



# HP Offshore Flushing Rigs

- Harben® pump suitable for low viscosity water based oils i.e. Oceanic HW series, Castrol Brayco, Trans-aqua, MEG, water
- NAS 1638 Class 6 cleanliness standard
- DNV 2.7-1, ATEX 1 & 2 and Norsok options
- Up to 700 bar & 175 l/min. 60°C max fluid temp
- Basic, PLC and HMI control options



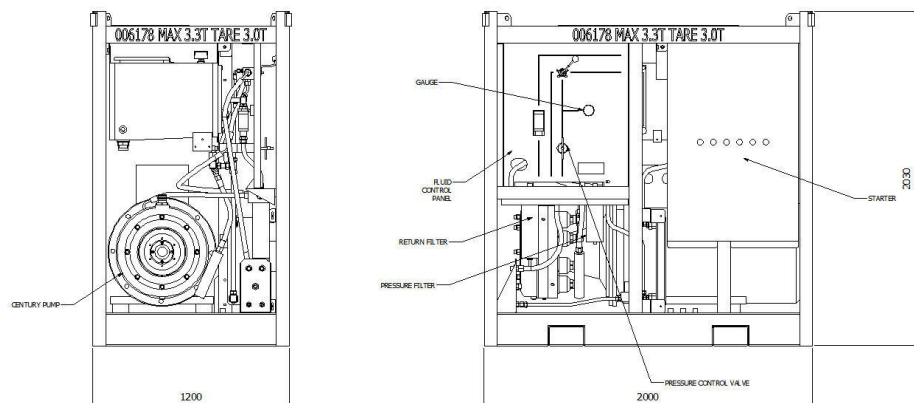
| Model  | HP Offshore Flushing Rigs   |
|--|---|
| <b>Pressure and Flow</b>   | The Harben® Offshore flushing rigs are available with a wide range of pressure and flow combinations. See reverse of brochure for details   |
| <b>Pump</b>            | Harben® radial piston diaphragm pump certified to ATEX Group II 2 G T4 for use in Zone 1 classified areas and below. Seal-less design suitable for pumping low lubricity fluids at high pressure  |
| <b>Motor/Starter</b>  | Typically Atex II 2G EEx de IIB T4 for use in Zone 1 classified areas or EEx nA II T3 for use in Zone 2 classified areas. Motors are IP55 rated for ingress protection. Options available are 400v/3ph/50Hz, 440-460v/3ph/60Hz or multi voltage 400/690v 50Hz - 400v 60Hz - 440-480v 60Hz - 660-690v 60 Hz. The starter supplied will match the ATEX and IP rating of the motor. Norsok Z015 standard available |
| <b>Supply Tank</b>   | Supply tank manufactured from 316 stainless steel. Low level and high temperature fluid sensing   |
| <b>Cooling</b>   | Thermostatically controlled water cooled plate cooler to maintain flushing fluid at required temperature. Pump crankcase oil cooling available as an option.  |
| <b>Frame</b>   | DNV 2.7-1 in 316 stainless steel or mild steel shot blasted and powder coated. Lifting chains provided  |
| <b>Filtration</b>  | 420 - 700 bar 3 micron high pressure filter, 40 bar 3 micron low pressure filter. Fitted with clogging indicators.  |
| <b>Dimensions</b>  | 2000mm Long X 1200mm Wide X 2030mm High *   |
| <b>Weight</b>  | Dry weight: From 3000 kgs *   |

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**High Pressure  
Cleaner Solutions**



\* All weights and dimensions are approximate and diagrams are for general information only.

## Harben Flushing Pump Options

The tables below show the performance in l/min that can be expected when operating on 50 Hz and 60 Hz electrical supplies with a 6 pole motor with the pump operating at listed pressures

If running on a VFD the Harben P type can be run at up to 1,300 rpm and the Century at 1,200 rpm. Both have a turndown ratio of 4:1

|   | Century | 700 Bar | 600 Bar | 500 Bar | 550 Bar | 450 Bar | 350 Bar | 400 Bar | 300 Bar | 200 Bar |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|   |         | 4.22.5  | 4.22.5  | 4.22.5  | 4.25.0  | 4.25.0  | 4.25.0  | 4.27.5  | 4.27.5  | 4.27.5  |
| Motor Power kW / 6 pole / 50 Hz / 980 rpm | 37 kW   | 29      | 33      | 36      |         |         | 54      |         |         | 72      |
|   | 45 kW   |         |         |         | 46      | 50      |         | 55      | 65      |         |

|  | Century | 700 Bar | 600 Bar | 500 Bar | 550 Bar | 450 Bar | 350 Bar | 400 Bar | 300 Bar | 200 Bar |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|  |         | 4.22.5  | 4.22.5  | 4.22.5  | 4.25.0  | 4.25.0  | 4.25.0  | 4.27.5  | 4.27.5  | 4.27.5  |
| Motor Power kW / 6 pole / 60 Hz / 1180 rpm | 37 kW   |         |         |         |         |         |         |         |         |         |
|  | 45 kW   | 35      | 39      | 43      |         |         | 65      |         |         | 86      |
|  | 55 kW   |         |         |         | 56      | 60      |         | 70      | 78      |         |

|   | Century | 700 Bar | 600 Bar | 500 Bar | 550 Bar | 450 Bar | 350 Bar | 400 Bar | 300 Bar | 200 Bar |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|   |         | 8.22.5  | 8.22.5  | 8.22.5  | 8.25.0  | 8.25.0  | 8.25.0  | 8.27.5  | 8.27.5  | 8.27.5  |
| Motor Power kW / 6 pole / 50 Hz / 980 rpm | 75 kW   | 58      | 64      | 69      |         |         | 110     |         |         | 150     |
|   | 90 kW   |         |         |         | 94      | 101     |         |         |         | 140     |
|   | 110 kW  |         |         |         |         |         |         | 131     |         |         |

|  | Century | 700 Bar | 600 Bar | 500 Bar | 550 Bar | 450 Bar | 350 Bar | 400 Bar | 300 Bar | 200 Bar |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|  |         | 8.22.5  | 8.22.5  | 8.22.5  | 8.25.0  | 8.25.0  | 8.25.0  | 8.27.5  | 8.27.5  | 8.27.5  |
| Motor Power kW / 6 pole / 50 Hz / 1180 rpm | 75 kW   |         |         | 84      |         |         |         |         |         | 175     |
|  | 90 kW   | 70      | 77      |         |         |         | 131     |         |         | 164     |
|  | 110 kW  |         |         |         | 112     | 121     |         | 155     |         |         |

|   | P Type  | 415 Bar |      |      |      | 350 Bar |      |      |      | 275 Bar |      |      |      |      |
|---|---------|---------|------|------|------|---------|------|------|------|---------|------|------|------|------|
|   |         | 3x18    | 4x18 | 6x18 | 8x18 | 3x20    | 4x20 | 6x20 | 8x20 | 3x22    | 4x22 | 6x22 | 8x22 |      |
| Motor Power kW / 6 pole / 50 Hz / 975 rpm | 11 kW   | 9.2     | 12.6 |      |      | 12.1    |      |      |      | 17.8    |      |      |      |      |
|   | 15 kW   |         |      | 18.9 |      |         | 17   |      |      |         |      | 23.3 |      |      |
|   | 18.5 kW |         |      |      |      |         |      |      | 25.3 |         |      |      |      |      |
|   | 22 kW   |         |      |      |      |         |      | 33.9 |      |         | 36   |      |      |      |
|   | 30 kW   |         |      |      |      |         |      |      |      |         |      |      |      | 45.5 |

|  | P Type  | 415 Bar |      |      |      | 350 Bar |      |      |      | 275 Bar |      |      |      |  |
|--|---------|---------|------|------|------|---------|------|------|------|---------|------|------|------|--|
|  |         | 3x18    | 4x18 | 6x18 | 8x18 | 3x20    | 4x20 | 6x20 | 8x20 | 3x22    | 4x22 | 6x22 | 8x22 |  |
| Motor Power kW / 6 pole / 60 Hz / 1180 rpm | 11 kW   | 11.1    | 15.2 |      |      | 14.6    |      |      |      |         |      |      |      |  |
|  | 15 kW   |         |      |      |      |         |      | 21   |      |         |      |      |      |  |
|  | 18.5 kW |         |      |      |      |         |      |      |      |         |      |      |      |  |
|  | 22 kW   |         |      |      |      |         |      | 30.5 |      |         |      |      |      |  |
|  | 30 kW   |         |      |      |      |         |      |      |      |         |      | 43.4 | 54.8 |  |