

**BALDOR® • RELIANCE** 

**Product Information Packet**

**CEM3538-BG**

**.5HP, 1735RPM, 3PH, 60HZ, 56C, 3514M, TEFC, F1**

| Part Detail |         |             |            |             |        |               |            |
|-------------|---------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | L       | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC      | Elec. Spec: | 35WGP862   | CD Diagram: | CD0005 | Mfg Plant:    |            |
| Mech. Spec: | 35E2213 | Layout:     | 35LYE2213  | Poles:      | 04     | Created Date: | 10-04-2013 |
| Base:       | RG      | Eff. Date:  | 02-21-2021 | Leads:      | 9#18   |               |            |

| Specs                           |                         |                                |                 |
|---------------------------------|-------------------------|--------------------------------|-----------------|
| Catalog Number:                 | CEM3538-BG              | Heater Indicator:              | No Heater       |
| Enclosure:                      | TEFC                    | Insulation Class:              | H               |
| Frame:                          | 56C                     | Inverter Code:                 | Inverter Ready  |
| Frame Material:                 | Steel                   | KVA Code:                      | K               |
| Output @ Frequency:             | .500 HP @ 60 HZ         | Lifting Lugs:                  | No Lifting Lugs |
| Synchronous Speed @ Frequency:  | 1800 RPM @ 60 HZ        | Locked Bearing Indicator:      | Locked Bearing  |
| Voltage @ Frequency:            | 208.0 V @ 60 HZ         | Motor Lead Quantity/Wire Size: | 9 @ 18 AWG      |
|                                 | 460.0 V @ 60 HZ         | Motor Lead Exit:               | Ko Box          |
|                                 | 230.0 V @ 60 HZ         | Motor Lead Termination:        | Flying Leads    |
| XP Class and Group:             | None                    | Motor Type:                    | 3514M           |
| XP Division:                    | Not Applicable          | Mounting Arrangement:          | F1              |
| Agency Approvals:               | CSA                     | Power Factor:                  | 74              |
|                                 | CSA EEV                 | Product Family:                | General Purpose |
|                                 | UR                      | 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:                 | Rigid                   | Rodent Screen:                 | None            |
| Bearing Grease Type:            | Polyrex EM (-20F +300F) | RoHS Status:                   | ROHS COMPLIANT  |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| <b>Blower:</b>                        | None                      | <b>Shaft Extension Location:</b>   | Pulley End          |
| <b>Current @ Voltage:</b>             | 1.700 A @ 208.0 V         | <b>Shaft Ground Indicator:</b>     | Shaft Grounding     |
|                                       | 1.600 A @ 230.0 V         | <b>Shaft Rotation:</b>             | Reversible          |
|                                       | .800 A @ 460.0 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>   | None                |
| <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>          | None                |
|                                       |                           | <b>Winding Thermal 2:</b>          | None                |

|                                   |                            |  |             |      |  |                       |   |  |              |       |
|-----------------------------------|----------------------------|--|-------------|------|--|-----------------------|---|--|--------------|-------|
| <b>Nameplate NP3441LUA</b>        |                            |  |             |      |  |                       |   |  |              |       |
| <b>CAT.NO.</b>                    | CEM3538-BG                 |  |             |      |  |                       |   |  |              |       |
| <b>SPEC</b>                       | 35E2213P862G1              |  |             |      |  |                       |   |  |              |       |
| <b>HP</b>                         | .5                         |  |             |      |  |                       |   |  |              |       |
| <b>VOLTS</b>                      | 208-230/460                |  |             |      |  |                       |   |  |              |       |
| <b>AMPS</b>                       | 1.7-1.6/.8                 |  |             |      |  |                       |   |  |              |       |
| <b>RPM</b>                        | 1735                       |  |             |      |  |                       |   |  |              |       |
| <b>FRAME</b>                      | 56C                        |  | <b>HZ</b>   | 60   |  | <b>PH</b>             | 3 |  |              |       |
| <b>SF</b>                         | 1.15                       |  | <b>CODE</b> | K    |  | <b>DES</b>            | B |  | <b>CLASS</b> | H     |
| <b>NEMA NOM. EFF</b>              | 82.5                       |  | <b>PF</b>   | 74   |  |                       |   |  |              |       |
| <b>RATING</b>                     | 40C AMB-CONT               |  |             |      |  |                       |   |  |              |       |
| <b>CC</b>                         |                            |  |             |      |  | <b>USABLE AT 208V</b> |   |  |              |       |
| <b>ENCL</b>                       | TEFC                       |  | <b>SER</b>  |      |  |                       |   |  |              |       |
| <b>DE</b>                         | 6205                       |  | <b>ODE</b>  | 6203 |  |                       |   |  |              |       |
| <b>VPWM INVERTER READY</b>        | SFA 1.9-1.8/.9             |  |             |      |  |                       |   |  |              |       |
| <b>CT6-60H(10:1)VT3-60H(20:1)</b> | 50HZ .5HP 190/380V 1.8/.9A |  |             |      |  |                       |   |  |              |       |
|                                   |                            |  |             |      |  |                       |   |  |              | SF1.0 |

| Parts List    |  |          |
|---------------|--|----------|
| Part Number   | Description                              | Quantity |
| SA270202      | SA 35E2213P862G1                         | 1.000 EA |
| RA256841      | RA 35E2213P862G1                         | 1.000 EA |
| 34FN3002B01   | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 EA |
| NS2512A01     | INSULATOR, CONDUIT BOX X                 | 1.000 EA |
| 35CB3007      | 35 CB CASTING W/.88 DIA. LEAD HOLE       | 1.000 EA |
| 36GS1000SP    | GASKET-CONDUIT BOX, .06 THICK #SV-330 LE | 1.000 EA |
| 51XB1016A07   | 10-16 X 7/16 HXWSSLD SERTYB              | 2.000 EA |
| 11XW1032G06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 EA |
| 35EP3122K00   | MASTER ODE,203 BRG,.683SH,#26 DRN,FH MTG | 1.000 EA |
| HW5100A03     | WAVY WASHER (W1543-017)                  | 1.000 EA |
| 35EP3307F00   | MASTER DE,205 BRG,.998SH,#26 DRN         | 1.000 EA |
| 51XN1032A20   | 10-32 X 1 1/4 HX WS SL SR                | 2.000 EA |
| 51XB1214A16   | 12-14X1.00 HXWSSLD SERTYB                | 1.000 EA |
| 35FH4005A32SP | IEC FH NO GRSR W/3 HOLES - PRIMED        | 1.000 EA |
| 51XW1032A06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 EA |
| 35CB4521GX    | CONDUIT BOX LID KIT **ORDER INDIV PARTS  | 1.000 EA |
| 51XW0832A07   | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 EA |
| HW2501D13     | KEY, 3/16 SQ X 1.375                     | 1.000 EA |
| HA7000A04     | KEY RETAINER 0.625 DIA SHAFTS            | 1.000 EA |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 EA |
| LB1508        | LABEL "SHAFT GROUNDING BRUSH" 1.50 X .81 | 1.000 EA |
| MJ1000A02     | GREASE, MOBIL POLYREX EM - 124047        | 0.050 LB |
| MG1000Y03     | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,      | 0.017 GA |
| HA3100A12     | THRUBOLT 10-32 X 7.375                   | 4.000 EA |

| <b>Parts List (continued)</b> |  |                 |
|-------------------------------|--|-----------------|
| <b>Part Number</b>            | <b>Description</b>                       | <b>Quantity</b> |
| LC0005E01                     | CONN.DIA./WARNING LABEL (LC0005/LB1119N) | 1.000 EA        |
| NP3441LUA                     | ALUM SUPER-E VPWM INV READY UL CSA-EEV C | 1.000 EA        |
| 35PA1066                      | PKG GRP, PRINT PK1008A06                 | 1.000 EA        |
| MN416A01                      | TAG-INSTAL-MAINT no wire (2100/bx) 4/22  | 1.000 EA        |
| FE-0000001                    | ZRTG FE ASSEMBLY                         | 1.000 EA        |
| PE-0000001                    | ZRTG PE ASSEMBLY                         | 1.000 EA        |

**AC Induction Motor Performance Data**

Record # 68079

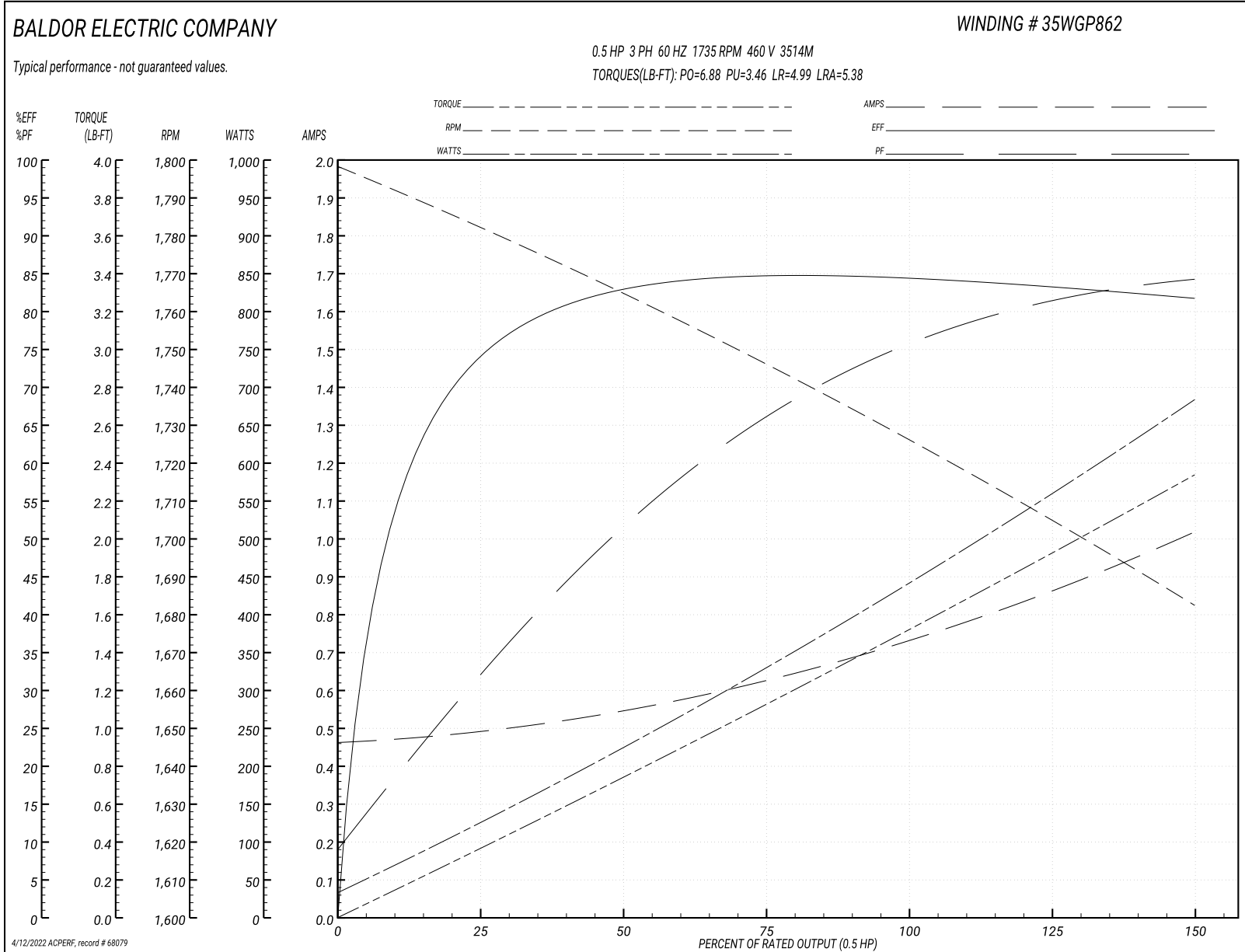
Typical performance - not guaranteed values

| Winding: 35WGP862-R072 |                   | Type: 3514M                                      | Enclosure: TEFC           |
|------------------------|-------------------|--|---------------------------|
| <b>Nameplate Data</b>  |                   | <b>460 V, 60 Hz:<br/>High Voltage Connection</b> |                           |
| Rated Output (HP)      | .5                | Full Load Torque                                 | 1.53 LB-FT                |
| Volts                  | 208-230/460       | Start Configuration                              | direct on line            |
| Full Load Amps         | 1.7-1.6/.8        | Breakdown Torque                                 | 6.88 LB-FT                |
| R.P.M.                 | 1735              | Pull-up Torque                                   | 3.46 LB-FT                |
| Hz                     | 60 Phase          | Locked-rotor Torque                              | 4.99 LB-FT                |
| NEMA Design Code       | B KVA Code        | Starting Current                                 | 5.38 A                    |
| Service Factor (S.F.)  | 1.15              | No-load Current                                  | 0.465 A                   |
| NEMA Nom. Eff.         | 82.5 Power Factor | Line-line Res. @ 25°C                            | 35.3 Ω                    |
| Rating - Duty          | 40C AMB-CONT      | Temp. Rise @ Rated Load                          | 52°C                      |
| S.F. Amps              | 1.9-1.8/.9        | Temp. Rise @ S.F. Load                           | 68°C                      |
|                        |                   | Locked-rotor Power Factor                        | 67.6                      |
|                        |                   | Rotor inertia                                    | 0.0827 LB-FT <sup>2</sup> |

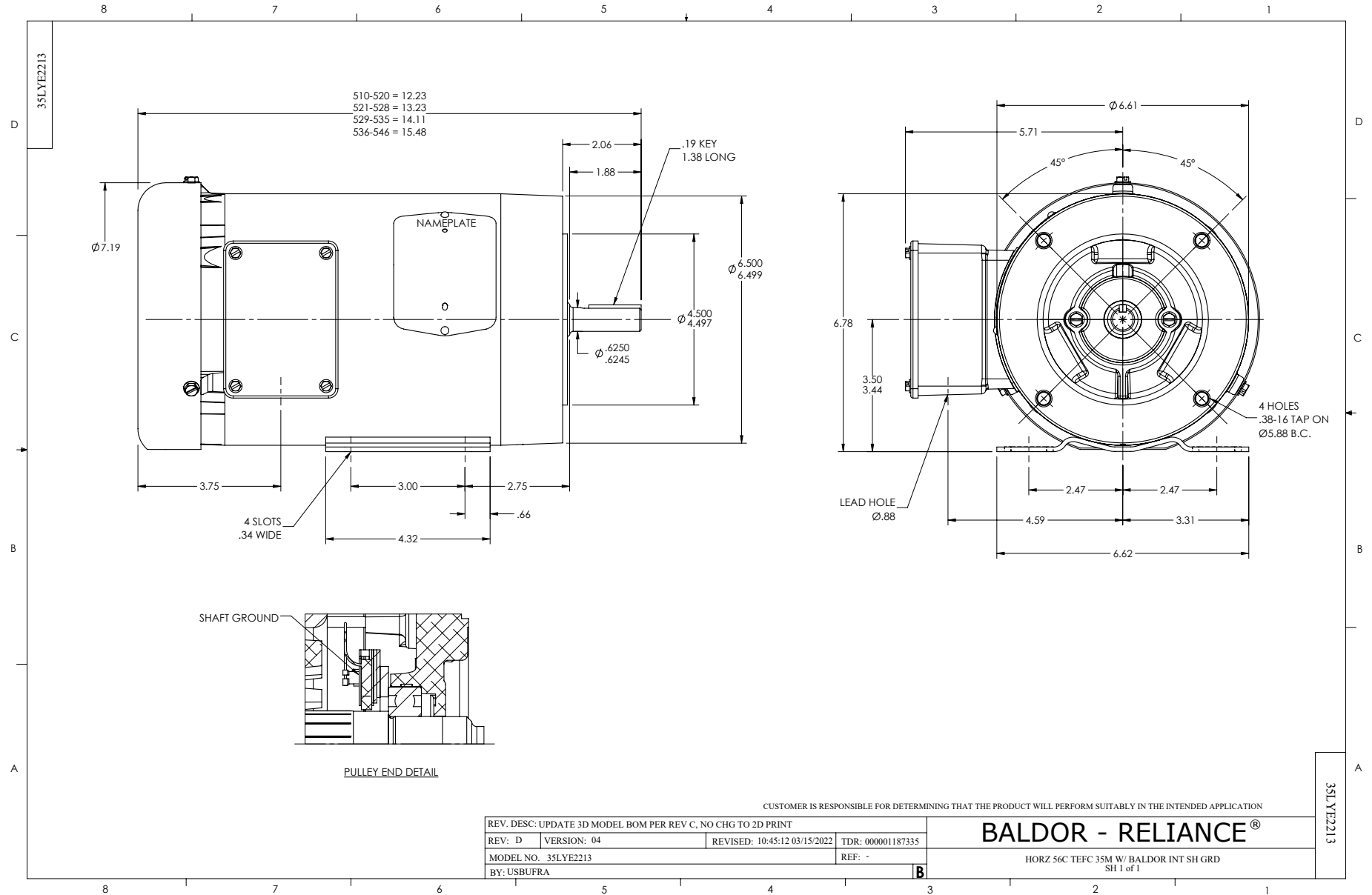
**Load Characteristics 460 V, 60 Hz, 0.5 HP**

| % of Rated Load | 25    | 50    | 75    | 100   | 125  | 150  | S.F.  |
|-----------------|-------|-------|-------|-------|------|------|-------|
| Power Factor    | 33    | 52    | 66    | 76    | 82   | 84   | 80    |
| Efficiency      | 74.3  | 82.6  | 84.6  | 84.4  | 83.4 | 81.6 | 83.8  |
| Speed           | 1781  | 1764  | 1746  | 1726  | 1705 | 1682 | 1713  |
| Line amperes    | 0.489 | 0.545 | 0.634 | 0.737 | 0.86 | 1.02 | 0.811 |

Performance Graph at 460V, 60Hz, 0.5HP Typical performance - Not guaranteed values



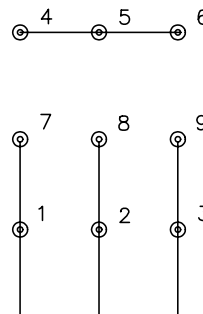




CD0005



LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

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.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: E BY: JLP

REVISED: 01/19/99 10:15

TDR: 0171435

900000

FILE: AAA00005140

MDL: -

MTL: -

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005