

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 12537181  
Catalog # : DT001504NPW22

|                       |                   |                             |                        |
|-----------------------|-------------------|-----------------------------|------------------------|
| Frame                 | : 143/5TD         | Locked rotor time           | : 25s (cold) 14s (hot) |
| Output                | : 1.5 HP (1.1 kW) | Temperature rise            | : 80 K                 |
| Poles                 | : 4               | 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         | : 1.68 A          | Protection degree           | : IP55                 |
| L. R. Amperes         | : 14.1 A          | Cooling method              | : IC411 - TEFC         |
| LRC                   | : 8.4x(Code L)    | Mounting                    | : F-1                  |
| No load current       | : 0.960 A         | Rotation <sup>1</sup>       | : Both (CW and CCW)    |
| Rated speed           | : 1755 rpm        | Noise level <sup>2</sup>    | : 51.0 dB(A)           |
| Slip                  | : 2.50 %          | Starting method             | : Direct On Line       |
| Rated torque          | : 4.49 ft.lb      | Approx. weight <sup>3</sup> | : 48.5 lb              |
| Locked rotor torque   | : 290 %           |                             |                        |
| Breakdown torque      | : 350 %           |                             |                        |
| Insulation class      | : F               |                             |                        |
| Service factor        | : 1.25            |                             |                        |
| Moment of inertia (J) | : 0.1431 sq.ft.lb |                             |                        |
| Design                | : B               |                             |                        |

|                |      |      |      |                  |          |
|----------------|------|------|------|------------------|----------|
| Output         | 50%  | 75%  | 100% | Foundation loads |          |
| Efficiency (%) | 82.5 | 85.5 | 86.5 | Max. traction    | : 107 lb |
| Power Factor   | 0.54 | 0.67 | 0.76 | Max. compression | : 166 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) |
|--------------|--------------|---------------|--------------|--------------|---------------|----------------|
| 14.7         | 12.1         | 12.0          | 8.7          | 6.1          | 4.9           | 3.6            |

|                      |                  |                      |
|----------------------|------------------|----------------------|
|                      | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : 6205 ZZ        | : 6204 ZZ            |
| Sealing              | : V'Ring         | : V'Ring             |
| Lubrication interval | : -              | : -                  |
| Lubricant amount     | : -              | : -                  |
| Lubricant type       | : 00088          |                      |

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 |                 |           |         |          |
| Checked by   |                 |           |         |          |
| Date         | 23/07/2026      |           |         |          |
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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

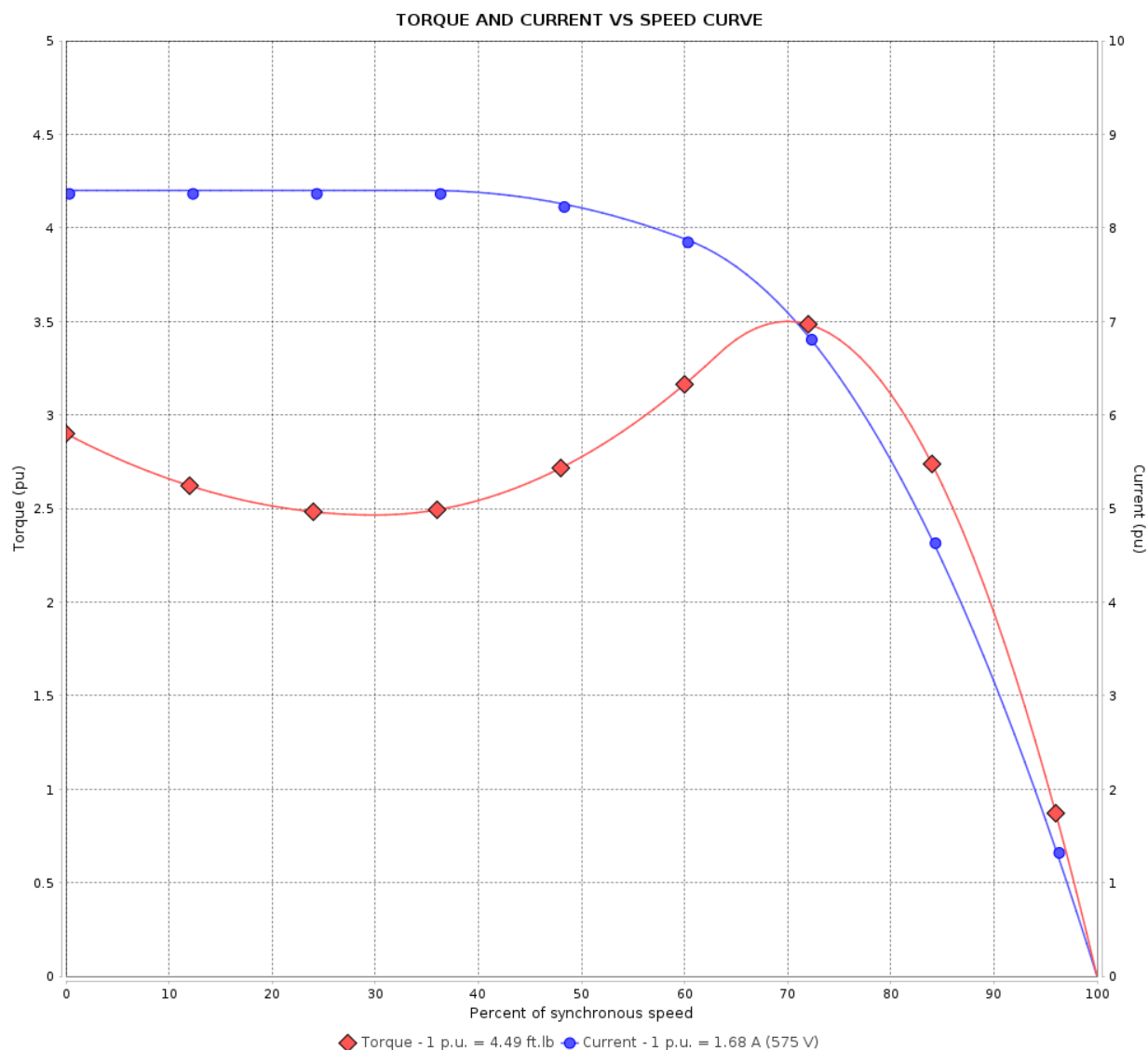


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Three-Phase

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Performance : 575 V 60 Hz 4P

|                     |              |                       |                   |
|---------------------|--------------|-----------------------|-------------------|
| Rated current       | : 1.68 A     | Moment of inertia (J) | : 0.1431 sq.ft.lb |
| LRC                 | : 8.4        | Duty cycle            | : Cont.(S1)       |
| Rated torque        | : 4.49 ft.lb | Insulation class      | : F               |
| Locked rotor torque | : 290 %      | Service factor        | : 1.25            |
| Breakdown torque    | : 350 %      | Temperature rise      | : 80 K            |
| Rated speed         | : 1755 rpm   | Design                | : B               |

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

| Rev.         | Changes Summary | Performed             | Checked | Date |
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| Checked by   |                 |                       |         |      |
| Date         | 23/07/2026      |                       |         |      |

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

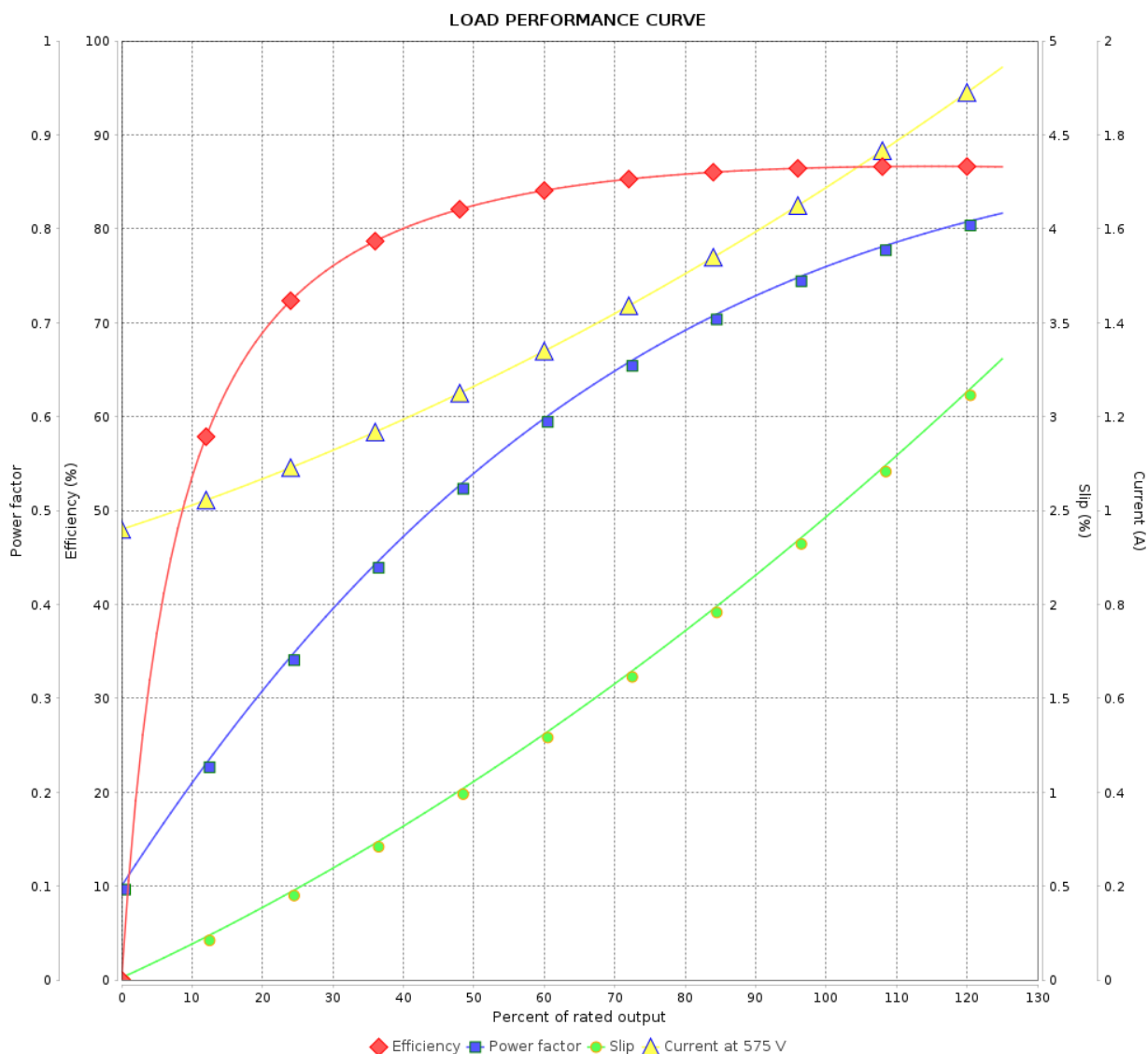


Customer :

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Three-Phase

Product code : 12537181

Catalog # : DT001504NPW22



Performance : 575 V 60 Hz 4P

Rated current : 1.68 A  
LRC : 8.4  
Rated torque : 4.49 ft.lb  
Locked rotor torque : 290 %  
Breakdown torque : 350 %  
Rated speed : 1755 rpm

Moment of inertia (J) : 0.1431 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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# THERMAL LIMIT CURVE

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Breakdown torque : 350 %  
Rated speed : 1755 rpm

Moment of inertia (J) : 0.1431 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

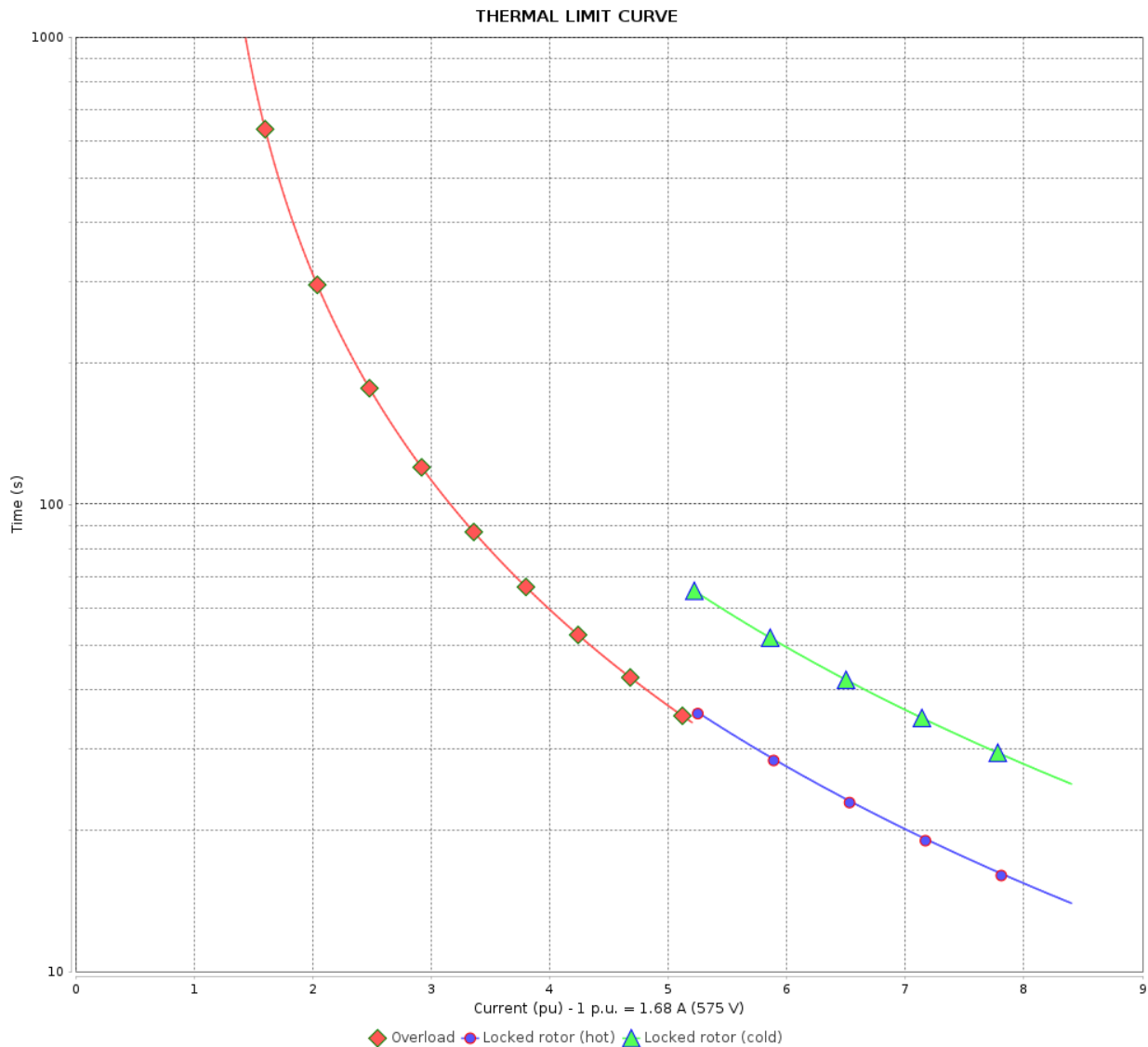
| Rev.         | Changes Summary |  | Performed | Checked | Date     |
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



| Rev.         | Changes Summary |  | Performed | Checked       | Date     |
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

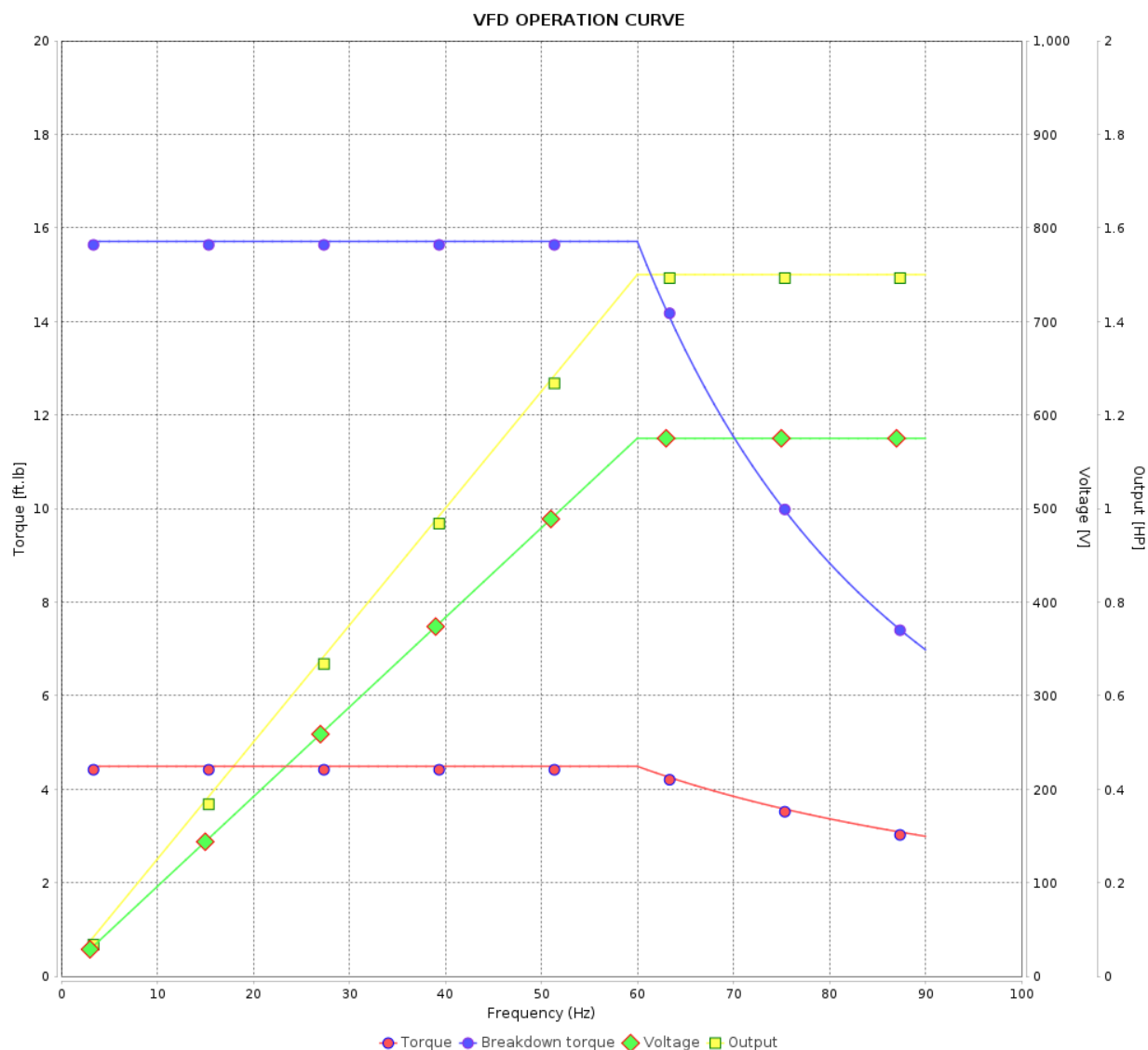


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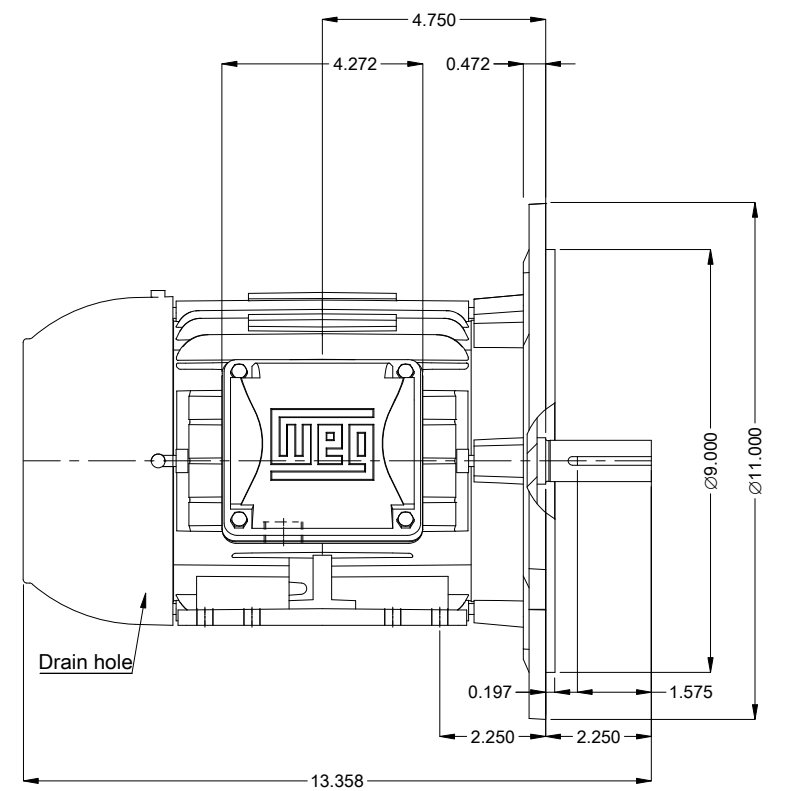
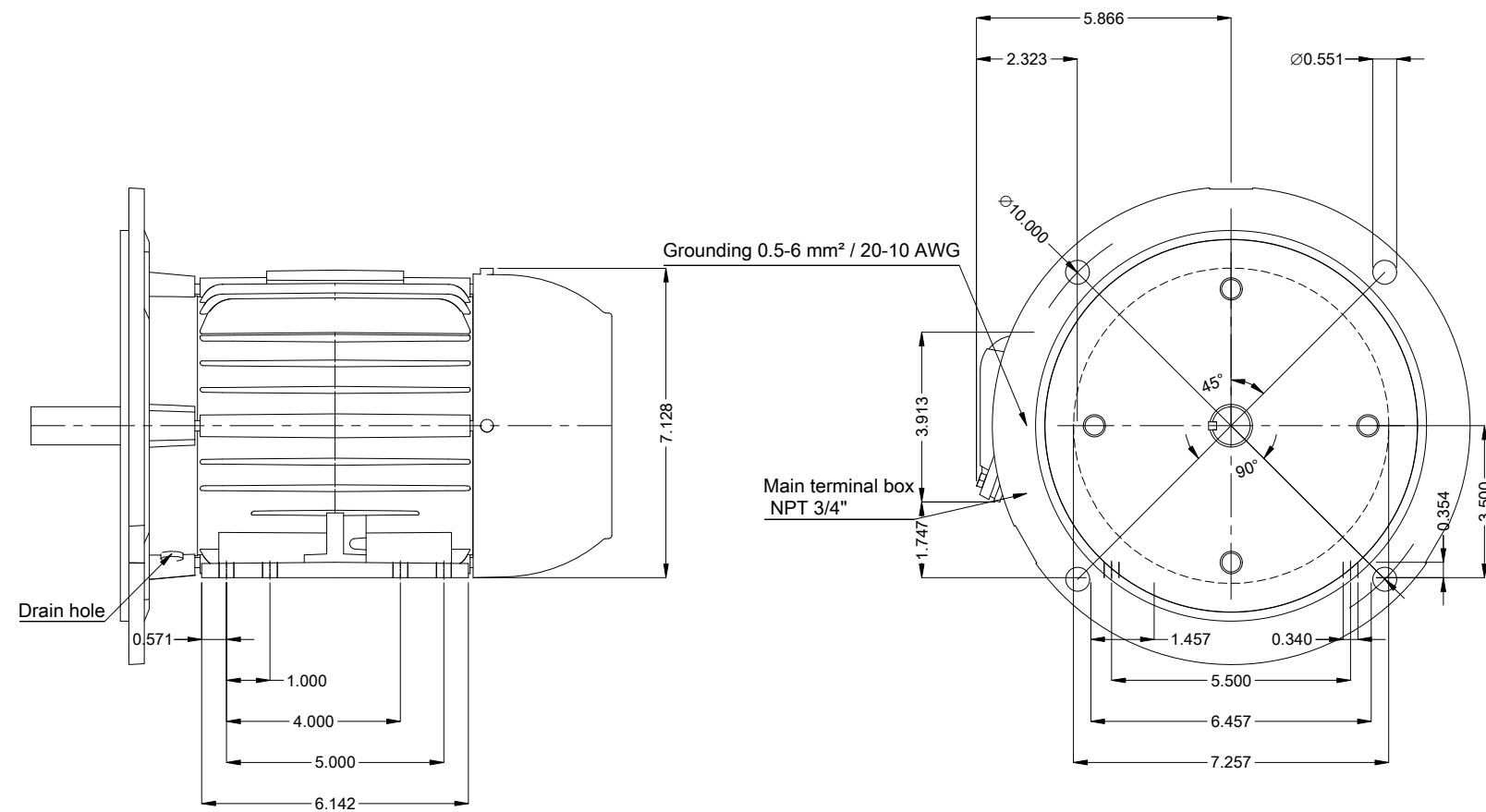


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|                           |            |                                                                                       |                                                                |  |  |                                  |                                           |          |                                                                                       |     |
|---------------------------|------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------|--|--|----------------------------------|-------------------------------------------|----------|---------------------------------------------------------------------------------------|-----|
| 1.5 HP   04 Poles   60 Hz |            |                                                                                       |                                                                |  |  |                                  |                                           |          |                                                                                       | A   |
|                           |            |                                                                                       |                                                                |  |  |                                  |                                           |          |                                                                                       |     |
|                           |            |                                                                                       |                                                                |  |  | Scale                      1 : 4 |                                           |          |                                                                                       |     |
|                           |            |                                                                                       |                                                                |  |  | HYBRISUSER                       |                                           |          |                                                                                       | 00  |
| ECM                       | LOC        | SUMMARY OF MODIFICATIONS                                                              |                                                                |  |  | EXECUTED                         | CHECKED                                   | RELEASED | DATE                                                                                  | VER |
| EXECUTED                  | HYBRISUSER |  | THREE PH. MOTOR W22 NEMA PREM. EFF.<br>FRAME 143/STD IP55 TEFC |  |  |                                  | <div>PREVIEW</div> <div>WDD      00</div> |          |  |     |
| CHECKED                   |            |                                                                                       |                                                                |  |  |                                  |                                           |          |                                                                                       |     |
| RELEASED                  |            |                                                                                       |                                                                |  |  |                                  |                                           |          |                                                                                       |     |
| REL. DATE                 |            |                                                                                       |                                                                |  |  |                                  |                                           |          |                                                                                       |     |
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|                    |
|--------------------|
| Packing - crate    |
| Color RAL 5009     |
| Painting plan 207A |
| Mounting B35R(D)   |

