

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 High Efficiency Three-Phase Product code : 14491557
Catalog # : 02536OP3EFP256TC-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 : 252 lb
Protection degree : IP23	Moment of inertia (J) : 0.9592 sq.ft.lb
Design : B	

Output [HP]	25	25	25	25
Poles	2	2	2	2
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	59.4/29.7	35.5	34.3	33.8
L. R. Amperes [A]	362/181	202	213	226
LRC [A]	6.1x(Code G)	5.7x(Code F)	6.2x(Code G)	6.7x(Code G)
No load current [A]	18.0/9.00	9.00	10.0	11.0
Rated speed [RPM]	3530	2890	2900	2915
Slip [%]	1.94	3.67	3.33	2.83
Rated torque [ft.lb]	37.2	45.4	45.3	45.0
Locked rotor torque [%]	190	130	140	150
Breakdown torque [%]	260	200	210	229
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	105 K	105 K	105 K
Locked rotor time	27s (cold) 15s (hot)	14s (cold) 8s (hot)	14s (cold) 8s (hot)	12s (cold) 7s (hot)
Noise level ²				
Efficiency (%)	25%	89.2	87.8	88.2
	50%	89.5	88.4	88.5
	75%	91.0	88.5	89.4
	100%	91.0	88.9	89.6
Power Factor	25%	0.50	0.57	0.51
	50%	0.72	0.79	0.73
	75%	0.82	0.86	0.83
	100%	0.86	0.89	0.87

	<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 65.7A SF 1.00 SFA 65.7A

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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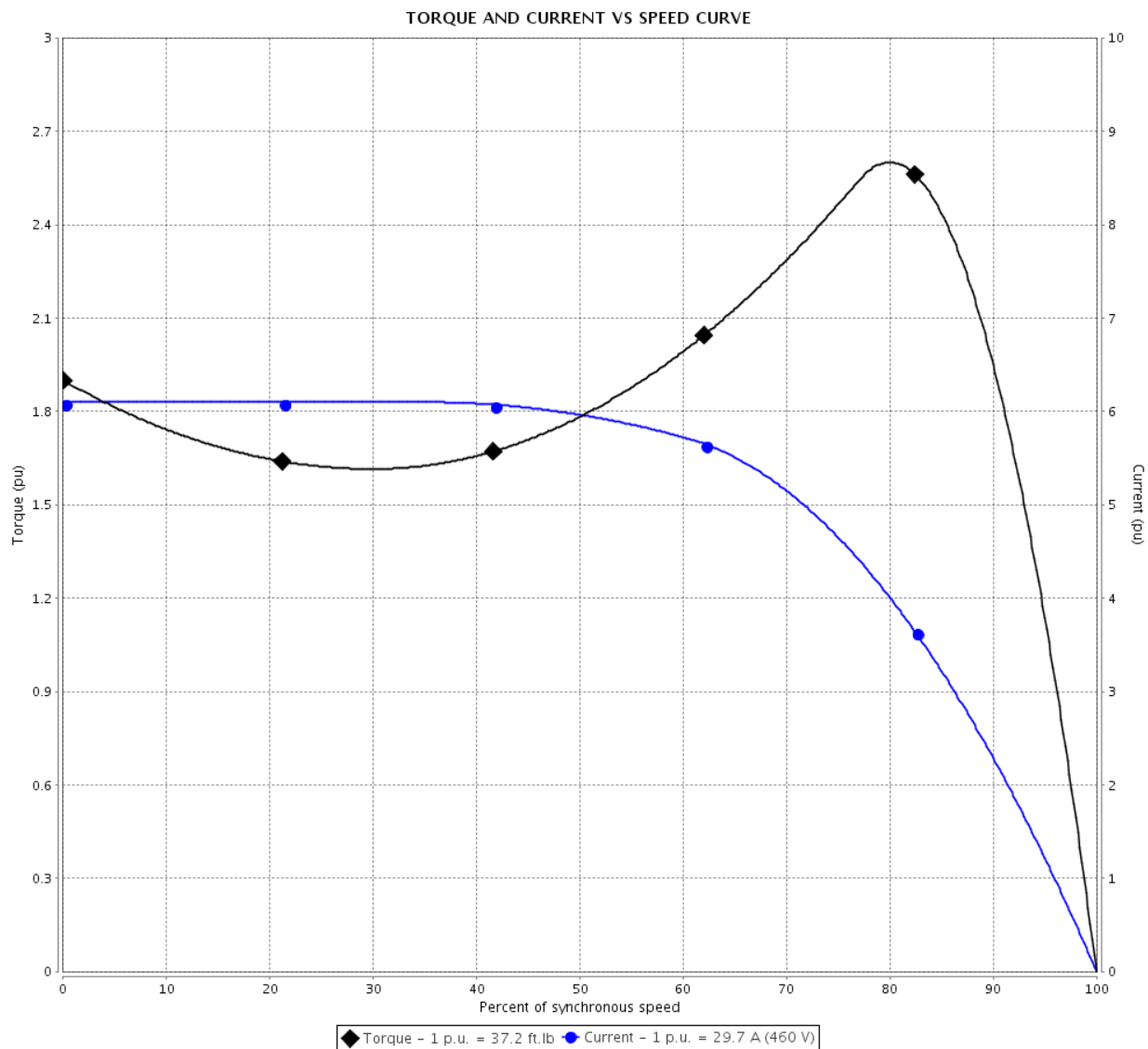
TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 High Efficiency Three-Phase Product code : 14491557
Catalog # : 02536OP3EFP256TC-W40



Performance : 230/460 V 60 Hz 2P

Rated current	: 59.4/29.7 A	Moment of inertia (J)	: 0.9592 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 37.2 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 3530 rpm	Design	: B

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

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Three Phase Induction Motor - Squirrel Cage



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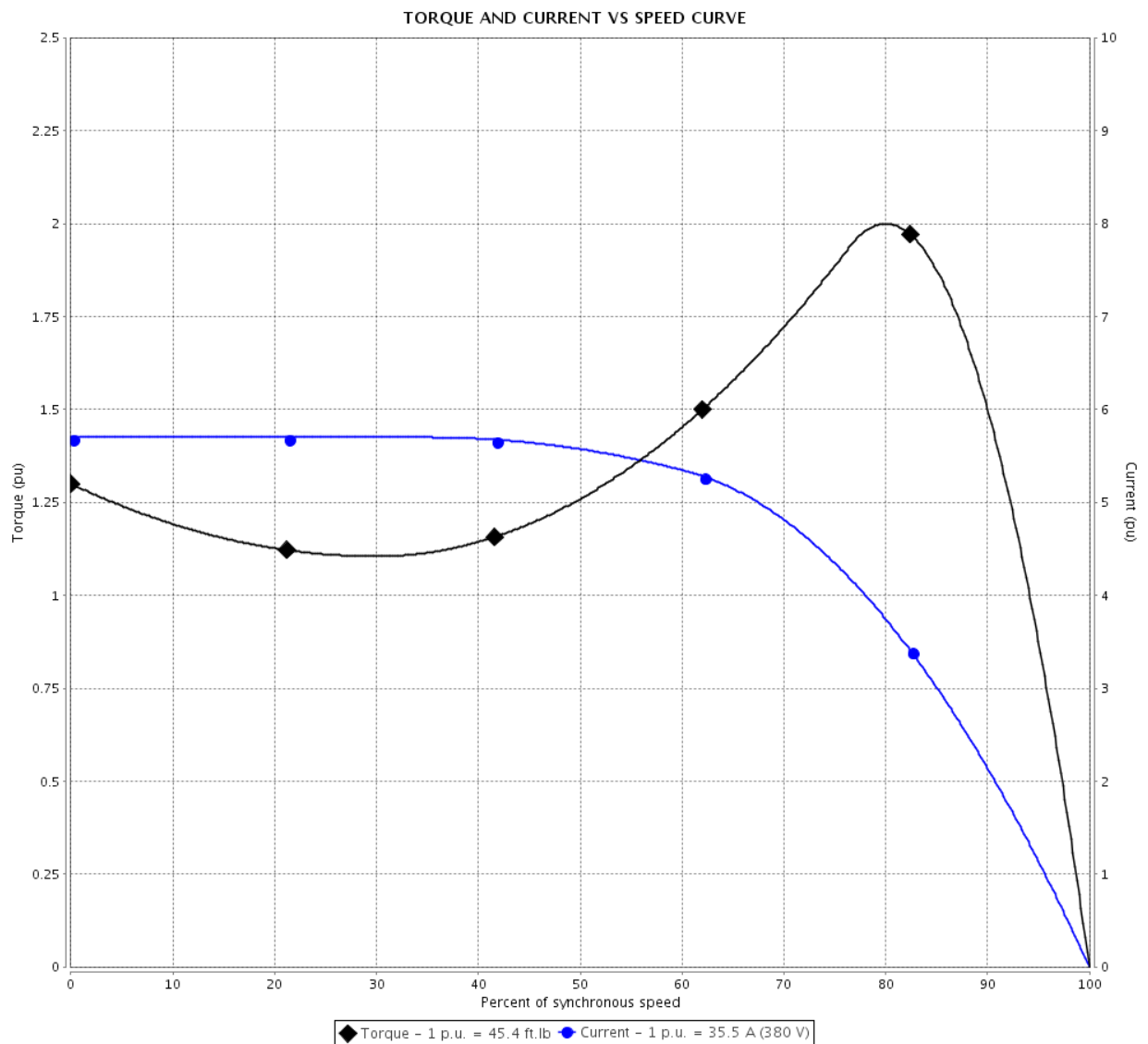
Product line : W40 High Efficiency Three-Phase

Product code :

14491557

Catalog # :

02536OP3EFP256TC-W40



Performance : 380 V 50 Hz 2P

Rated current	: 35.5 A	Moment of inertia (J)	: 0.9592 sq.ft.lb
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 45.4 ft.lb	Insulation class	: F
Locked rotor torque	: 130 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 2890 rpm	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



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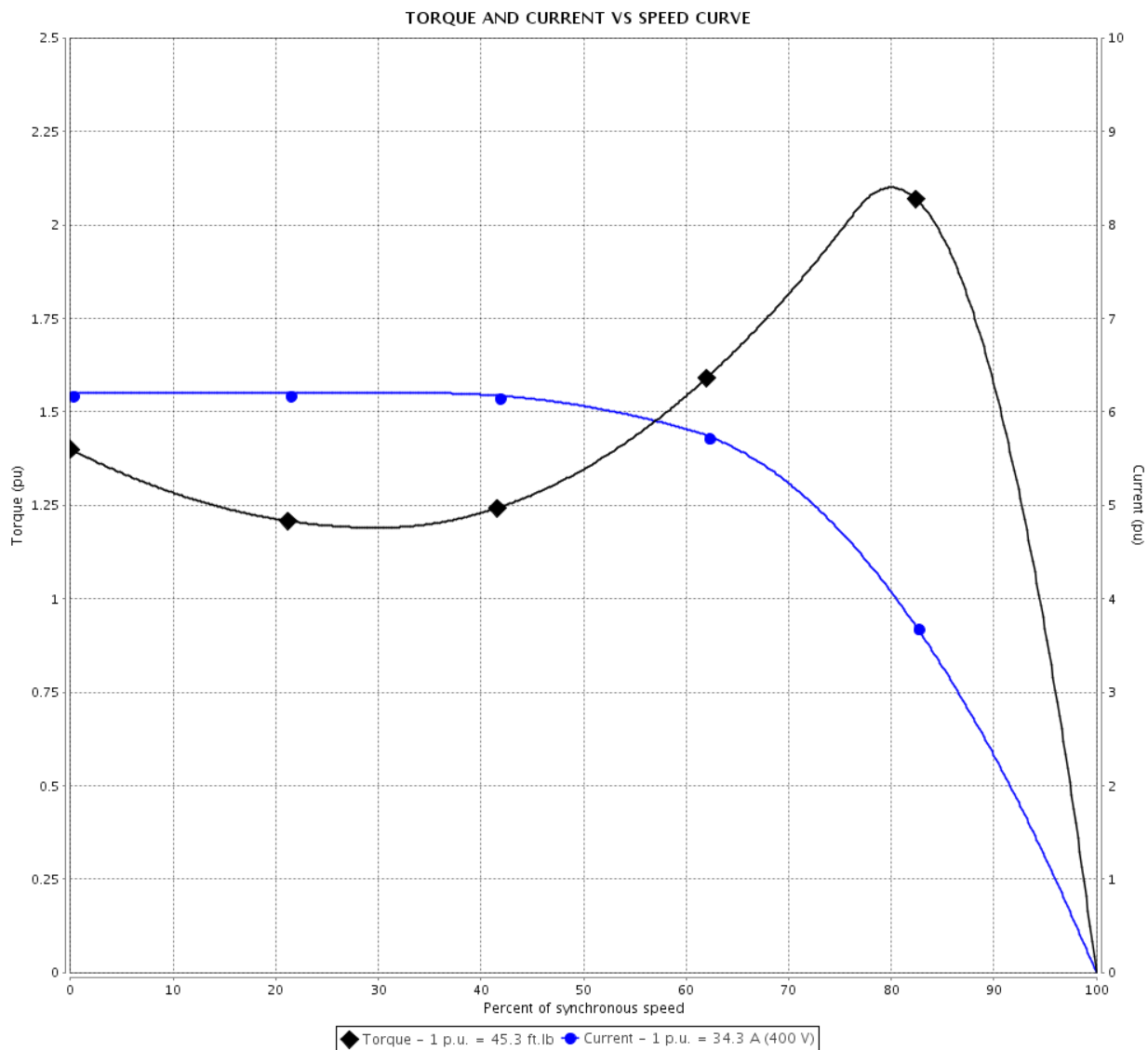
Product line : W40 High Efficiency Three-Phase

Product code :

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Catalog # :

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Performance : 400 V 50 Hz 2P IE1

Rated current	: 34.3 A	Moment of inertia (J)	: 0.9592 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 45.3 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 2900 rpm	Design	: B

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

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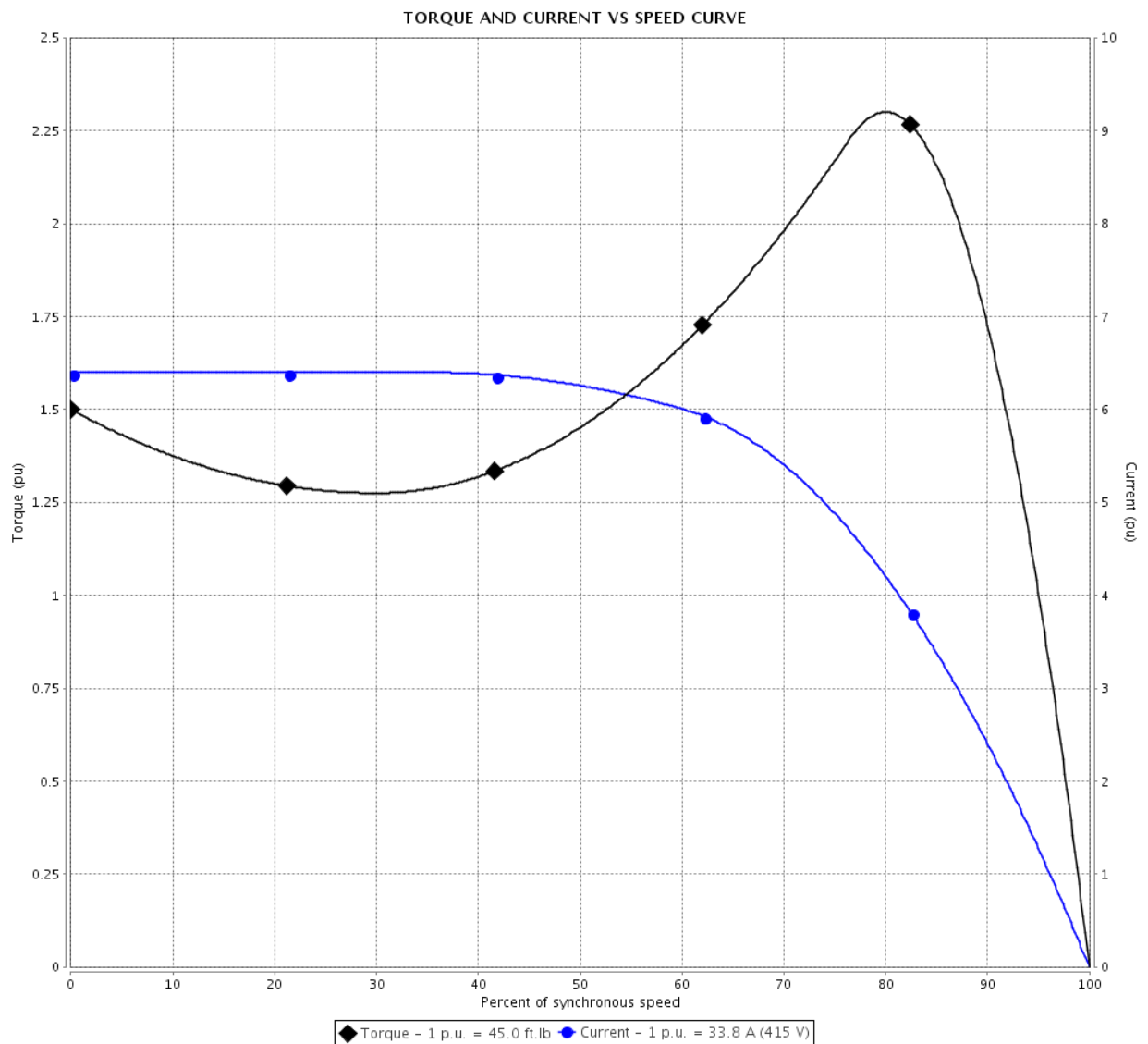
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Rated current	: 33.8 A	Moment of inertia (J)	: 0.9592 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 45.0 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 2915 rpm	Design	: B

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

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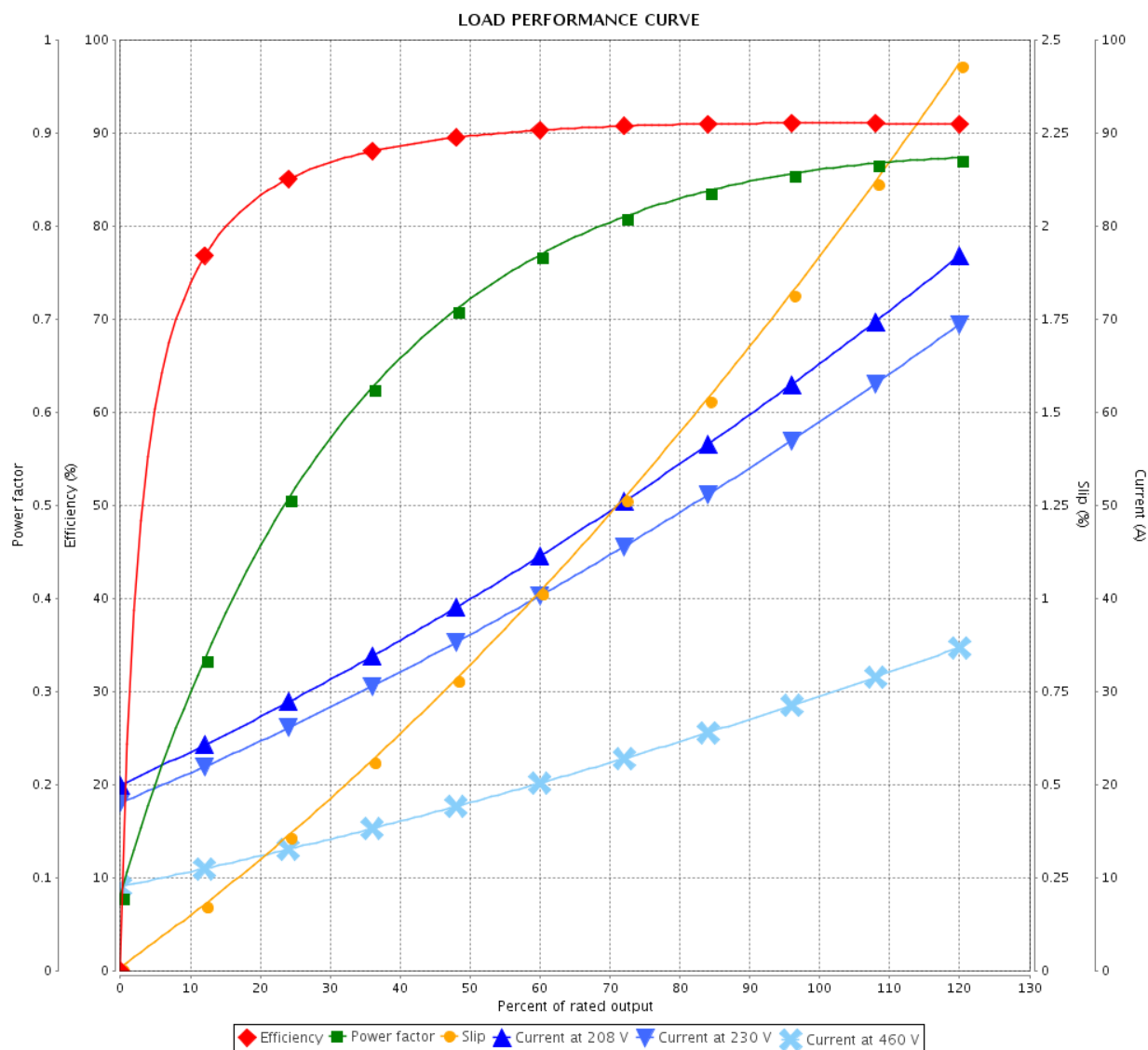
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Product code :

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Catalog # :

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Performance : 230/460 V 60 Hz 2P

Rated current : 59.4/29.7 A

LRC : 6.1

Rated torque : 37.2 ft.lb

Locked rotor torque : 190 %

Breakdown torque : 260 %

Rated speed : 3530 rpm

Moment of inertia (J) : 0.9592 sq.ft.lb

Duty cycle : Cont.(S1)

Insulation class : F

Service factor : 1.15

Temperature rise : 80 K

Design : B

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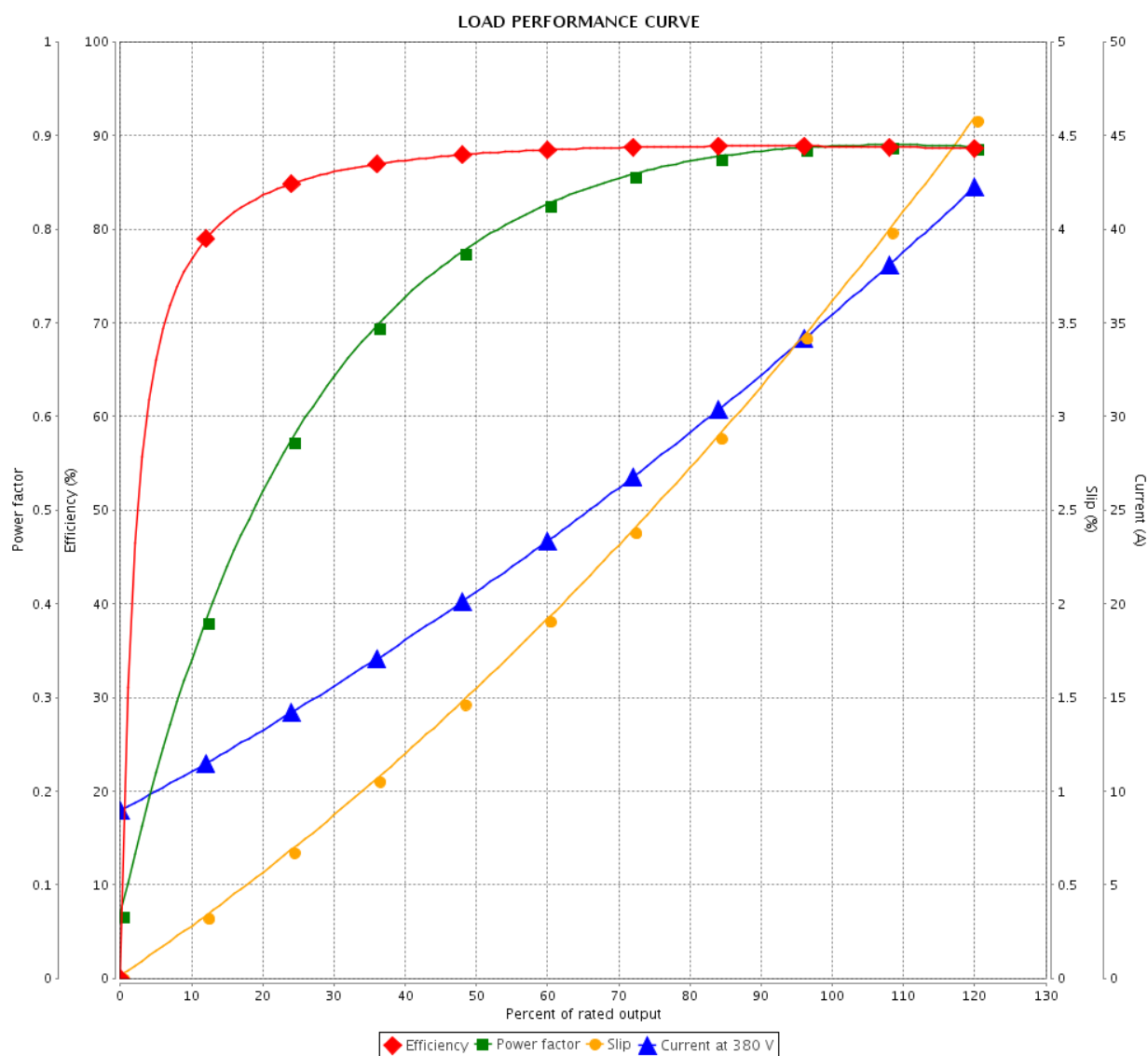
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Performance : 380 V 50 Hz 2P

Rated current : 35.5 A
 LRC : 5.7
 Rated torque : 45.4 ft.lb
 Locked rotor torque : 130 %
 Breakdown torque : 200 %
 Rated speed : 2890 rpm

Moment of inertia (J) : 0.9592 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



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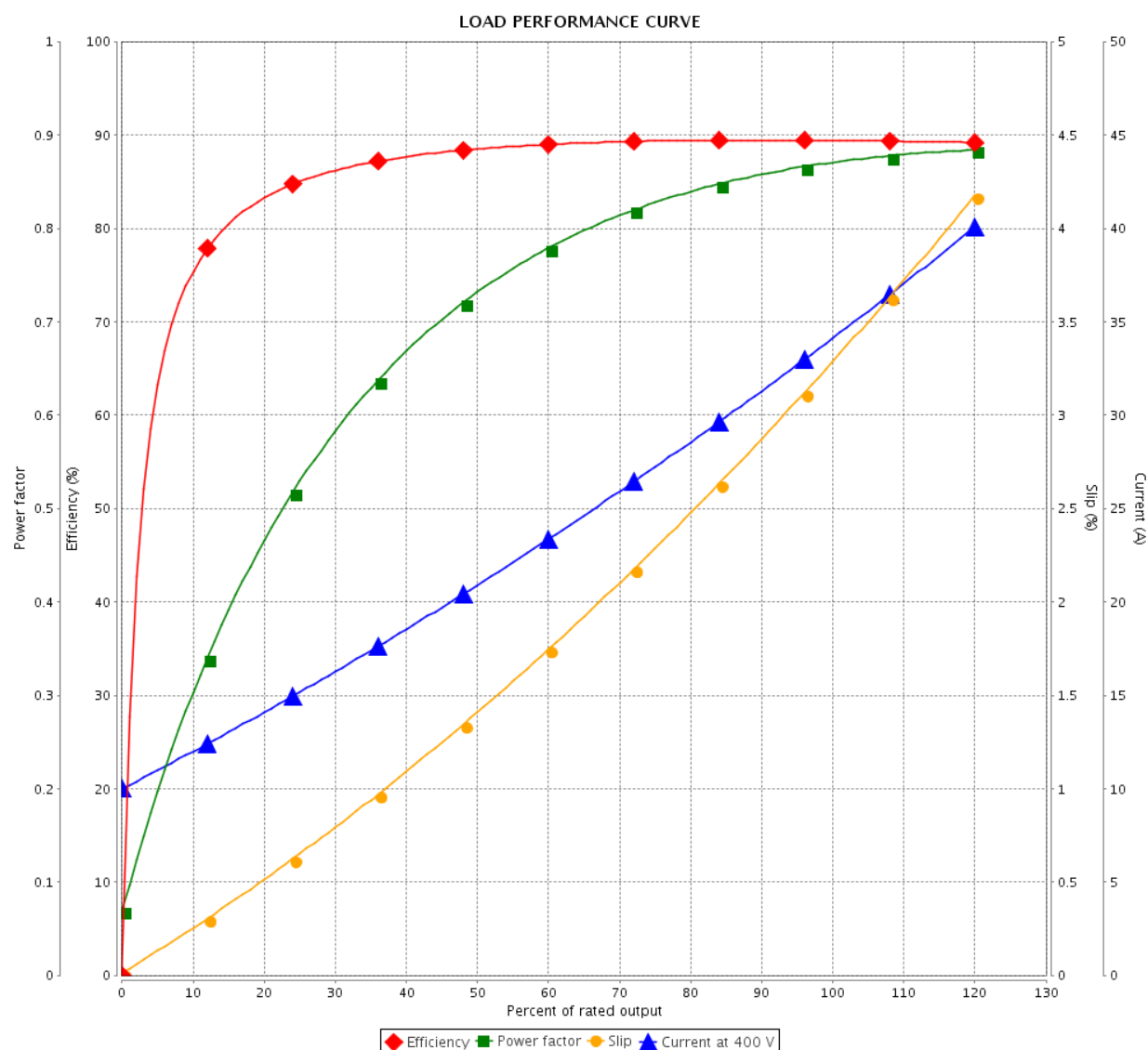
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 LRC : 6.2
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 Locked rotor torque : 140 %
 Breakdown torque : 210 %
 Rated speed : 2900 rpm

Moment of inertia (J) : 0.9592 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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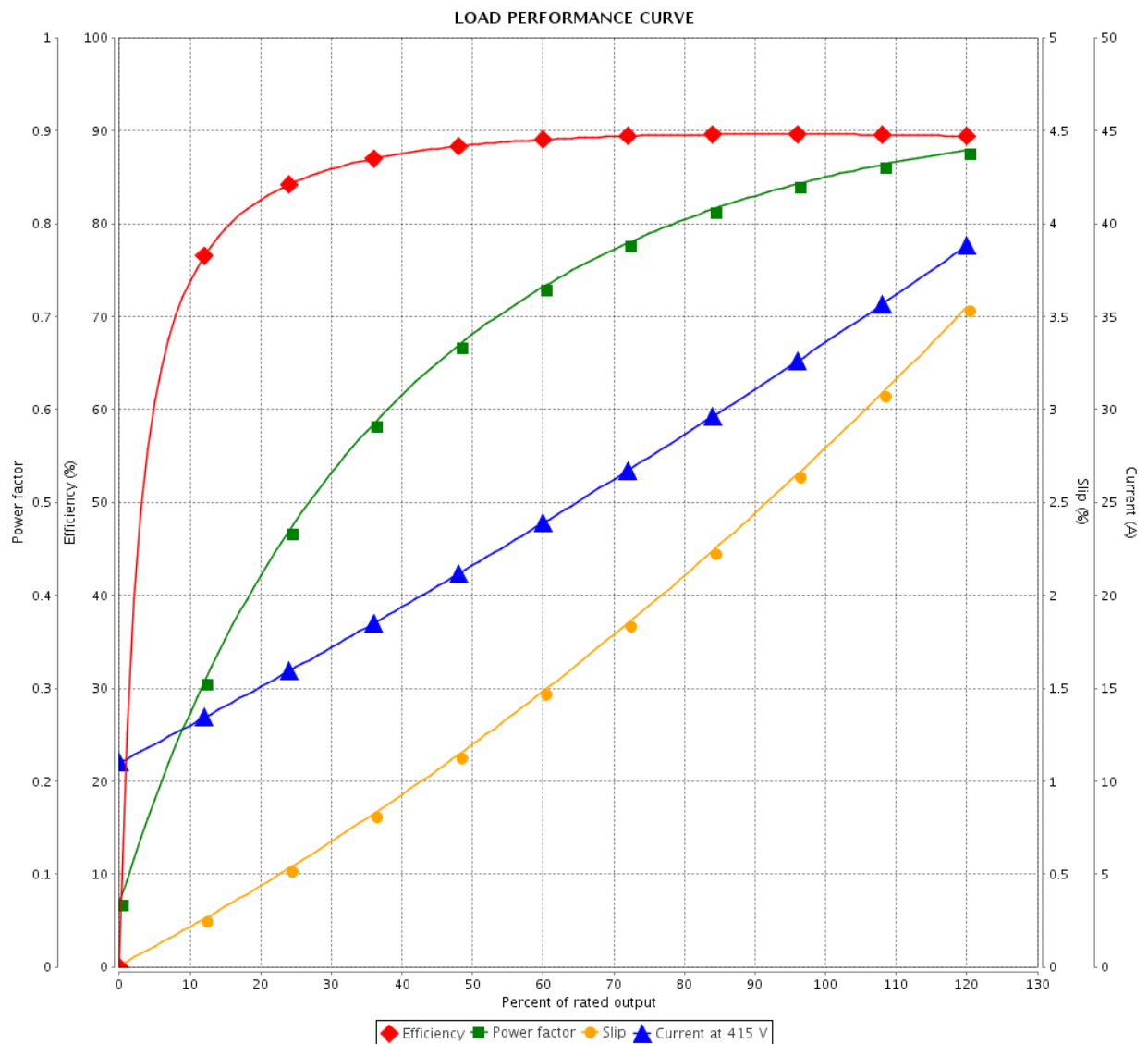
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 Service factor : 1.00
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THERMAL LIMIT CURVE

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Duty cycle : Cont.(S1)

Insulation class : F

Service factor : 1.15

Temperature rise : 80 K

Design : B

Heating constant

Cooling constant

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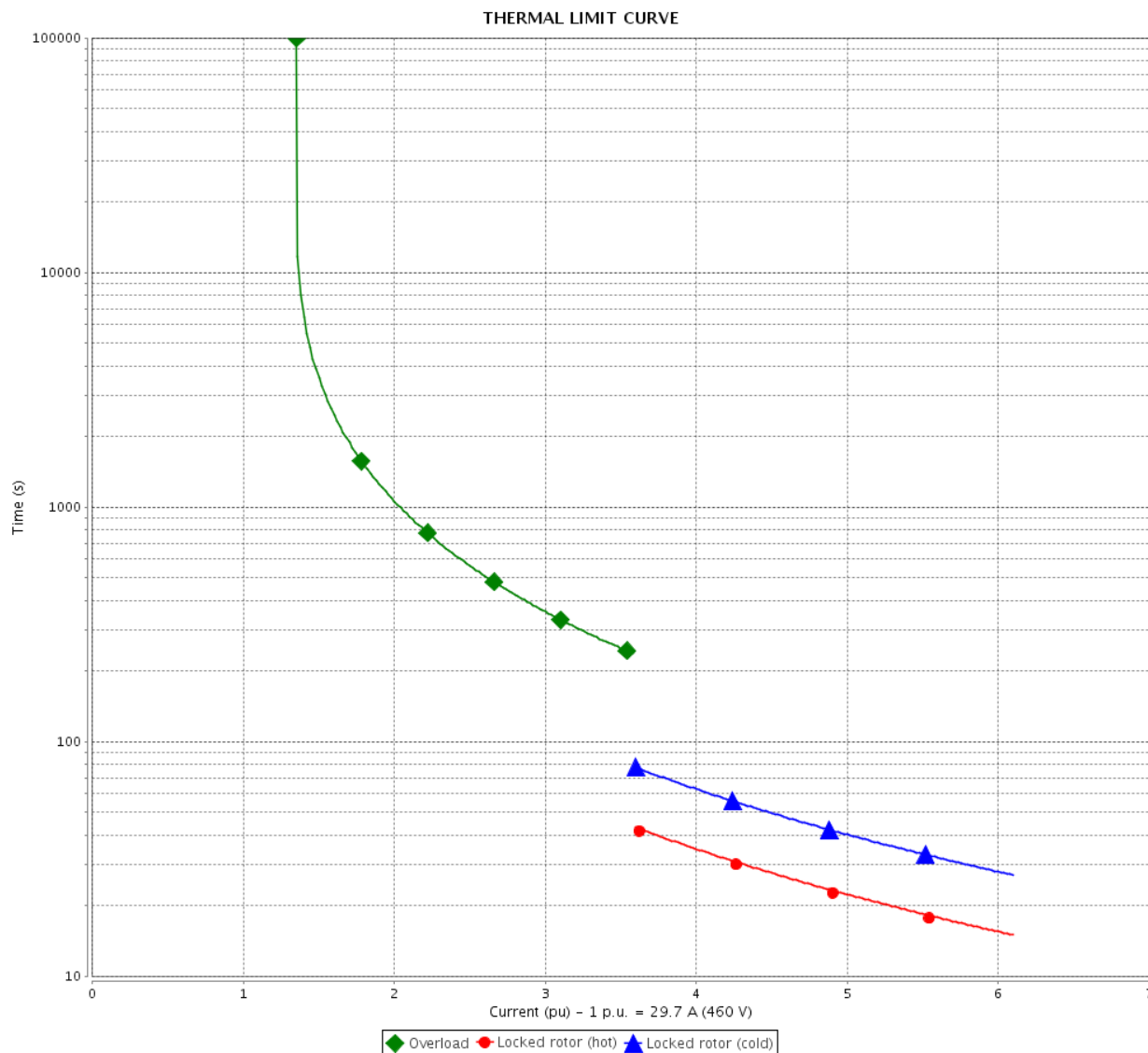
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Locked rotor torque	: 130 %	Service factor	: 1.00
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Rated speed	: 2890 rpm	Design	: B

Heating constant

Cooling constant

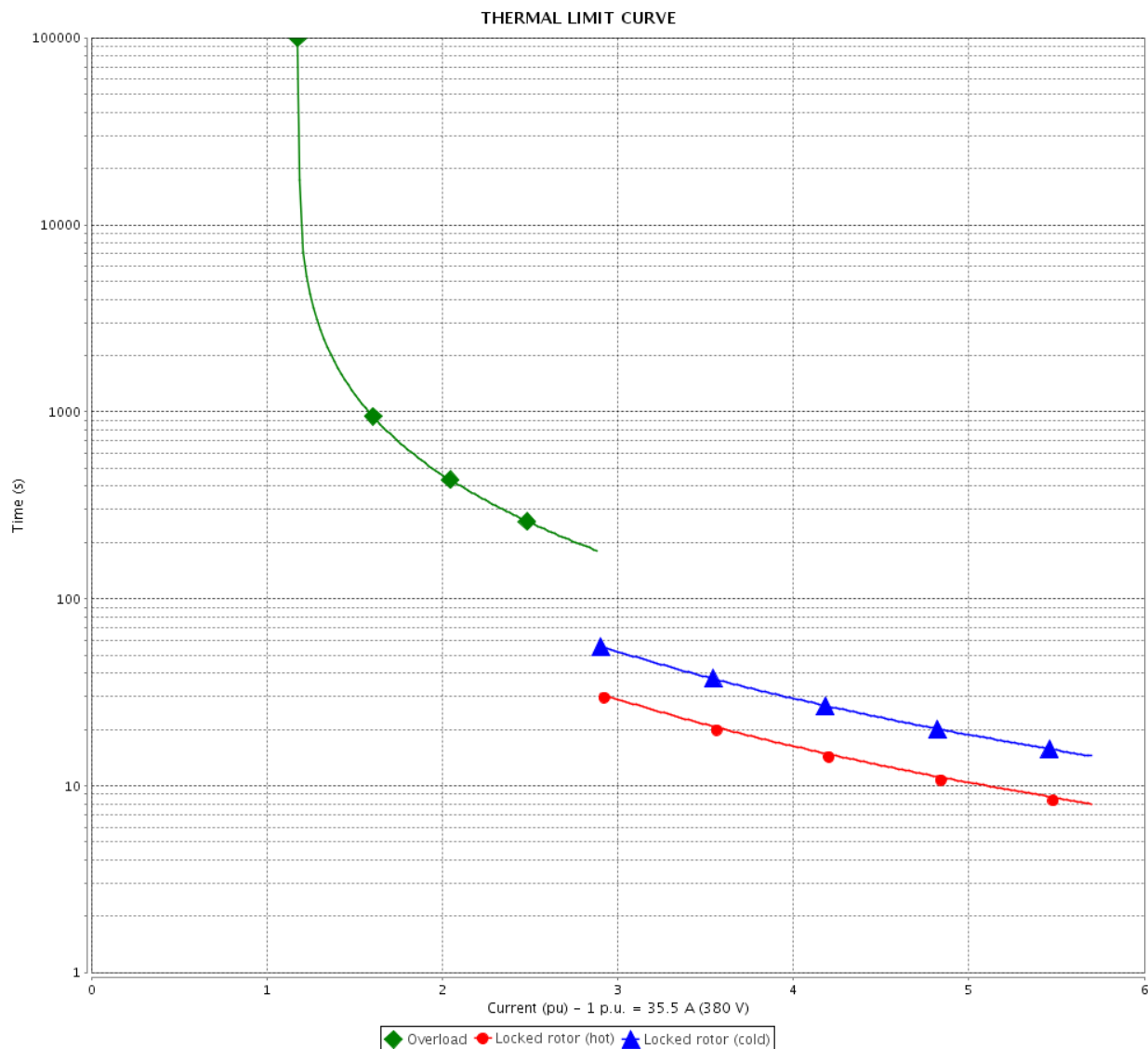
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Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 2900 rpm	Design	: B

Heating constant

Cooling constant

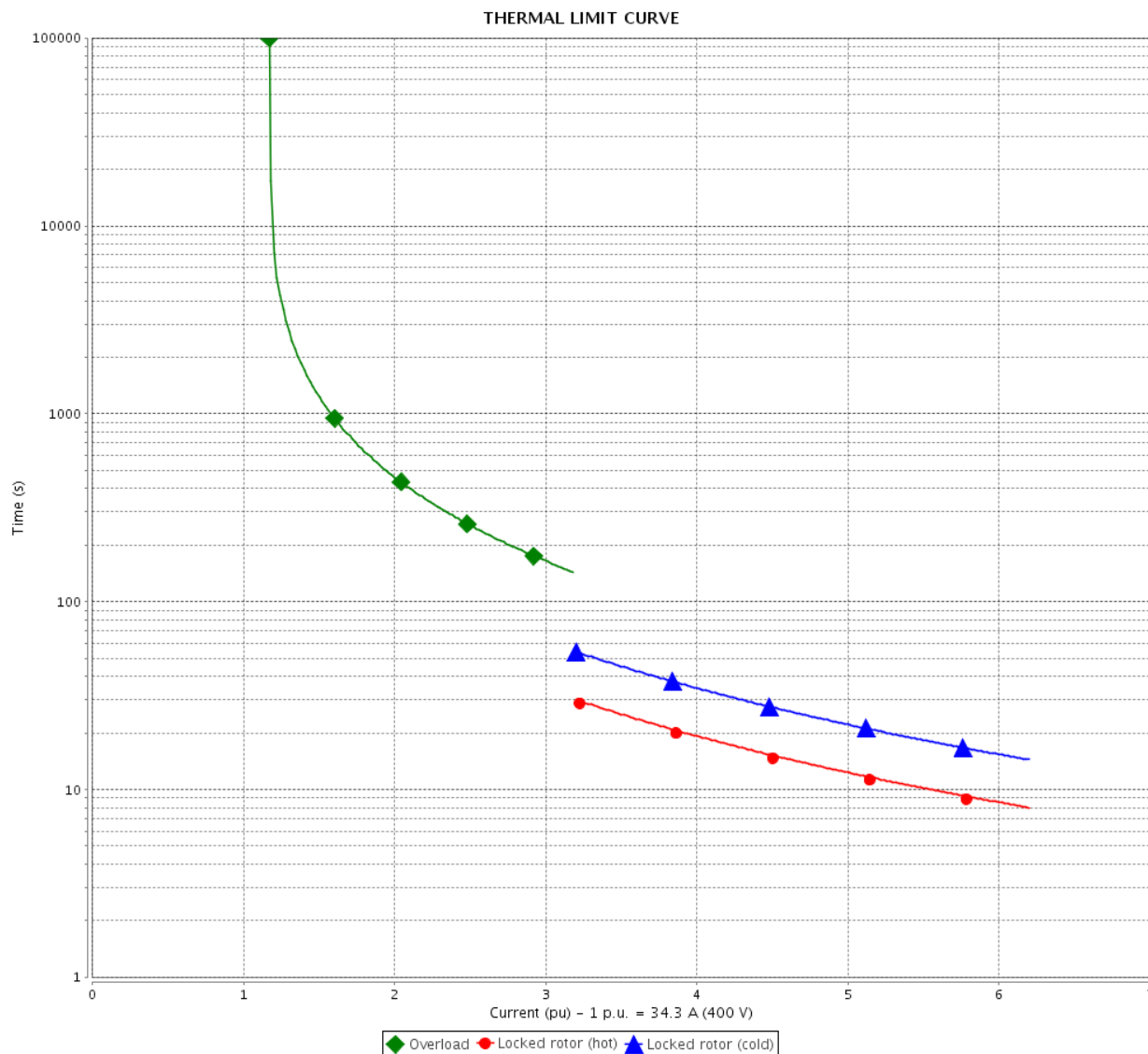
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Cooling constant

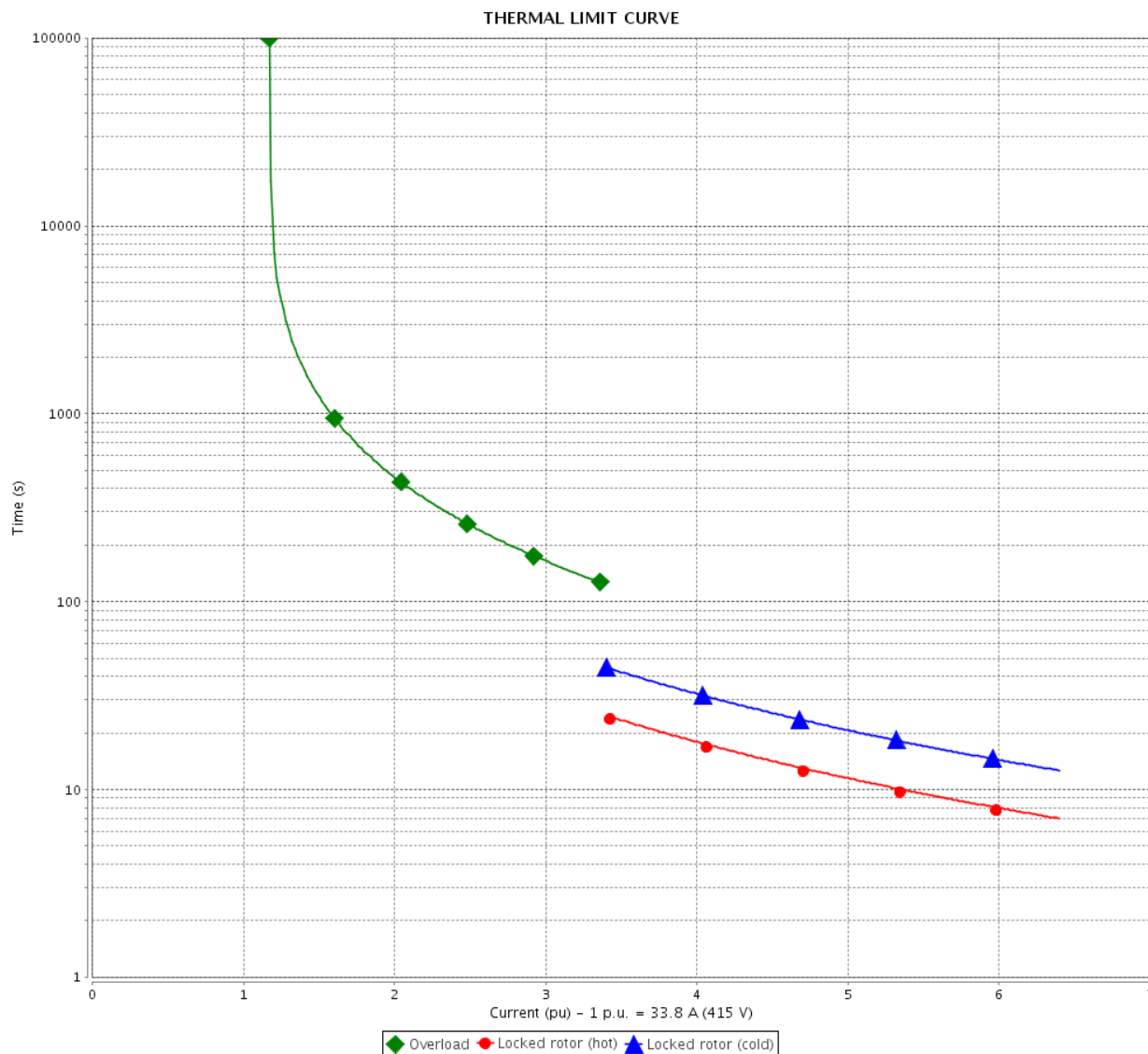
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line

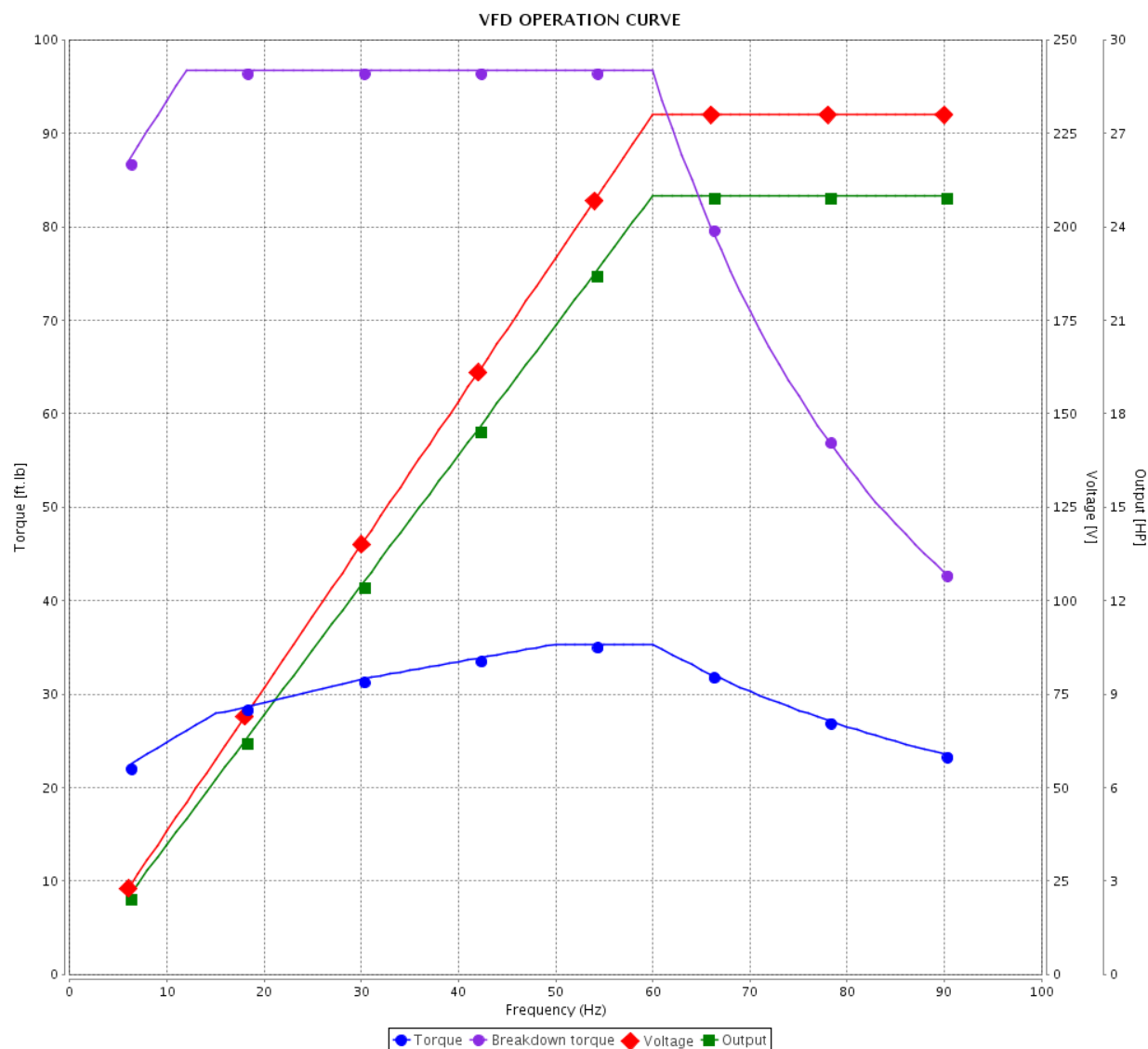
: W40 High Efficiency Three-Phase

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 Breakdown torque : 260 %
 Rated speed : 3530 rpm

Moment of inertia (J) : 0.9592 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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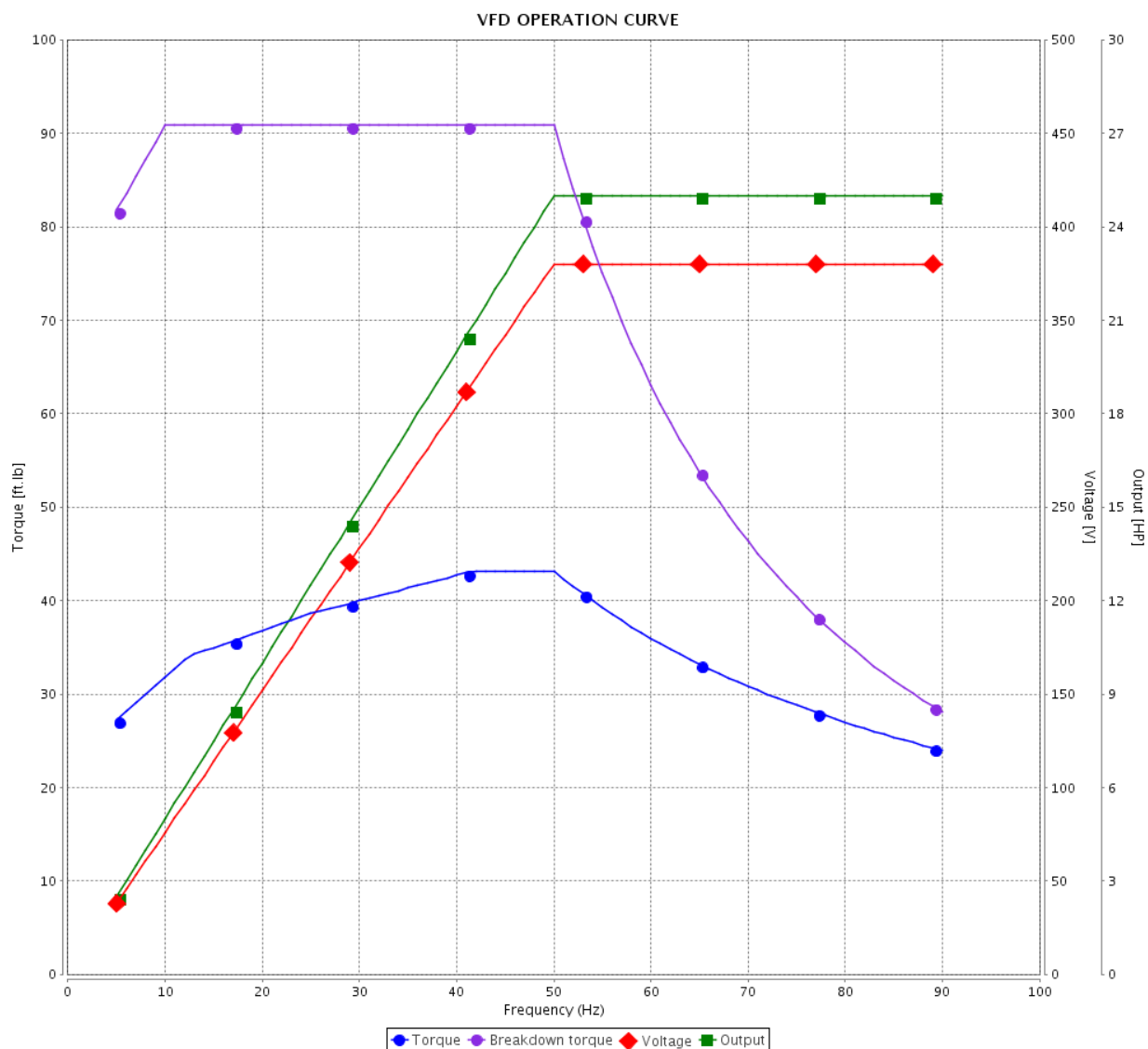
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VFD OPERATION CURVE

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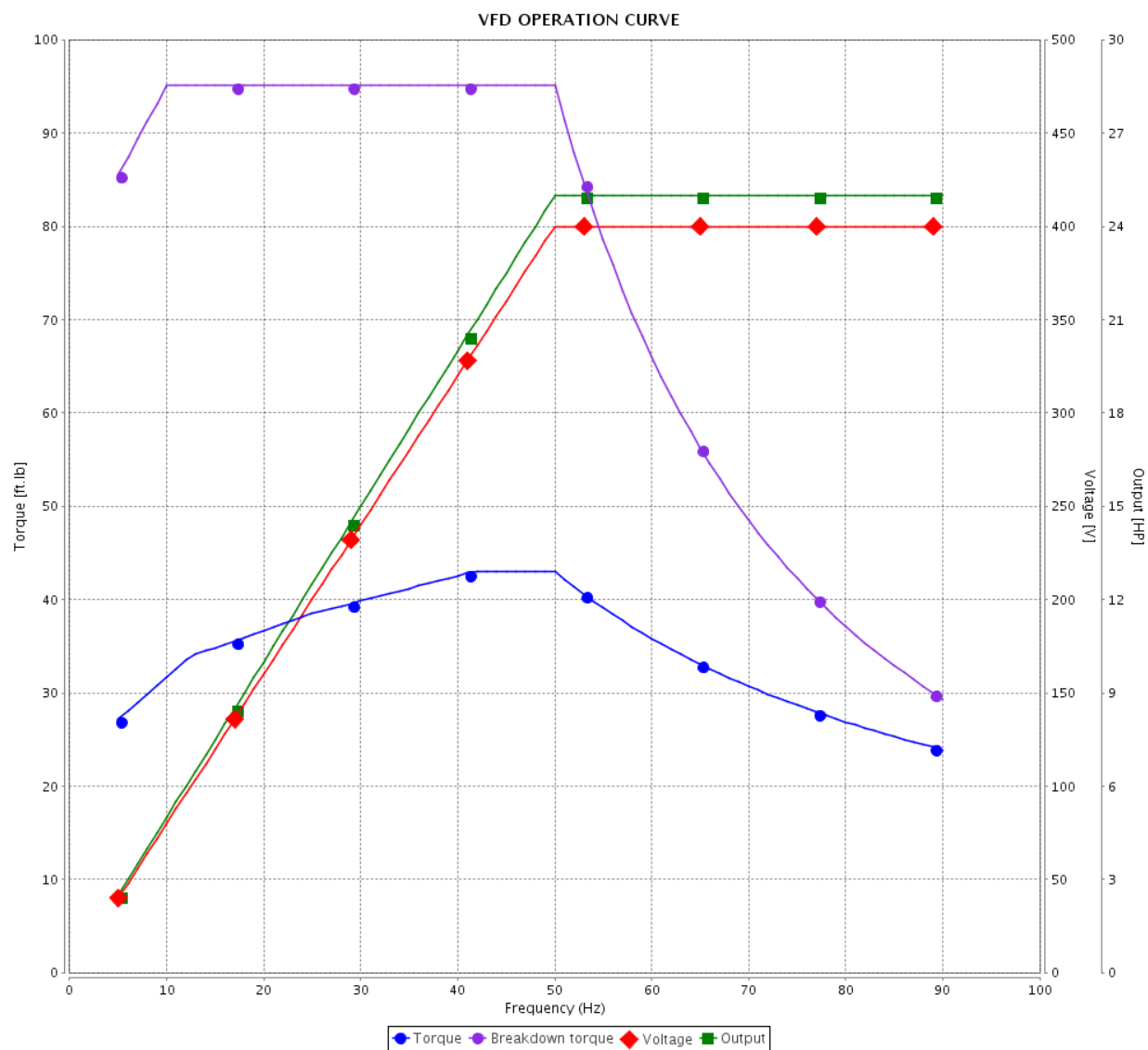
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VFD OPERATION CURVE

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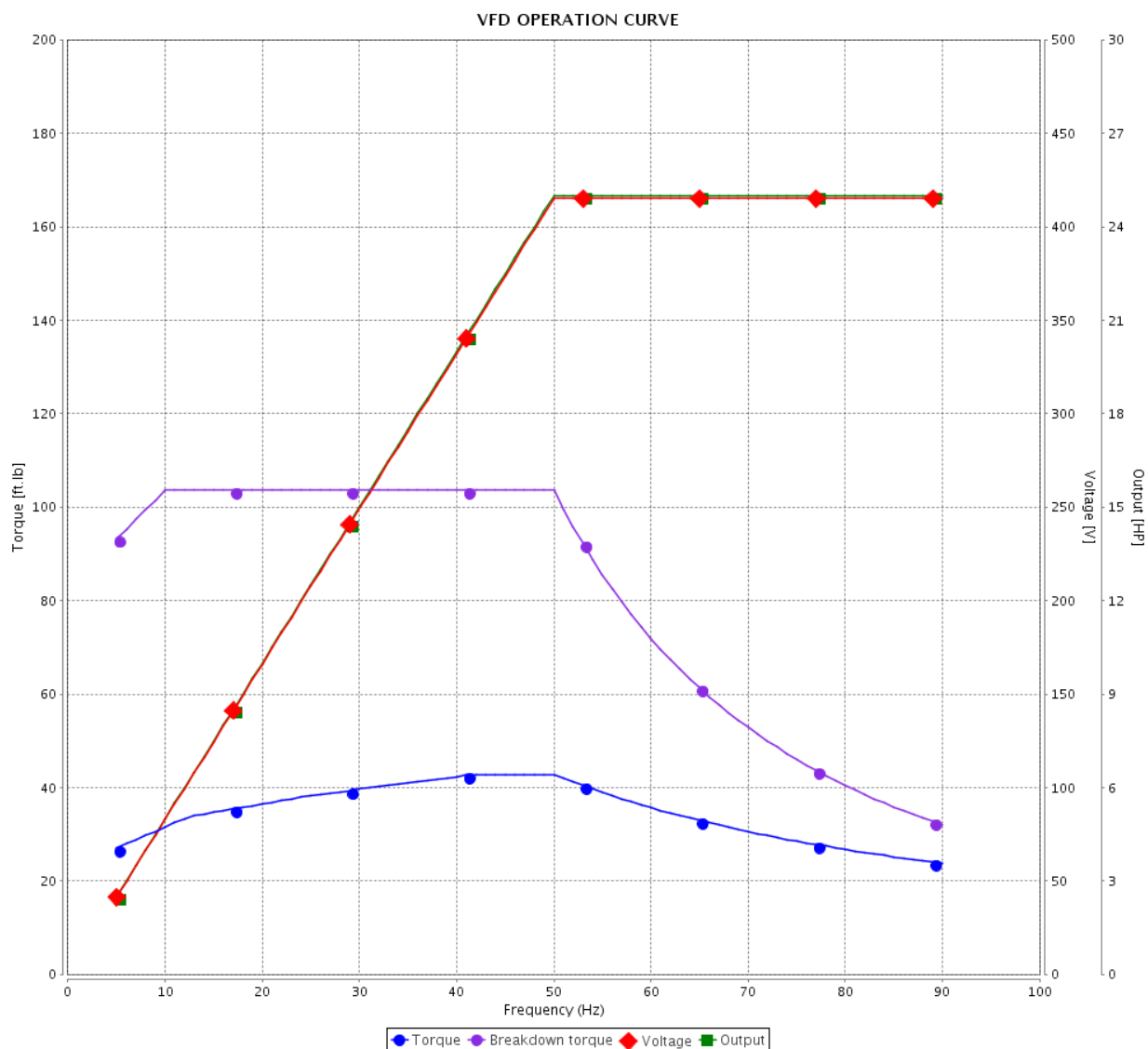
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