

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase      Product code : 14484973  
Catalog # : 007120T3E254JP-W40

Frame : 254JP	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> : 221 lb
Protection degree : IP23	Moment of inertia (J) : 2.29 sq.ft.lb
Design : B	

Output [HP]	7.5	7.5	7.5	7.5
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	19.9/9.94	11.4	11.1	11.0
L. R. Amperes [A]	133/66.6	67.3	71.0	74.8
LRC [A]	6.7x(Code H)	5.9x(Code G)	6.4x(Code H)	6.8x(Code J)
No load current [A]	10.8/5.40	5.30	5.80	6.10
Rated speed [RPM]	1180	975	975	980
Slip [%]	1.67	2.50	2.50	2.00
Rated torque [ft.lb]	33.4	40.4	40.4	40.2
Locked rotor torque [%]	260	190	210	229
Breakdown torque [%]	300	240	260	290
Service factor	1.25	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	28s (cold) 16s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	19s (cold) 11s (hot)
Noise level <sup>2</sup>	59.0 dB(A)			
Efficiency (%)	25%	86.6	87.4	87.1
	50%	87.5	87.6	87.3
	75%	89.5	88.0	88.0
	100%	90.2	88.0	88.0
Power Factor	25%	0.34	0.40	0.33
	50%	0.58	0.65	0.58
	75%	0.70	0.77	0.71
	100%	0.77	0.83	0.79

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6309 Z C3	6209 Z C3	Max. traction
Sealing :	Without	Without	Max. compression
	Bearing Seal	Bearing Seal	
Lubrication interval :	20000 h	20000 h	
Lubricant amount :	13 g	9 g	
Lubricant type :	Mobil Polyrex EM		

Notes  
USABLE @208V 22.0A SF 1.15 SFA 25.3A

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

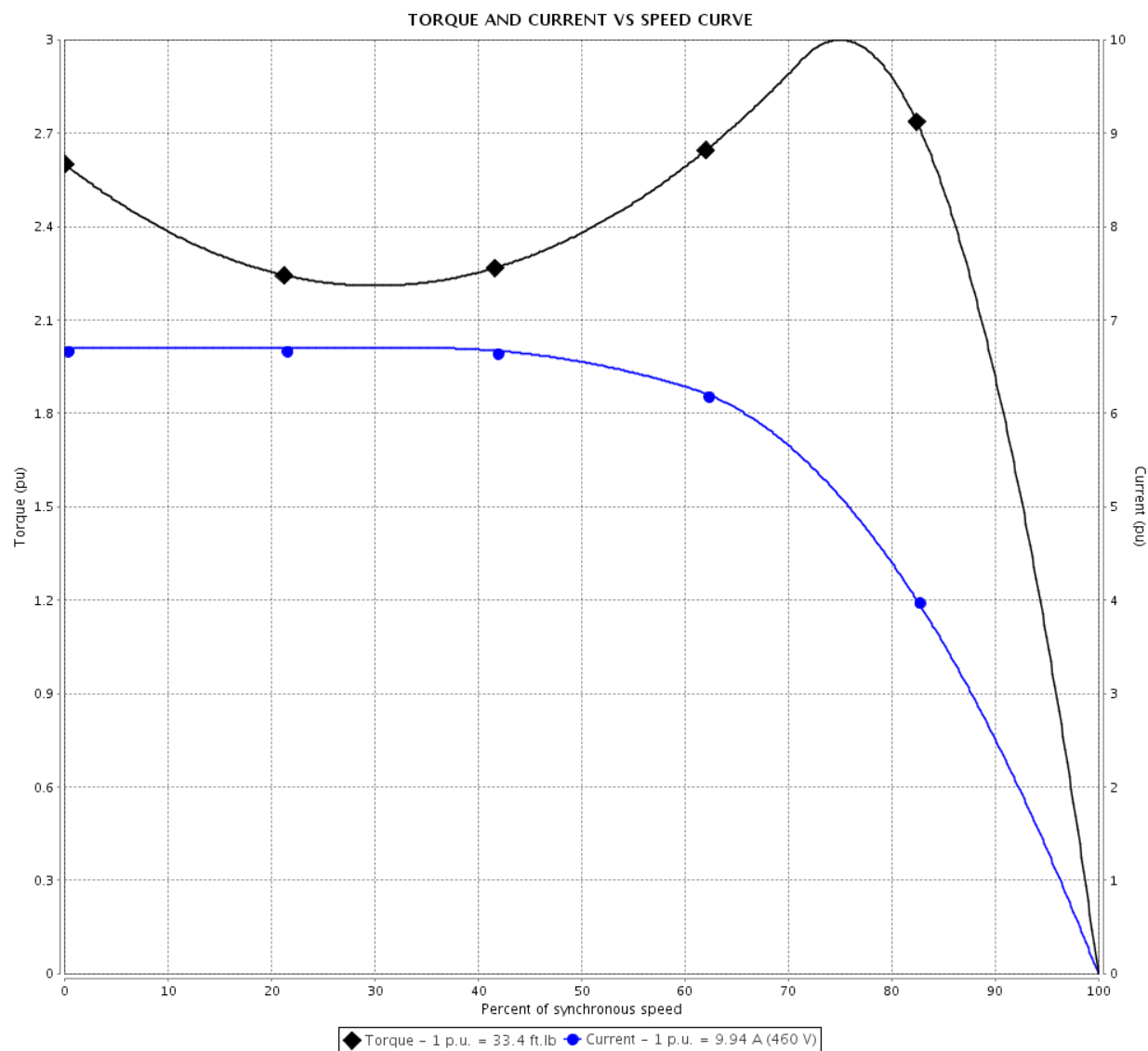


Customer :

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

Product code : 14484973

Catalog # : 007120T3E254JP-W40



Performance : 230/460 V 60 Hz 6P

Rated current : 19.9/9.94 A  
LRC : 6.7  
Rated torque : 33.4 ft.lb  
Locked rotor torque : 260 %  
Breakdown torque : 300 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 2.29 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
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

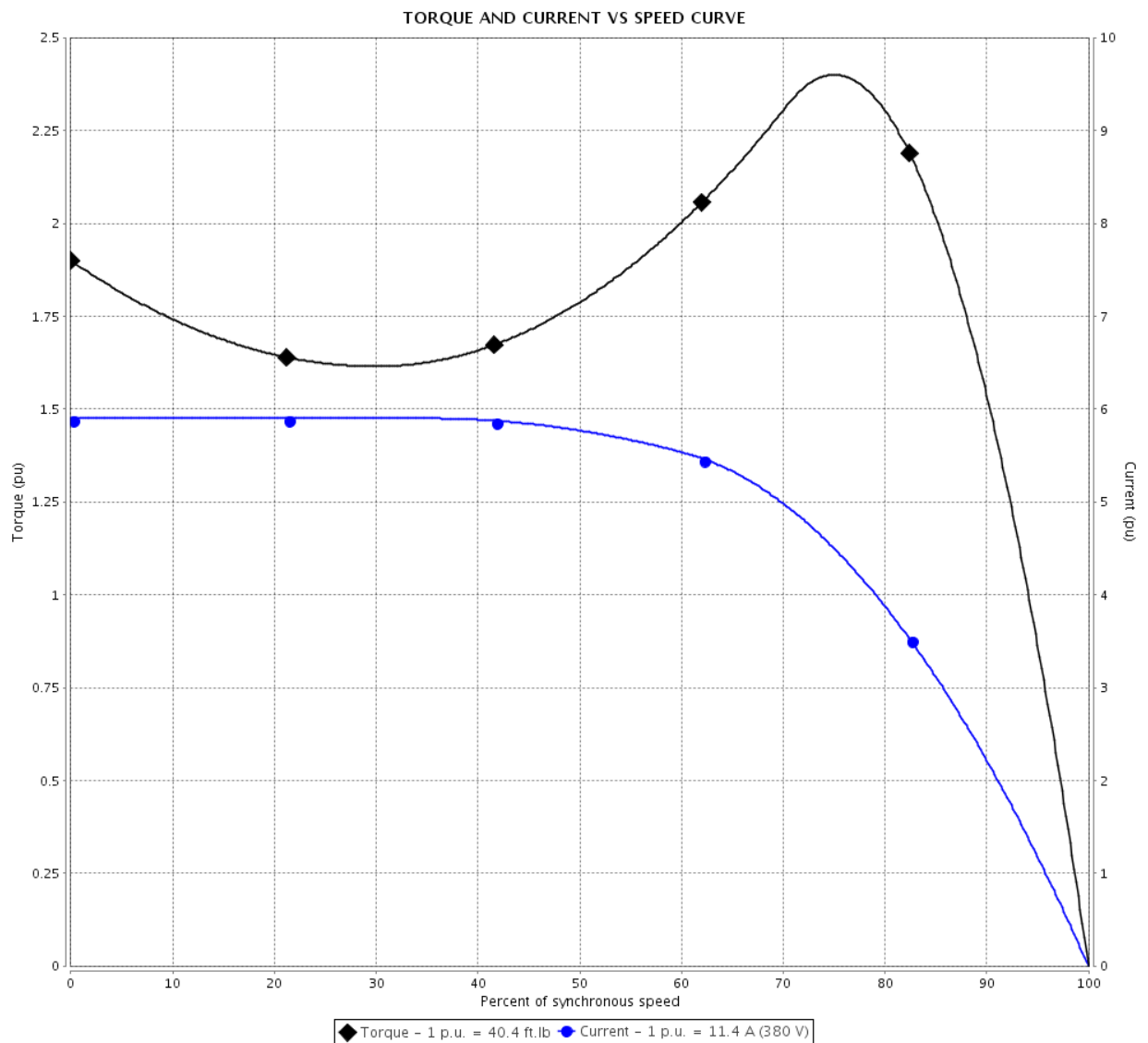


Customer :

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

Product code : 14484973

Catalog # : 00712OT3E254JP-W40



Performance : 380 V 50 Hz 6P IE3

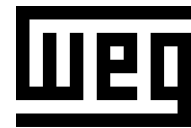
Rated current	: 11.4 A	Moment of inertia (J)	: 2.29 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 40.4 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

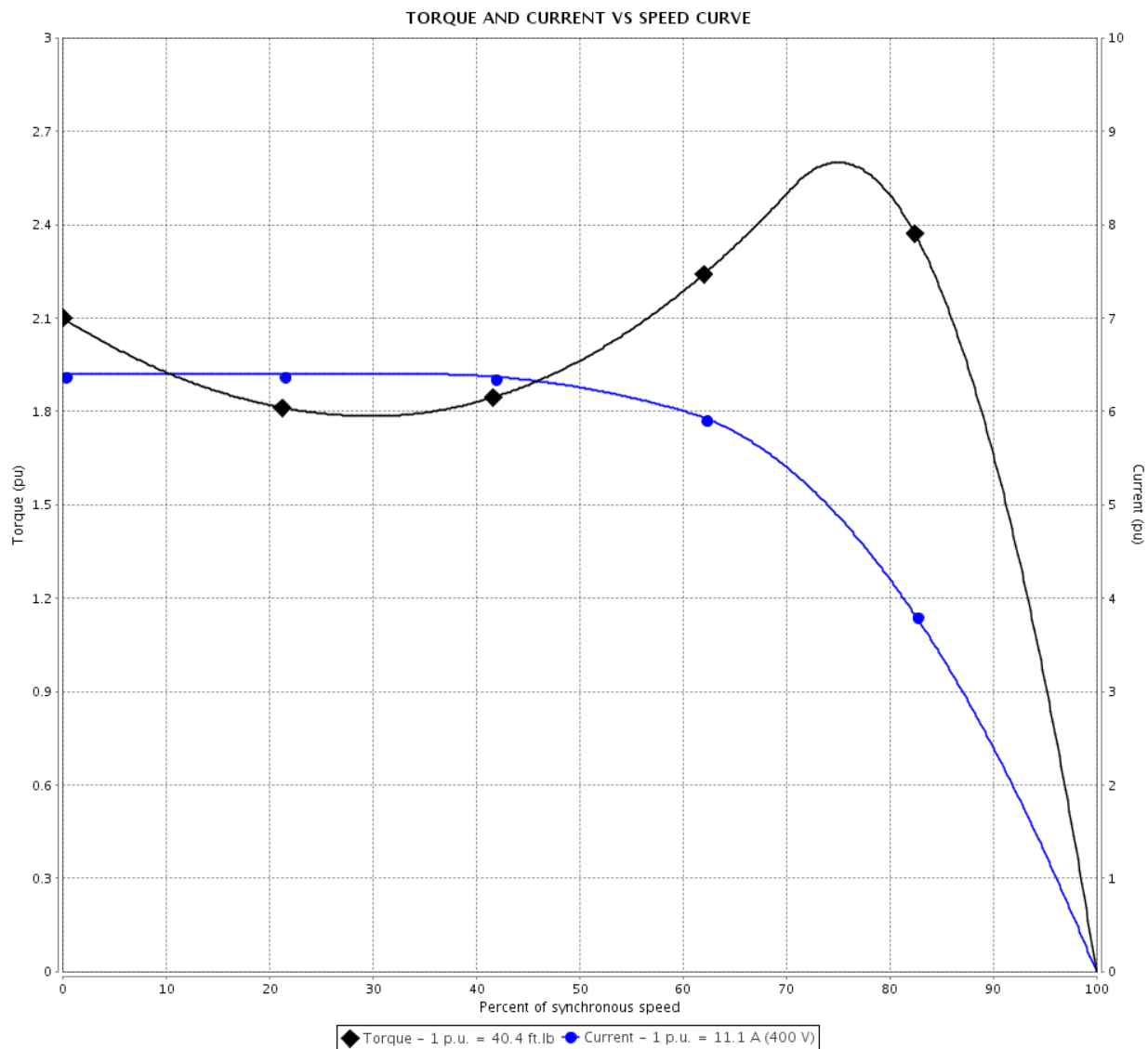


Customer :

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

Product code : 14484973

Catalog # : 007120T3E254JP-W40



Performance : 400 V 50 Hz 6P IE3

Rated current	: 11.1 A	Moment of inertia (J)	: 2.29 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 40.4 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 : 21s (cold) 12s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

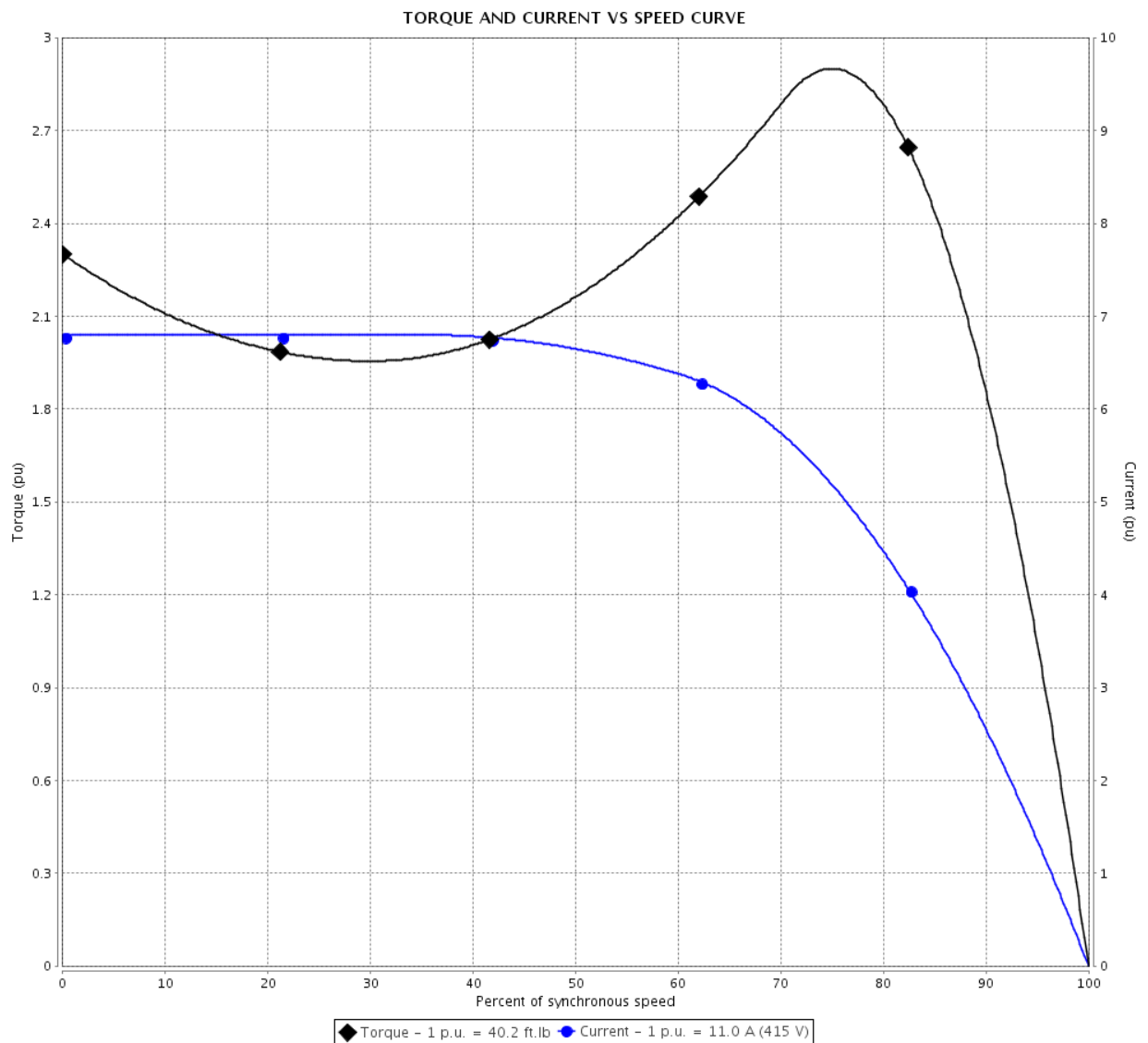


Customer :

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

Product code : 14484973

Catalog # : 00712OT3E254JP-W40



Performance : 415 V 50 Hz 6P IE3

Rated current	: 11.0 A	Moment of inertia (J)	: 2.29 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 40.2 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

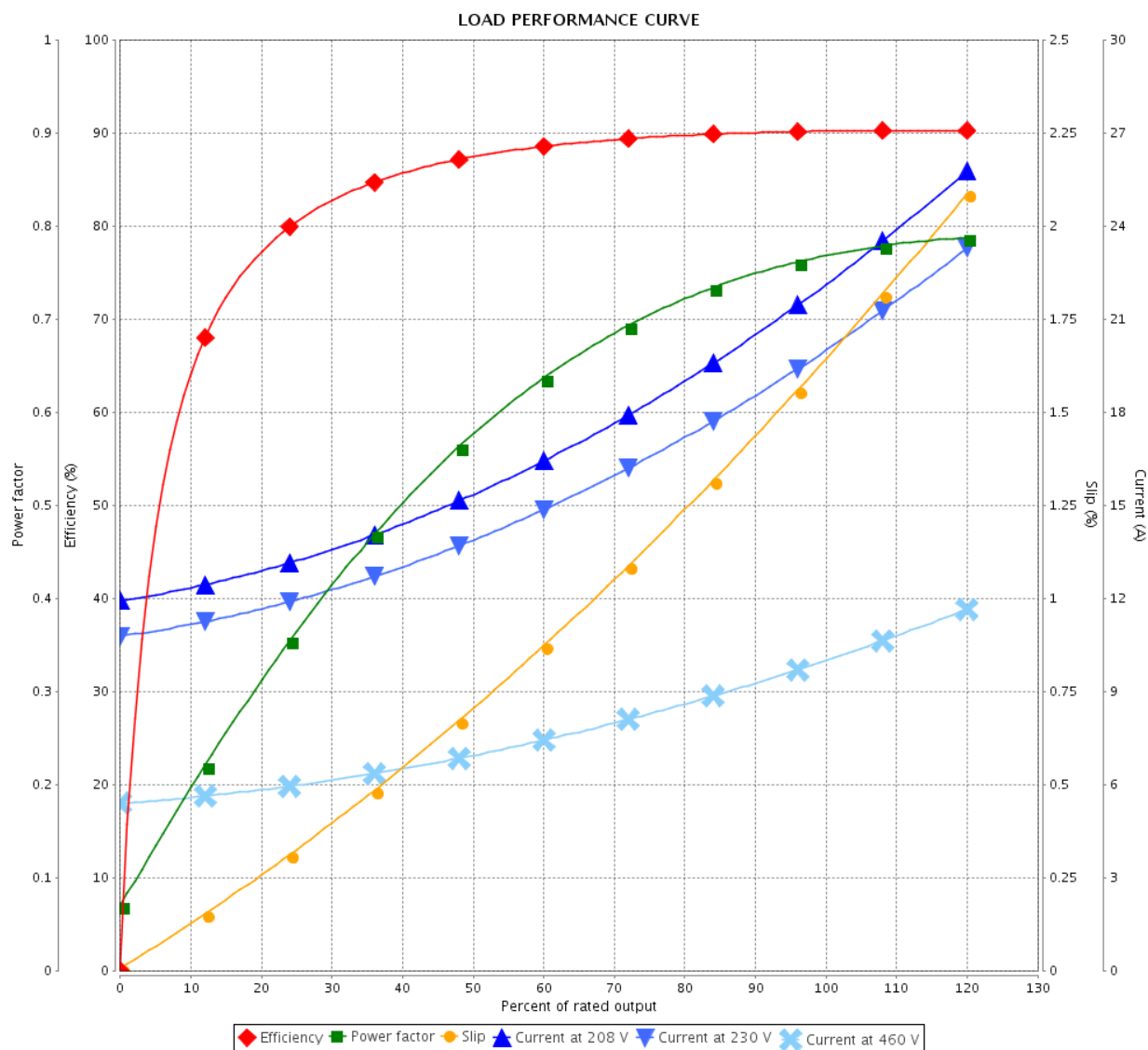


Customer :

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

Product code : 14484973

Catalog # : 007120T3E254JP-W40



Performance : 230/460 V 60 Hz 6P

Rated current : 19.9/9.94 A  
LRC : 6.7  
Rated torque : 33.4 ft.lb  
Locked rotor torque : 260 %  
Breakdown torque : 300 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 2.29 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

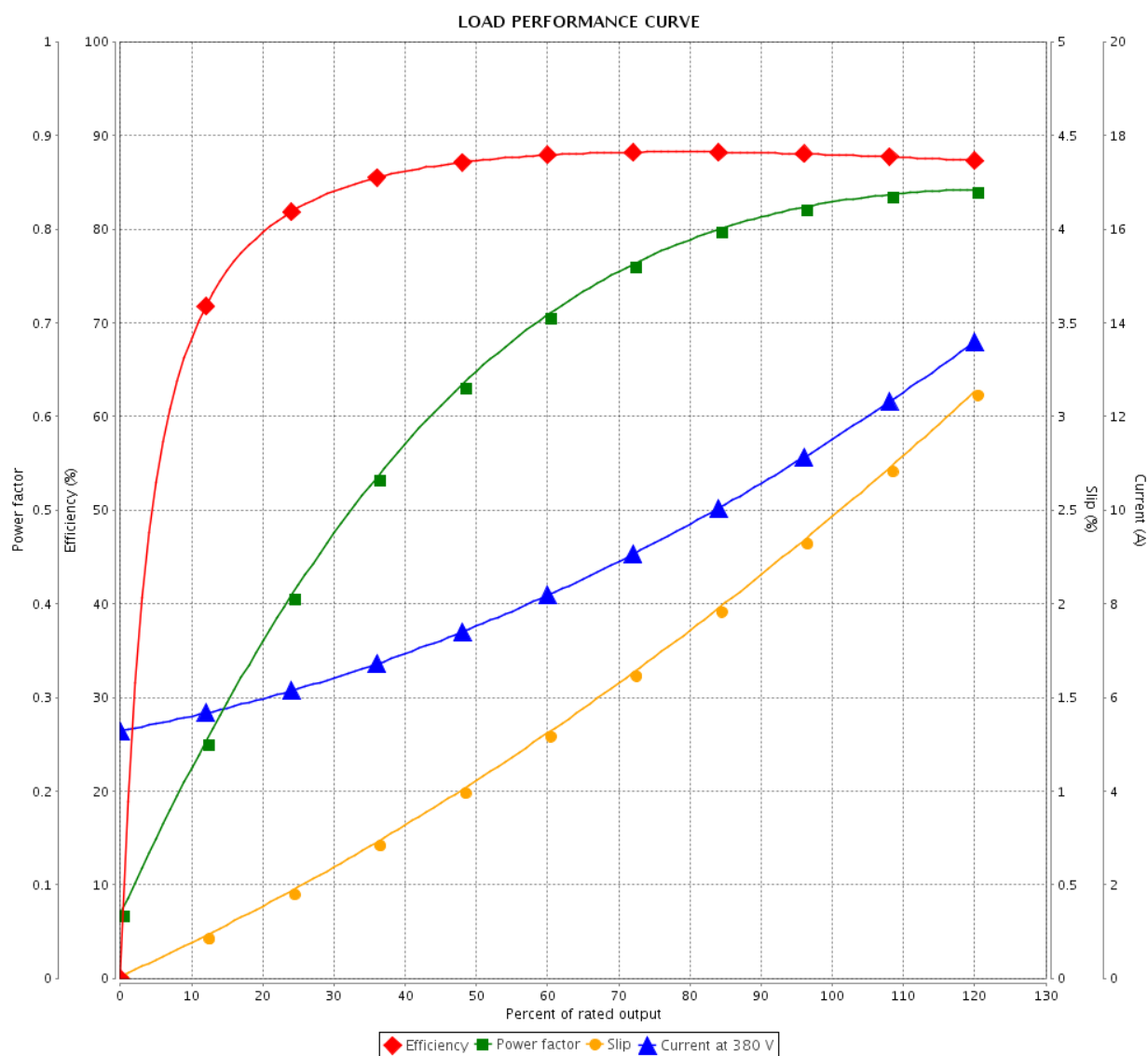


Customer :

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

Product code : 14484973

Catalog # : 00712OT3E254JP-W40



Performance : 380 V 50 Hz 6P IE3

Rated current	: 11.4 A	Moment of inertia (J)	: 2.29 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 40.4 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

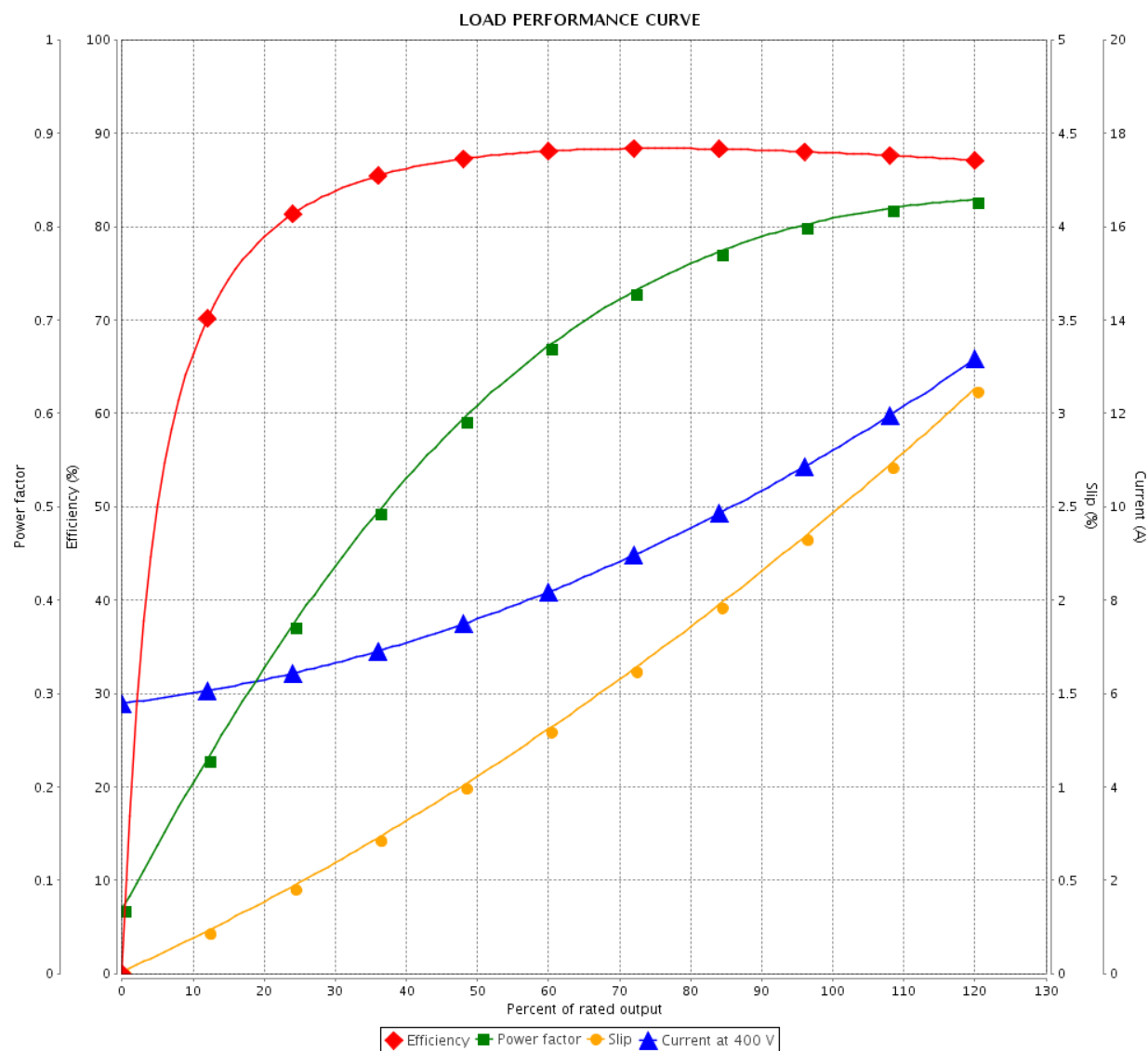


Customer :

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

Product code : 14484973

Catalog # : 007120T3E254JP-W40



Performance : 400 V 50 Hz 6P IE3

Rated current : 11.1 A  
LRC : 6.4  
Rated torque : 40.4 ft.lb  
Locked rotor torque : 210 %  
Breakdown torque : 260 %  
Rated speed : 975 rpm

Moment of inertia (J) : 2.29 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

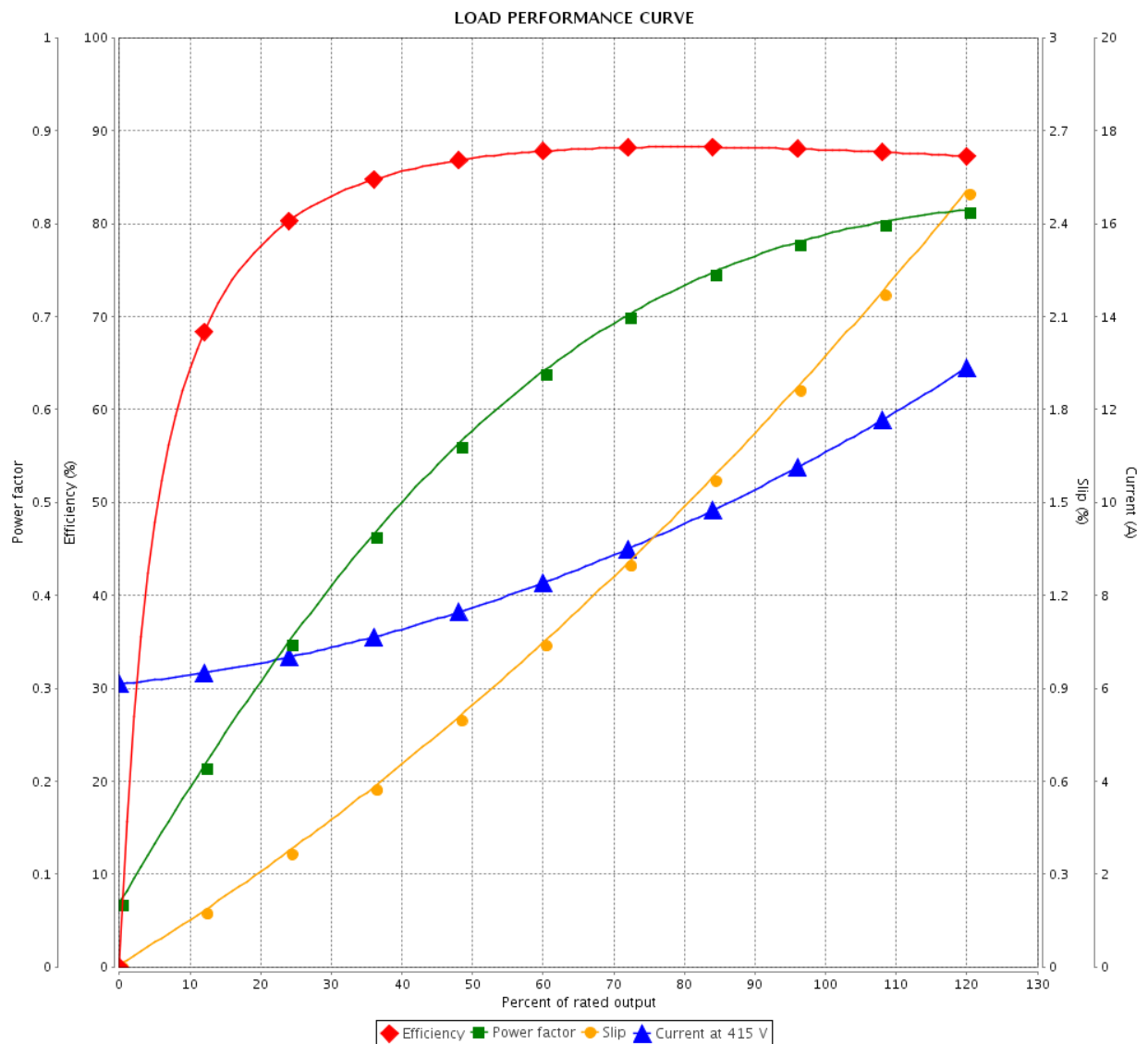


Customer :

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

Product code : 14484973

Catalog # : 00712OT3E254JP-W40



Performance : 415 V 50 Hz 6P IE3

Rated current : 11.0 A  
LRC : 6.8  
Rated torque : 40.2 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 290 %  
Rated speed : 980 rpm

Moment of inertia (J) : 2.29 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 current : 19.9/9.94 A  
LRC : 6.7  
Rated torque : 33.4 ft.lb  
Locked rotor torque : 260 %  
Breakdown torque : 300 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 2.29 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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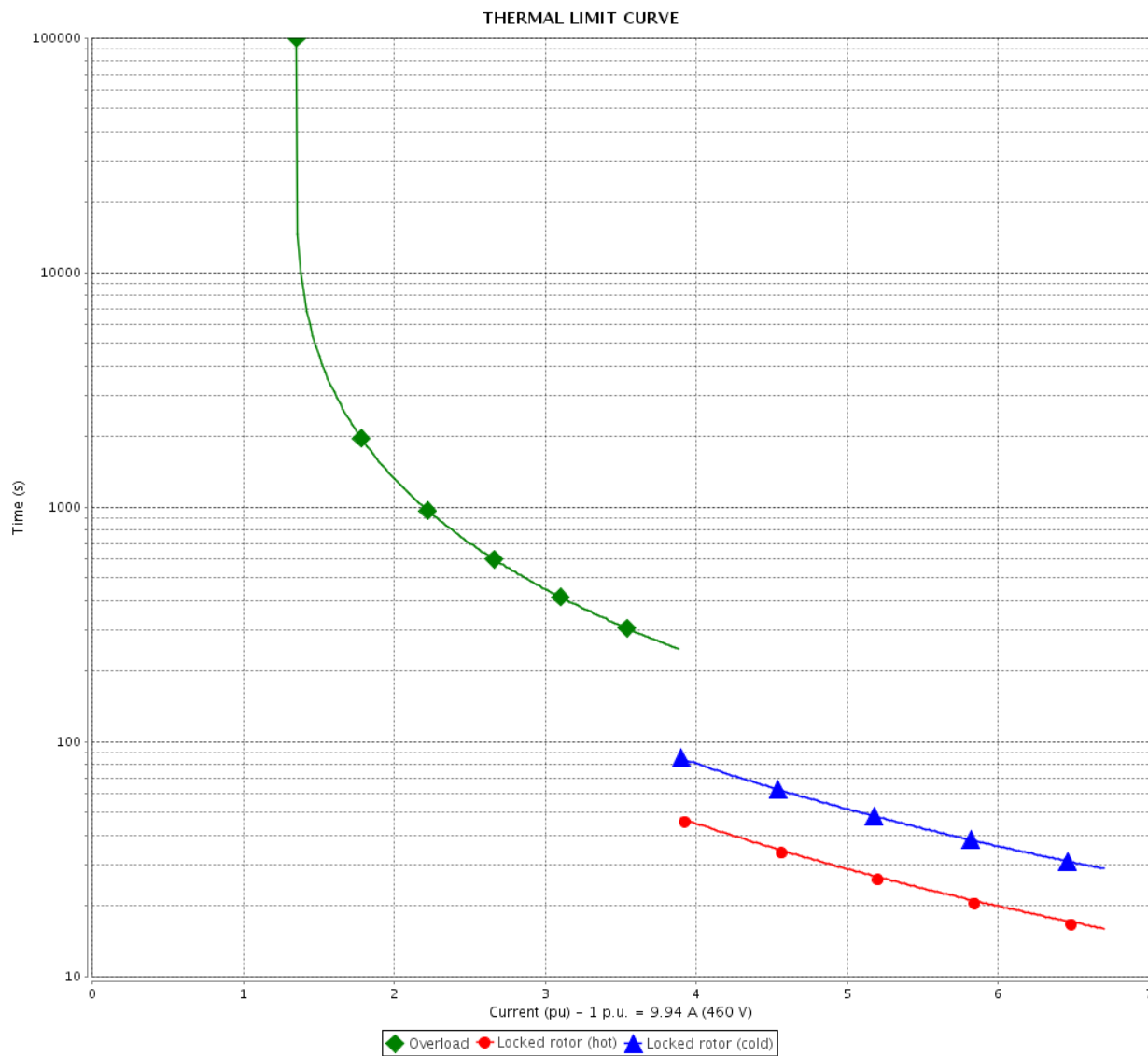
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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer

:

Product line

: W40 JP Pump NEMA Premium  
Efficiency Three-Phase

Product code :

14484973

Catalog # :

00712OT3E254JP-W40

Performance : 380 V 50 Hz 6P IE3

Rated current

: 11.4 A

LRC

: 5.9

Rated torque

: 40.4 ft.lb

Locked rotor torque

: 190 %

Breakdown torque

: 240 %

Rated speed

: 975 rpm

Moment of inertia (J)

: 2.29 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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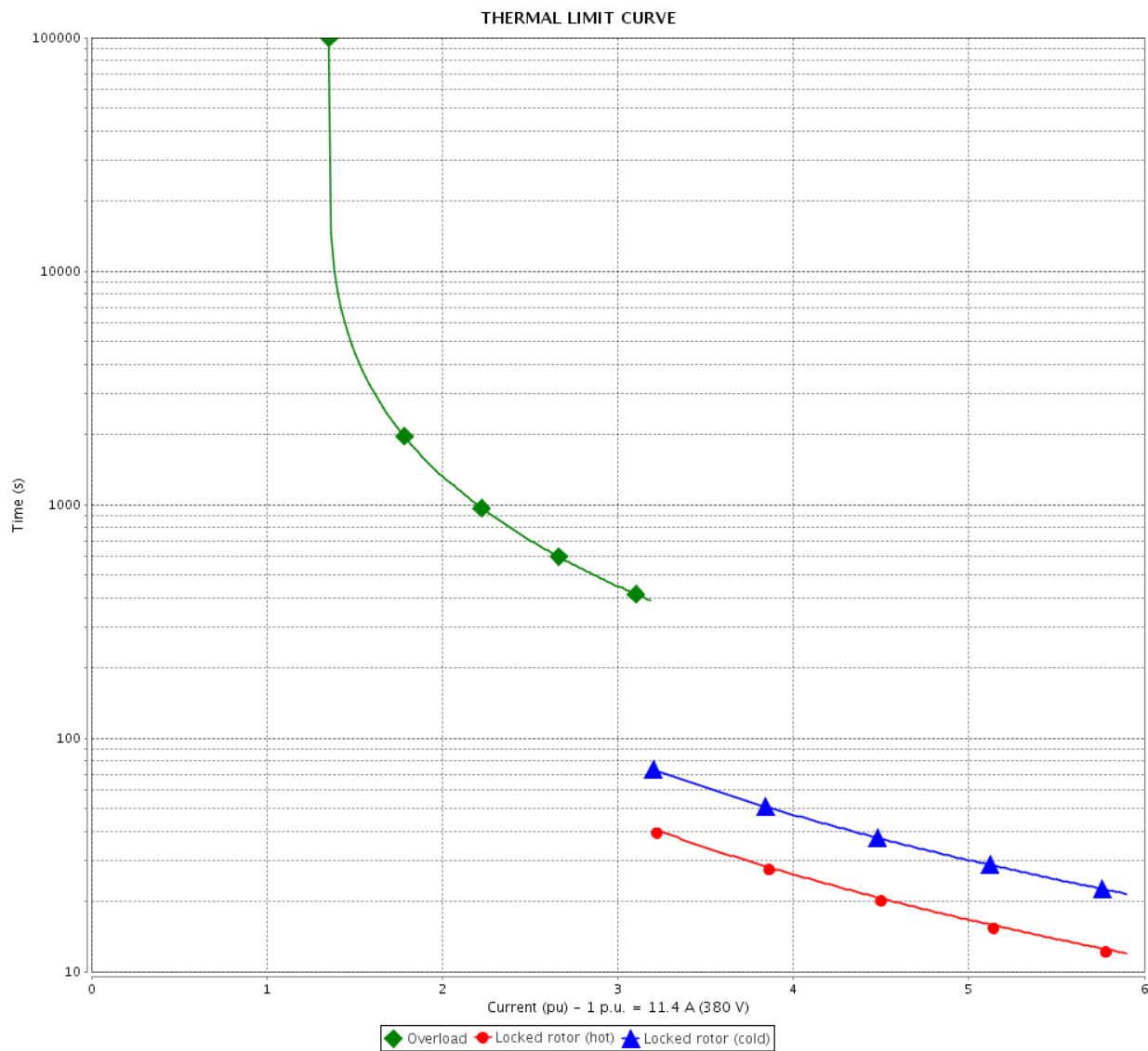
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Customer

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Product line

: W40 JP Pump NEMA Premium  
Efficiency Three-Phase

Product code :

14484973

Catalog # :

00712OT3E254JP-W40

Performance : 400 V 50 Hz 6P IE3

Rated current

: 11.1 A

LRC

: 6.4

Rated torque

: 40.4 ft.lb

Locked rotor torque

: 210 %

Breakdown torque

: 260 %

Rated speed

: 975 rpm

Moment of inertia (J)

: 2.29 sq.ft.lb

Duty cycle

: Cont.(S1)

Insulation class

: F

Service factor

: 1.00

Temperature rise

: 80 K

Design

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Heating constant

Cooling constant

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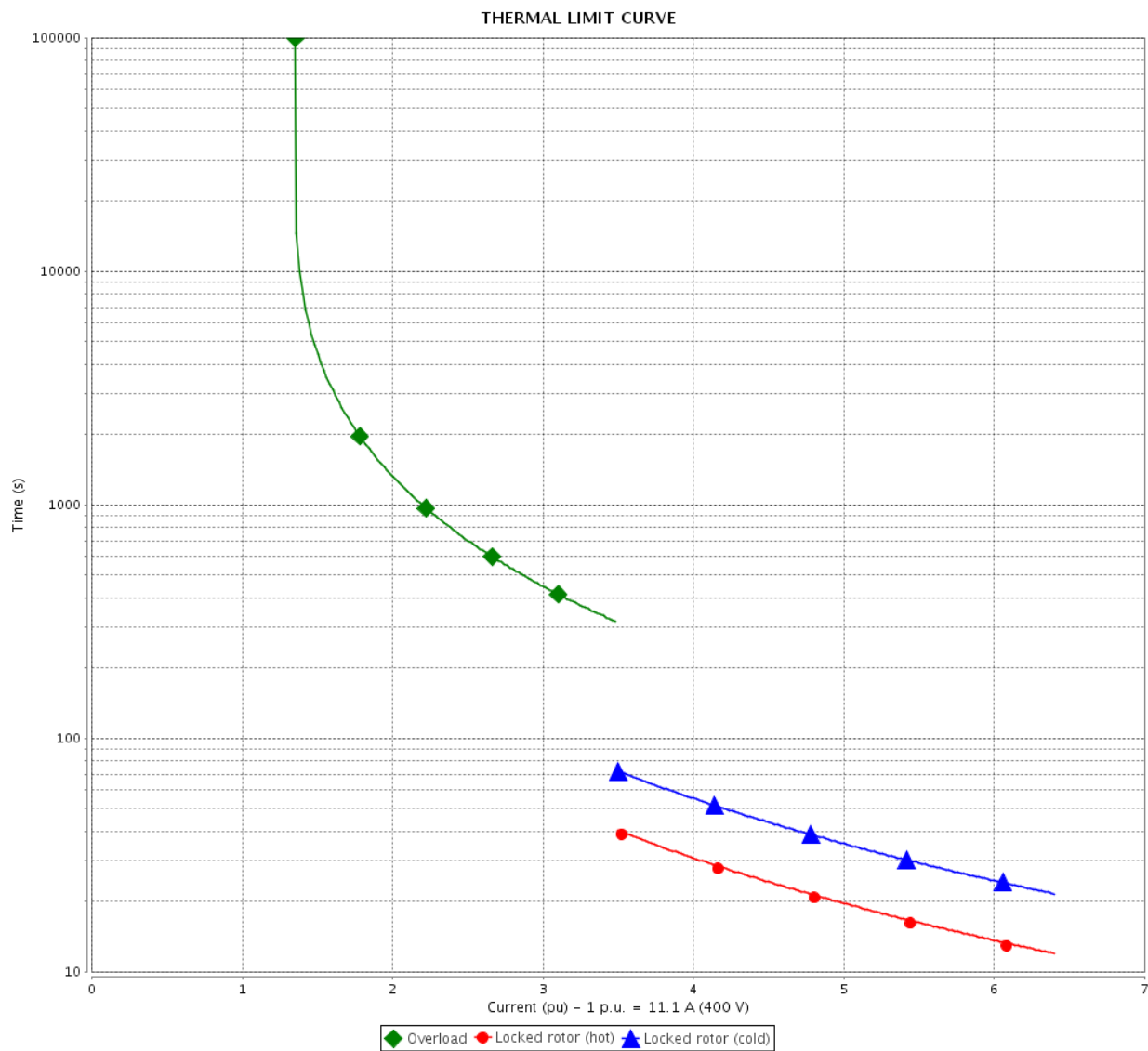
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Customer

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Product line

: W40 JP Pump NEMA Premium  
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Product code :

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Catalog # :

00712OT3E254JP-W40

Performance : 415 V 50 Hz 6P IE3

Rated current

: 11.0 A

LRC

: 6.8

Rated torque

: 40.2 ft.lb

Locked rotor torque

: 229 %

Breakdown torque

: 290 %

Rated speed

: 980 rpm

Moment of inertia (J)

: 2.29 sq.ft.lb

Duty cycle

: Cont.(S1)

Insulation class

: F

Service factor

: 1.00

Temperature rise

: 80 K

Design

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Heating constant

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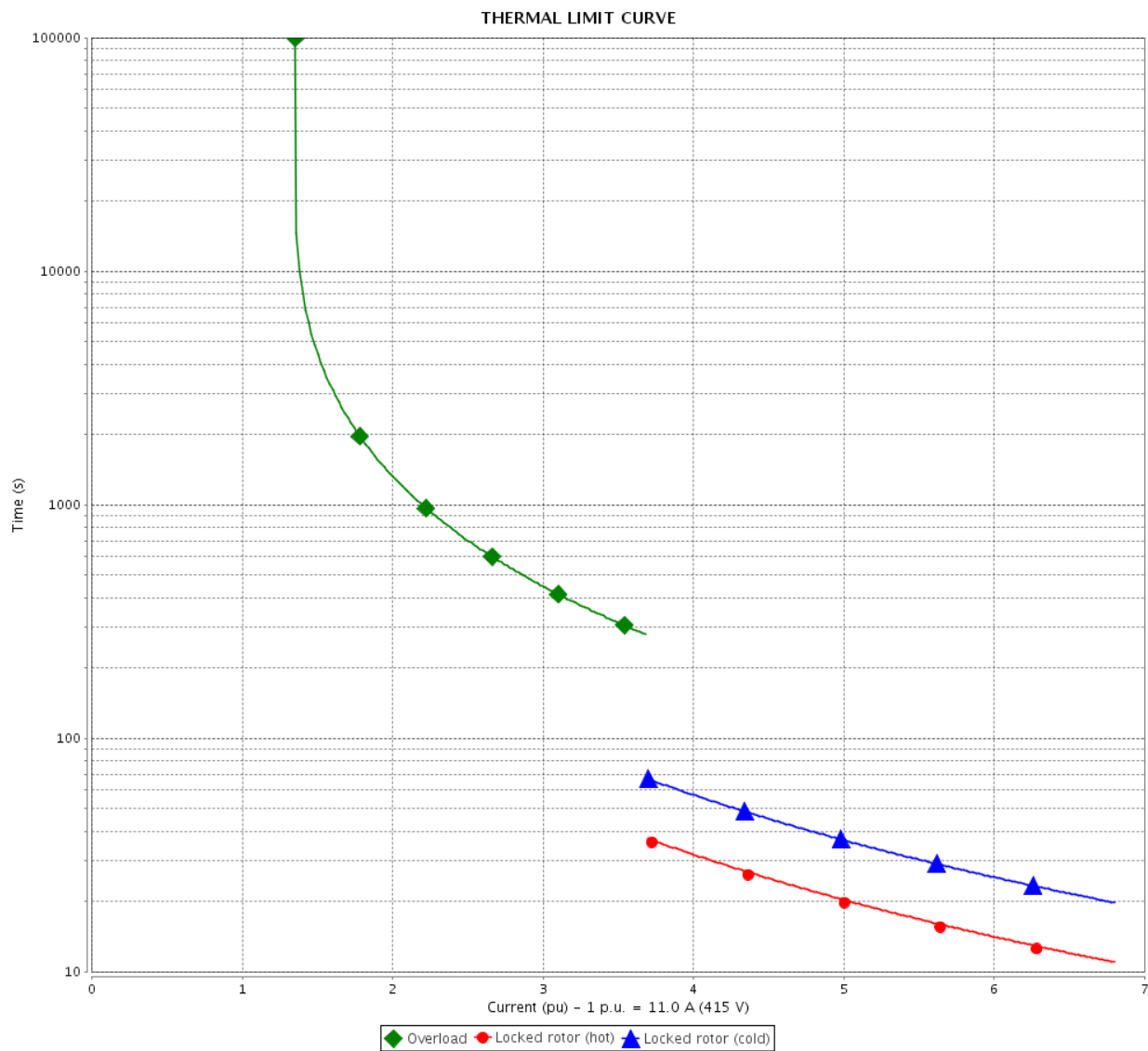


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Three Phase Induction Motor - Squirrel Cage



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

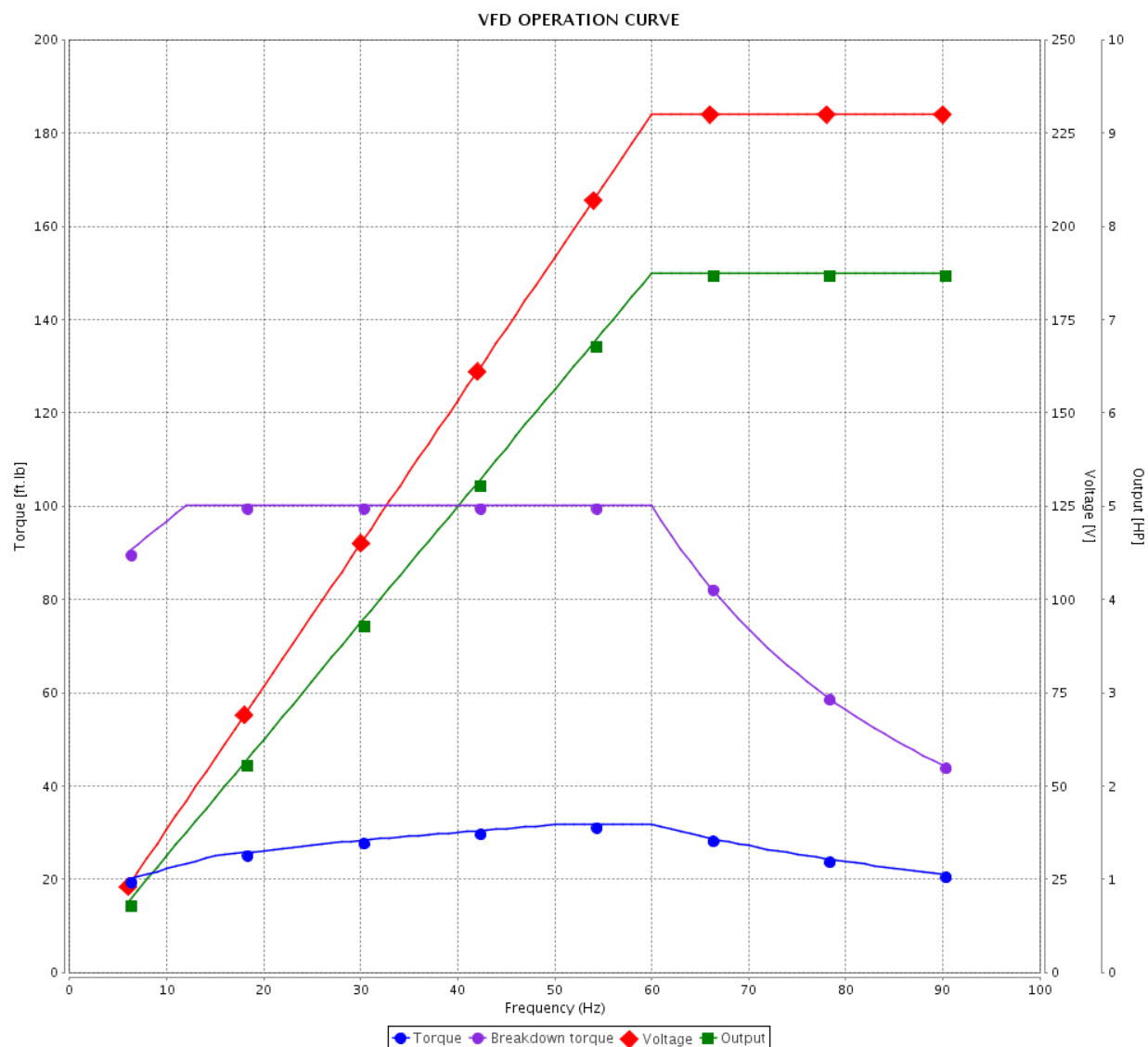


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Performance : 230/460 V 60 Hz 6P

Rated current : 19.9/9.94 A  
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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

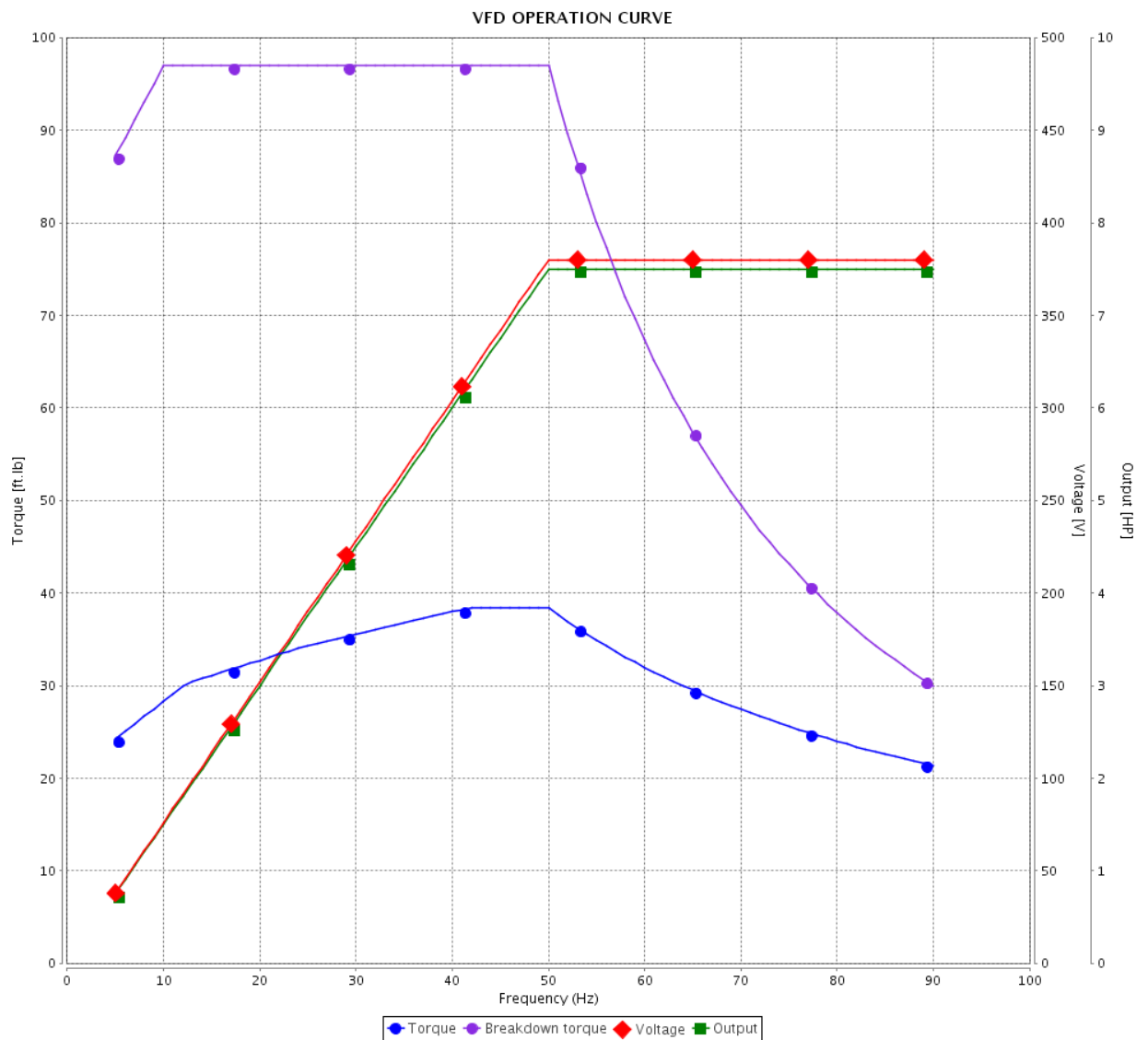


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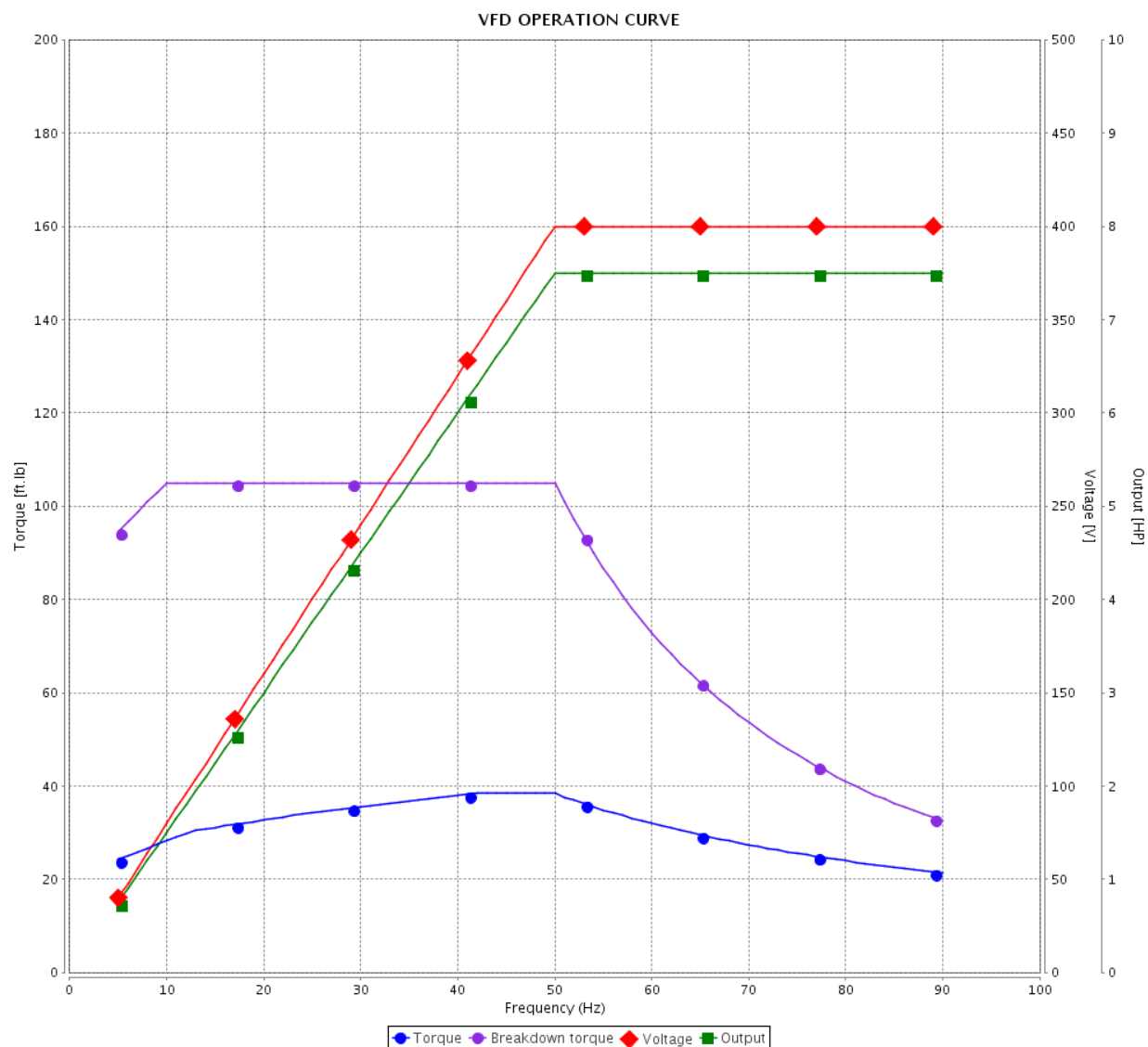


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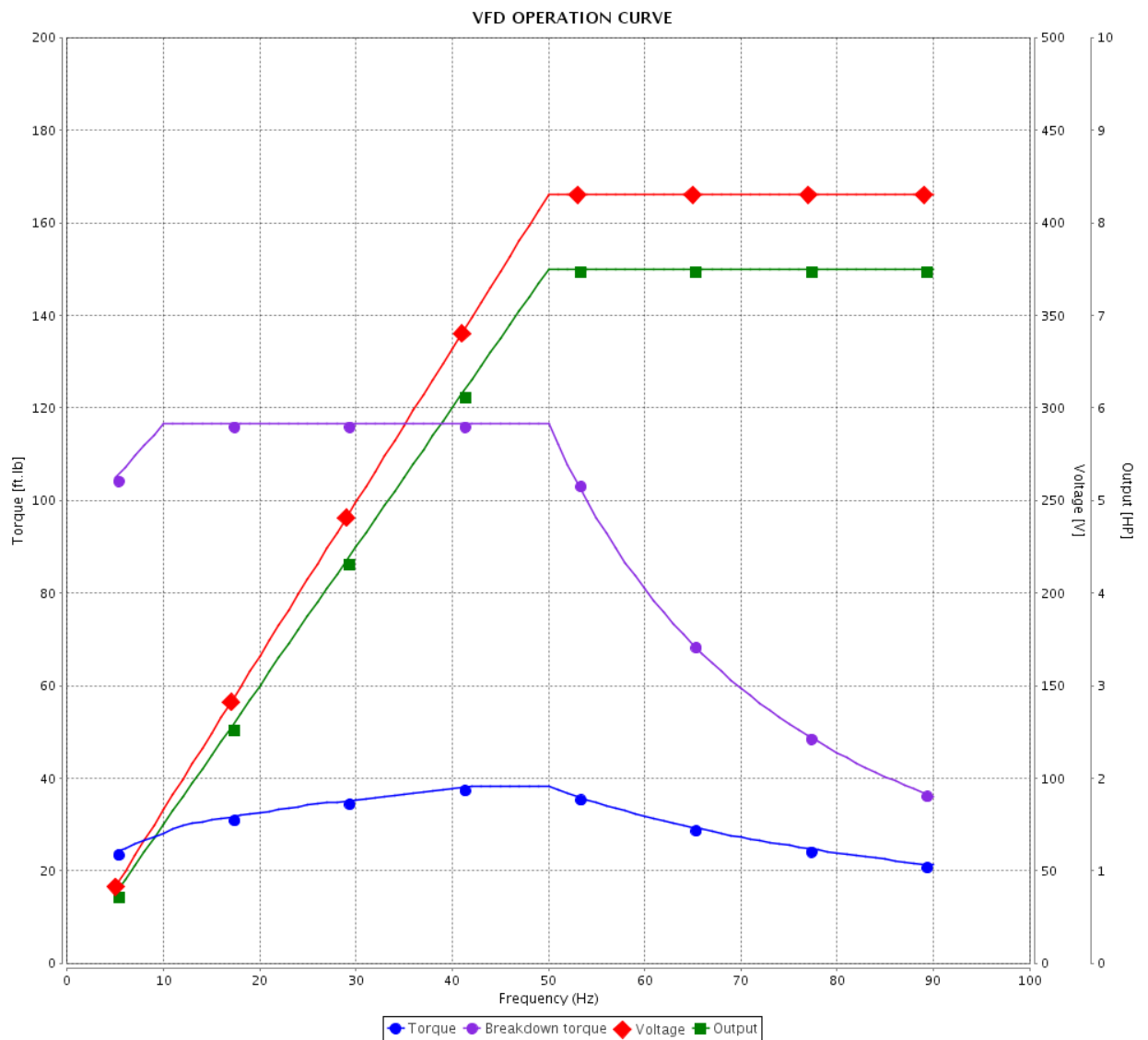


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