

**BALDOR® • RELIANCE** 

**Product Information Packet**

**CFM3166A**

**1.5HP AIROVER, 1140RPM, 3PH, 60HZ, 56YZ, OPAO**

| Part Detail |        |             |            |             |        |               |    |
|-------------|--------|-------------|------------|-------------|--------|---------------|----|
| Revision:   | AP     | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No |
| Type:       | AC     | Elec. Spec: | 35WGY797   | CD Diagram: | CD0007 | Mfg Plant:    |    |
| Mech. Spec: | 35K306 | Layout:     | 35LYK306   | Poles:      | 06     | Created Date: |    |
| Base:       | N      | Eff. Date:  | 06-29-2020 | Leads:      | 12#18  |               |    |

| Specs                           |                         |                                |                   |
|---------------------------------|-------------------------|--------------------------------|-------------------|
| Catalog Number:                 | CFM3166A                | Insulation Class:              | F                 |
| Enclosure:                      | OPAO                    | Inverter Code:                 | Not Inverter      |
| Frame:                          | 56YZ                    | KVA Code:                      | J                 |
| Frame Material:                 | Steel                   | Lifting Lugs:                  | No Lifting Lugs   |
| Output @ Frequency:             | 1.500 HP @ 60 HZ        | Locked Bearing Indicator:      | No Locked Bearing |
| Synchronous Speed @ Frequency:  | 1200 RPM @ 60 HZ        | Motor Lead Quantity/Wire Size: | 12 @ 18 AWG       |
| Voltage @ Frequency:            | 208.0 V @ 60 HZ         | Motor Lead Exit:               | Terminal Panel    |
|                                 | 230.0 V @ 60 HZ         | Motor Lead Termination:        | None              |
|                                 | 460.0 V @ 60 HZ         | Motor Type:                    | 3534M             |
| XP Class and Group:             | None                    | Mounting Arrangement:          | F1                |
| XP Division:                    | Not Applicable          | Power Factor:                  | 72                |
| Agency Approvals:               | UR                      | Product Family:                | General Purpose   |
|                                 | CSA                     | Pulley End Bearing Type:       | Sealed Bearing    |
| Auxillary Box:                  | No Auxillary Box        | Pulley Face Code:              | Other             |
| Auxillary Box Lead Termination: | None                    | Pulley Shaft Indicator:        | Key And Flat      |
| Base Indicator:                 | No Mounting             | Rodent Screen:                 | None              |
| Bearing Grease Type:            | Polyrex EM (-20F +300F) | RoHS Status:                   | ROHS COMPLIANT    |
| Blower:                         | None                    | Shaft Extension Location:      | Pulley End        |

|                                       |                           |                                    |                            |
|---------------------------------------|---------------------------|------------------------------------|----------------------------|
| <b>Current @ Voltage:</b>             | 2.500 A @ 460.0 V         | <b>Shaft Ground Indicator:</b>     | No Shaft Grounding         |
|                                       | 5.000 A @ 230.0 V         | <b>Shaft Rotation:</b>             | Reversible                 |
|                                       | 5.500 A @ 208.0 V         | <b>Shaft Slinger Indicator:</b>    | No Slinger                 |
| <b>Design Code:</b>                   | B                         | <b>Speed Code:</b>                 | Single Speed               |
| <b>Drip Cover:</b>                    | No Drip Cover             | <b>Motor Standards:</b>            | NEMA                       |
| <b>Duty Rating:</b>                   | CONT                      | <b>Starting Method:</b>            | Direct on line             |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Thermal Device - Bearing:</b>   | None                       |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Thermal Device - Winding:</b>   | Do Not Use Eve-Not Valid   |
| <b>Front Face Code:</b>               | Standard                  | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor        |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Winding Thermal 1:</b>          | Automatic Thermal Overload |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Winding Thermal 1 Location:</b> | SB                         |
|                                       |                           | <b>Winding Thermal 2:</b>          | None                       |

|                          |              |  |             |            |                       |     |  |           |           |   |
|--------------------------|--------------|--|-------------|------------|-----------------------|-----|--|-----------|-----------|---|
| <b>Nameplate NP1257L</b> |              |  |             |            |                       |     |  |           |           |   |
| <b>CAT.NO.</b>           | CFM3166A     |  |             |            |                       |     |  |           |           |   |
| <b>SPEC.</b>             | 35K306Y797   |  |             |            |                       |     |  |           |           |   |
| <b>HP</b>                | 1.5 AIR OVER |  |             |            |                       |     |  |           |           |   |
| <b>VOLTS</b>             | 208-230/460  |  |             |            |                       |     |  |           |           |   |
| <b>AMP</b>               | 5.5-5/2.5    |  |             |            |                       |     |  |           |           |   |
| <b>RPM</b>               | 1140         |  |             |            |                       |     |  |           |           |   |
| <b>FRAME</b>             | 56YZ         |  |             |            | <b>HZ</b>             | 60  |  |           | <b>PH</b> | 3 |
| <b>SER.F.</b>            | 1.15         |  | <b>CODE</b> | J          | <b>DES</b>            | B   |  | <b>CL</b> | F         |   |
| <b>NEMA-NOM-EFF</b>      | 76           |  | <b>PF</b>   | 72         |                       |     |  |           |           |   |
| <b>RATING</b>            | 60C AMB-CONT |  |             |            |                       |     |  |           |           |   |
| <b>CC</b>                |              |  |             |            | <b>USABLE AT 208V</b> | 5.5 |  |           |           |   |
| <b>DE</b>                | 6203         |  |             | <b>ODE</b> | 6205                  |     |  |           |           |   |
| <b>ENCL</b>              | OPAO         |  | <b>SN</b>   |            |                       |     |  |           |           |   |

| Parts List  |  |           |
|-------------|--|-----------|
| Part Number | Description                              | Quantity  |
| SA026294    | SA 35K306Y797                            | 1.000 EA  |
| RA022344    | RA 35K306Y797                            | 1.000 EA  |
| TPMYJ43KR   | THERMAL 3PH .75 AUT 135 X                | 1.000 EA  |
| RM1001A01   | GROMMET "MIDSTATES"                      | 1.000 EA  |
| 53XT0832G07 | 8-32X7/16 PN STD SR TY23G X              | 1.000 EA  |
| HA6001A01   | 7H5RMAL RETAINER (PLATED)                | 1.000 EA  |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 2.000 EA  |
| 35EP3210B00 | MASTER DE,205 BRG,1.000SH                | 1.000 EA  |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 2.000 EA  |
| MJ5004A05   | #242-21 LOCTITE GENERAL PURPOSE MED. STR | 0.010 EA  |
| HW5100A03   | WAVY WASHER (W1543-017)                  | 1.000 EA  |
| 35EP3102B42 | PUEP SH THRU HOLE .50 NPT, 2 #26 DRILL F | 1.000 EA  |
| XY1032A02   | 10-32 HEX NUT DIRECTIONAL SERRATION      | 4.000 EA  |
| 35CB4500SP  | TERMINAL BOX LID STAMPED                 | 1.000 EA  |
| HA1041A01   | CUPPED SLINGER KENCO                     | 1.000 EA  |
| HW2501D40   | KEY, 3/16 SQ X 4.750                     | 1.000 EA  |
| HA7000A04   | KEY RETAINER 0.625 DIA SHAFTS            | 1.000 EA  |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 EA  |
| 10XN2520A06 | 1/4 20X3/8 HX HD CAP                     | 3.000 EA  |
| WD1000A16   | 2-520128-2 AMP FLAG TERM (4M/RL) 22-18   | 12.000 EA |
| MJ1000A02   | GREASE, MOBIL POLYREX EM - 124047        | 0.050 LB  |
| 35GS1002A02 | GASKET,1/16 THICK NEOPRE.FT.SMITH MADE   | 1.000 EA  |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 2.000 EA  |
| MG1000G27   | MED CHARCOAL METALLIC GREY 400-0096      | 0.017 GA  |

| <b>Parts List (continued)</b> |  |                 |
|-------------------------------|--|-----------------|
| <b>Part Number</b>            | <b>Description</b>                       | <b>Quantity</b> |
| SP5079A02                     | MODEL 35 3PH TERM PANEL CONN 12LD DUAL V | 1.000 EA        |
| HA3100A41                     | THRUBOLT 10-32 X 10.500                  | 4.000 EA        |
| LB1118                        | LABEL,WARNING (ROLL LABEL)               | 1.000 EA        |
| LC0007A01                     | CONN LABEL TYPE M,DV,REV,12LD 2Y/1Y TERM | 1.000 EA        |
| NP1257L                       | ALUM UL CSA CC THERMAL REV MTG           | 1.000 EA        |
| G7PA1000                      | PKG GRP, PRINT PK1034A06                 | 1.000 EA        |
| MN416A01                      | TAG-INSTAL-MAINT no wire (1200/bx) 3/19  | 1.000 EA        |
| PE-0000001                    | ZRTG PE ASSEMBLY                         | 1.000 EA        |
| FE-0000001                    | ZRTG FE ASSEMBLY                         | 1.000 EA        |

**AC Induction Motor Performance Data**

Record # 61269

Typical performance - not guaranteed values

| <b>Winding: 35WGY797-R003</b> |              |                     | <b>Type: 3534M</b>             |                              |  | <b>Enclosure: OPAO</b>                           |             |  |                          |
|-------------------------------|--------------|---------------------|--------------------------------|------------------------------|--|--|-------------|--|--------------------------|
| <b>Nameplate Data</b>         |              |                     |                                |                              |  | <b>460 V, 60 Hz:<br/>High Voltage Connection</b> |             |  |                          |
| <b>Rated Output (HP)</b>      | 1.5 AIR OVER |                     | <b>Full Load Torque</b>        |                              |  | 6.8 LB-FT  |             |  |                          |
| <b>Volts</b>                  | 208-230/460  |                     | <b>Start Configuration</b>     |                              |  | direct on line                                   |             |  |                          |
| <b>Full Load Amps</b>         | 5.5-5/2.5    |                     | <b>Breakdown Torque</b>        |                              |  | 22.97 LB-FT                                      |             |  |                          |
| <b>R.P.M.</b>                 | 1140         |                     | <b>Pull-up Torque</b>          |                              |  | 16.04 LB-FT                                      |             |  |                          |
| <b>Hz</b>                     | 60           | <b>Phase</b>        | 3                              | <b>Locked-rotor Torque</b>   |  |  | 20.05 LB-FT |  |                          |
| <b>NEMA Design Code</b>       | B            |                     | <b>KVA Code</b>                | J                            |  | <b>Starting Current</b>                          |             |  | 14.97 A                  |
| <b>Service Factor (S.F.)</b>  | 1.15         |                     | <b>No-load Current</b>         |                              |  | 1.5 A  |             |  |                          |
| <b>NEMA Nom. Eff.</b>         | 76           | <b>Power Factor</b> | 72                             | <b>Line-line Res. @ 25°C</b> |  |  | 13.7 Ω      |  |                          |
| <b>Rating - Duty</b>          | 60C AMB-CONT |                     | <b>Temp. Rise @ Rated Load</b> |                              |  | 54°C   |             |  |                          |
| <b>S.F. Amps</b>              |              |                     | <b>Temp. Rise @ S.F. Load</b>  |                              |  | 66°C   |             |  |                          |
|                               |              |                     |                                |                              |  | <b>Locked-rotor Power Factor</b>                 |             |  | 57                       |
|                               |              |                     |                                |                              |  | <b>Rotor inertia</b>                             |             |  | 0.202 LB-FT <sup>2</sup> |

**Load Characteristics 460 V, 60 Hz, 1.5 HP**

| <b>% of Rated Load</b> | <b>25</b> | <b>50</b> | <b>75</b> | <b>100</b> | <b>125</b> | <b>150</b> | <b>S.F.</b> |
|------------------------|-----------|-----------|-----------|------------|------------|------------|-------------|
| <b>Power Factor</b>    | 35        | 52        | 64        | 73         | 75         | 77         | 78          |
| <b>Efficiency</b>      | 63.9      | 75        | 78        | 78.5       | 76.9       | 74.9       | 77.6        |
| <b>Speed</b>           | 1183      | 1168      | 1152      | 1133       | 1110       | 1084       | 1120        |
| <b>Line amperes</b>    | 1.61      | 1.8       | 2.1       | 2.4        | 2.91       | 3.41       | 2.7         |

Performance Graph at 460V, 60Hz, 1.5HP Typical performance - Not guaranteed values

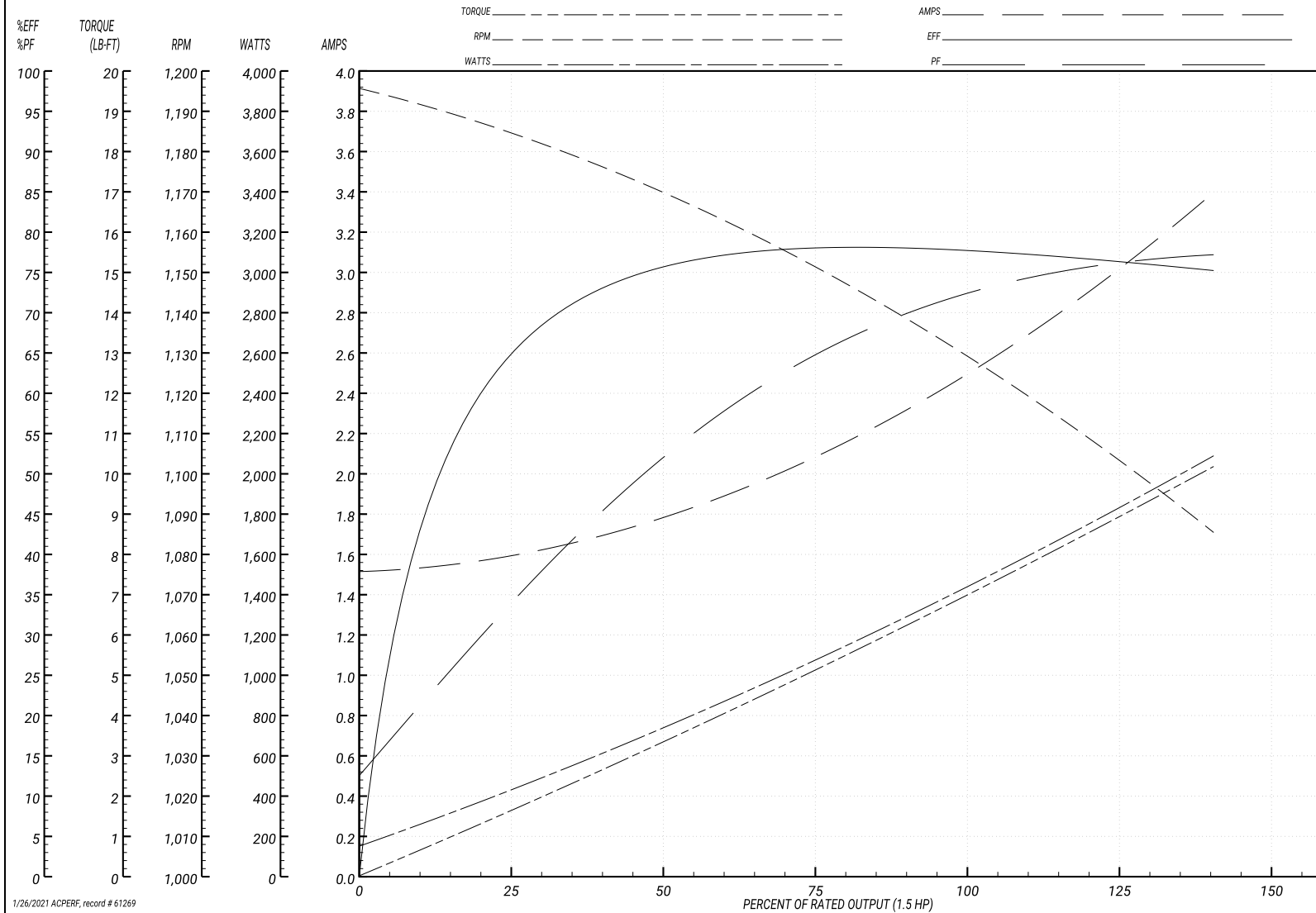
ABB Motors and Mechanical Inc.

WINDING # 35WGY797

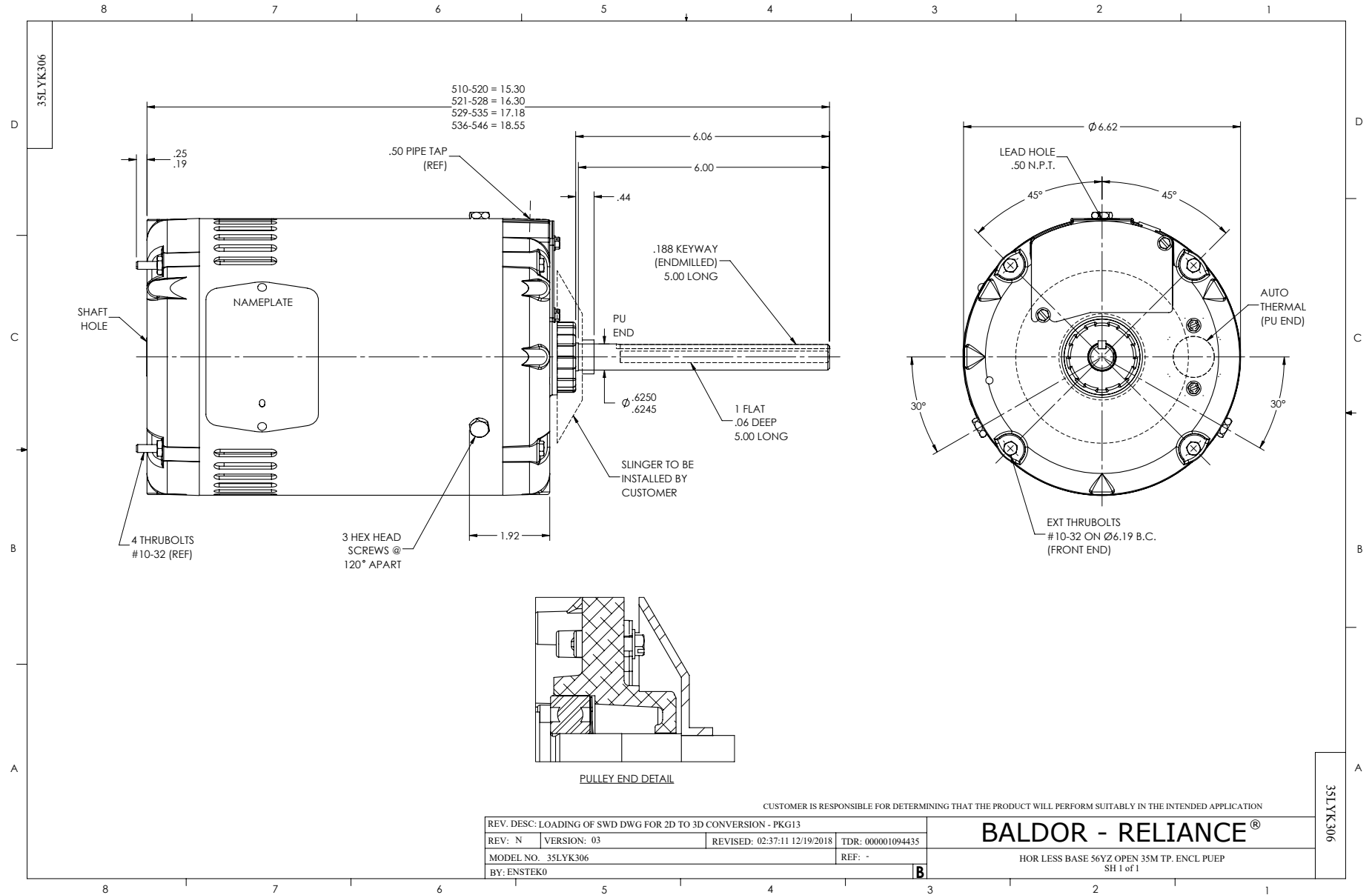
Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 1140 RPM 460 V 3534M

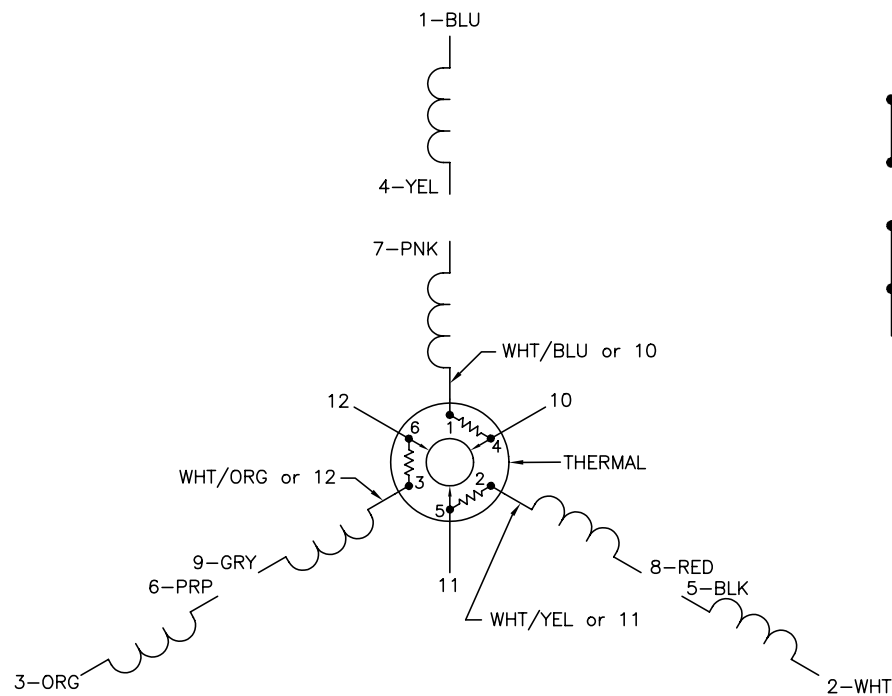
TORQUES(LB-FT): PO=22.97 PU=16.04 LR=20.05 LRA=14.97



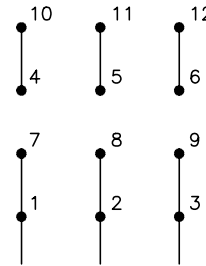
1/26/2021 ACPERF, record # 61269



CD0007

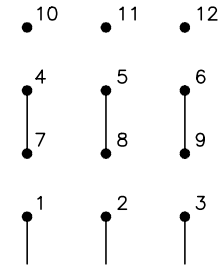


LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
3. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

|                                  |         |                        |              |
|----------------------------------|---------|------------------------|--------------|
| REV. DESC: ADDED "CK" PLANT CODE |         |                        |              |
| REV. LTR: E                      | BY: EAH | REVISED: 05/06/99 17:1 | TDR: 0181040 |
| L00000                           |         | FILE: AAA00008370      | MDL: -       |
|                                  |         | MTL: -                 |              |

**BALDOR ELECTRIC Co.**

3PH, DV, THERMAL, 12 LEADS

CD0007