MG-375 Electric Direct Drive

Provides a reliable, economical 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 work areas and aesthetically sensitive environments.
- Standard features include a hinged guard for easy sheave and belt inspection or replacement and a two-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 the wide range of operating temperatures and to lubricate all moving parts for a long service life.

Tool Description

The Weatherford MG-375 is an electric, belt-driven drive with a torque capacity of 375 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	102.288 lbf (455,000 N)
Bearing Ca90 capacity	26,540 lbf (12,038 kgf)
Torsional rating	375 lbf-ft (508 N•m)
Maximum polished-rod speed	500 rpm
Polished-rod size	1-1/4 in.
Maximum axial load	9.0 tonne (8.5 tonne for ATEX)
Main shaft type	Hollow
Maximum sheave ratio[a]	4.3:1
PR drive clamp type	6 bolt

[a] May vary by motor frame size

The MG-375electric 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

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Specifications

Available stuffing box (SB) mounting	9T two-post yoke, bolted cap, one-piece SB	12T two-post yoke, threaded cap, one-piece SB		15T tapered booth, bolt-on SB			Integral
Available stuffing box type	Conventional	Conventional	I-PAK®	Conventional	I-PAK®	DuraSeal	DuraSeal
Available stuffing box wellhead connection API compatible	2-7/8 EUE pin						
	3-1/8 2M & 3M flange					3-1/8 3M flange	
				4-1/16 2M or 3M flange			
				5-1/8 2M or 3M flange			
Height: top of PR guard	65 in. (1,650 mm)	70 in. (1,770 mm)		73 in. (1,846 mm)			57 in. (1,443 mm)
Height: top of PR clamp	44 in. (1,121 mm)	49 in. (1,241 mm)		52 in. (1,317 mm)			36 in. (914 mm)
Width	22 in. (548 mm)						
Length	38 in. (958 mm)						
Approximate weight[b]	441 lb (200 kg)						
Motor mounting	Single						
Maximum motor frame size	286T (IEC 180L)						
Maximum motor weight[c]	550 lb (249 kg)						
Maximum mountable motor	20 hp, 1,800 rpm						
	15 hp, 1,200 rpm						
Input shaft diameter/orientation	2.36 in. (60 mm)/vertical						
Maximum driven sheave diameter	19 in. (483 mm)						
Maximum driver sheave diameter	4.4 in. (112 mm)						
Maximum number of belts	3 ea. Type C, 3 ea. Type 5V						
Minimum center distance[d]	8-5/6 in. + D (224 mm + D)						
Maximum slant angle from vertical	30° (0° for ATEX)						
Ambient operating temperature range	-40 to 122°F (-40 to 50°C) -4 to 104°F (-20 to 40°C) CE/ATEX						
Minimum start-up temperature	-4°F (-20°C)						
Operating temperature range	-4 to 248°F (-20 to 120°C)						
Noise level at 1-m distance[e]	75 dB						

[b] Not including motor, belts, sheaves, and bushings
[c] Including motor, belts, sheaves, and bushings
[d] D = distance from the base of selected motor to its centerline
[e] Varies by motor, belt type, and operating conditions

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

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