

**BALDOR® • RELIANCE** 

**Product Information Packet**

**VECP83583T-4**

**1.5HP,3450RPM,3PH,60HZ,143TC,0524M,TEFC**

| Part Detail |        |             |            |             |   |               |            |
|-------------|--------|-------------|------------|-------------|---|---------------|------------|
| Revision:   | AS     | Status:     | PRD/A      | Change #:   |   | Proprietary:  | No         |
| Type:       | AC     | Elec. Spec: | 05WGW176   | CD Diagram: | CD0006  | Mfg Plant:    |            |
| Mech. Spec: | 05F161 | Layout:     | 05LYF161   | Poles:      | 02  | Created Date: | 11-27-2007 |
| Base:       | N      | Eff. Date:  | 01-17-2020 | Leads:      | 3#18 15" LEAD LENGTH,0#0 Dbl Dip & Bake,0#0 Phase InsulaY |               |            |

| Specs                           |                         |                                |                                |
|---------------------------------|-------------------------|--------------------------------|--------------------------------|
| Catalog Number:                 | VECP83583T-4            | KVA Code:                      | M                              |
| Enclosure:                      | TEFC                    | Lifting Lugs:                  | Standard Lifting Lugs          |
| Frame:                          | 143TC                   | Locked Bearing Indicator:      | Locked Bearing                 |
| Frame Material:                 | Iron                    | Motor Lead Quantity/Wire Size: | @ 0 AWG                        |
| Output @ Frequency:             | 1.500 HP @ 60 HZ        |                                | 3 @ 18 AWG                     |
| Synchronous Speed @ Frequency:  | 3600 RPM @ 60 HZ        | Motor Lead Exit:               | Ko Box                         |
| Voltage @ Frequency:            | 460.0 V @ 60 HZ         | Motor Lead Termination:        | Ring Terminals                 |
| XP Class and Group:             | CLI GP A,B,C,D          | Motor Type:                    | 0524M                          |
| XP Division:                    | Division II             | Mounting Arrangement:          | F1                             |
| Agency Approvals:               | UR                      | Power Factor:                  | 83                             |
|                                 | CSA EEV                 | Product Family:                | Chem Process S/P 32-8 IEEE 841 |
|                                 | CSA                     | Pulley End Bearing Type:       | Ball                           |
| Auxillary Box:                  | No Auxillary Box        | Pulley Face Code:              | C-Face                         |
| Auxillary Box Lead Termination: | None                    | Pulley Shaft Indicator:        | Standard                       |
| 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                     |
| Constant Torque Speed Range:    | 6                       | Shaft Ground Indicator:        | No Shaft Grounding             |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| <b>Current @ Voltage:</b>             | 2.000 A @ 460.0 V         | <b>Shaft Rotation:</b>             | Reversible          |
| <b>Design Code:</b>                   | B                         | <b>Shaft Slinger Indicator:</b>    | No Slinger          |
| <b>Drip Cover:</b>                    | Drip Cover                | <b>Speed Code:</b>                 | Single Speed        |
| <b>Duty Rating:</b>                   | CONT                      | <b>Motor Standards:</b>            | NEMA                |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Starting Method:</b>            | Direct on line      |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Thermal Device - Bearing:</b>   | None                |
| <b>Front Face Code:</b>               | Standard                  | <b>Thermal Device - Winding:</b>   | None                |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Winding Thermal 1:</b>          | None                |
| <b>Insulation Class:</b>              | F                         | <b>Winding Thermal 2:</b>          | None                |
| <b>Inverter Code:</b>                 | Inverter Ready            | <b>XP Temp Code:</b>               | T4                  |

|                          |              |              |                 |
|--------------------------|--------------|--------------|-----------------|
| <b>Nameplate NP3235E</b> |              |              |                 |
| <b>CAT.NO.</b>           | VECP83583T-4 |              |                 |
| <b>SPEC.</b>             | 05F161W176   |              |                 |
| <b>HP</b>                | 1.5          | <b>TE</b>    | <b>IP</b> 56    |
| <b>VOLTS</b>             | 460          |              |                 |
| <b>AMPS</b>              | 2            |              |                 |
| <b>R.P.M.</b>            | 3450         |              |                 |
| <b>FRAME</b>             | 143TC        | <b>HZ</b>    | 60              |
| <b>SER.F.</b>            | 1.15         | <b>CODE</b>  | M <b>DES.</b> B |
| <b>RATING</b>            | 40C AMB-CONT |              |                 |
| <b>SN</b>                |              |              |                 |
| <b>DE</b>                | 6205         | <b>ODE</b>   | 6205            |
| <b>NEMA NOM. EFF.</b>    | 85.5         | <b>P.F.</b>  | 83              |
| <b>GUAR. MIN. EFF.</b>   | 82.5         | <b>CC</b>    | 010A            |
| <b>T. CODE</b>           | T4           | <b>TEMP=</b> | 135             |
|                          |              | <b>PH</b>    | 3               |
|                          |              | <b>CLASS</b> | F               |

|                          |            |                                |     |
|--------------------------|------------|--------------------------------|-----|
| <b>Nameplate NP3186E</b> |            |                                |     |
| <b>SPEC.</b>             | 05F161W176 |                                |     |
| <b>D.E. BRG.</b>         | 25BC02X30X |                                |     |
| <b>O.D.E. BRG.</b>       | 25BC02X30X |                                |     |
| <b>GREASE</b>            | POLYREX EM |                                |     |
| <b>WEIGHT</b>            | 58         | <b># OF ROTOR BARS</b>         | 20  |
| <b>RPM MAX</b>           | 5400       | <b>MAX. KVAR</b>               | .25 |
| <b>BLANK</b>             |            |                                |     |
| <b>INV.TYPE</b>          | PWM        | <b># OF STATOR SLOTS</b>       | 24  |
| <b>T=</b>                | 135        | <b>C HP TO</b>                 | 90  |
| <b>C HP FR</b>           | 60         | <b>CT HZ TO</b>                | 60  |
| <b>CT HZ FROM</b>        | 6          | <b>VT HZ TO</b>                | 60  |
| <b>VT HZ FROM</b>        | 3          | <b>HTR-AMPS</b>                | N/A |
| <b>HTR-VOLTS</b>         | N/A        | <b>MAX. SPACE HEATER TEMP.</b> | N/A |
| <b>HTR-WATTS</b>         |            |                                |     |

| Parts List   |  |          |
|--------------|--|----------|
| Part Number  | Description                              | Quantity |
| SA165925     | SA 05F161W176                            | 1.000 EA |
| RA154313     | RA 05F161W176                            | 1.000 EA |
| HW3201A05    | 3/8-16 EYEBOLT                           | 1.000 EA |
| 06CB1001A01G | CONDUIT BOX, MACH GRAY                   | 1.000 EA |
| RM1016       | LEAD SEPARATOR GASKET - 305/306 C.P.MOTO | 1.000 EA |
| 51XW2520A12  | SCREW, HEX SER SLT HD, ZN, 1/4-20 X .75  | 2.000 EA |
| 11XW1032G06  | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 EA |
| HW3001B01    | BRASS CUP WASHER, FOR #10 SCREW          | 1.000 EA |
| 10XN2520S06  | 1/4 20X3/8 HX HD CAP S.S.                | 2.000 EA |
| WD1000B16    | T&B CX70TN OR L70P TERMINAL LUG          | 1.000 EA |
| 51XN1032A20  | 10-32 X 1 1/4 HX WS SL SR                | 2.000 EA |
| 05EP1100A03G | FREP TEFC 203,GRSR,RLF,NO DRAIN          | 1.000 EA |
| HW4601A22    | INPRO SEAL, 205 BRG, VBX                 | 1.000 EA |
| HW4500A01    | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| HA4051A00    | PLASTIC CAP FOR GREASE FITTING           | 1.000 EA |
| HW4500A17    | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| HW5100A05    | WVY WSHR F/205 & 304 BRGS                | 1.000 EA |
| 35EP1329A33G | EP ENCL,GRSR,RLF,(2).25-28 DRAINS, INPRO | 1.000 EA |
| HW4601A22    | INPRO SEAL, 205 BRG, VBX                 | 1.000 EA |
| HW4500A01    | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| HA4051A00    | PLASTIC CAP FOR GREASE FITTING           | 1.000 EA |
| HW4500A17    | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| HA4010A01    | T-DRAIN PLUG,416 S.S.,W/ 1/4-28 THD & .0 | 2.000 EA |
| 51XN1032A20  | 10-32 X 1 1/4 HX WS SL SR                | 2.000 EA |

| Parts List (continued) |  |          |
|------------------------|--|----------|
| Part Number            | Description                              | Quantity |
| HA3100A28              | THRUBOLT 10-32 X 8.187                   | 4.000 EA |
| 51XB1214A16            | 12-14X1.00 HXWSSLD SERTYB                | 1.000 EA |
| 35FH1000A27G           | 35FH1000A27 W/GRAY FLUIDIZ               | 1.000 EA |
| 10XN2520A16            | 1/4-20 X 1 HEX HEAD CAP SCR, ZINC PLATED | 3.000 EA |
| HW1001A25              | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 3.000 EA |
| 35FH4500A01            | DRIP COVER, STAMPED X - W/PRIMED         | 1.000 EA |
| HA2001A13              | 35-10103 SPACER WELKER                   | 3.000 EA |
| 51XN1032A20            | 10-32 X 1 1/4 HX WS SL SR                | 3.000 EA |
| WD4100A03              | DE-750 HEYCO PLUG 62MP0750 MICRO PLASTIC | 1.000 EA |
| 06CB1503A01G           | LIPPED CONDUIT BOX LID, MACH GRAY EPOXY  | 1.000 EA |
| 06GS1009               | GASKET, KOBX LID, 1/8" THICK BLACK NEOPR | 1.000 EA |
| 10XN2520A12            | 1/4-20 X 3/4 HEX HEAD CAP                | 2.000 EA |
| HW1001A25              | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 EA |
| HW2501D13              | KEY, 3/16 SQ X 1.375                     | 1.000 EA |
| HA7000A01              | KEY RETAINER 7/8" DIA SHAFT              | 1.000 EA |
| MJ5004A59              | ADHESIVE LOCTITE #401 SURFACE INSENSITIV | 0.010 EA |
| MJ5001A27              | 32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL  | 0.001 QT |
| MJ1000A73              | INPRO P-80 ASSEMBLY LUB./ 1 QT. CONTAIN  | 0.001 QT |
| 85XU0407S04            | 4X1/4 U DRIVE PIN STAINLESS              | 4.000 EA |
| LB1115N                | LABEL,LIFTING DEVICE (ON ROLLS)          | 1.000 EA |
| LT0019A00              | MOTOR NO-LOAD PERFORMANCE DATA SHEET     | 1.000 EA |
| WD1000D21              | TRM,T&B #B71M,RING,18-14,.25,NON-INSL    | 3.000 EA |
| MJ1000A02              | GREASE, MOBIL POLYREX EM - 124047        | 0.050 LB |
| 34FN3002B01            | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 EA |

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|           |   |          |
|-----------|---|----------|
| MG1025N19 | WILKOFAST, 778.50, RELIANCE BLUE-GREEN  | 0.017 GA |
| MG1500Y02 | WILKOPON (use 004824003CAH)             | 0.017 GA |
| LB1119N   | WARNING LABEL                           | 1.000 EA |
| LB1449    | DIV-2/NEC WARNING LABEL                 | 1.000 EA |
| LC0006    | CONNECTION LABEL                        | 1.000 EA |
| NP3235E   | SS IEEE841 DIV-2 UL CSA-C US EEV PREM   | 1.000 EA |
| NP3186E   | SS IEEE841 INV AUX DATA INFORMATION     | 1.000 EA |
| 36PA1001  | PKG GRP, PRINT PK1017A06                | 1.000 EA |
| PK3082    | STYROFOAM CRADLE                        | 1.000 EA |
| MN416A01  | TAG-INSTAL-MAINT no wire (1200/bx) 3/19 | 1.000 EA |

**AC Induction Motor Performance Data**

Record # 47131 - Typical performance - not guaranteed values

|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 05WGW176-R028 | <b>Type:</b> 0524M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

| Nameplate Data        |              |              |    | 460 V, 60 Hz:<br>Single Voltage Motor |                           |
|-----------------------|--------------|--------------|----|---------------------------------------|---------------------------|
| Rated Output (HP)     | 1.5          |              |    | Full Load Torque                      | 2.3 LB-FT                 |
| Volts                 | 460          |              |    | Start Configuration                   | direct on line            |
| Full Load Amps        | 2            |              |    | Breakdown Torque                      | 10.8 LB-FT                |
| R.P.M.                | 3450         |              |    | Pull-up Torque                        | 8.1 LB-FT                 |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                   | 10.2 LB-FT                |
| NEMA Design Code      | B            | KVA Code     | M  | Starting Current                      | 20.1 A                    |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                       | 0.88 A                    |
| NEMA Nom. Eff.        | 85.5         | Power Factor | 83 | Line-line Res. @ 25°C                 | 8.38 Ω                    |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load               | 32°C                      |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                | 37°C                      |
|                       |              |              |    | Locked-rotor Power Factor             | 50.3                      |
|                       |              |              |    | Rotor inertia                         | 0.0664 LB-FT <sup>2</sup> |

Load Characteristics 460 V, 60 Hz, 1.5 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 49   | 69   | 80   | 84   | 87   | 90   | 85   |
| Efficiency      | 71.9 | 81.3 | 84.5 | 85.5 | 85.1 | 84   | 85.2 |
| Speed           | 3569 | 3545 | 3521 | 3496 | 3468 | 3439 | 3479 |
| Line amperes    | 1.03 | 1.29 | 1.6  | 2    | 2.4  | 2.8  | 2.25 |

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

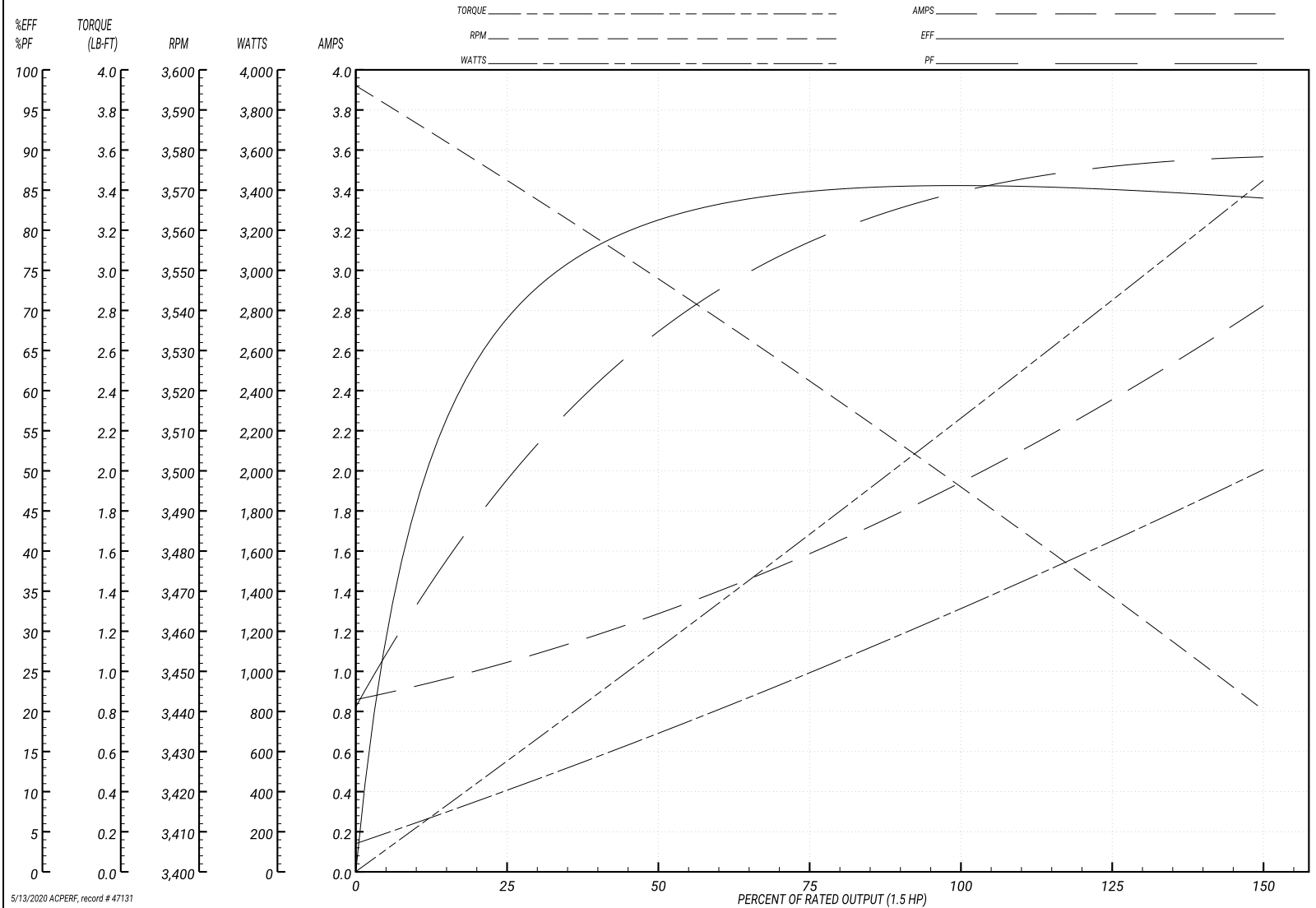
ABB Motors and Mechanical Inc.

WINDING # 05WGW176

Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 3450 RPM 460 V 0524M

TORQUES(LB-FT): PO=10.8 PU=8.1 LR=10.2 LRA=20.1



5/13/2020 ACPERF, record # 47131

**AC Induction Motor Performance Data**

Record # 66931 - Typical performance - not guaranteed values

|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 05WGW176-R028 | <b>Type:</b> 0524M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

| Nameplate Data        |              |              |    | 368 V, 60 Hz:<br>Single Voltage Motor |                           |
|-----------------------|--------------|--------------|----|---------------------------------------|---------------------------|
| Rated Output (HP)     | 1.5          |              |    | Full Load Torque                      | 2.34 LB-FT                |
| Volts                 | 460          |              |    | Start Configuration                   | direct on line            |
| Full Load Amps        | 2            |              |    | Breakdown Torque                      | 6.82 LB-FT                |
| R.P.M.                | 3450         |              |    | Pull-up Torque                        | 5.08 LB-FT                |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                   | 6.4 LB-FT                 |
| NEMA Design Code      | B            | KVA Code     | M  | Starting Current                      | 15.92 A                   |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                       | 0.68 A                    |
| NEMA Nom. Eff.        | 85.5         | Power Factor | 83 | Line-line Res. @ 25°C                 | 8.38 Ω                    |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load               | 35°C                      |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                | 44°C                      |
|                       |              |              |    | Locked-rotor Power Factor             | 50.3                      |
|                       |              |              |    | Rotor inertia                         | 0.0664 LB-FT <sup>2</sup> |

Load Characteristics 368 V, 60 Hz, 1.5 HP

| % of Rated Load | 25    | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|-------|------|------|------|------|------|------|
| Power Factor    | 63    | 81   | 88   | 89   | 90   | 91   | 90   |
| Efficiency      | 77.2  | 84   | 85.2 | 84.7 | 82.7 | 80.2 | 83.5 |
| Speed           | 3555  | 3518 | 3479 | 3436 | 3387 | 3330 | 3407 |
| Line amperes    | 0.931 | 1.34 | 1.81 | 2.38 | 2.98 | 3.62 | 2.74 |

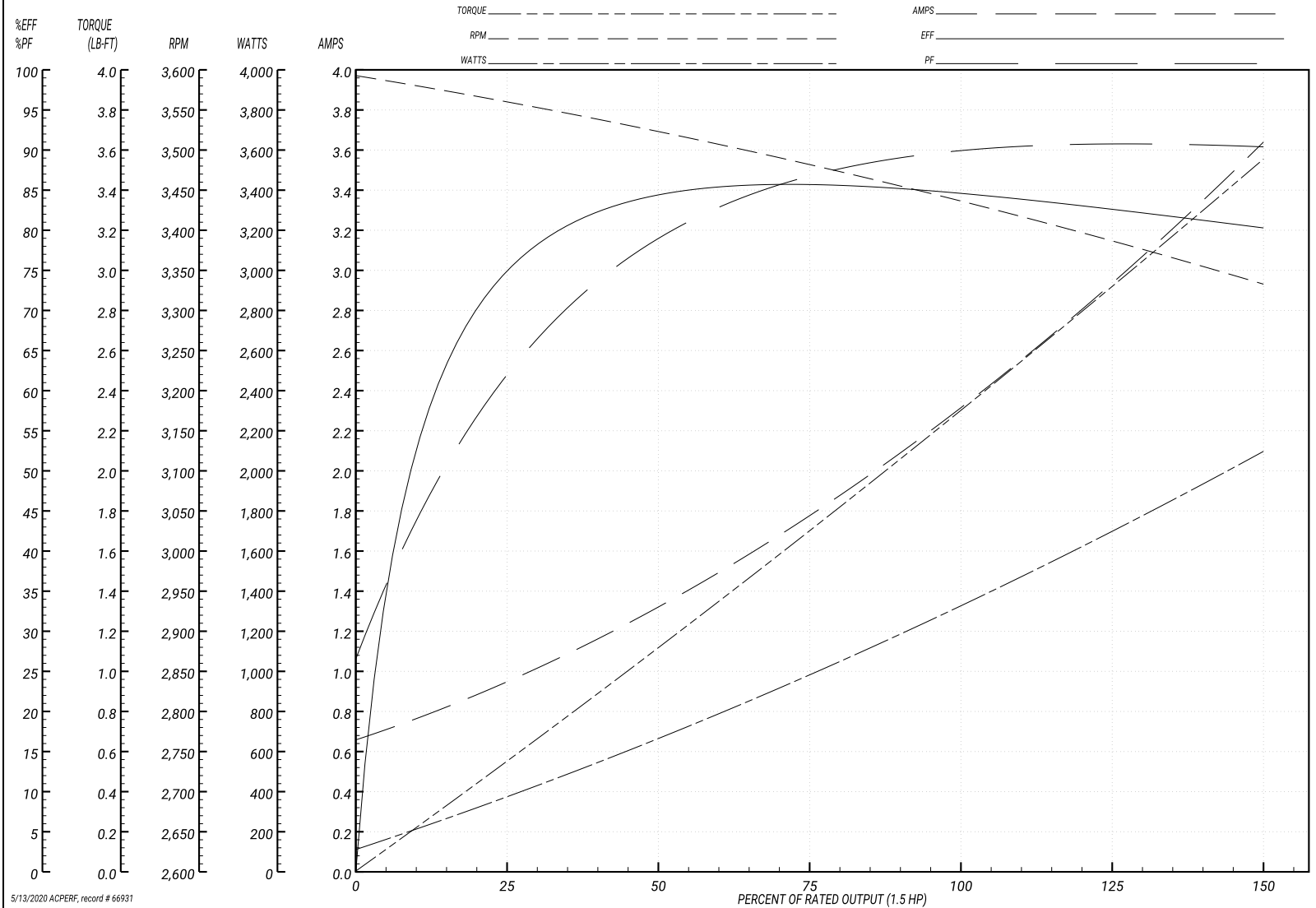
Performance Graph at 368V, 60Hz, 1.5HP Typical performance - Not guaranteed values

ABB Motors and Mechanical Inc.

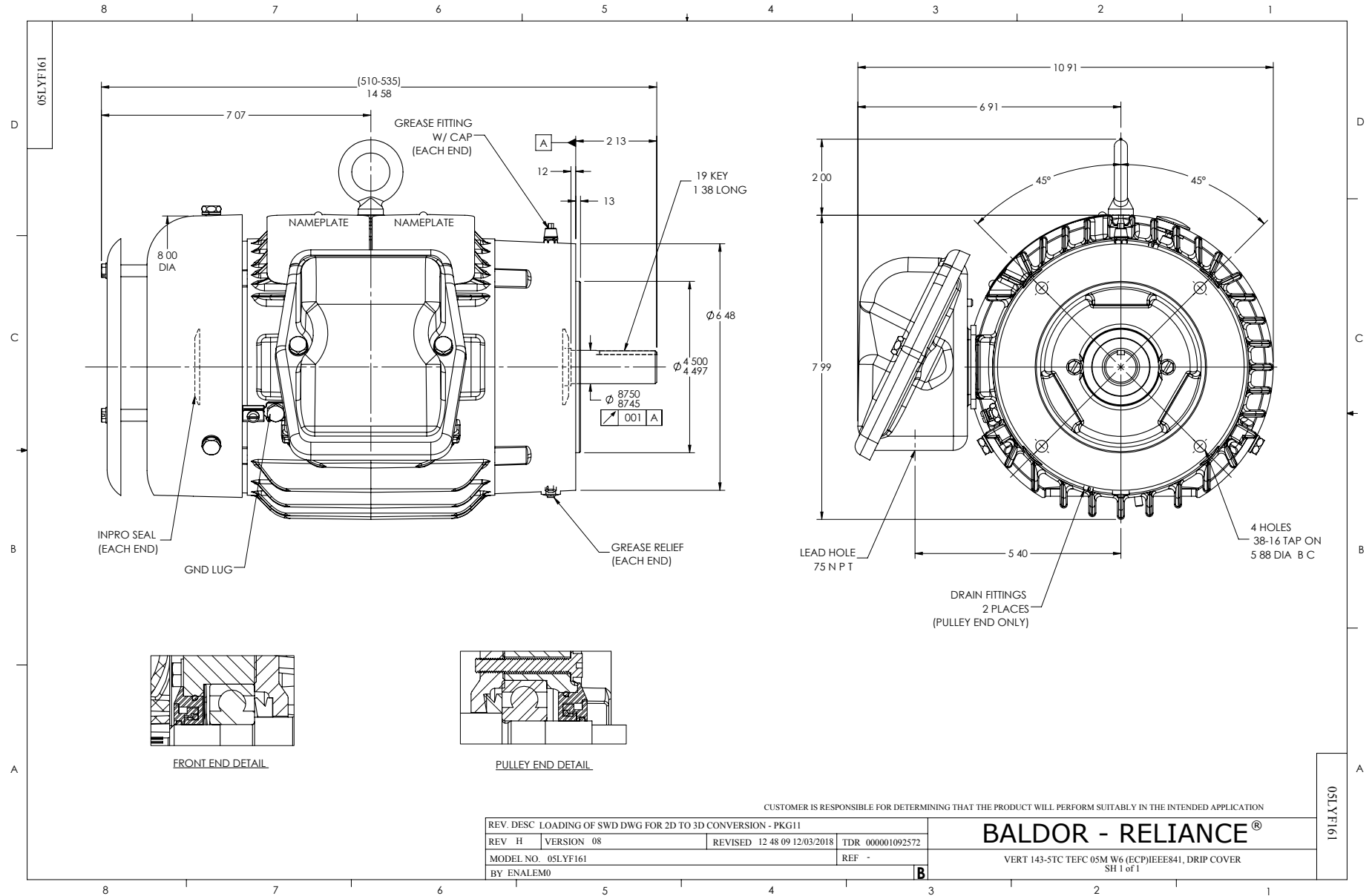
WINDING # 05WGW176

Typical performance - not guaranteed values.

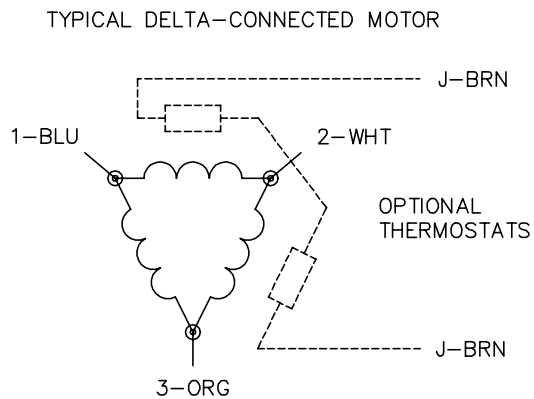
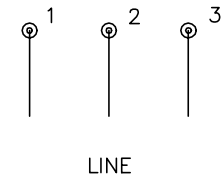
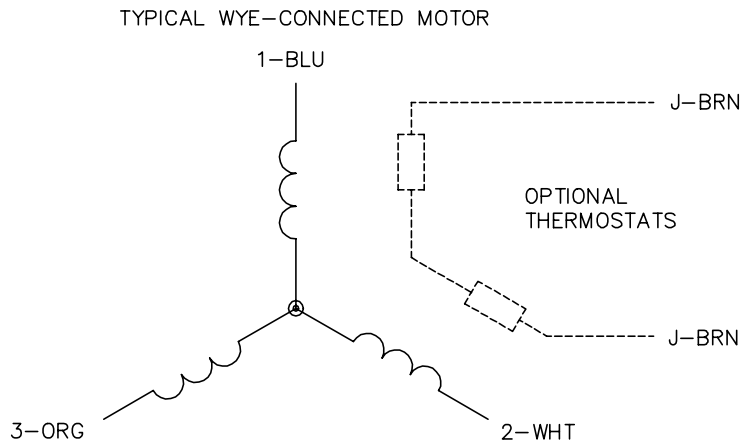
1.5 HP 3 PH 60 HZ 3450 RPM 368 V 0524M  
 TORQUES(LB-FT): PO=6.82 PU=5.08 LR=6.4 LRA=15.92



5/13/2020 ACPERF, record # 66931



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