

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: 180LTFC6588

Catalog No: R338A

Globetrotter® IEC Cast Iron Motor, 20 & 15 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V,
1200 & 1000 RPM, 180L Frame, TEFC



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RegalRexnord

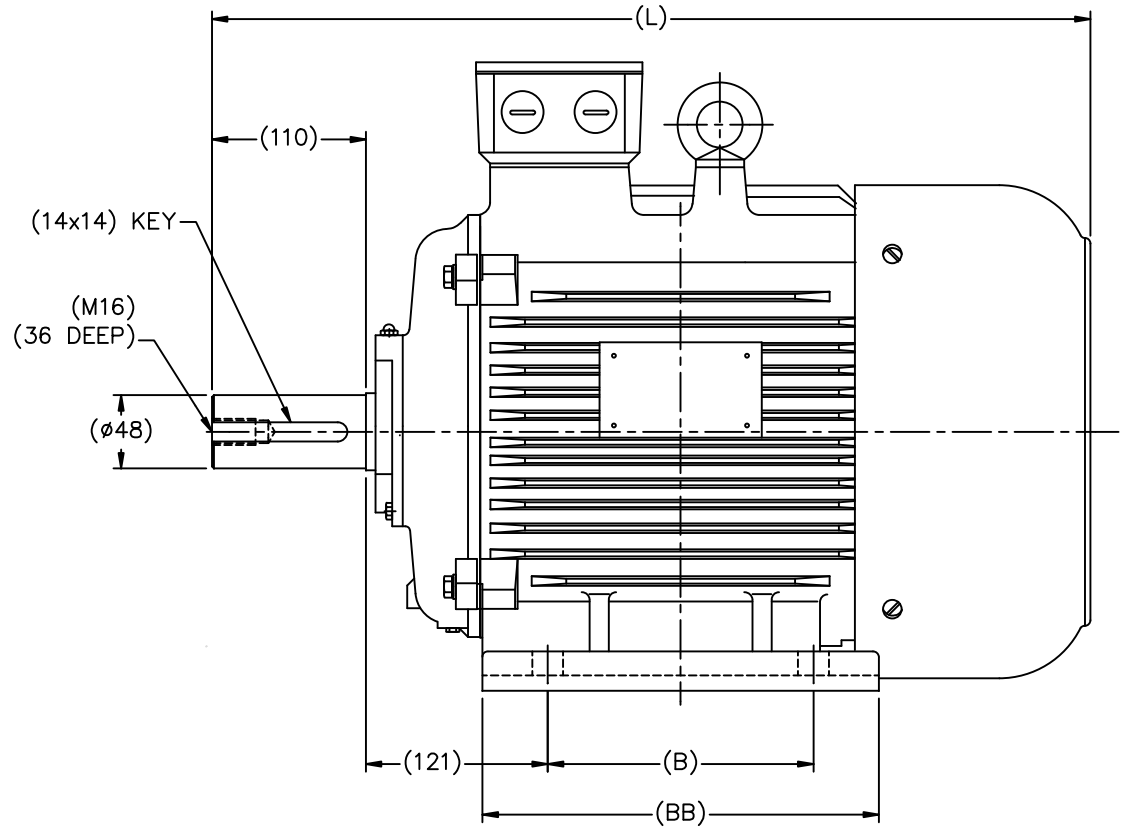
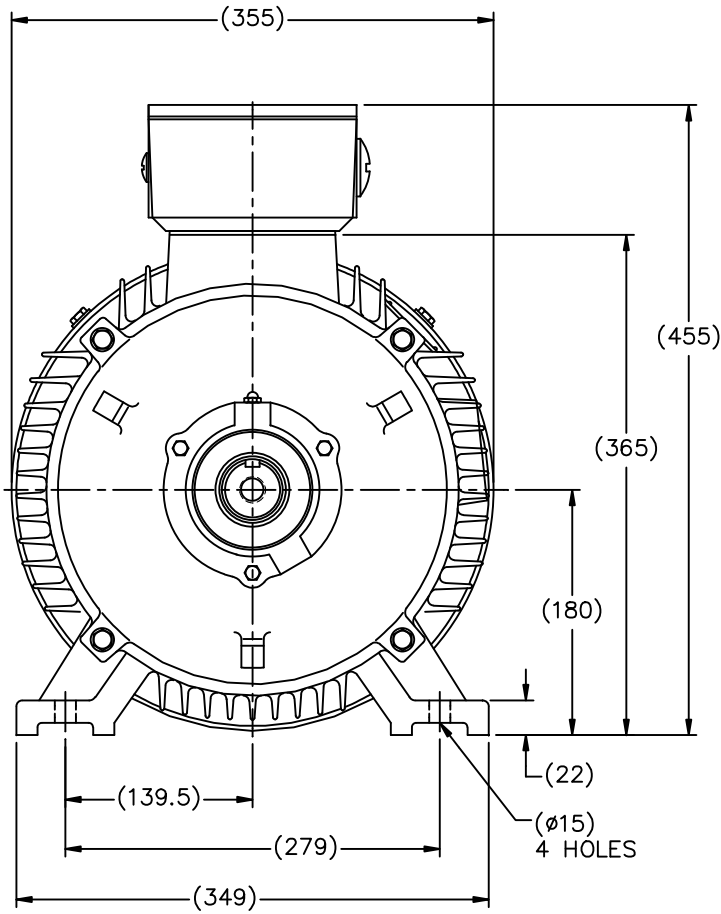
Nameplate Specifications

| | | | |
|------------------------|----------------------------|----------------------------|------------------------------------|
| Phase | 3 | Output HP | 20 & 15 Hp |
| Output KW | 14.9 & 11.2 kW | Voltage | 230/460 & 200/400 V |
| Speed | 1185 & 985 rpm | Service Factor | 1.15 & 1.0 |
| Frame | 180L | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Efficiency | 92.4 & 91 % |
| Ambient Temperature | 40 °C | Frequency | 60 & 50 Hz |
| Current | 54/27 & 50/25 A | Power Factor | 75 |
| Duty | Continuous | Insulation Class | F |
| Design Code | B | KVA Code | G |
| Drive End Bearing Size | 6311 | Opp Drive End Bearing Size | 6211 |
| UL | No | CSA | Y |
| CE | Y | IP Code | 55 |
| Number of Speeds | 1 | | |

Technical Specifications

| | | | |
|-------------------|-------------------------------------|-----------------------|---|
| Electrical Type | Squirrel Cage Inverter Rated | Starting Method | Part Wdg Start & Wye Start Delta Run Or Inverter |
| Poles | 6 | Rotation | Reversible |
| Mounting | Rigid Base | Motor Orientation | Horizontal |
| Drive End Bearing | Ball | Opp Drive End Bearing | Ball |
| Frame Material | Cast Iron | Shaft Type | IEC |
| Overall Length | 28.26 in | Shaft Diameter | 1.888 in |
| Shaft Extension | 4.31 in | Assembly/Box Mounting | F3 |
| Outline Drawing | B-SS622257 | Connection Drawing | 004172.01ME |

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(MAY NOT BE DRAWN TO SCALE)

(DIMENSIONS ARE IN MILLIMETERS)

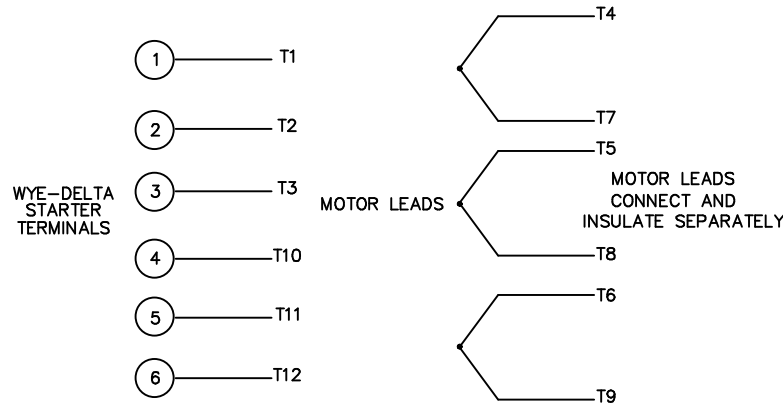
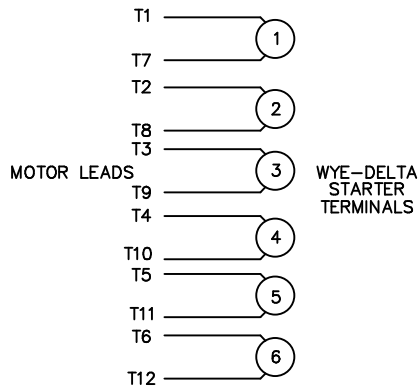
| Cat.No | FRAME | B | BB | L |
|---------------------|--------|-----|-----|-----|
| 193324.60 193322.60 | DF180M | 241 | 311 | 680 |
| 193325.60 193320.60 | DF180L | 279 | 349 | 718 |

| TOLERANCES UNLESS SPECIFIED | | REGAL-BELOIT CORPORATION | | DRAWN HLB 12-06-2010 | |
|--|----------|--------------------------|------|----------------------|--------------------------|
| DEC. | METRIC | REGAL-BELOIT CORPORATION | | CHK | DJK 12-17-2010 |
| .X | ±2.5 | TITLE OUTLINE | | APPD | SB 12-13-2010 |
| .XX | ±.76 | DF180M,L-4,6 | | SCALE | 1=18 |
| .XXX | ±.127 | MAT'L | | REF | |
| .XXXX | ±.0127 | FINISH | | FMF | HEBEI |
| NO. | REVISION | BY & DATE | CHK | ANG | ±7'30" |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT | | | RFP | 12-22-2010 | CAD FILE SS622257 |
| | | | DIST | SIZE | DRAWING NO. PAGE OF REV. |
| | | | | B | SS622257 |

WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

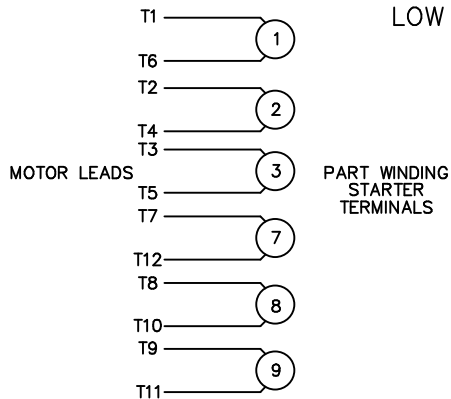
LOW VOLTAGE CONNECTION

HIGH VOLTAGE CONNECTION



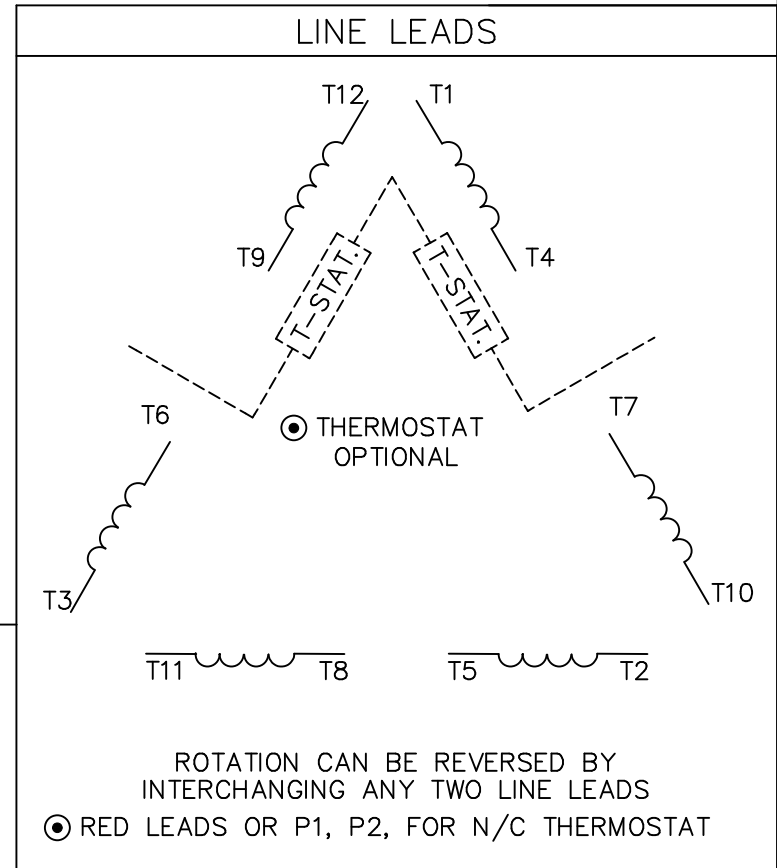
REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

PART WINDING START USABLE ON 4 & 6 POLE MOTORS
LOW VOLTAGE CONNECTION ONLY



REFER TO THE PART WINDING STARTER INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

REFER TO THE CUTLER - HAMMER OR EQUIV. FOR PROPER SELECTION OF OVERLOAD HEATER COILS.



| ACROSS THE LINE START & RUN | | | | |
|-----------------------------|-------------------|-------------------|-------------------|----------------------------|
| | LINE 1 | LINE 2 | LINE 3 | JOIN & INSULATE SEPARATELY |
| HIGH VOLT | T1, T12 | T2, T10 | T3, T11 | (T4, T7) (T5, T8) (T6, T9) |
| LOW VOLT | T1, T6 T7, T12 | T2, T4 T8, T10 | T3, T5 T9, T11 | |

| NO. | REVISION | BY & DATE | CHK | TOLERANCES UNLESS SPECIFIED | |
|-----|---|--------------|-----|-----------------------------|--------|
| | | | | DEC. | INCHES |
| | | | | .X | ±.1 |
| 03 | REV'D LOW VOLTAGE CONN. LEADS PER ELEC. | BJB 06/07/00 | | .XX | ±.01 |
| 02 | ADDED T-STAT. NOTES PER ELECTRICAL | KMM 06/02/98 | | .XXX | ±.005 |
| 01 | REDRAWN TO CAD | DBT 06/02/97 | | .XXXX | ±.0005 |
| | | | | ANG | ±1/2° |

MARATHON ELECTRIC

DRAWN WLW 09/08/77
 CHK RPB 09/12/77
 APPD JCW 09/12/77

TITLE DELTA - WYE CONNECTION DIAGRAM
 SCALE 1=1
 REF
 FMF
 PREV

RFP CAD FILE 00417201ME SIZE A DRAWING NO. 004172-01ME REV. 03
 DIST

CERTIFICATION DATA SHEET

Model#: 180LTFC6588 AA
CONN. DIAGRAM: 004172.01ME
OUTLINE: B-SS622257

WINDING#: T14506013 FR 3
ASSEMBLY: F3

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-------|-----------|-----------|----------|-------|-----------|----------|--------|
| 20&15 | 14.9&11.2 | 1200 | 1185&985 | 180L | TEFC | G | B |

| PH | Hz | VOLTS | FL AMPS | START TYPE | DUTY | INSL | S.F | AMB°C | ELEVATION |
|----|-------|---------------------|-------------|--------------------------|----------------|------|----------|-------|-----------|
| 3 | 60/50 | 230/460#200/ 400 | 54/27&50/25 | PWS & YDRUN OR INV | CONTINUOU S | F2 | 1.15/1.0 | 40 | 3300 |

| FULL LOAD EFF: 92.4&91 | 3/4 LOAD EFF: 92.4 | 1/2 LOAD EFF: 91 | GTD. EFF | ELEC. TYPE | NO LOAD AMPS |
|---------------------------|--------------------|-------------------|----------|-------------------|--------------|
| FULL LOAD PF: 75&69 | 3/4 LOAD PF: 70 | 1/2 LOAD PF: 59.2 | 91 | SQ CAGE INV RATED | 25 / 12.5 |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|-------------|-------------------|---------------|---------------|-------------|
| 88 LB-FT | 290 / 145 | 142 LB-FT 160 | 230 LB-FT 260 | 55 |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|---------------------------|-------------|--------------|-------------|-----------------|-----------------|----------------------|
| 55.5 dBA | 65.5 dBA | 6.64 LB-FT^2 | 6.6 LB-FT^2 | 15 SEC. | 2 | 400 LBS. |

***** SUPPLEMENTAL INFORMATION *****

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT |
|--------------------|---------------------|---------------|-------------|------------------------|-----------------------|---------------|---------|------------------|
| STANDARD | STANDARD | RIGID | HORIZONTAL | PREMIUM SEVERE DUTY | NONE | FALSE | NONE | BLUE (ENAMEL) |

| BEARINGS | | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL |
|----------|------|------------|--------------|------------|-------------|----------------------------|-------------------|
| DE | OPE | | | | | | |
| BALL | BALL | POLYREX EM | STANDARD IEC | NONE | NONE | 1045 HOT ROLLED (C-204) | CAST IRON |
| 6311 | 6211 | | | | | | |

| THERMO-PROTECTORS | | | | THERMISTORS | CONTROL | SPACE /n HEATERS |
|-------------------|------------|----------|----------|-------------|---------|------------------|
| THERMOSTATS | PROTECTORS | WDG RTDs | BRG RTDs | | | |
| NONE | NOT | NONE | NONE | NONE | FALSE | NONE VOLTS |

If Inverter equals NONE, contact factory for further information

| |
|---------------------------------------|
| INVERTER TORQUE: CONSTANT 2:1 |
| INV. HP SPEED RANGE: 1.5 X BASE SPEED |
| ENCODER: NONE |
| NONE NONE |
| NONE NONE PPR |
| BRAKE: NONE NONE |
| NONE P/N NONE |
| NONE NONE |
| NONE FT-LB NONE V NONE Hz |

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DATE: 06/27/2017 01:01:56 AM
 FORM 3531 REV.3 02/07/99
 ** Subject to change without notice.

Data Sheet

Date: 29-06-2017
 Customer: _____
 Attention: _____
 Submitted by: FAREEDA DUDEKULA



180LTC6588

Submittal

Data @ 460 V

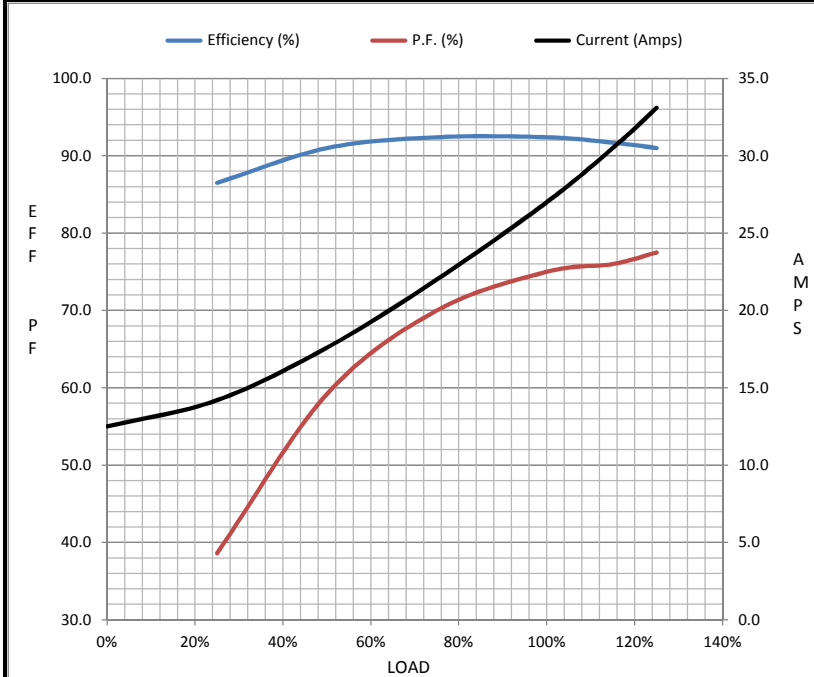
Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|-----|
| Current (Amps) | 12.5 | 14.2 | 17.6 | 22.0 | 27.0 | 30.5 | 33.1 | 145 |
| Torque (ft-lb) | 0.00 | 22.0 | 45.0 | 67.0 | 88.0 | 103 | 112 | 142 |
| RPM | 1200 | 1197 | 1192 | 1190 | 1185 | 1,180 | 1180 | 0 |
| Efficiency (%) | | 86.5 | 91.0 | 92.4 | 92.4 | 91.7 | 91.0 | |
| P.F. (%) | 5.1 | 38.6 | 59.2 | 70.0 | 75.0 | 76.0 | 77.5 | 0.0 |

Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM) | 0 | 850 | 1110 | 1185 | 1200 |
| Current (Amps) | 145 | 135 | 99.0 | 27.0 | 12.5 |
| Torque (ft-lb) | 142 | 123 | 230 | 88.0 | 0.00 |

| Information Block | | | | |
|-----------------------------|------------------------|--------|--------|--------|
| HP | 20.0 | | | |
| Sync. RPM | 1200 | | | |
| Frame | 286 | | | |
| Enclosure | TEFC | | | |
| Construction | TFC | | | |
| Voltage | 230/460#200/40(V) | | | |
| Frequency | 60 Hz | | | |
| Design | B | | | |
| LR Code letter | G | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 55 ° C | | | |
| Duty | CONT | | | |
| Ambient | 40 ° C | | | |
| Elevation | 1,000 feet | | | |
| Rotor/Shaft wk ² | 6.6 Lb-Ft ² | | | |
| Ref Wdg | T14506013 FR | | | |
| Sound Pressure @ 1M | 56 dBA | | | |
| VFD Rating | CONSTANT 2:1 | | | |
| Outline Dwg | B-SS622257 | | | |
| Conn. Diag | 004172.01ME | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 365THFS8036 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |



Speed - Torque Curve

