Schlumberger

KUDU Drivehead

Hydraulic or electric power system for PCP installations

APPLICATIONS

- Progressing cavity pump (PCP) installations for
  - Heavy, medium, and light oil
  - Coal bed methane (CBM) well dewatering
  - Thermal wells
  - Water source wells

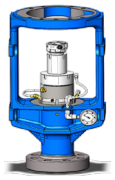
BENEFITS

- Minimizes environmental impact by eliminating wellsite contamination
- Ensures safety and reliability
- Reduces operational cost

FEATURES

- Electric or hydraulic power options
- Balanced lift points for safer and easier installation
- Patented automatic antilock backspin control
- Maximum speed of 500 rpm
- Ability to isolate the drive unit from the borehole fluid
- Low maintenance
- KUDU Oryx seal features:
  - Patented design
  - Zero tolerance for leaks
  - Early warning seal failure system
  - Field serviceable
  - Available high-temperature option

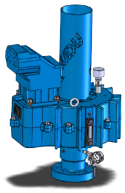
KUDU hydraulic or electric driveheads are specifically designed for PCP installations in heavy to light oil, gas dewatering, and thermal operations. These driveheads are either a vertical shaft, bearing box type, or a right-angle drive gearbox type. Ranging up to 200 horsepower, KUDU driveheads are proven performers and meet critical safety and environmental standards.



KUDU oryx rotary seal.

KUDU Oryx rotary seals

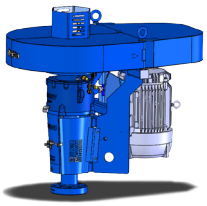
The patented rotary seal has a zero tolerance for leaks and requires little maintenance. Using an early-warning seal-failure system, it helps to minimize environmental impact while still delivering outstanding performance. The KUDU Oryx rotary seal is field serviceable and is offered for all drivehead models except the VHGH. A high-temperature option is also available.



KUDU VHGH-9.3T.

VHGH-9.3T

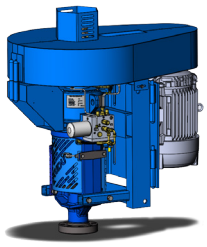
The most compact and high-capacity unit in our drivehead offering, the hydraulic VHGH-9.3T drivehead is capable of transferring up to 1,600 ft.lbf torque and is safe, reliable, and operator-friendly. The patented integral seal, bearings, and gear set are kept separate from the hydraulic system, which prevents contamination and costly repairs on hydraulic power units. Unit installation is easy due to its compact, lightweight design and balanced lifting points, making it ideal for slant-well applications.



KUDU VH 60-hp 9.3T.

VH 60-hp 9.3T

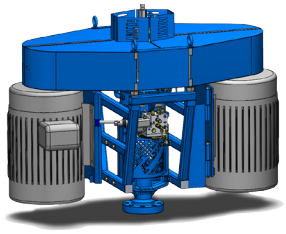
This low-profile electric drivehead is also available in a hydraulic version. An internal pump assembly eliminates external brake lines, reducing the possibility of leaks and environmental contamination. The brake pads are easily accessible, resulting in convenient servicing. The VH 60-hp 9.3T is designed for rodstring loads up to 9.3 tons [20,503 lbm], and is capable of handling up to 60 hp [45 kW]. It uses a KUDU Oryx rotary seal, which prolongs the life of the seal assembly.



KUDU VH 100-hp 13.7 or 22.8T.

VH 100-hp 13.7 or 22.8T

The VH 100 is rated for 13.7-ton [30,200-lbm] and 22.8-ton [50,300-lbm] axial load capacities. It features a simple design and can deliver up to 100 hp [75 kW].



KUDU VH 200-hp 22.8T.

VH 200-hp 22.8T

The most powerful drivehead of our product line, this high-capacity drive delivers up to 200 hp [145 kW] with 22.8 tons of axial load, allowing producers to run our highest-volume PCP.

KUDU Drivehead

KUDU Drivehead Specifications				
	VHGH - 9.3T	VH 60HP 9.3T	VH 100HP 13.7/22.8T	VH 200HP 22.8T
Drivehead speed ratio	4.1 : 1	1 : 1	1 : 1	1 : 1
Max. torque, ft.lbf [N.m]	1,600 [2,169]	1,250 [1,695]	1,772 [2,403]	3,544 [4,805]
Input shaft	Vertical	Vertical	Vertical	Vertical
Shaft type	Hollow shaft	Hollow shaft	Hollow shaft	Hollow shaft
Axial load capacity†	9.3T	9.3T	13.7 or 22.8T	22.8T
Maximum speed, rpm	500	500	500	500
Horsepower range, hp [kW]	Up to 150 [Up to 110]	5 to 60 [4 to 45]	15 to 100 [11 to 75]	30 to 200 [22 to 145]
Polished rod diameter, in [mm]	1.25 [31.8] 1.5 [38.1]	1.25 [31.8]	1.25 [31.8] 1.5 [38.1] 2 [50.8]	1.25 [31.8] 1.5 [38.1] 2 [50.8]
Input shaft size, in [mm]	n/a‡	2.625 [66.7]	3.125 [79.4]	3.125 [79.4]
Backspin control	Check valve with orifice	Antilock disc brake	Antilock disc brake	Antilock disc brake
API wellhead connection (thread), in [mm]	n/a	2.875 [73] 3.5 [88.9] EUE pin	n/a	n/a
API wellhead connection (flange), in [mm]	3.125 [79.4]	3.125 [79.4]	3.125 [79.4] 4.063 [103.2] 5.125 [130.2]	3.125 [79.4] 4.063 [103.2] 5.125 [130.2]
API wellhead connection (flange), psi [kPa]	3,000 [20,684]	3,000 [20,684] 2,000 [13,790]	3,000 [20,684] 2,000 [13,790]	3,000 [20,684] 2,000 [13,790]
Prime mover	Hydraulic	Electric or hydraulic	Electric or hydraulic	Electric or hydraulic
Driven sheave maximum diameter, in [cm]	n/a	31.5 [80.1]	31.5 [80.1]	31.5 [80.1]
Minimum center distance, in [cm]	n/a	21.6 [54.9]	20.6 [52.3]	24.2 [61.5]
Maximum center distance, in [cm]	n/a	28.0 [71.1]	28.8 [73.2]	29.7 [75.4]

†The bearing rating is determined according to the accepted standard using the ISO calculation for L10 life rating, based on 25,000 hours of operation at full rated load and maximum rated speed of 500 rpm. The three-bearing system used ensures the thrust bearing is isolated from the radial loads. Thrust bearing is self-aligning to provide a uniform bearing load.
‡Not applicable.

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