

# DATA SHEET

Premium Efficiency Motor: **IOW20-9-324T**

**60 Hz**

WorldWide Electric Corporation

1 (800) 808-2131

Worldwideelectric.net



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Customer:

| MOTOR INFORMATION       |                             |
|-------------------------|-----------------------------|
| HP                      | 20                          |
| RPM                     | 900                         |
| Phase                   | 3                           |
| Frequency               | 60 Hz                       |
| Voltage                 | 230/460/796                 |
| Frame Size              | 324T                        |
| Enclosure               | TEFC                        |
| Degree of Protection    | IP55                        |
| Service Factor          | 1.15                        |
| Poles                   | 8                           |
| Full Load Speed         | 843                         |
| Insulation Class        | F                           |
| Temp Rise               | 80°C                        |
| NEMA Code Letter        | G                           |
| Duty Cycle              | S1 / Continuous             |
| Slip                    | 6.33%                       |
| NEMA Design             | D                           |
| Moment of Inertia       | 8.57 lb.ft.^2               |
| Locked Rotor Time (Hot) | 6 seconds                   |
| Sound Pressure Level    | 83 dB(A)                    |
| Number of Starts        | 2 Cold / 1 Hot              |
| Max Ambient Temperature | 40°C                        |
| Max Elevation           | 1000 m.a.s.l (3300 f.a.s.l) |
| Mounting                | F2                          |
| Rotation                | Bi-Directional              |
| Area of Classification  | Safe Area                   |
| Inverter Rating         | No                          |
| Standard                | NEMA MG-1                   |
| Approvals               | CE                          |

| EFFICIENCY/POWER FACTOR |        |       |
|-------------------------|--------|-------|
| LOAD                    | EFF    | P. F. |
| 100%                    | 85.0 % | 0.74  |
| 75%                     | 85.4 % | 0.67  |
| 50%                     | 84.2 % | 0.54  |

| TORQUE       |       |       |
|--------------|-------|-------|
| FULL LOAD    | LRT   | BDT   |
| 124.7 lb.ft. | 285 % | 290 % |

| AMPERAGE INFORMATION |       |       |       |
|----------------------|-------|-------|-------|
|                      | 230V  | 460V  | 796V  |
| Full Load Amps       | 59.6A | 29.8A | 17.2A |
| Locked Rotor Amps    | 304A  | 152A  | 87.8A |
| No Load Current      | 31.2A | 15.6A | 9A    |

| BEARING INFORMATION     |                  |
|-------------------------|------------------|
| DE Bearing              | 6312 C3          |
| ODE Bearing             | 6312 C3          |
| Grease Type             | MOBIL POLYREX EM |
| DE Regreasing Interval  | 6800 Hours       |
| ODE Regreasing Interval | 6800 Hours       |
| Grease Quantity DE/ODE  | 35g/35g          |

| ADDITIONAL DATA    |                                |
|--------------------|--------------------------------|
| F1 Suitable        | Yes                            |
| Shaft Material     | 1045 Carbon Steel              |
| Connection Diagram | 230/460/796 V - 12 Lead ΔΔ/Δ/Y |
| Approximate Weight | 507 lbs.                       |

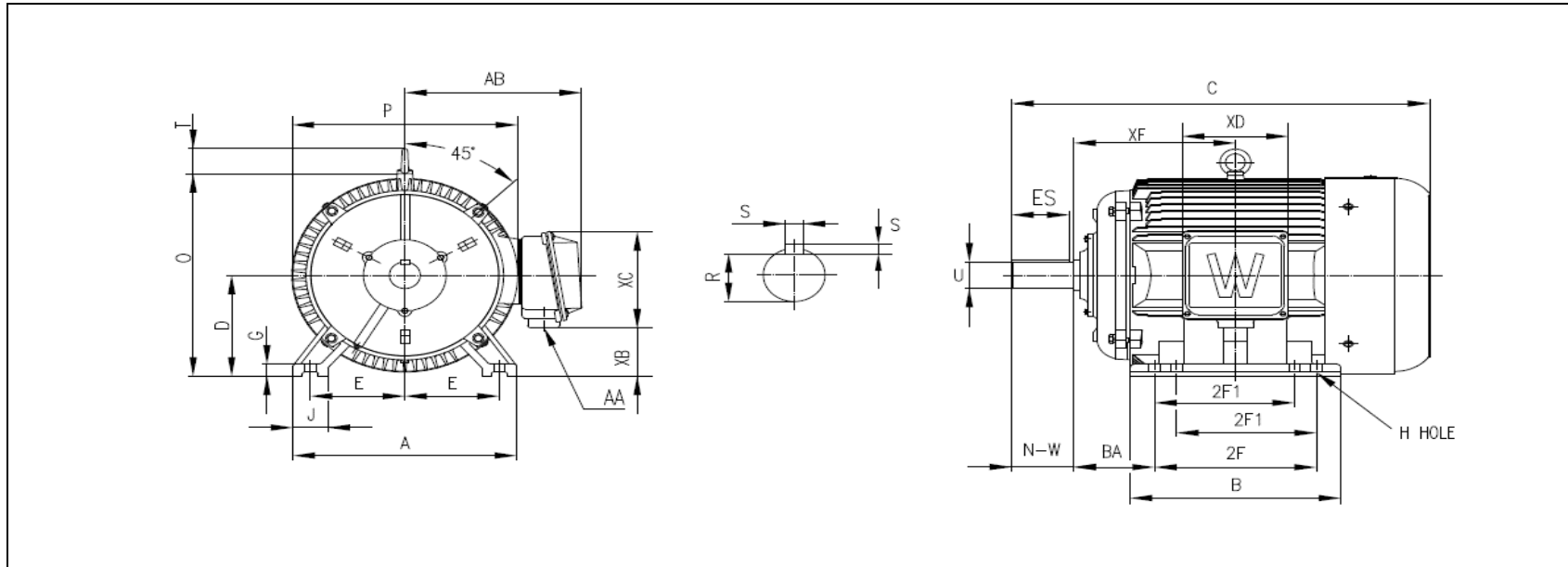
# MOTOR DRAWING

Premium Efficiency Motor: **IOW20-9-324T**

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## DIMENSION - INCHES

| MOUNTING |     |      |      |      | A     | B     | C     | D | G     | J     | P     | O     | T    | AB   |
|----------|-----|------|------|------|-------|-------|-------|---|-------|-------|-------|-------|------|------|
| E        | 2F1 | 2F   | H    | BA   |       |       |       |   |       |       |       |       |      |      |
| 6.25     | --  | 10.5 | 0.67 | 5.25 | 15.28 | 13.35 | 29.36 | 8 | 0.984 | 2.756 | 15.63 | 15.91 | 2.44 | 13.9 |

| SHAFT & KEY |      |       |      |       |
|-------------|------|-------|------|-------|
| S           | ES   | R     | N-W  | U     |
| 0.5         | 3.91 | 1.845 | 5.25 | 2.125 |

| TERMINAL BOX |      |       |      |      |
|--------------|------|-------|------|------|
| AA           | XB   | XC    | XD   | XF   |
| 2 NPT        | 2.47 | 10.83 | 8.98 | 10.4 |

# PERFORMANCE CURVES

Premium Efficiency Motor:

**IOW20-9-324T**

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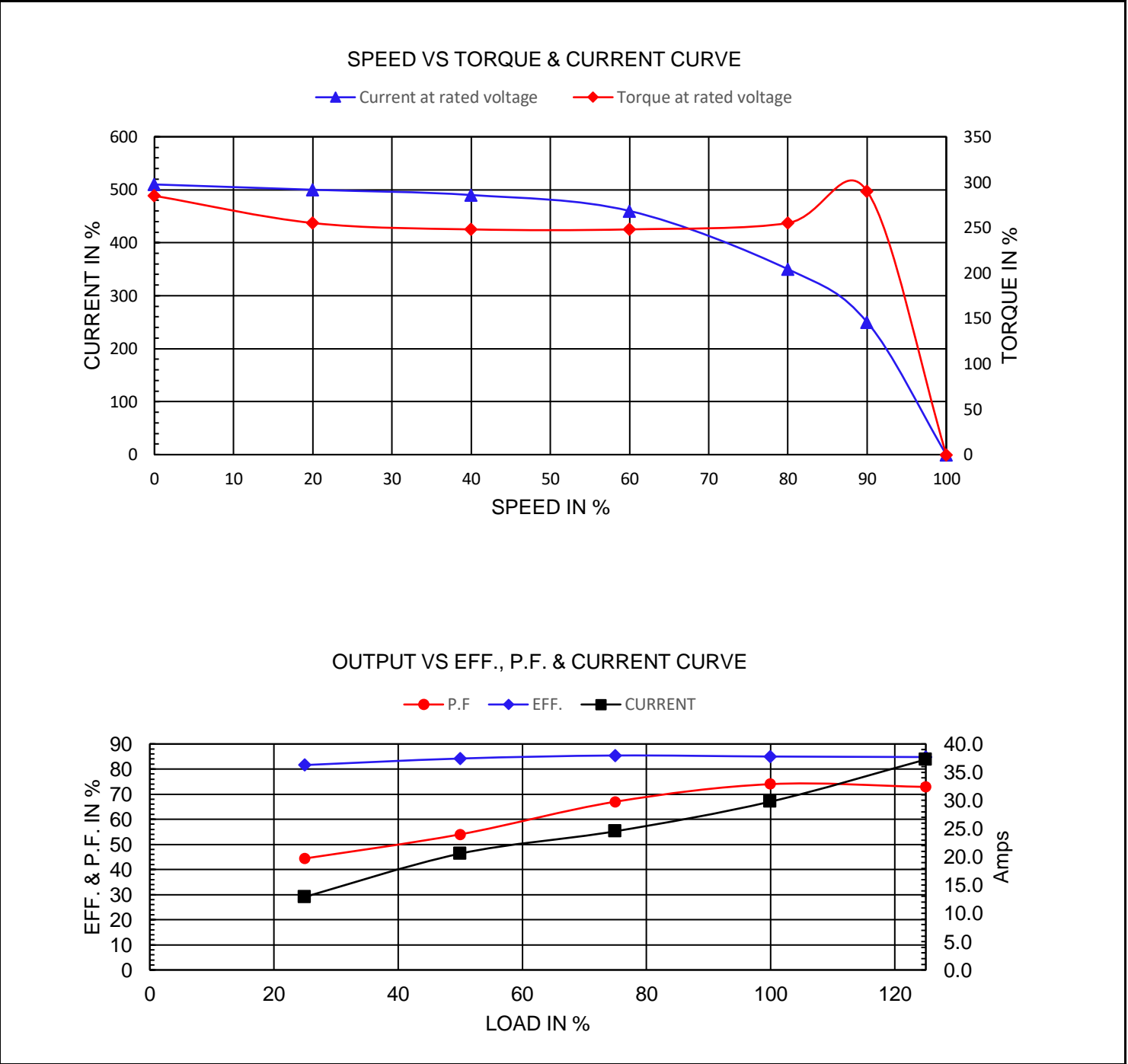
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|                    |              |            |     |              |      |   |
|--------------------|--------------|------------|-----|--------------|------|---|
| Motor Type         | PEWWE        |            |     |              |      |   |
| Output Rating (HP) | 20           | FL Speed   | 843 | 796 volt FLA | 17.2 | A |
| Full Load Torque   | 124.7 lb.ft  | LRT (%FLT) | 285 | 460 volt FLA | 29.8 | A |
| Rotor Wk^2         | 8.57 lb-ft^2 | BDT (%FLT) | 290 | 230 volt FLA | 59.6 | A |



# NAMEPLATE / WIRING

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Premium Efficiency Motor:

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## SAMPLE NAMEPLATE DATA

|                                       |                      |             |                      |   |                      |                      |                      |  |  |      |                      |
|---------------------------------------|----------------------|-------------|----------------------|---|----------------------|----------------------|----------------------|--|--|------|----------------------|
|                                       |                      |             |                      | <b>OIL WELL PUMPING 3 PHASE<br/>INDUSTRIAL ELECTRIC MOTOR</b> |                      |                      |                      |  |  |      |                      |
| Model                                 | <input type="text"/> | Ser No.     | <input type="text"/> | TYPE  |                      | <input type="text"/> |                      |  |  |      |                      |
| HP                                    | <input type="text"/> | FR          | <input type="text"/> | Encl  | <input type="text"/> | IP                   | <input type="text"/> |  |  |      |                      |
| Voltage                               | <input type="text"/> | Hz          | <input type="text"/> | Design  | <input type="text"/> |                      |                      |  |  |      |                      |
| AMPS                                  | <input type="text"/> | RPM         | <input type="text"/> | Ins Cl  | <input type="text"/> |                      |                      |  |  |      |                      |
| Rating                                | <input type="text"/> | °C Amb Cont | <input type="text"/> | S.F.  | <input type="text"/> | kVA Code             | <input type="text"/> |  |  |      |                      |
| Eff.                                  | <input type="text"/> | %           | Power Factor         | <input type="text"/>  |                      |                      |                      |  |  |      |                      |
| DE Brng                               | <input type="text"/> | ODE Brng    | <input type="text"/> |   |                      |                      |                      |  |  |      |                      |
| Locked Rotor Torque/Rated Torque      | <input type="text"/> |             |                      |   |                      |                      |                      |  |  | %    |                      |
|                                       |                      |             |                      |   |                      |                      |                      |  |  | Date | <input type="text"/> |
| <b>WorldWide Electric Corporation</b> |                      |             |                      |   |                      |                      |                      |  |  |      |                      |

**CONNECTION**

| 230V 2Δ |    |    | 460V Δ |    |    | 796V Y |    |    |
|---------|----|----|--------|----|----|--------|----|----|
| 6       | 4  | 5  | 4      | 5  | 6  | 4      | 5  | 6  |
| 7       | 8  | 9  | 7      | 8  | 9  | 7      | 8  | 9  |
| 12      | 10 | 11 | 12     | 10 | 11 | 12     | 10 | 11 |
| 1       | 2  | 3  | 1      | 2  | 3  | 1      | 2  | 3  |
| L1      | L2 | L3 | L1     | L2 | L3 | L1     | L2 | L3 |

Made in China

|                                  |   |          |                                      |          |                                   |    |                                   |  |  |  |  |
|----------------------------------|---|----------|--------------------------------------|----------|-----------------------------------|----|-----------------------------------|--|--|--|--|
| Model                            | <input type="text" value="IOW20-9-324T"/>   |          |                                      |          |                                   |    |                                   |  |  |  |  |
| HP                               | <input type="text" value="20"/>             | Frame    | <input type="text" value="324T"/>    | Encl     | <input type="text" value="TEFC"/> | IP | <input type="text" value="IP55"/> |  |  |  |  |
| Voltage                          | <input type="text" value="230/460/796"/>    | Hz       | <input type="text" value="60"/>      | Design   | <input type="text" value="D"/>    |    |                                   |  |  |  |  |
| Amps                             | <input type="text" value="59.6/29.8/17.2"/> | RPM      | <input type="text" value="843"/>     | Ins Cl   | <input type="text" value="F"/>    |    |                                   |  |  |  |  |
| Rating                           | <input type="text" value="40°C Amb Cont"/>  | S.F.     | <input type="text" value="1.15"/>    | kVA Code | <input type="text" value="G"/>    |    |                                   |  |  |  |  |
| Eff.                             | <input type="text" value="85.0%"/>          | P.F.     | <input type="text" value="0.74"/>    |          |                                   |    |                                   |  |  |  |  |
| DE Brng                          | <input type="text" value="6312 C3"/>        | ODE Brng | <input type="text" value="6312 C3"/> |          |                                   |    |                                   |  |  |  |  |
| Locked Rotor Torque/Rated Torque | <input type="text" value="285%"/>           |          |                                      |          |                                   |    |                                   |  |  |  |  |