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# Customer information packet

## ECTM2334T

20 AIR OVERHP, 1770RPM, 3PH, 60HZ, 256T, 0960

Class - None

Division - Not Applicable

## Specifications

|                                |                                                                |
|--------------------------------|----------------------------------------------------------------|
| Enclosure                      | TEAO                                                           |
| Frame                          | 256T                                                           |
| Frame Material                 | Iron                                                           |
| Frequency                      | 60.00 Hz                                                       |
| Haz Area Class and Group       | None                                                           |
| Haz Area Division              | Not Applicable                                                 |
| Motor Letter Type              | Three Phase                                                    |
| Output @ Frequency             | 20.000 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               | CSA<br>CSA EEV<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                                                           |
| Current @ Voltage              | 48.000 A @ 230.0 V<br>52.000 A @ 208.0 V<br>24.000 A @ 460.0 V |
| Design Code                    | A                                                              |
| Drip Cover                     | No Drip Cover                                                  |
| Duty Rating                    | CONT                                                           |
| Efficiency @ 100% Load         | 93.0 %                                                         |
| Electrically Isolated Bearing  | Not Electrically Isolated                                      |
| Feedback Device                | NO FEEDBACK                                                    |
| Front Face Code                | Standard                                                       |
| Front Shaft Indicator          | None                                                           |

## Part detail

|              |            |
|--------------|------------|
| Revision     | R          |
| Type         | AC         |
| Mech. spec.  | 09L877     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 09WGT459   |
| Layout       | 09LYL877   |
| Eff. date    | 11-14-2023 |
| CD Diagram   | CD0180     |
| Poles        | 04         |
| Leads        | 9#10       |
| Proprietary  | False      |
| Created date | 11-27-2017 |

|                               |                             |
|-------------------------------|-----------------------------|
| Heater Indicator              | No Heater                   |
| High Voltage Full Load Amps   | 24.0 a                      |
| Insulation Class              | F                           |
| Inverter Code                 | Inverter Ready              |
| KVA Code                      | J                           |
| Lifting Lugs                  | Vertical Lifting Lugs       |
| Locked Bearing Indicator      | Locked Bearing              |
| Motor Lead Exit               | Ko Box                      |
| Motor Lead Quantity/Wire Size | 9 @ 10 AWG                  |
| Motor Lead Termination        | Flying Leads                |
| Motor Standards               | NEMA                        |
| Motor Type                    | 0960M                       |
| Mounting Arrangement          | F1                          |
| Number of Poles               | 4                           |
| Overall Length                | 23.00 IN                    |
| Power Factor                  | 83                          |
| Product Family                | Super-E Chemical Processing |
| Pulley End Bearing Type       | Sealed Bearing              |
| Pulley Face Code              | Standard                    |
| Pulley Shaft Indicator        | Standard                    |
| Rodent Screen                 | None                        |
| Service Factor                | 1.15                        |
| Shaft Diameter                | 1.625 IN                    |
| Shaft Extension Location      | Pulley End                  |
| 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

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## Nameplate

| NP2178       |                   |  |      |      |  |     |   |    |   |
|--------------|-------------------|--|------|------|--|-----|---|----|---|
| CAT.NO.      | ECTM2334T         |  |      |      |  |     |   |    |   |
| SPEC.        | 09L877T459G1      |  |      |      |  |     |   |    |   |
| HP           | 20 AIR OVER       |  |      |      |  |     |   |    |   |
| VOLTS        | 230/460           |  |      |      |  |     |   |    |   |
| AMP          | 48/24             |  |      |      |  |     |   |    |   |
| RPM          | 1770              |  |      |      |  |     |   |    |   |
| FRAME        | 256T              |  | HZ   | 60   |  | PH  | 3 |    |   |
| SER.F.       | 1.15              |  | CODE | J    |  | DES | A | CL | F |
| NEMA-NOM-EFF | 93                |  | PF   | 83   |  |     |   |    |   |
| RATING       | 40C AMB-CONT      |  |      |      |  |     |   |    |   |
| CC           |                   |  |      |      |  |     |   |    |   |
| DE           | 6309              |  | ODE  | 6208 |  |     |   |    |   |
| ENCL         | TEAO              |  | SN   |      |  |     |   |    |   |
|              | 1800 FPM @ 250CFM |  |      |      |  |     |   |    |   |

**AC Induction Motor Performance Data**

Record # 70816

Typical performance - not guaranteed values

| Winding: 09WGT459-R007 |    |              |              | Type: 0960M                              |                       | Enclosure: TEAO |           |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|-----------------|-----------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                 |           |
| Rated Output (HP)      |    | 20 AIR OVER  |              | Full Load Torque                         |                       | 59.27 LB-FT     |           |
| Volts                  |    | 230/460      |              | Start Configuration                      |                       | direct on line  |           |
| Full Load Amps         |    | 48/24        |              | Breakdown Torque                         |                       | 232 LB-FT       |           |
| R.P.M.                 |    | 1770         |              | Pull-up Torque                           |                       | 126 LB-FT       |           |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 141 LB-FT       |           |
| NEMA Design Code       |    | A            | KVA Code     | J                                        | Starting Current      |                 | 198 A     |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 10.4 A          |           |
| NEMA Nom. Eff.         |    | 93           | Power Factor | 83                                       | Line-line Res. @ 25°C |                 | 0.33814 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 58°C            |           |
| S.F. Amps              |    |              |              | Temp. Rise @ S.F. Load                   |                       | 70°C            |           |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 26.9            |           |

**Load Characteristics 460 V, 60 Hz, 20 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 45     | 67     | 78     | 83     | 86     | 87     | 85   |
| Efficiency      | 89.2   | 93     | 93.7   | 93.6   | 93.1   | 92.4   | 93.3 |
| Speed           | 1793.2 | 1786.4 | 1779.1 | 1771.9 | 1763.7 | 1755.3 | 1767 |
| Line amperes    | 11.8   | 15     | 19.2   | 24     | 29.3   | 34.9   | 27.2 |

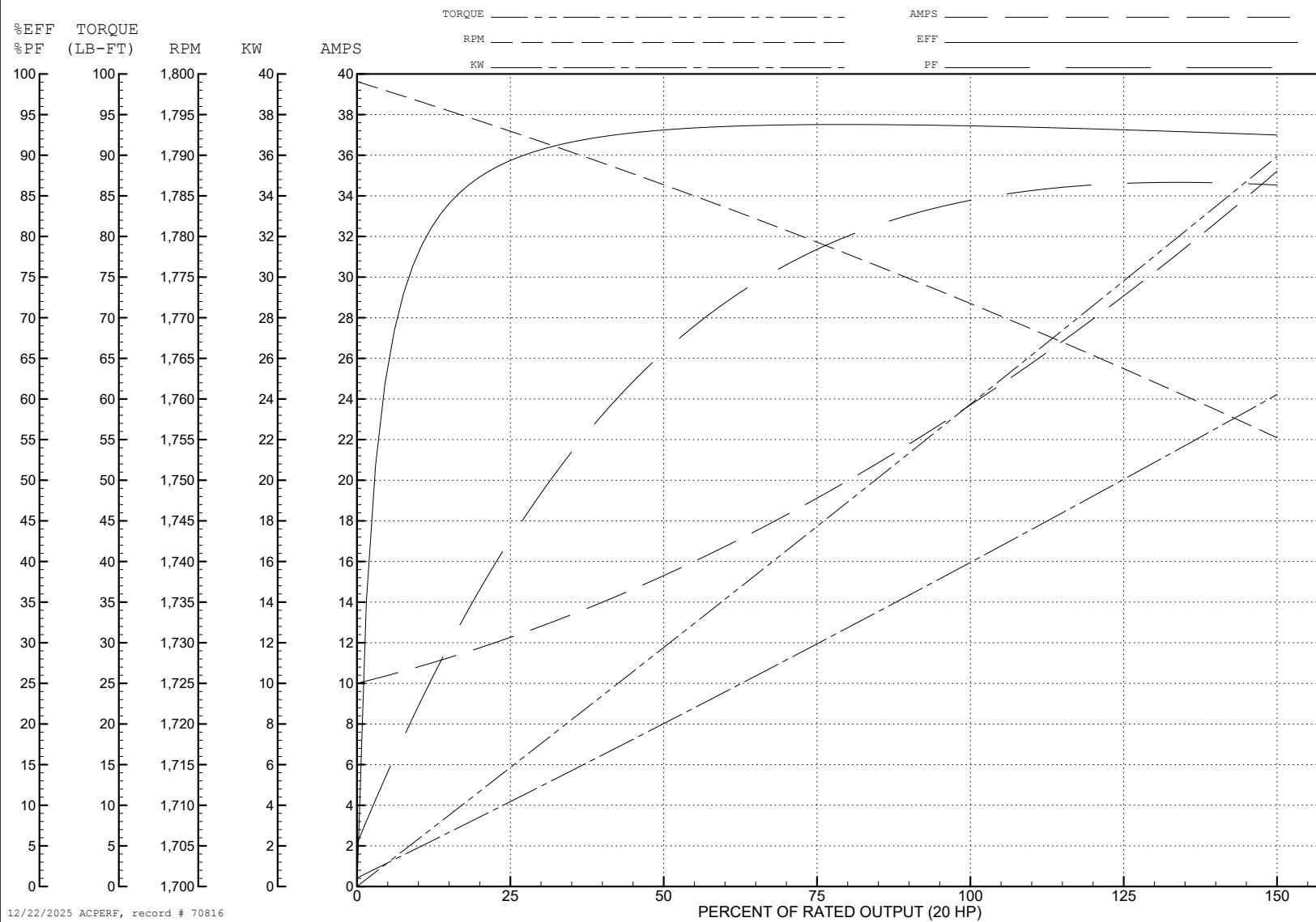
ABB Motors and Mechanical Inc.

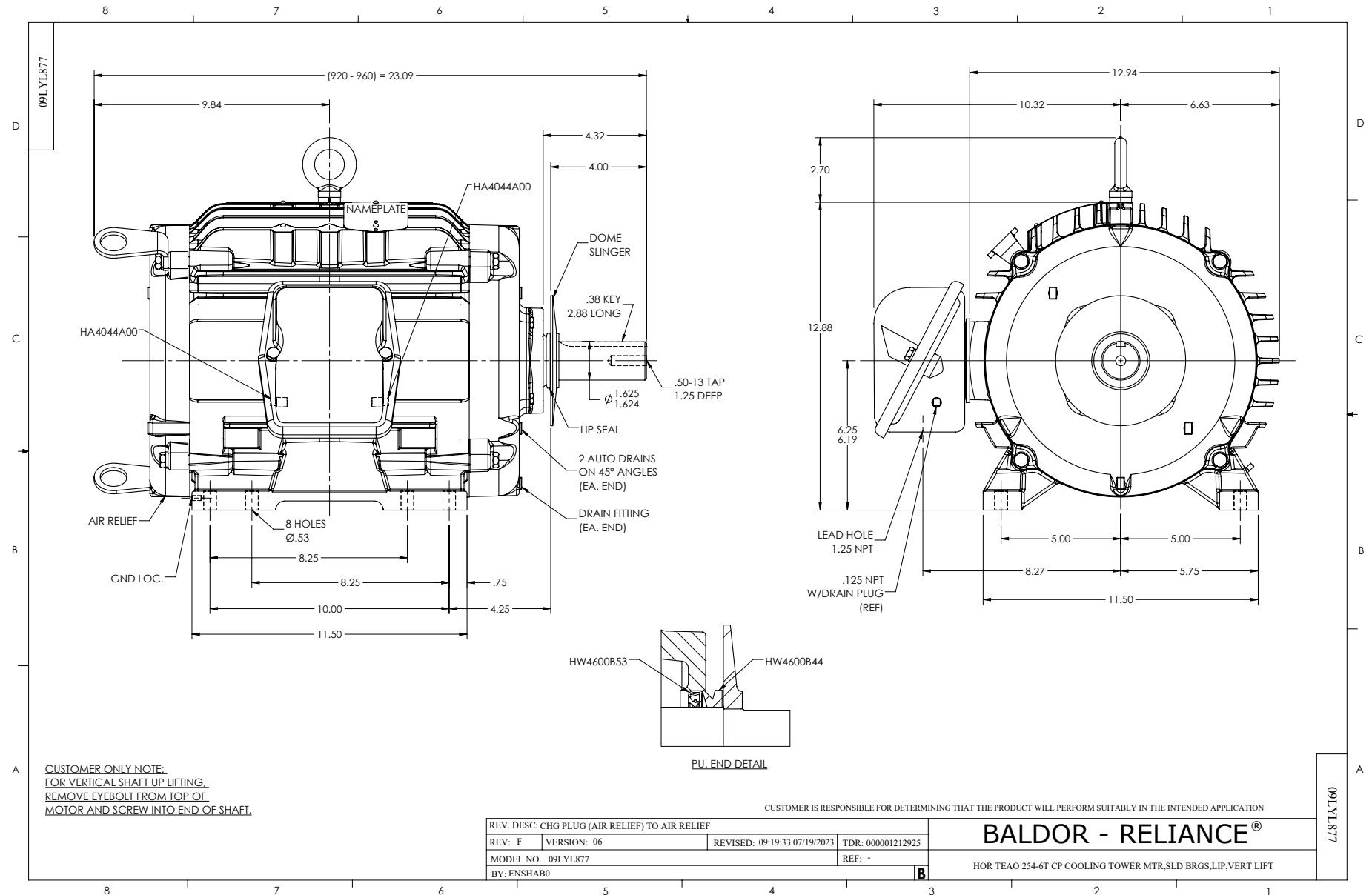
WINDING # 09WGT459

Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 1770 RPM 460 V 0960M

TORQUES (LB-FT): PO=232 PU=126 LR=141 LRA=198





CD0180

LOW VOLTAGE  
(2D)HIGH VOLTAGE  
(1D)

## NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0180

REV. DESC: ADD CLASS CONN00000007

REV. LTR: D

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\148

REVISED: 10: 25: 29 02/19/2019

BY: ENBRIRO

MTL: —



BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

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