

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase Product code : 12862531

Frame	: 132M	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: B5T
Duty cycle	: 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>3</sup>	: 79.6 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0563 kgm <sup>2</sup>
Design	: N		

Output [kW]	7.5	7.5	7.5	7.5
Poles	4	4	4	4
Frequency [Hz]	50	50	50	60
Rated voltage [V]	380/660	400/690	415	460
Rated current [A]	14.8/8.54	14.6/8.46	14.6	12.7
L. R. Amperes [A]	123/70.9	124/71.9	127	120
LRC [A]	8.3	8.5	8.7	9.5
No load current [A]	6.80/3.92	7.50/4.35	8.30	6.90
Rated speed [RPM]	1460	1465	1465	1770
Slip [%]	2.67	2.33	2.33	1.67
Rated torque [kgfm]	5.00	4.99	4.99	4.13
Locked rotor torque [%]	229	250	280	280
Breakdown torque [%]	310	350	380	400
Service factor	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	18s (cold) 10s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	19s (cold) 11s (hot)
Noise level <sup>2</sup>	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	58.0 dB(A)
Efficiency (%)	25%			
	50%	90.0	89.0	88.5
	75%	90.2	90.4	90.3
	100%	90.4	90.4	90.4
Power Factor	25%			
	50%	0.66	0.63	0.59
	75%	0.79	0.76	0.72
	100%	0.85	0.82	0.79

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

Losses (%)	P1 (0,9;1,0)	10.6	10.6	10.6	9.0
	P2 (0,5;1,0)	9.6	9.6	9.6	8.2
	P3 (0,25;1,0)	9.3	9.3	9.3	7.9
	P4 (0,9;0,5)	5.0	5.0	5.0	4.2
	P5 (0,5;0,5)	3.8	3.8	3.8	3.2
	P6 (0,5;0,25)	2.5	2.5	2.5	2.1
	P7 (0,25;0,25)	2.1	2.1	2.1	1.8

Bearing type	: Drive end	6308 ZZ	Non drive end	6207 ZZ	Foundation loads
	: Sealing	Oil Seal		Lip Seal	
Lubrication interval	: -	-	-	-	Max. compression : 345 kgf
Lubricant amount	: -	-	-	-	
Lubricant type	: Mobil Polyrex EM				

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 IEC 60034-1.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	05/12/2024		1 / 18	

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Notes

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	05/12/2024		Page 2 / 18	Revision

# TORQUE AND CURRENT VS SPEED CURVE

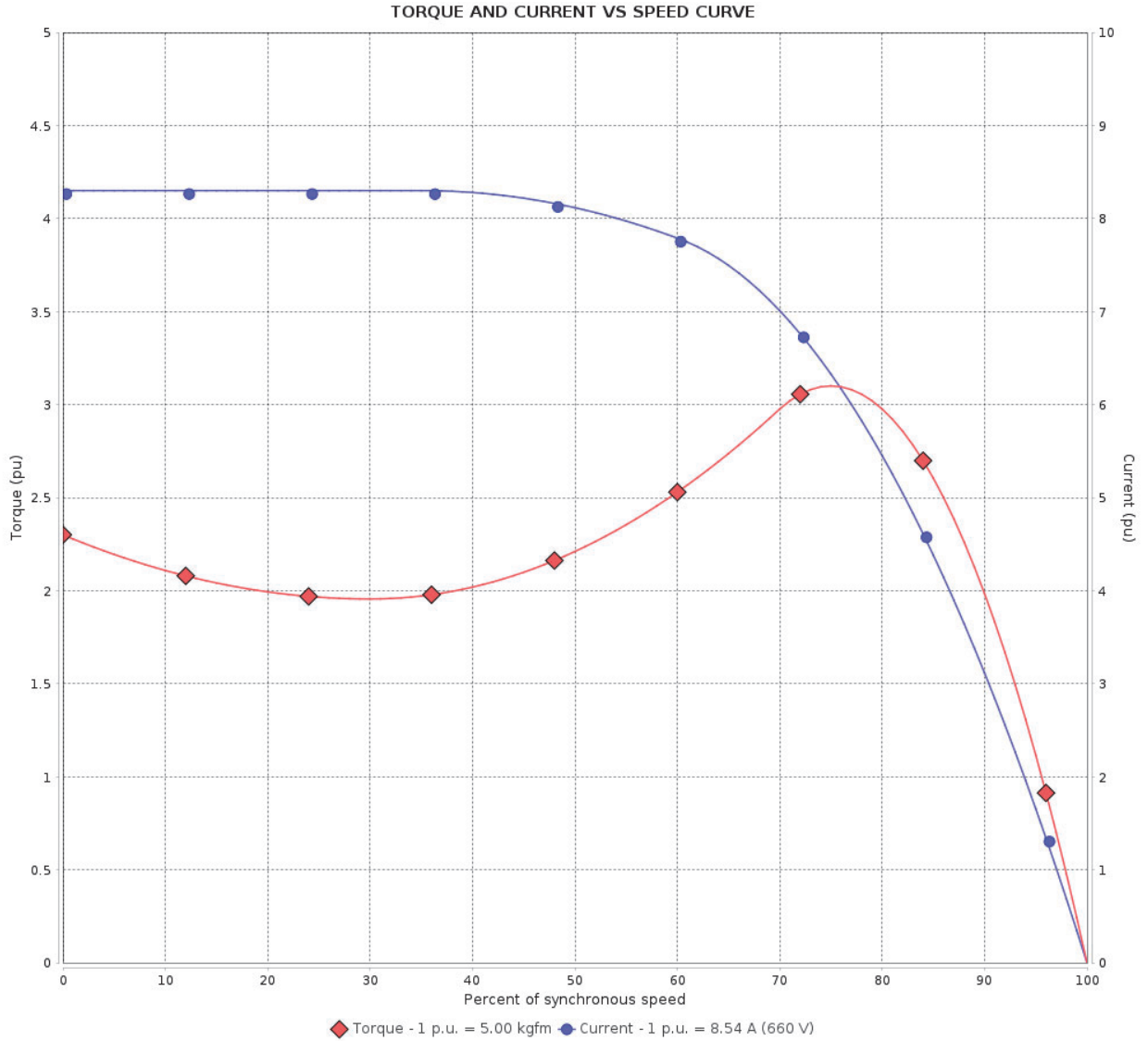


## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 380/660 V 50 Hz 4P

Rated current : 14.8/8.54 A  
 LRC : 8.3  
 Rated torque : 5.00 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 310 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 / 18		
Date	05/12/2024			

# TORQUE AND CURRENT VS SPEED CURVE

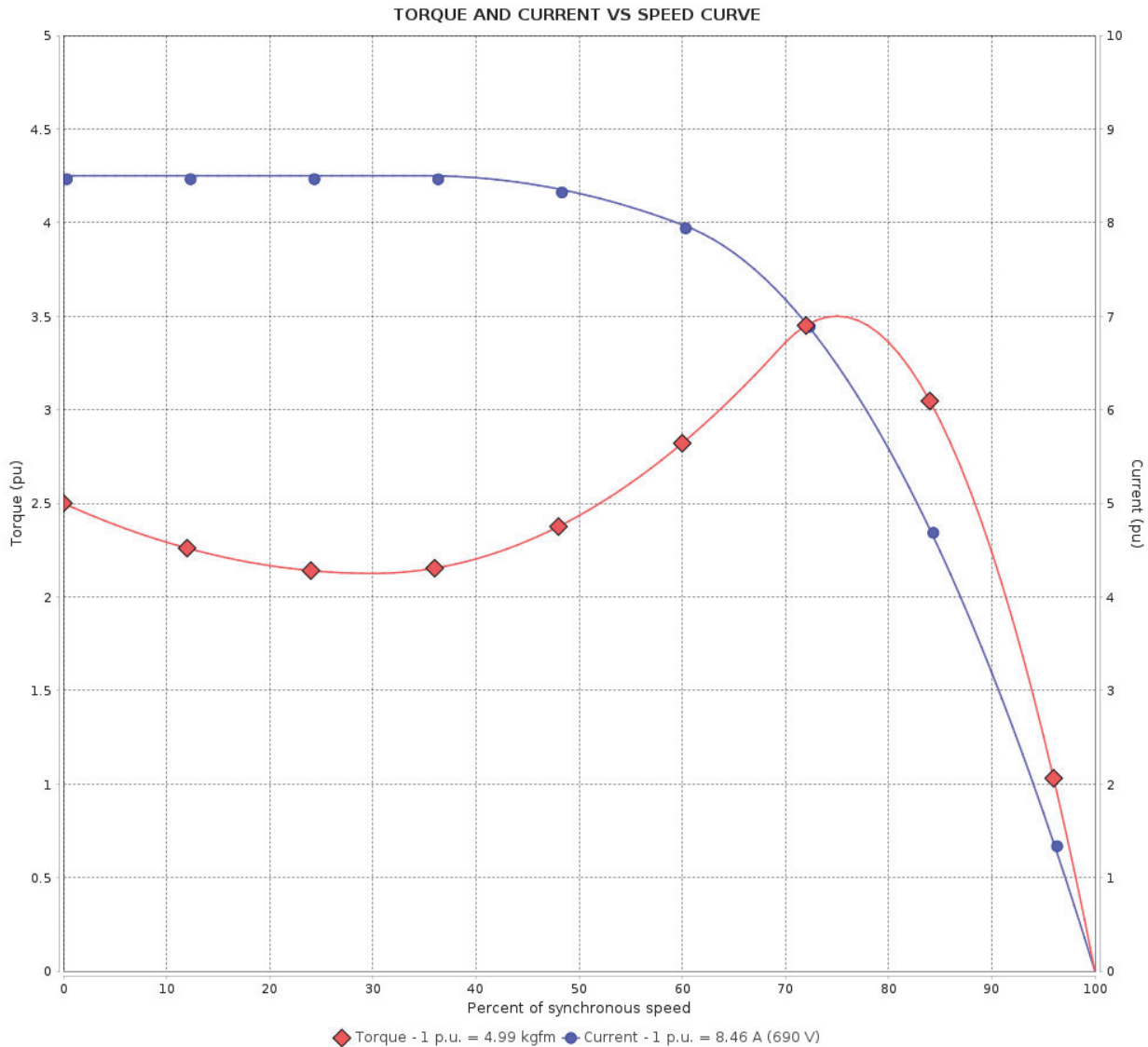


## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 400/690 V 50 Hz 4P

Rated current	: 14.6/8.46 A	Moment of inertia (J)	: 0.0563 kgm <sup>2</sup>
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 4.99 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 18	Revision
Checked by				
Date	05/12/2024			

# TORQUE AND CURRENT VS SPEED CURVE

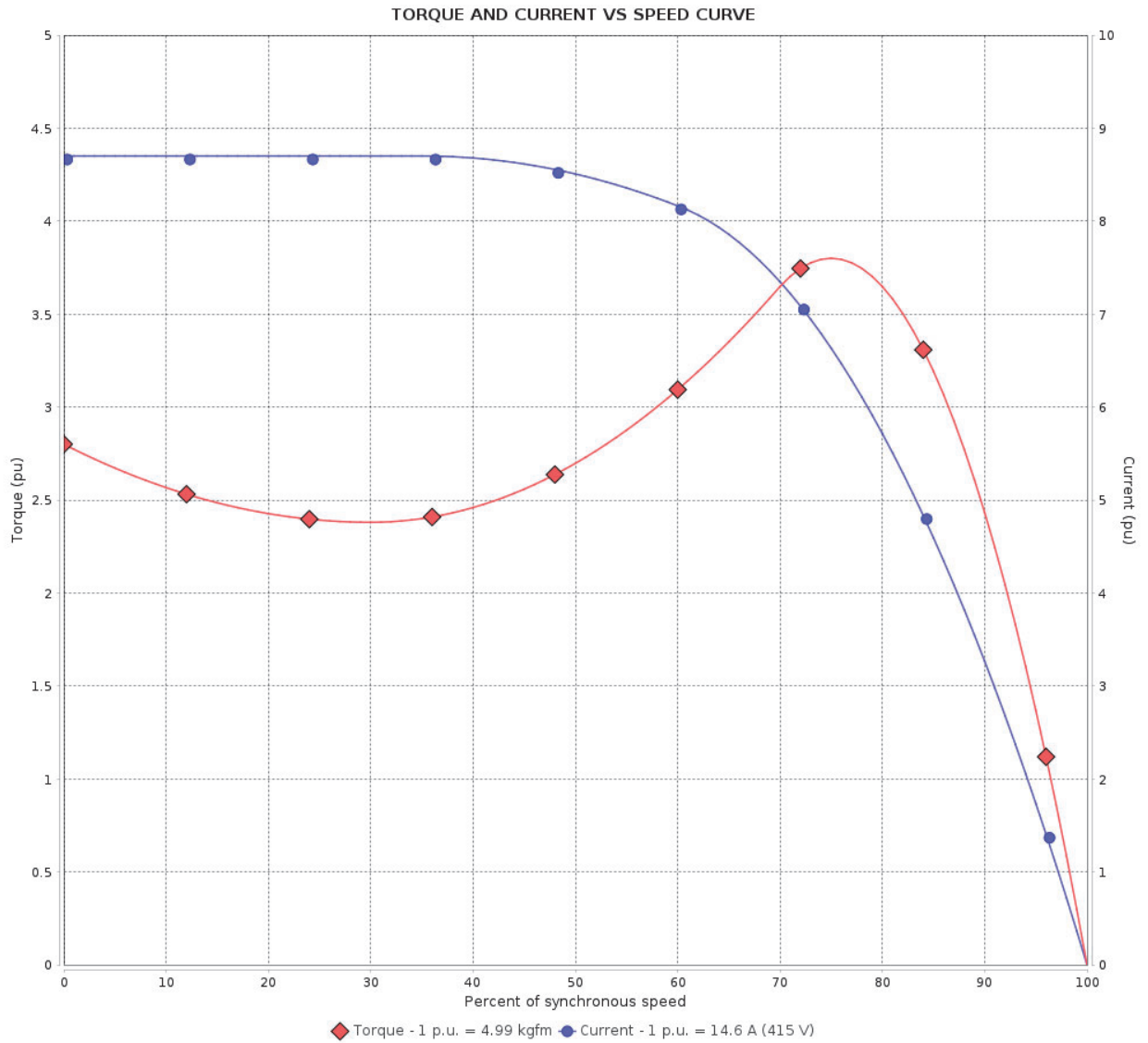


## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 415 V 50 Hz 4P

Rated current	: 14.6 A	Moment of inertia (J)	: 0.0563 kgm <sup>2</sup>
LRC	: 8.7	Duty cycle	: S1
Rated torque	: 4.99 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 18	Revision
Checked by				
Date	05/12/2024			

# TORQUE AND CURRENT VS SPEED CURVE

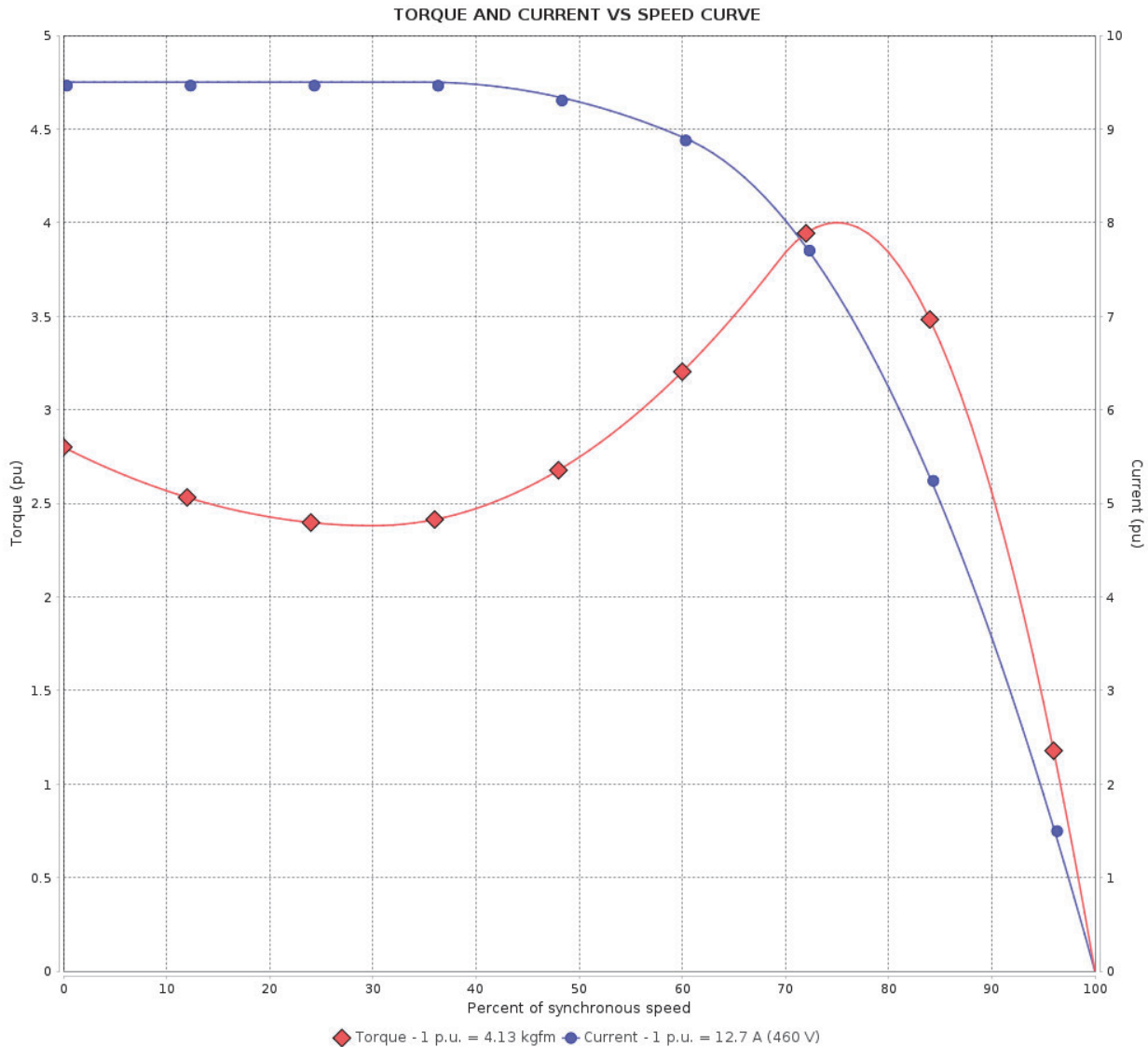


## Three Phase Induction Motor - Squirrel Cage

Customer : \_\_\_\_\_

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 460 V 60 Hz 4P

Rated current	: 12.7 A	Moment of inertia (J)	: 0.0563 kgm <sup>2</sup>
LRC	: 9.5	Duty cycle	: S1
Rated torque	: 4.13 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 18	Revision
Checked by				
Date	05/12/2024			

# LOAD PERFORMANCE CURVE

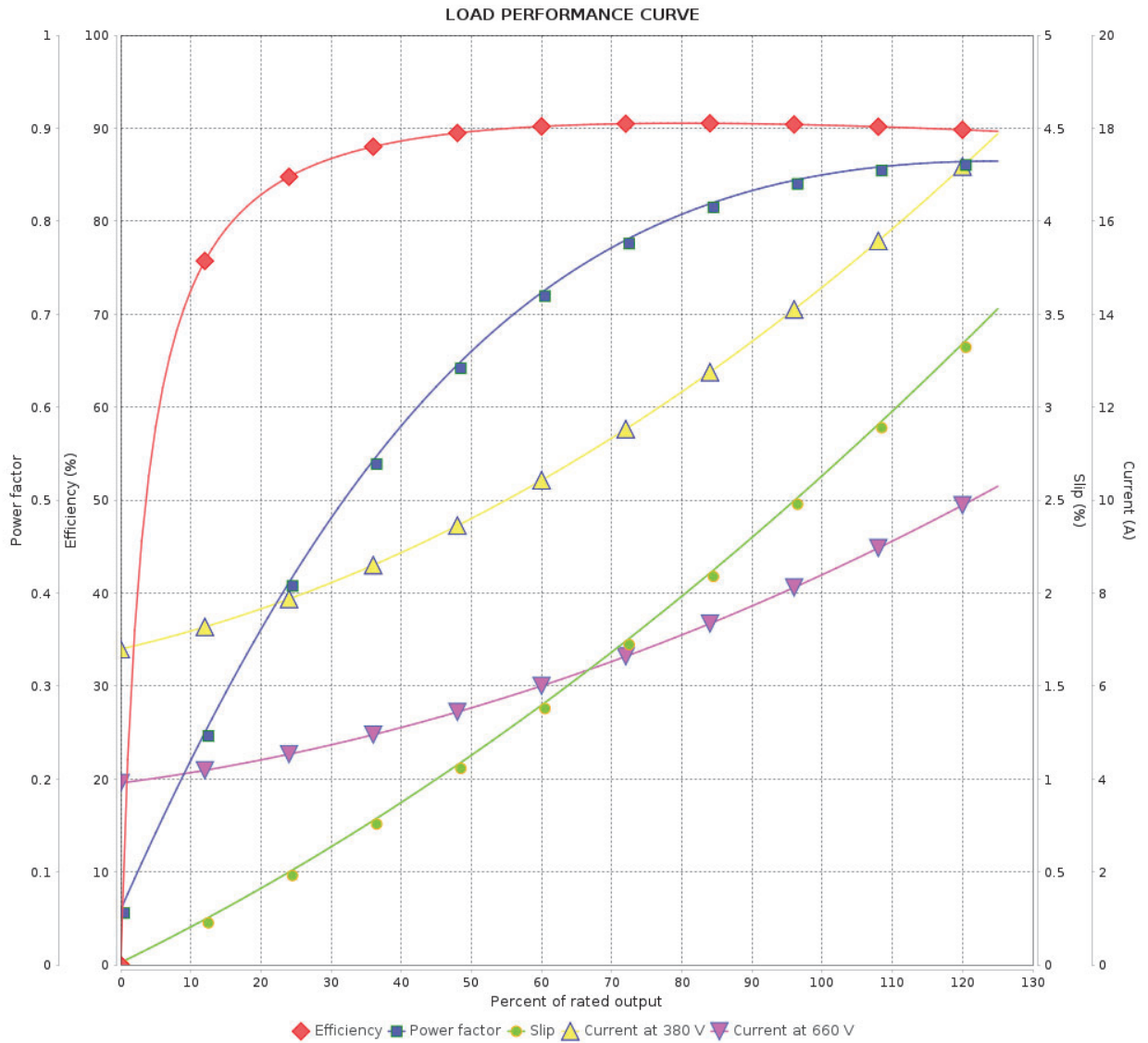
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 380/660 V 50 Hz 4P

Rated current : 14.8/8.54 A  
 LRC : 8.3  
 Rated torque : 5.00 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 310 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			7 / 18	
Date	05/12/2024			

# LOAD PERFORMANCE CURVE

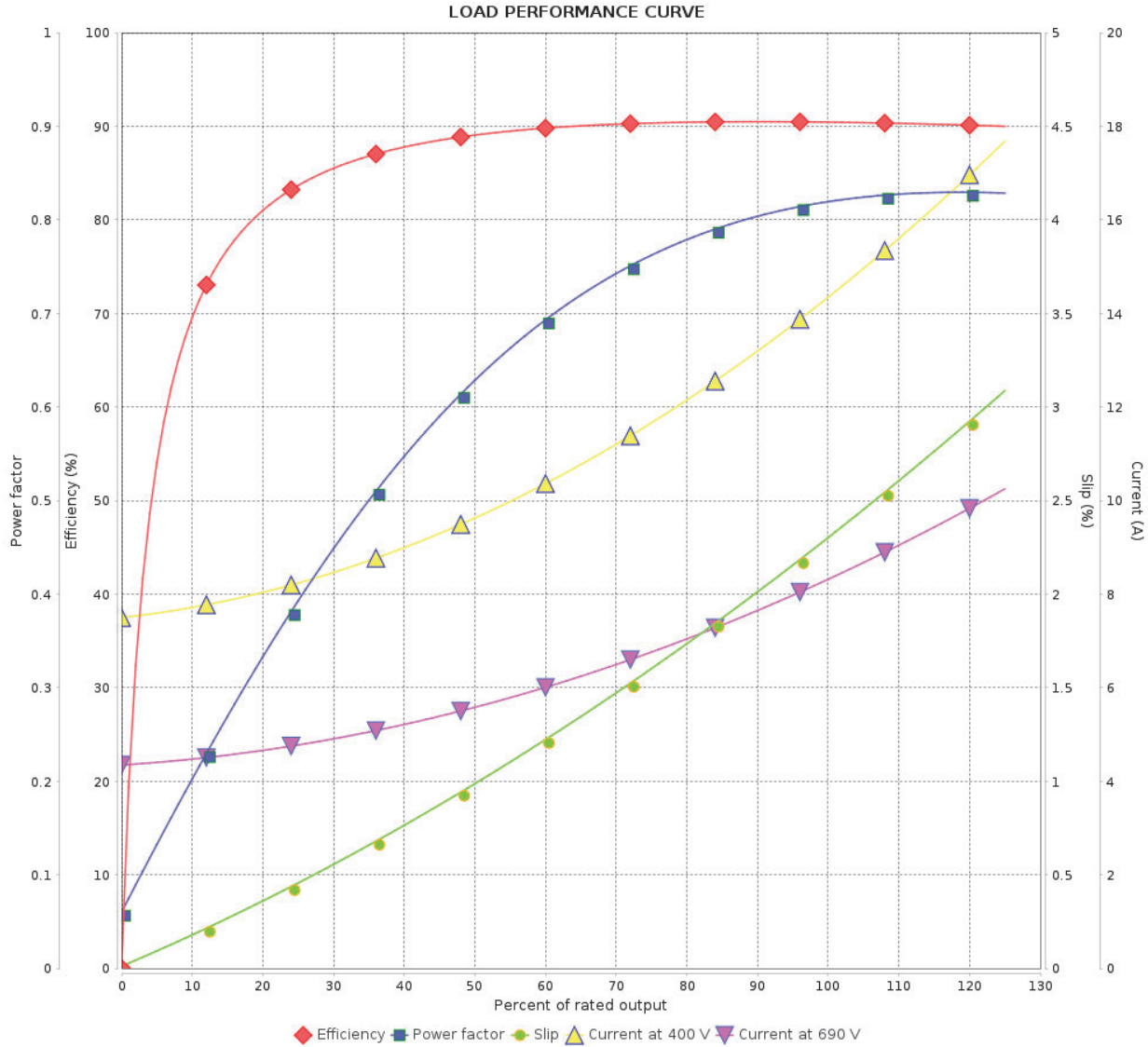
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 400/690 V 50 Hz 4P

Rated current : 14.6/8.46 A  
 LRC : 8.5  
 Rated torque : 4.99 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 350 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 18	Revision
Checked by				
Date	05/12/2024			

# LOAD PERFORMANCE CURVE

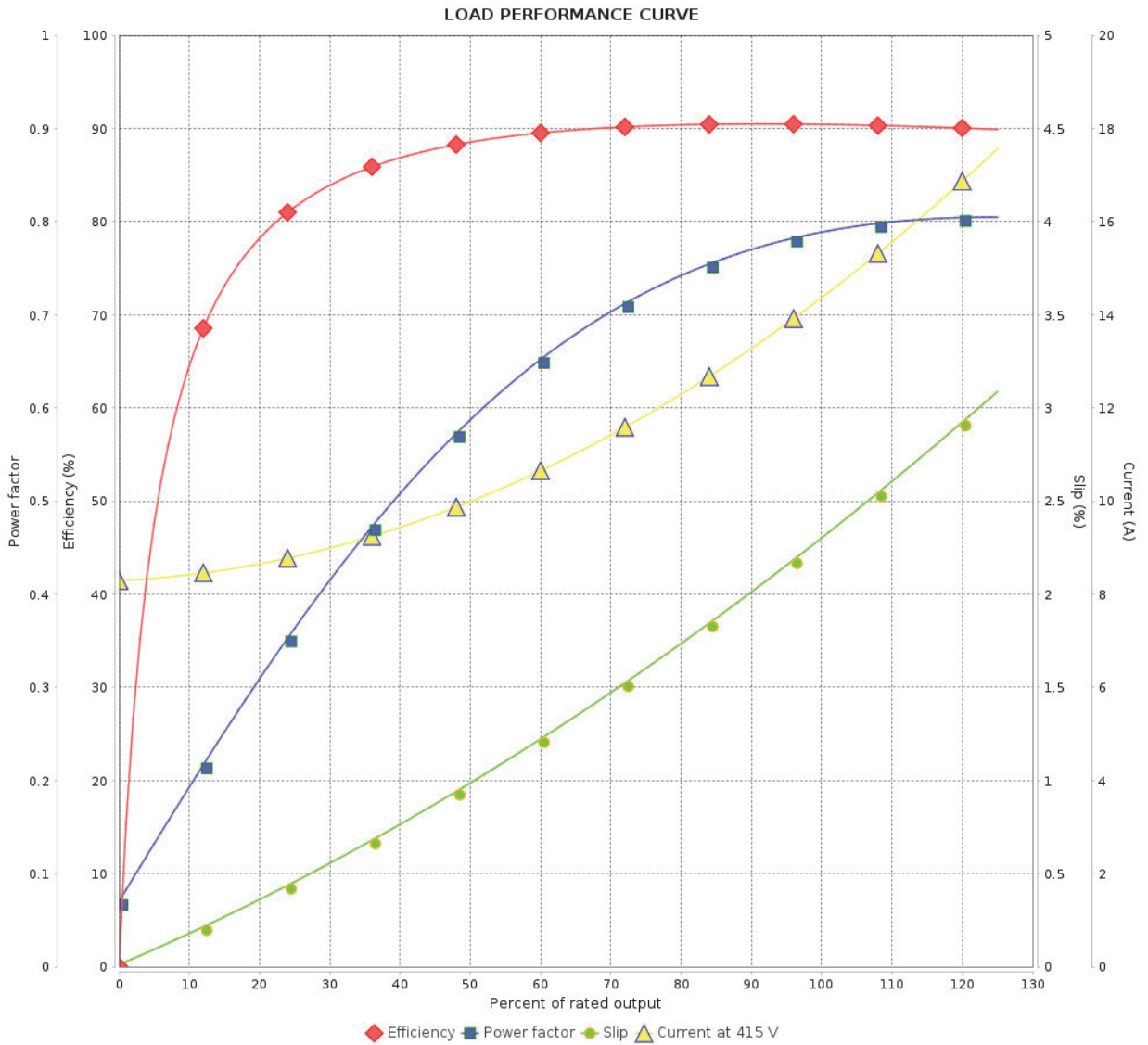
## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 415 V 50 Hz 4P

Rated current : 14.6 A  
 LRC : 8.7  
 Rated torque : 4.99 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 380 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			9 / 18	
Date	05/12/2024			

# LOAD PERFORMANCE CURVE

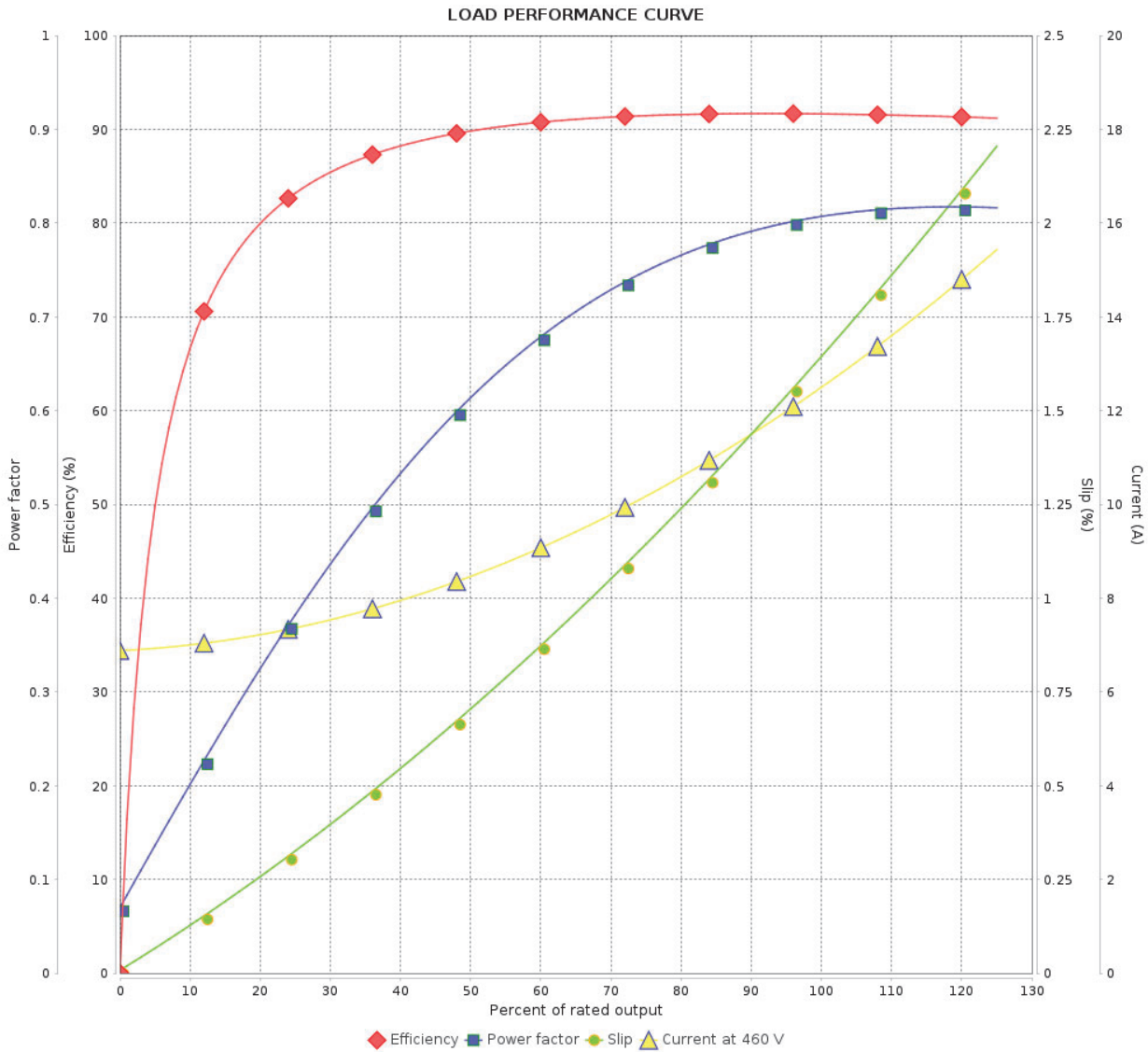
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 460 V 60 Hz 4P

Rated current : 12.7 A  
 LRC : 9.5  
 Rated torque : 4.13 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 400 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 18	Revision
Checked by				
Date	05/12/2024			

# THERMAL LIMIT CURVE

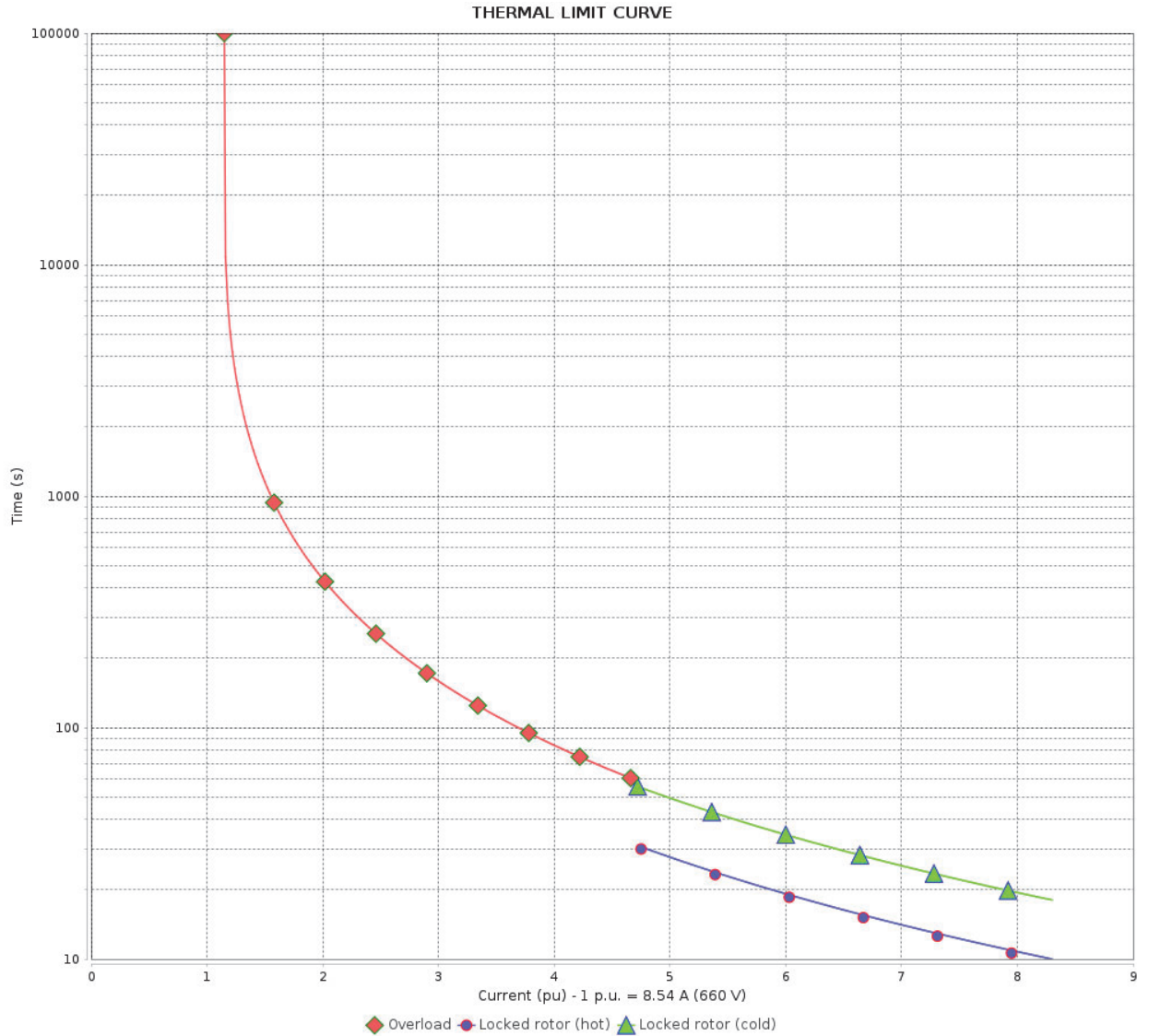
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 380/660 V 50 Hz 4P

Rated current : 14.8/8.54 A  
 LRC : 8.3  
 Rated torque : 5.00 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 310 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		11 / 18		

# THERMAL LIMIT CURVE

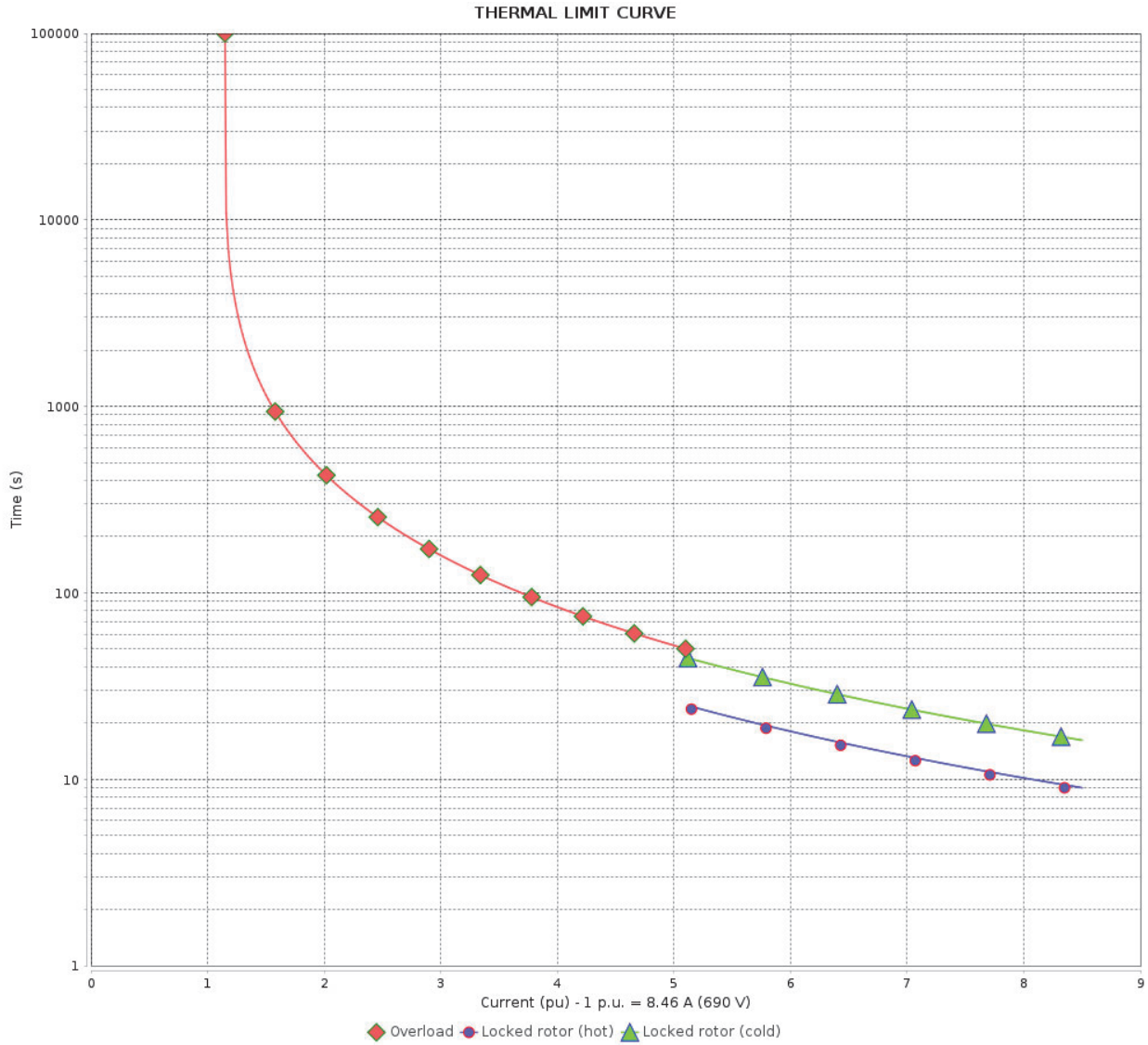
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 400/690 V 50 Hz 4P

Rated current : 14.6/8.46 A  
 LRC : 8.5  
 Rated torque : 4.99 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 350 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by	05/12/2024	Page		Revision
Checked by		12 / 18		
Date		12 / 18		

# THERMAL LIMIT CURVE

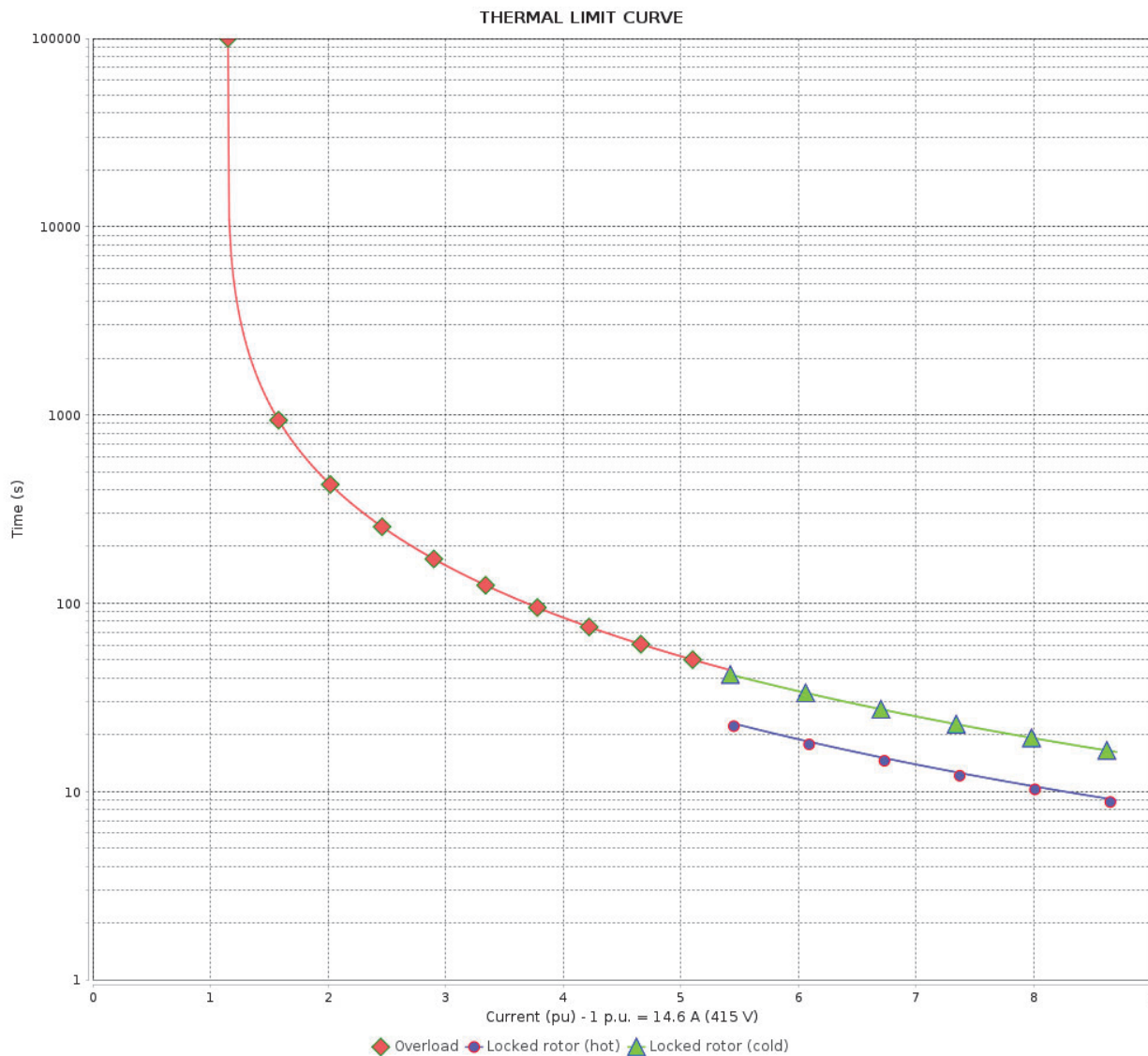
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 415 V 50 Hz 4P

Rated current : 14.6 A  
 LRC : 8.7  
 Rated torque : 4.99 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 380 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant  
 Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 18		
Date		05/12/2024		

# THERMAL LIMIT CURVE

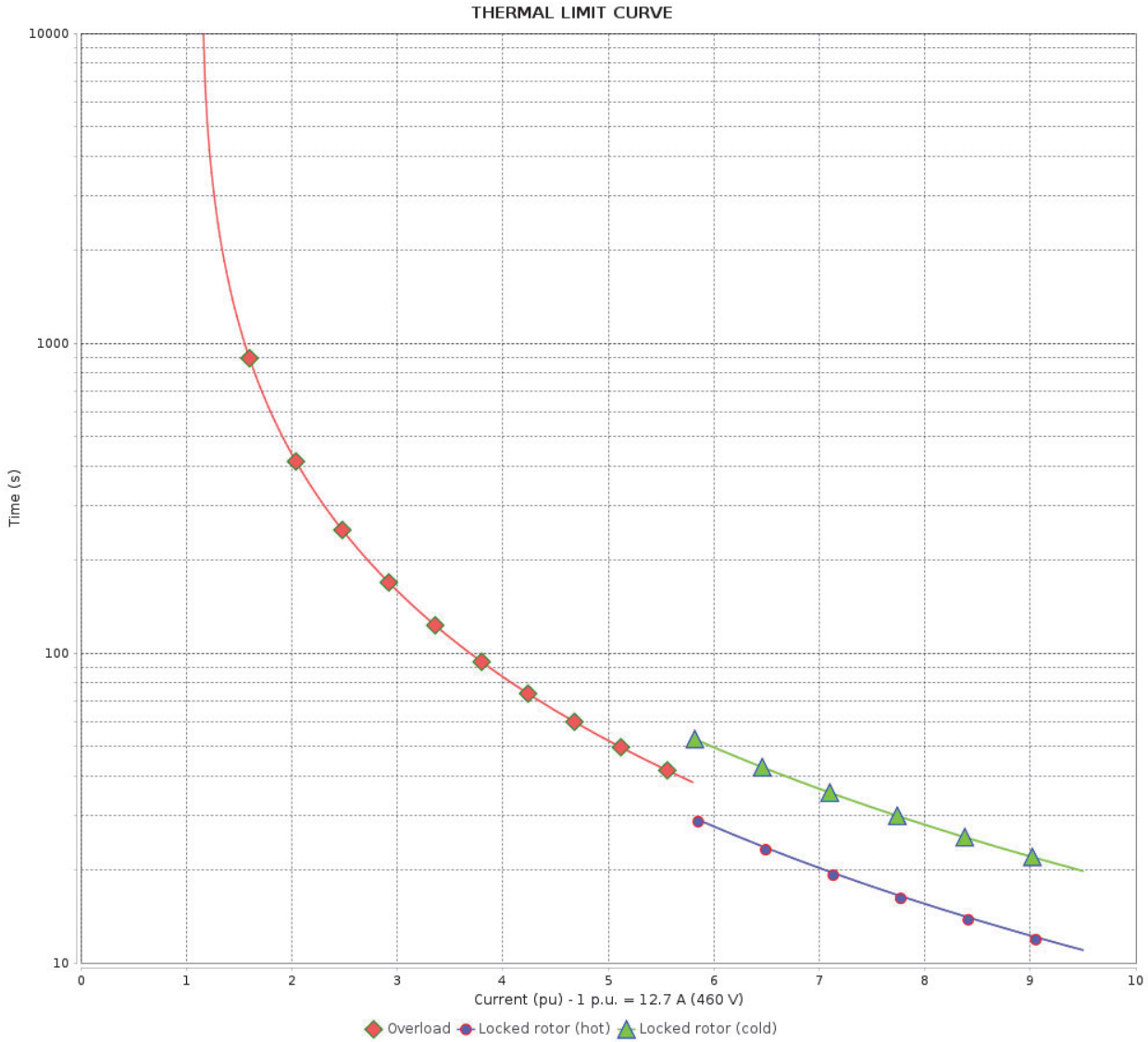
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 460 V 60 Hz 4P

Rated current : 12.7 A  
 LRC : 9.5  
 Rated torque : 4.13 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 400 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by	05/12/2024	Page 14 / 18		Revision
Checked by				
Date				

# VFD OPERATION CURVE

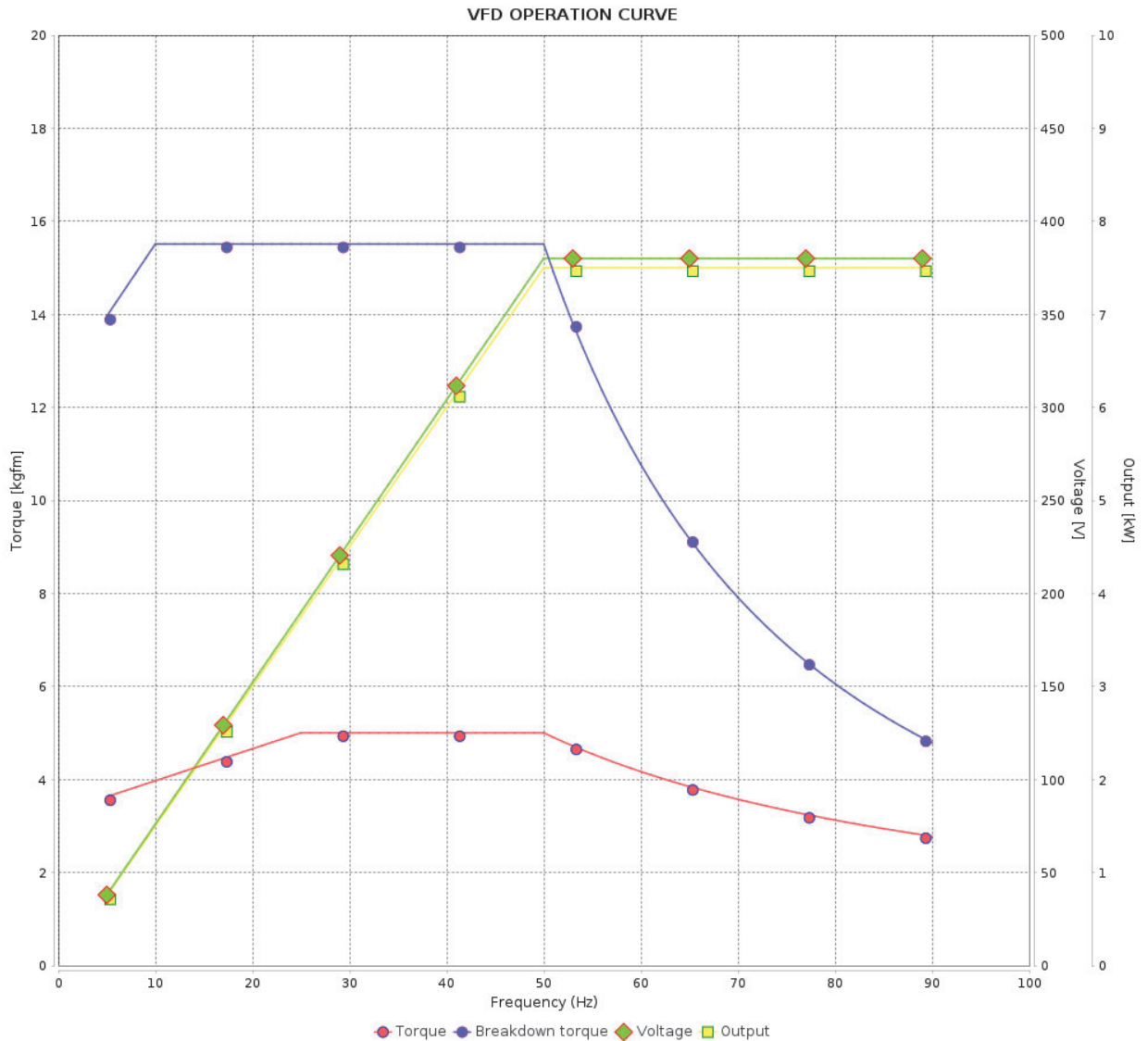
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 380/660 V 50 Hz 4P

Rated current : 14.8/8.54 A  
 LRC : 8.3  
 Rated torque : 5.00 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 310 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 15 / 18	Revision
Checked by				
Date	05/12/2024			

# VFD OPERATION CURVE

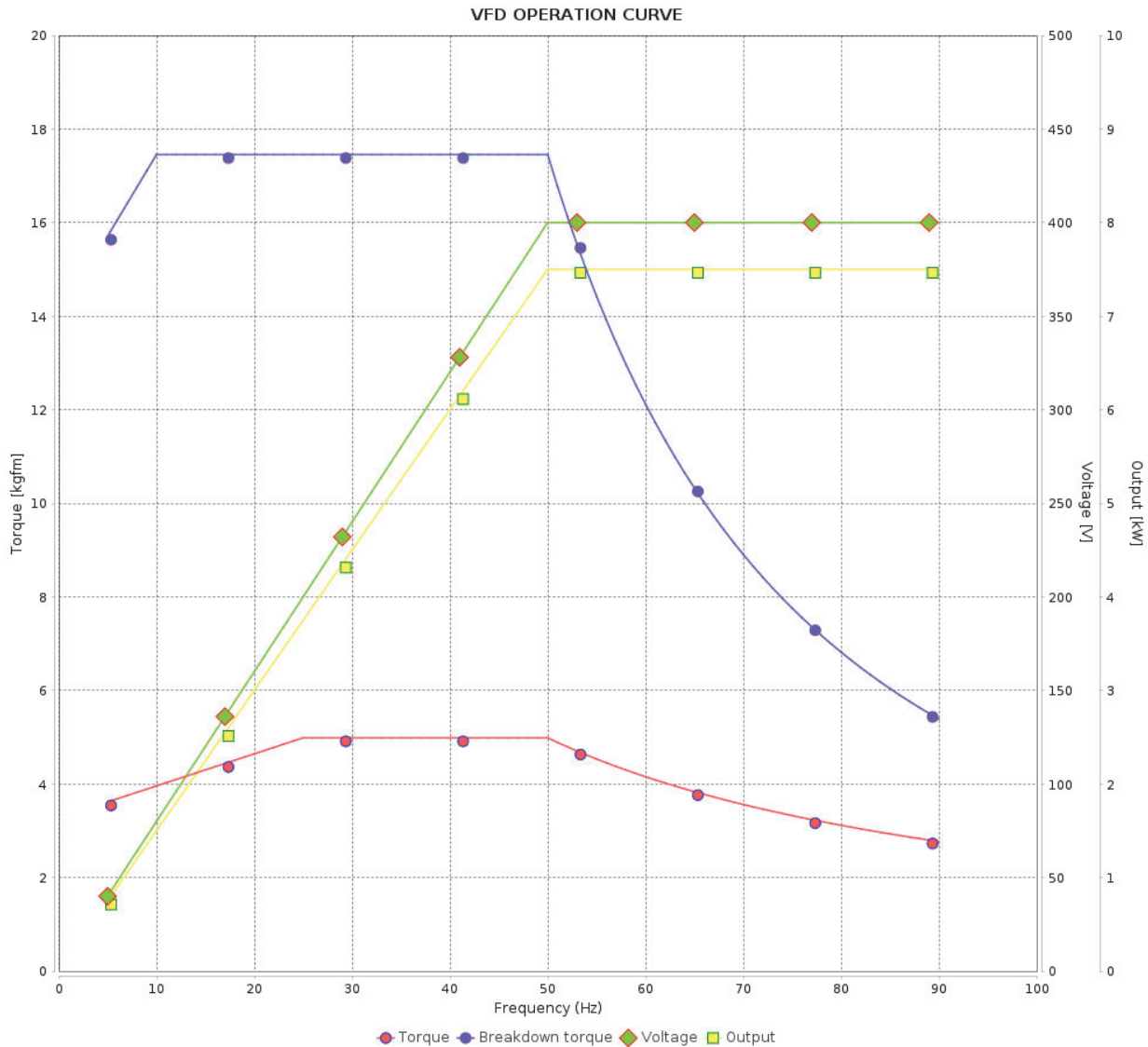
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 400/690 V 50 Hz 4P

Rated current : 14.6/8.46 A  
 LRC : 8.5  
 Rated torque : 4.99 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 350 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# VFD OPERATION CURVE

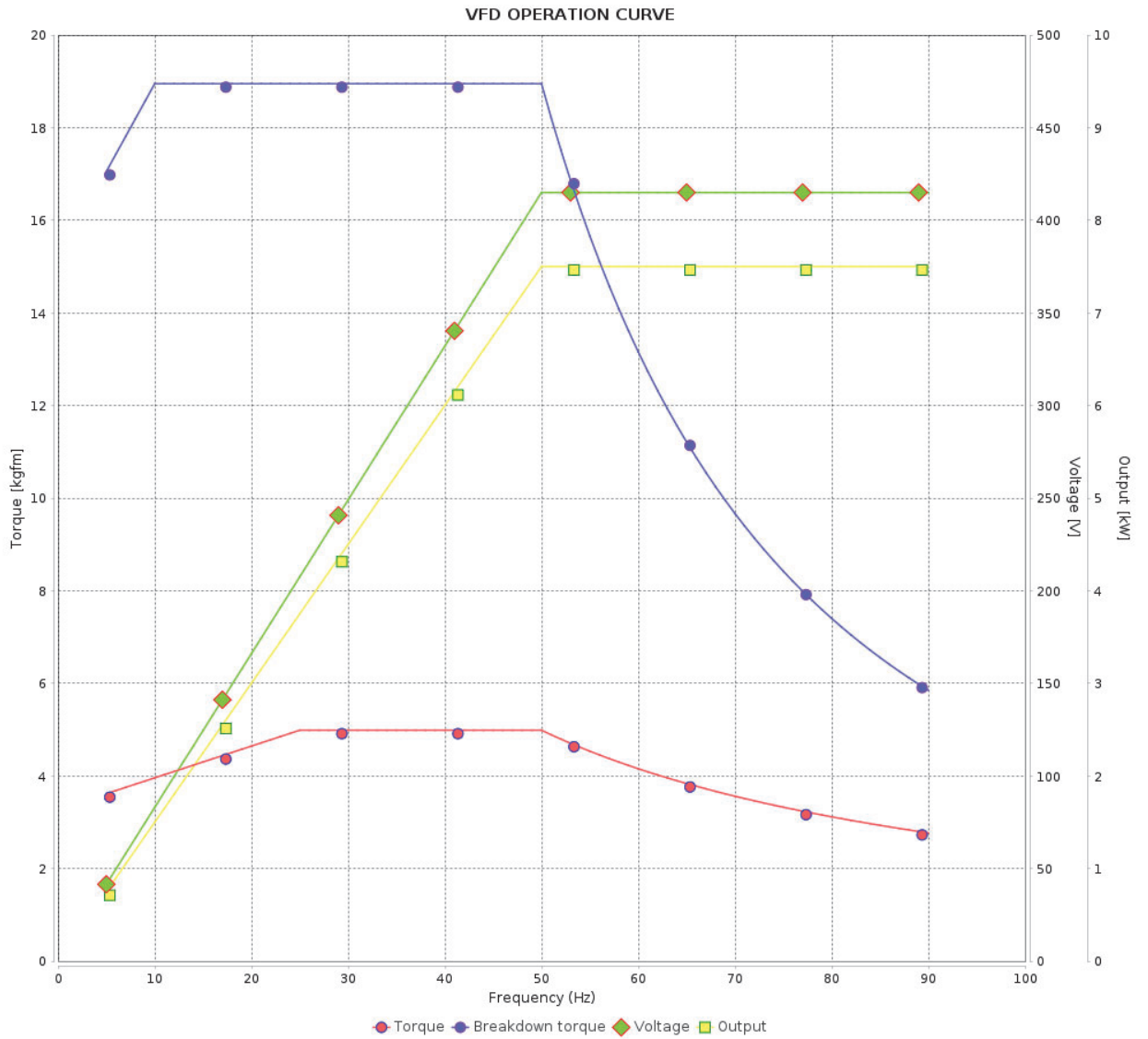
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



Performance : 415 V 50 Hz 4P

Rated current : 14.6 A  
 LRC : 8.7  
 Rated torque : 4.99 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 380 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 17 / 18	Revision
Checked by				
Date	05/12/2024			

# VFD OPERATION CURVE

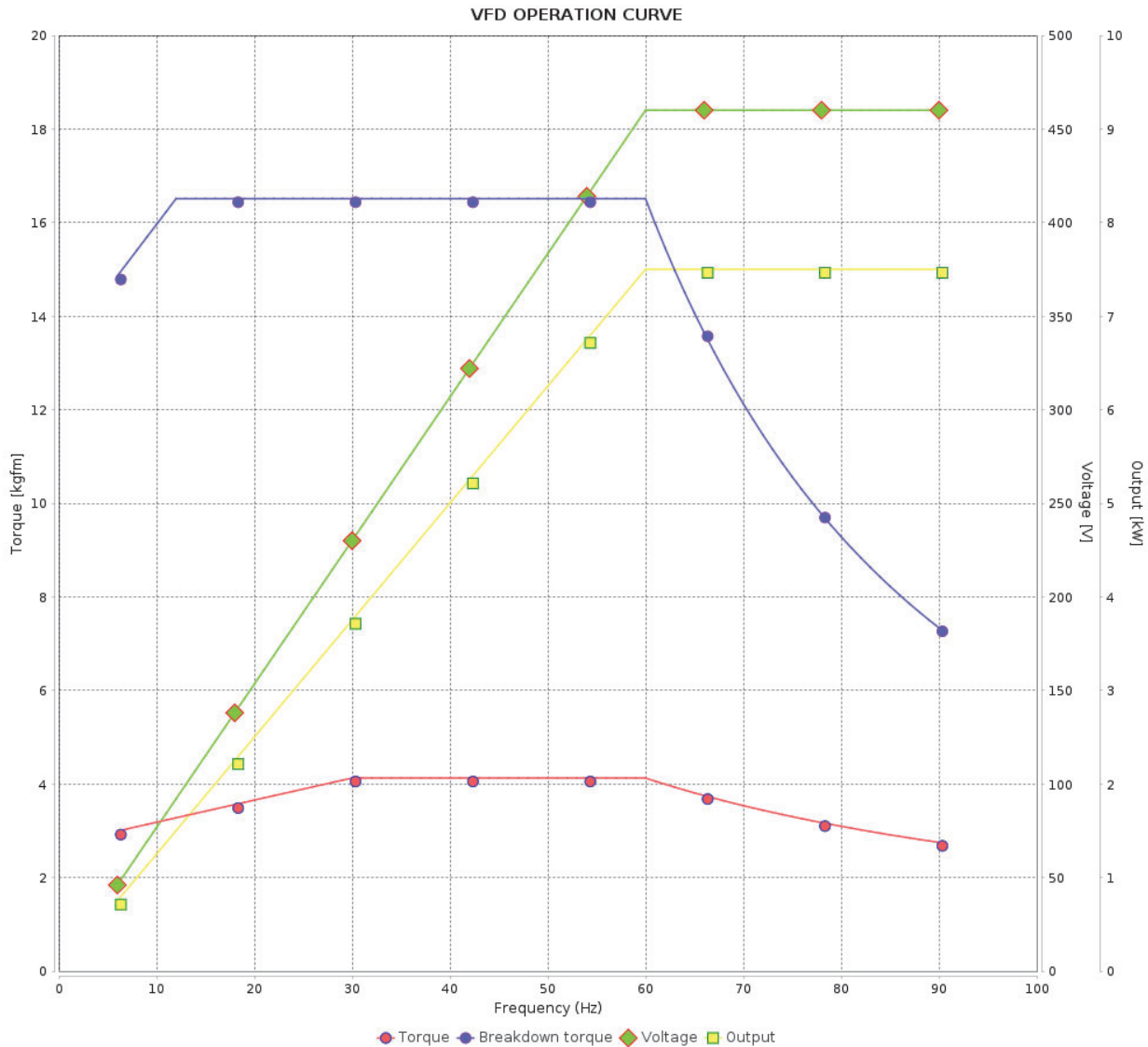
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862531



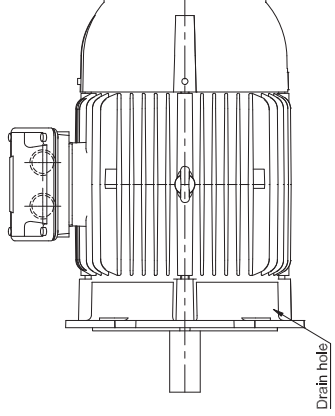
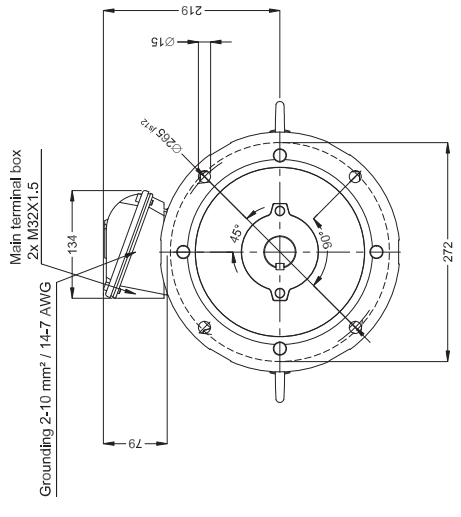
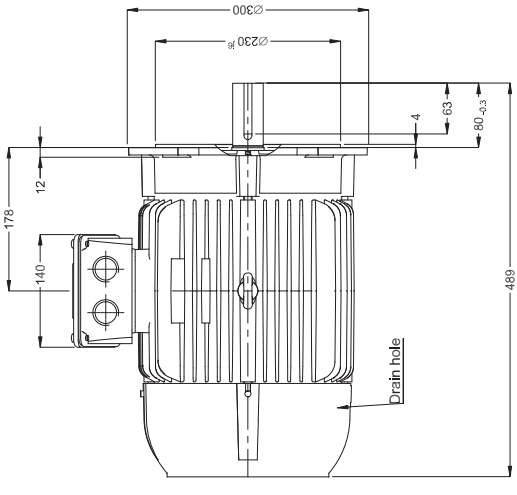
Performance : 460 V 60 Hz 4P

Rated current : 12.7 A  
 LRC : 9.5  
 Rated torque : 4.13 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 400 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.0563 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

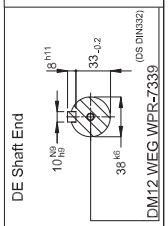
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 18 / 18	Revision
Checked by				
Date	05/12/2024			

1 2 3 4 5 6



7.5 kW 04 Poles 50 Hz

Scale		2 : 13	
HYBRIS/USER	EXECUTED	CHECKED	RELEASED
DATE	00	VER	
<b>PREVIEW</b>			
WDD	00	SHEET	1 / 1
SUMMARY OF MODIFICATIONS		THREE PH. MOTOR W22 IE3 FRAME 132M IP55 TEFC	
ECM	LOC		
EXECUTED	HYBRIS/USER		
CHECKED			
RELEASED			
REL. DATE			



Sealing - oil seal ring  
 Bearing cap  
 Color RAL 5009  
 Painting plan 207A  
 Mounting B5T

Dimensions in mm

