

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 High Efficiency Three-Phase Product code : 14490665
Catalog # : 03036OP3EFP284TS-W40

Frame : 284TS	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 : 301 lb
Protection degree : IP23	Moment of inertia (J) : 1.59 sq.ft.lb
Design : B	

Output [HP]	30	30	30	30
Poles	2	2	2	2
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	69.8/34.9	41.7	40.3	39.2
L. R. Amperes [A]	433/216	242	250	243
LRC [A]	6.2x(Code G)	5.8x(Code F)	6.2x(Code G)	6.2x(Code G)
No load current [A]	22.0/11.0	10.0	11.0	12.0
Rated speed [RPM]	3540	2920	2930	2935
Slip [%]	1.67	2.67	2.33	2.17
Rated torque [ft.lb]	44.5	54.0	53.8	53.7
Locked rotor torque [%]	170	130	130	150
Breakdown torque [%]	260	200	210	229
Service factor	1.15	1.00	1.15	1.15
Temperature rise	80 K	105 K	80 K	80 K
Locked rotor time	28s (cold) 16s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	18s (cold) 10s (hot)
Noise level ²				
Efficiency (%)	25%	90.0	89.3	89.6
	50%	90.2	89.5	90.1
	75%	91.0	90.0	90.2
	100%	91.0	90.0	90.6
Power Factor	25%	0.50	0.58	0.54
	50%	0.74	0.80	0.76
	75%	0.83	0.86	0.84
	100%	0.87	0.89	0.87

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type	: 6311 Z C3	6211 Z C3	Max. traction
Sealing	: Without	Without	Max. compression
	Bearing Seal	Bearing Seal	
Lubrication interval	: 20000 h	20000 h	
Lubricant amount	: 18 g	11 g	
Lubricant type	: Mobil Polyrex EM		

Notes

USABLE @208V 77.2A SF 1.00 SFA 77.2A

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 :

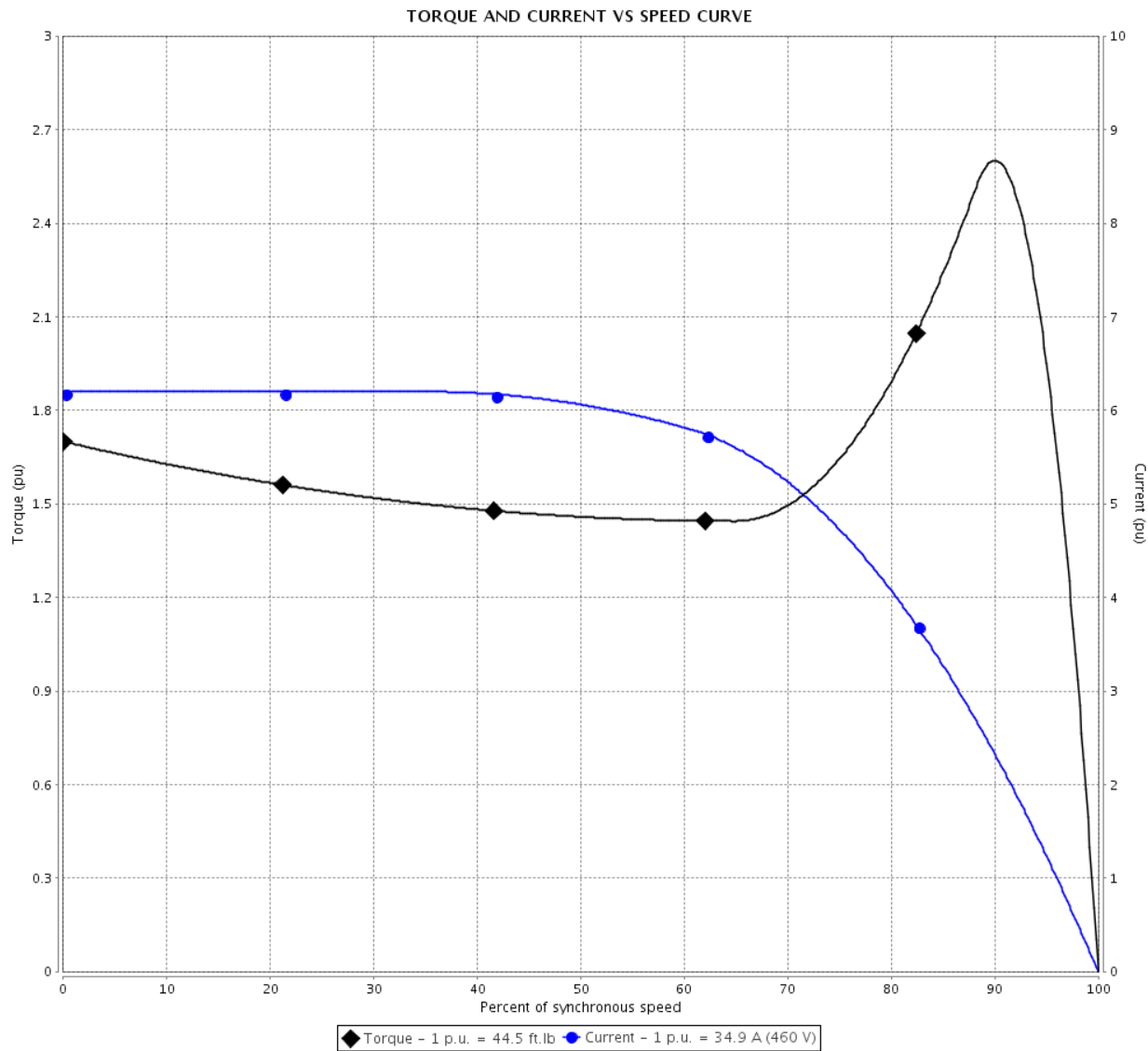
Product line : W40 High Efficiency Three-Phase

Product code :

14490665

Catalog # :

03036OP3EFP284TS-W40



Performance : 230/460 V 60 Hz 2P

Rated current : 69.8/34.9 A
LRC : 6.2
Rated torque : 44.5 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 260 %
Rated speed : 3540 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
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



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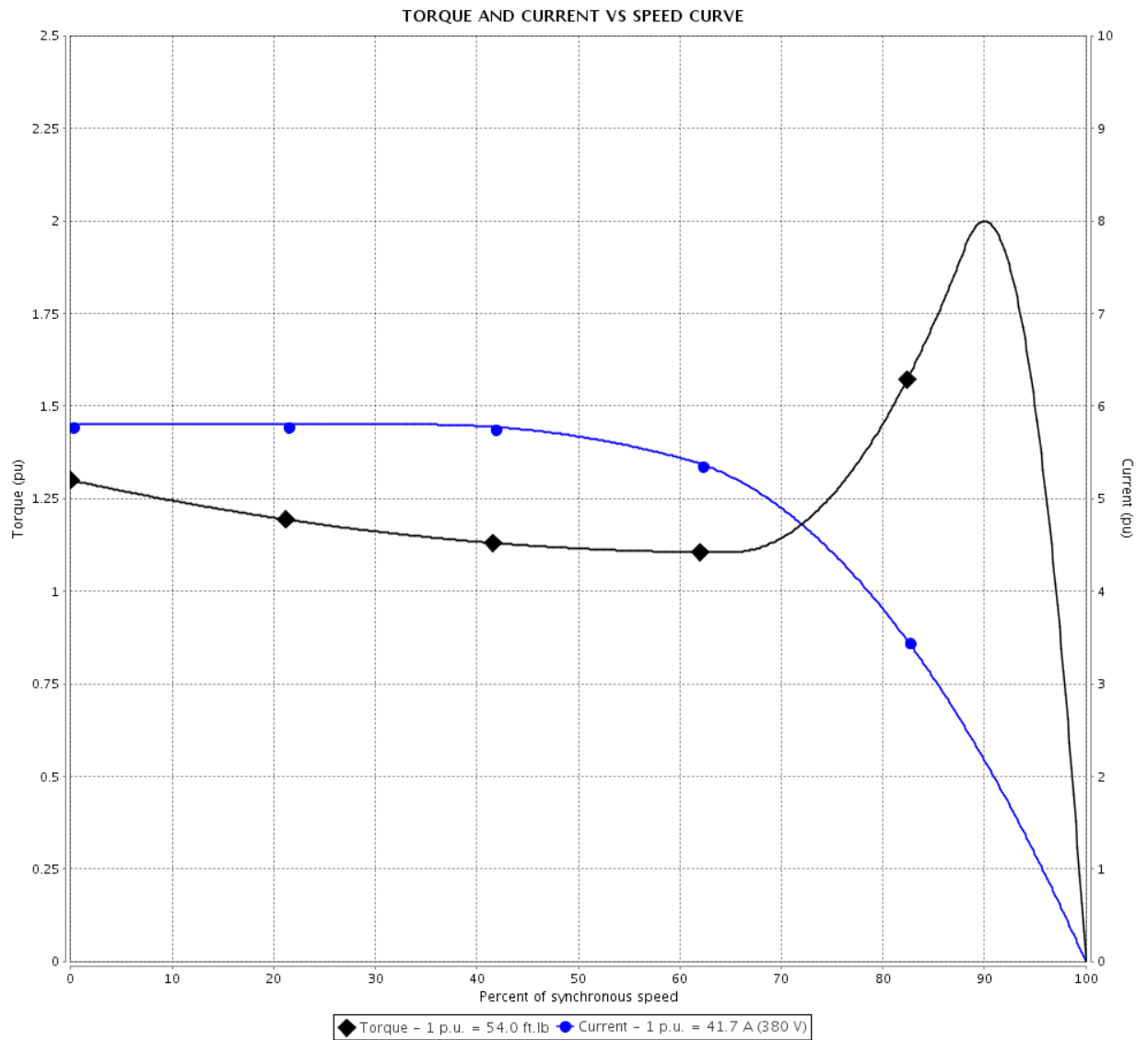
Product line : W40 High Efficiency Three-Phase

Product code :

14490665

Catalog # :

03036OP3EFP284TS-W40



Performance : 380 V 50 Hz 2P IE1

Rated current	: 41.7 A	Moment of inertia (J)	: 1.59 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 54.0 ft.lb	Insulation class	: F
Locked rotor torque	: 130 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 2920 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



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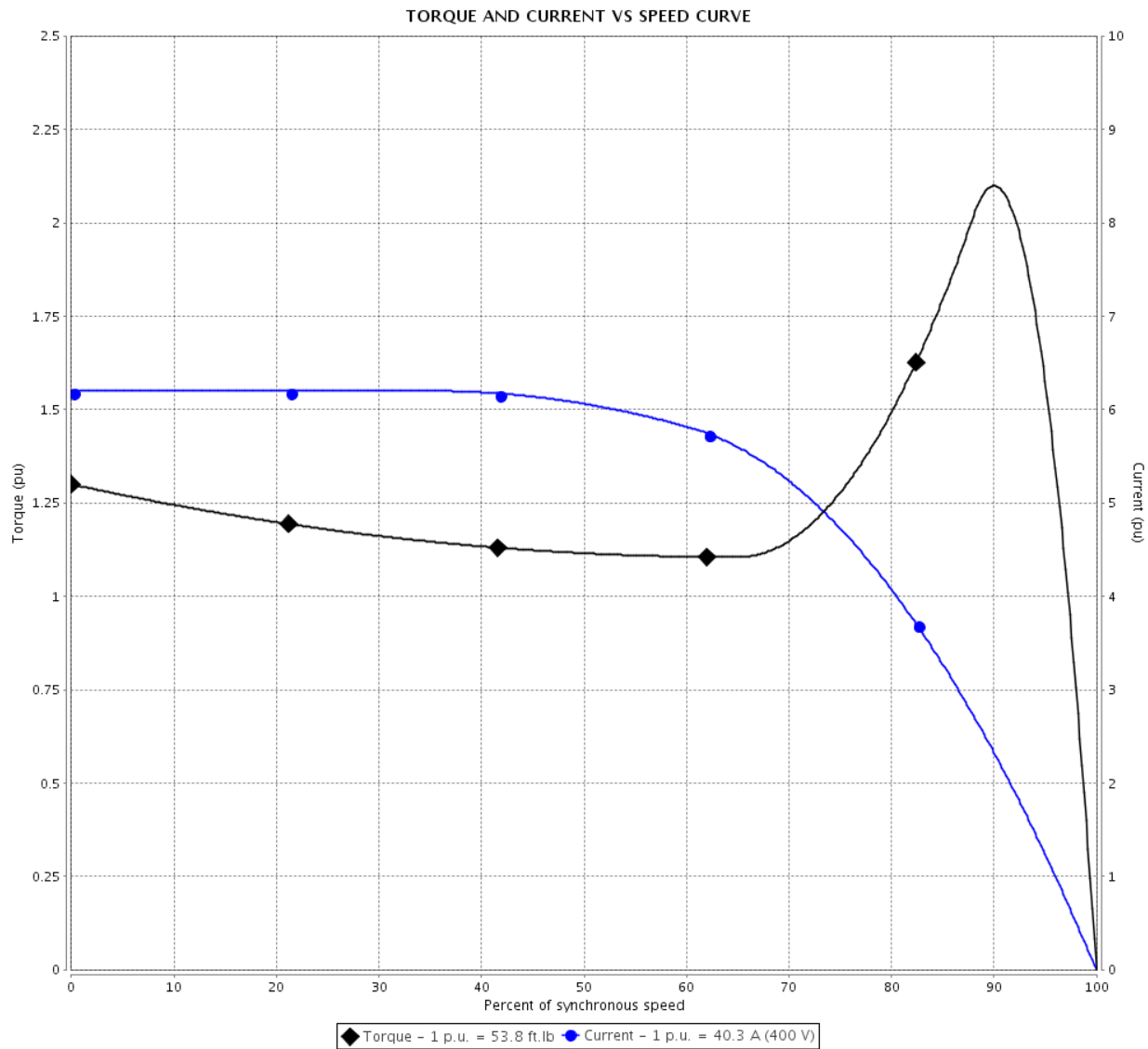
Product line : W40 High Efficiency Three-Phase

Product code :

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Catalog # :

03036OP3EFP284TS-W40



Performance : 400 V 50 Hz 2P IE1

Rated current	: 40.3 A	Moment of inertia (J)	: 1.59 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 53.8 ft.lb	Insulation class	: F
Locked rotor torque	: 130 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 2930 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE

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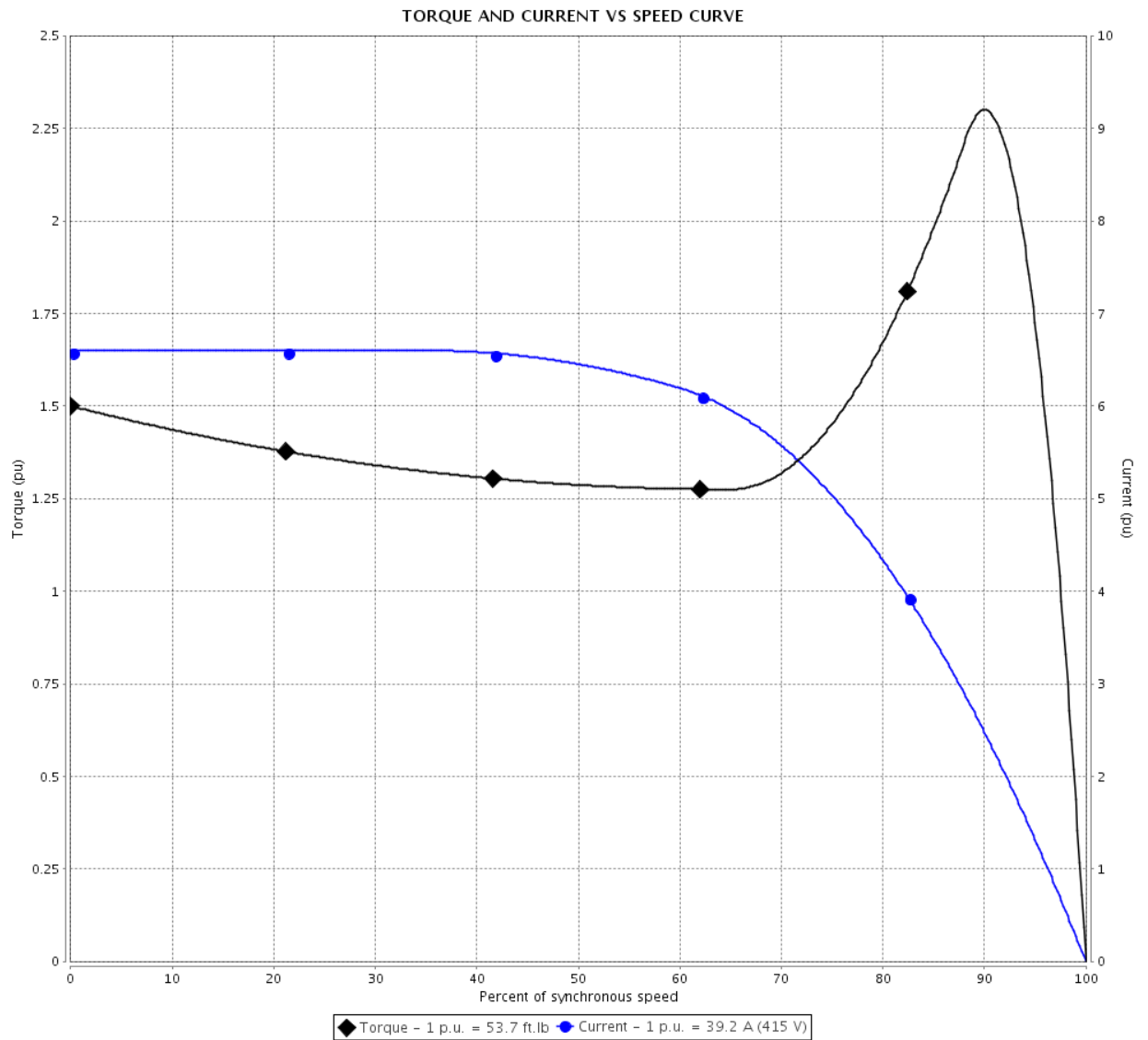
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Performance : 415 V 50 Hz 2P IE1

Rated current	: 39.2 A	Moment of inertia (J)	: 1.59 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 53.7 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 2935 rpm	Design	: B

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

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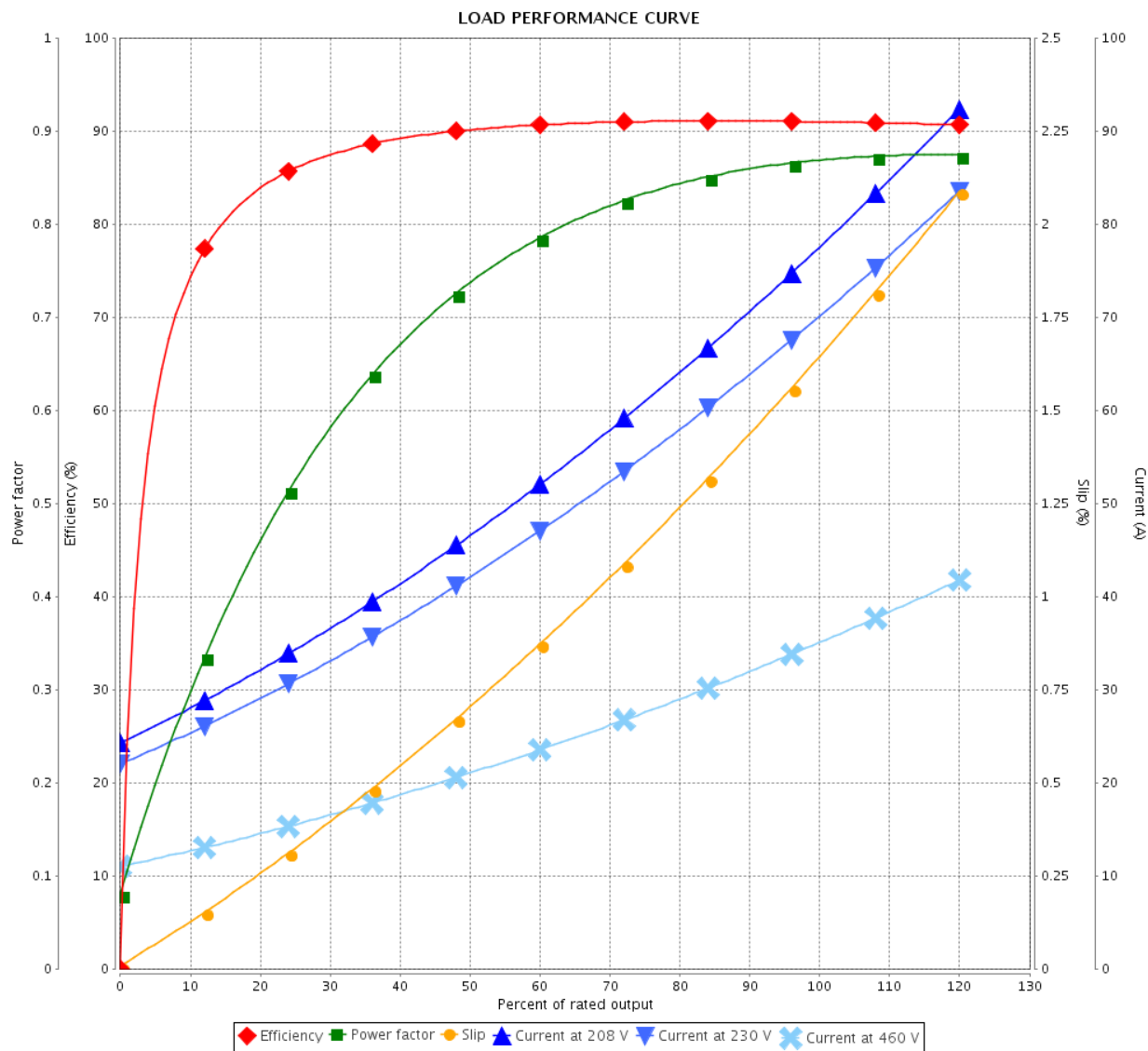
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Product code :

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Catalog # :

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Performance : 230/460 V 60 Hz 2P

Rated current : 69.8/34.9 A
 LRC : 6.2
 Rated torque : 44.5 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 260 %
 Rated speed : 3540 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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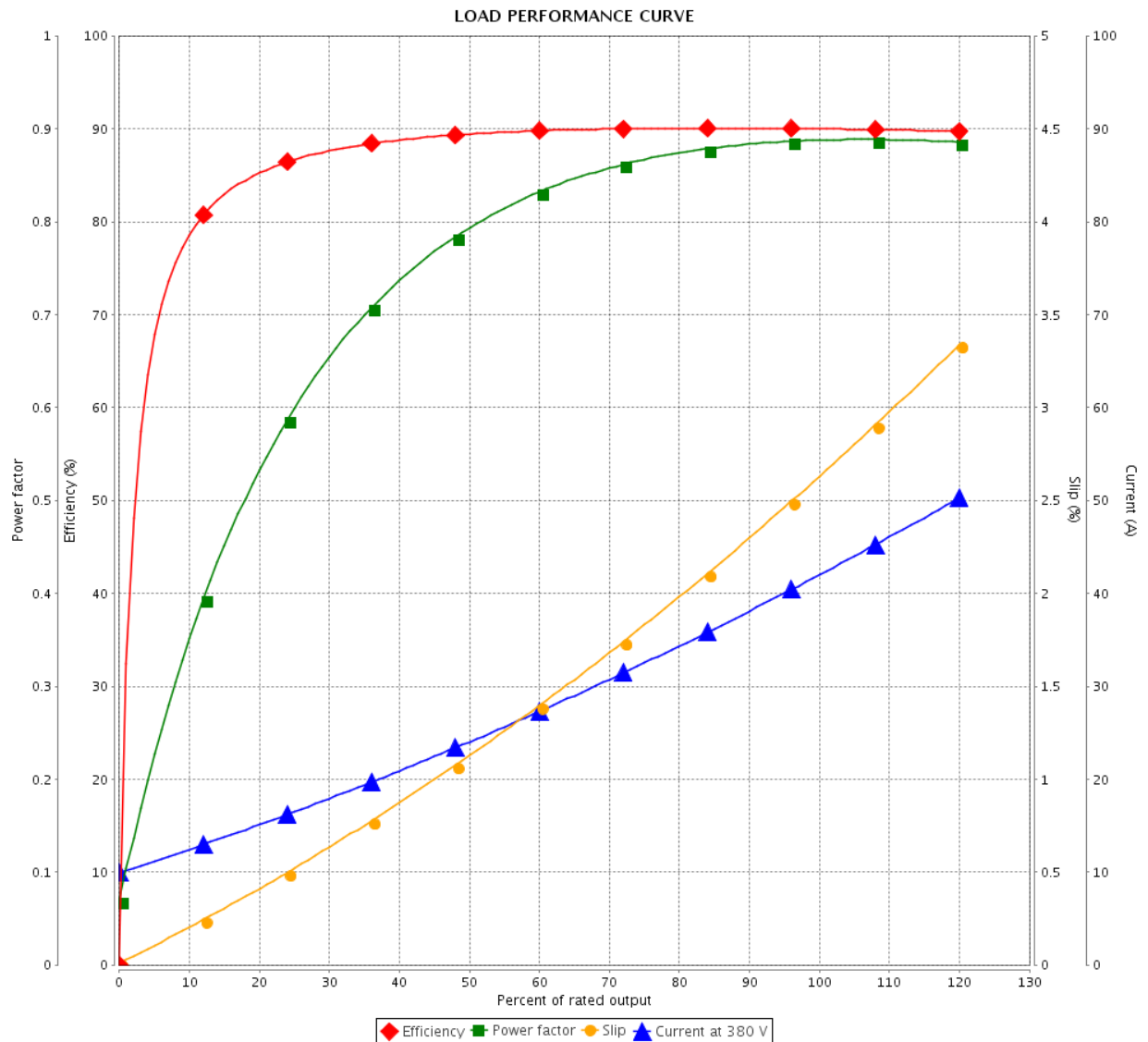
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Performance : 380 V 50 Hz 2P IE1

Rated current : 41.7 A
 LRC : 5.8
 Rated torque : 54.0 ft.lb
 Locked rotor torque : 130 %
 Breakdown torque : 200 %
 Rated speed : 2920 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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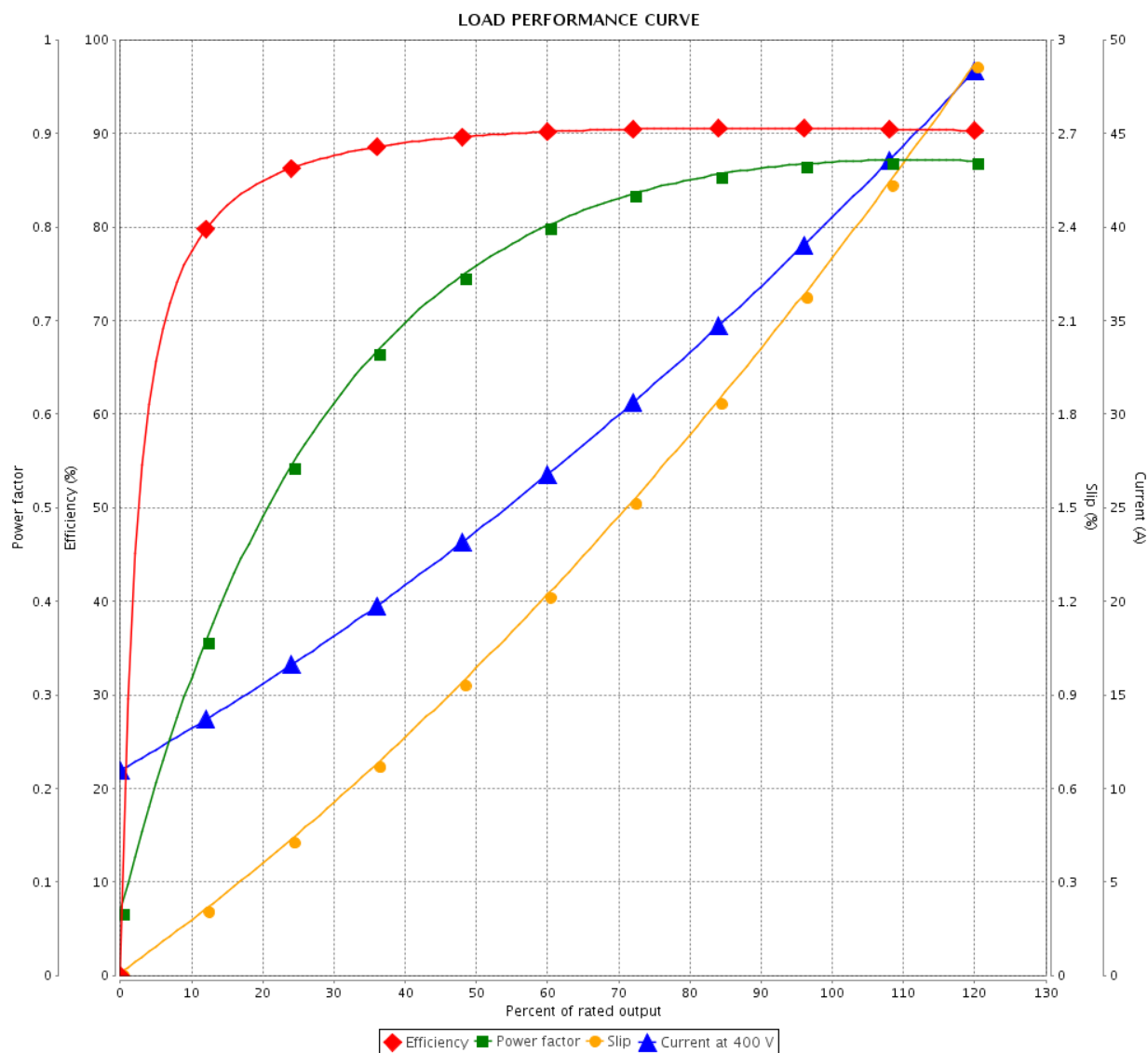
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Catalog # :

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Performance : 400 V 50 Hz 2P IE1

Rated current : 40.3 A
 LRC : 6.2
 Rated torque : 53.8 ft.lb
 Locked rotor torque : 130 %
 Breakdown torque : 210 %
 Rated speed : 2930 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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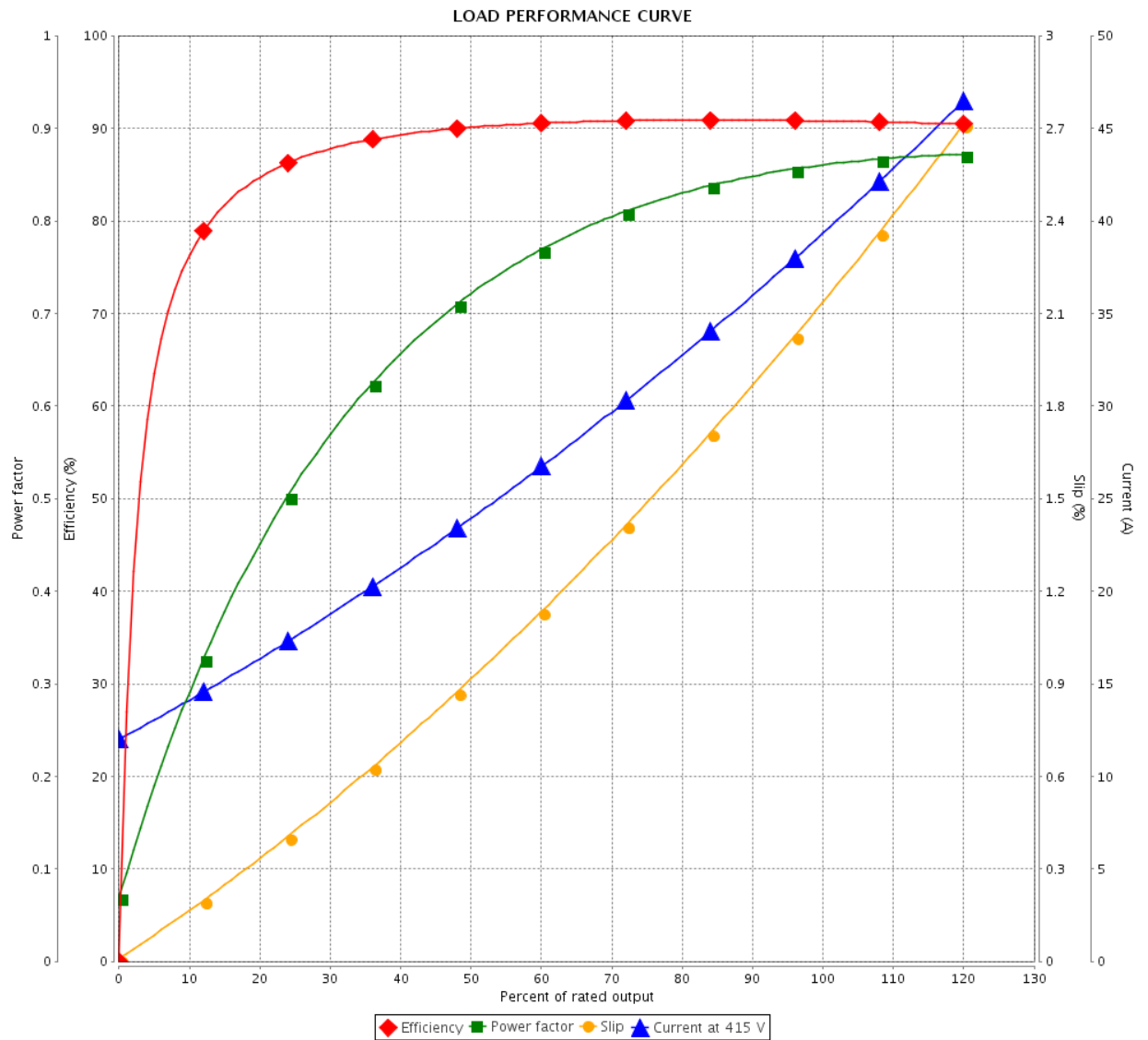
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Catalog # :

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Performance : 415 V 50 Hz 2P IE1

Rated current : 39.2 A
 LRC : 6.2
 Rated torque : 53.7 ft.lb
 Locked rotor torque : 150 %
 Breakdown torque : 229 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE

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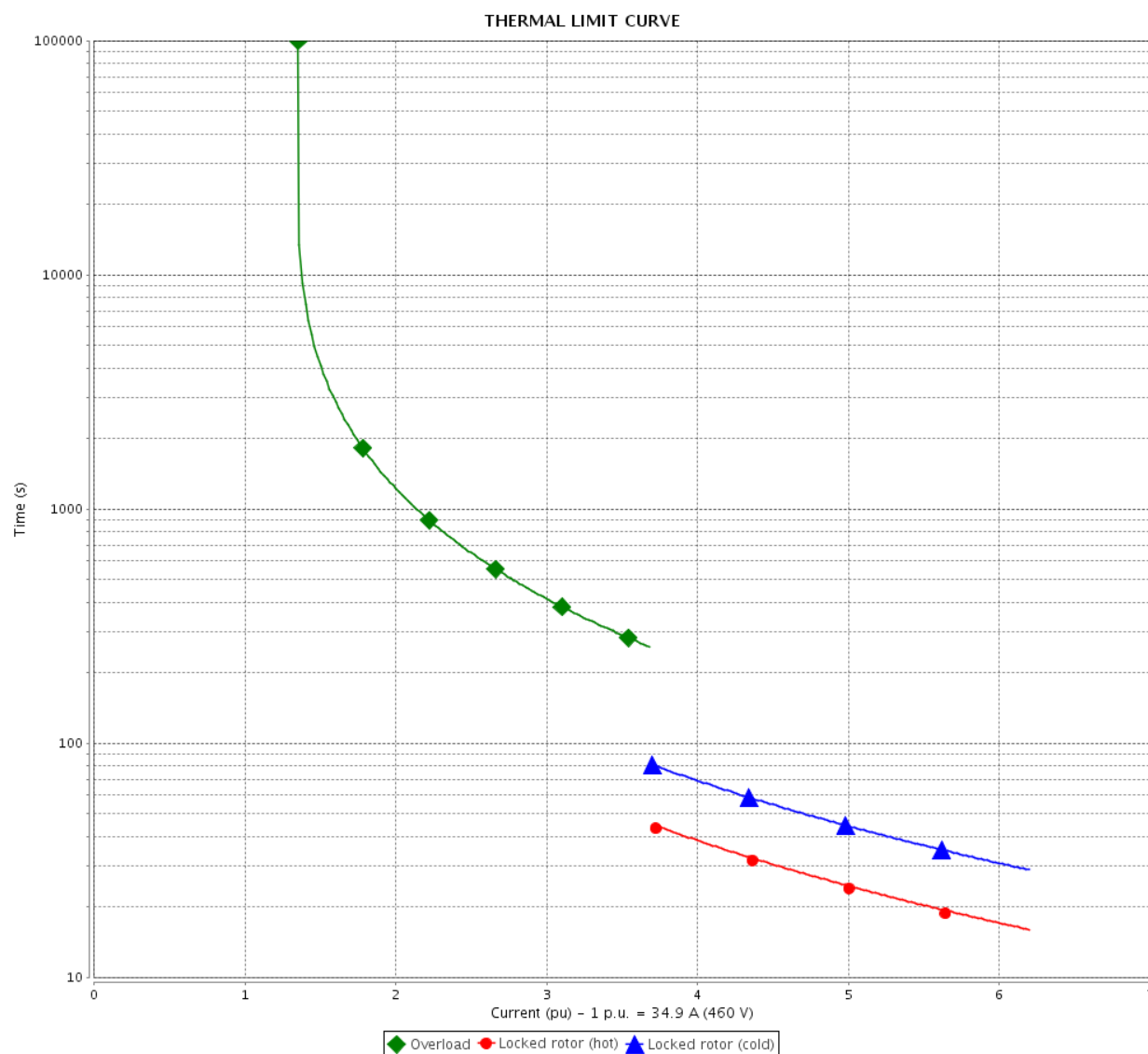
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Catalog # :

03036OP3EFP284TS-W40



Performance : 230/460 V 60 Hz 2P

Rated current : 69.8/34.9 A

LRC : 6.2

Rated torque : 44.5 ft.lb

Locked rotor torque : 170 %

Breakdown torque : 260 %

Rated speed : 3540 rpm

Moment of inertia (J)

: 1.59 sq.ft.lb

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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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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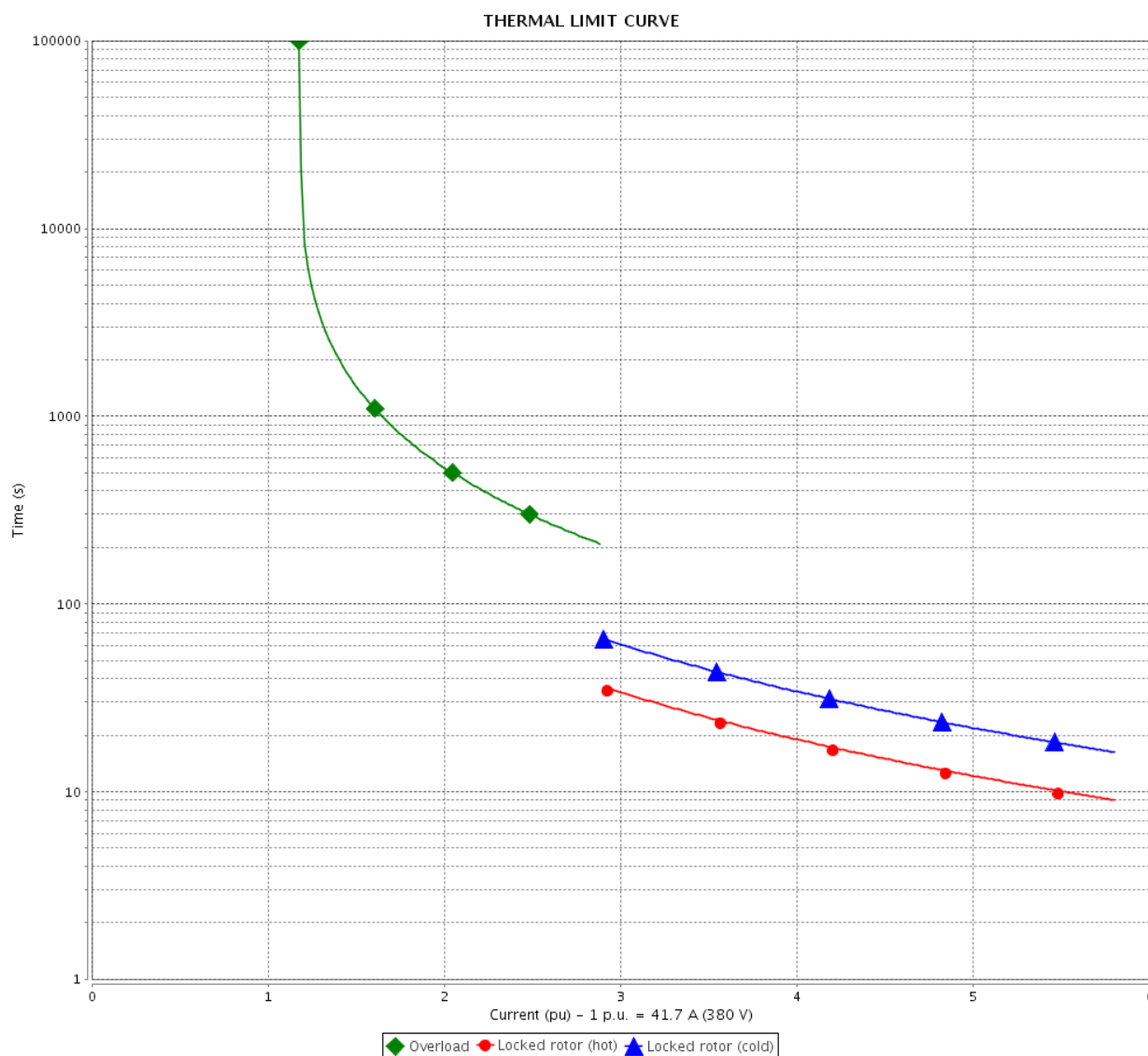
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Performance : 380 V 50 Hz 2P IE1

Rated current : 41.7 A
 LRC : 5.8
 Rated torque : 54.0 ft.lb
 Locked rotor torque : 130 %
 Breakdown torque : 200 %
 Rated speed : 2920 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Heating constant

Cooling constant

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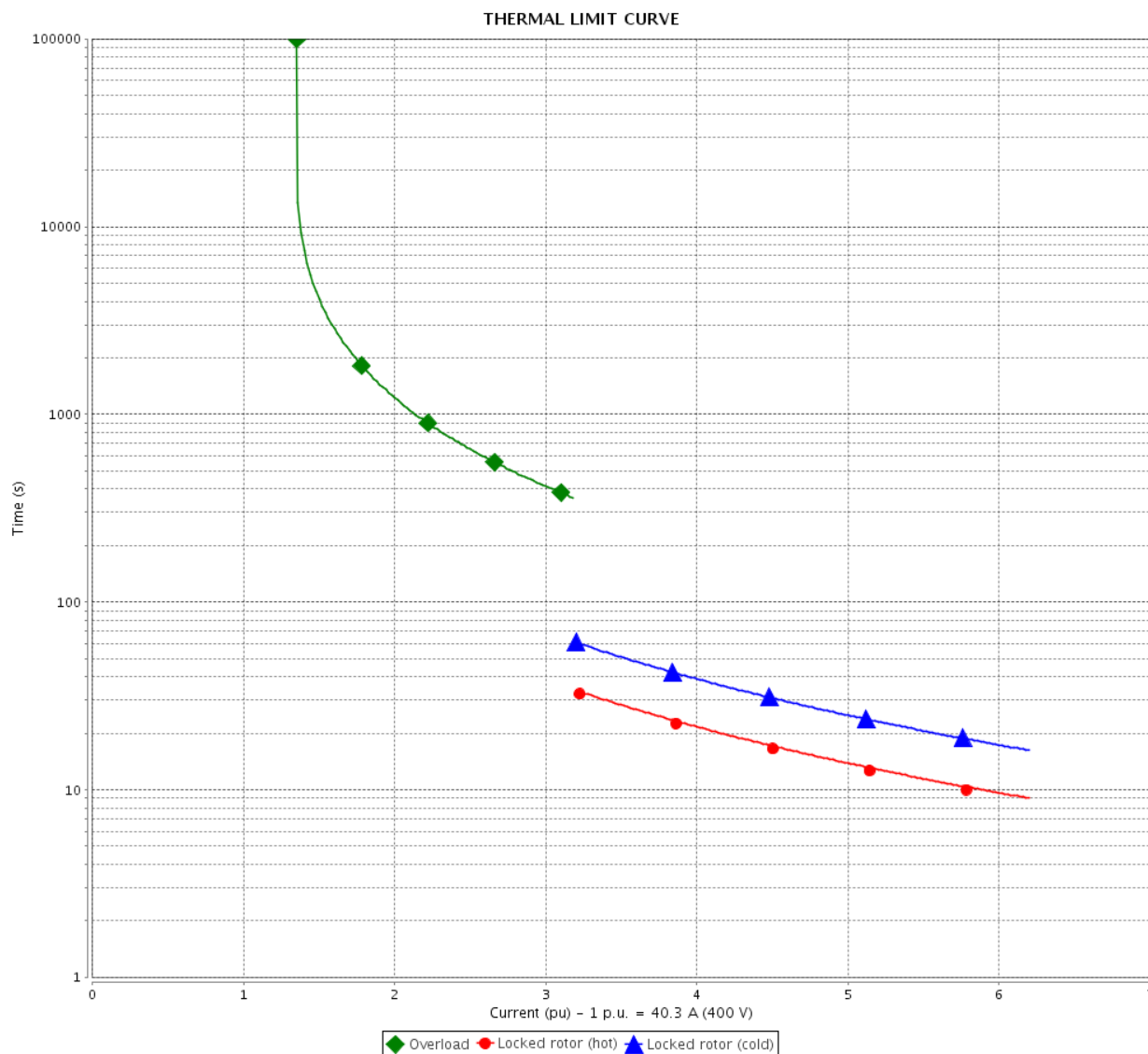
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Performance : 400 V 50 Hz 2P IE1

Rated current : 40.3 A
LRC : 6.2
Rated torque : 53.8 ft.lb
Locked rotor torque : 130 %
Breakdown torque : 210 %
Rated speed : 2930 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
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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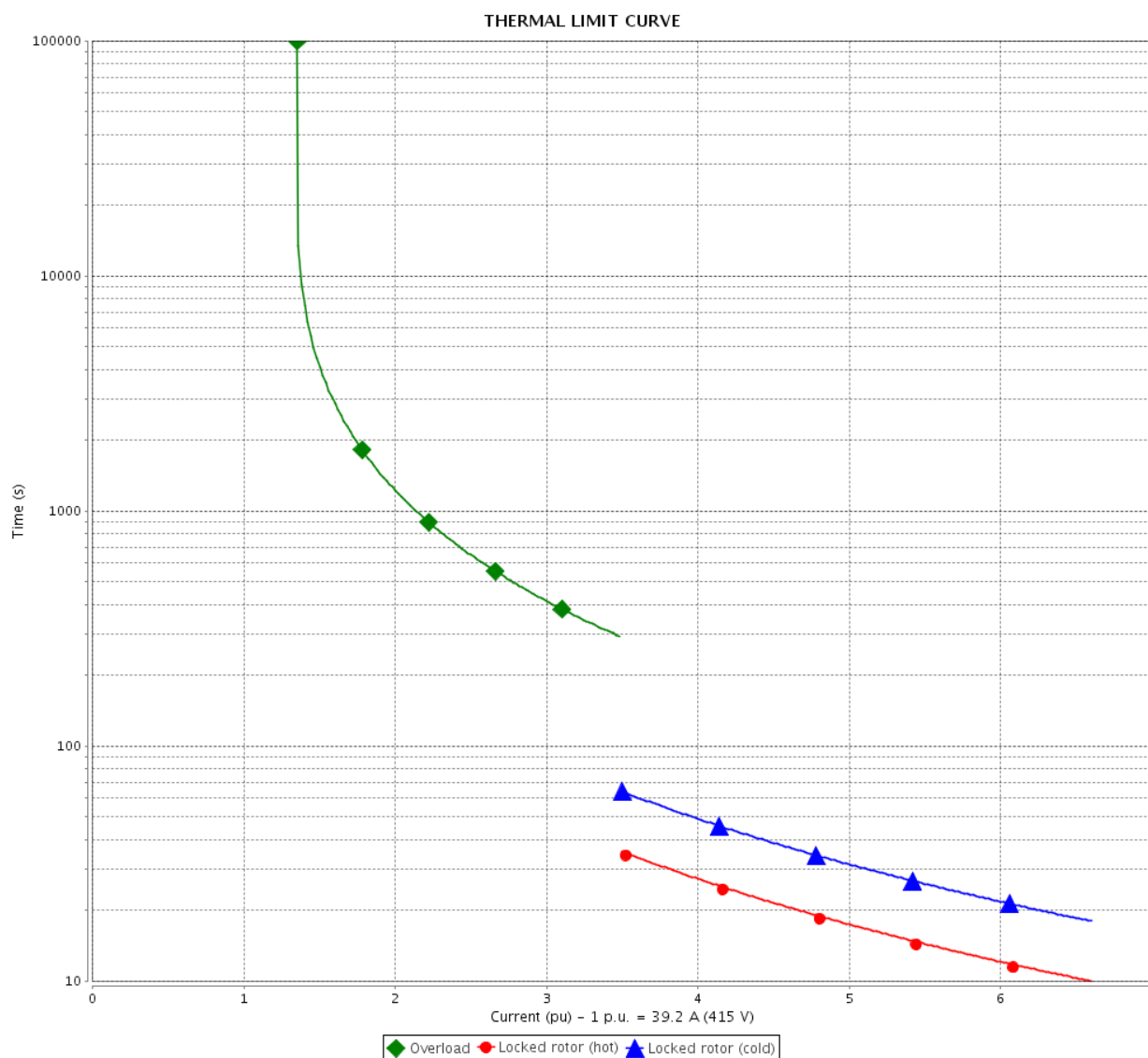
Product line : W40 High Efficiency Three-Phase

Product code :

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Catalog # :

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Performance : 415 V 50 Hz 2P IE1

Rated current : 39.2 A
 LRC : 6.2
 Rated torque : 53.7 ft.lb
 Locked rotor torque : 150 %
 Breakdown torque : 229 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
 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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VFD OPERATION CURVE

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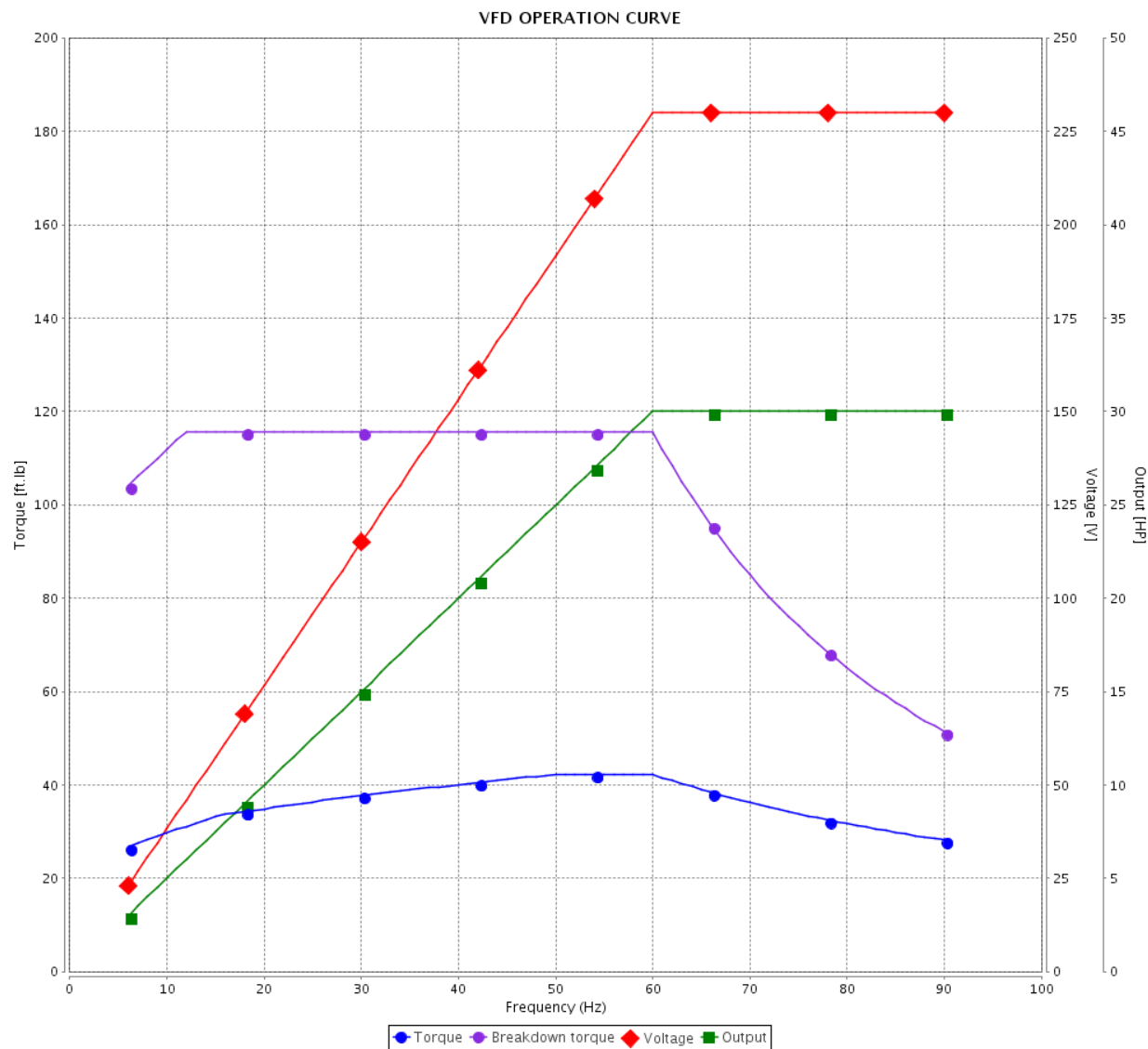
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Performance : 230/460 V 60 Hz 2P

Rated current : 69.8/34.9 A
 LRC : 6.2
 Rated torque : 44.5 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 260 %
 Rated speed : 3540 rpm

Moment of inertia (J) : 1.59 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

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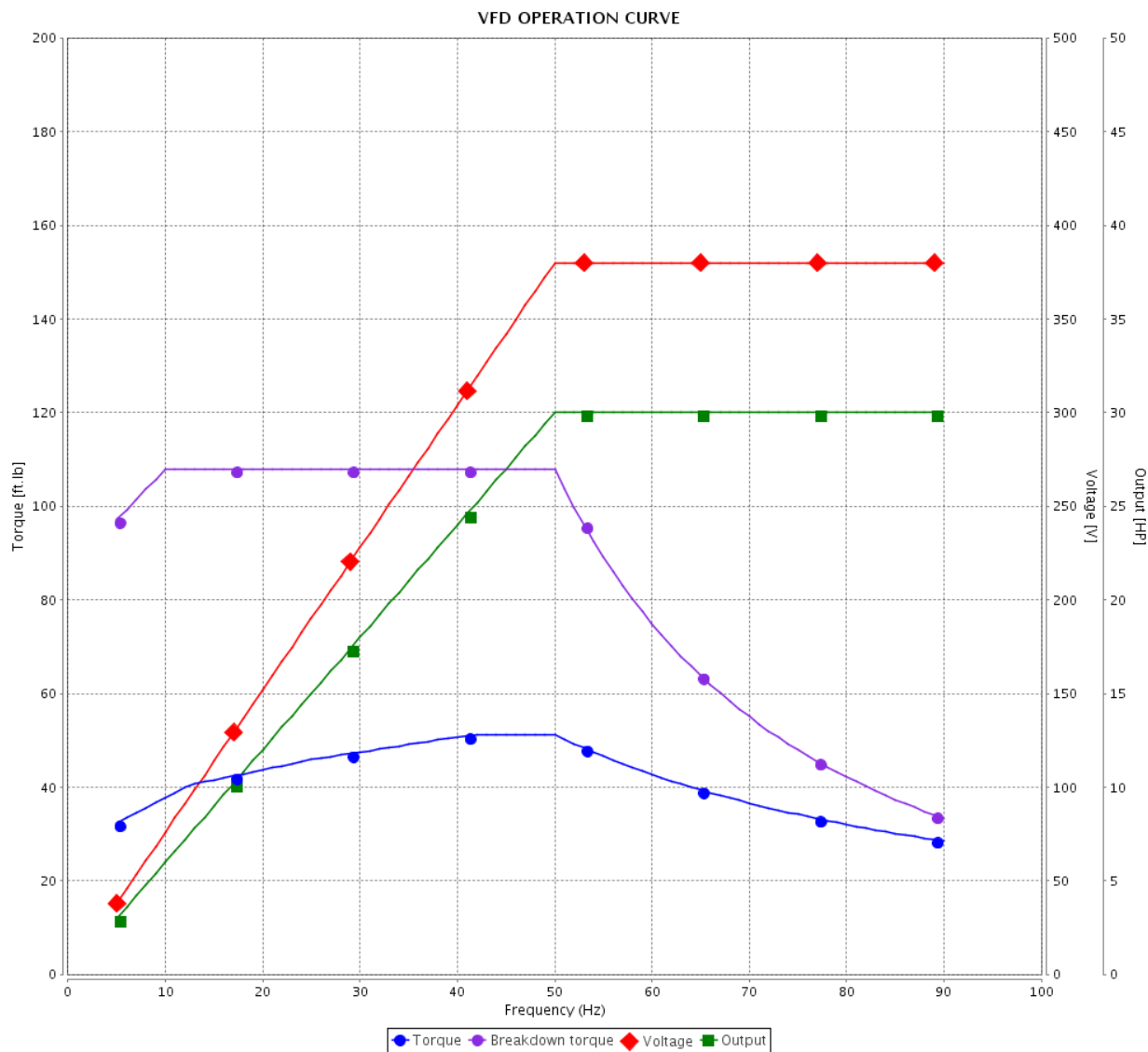
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Performance : 380 V 50 Hz 2P IE1

Rated current : 41.7 A
 LRC : 5.8
 Rated torque : 54.0 ft.lb
 Locked rotor torque : 130 %
 Breakdown torque : 200 %
 Rated speed : 2920 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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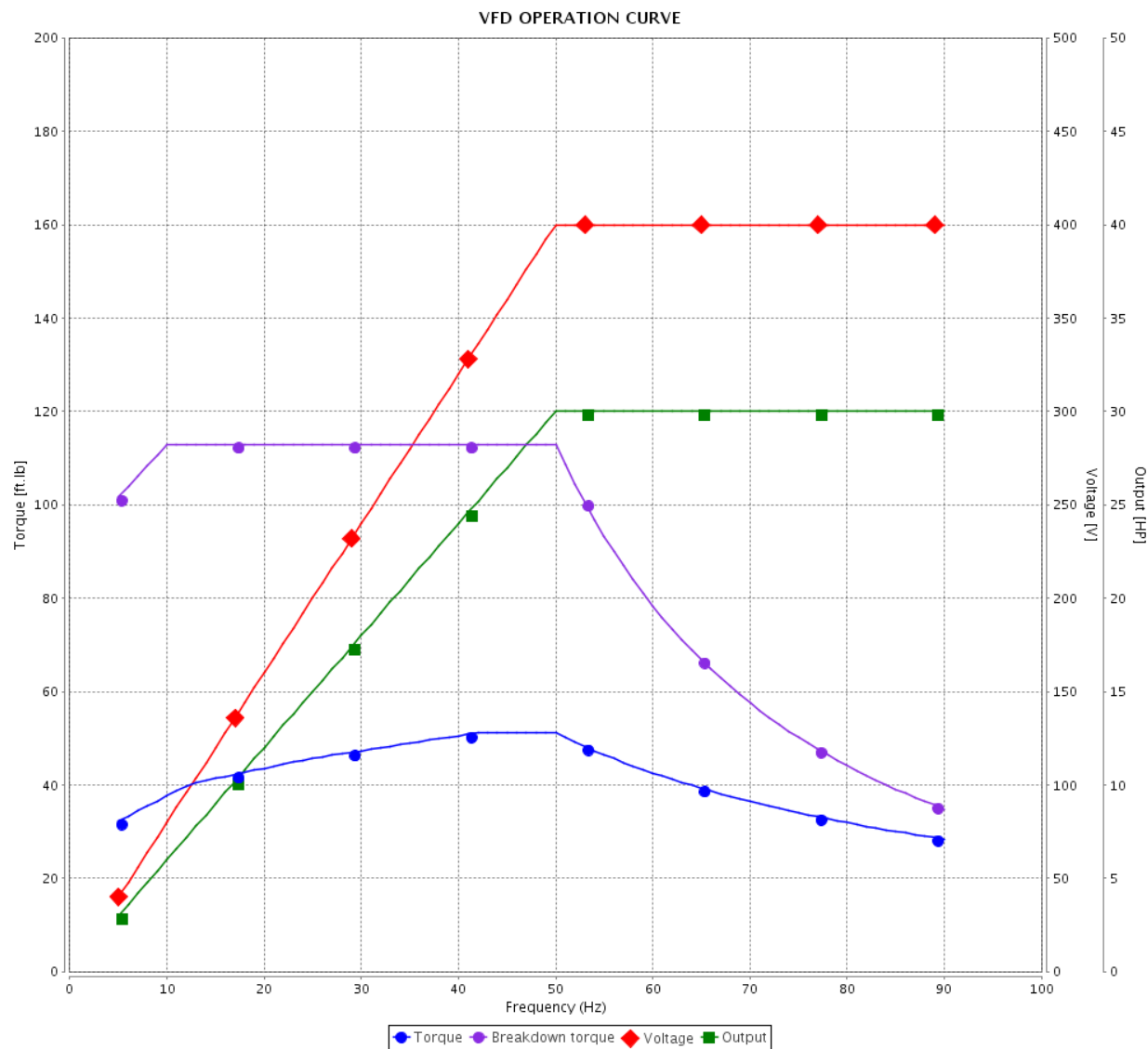
Product line : W40 High Efficiency Three-Phase

Product code :

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Catalog # :

03036OP3EFP284TS-W40



Performance : 400 V 50 Hz 2P IE1

Rated current : 40.3 A
 LRC : 6.2
 Rated torque : 53.8 ft.lb
 Locked rotor torque : 130 %
 Breakdown torque : 210 %
 Rated speed : 2930 rpm

Moment of inertia (J) : 1.59 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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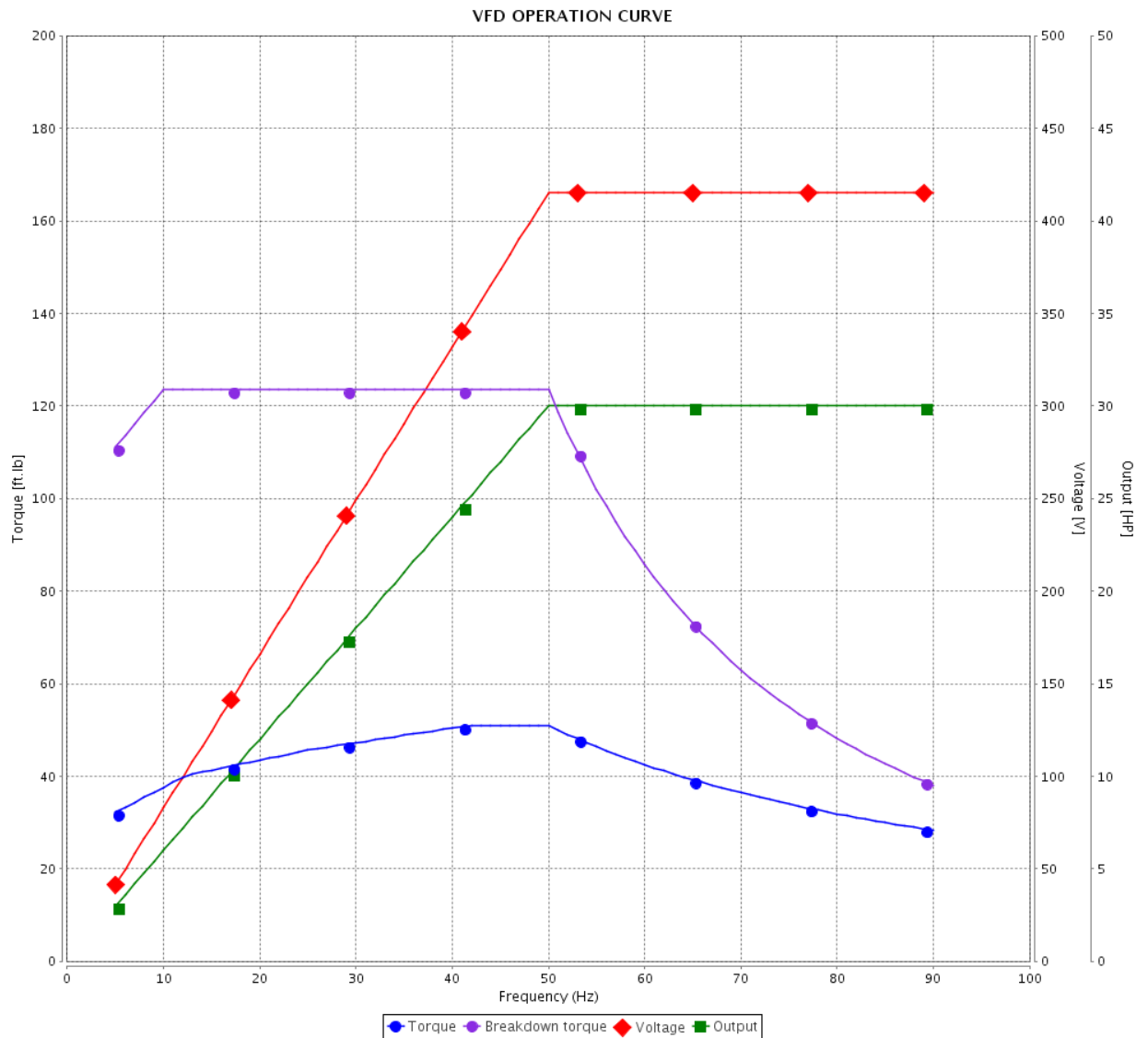
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