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# Customer information packet

## VFSWDM3546-E

1HP, 1770RPM, 3PH, 60HZ, 56C, 3522M, TENV, F1, N

Class - None

Division - Not Applicable

## Specifications

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Enclosure                      | TENV                                                        |
| Frame                          | 56C                                                         |
| Frame Material                 | Stainless Steel                                             |
| Frequency                      | 60.00 Hz                                                    |
| Haz Area Class and Group       | None                                                        |
| Haz Area Division              | Not Applicable                                              |
| Motor Letter Type              | Three Phase                                                 |
| Output @ Frequency             | 1.000 HP @ 60 HZ                                            |
| Phase                          | 3                                                           |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                            |
| Voltage @ Frequency            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                          |
| Agency Approvals               | NEMA PREMIUM<br>NEMA_PREMIUM<br>UR<br>CSA EEV               |
| Ambient Temperature            | 40 °C                                                       |
| Auxillary Box                  | No Auxillary Box                                            |
| Auxillary Box Lead Termination | None                                                        |
| Base Indicator                 | No Mounting                                                 |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                     |
| Blower                         | None                                                        |
| Current @ Voltage              | 3.300 A @ 208.0 V<br>3.340 A @ 230.0 V<br>1.670 A @ 460.0 V |
| Design Code                    | B                                                           |
| Drip Cover                     | No Drip Cover                                               |
| Duty Rating                    | CONT                                                        |
| Efficiency @ 100% Load         | 85.5 %                                                      |
| Electrically Isolated Bearing  | Not Electrically Isolated                                   |
| Feedback Device                | NO FEEDBACK                                                 |
| Front Shaft Indicator          | None                                                        |

## Part detail

|              |            |
|--------------|------------|
| Revision     | G          |
| Type         | AC         |
| Mech. spec.  | 35E4656    |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 35WGG184   |
| Layout       | 35LYE4656  |
| Eff. date    | 08-14-2023 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 07-16-2021 |

|                               |                        |
|-------------------------------|------------------------|
| Heater Indicator              | No Heater              |
| High Voltage Full Load Amps   | 1.7 a                  |
| Insulation Class              | H                      |
| Inverter Code                 | Inverter Ready         |
| KVA Code                      | N                      |
| Lifting Lugs                  | No Lifting Lugs        |
| Locked Bearing Indicator      | Locked Bearing         |
| Motor Finish                  | UNPAINTED              |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG             |
| Motor Lead Termination        | Flying Leads           |
| Motor Standards               | NEMA                   |
| Motor Type                    | 3522M                  |
| Mounting Arrangement          | F1                     |
| Number of Poles               | 4                      |
| Overall Length                | 13.96 IN               |
| Power Factor                  | 66                     |
| Product Family                | WD All SS Encapsulated |
| Pulley End Bearing Type       | Sealed Bearing         |
| Pulley Face Code              | C-Face                 |
| Pulley Shaft Indicator        | Standard               |
| Rodent Screen                 | None                   |
| RoHS Status                   | ROHS COMPLIANT         |
| Service Factor                | 1.15                   |
| Shaft Diameter                | 0.625 IN               |
| Shaft Ground Indicator        | No Shaft Grounding     |
| Shaft Rotation                | Reversible             |
| Shaft Slinger Indicator       | No Slinger             |
| Speed                         | 1770 rpm               |
| Speed Code                    | Single Speed           |
| Starting Method               | Direct on line         |
| Thermal Device - Bearing      | None                   |
| Thermal Device - Winding      | None                   |
| Vibration Sensor Indicator    | No Vibration Sensor    |
| Winding Thermal 1             | None                   |

Winding Thermal 2

None

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## Nameplate

| NP4427AAA01 |               |       |         |          |      |               |      |    |       |      |      |  |       |  |  |
|-------------|---------------|-------|---------|----------|------|---------------|------|----|-------|------|------|--|-------|--|--|
| CAT #       | VFSWDM3546-E  |       |         |          |      | WT            | 37   |    | LBS   |      |      |  |       |  |  |
| SPEC        | 35E4656G184G1 |       |         |          |      | ENCL          | TENV |    |       |      |      |  |       |  |  |
| SER #       |               |       |         |          |      | CC            | 010A |    | IP    | 69   |      |  |       |  |  |
| HP          | 1             |       | MAG CUR |          |      | 2.5/1.25      |      |    |       |      |      |  |       |  |  |
| VOLTS       | 230/460       |       |         |          |      | NEMA NOM. EFF |      |    |       |      | 85.5 |  |       |  |  |
| AMPS        | 3.34/1.67     |       |         |          |      |               |      | PF | 66    |      |      |  |       |  |  |
| RATING      | 40C AMB-CONT  |       |         |          |      |               |      |    |       |      |      |  |       |  |  |
| RPM         | 1770          |       |         |          |      | MAX RPM       |      |    | 2700  |      |      |  |       |  |  |
| FRAME       | 56C           |       | HZ      | 60       |      | CODE          | N    |    | CLASS | H    |      |  |       |  |  |
| SER.F.      | 1.15          |       | SF AMP  | 3.5/1.75 |      |               | PH   | 3  |       | DES  | B    |  |       |  |  |
| DE          | 6205          |       |         | ODE      |      | 6205          |      |    |       |      |      |  |       |  |  |
| LUBRICATION | POLYREX EM    |       |         |          |      |               |      |    |       |      |      |  |       |  |  |
| ID LOGO     | INVERTER TYPE |       |         |          | VPWM |               | CHP  | 60 |       | TO   | 90   |  | 1.5:1 |  |  |
| ID LOGO     | WK2           | 0.159 |         | CT       | 15   |               | TO   | 60 |       | 4:1  |      |  |       |  |  |
| ID LOGO     | SL HZ         | 1     |         | VT       | 3    |               | TO   | 60 |       | 20:1 |      |  |       |  |  |
|             |               |       |         |          |      |               |      |    |       |      |      |  |       |  |  |
|             |               |       |         |          |      |               |      |    |       |      |      |  |       |  |  |
|             |               |       |         |          |      |               |      |    |       |      |      |  |       |  |  |
|             |               |       |         |          |      |               |      |    |       |      |      |  |       |  |  |
|             |               |       |         |          |      |               |      |    |       |      |      |  |       |  |  |
|             |               |       |         |          |      |               |      | QR |       |      |      |  |       |  |  |
| YR          |               |       |         |          |      |               |      |    |       |      |      |  |       |  |  |

**AC Induction Motor Performance Data**

Record # 87470

Typical performance - not guaranteed values

| Winding: 35WGG184-R004 |    |           | Type: 3522M                              |                     | Enclosure: TENV           |                       |              |        |
|------------------------|----|-----------|------------------------------------------|---------------------|---------------------------|-----------------------|--------------|--------|
| Nameplate Data         |    |           | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |                       |              |        |
| Rated Output (HP)      |    | 1         | Full Load Torque                         |                     | 2.99 LB-FT                |                       |              |        |
| Volts                  |    | 230/460   | Start Configuration                      |                     | direct on line            |                       |              |        |
| Full Load Amps         |    | 3.34/1.67 | Breakdown Torque                         |                     | 16.6 LB-FT                |                       |              |        |
| R.P.M.                 |    | 1770      | Pull-up Torque                           |                     | 7.42 LB-FT                |                       |              |        |
| Hz                     | 60 | Phase     | 3                                        | Locked-rotor Torque |                           | 10.32 LB-FT           |              |        |
| NEMA Design Code       |    | B         | KVA Code                                 | N                   | Starting Current          |                       | 16.1 A       |        |
| Service Factor (S.F.)  |    | 1.15      | No-load Current                          |                     | 1.23 A                    |                       |              |        |
| NEMA Nom. Eff.         |    | 85.5      | Power Factor                             |                     | 66                        | Line-line Res. @ 25°C |              | 14.4 Ω |
| Rating - Duty          |    | 40C       | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |                       | 63°C         |        |
| S.F. Amps              |    |           |                                          |                     | Temp. Rise @ S.F. Load    |                       | 71°C         |        |
|                        |    |           |                                          |                     | Locked-rotor Power Factor |                       | 59.4         |        |
|                        |    |           |                                          |                     | Rotor inertia             |                       | 0.159 lb-ft² |        |

**Load Characteristics 460 V, 60 Hz, 1 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 27   | 43   | 56   | 66   | 73   | 78   | 72   |
| Efficiency      | 70.8 | 81.2 | 84.5 | 85.9 | 85.8 | 85.2 | 85.5 |
| Speed           | 1793 | 1786 | 1781 | 1773 | 1766 | 1758 | 1768 |
| Line amperes    | 1.25 | 1.34 | 1.49 | 1.67 | 1.87 | 2.12 | 1.75 |

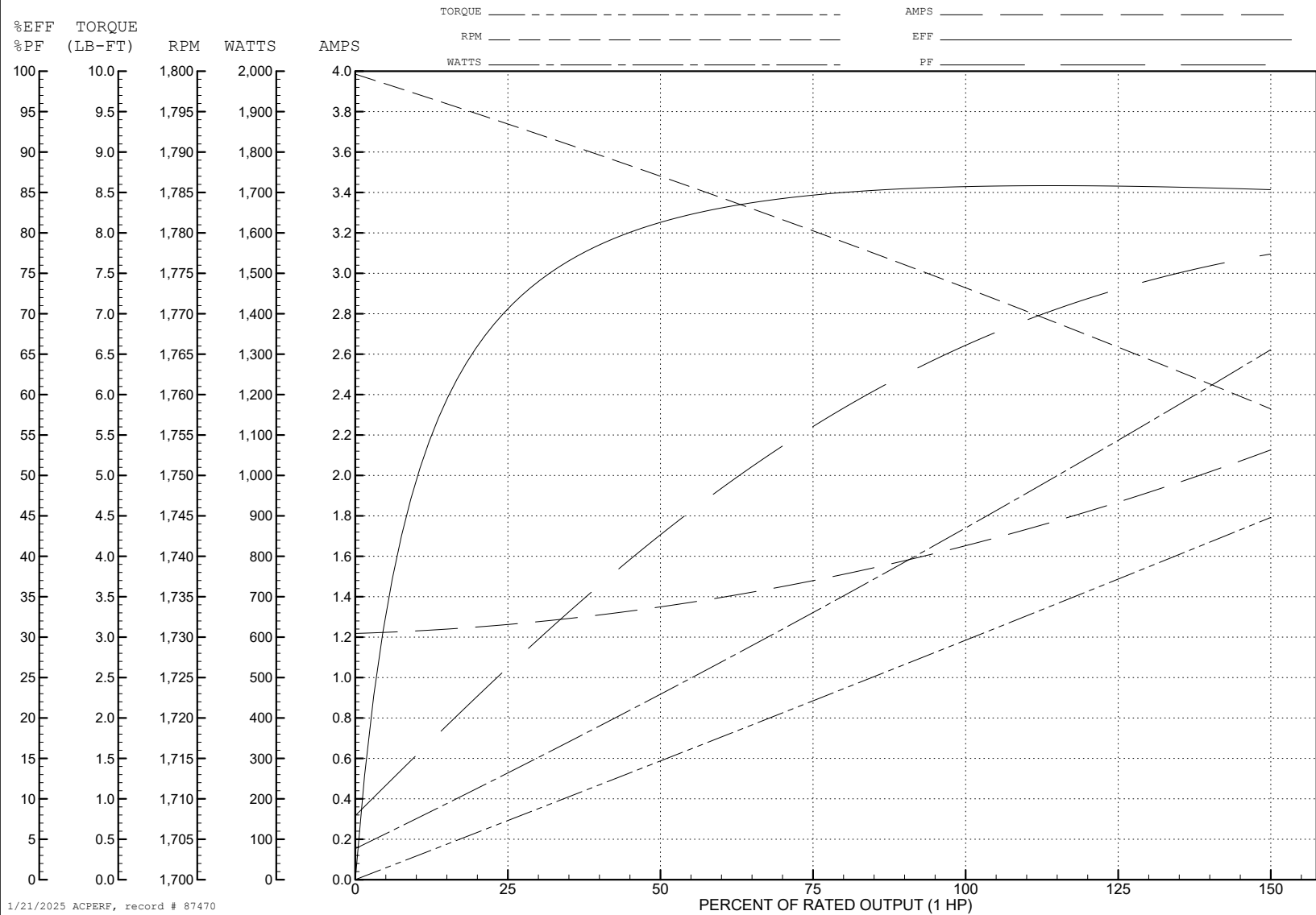
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WINDING # 35WGG184

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 3522M

TORQUES (LB-FT): PO=16.6 PU=7.42 LR=10.32 LRA=16.1



**AC Induction Motor Performance Data**

Record # 89717

Typical performance - not guaranteed values

| Winding: 35WGG184-R010 |    |               | Type: 3522M                              |                     | Enclosure: TENV         |             |        |
|------------------------|----|---------------|------------------------------------------|---------------------|-------------------------|-------------|--------|
| Nameplate Data         |    |               | 460 V, 60 Hz:<br>High Voltage Connection |                     |                         |             |        |
| Rated Output (HP)      |    | 1             | Full Load Torque                         |                     | 2.99 LB-FT              |             |        |
| Volts                  |    | 208-230/460   | Start Configuration                      |                     | direct on line          |             |        |
| Full Load Amps         |    | 3.3-3.34/1.67 | Breakdown Torque                         |                     | 16.6 LB-FT              |             |        |
| R.P.M.                 |    | 1770          | Pull-up Torque                           |                     | 7.42 LB-FT              |             |        |
| Hz                     | 60 | Phase         | 3                                        | Locked-rotor Torque |                         | 10.32 LB-FT |        |
| NEMA Design Code       |    | B             | KVA Code                                 | N                   | Starting Current        |             | 16.1 A |
| Service Factor (S.F.)  |    | 1.15          | No-load Current                          |                     | 1.23 A                  |             |        |
| NEMA Nom. Eff.         |    | 85.5          | Power Factor                             | 66                  | Line-line Res. @ 25°C   |             | 14.4 Ω |
| Rating - Duty          |    | 65C           | AMB-CONT                                 |                     | Temp. Rise @ Rated Load |             | 63°C   |
| S.F. Amps              |    | 3.6-3.5/1.75  | Temp. Rise @ S.F. Load                   |                     | 71°C                    |             |        |
|                        |    |               | Locked-rotor Power Factor                |                     | 59.3666                 |             |        |
|                        |    |               | Rotor inertia                            |                     | 0.159 lb-ft²            |             |        |

**Load Characteristics 460 V, 60 Hz, 1 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 27   | 43   | 56   | 66   | 73   | 78   | 70   |
| Efficiency      | 70.8 | 81.2 | 84.5 | 85.9 | 85.8 | 85.2 | 85.8 |
| Speed           | 1793 | 1786 | 1781 | 1773 | 1766 | 1758 | 1769 |
| Line amperes    | 1.25 | 1.34 | 1.49 | 1.67 | 1.87 | 2.12 | 1.79 |

ABB Motors and Mechanical Inc.

WINDING # 35WGG184

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 3522M

TORQUES (LB-FT): PO=16.6 PU=7.42 LR=10.32 LRA=16.1

