

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12448183  
Catalog # : HT040502NPW22

|                       |                 |                             |                        |
|-----------------------|-----------------|-----------------------------|------------------------|
| Frame                 | : 324/6TS       | Locked rotor time           | : 39s (cold) 22s (hot) |
| Output                | : 40 HP (30 kW) | Temperature rise            | : 80 K                 |
| Poles                 | : 2             | Duty cycle                  | : Cont.(S1)            |
| Frequency             | : 60 Hz         | Ambient temperature         | : -20°C to +40°C       |
| Rated voltage         | : 575 V         | Altitude                    | : 1000 m.a.s.l.        |
| Rated current         | : 38.4 A        | Protection degree           | : IP55                 |
| L. R. Amperes         | : 242 A         | Cooling method              | : IC411 - TEFC         |
| LRC                   | : 6.3x(Code G)  | Mounting                    | : F-1                  |
| No load current       | : 12.4 A        | Rotation <sup>1</sup>       | : Both (CW and CCW)    |
| Rated speed           | : 3560 rpm      | Noise level <sup>2</sup>    | : 76.0 dB(A)           |
| Slip                  | : 1.11 %        | Starting method             | : Direct On Line       |
| Rated torque          | : 59.0 ft.lb    | Approx. weight <sup>3</sup> | : 547 lb               |
| Locked rotor torque   | : 229 %         |                             |                        |
| Breakdown torque      | : 250 %         |                             |                        |
| Insulation class      | : F             |                             |                        |
| Service factor        | : 1.25          |                             |                        |
| Moment of inertia (J) | : 4.90 sq.ft.lb |                             |                        |
| Design                | : B             |                             |                        |

|                |       |      |      |      |                  |          |
|----------------|-------|------|------|------|------------------|----------|
| Output         | 25%   | 50%  | 75%  | 100% | Foundation loads |          |
| Efficiency (%) | 0.000 | 91.7 | 92.4 | 92.4 | Max. traction    | : 335 lb |
| Power Factor   | 0.00  | 0.74 | 0.82 | 0.85 | Max. compression | : 797 lb |

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

| P1 (0,9;1,0) | P2 (0,5;1,0) | P3 (0,25;1,0) | P4 (0,9;0,5) | P5 (0,5;0,5) | P6 (0,5;0,25) | P7 (0,25;0,25) |
|--------------|--------------|---------------|--------------|--------------|---------------|----------------|
| 7.9          | 5.3          | 4.4           | 5.3          | 2.9          | 2.3           | 1.4            |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | 6312 C3          | 6212 C3              |
| Sealing              | : | V'Ring           | V'Ring               |
| Lubrication interval | : | 12000 h          | 15000 h              |
| Lubricant amount     | : | 21 g             | 13 g                 |
| Lubricant type       | : | Mobil Polyrex EM |                      |

Notes

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.

| Rev.         | Changes Summary | Performed                 | Checked | Date |
|--------------|-----------------|---------------------------|---------|------|
|              |                 |                           |         |      |
| Performed by |                 | Page<br>1 / 6<br>Revision |         |      |
| Checked by   |                 |                           |         |      |
| Date         | 30/07/2026      |                           |         |      |

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

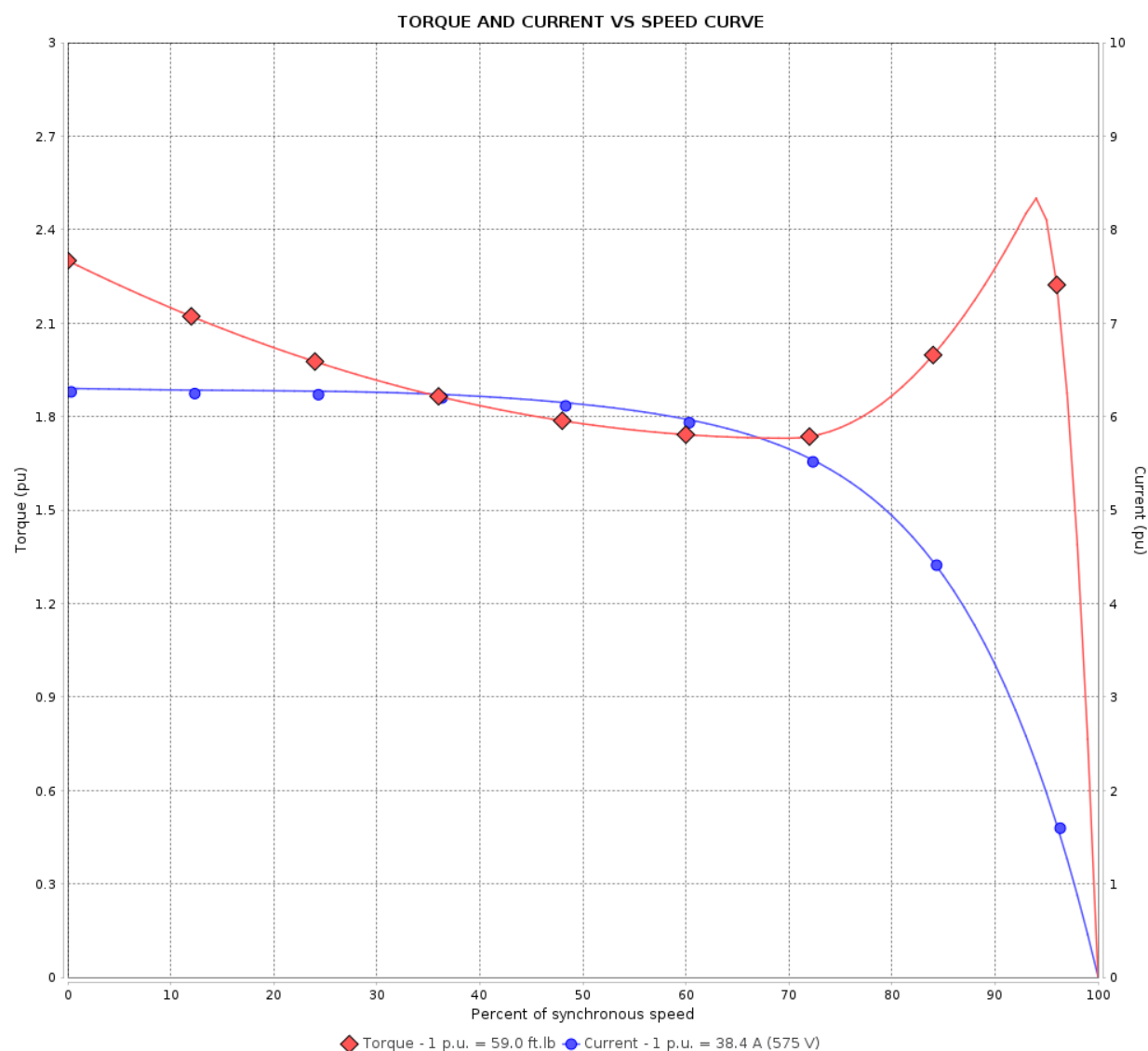


Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12448183

Catalog # : HT040502NPW22



Performance : 575 V 60 Hz 2P

|                     |              |                       |                 |
|---------------------|--------------|-----------------------|-----------------|
| Rated current       | : 38.4 A     | Moment of inertia (J) | : 4.90 sq.ft.lb |
| LRC                 | : 6.3        | Duty cycle            | : Cont.(S1)     |
| Rated torque        | : 59.0 ft.lb | Insulation class      | : F             |
| Locked rotor torque | : 229 %      | Service factor        | : 1.25          |
| Breakdown torque    | : 250 %      | Temperature rise      | : 80 K          |
| Rated speed         | : 3560 rpm   | Design                | : B             |

Locked rotor time : 39s (cold) 22s (hot)

| Rev.         | Changes Summary | Performed                | Checked | Date |
|--------------|-----------------|--------------------------|---------|------|
|              |                 |                          |         |      |
| Performed by |                 | Page 2 / 6      Revision |         |      |
| Checked by   |                 |                          |         |      |
| Date         | 30/07/2026      |                          |         |      |

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

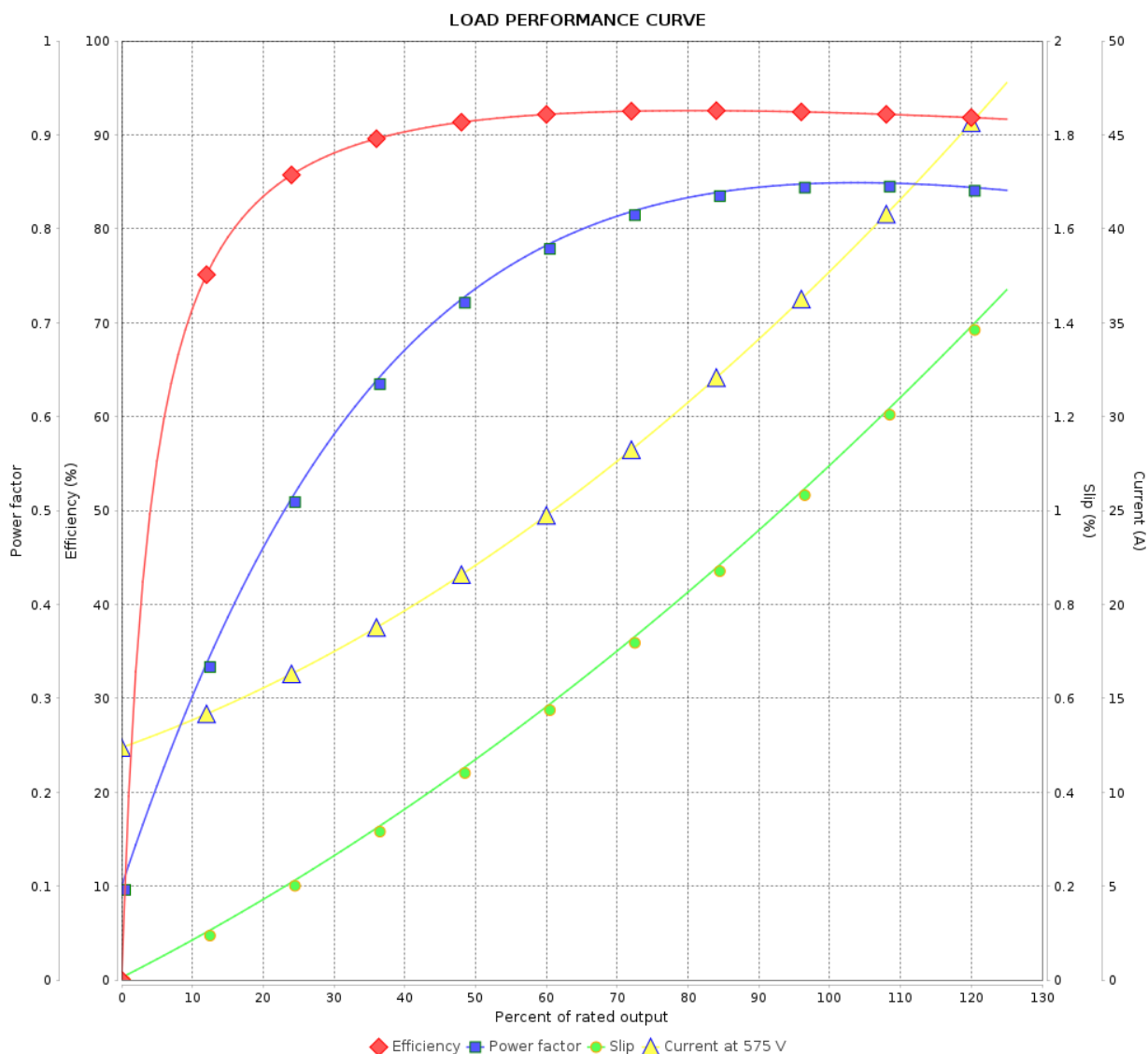


Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12448183

Catalog # : HT040502NPW22



Performance : 575 V 60 Hz 2P

Rated current : 38.4 A  
LRC : 6.3  
Rated torque : 59.0 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 250 %  
Rated speed : 3560 rpm

Moment of inertia (J) : 4.90 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed             | Checked | Date |
|--------------|-----------------|-----------------------|---------|------|
|              |                 |                       |         |      |
| Performed by |                 | Page<br>3 / 6Revision |         |      |
| Checked by   |                 |                       |         |      |
| Date         | 30/07/2026      |                       |         |      |

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12448183

Catalog # : HT040502NPW22

Performance : 575 V 60 Hz 2P

|                     |              |                       |                 |
|---------------------|--------------|-----------------------|-----------------|
| Rated current       | : 38.4 A     | Moment of inertia (J) | : 4.90 sq.ft.lb |
| LRC                 | : 6.3        | Duty cycle            | : Cont.(S1)     |
| Rated torque        | : 59.0 ft.lb | Insulation class      | : F             |
| Locked rotor torque | : 229 %      | Service factor        | : 1.25          |
| Breakdown torque    | : 250 %      | Temperature rise      | : 80 K          |
| Rated speed         | : 3560 rpm   | Design                | : B             |

Heating constant

Cooling constant

Rev.

Changes Summary

Performed

Checked

Date

Performed by

Checked by

Date

30/07/2026

Page

4 / 6

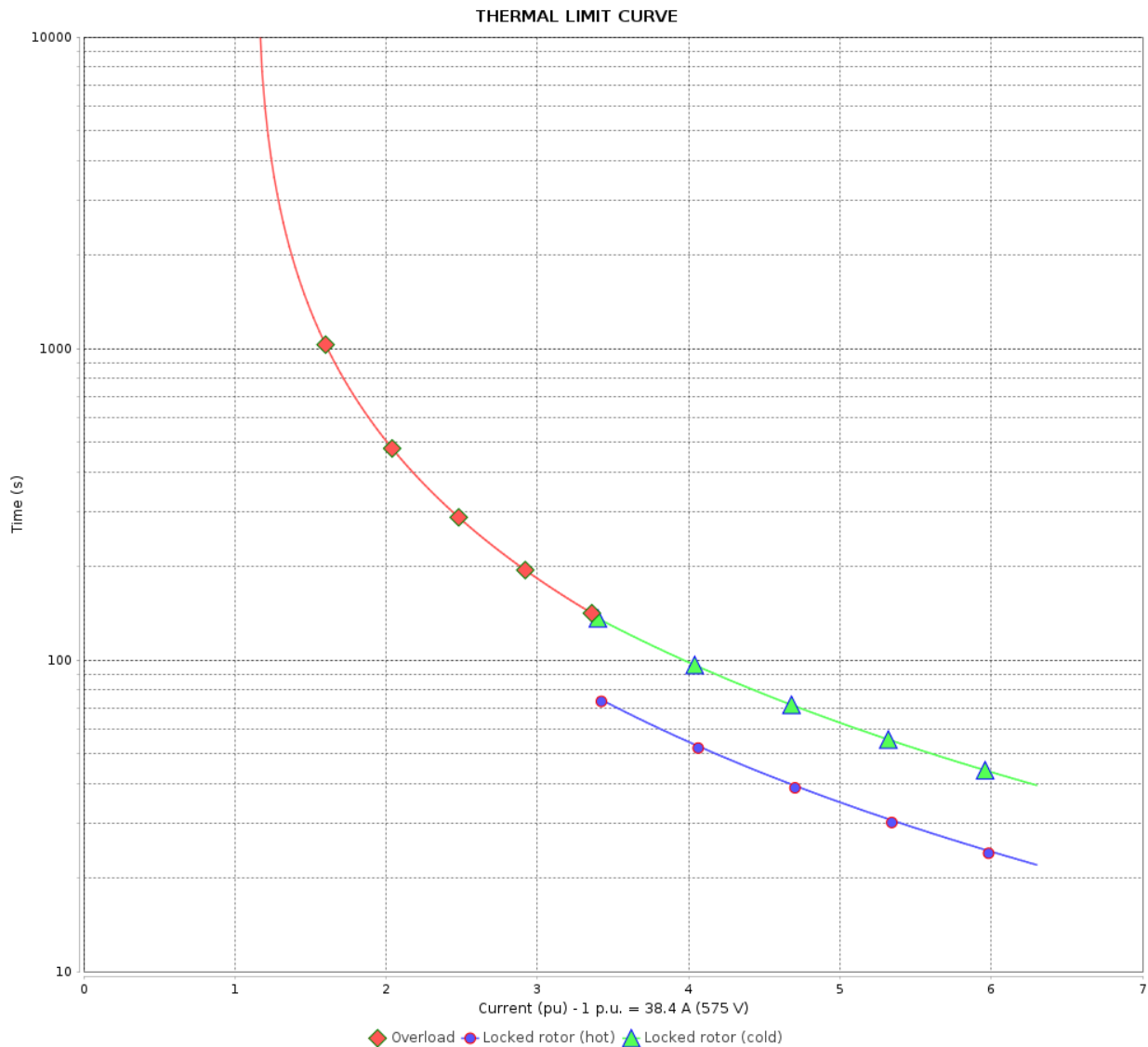
Revision

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :



| Rev.         | Changes Summary |          | Performed | Checked | Date          |
|--------------|-----------------|----------|-----------|---------|---------------|
|              |                 |          |           |         |               |
| Performed by |                 |          |           |         | Page<br>5 / 6 |
| Checked by   |                 |          |           |         |               |
| Date         | 30/07/2026      |          |           |         |               |
|              |                 | Revision |           |         |               |

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

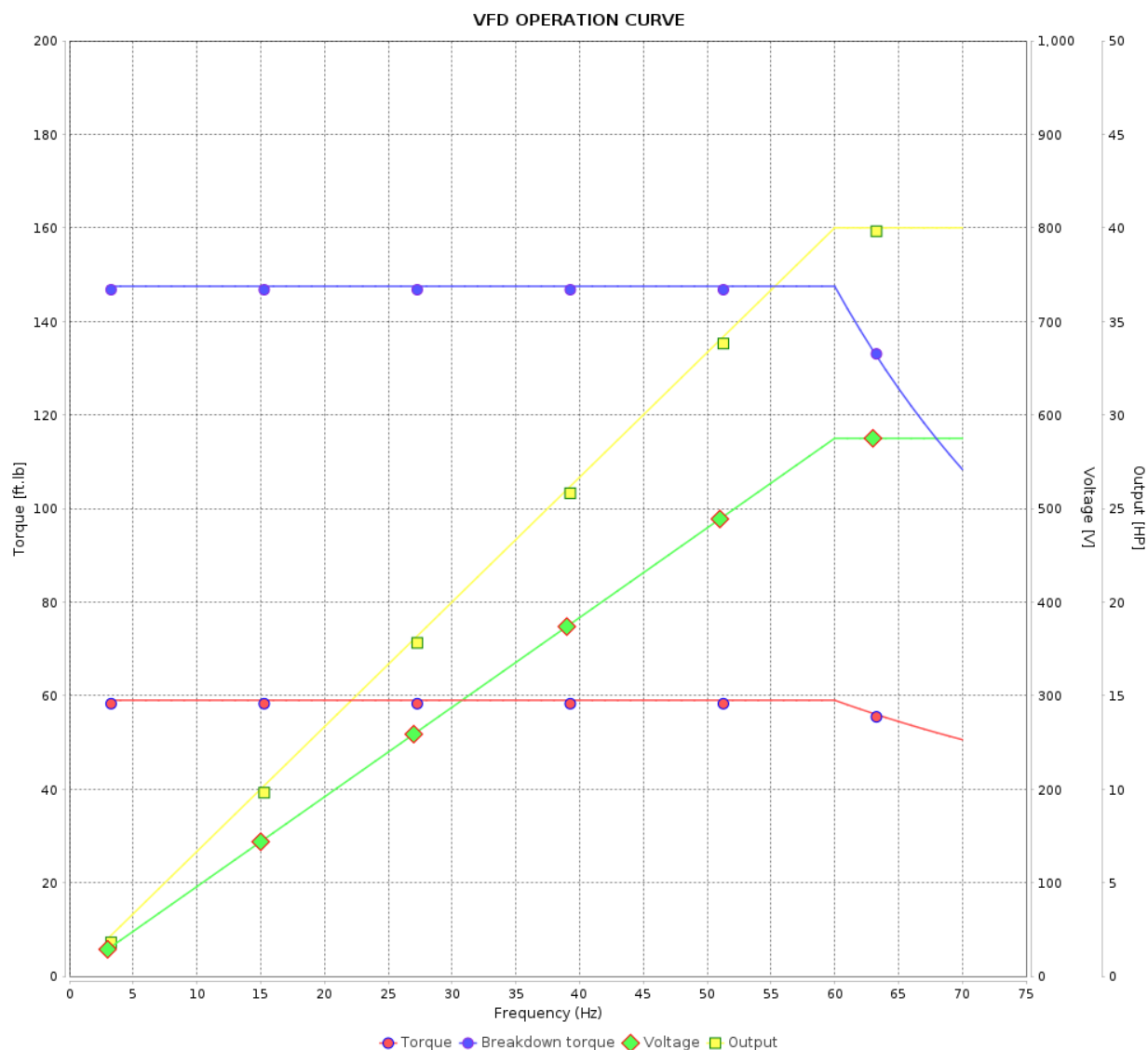


Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12448183

Catalog # : HT040502NPW22



Performance : 575 V 60 Hz 2P

Rated current : 38.4 A  
LRC : 6.3  
Rated torque : 59.0 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 250 %  
Rated speed : 3560 rpm

Moment of inertia (J) : 4.90 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary |  | Performed | Checked | Date     |
|--------------|-----------------|--|-----------|---------|----------|
|              |                 |  |           |         |          |
| Performed by |                 |  |           | Page    | Revision |
| Checked by   |                 |  |           | 6 / 6   |          |
| Date         |                 |  |           |         |          |

