

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 Cooling Tower NEMA Premium Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22

Frame	: 284T	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: F-2
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 ^a	: 389 lb
Protection degree	: IP55	Moment of inertia (J)	: 5.11 sq.ft.lb
Design	: B		

Output [HP]	25	20	20	20	25	25	25	
Poles	4	4	4	4	4	4	4	
Frequency [Hz]	60	50	50	50	50	50	50	
Rated voltage [V]	230/460	380	400	415	380	400	415	
Rated current [A]	59.0/29.5	29.1	28.2	27.5	35.9	34.3	33.2	
L. R. Amperes [A]	366/183	175	189	198	190	189	196	
LRC [A]	6.2x(Code G)	6.0x(Code G)	6.7x(Code H)	7.2x(Code J)	5.3x(Code F)	5.5x(Code F)	5.9x(Code G)	
No load current [A]	22.0/11.0	11.0	11.7	12.4	11.0	11.7	12.4	
Rated speed [RPM]	1770	1470	1473	1475	1455	1460	1465	
Slip [%]	1.67	2.00	1.80	1.67	3.00	2.67	2.33	
Rated torque [ft.lb]	74.2	71.4	71.3	71.2	90.2	89.9	89.6	
Locked rotor torque [%]	240	229	250	270	180	200	220	
Breakdown torque [%]	270	260	300	330	210	240	260	
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K	
Locked rotor time	43s (cold) 24s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	
Noise level ²	63.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	
Efficiency (%)	25%	91.7	91.1	91.0	90.8	92.9	92.8	92.2
	50%	92.4	91.3	91.3	91.2	92.4	92.4	92.4
	75%	93.0	92.1	92.5	92.5	91.7	92.4	92.4
	100%	93.6	92.1	92.6	92.7	91.0	91.7	92.4
Power Factor	25%	0.45	0.44	0.41	0.38	0.52	0.48	0.45
	50%	0.70	0.69	0.65	0.62	0.76	0.73	0.70
	75%	0.80	0.80	0.78	0.75	0.84	0.82	0.80
	100%	0.84	0.85	0.83	0.82	0.86	0.85	0.84

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	P2 (0,5;1,0)	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	P3 (0,25;1,0)	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	P4 (0,9;0,5)	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	P5 (0,5;0,5)	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	P6 (0,5;0,25)	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	P7 (0,25;0,25)	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Bearing type	: Drive end	6311	Non drive end	6211	Foundation loads	Max. traction	: 822 lb
	: 2RS C3		: 2RS C3				
Sealing	: V'Ring		V'Ring		Max. compression	: 1210 lb	
Lubrication interval	: -		-				
Lubricant amount	: -		-				
Lubricant type	: Mobil Polyrex EM						

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Three Phase Induction Motor - Squirrel Cage



Customer : _____

Notes
USABLE @208V 65.2A SF 1.15 SFA 75.0A

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Three Phase Induction Motor - Squirrel Cage



Customer : _____

Space heater information

Voltage: 110-127/200-240 V

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



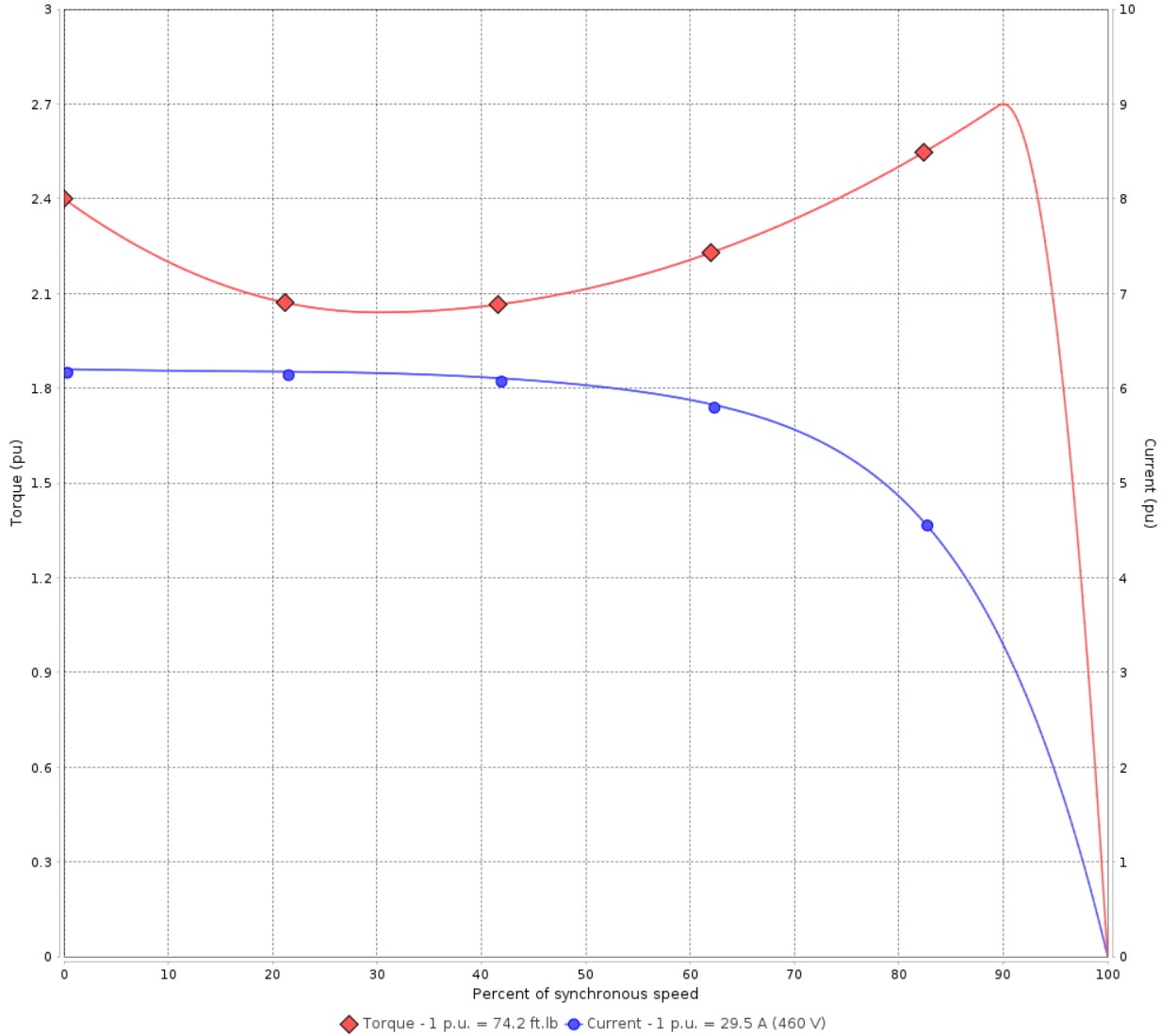
Customer :

Product line : W22 Cooling Tower NEMA Premium Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 59.0/29.5 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 74.2 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

Locked rotor time : 43s (cold) 24s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



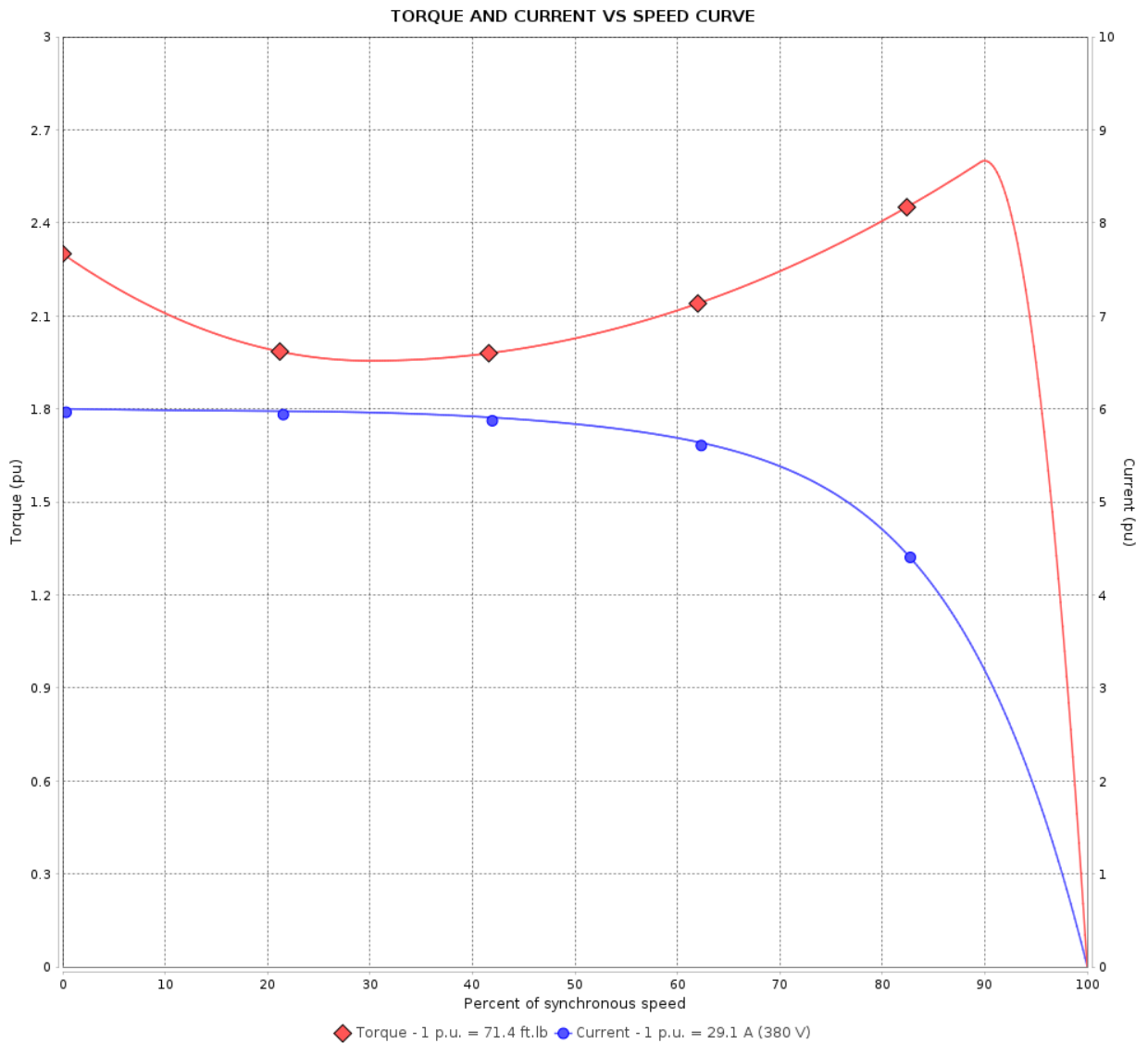
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Customer :

Product line : W22 Cooling Tower NEMA Premium
Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 29.1 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 71.4 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

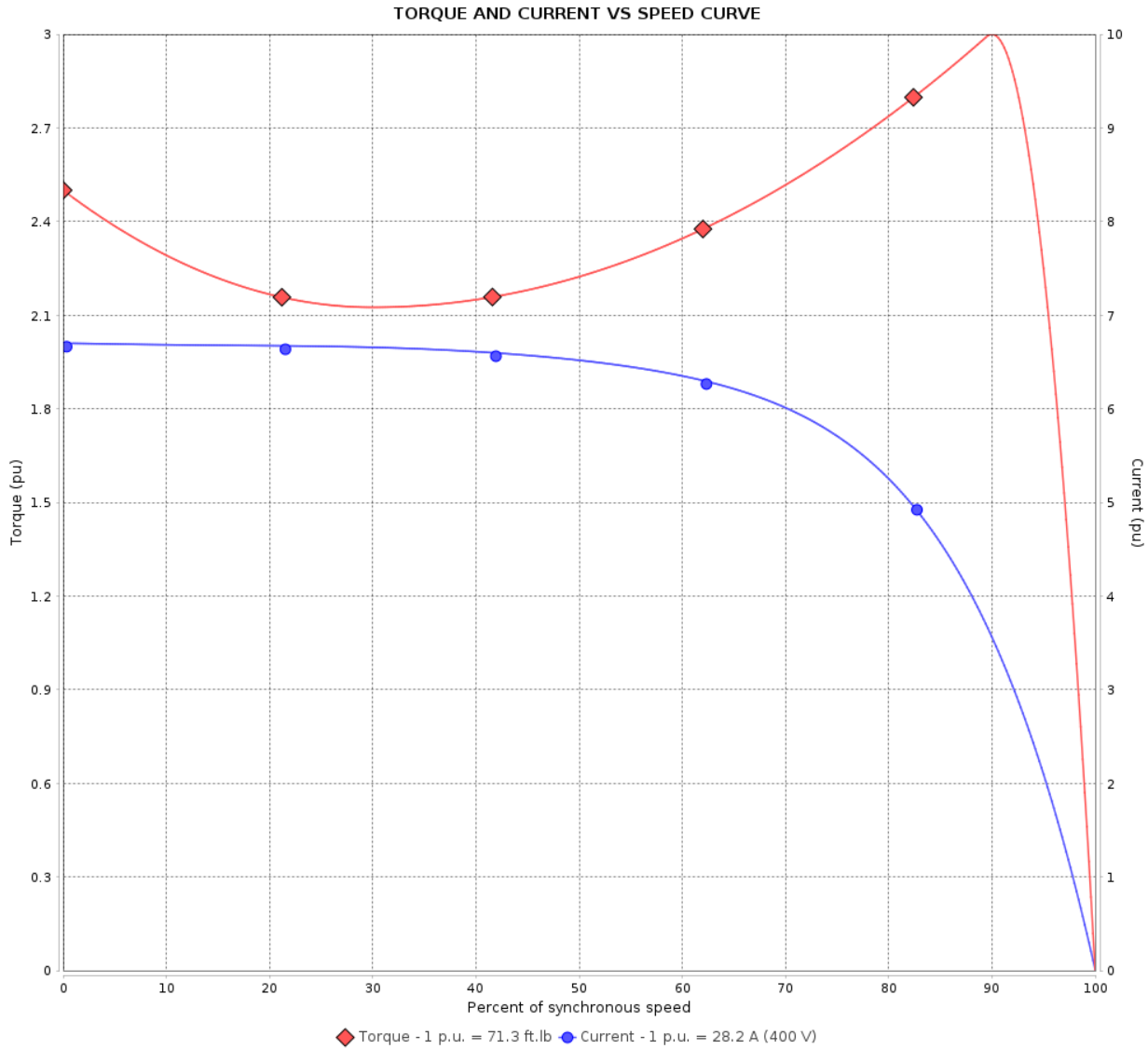


Customer :

Product line : W22 Cooling Tower NEMA Premium
Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 400 V 50 Hz 4P IE3

Rated current	: 28.2 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 71.3 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1473 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



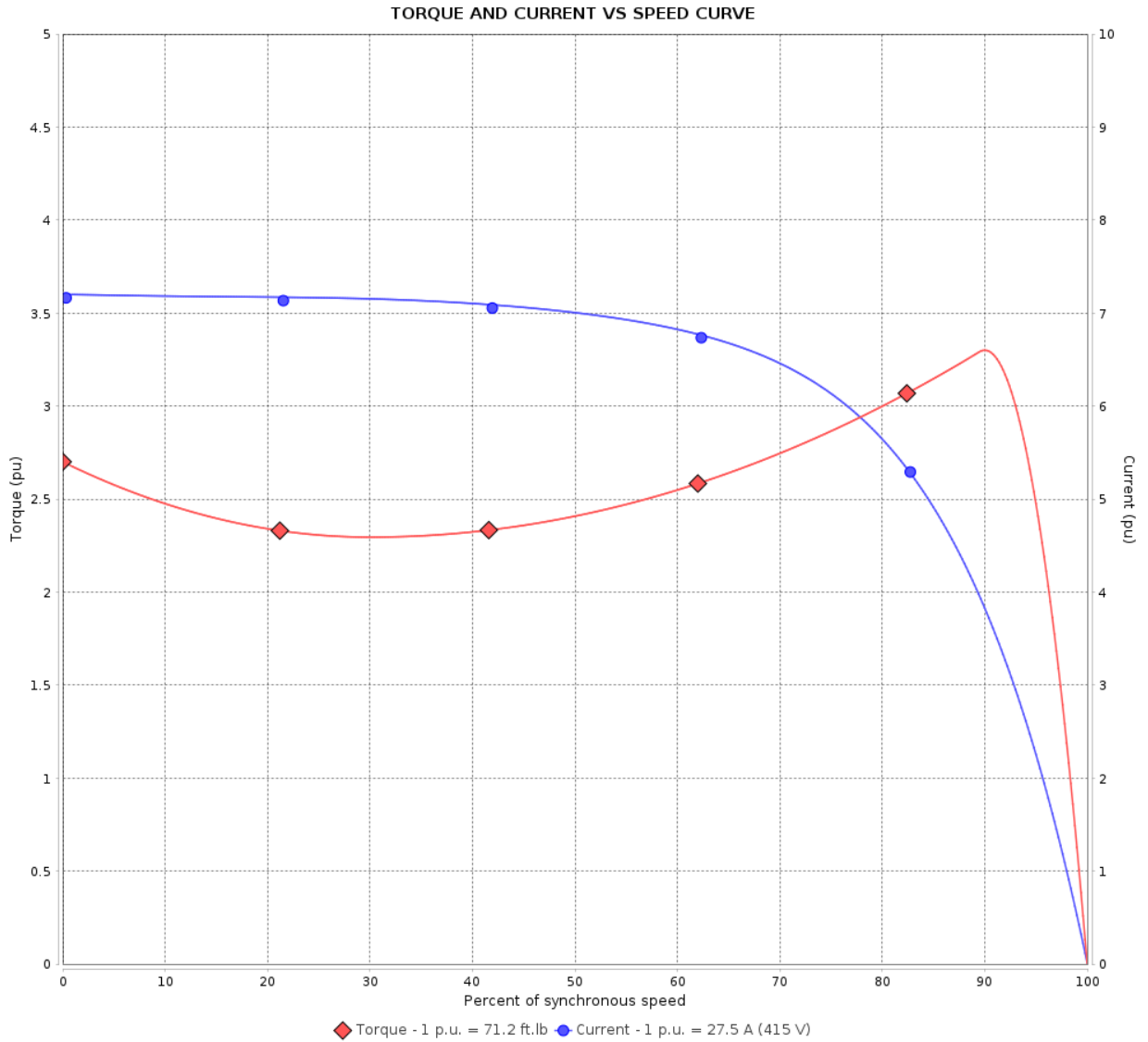
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Performance : 415 V 50 Hz 4P IE3

Rated current	: 27.5 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 71.2 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



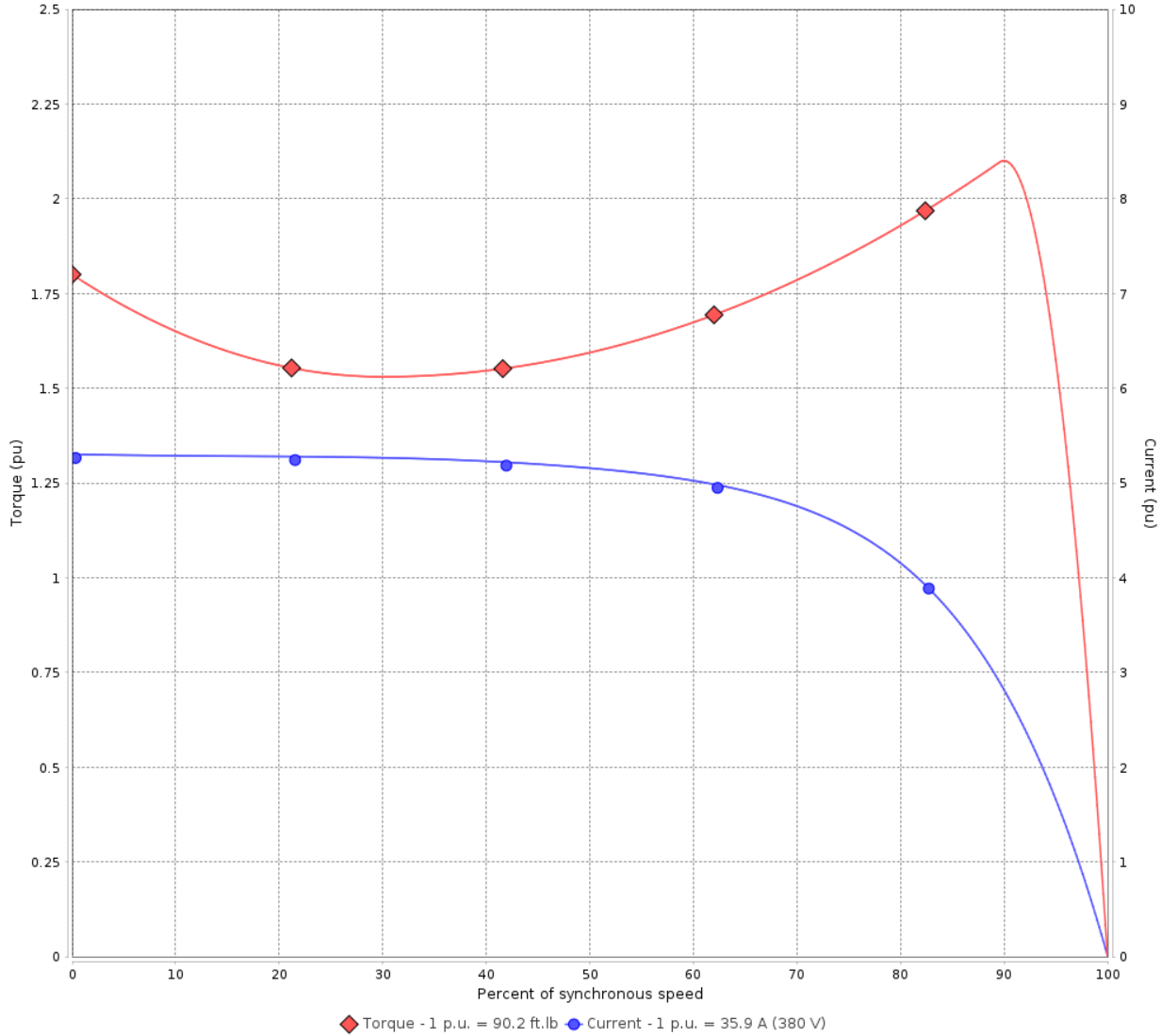
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Product code : 11972328

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current	: 35.9 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 90.2 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1455 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



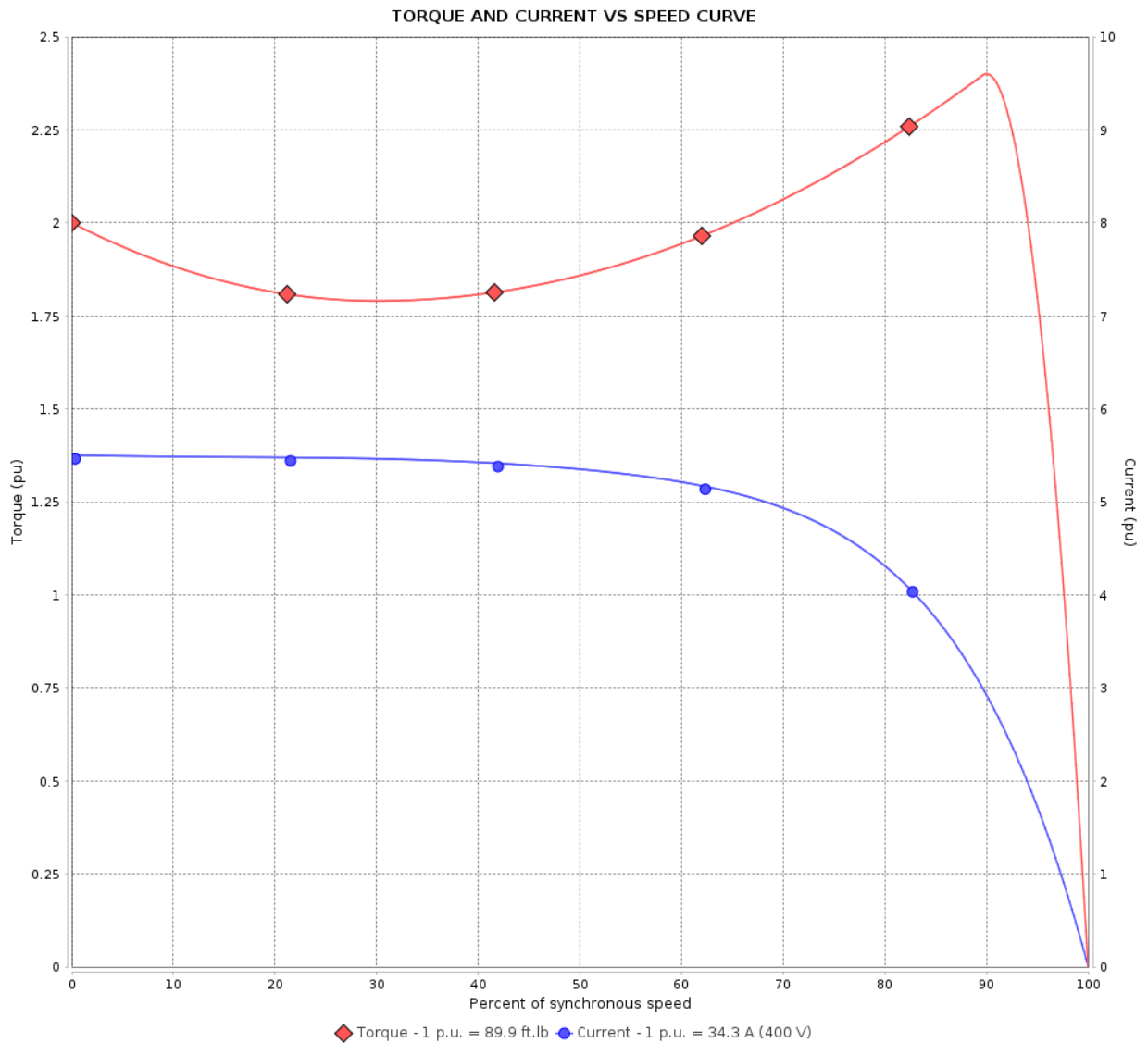
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Customer :

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Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 400 V 50 Hz 4P IE2

Rated current	: 34.3 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 89.9 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



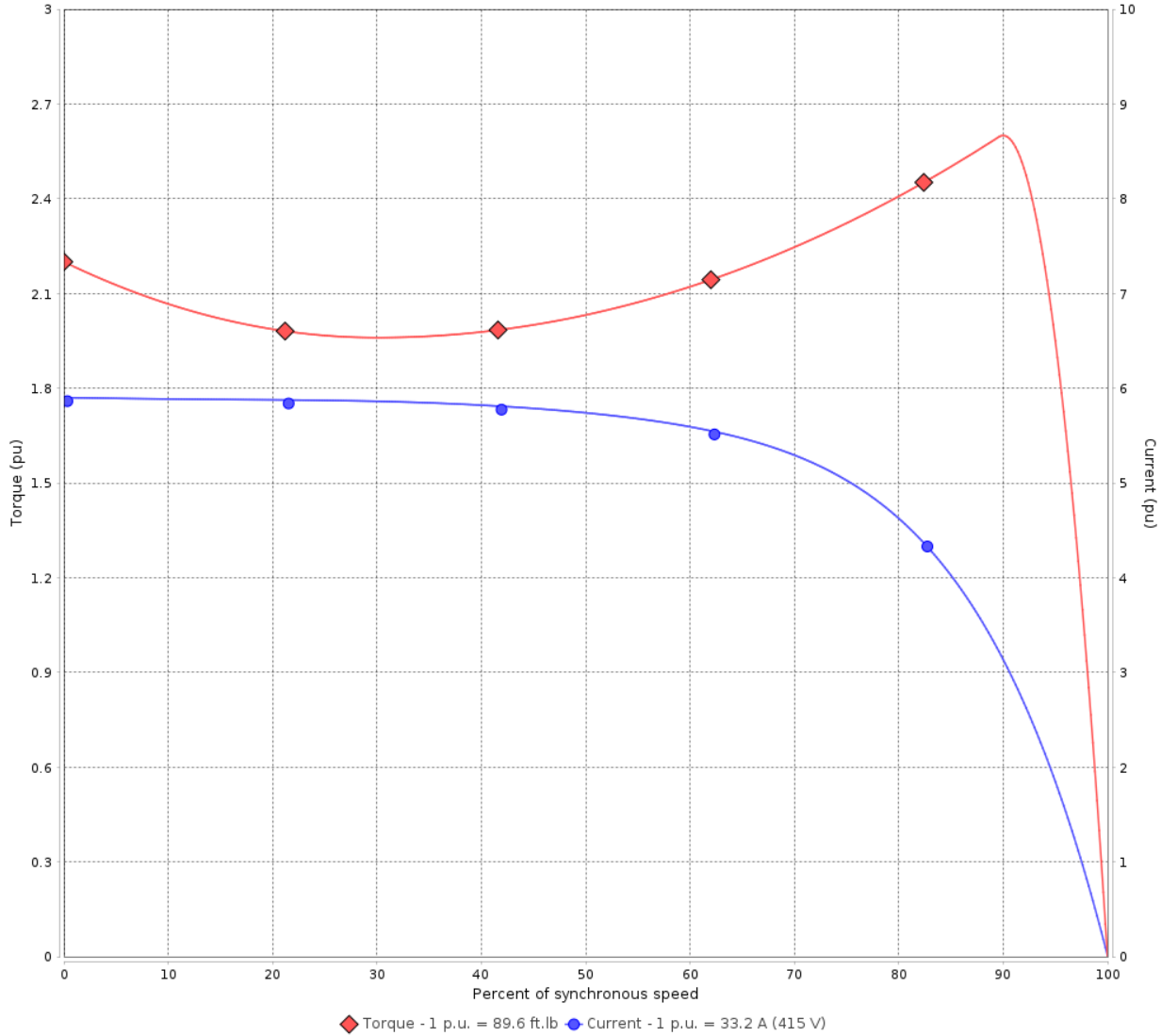
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 33.2 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 89.6 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 1465 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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Three Phase Induction Motor - Squirrel Cage

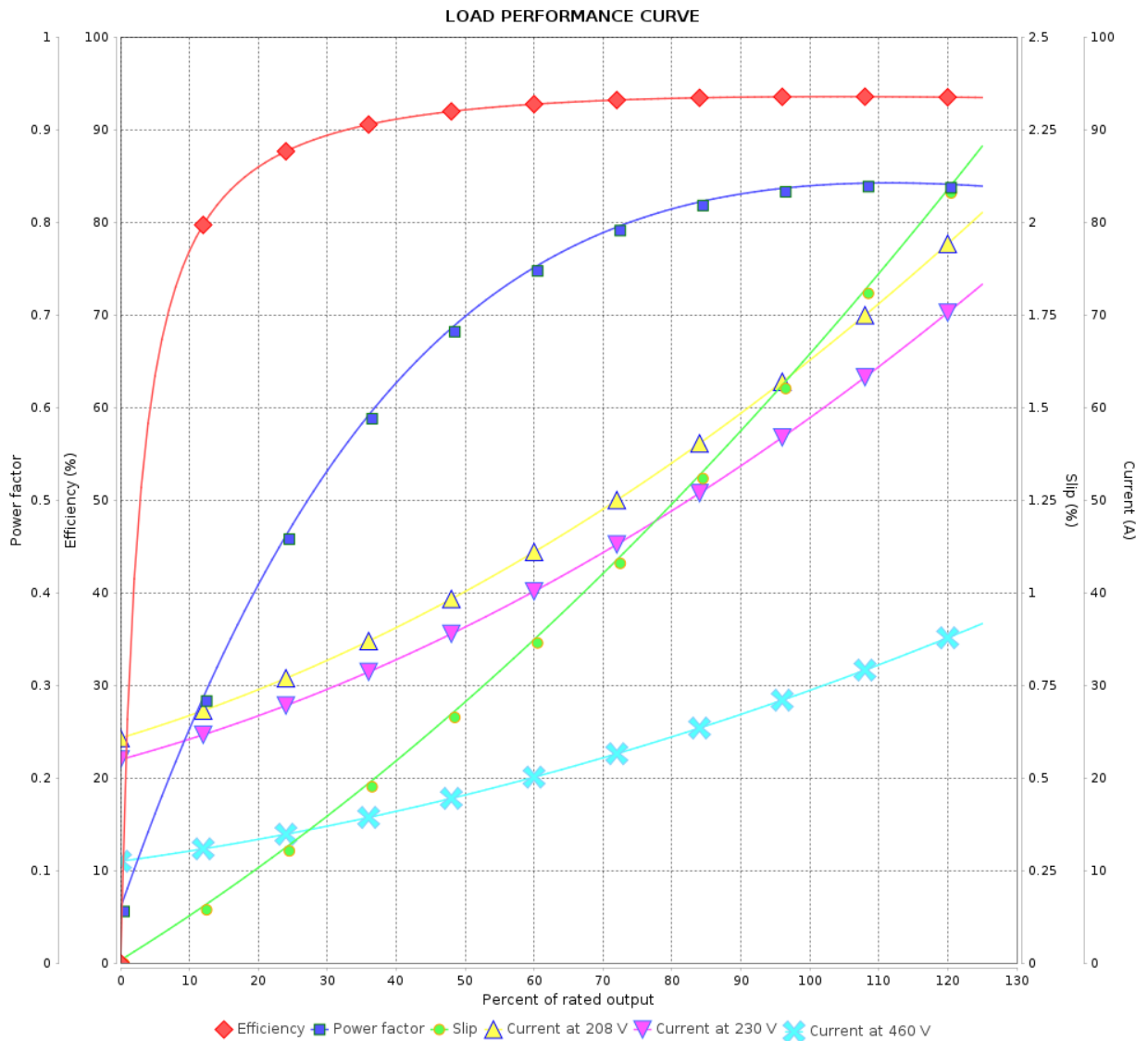


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Performance : 230/460 V 60 Hz 4P

Rated current : 59.0/29.5 A
 LRC : 6.2
 Rated torque : 74.2 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 270 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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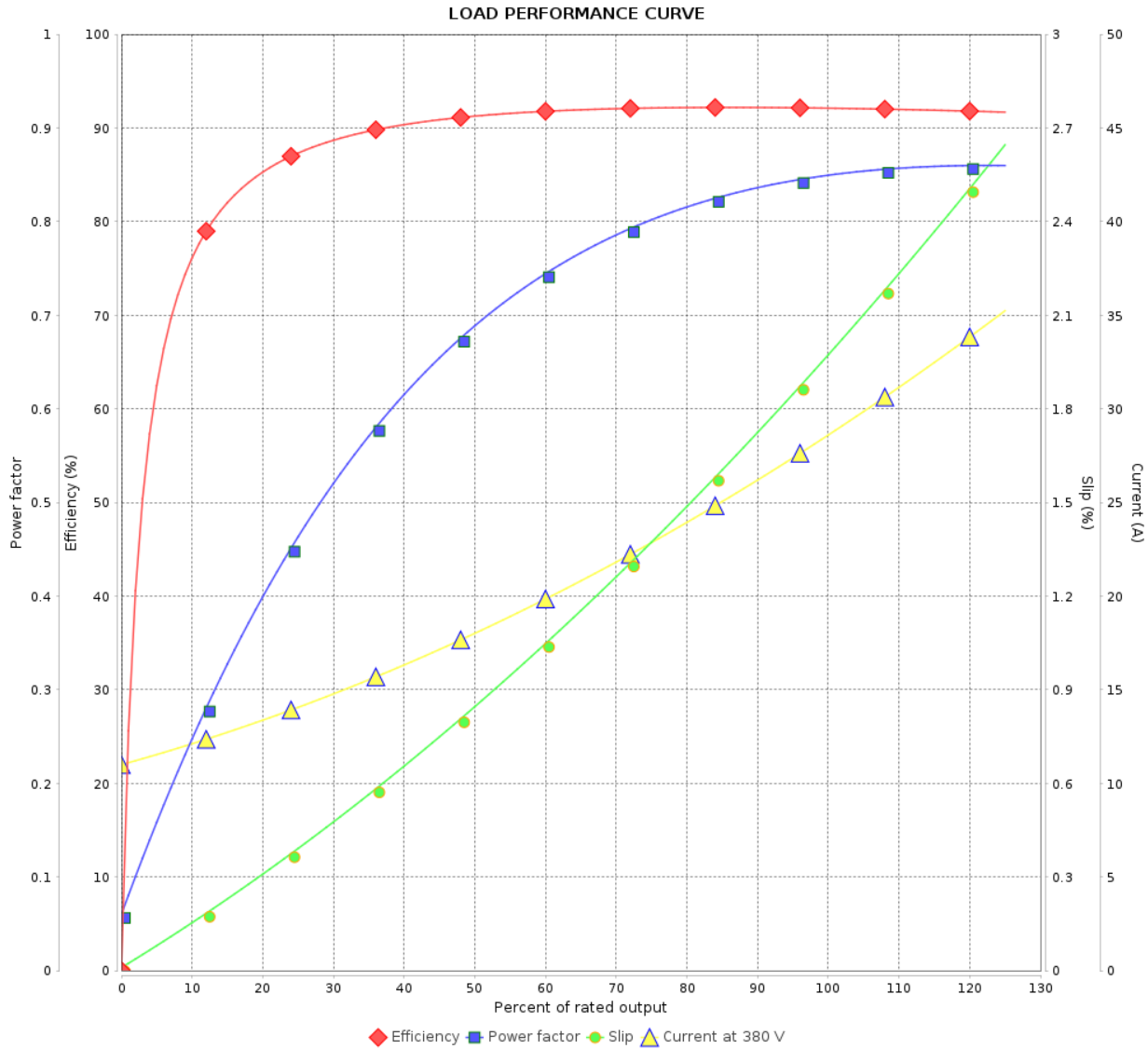


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Performance : 380 V 50 Hz 4P IE3

Rated current : 29.1 A
 LRC : 6.0
 Rated torque : 71.4 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1470 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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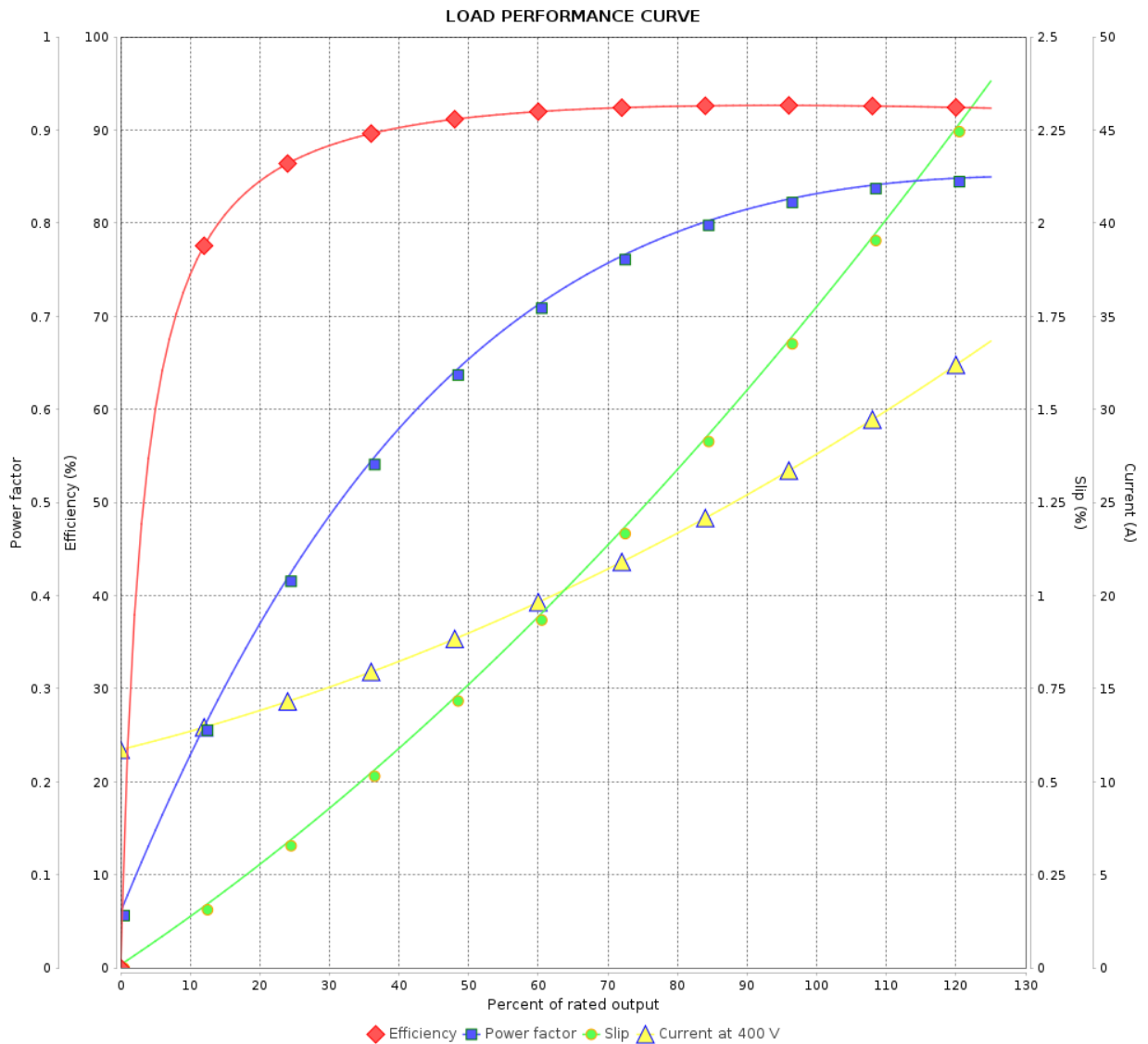


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Efficiency Three-Phase

Product code : 11972328

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Performance : 400 V 50 Hz 4P IE3

Rated current : 28.2 A
 LRC : 6.7
 Rated torque : 71.3 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 300 %
 Rated speed : 1473 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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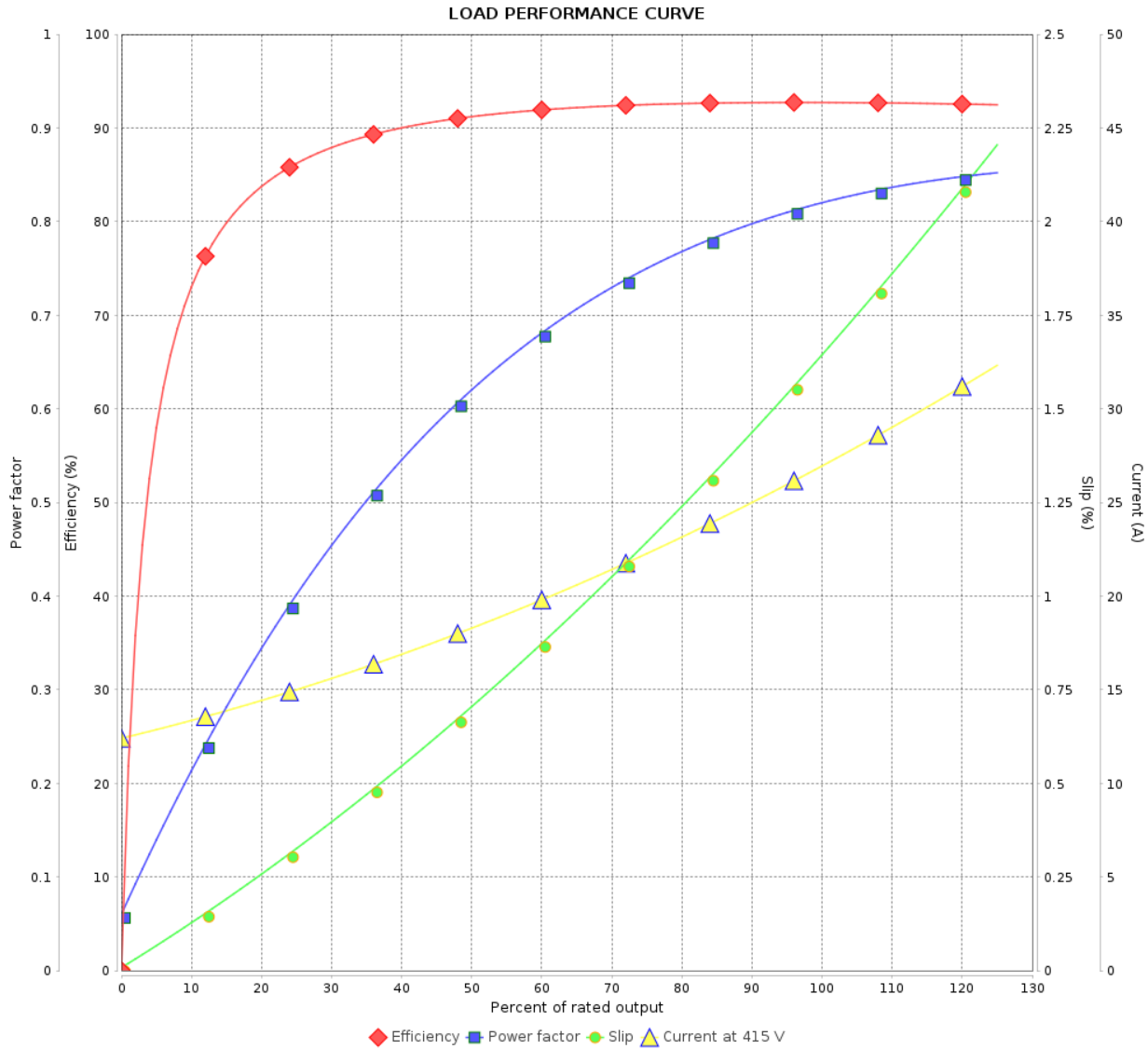


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Performance : 415 V 50 Hz 4P IE3

Rated current : 27.5 A
 LRC : 7.2
 Rated torque : 71.2 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 330 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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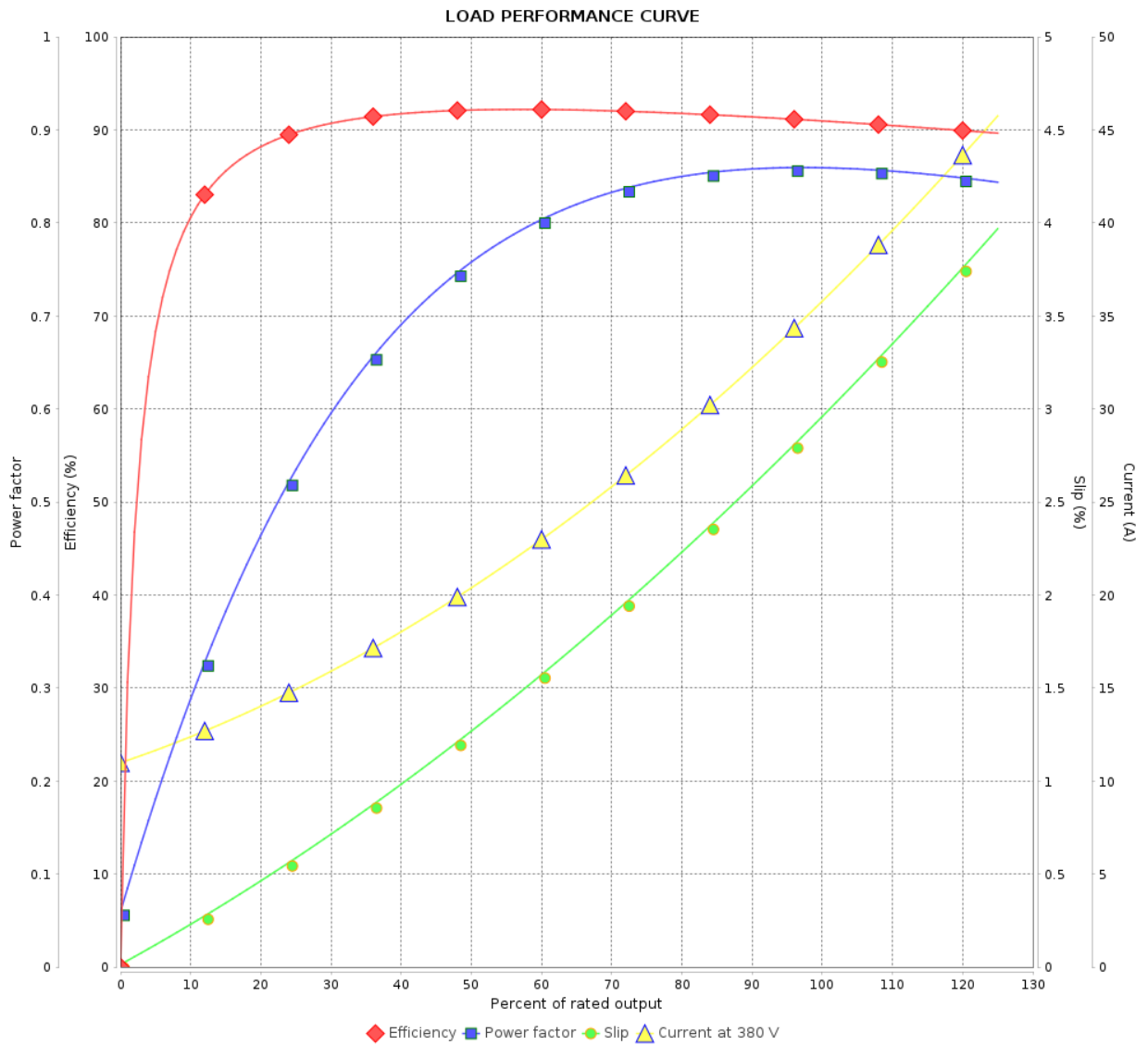


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Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 380 V 50 Hz 4P IE1

Rated current : 35.9 A
 LRC : 5.3
 Rated torque : 90.2 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 210 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 5.11 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

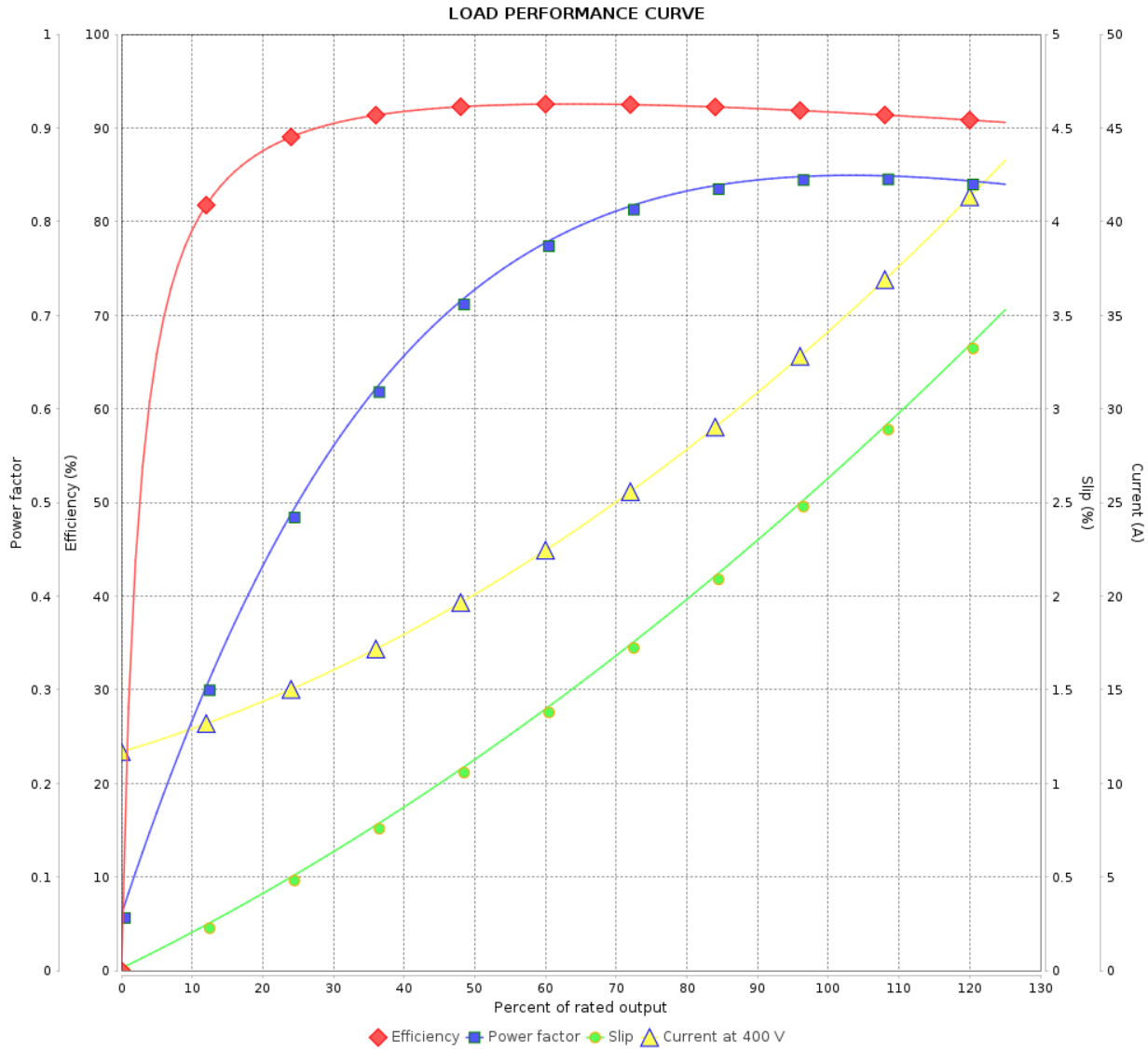


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Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 400 V 50 Hz 4P IE2

Rated current : 34.3 A
 LRC : 5.5
 Rated torque : 89.9 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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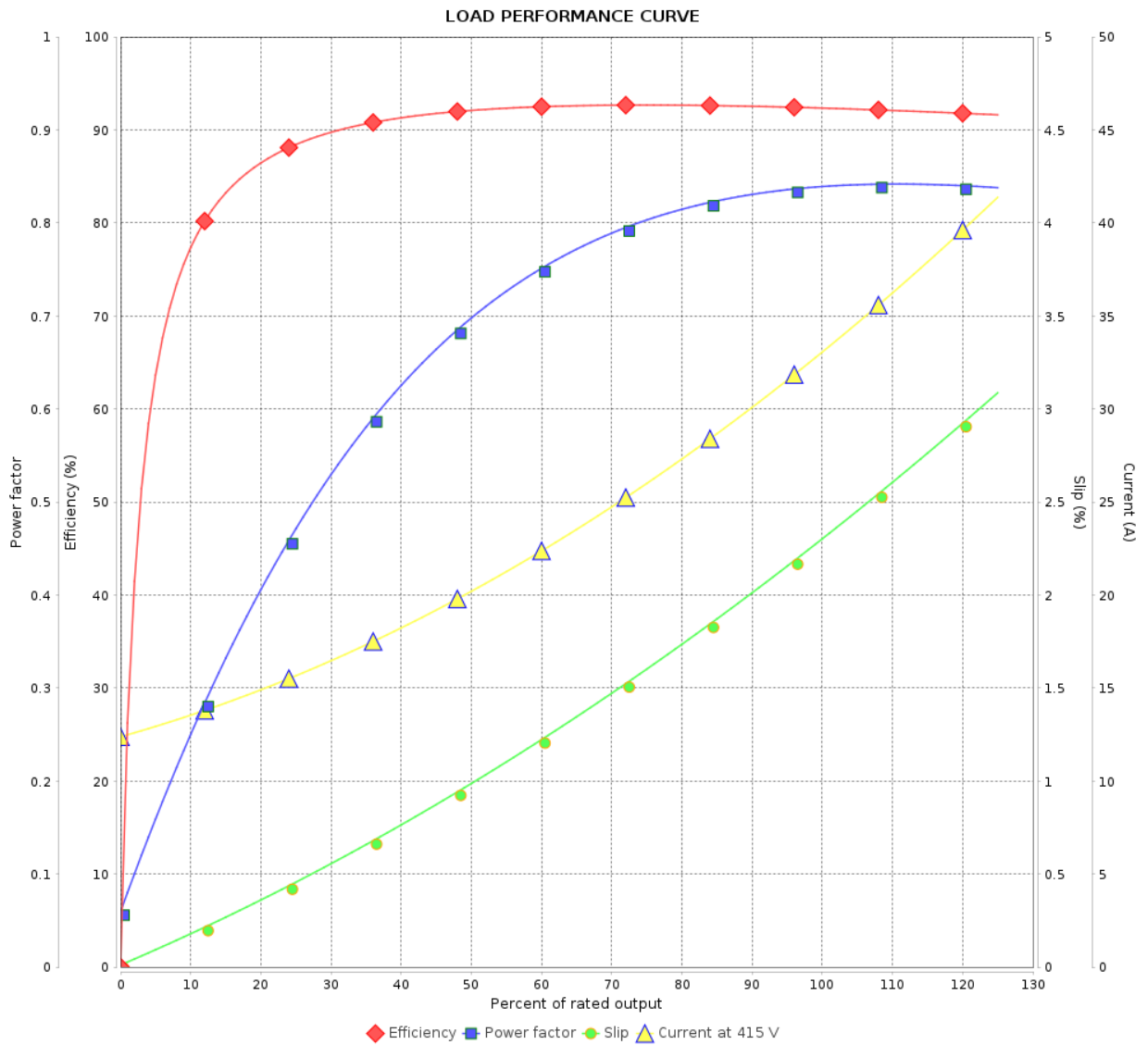


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Performance : 415 V 50 Hz 4P IE2

Rated current : 33.2 A
LRC : 5.9
Rated torque : 89.6 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 260 %
Rated speed : 1465 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22

Performance : 230/460 V 60 Hz 4P

Rated current : 59.0/29.5 A
LRC : 6.2
Rated torque : 74.2 ft.lb
Locked rotor torque : 240 %
Breakdown torque : 270 %
Rated speed : 1770 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

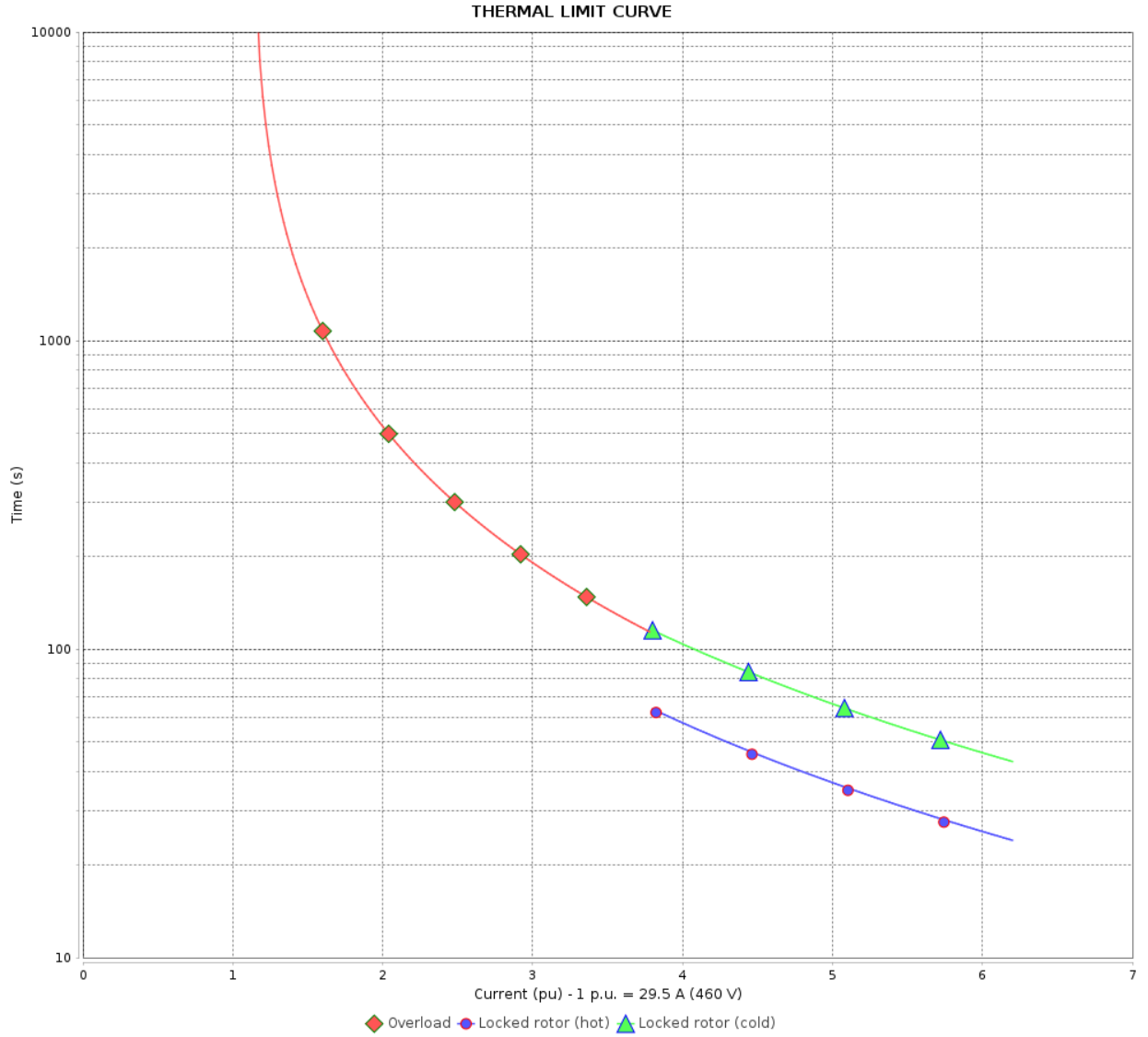
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THERMAL LIMIT CURVE



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Customer :

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Performance : 380 V 50 Hz 4P IE3

Rated current	: 29.1 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 71.4 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

Heating constant

Cooling constant

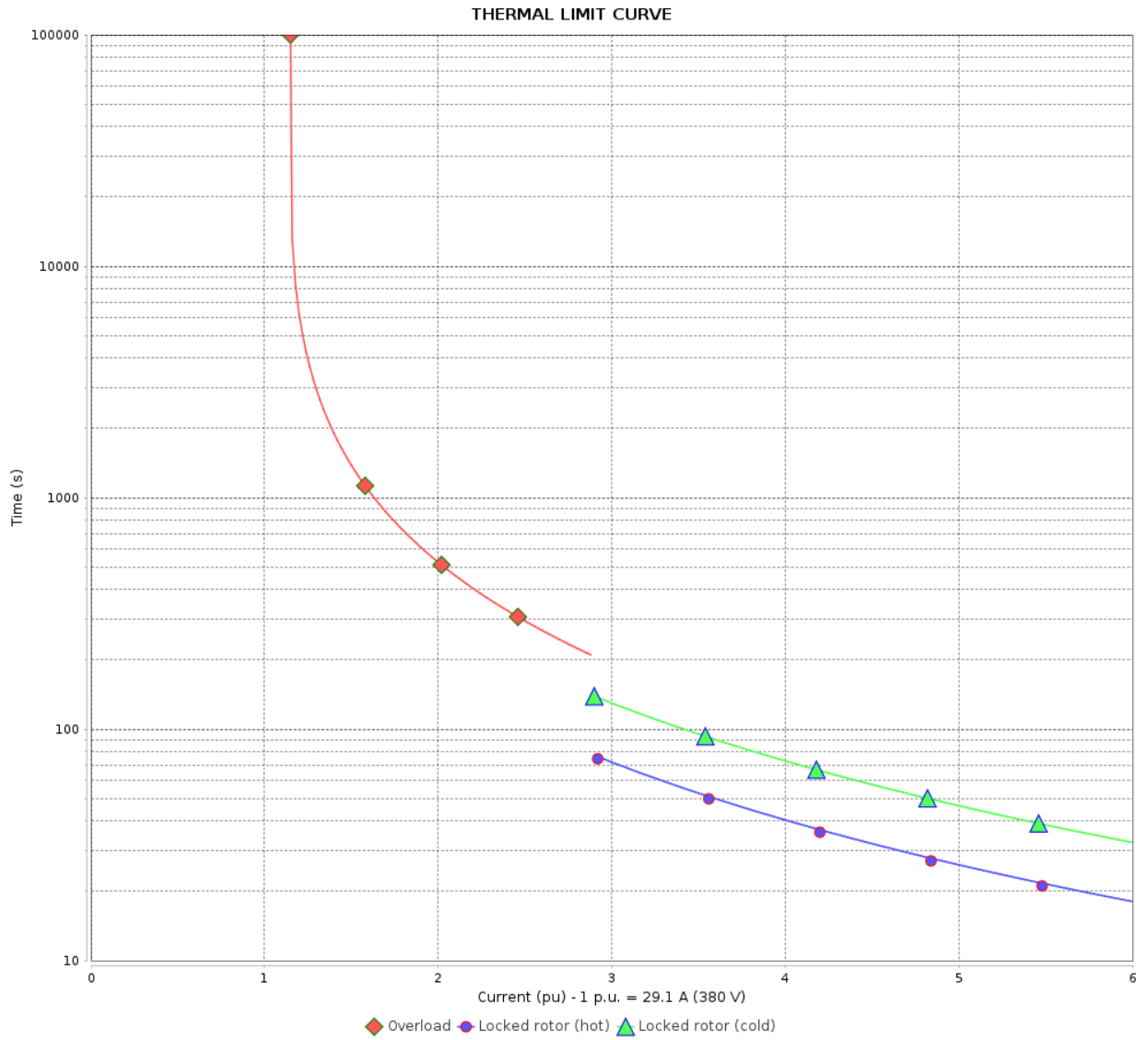
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THERMAL LIMIT CURVE



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Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22

Performance : 400 V 50 Hz 4P IE3

Rated current	: 28.2 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 71.3 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1473 rpm	Design	: B

Heating constant

Cooling constant

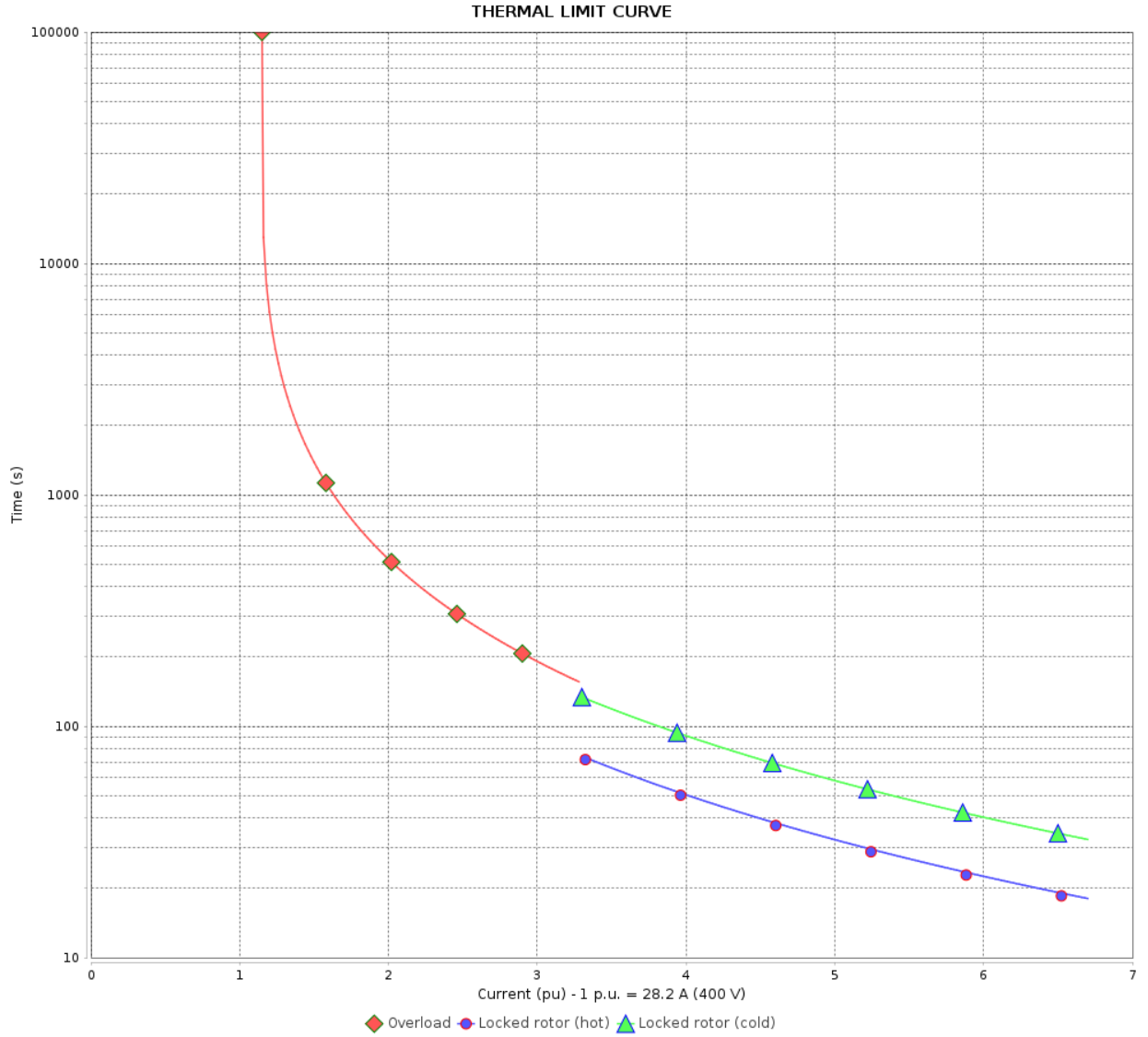
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Performance : 415 V 50 Hz 4P IE3

Rated current	: 27.5 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 71.2 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

Heating constant

Cooling constant

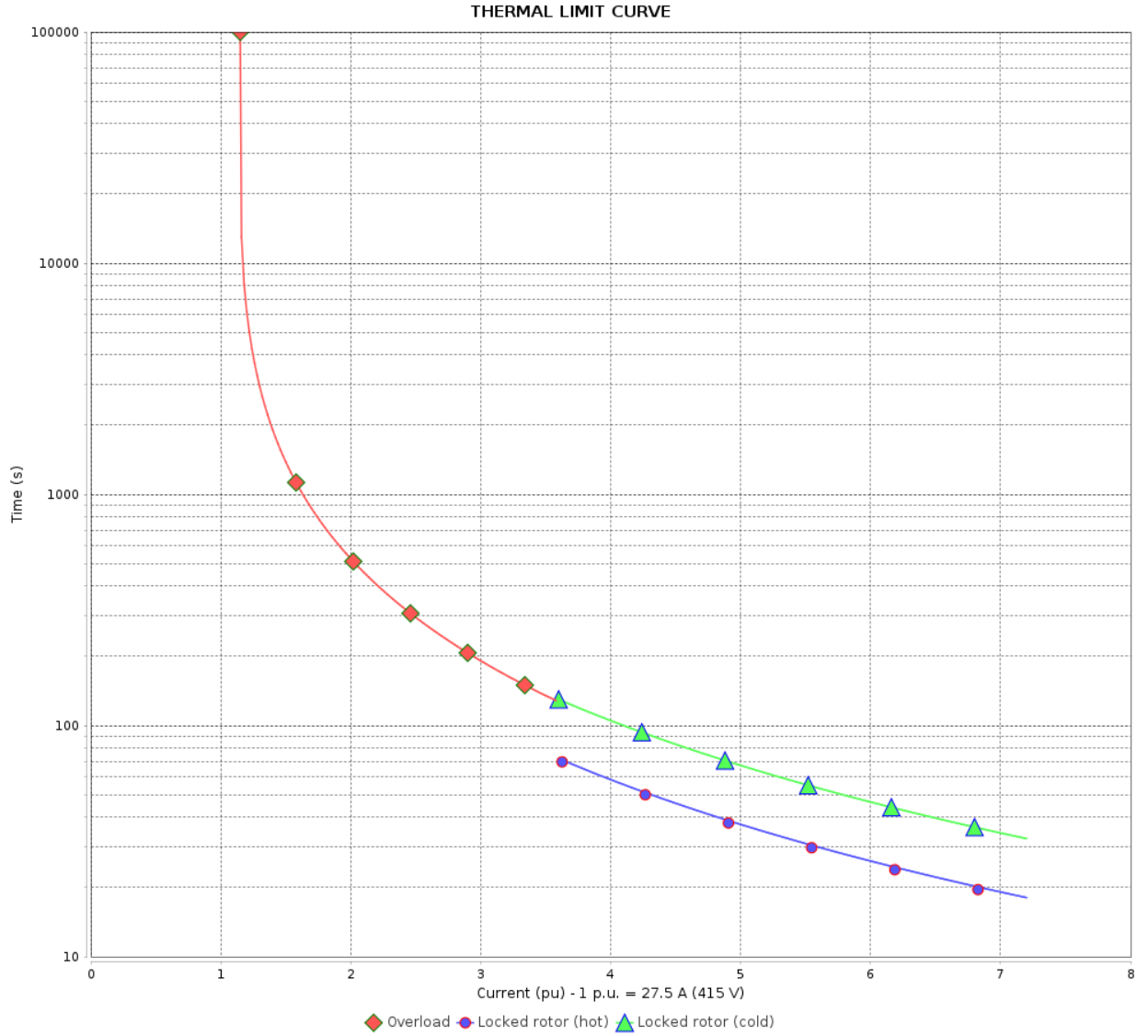
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Customer :

Product line : W22 Cooling Tower NEMA Premium
Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22

Performance : 380 V 50 Hz 4P IE1

Rated current	: 35.9 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 90.2 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1455 rpm	Design	: B

Heating constant

Cooling constant

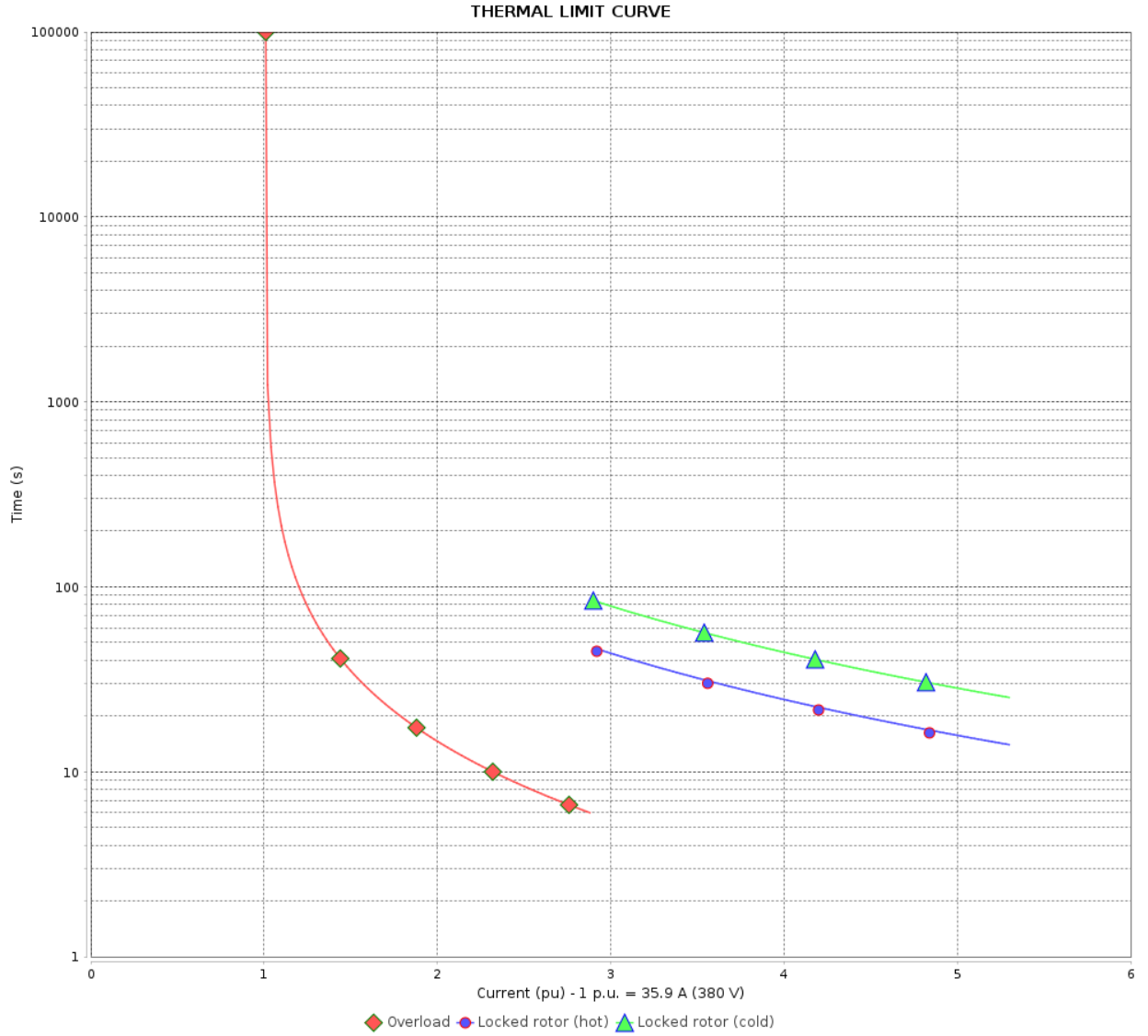
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 Cooling Tower NEMA Premium
Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22

Performance : 400 V 50 Hz 4P IE2

Rated current	: 34.3 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 89.9 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

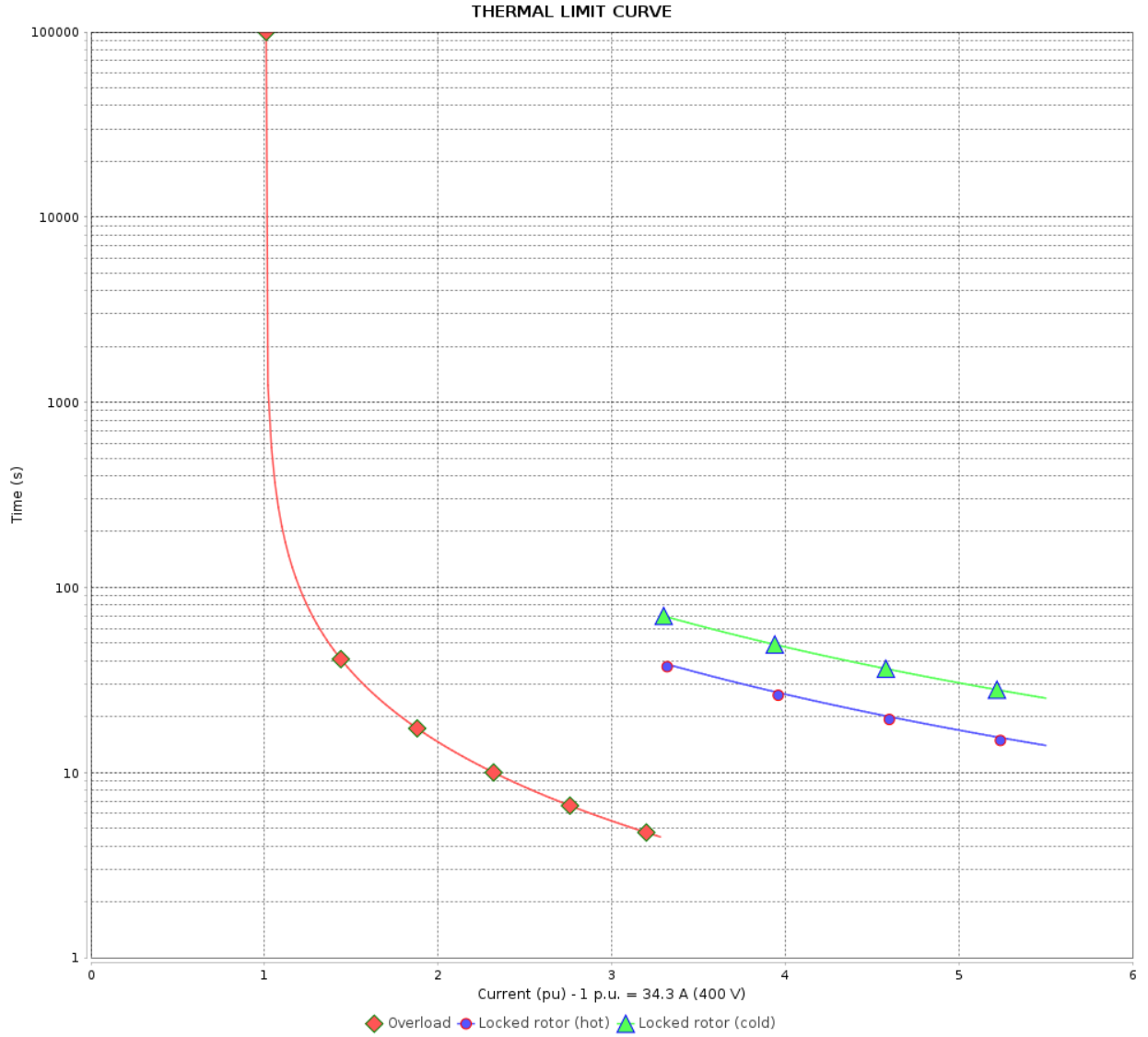
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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 Cooling Tower NEMA Premium
Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22

Performance : 415 V 50 Hz 4P IE2

Rated current	: 33.2 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 89.6 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 1465 rpm	Design	: B

Heating constant

Cooling constant

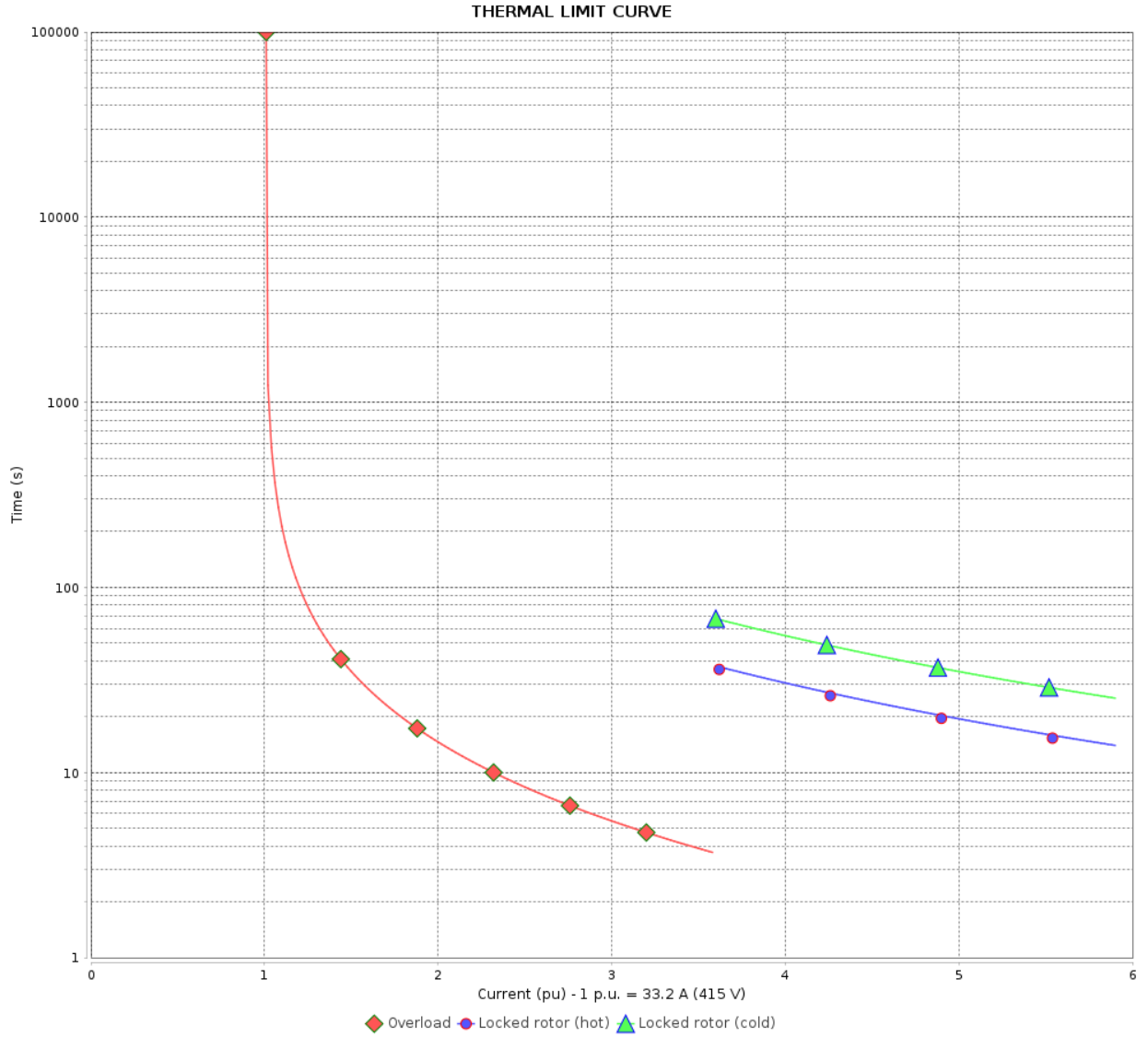
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

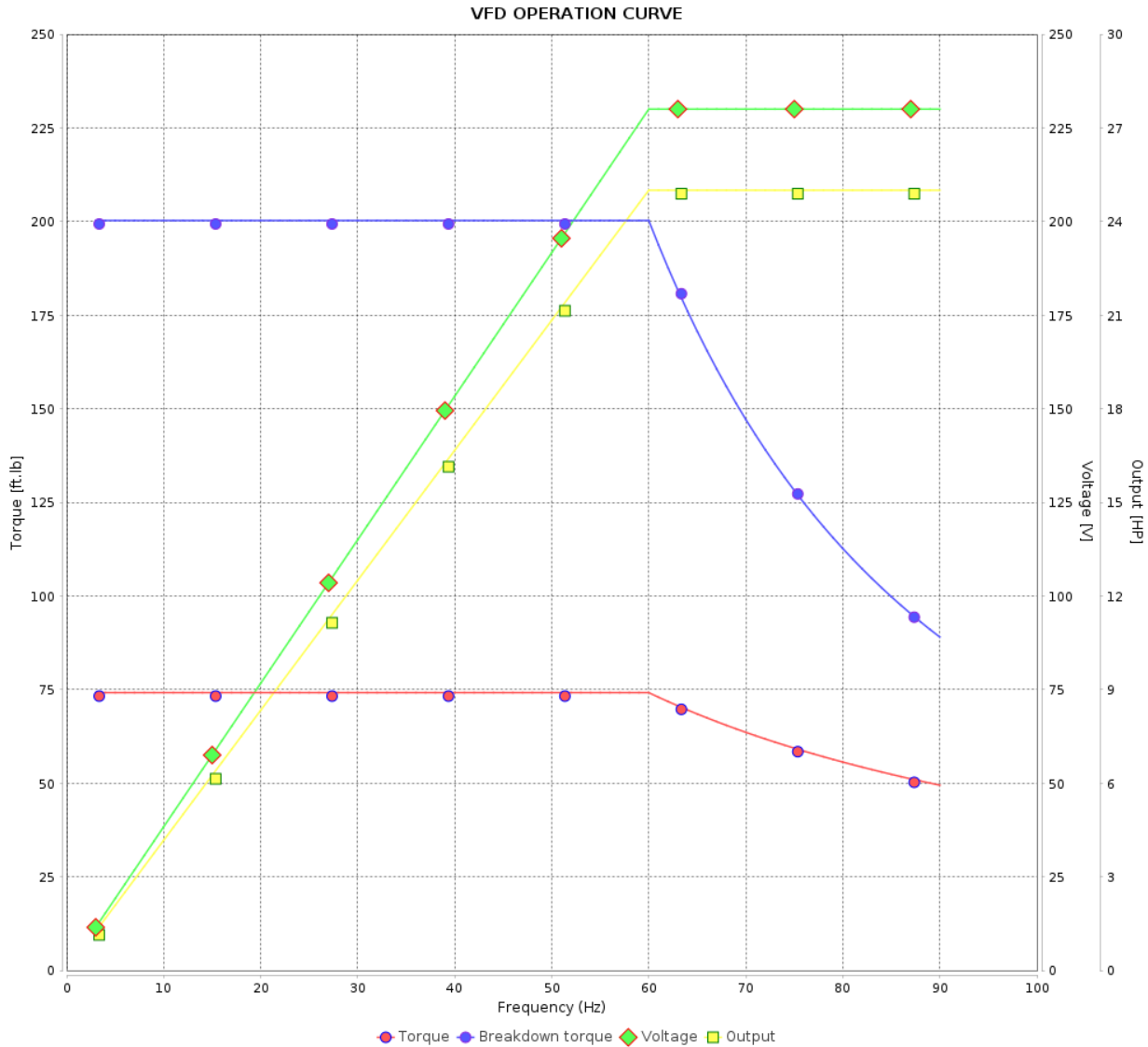


Customer :

Product line : W22 Cooling Tower NEMA Premium Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 230/460 V 60 Hz 4P

Rated current : 59.0/29.5 A
 LRC : 6.2
 Rated torque : 74.2 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 270 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 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

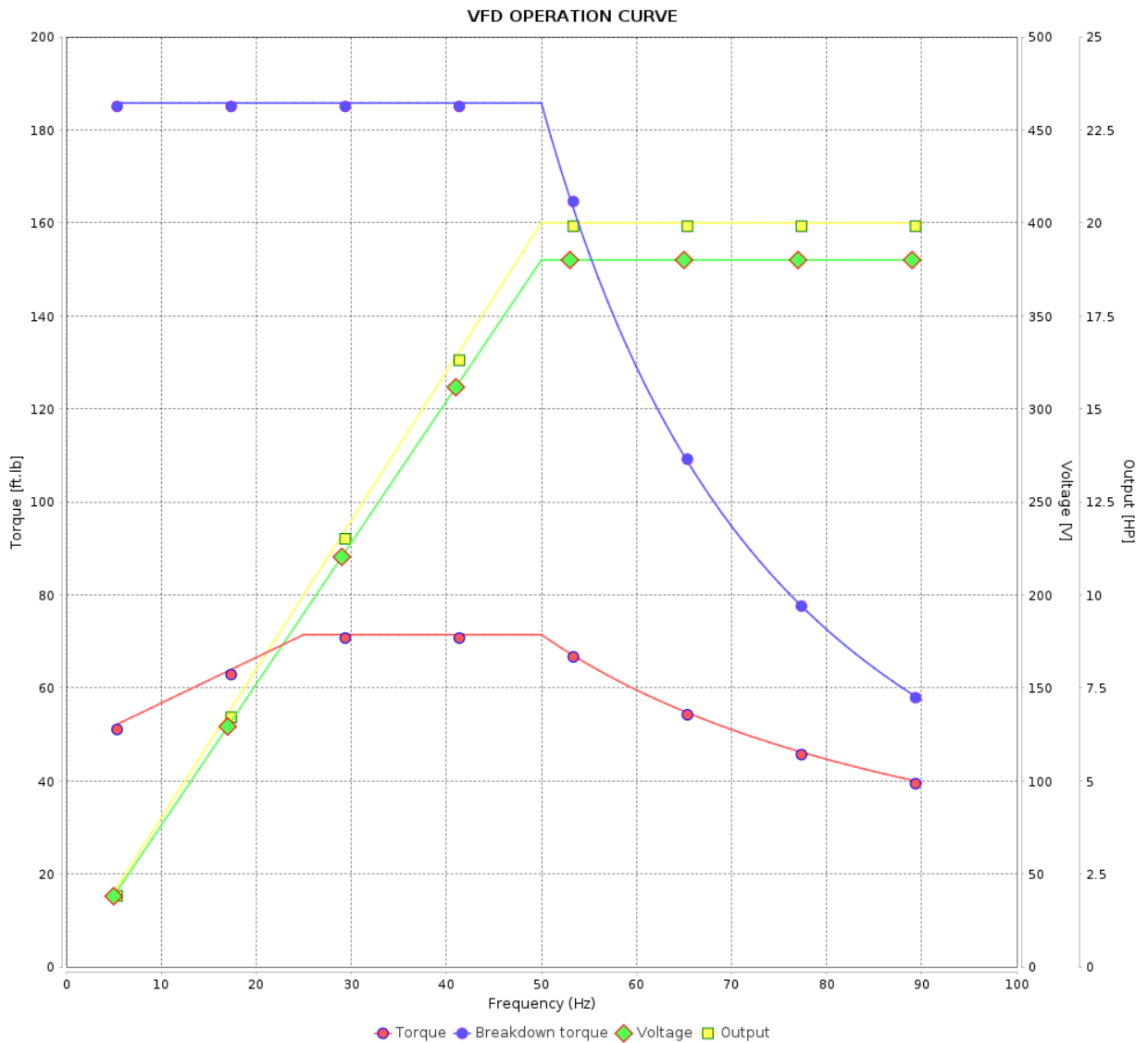


Customer :

Product line : W22 Cooling Tower NEMA Premium Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 29.1 A
 LRC : 6.0
 Rated torque : 71.4 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1470 rpm

Moment of inertia (J) : 5.11 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

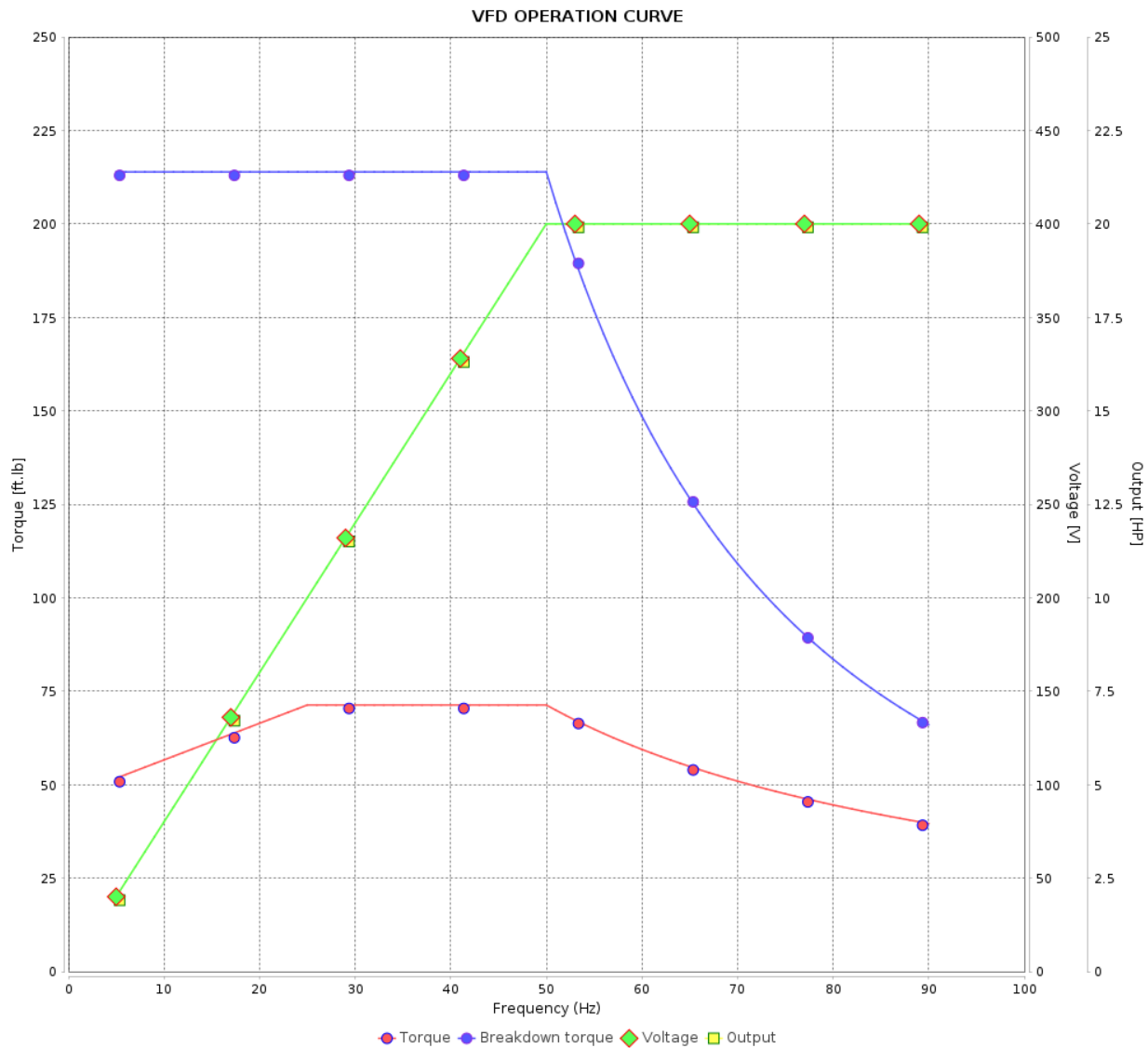


Customer :

Product line : W22 Cooling Tower NEMA Premium Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 400 V 50 Hz 4P IE3

Rated current	: 28.2 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 71.3 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1473 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

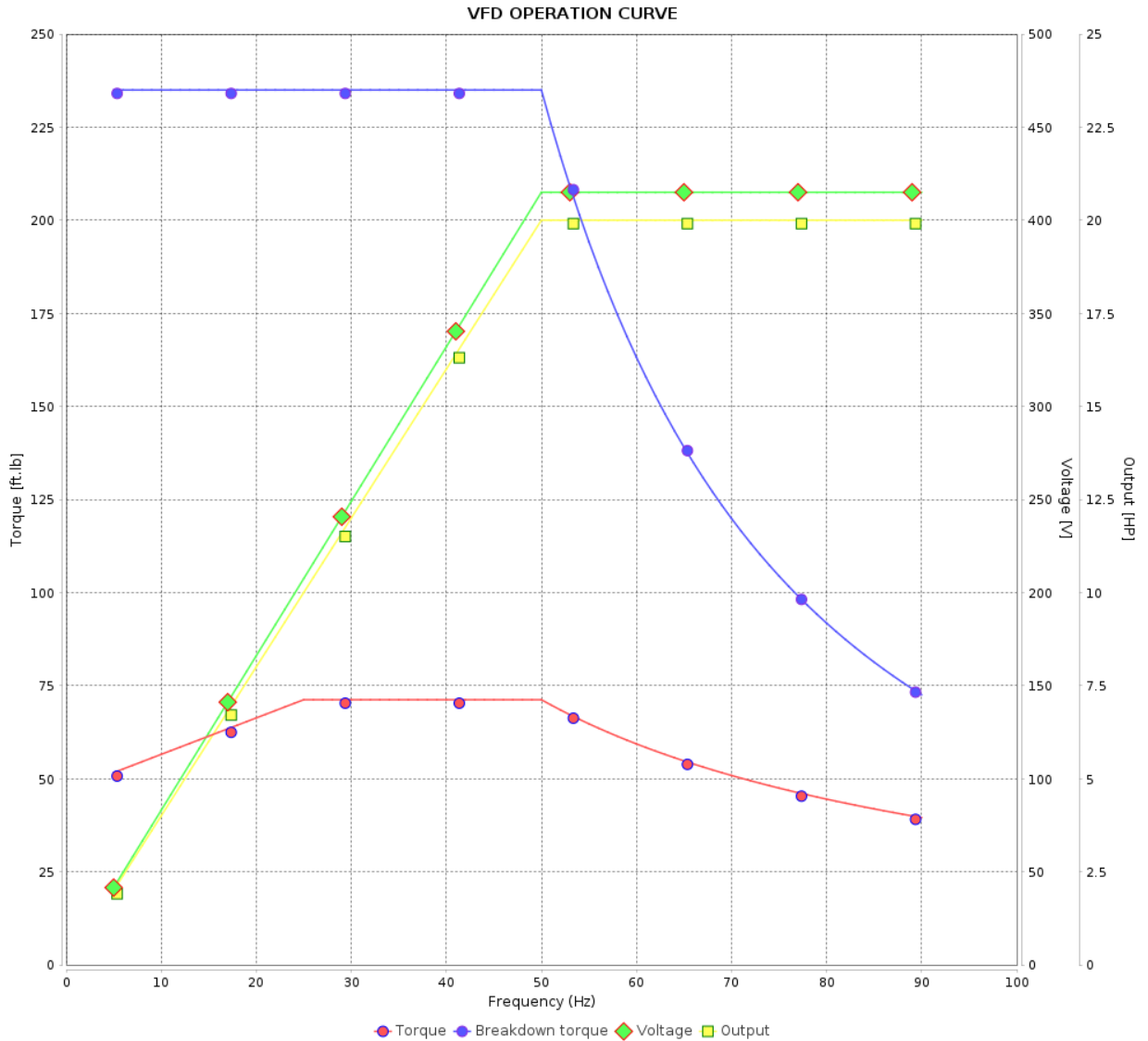


Customer :

Product line : W22 Cooling Tower NEMA Premium
Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 27.5 A
LRC : 7.2
Rated torque : 71.2 ft.lb
Locked rotor torque : 270 %
Breakdown torque : 330 %
Rated speed : 1475 rpm

Moment of inertia (J) : 5.11 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

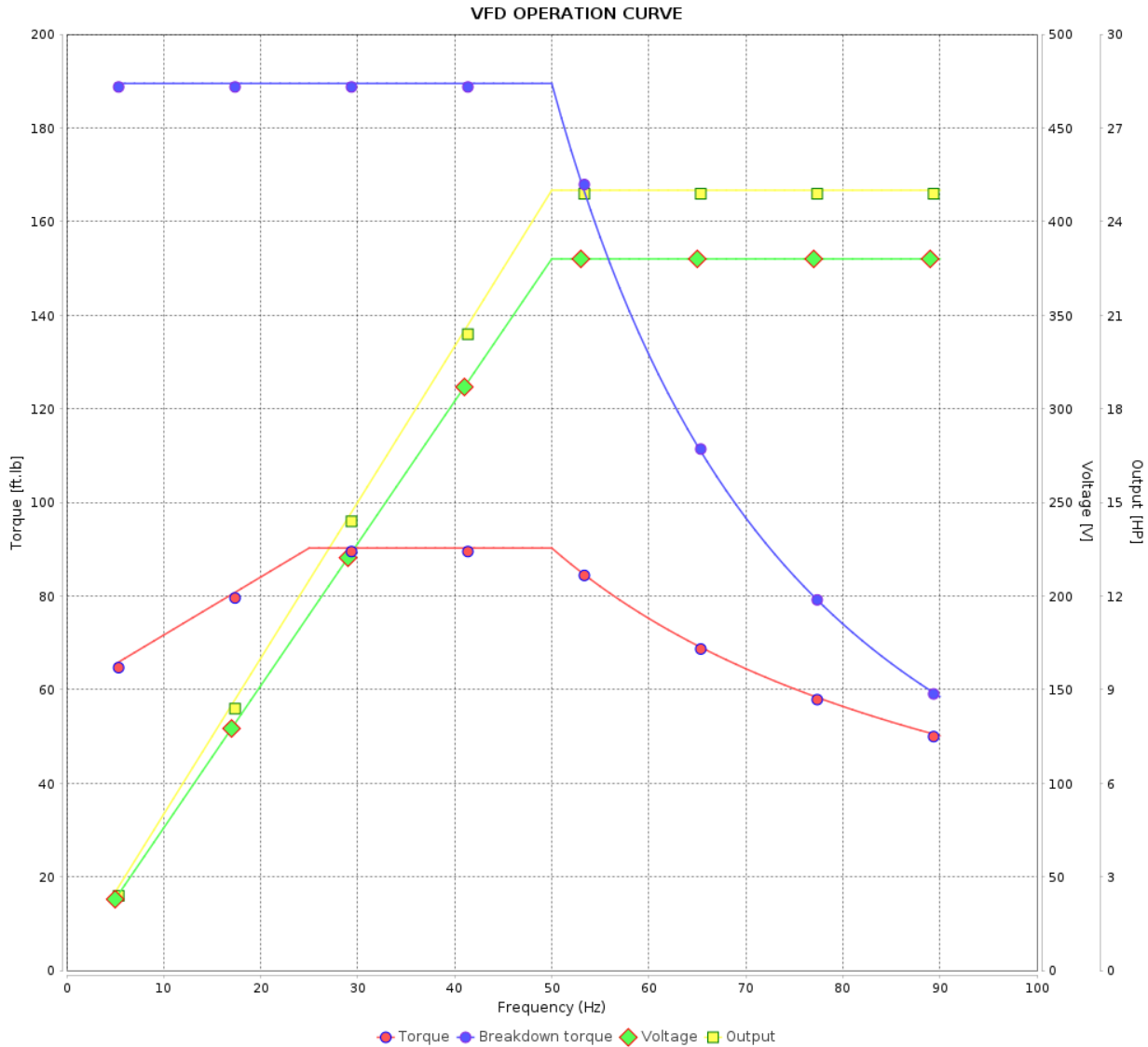


Customer :

Product line : W22 Cooling Tower NEMA Premium Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 380 V 50 Hz 4P IE1

Rated current	: 35.9 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 90.2 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1455 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

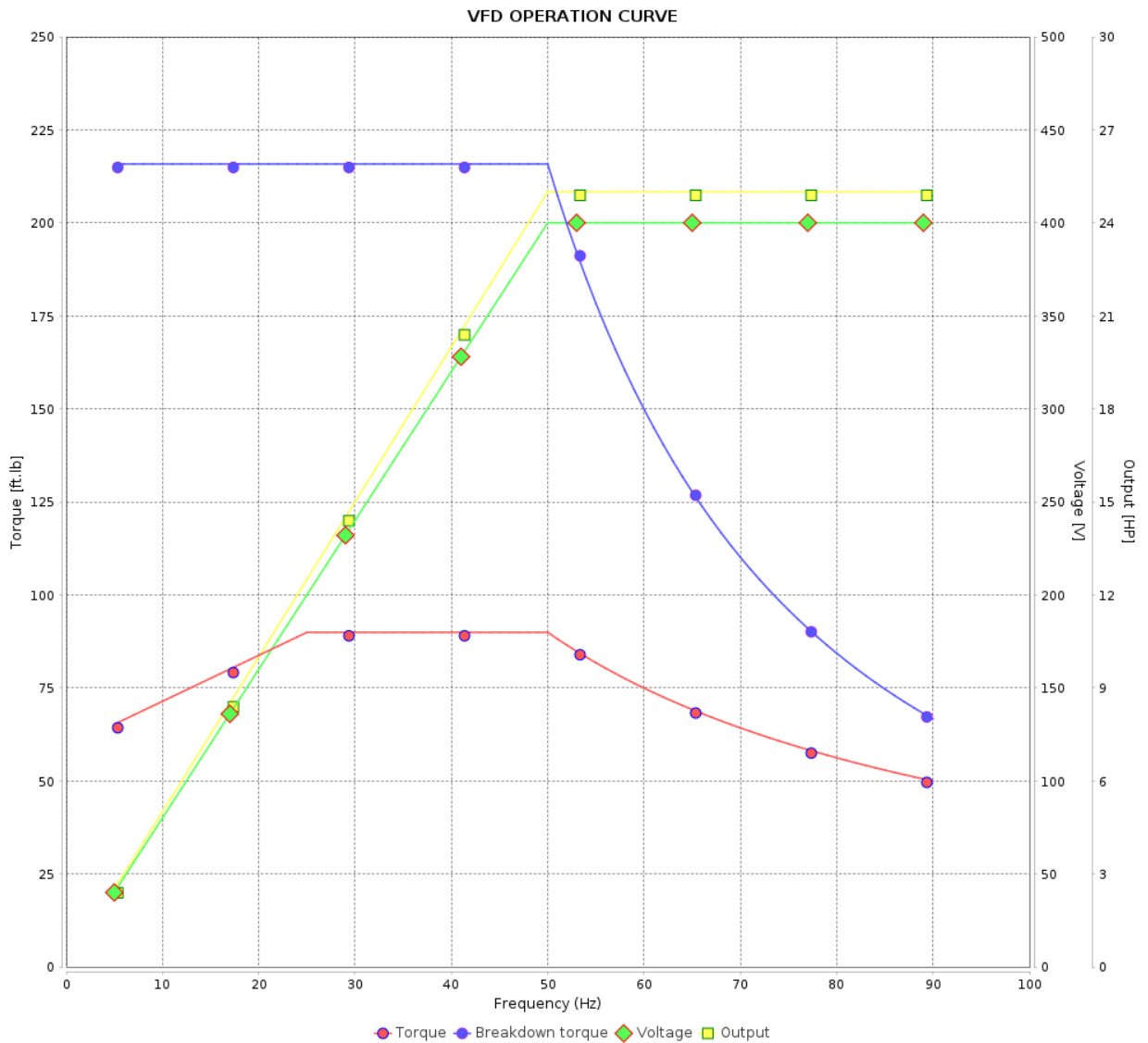


Customer :

Product line : W22 Cooling Tower NEMA Premium Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 400 V 50 Hz 4P IE2

Rated current : 34.3 A
 LRC : 5.5
 Rated torque : 89.9 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 5.11 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

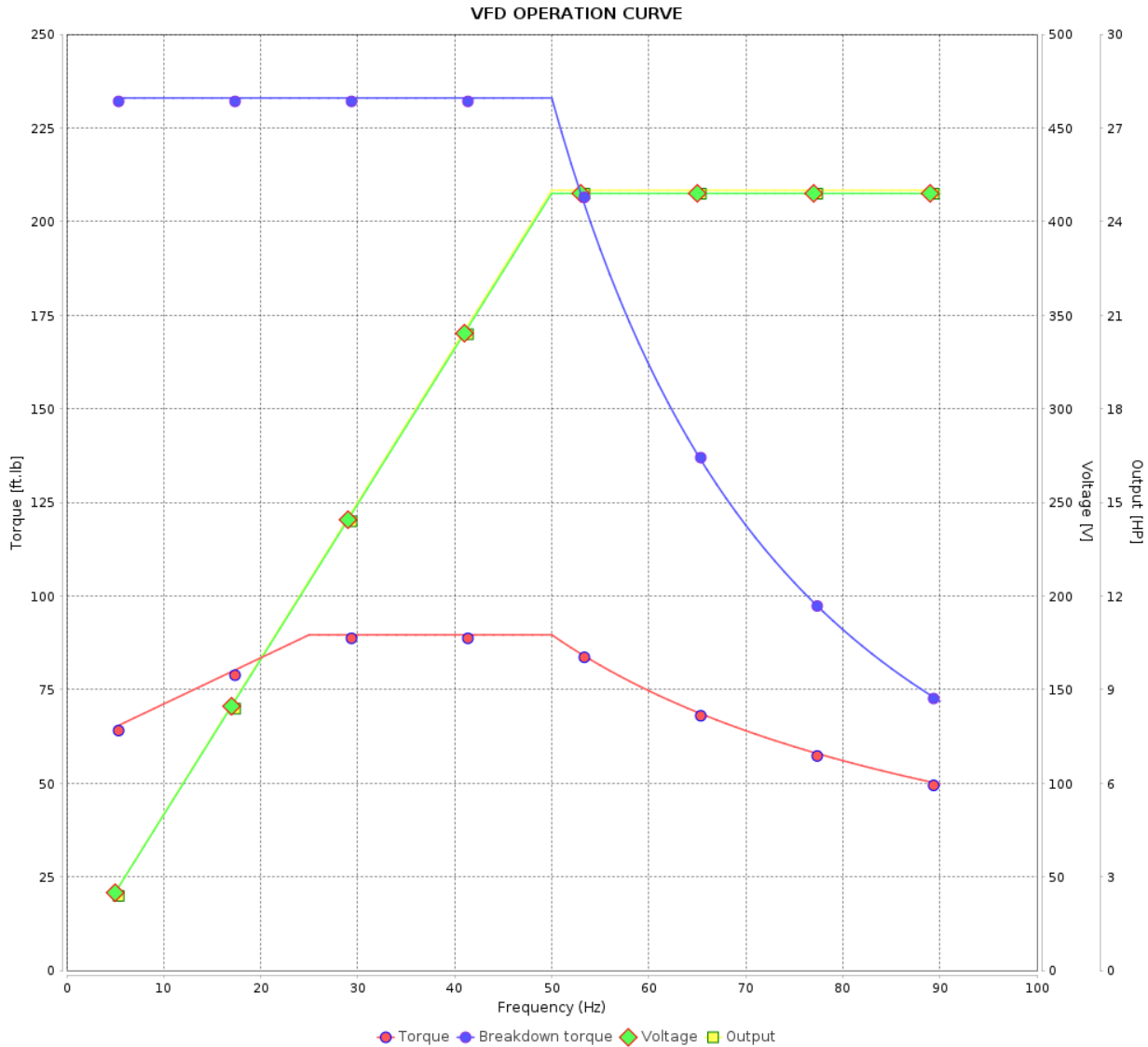


Customer :

Product line : W22 Cooling Tower NEMA Premium Efficiency Three-Phase

Product code : 11972328

Catalog # : 02518ET3ECT284T-W22



Performance : 415 V 50 Hz 4P IE2

Rated current	: 33.2 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 89.6 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 1465 rpm	Design	: B

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