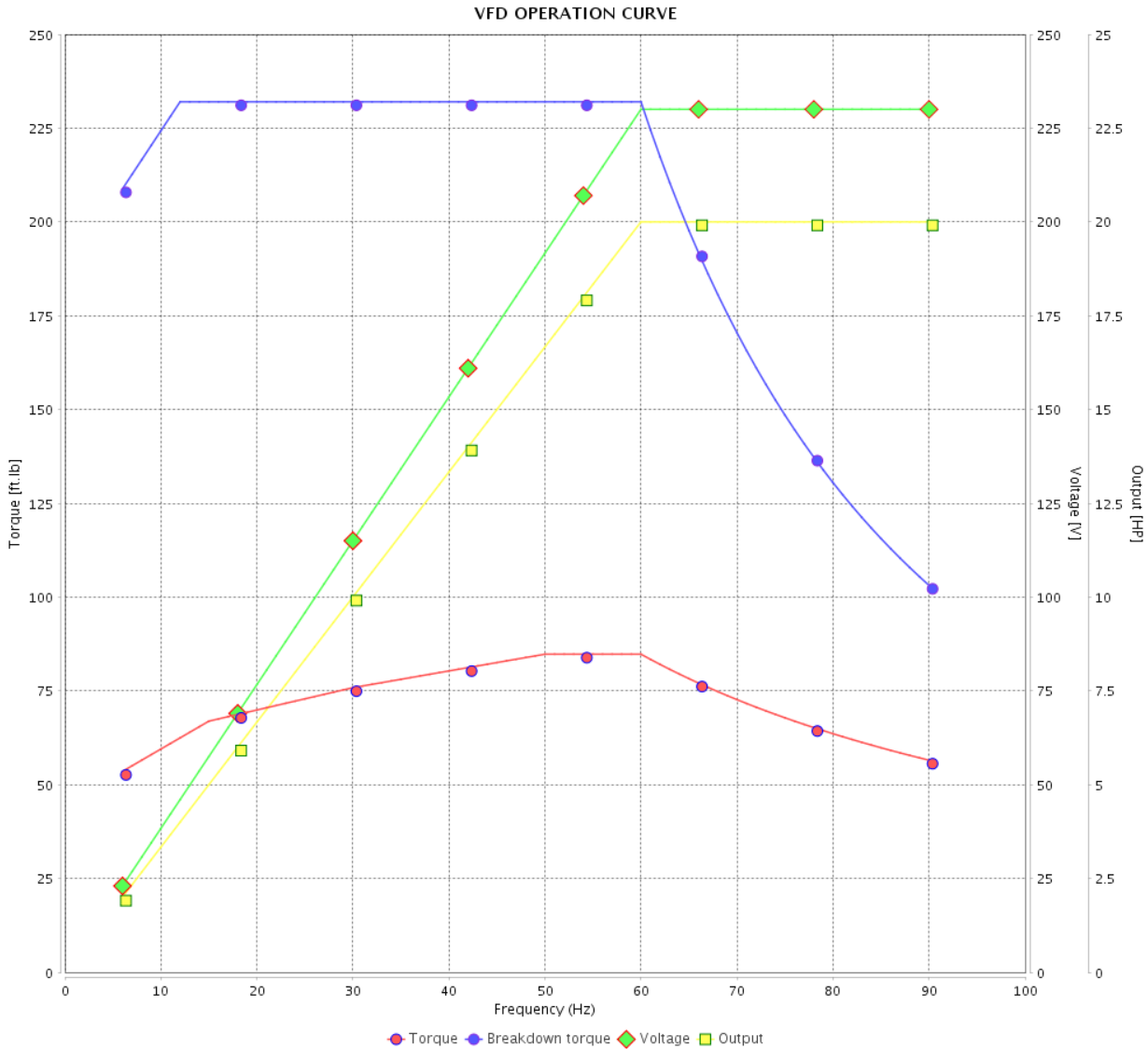


Customer :

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

Product code : 14485015

Catalog # : 02012OT3E286JP-W40



Performance : 230/460 V 60 Hz 6P

Rated current : 48.6/24.3 A
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 Rated torque : 89.2 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1177 rpm

Moment of inertia (J) : 6.89 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

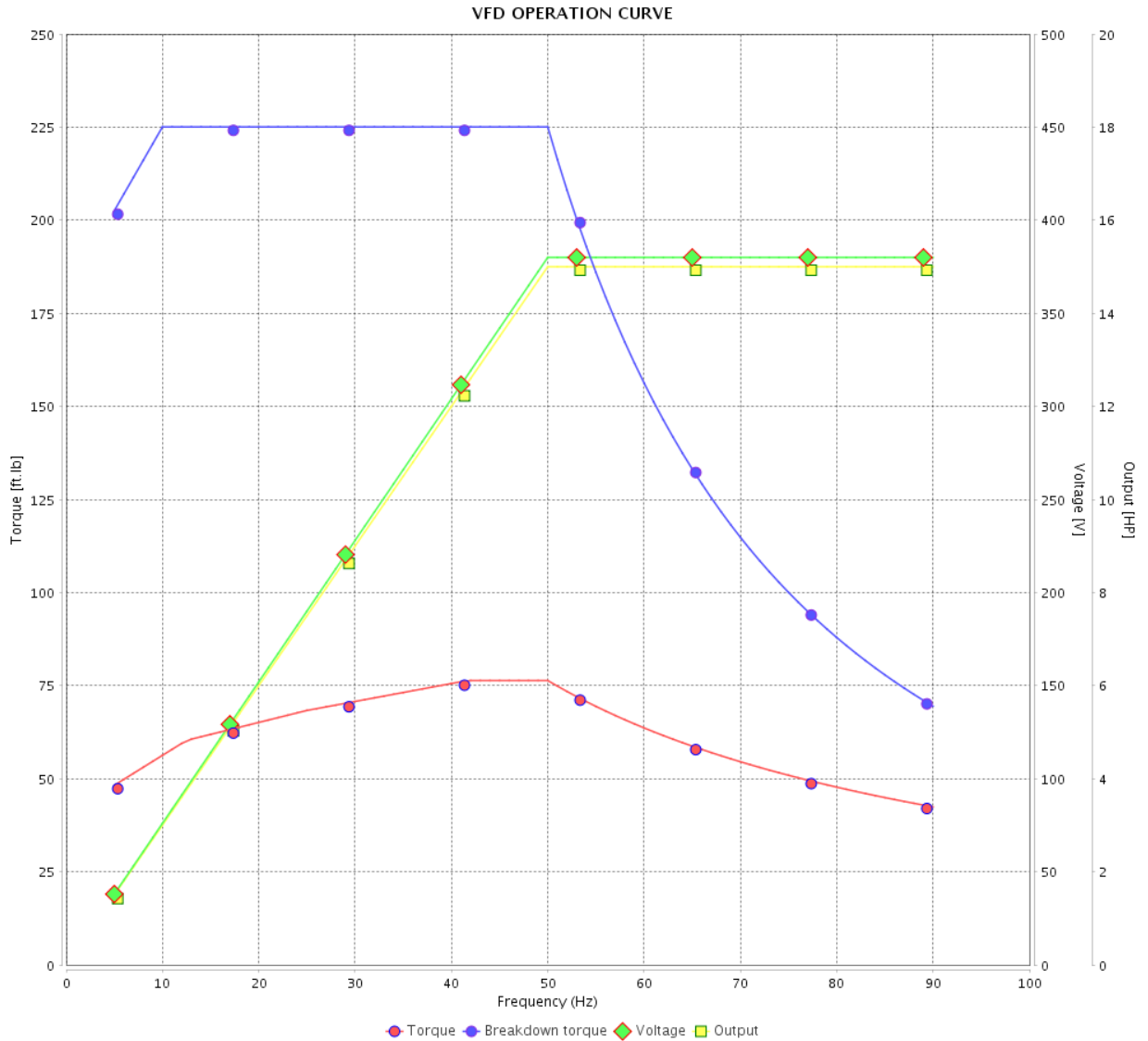


Customer :

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Product code : 14485015

Catalog # : 02012OT3E286JP-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 22.0 A
 LRC : 7.2
 Rated torque : 80.4 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 980 rpm

Moment of inertia (J) : 6.89 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



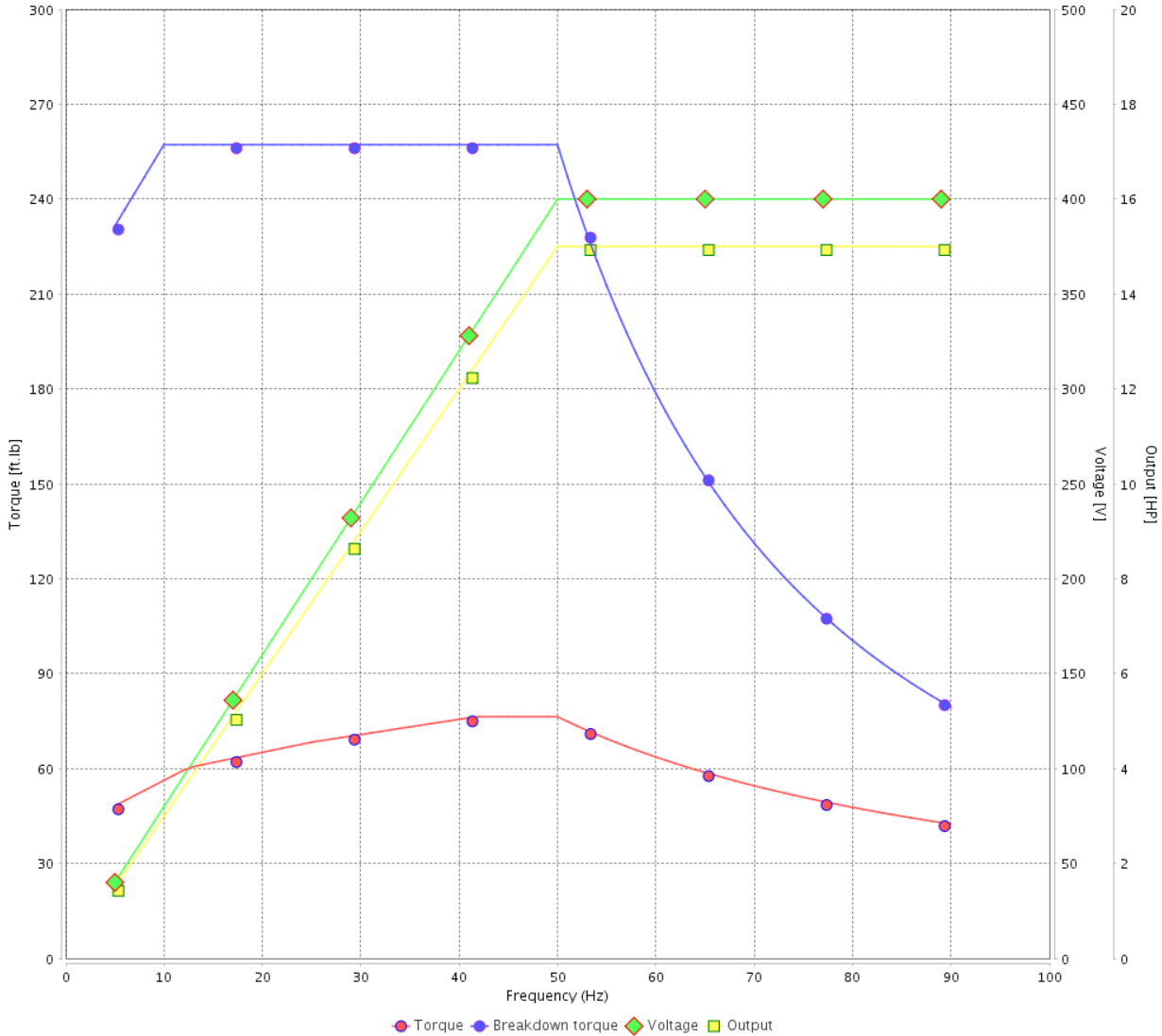
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

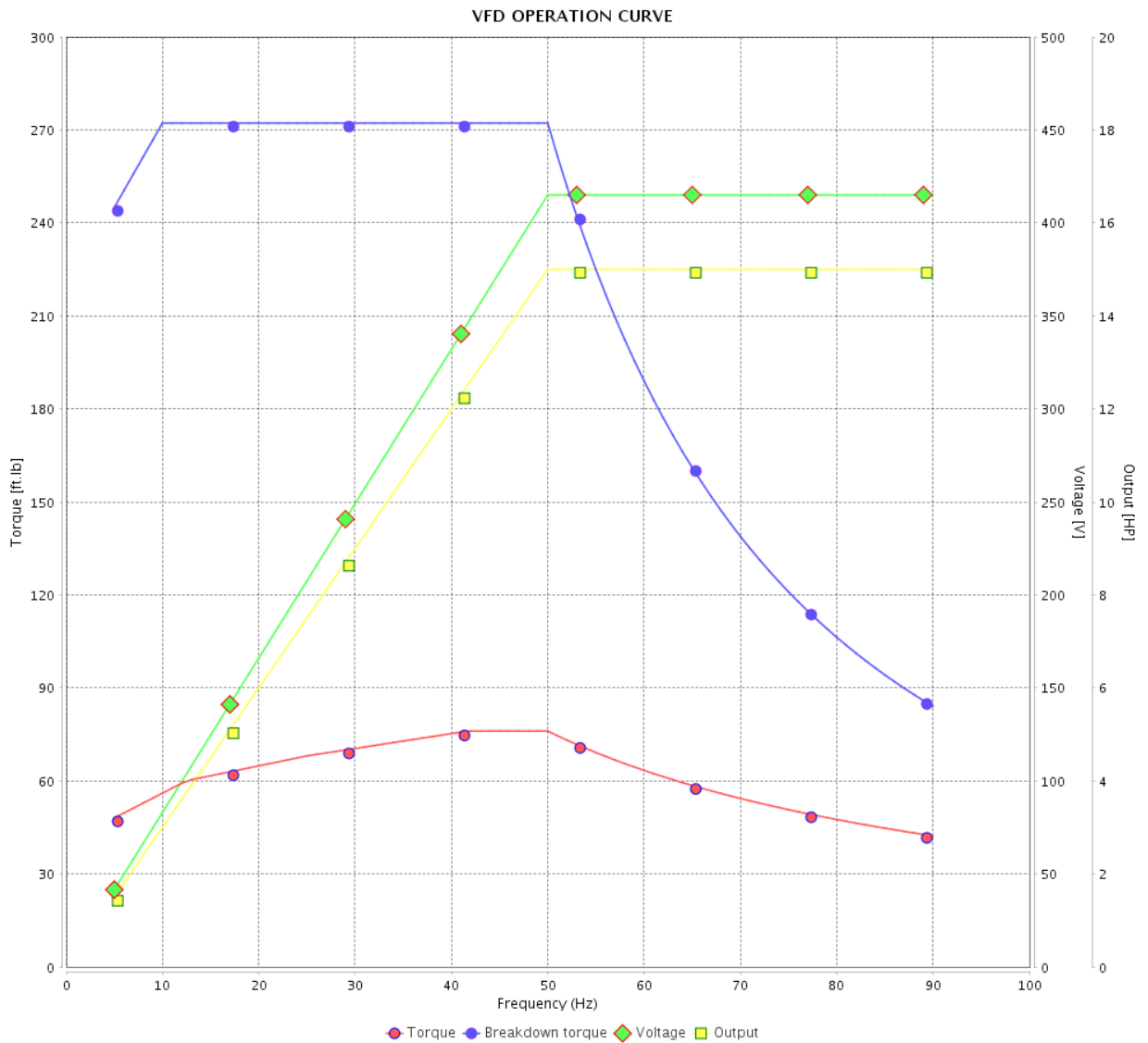


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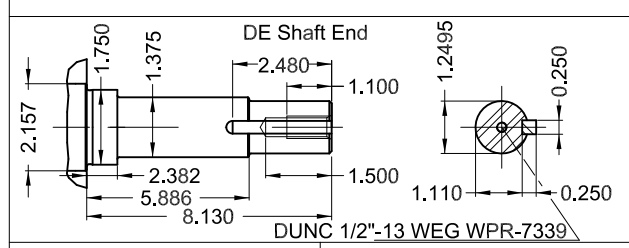
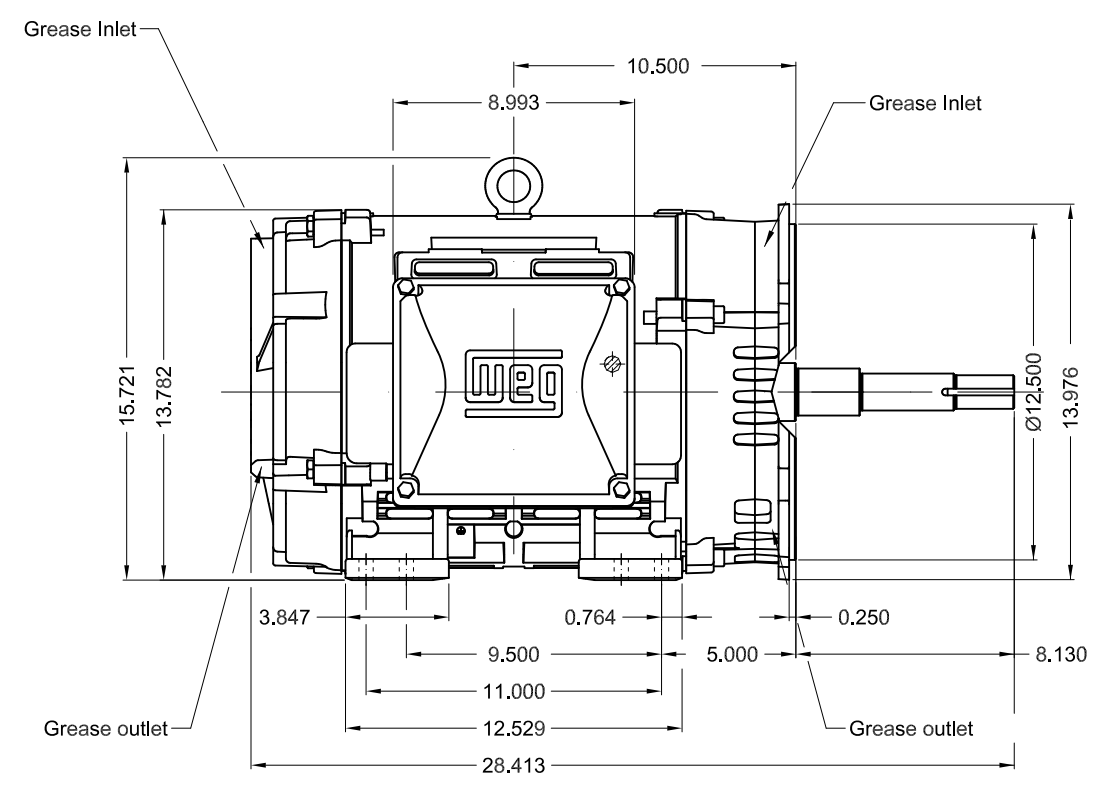
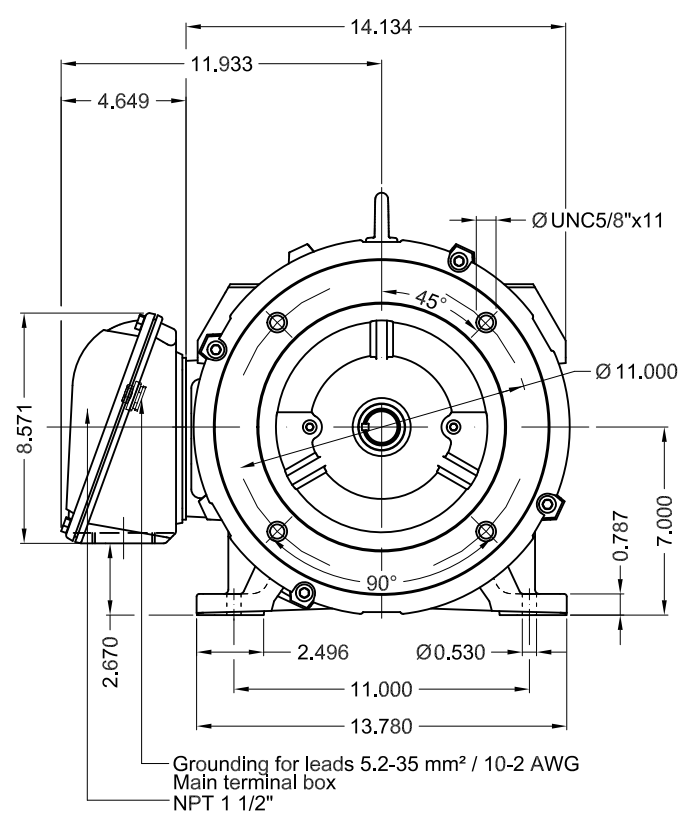


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Rated current : 20.9 A
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 Rated torque : 80.0 ft.lb
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Moment of inertia (J) : 6.89 sq.ft.lb
 Duty cycle : Cont.(S1)
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20 HP 06 Poles 60 Hz A

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 CLOSE COUPLED PUMP JP TYPE PREM. FT. FRAME 284/6JP IP23 ODP					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	WDD	SHEET	1 / 1	

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

PREVIEW

