

## MG-1500 Electric Direct Drive

Provides a reliable, economic solution for a variety of PCP applications, including heavy to light oil, coalbed methane, and water source wells

### Applications

- PCP applications driven by electric or hydraulic motors

### Features and Benefits

- The small footprint is especially useful for height-restricted areas and aesthetically sensitive environments.
- Standard features include a hinged guard for easy sheave and belt inspection or replacement and a three-point lifting system for ease of handling.
- The centrifugal braking system provides a resistive torque that is proportional to speed, for a safe release of the backspin energy. The brake shoes automatically engage and retract based on speed, which results in a quick, complete, and controlled fluid dump, enabling production to resume quickly.
- The braking system is enclosed and immersed in synthetic oil to manage a wide range in operating temperatures and to lubricate all moving parts for a long service life.

### Tool Description

The Weatherford MG-1500 drive is an electric, belt-driven drive with a torque capacity of 1,500 lbf-ft. It is compatible with Weatherford stuffing boxes and various wellhead connections.

### Specifications

|                                   |   |
|-----------------------------------|---|
| Drive type                        | Belt direct drive                             |
| Prime mover type                  | Electric or hydraulic (with optional adapter) |
| Braking mechanism                 | Centrifugal braking system                    |
| Dynamic bearing capacity          | 150,622 lbf (670,000 N)                       |
| Bearing Ca90 capacity             | 39,049 lbf (17,712 kgf)                       |
| Torsional rating                  | 1,500 lbf-ft (2,034 N•m)                      |
| Maximum polished-rod speed        | 500 rpm                                       |
| Polished rod size                 | 1-1/4 and 1-1/2 in.                           |
| Maximum axial load                | 12 tonne                                      |
| Main shaft type                   | Hollow  |
| Maximum sheave ratio <sup>1</sup> | 5:1   |

<sup>1</sup>May vary by motor frame size



The MG-1500 electric direct drive is built with a unique centrifugal wet-braking system that provides reliable, controlled backspin protection to enhance operational safety.

### Options

- Integral, booth- and yoke-mounted stuffing boxes\*
- Conventional, I-PAK®, and DuraSeal® stuffing box types
- CE/ATEX-certified model available\*
- ISO 15163-2 model available
- Polished-rod speed indicator
- Polished-rod lock-out tool
- Support arms

\* Some conditions may apply



# MG-1500 Electric Direct Drive

## Specifications

|  |   |        |   |       |           |                   |
|--|---|--------|---|-------|-----------|-------------------|
| PR drive clamp type  | 8 bolt  |        |   |       |           |                   |
| Available stuffing box (SB) mounting                         | 12T two-post yoke, threaded cap, one-piece SB                       |        | 33.6 T standard booth, bolt-on SB                     |       |           | Integral          |
| Available stuffing box type                                  | Conventional  | I-PAK® | Conventional  | I-PAK | DuraSeal® | DuraSeal          |
| Available stuffing box wellhead connection<br>API compatible | 2-7/8 EUE pin   |        |   |       |           |                   |
|  | 3-1/8 3M flange   |        |   |       |           |                   |
|  |   |        | 4-1/16 2M or 3M flange                                |       |           |                   |
|  |   |        | 5-1/8 2M or 3M flange                                 |       |           |                   |
| Height: top of PR guard                                      | 93 in. (2,370 mm)   |        |   |       |           | 77 in. (1,964 mm) |
| Height: top of PR clamp                                      | 59 in. (1,496 mm)   |        |   |       |           | 43 in. (1,086 mm) |
| Width  | 33 in. (845 mm)   |        |   |       |           |                   |
| Length   | 53 in. (1,343 mm)   |        |   |       |           |                   |
| Approximate weight <sup>1</sup>                              | 1,180 lb (535 kg)   |        |   |       |           | 1,000 lb (454 kg) |
| Motor mounting   | Single  |        |   |       |           |                   |
| Maximum motor frame size                                     | 405T (IEC 250S/M)   |        |   |       |           |                   |
| Maximum motor weight <sup>2</sup>                            | 800 lb (363 kg)   |        | 1,500 lb (680 kg)<br>2-7/8 EUE pin: 1,000 lb (454 kg) |       |           |                   |
| Maximum mountable motor                                      | 100 hp, 1,800 rpm   |        |   |       |           |                   |
|  | 75 hp, 1,200 rpm  |        |   |       |           |                   |
| Input shaft diameter/orientation                             | 2.75 in. (70 mm)/vertical   |        |   |       |           |                   |
| Maximum driven sheave diameter                               | 30 in. (762 mm)   |        |   |       |           |                   |
| Maximum driver sheave diameter                               | 11.5 in. (292 mm)   |        |   |       |           |                   |
| Maximum number of belts                                      | 4 ea. Type C, 6 ea. Type 5V, 1 ea. synchronous                      |        |   |       |           |                   |
| Minimum center distance <sup>3</sup>                         | 12 in. + D (305 mm + D)   |        |   |       |           |                   |
| Maximum slant angle from vertical                            | 30° (0° for ATEX)   |        |   |       |           |                   |
| Ambient operating temperature range                          | -40 to 122°F (-40 to 50°C)<br>-4 to 104°F (-20 to 40°C) for CE/ATEX |        |   |       |           |                   |
| Minimum start-up temperature                                 | -4°F (-20°C)  |        |   |       |           |                   |
| Operating temperature range                                  | -4 to 248°F (-20 to 120°C)  |        |   |       |           |                   |

<sup>1</sup> Not including motor, belts, sheaves, and bushings

<sup>2</sup> Including motor, belts, sheaves, and bushings

<sup>3</sup> D = distance from the base of selected motor to its centerline

\* I-PAK is a registered trademark of Weatherford in the US and Canada. DuraSeal is a registered trademark of Weatherford in the US.

