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# Customer information packet

## ECP3581T-4

1HP, 1770RPM, 3PH, 60HZ, 143T, 0520M, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

## Specifications

|                                |                                                          |
|--------------------------------|----------------------------------------------------------|
| Enclosure                      | TEFC                                                     |
| Frame                          | 143T                                                     |
| Frame Material                 | Iron                                                     |
| Frequency                      | 60.00 Hz                                                 |
| Haz Area Class and Group       | CL I GP A,B,C,D                                          |
| Haz Area Division              | Division II                                              |
| 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                                          |
| Agency Approvals               | CCSA US<br>CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR |
| Ambient Temperature            | 40 °C                                                    |
| Auxiliary Box                  | NO AUXILLARY BOX                                         |
| Auxiliary Box Lead Termination | None                                                     |
| Base Indicator                 | Rigid                                                    |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                  |
| Blower                         | None                                                     |
| Constant Torque Speed Range    | 1.2                                                      |
| Current @ Voltage              | 1.600 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                                                     |
| Haz Area Temp Code             | T4                                                       |

## Part detail

|              |            |
|--------------|------------|
| Revision     | C          |
| Type         | AC         |
| Mech. spec.  | 05F008     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 05WGX565   |
| Layout       | 05LYF008   |
| Eff. date    | 10-01-2025 |
| CD Diagram   | CD0006     |
| Poles        | 04         |
| Leads        | 3#18       |
| Proprietary  | False      |
| Created date | 03-11-2022 |

|                               |                              |
|-------------------------------|------------------------------|
| Heater Indicator              | No Heater                    |
| High Voltage Full Load Amps   | 1.6 a                        |
| Insulation Class              | F                            |
| Inverter Code                 | Inverter Ready               |
| KVA Code                      | N                            |
| Lifting Lugs                  | Standard Lifting Lugs        |
| Locked Bearing Indicator      | No Locked Bearing            |
| Max Speed                     | 2700 rpm                     |
| Motor Lead Quantity/Wire Size | 3 @ 18 AWG                   |
| Motor Lead Termination        | Flying Leads                 |
| Motor Standards               | NEMA                         |
| Motor Type                    | 0520M                        |
| Mounting Arrangement          | F1                           |
| Number of Poles               | 4                            |
| Overall Length                | 12.88 IN                     |
| Power Factor                  | 68                           |
| Product Family                | Chemical Processing (Not DC) |
| Pulley End Bearing Type       | Ball                         |
| Pulley Face Code              | Standard                     |
| Pulley Shaft Indicator        | Standard                     |
| Rodent Screen                 | None                         |
| Service Factor                | 1.15                         |
| Shaft Diameter                | 0.875 IN                     |
| Shaft Ground Indicator        | No Shaft Grounding           |
| Shaft Rotation                | Reversible                   |
| Shaft Slinger Indicator       | Shaft 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                         |

## Nameplate

| NP3258       |              |  |      |      |     |    |    |   |  |
|--------------|--------------|--|------|------|-----|----|----|---|--|
| CAT.NO.      | ECP3581T-4   |  |      |      |     |    |    |   |  |
| SPEC.        | 05F008X565G1 |  |      |      |     |    |    |   |  |
| HP           | 1 TE         |  |      |      |     |    |    |   |  |
| VOLTS        | 460          |  |      |      |     |    |    |   |  |
| AMP          | 1.6          |  |      |      |     |    |    |   |  |
| RPM          | 1770         |  |      |      |     |    |    |   |  |
| FRAME        | 143T         |  | HZ   | 60   |     | PH | 3  |   |  |
| SER.F.       | 1.15         |  | CODE | N    | DES | B  | CL | F |  |
| RATING       | 40C AMB-CONT |  |      |      |     |    |    |   |  |
| SN           |              |  |      |      |     |    |    |   |  |
| DE           | 6205         |  | ODE  | 6205 |     |    |    |   |  |
| NEMA-NOM-EFF | 85.5         |  | PF   | 68   |     |    |    |   |  |
| G.MIN.EFF    | 82.5         |  | CC   | 010A |     |    |    |   |  |
| T. CODE      | T4           |  | T=   | 135  |     |    |    |   |  |

| NP3261      |                         |           |      |
|-------------|-------------------------|-----------|------|
| SPEC.       | 05F008X565G1            |           |      |
| D.E. BRG.   | 25BC02XP30X             |           |      |
| O.D.E. BRG. | 25BC02XP30X             |           |      |
| GREASE      | POLYREX EM              |           |      |
| RPM MAX     | 2700                    | MAX. KVAR | 0.52 |
| BLANK       | SFA 1.75                |           |      |
| INV.TYPE    | PWM                     |           |      |
| T=          | 135                     |           |      |
| C HP FR     | 60                      | C HP TO   | 90   |
| CT HZ FROM  | 1.2                     | CT HZ TO  | 60   |
| VT HZ FROM  | 0-                      | VT HZ TO  | 60   |
| HTR-VOLTS   | HTR-AMPS                |           |      |
| HTR-WATTS   | MAX. SPACE HEATER TEMP. |           |      |

**Accessories**

| Part number | Description | Multiplier |
|-------------|-------------|------------|
| 35-1300     | C FACE KIT  | A8         |

## AC Induction Motor Performance Data

Record # 82133

Typical performance - not guaranteed values

| Winding: 05WGX565-R001 |    |       | Type: 0520M                           |                     | Enclosure: TEFC         |                       |         |        |
|------------------------|----|-------|---------------------------------------|---------------------|-------------------------|-----------------------|---------|--------|
| Nameplate Data         |    |       | 460 V, 60 Hz:<br>Single Voltage Motor |                     |                         |                       |         |        |
| Rated Output (HP)      |    | 1     | Full Load Torque                      |                     | 2.97 LB-FT              |                       |         |        |
| Volts                  |    | 460   | Start Configuration                   |                     | direct on line          |                       |         |        |
| Full Load Amps         |    | 1.6   | Breakdown Torque                      |                     | 13.86 LB-FT             |                       |         |        |
| R.P.M.                 |    | 1760  | Pull-up Torque                        |                     | 7.96 LB-FT              |                       |         |        |
| Hz                     | 60 | Phase | 3                                     | Locked-rotor Torque |                         | 9.14 LB-FT            |         |        |
| NEMA Design Code       |    | B     | KVA Code                              | N                   | Starting Current        |                       | 14.35 A |        |
| Service Factor (S.F.)  |    | 1.15  | No-load Current                       |                     | 1.11 A                  |                       |         |        |
| NEMA Nom. Eff.         |    | 85.5  | Power Factor                          |                     | 67                      | Line-line Res. @ 25°C |         | 16.8 Ω |
| Rating - Duty          |    | 40C   | AMB-CONT                              |                     | Temp. Rise @ Rated Load |                       | 24°C    |        |
| S.F. Amps              |    | 1.8   | Temp. Rise @ S.F. Load                |                     | 28°C                    |                       |         |        |
|                        |    |       | Locked-rotor Power Factor             |                     | 61.8256                 |                       |         |        |
|                        |    |       | Rotor inertia                         |                     | 0.144 lb-ft²            |                       |         |        |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 29   | 46   | 59   | 68   | 75   | 79   | 73   |
| Efficiency      | 71.7 | 81.5 | 84.6 | 85.6 | 85.4 | 84.8 | 85.6 |
| Speed           | 1791 | 1784 | 1776 | 1768 | 1759 | 1751 | 1763 |
| Line amperes    | 1.14 | 1.25 | 1.4  | 1.61 | 1.84 | 2.1  | 1.73 |

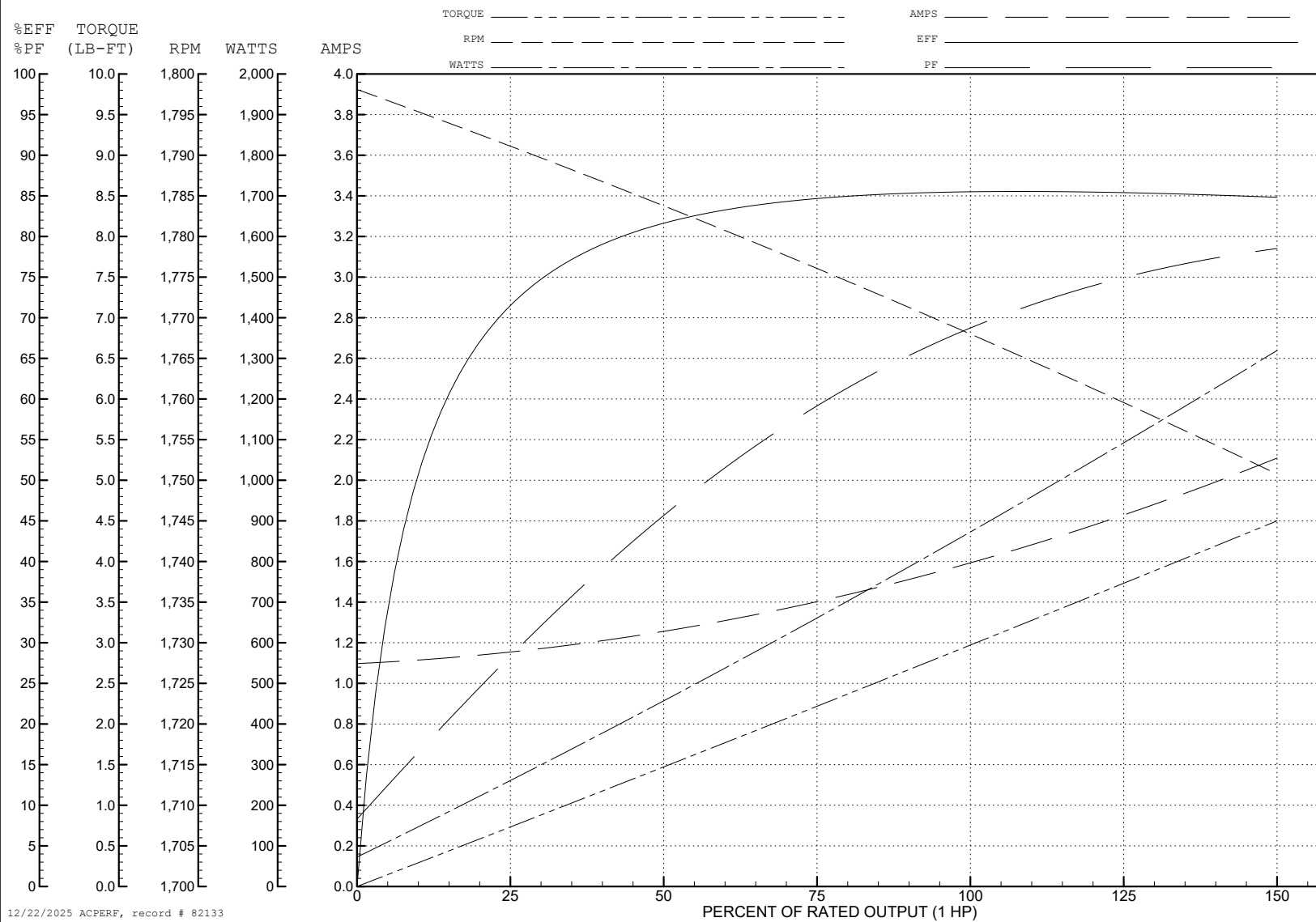
ABB Motors and Mechanical Inc.

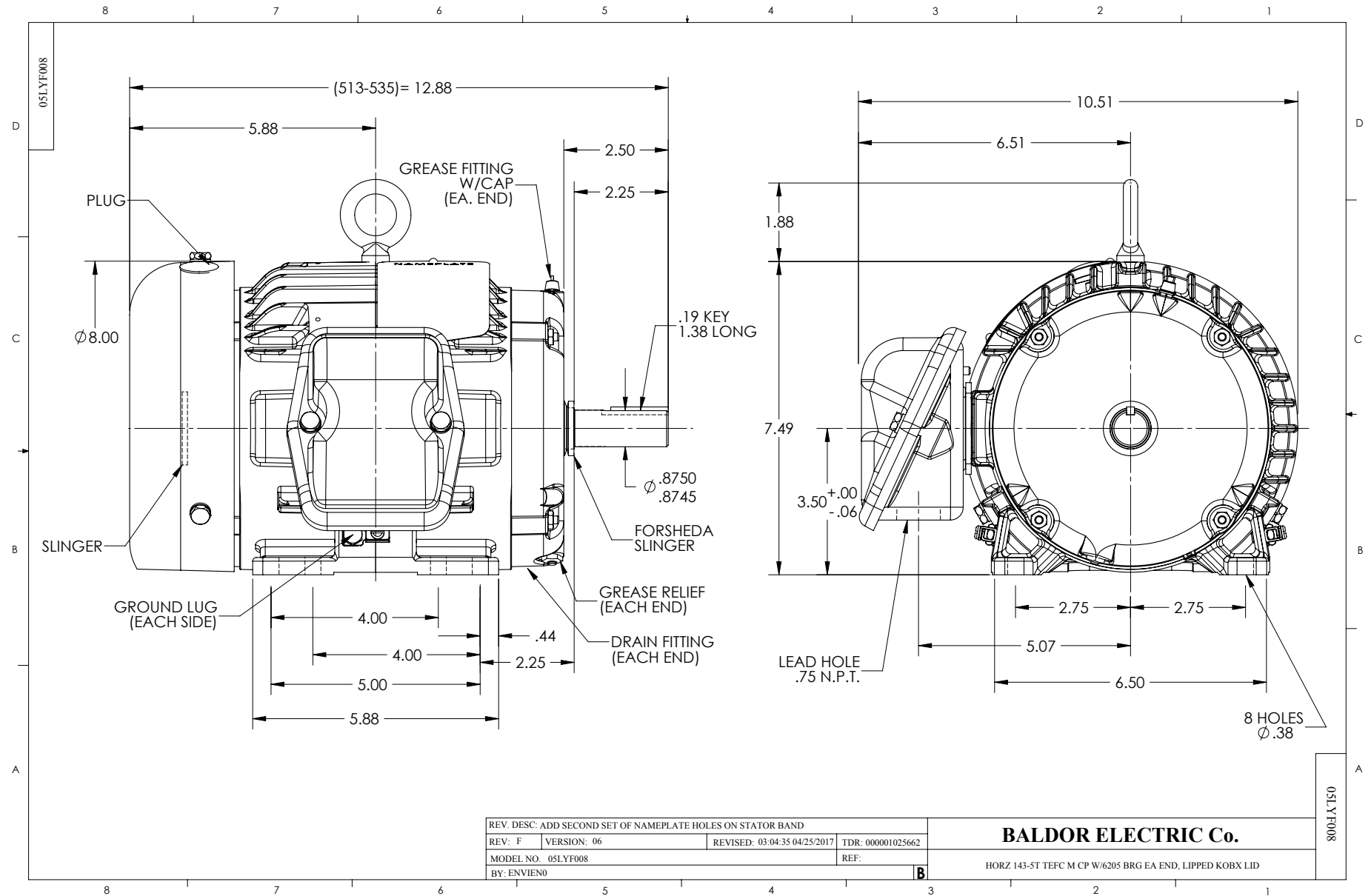
WINDING # 05WGX565

Typical performance - not guaranteed values.

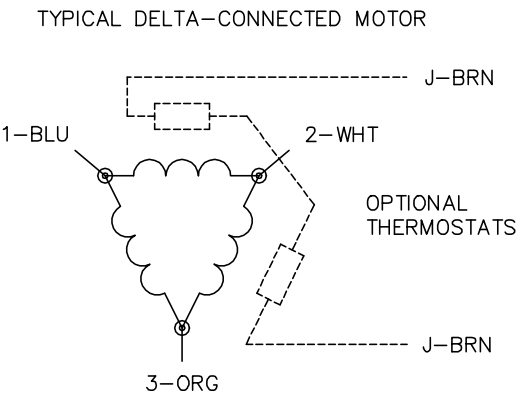
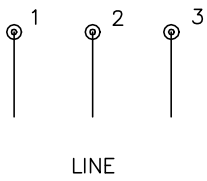
1 HP 3 PH 60 HZ 1760 RPM 460 V 0520M

TORQUES (LB-FT): PO=13.86 PU=7.96 LR=9.14 LRA=14.35





CD0006



- NOTES:
- 1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
  - 2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
  - 3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
  - 4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
  - 5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

|                                   |                                |                   |
|-----------------------------------|--------------------------------|-------------------|
| REV. DESC: ADD CLASS CONN00000007 |                                |                   |
| REV. LTR: E                       | VERSION: 01                    | TDR: 000001099922 |
| FILE: \AAA\00005\141              | REVISED: 10: 24: 49 02/19/2019 | BY: ENBRIRO       |
| MTL: —                            |                                |                   |

BALDOR - RELIANCE®

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1