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# Customer information packet

## EM2543T-5

50HP, 1775RPM, 3PH, 60HZ, 326T, 4256M, OPSB, F1

## Specifications

|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Enclosure                      | OPSB                                          |
| Frame                          | 326T                                          |
| Frame Material                 | Steel                                         |
| Frequency                      | 60.00 Hz                                      |
| Motor Letter Type              | Three Phase                                   |
| Output @ Frequency             | 50.000 HP @ 60 HZ                             |
| Phase                          | 3                                             |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                              |
| Voltage @ Frequency            | 575.0 V @ 60 HZ                               |
| Agency Approvals               | CSA EEV<br>UR<br>NEMA_PREMIUM<br>NEMA PREMIUM |
| 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                                          |
| Current @ Voltage              | 46.000 A @ 575.0 V                            |
| Design Code                    | A                                             |
| Drip Cover                     | No Drip Cover                                 |
| Duty Rating                    | CONT                                          |
| Efficiency @ 100% Load         | 94.5 %                                        |
| Electrically Isolated Bearing  | Not Electrically Isolated                     |
| Feedback Device                | NO FEEDBACK                                   |
| Front Face Code                | Standard                                      |
| Front Shaft Indicator          | None                                          |
| Heater Indicator               | No Heater                                     |
| High Voltage Full Load Amps    | 46.0 a                                        |
| Insulation Class               | F                                             |
| Inverter Code                  | Inverter Ready                                |

## Part detail

|              |            |
|--------------|------------|
| Revision     | AK         |
| Type         | AC         |
| Mech. spec.  | 42F56      |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 42WGW476   |
| Layout       | 42LYF056   |
| Eff. date    | 06-27-2024 |
| CD Diagram   | CD0006     |
| Poles        | 04         |
| Leads        | 3#8        |
| Proprietary  | False      |
| Created date | 01-01-0001 |

|                               |                       |
|-------------------------------|-----------------------|
| KVA Code                      | G                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | No Locked Bearing     |
| Motor Lead Exit               | Ko Box                |
| Motor Lead Quantity/Wire Size | 3 @ 8 AWG             |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 4256M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 4                     |
| Overall Length                | 27.69 IN              |
| Power Factor                  | 87                    |
| Product Family                | General Purpose       |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | Standard              |
| Pulley Shaft Indicator        | Standard              |
| Rodent Screen                 | None                  |
| Service Factor                | 1.15                  |
| Shaft Diameter                | 2.125 IN              |
| Shaft Extension Location      | Pulley End            |
| Shaft Ground Indicator        | No Shaft Grounding    |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | No Slinger            |
| Speed                         | 1775 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

| NP3554L   |              |                         |              |       |                     |      |         |            |        |      |      |
|-----------|--------------|-------------------------|--------------|-------|---------------------|------|---------|------------|--------|------|------|
| CAT.NO.   | EM2543T-5    |                         |              | P/N   |                     |      |         |            |        | ENCL | OPSB |
| SPEC.     | 42F056W476   | CC                      | 010A         | FRAME |                     | 326T | SER.NO. |            |        |      |      |
| HP        | 50           |                         | CLASS        |       | F                   | HZ   | 60      |            |        |      |      |
| RPM       | 1775         |                         | PH           | 3     | DES                 |      | A       |            |        |      |      |
| VOLTS     | 575          |                         |              | CODE  |                     | G    | ODE BRG | 6311       | DE BRG | 6312 |      |
| AMPS      | 46           |                         |              |       |                     |      |         |            |        |      |      |
| RATING    | 40C AMB-CONT |                         | NEMA-NOM-EFF |       |                     | 94.5 | GREASE  | POLYREX EM |        |      |      |
| PF        | 87           | SER.F.                  | 1.15         |       | VPWM INVERTER READY |      |         |            |        |      |      |
|           |              |                         |              |       |                     |      |         |            |        |      |      |
| HTR-VOLTS | HTR-AMPS     | MAX. SPACE HEATER TEMP. |              |       |                     |      |         |            |        |      |      |

**Accessories**

| Part number | Description                              | Multiplier |
|-------------|------------------------------------------|------------|
| 42-1300     | C FACE KIT                               | A8         |
| 42EP1601A01 | SP'L D-FLANGE MTD. PU. E.P. MDL.42 W/BFL |            |

## AC Induction Motor Performance Data

Record # 13695

Typical performance - not guaranteed values

| Winding: 42WGW476-R001 |    |              | Type: 4256M                           |                           | Enclosure: OPSB       |             |         |
|------------------------|----|--------------|---------------------------------------|---------------------------|-----------------------|-------------|---------|
| Nameplate Data         |    |              | 575 V, 60 Hz:<br>Single Voltage Motor |                           |                       |             |         |
| Rated Output (HP)      |    | 50           | Full Load Torque                      |                           | 148 LB-FT             |             |         |
| Volts                  |    | 575          | Start Configuration                   |                           | direct on line        |             |         |
| Full Load Amps         |    | 46           | Breakdown Torque                      |                           | 423 LB-FT             |             |         |
| R.P.M.                 |    | 1775         | Pull-up Torque                        |                           | 234 LB-FT             |             |         |
| Hz                     | 60 | Phase        | 3                                     | Locked-rotor Torque       |                       | 282 LB-FT   |         |
| NEMA Design Code       |    | A            | KVA Code                              | G                         | Starting Current      |             | 305 A   |
| Service Factor (S.F.)  |    | 1.15         | No-load Current                       |                           | 16.5 A                |             |         |
| NEMA Nom. Eff.         |    | 94.5         | Power Factor                          | 87                        | Line-line Res. @ 25°C |             | 0.194 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                       | Temp. Rise @ Rated Load   |                       | 36°C        |         |
| S.F. Amps              |    |              |                                       | Temp. Rise @ S.F. Load    |                       | 42°C        |         |
|                        |    |              |                                       | Locked-rotor Power Factor |                       | 27.1        |         |
|                        |    |              |                                       | Rotor inertia             |                       | 7.46 LB-FT2 |         |

## Load Characteristics 575 V, 60 Hz, 50 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 47   | 69   | 79   | 86   | 86   | 85   | 86   |
| Efficiency      | 90   | 93.5 | 94.4 | 94.5 | 94.3 | 94   | 94.4 |
| Speed           | 1795 | 1790 | 1785 | 1780 | 1774 | 1768 | 1776 |
| Line amperes    | 22.5 | 29.2 | 37.7 | 46   | 58   | 70   | 53.2 |

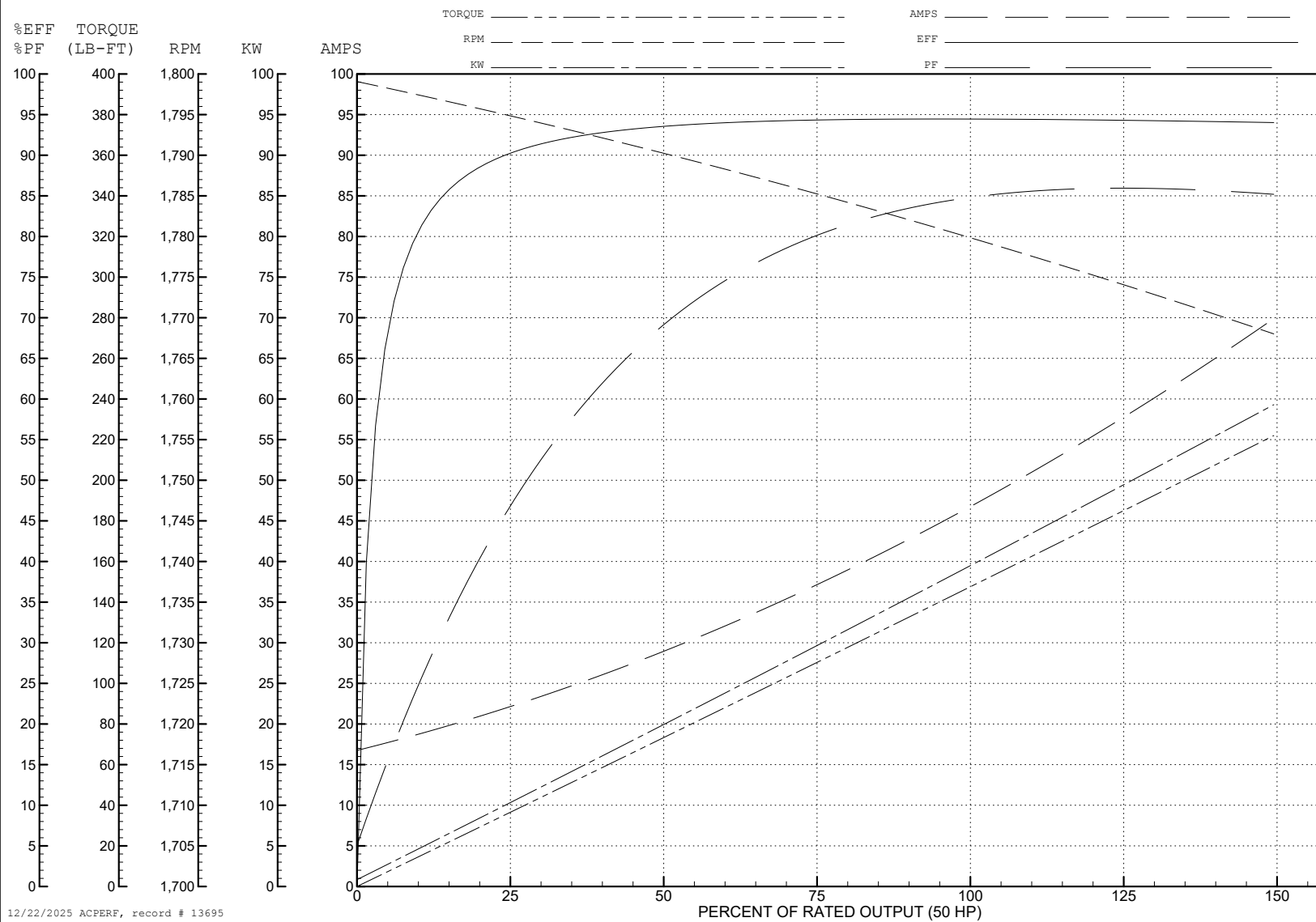
ABB Motors and Mechanical Inc.

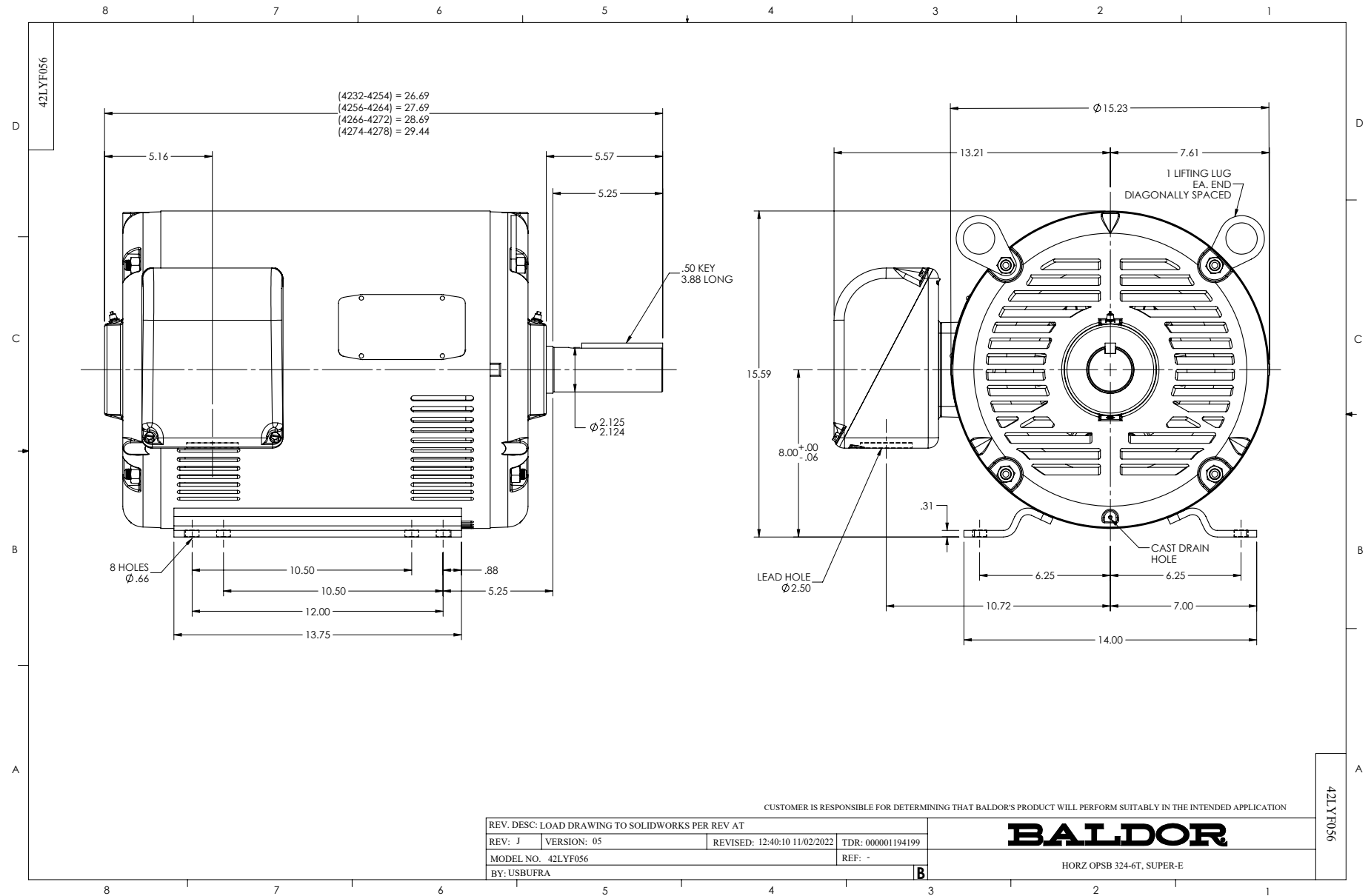
WINDING # 42GW476

Typical performance - not guaranteed values.

50 HP 3 PH 60 HZ 1775 RPM 575 V 4256M

TORQUES (LB-FT): PO=423 PU=234 LR=282 LRA=305





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

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