

Flushing unit Harben / Marshall Sea

Offshore ATEX II3GcT3 Zone 2, Norsok Z-015



Specifications

Dimension	1,100 x 1,650 x 1,450	Filter element	3μ
Weight	1,400 kg	Frequency	50-60 Hz
Lifting / transport	Frame with pockets for forklift & lifting lugs according to "Maskindirektivet 522"	Equipment / functions	Flow indicator, tapping for bottle sampling, connection for online sampling using particle monitor, selector valve and PCV
Pump 1	Harben 8.18	Voltage range	400 – 480 - / 660 – 690 V
Pump 2	Marshall Sea	Current consumption	70A
Max pressure pump 1	415 bar	Motor 1	ATB. 30KW Multi voltage (380-690VAC) Ex II 3 G EExnA II T3
Max flow pump 1	42 l/min	Motor 2	ATB. 7,5KW Multi voltage (380-690VAC) Ex II 3 G EExnA II T3
Max pressure pump 2	1,000 bar	Control cabinet (starter)	CEAG EEx de cabinet (Modified) II 2 EEx de (ia) IIC T6 Ex
Max flow pump 2	5 l/min	Year of construction	2005
Reservoir capacity	300 litre		
Outlet connection	1/2" BSP		
Return connection	3/4" BSP		
Outlet cooling	1/2" BSP		
Inlet cooling	1/2" BSP		

Test unit - EFP 51

Industry electric / Den-jet test unit

This HPU is with PLC controlled frequency converter, 1x 54 litre LP 345 bar accumulator, and 1x54 litre 740 bar accumulator.

2x outlet LP and HP, adjustable on display from 0 – full pressure, possible to run single or dual mode



Specifications

Dimensions	1,500 x 1,000 x 2,450 mm
Weight	1,300 kg
Engine	30 kw
Voltage	400v 63 amp
Pump	Den-Jet 028-06
Fluid	Water, oil based and non-lubricated liquids - if other liquids or acids, please contact Proserv
Max discharge pressure	740 / 345 bar
Max flow rate	25 l/min @ 740 bar
Suction connection	3/4" BSP
Discharge connection	1/2" BSP
Utilities required	Water for cooling, filters: 1 HC 9800FKP8H 1 HC9100FKP8H
Standard for design	Onshore
Classification	No
Versatility	Flushing, pressure testing, injection and cleaning

Flushing unit - EFP 64

Harben pump with frequency control.

Industry electric / Harben flushing unit with PLS controlled frequency converter

Adjustable on display from 0 - full pressure and from 10% - full speed on motor

10% approx. 4 l/min



Specifications

Dimensions	1,700 x 860 x 1,500 mm
Weight	700 kg
Engine	Electric 22 kw
Voltage	380-690 v, 50 Hz
Pump	Harben type P6x20
Fluid	Water, oil based and non-lubricated liquids - if other liquids or acids, please contact Proserv
Max discharge pressure	345 bar (Harben)
Max flow rate	38 l/min @ 50 bar 26 l/min @ 345 bar
Suction connection	3/4" BSP
Discharge connection	1/2" BSP
Utilities required	Fresh water for cooling
Standard for design	Onshore
Classification	No
Versatility	Flushing, pressure testing, injection and cleaning

Flushing unit - EFP 27

Industry electric / Harben flushing unit with Haskel ASF 150 pressure pump



Specifications

Dimensions	1,600 x 860 x 1,500 mm
Weight	700 kg
Engine	Electric 30 kw
Voltage	380-690 v, 50 Hz
Pump	Harben type P6x20
Pressure pump	Haskel ASF 150
Fluid	Water, oil based and non-lubricated liquids
Max discharge pressure	345 bar (Harben) 1,035 bar (Haskel)
Max flow rate	38 l/min @ 50 bar 26 l/min @ 345 bar (Harben) 0-1.2 l/min (Haskel)
Suction connection	3/4" BSP
Discharge connection	1/2" BSP
Utilities required	Fresh water for cooling - filters: 1 HC9800FKP4H, 1 HC9100FKP8H
Standard for design	Onshore
Classification	No
Recommendation	For Haskel use, recommended 60 strokes per minute
Versatility	Flushing, pressure testing, injection and cleaning

Flushing unit - EFP 57

Industry electric / Harben flushing unit



Specifications

Dimensions	1,600 x 860 x 1,500 mm
Weight	700 kg
Engine	Electric 22 kw
Voltage	380-690 v, 50 Hz
Pump	Harben type P6x20
Fluid	Water, oil based and non-lubricated liquids - if other liquids or acids, please contact Proserv
Max discharge pressure	345 bar
Max flow rate	38 l/min @ 50 bar 26 l/min @ 345 bar
Suction connection	3/4" BSP
Discharge connection	1/2" BSP
Utilities required	Fresh water for cooling - filters: 1 HC9800FKP8H, 1 HC9100FKP8H
Standard for design	Onshore
Classification	No
Versatility	Flushing, pressure testing, injection and cleaning

Flushing unit - EFP 59

Flushing unit Harben pump with frequency control

Industry electric / Harben flushing unit with PLS controlled frequency converter

Adjustable on display from 0 - full pressure and from 10% - full speed on motor

10% approx. 4 l/min



Specifications

Dimensions	1,700 x 860 x 1,500 mm
Weight	700 kg
Engine	Electric 30 kw
Voltage	380-690 v, 50 Hz
Pump	Harben type P8x20
Fluid	Water, oil based and non-lubricated liquids - if other liquids or acids, please contact Proserv
Max discharge pressure	345 bar (Harben)
Max flow rate	48 l/min @ 50 bar 35 l/min @ 345 bar
Suction connection	3/4" BSP
Discharge connection	1/2" BSP
Utilities required	Fresh water for cooling
Standard for design	Onshore
Classification	No
Versatility	Flushing, pressure testing, injection and cleaning

Flushing unit - EFP 27

Industry Electric / Harben Flushing Unit with Haskel ASF 150 pressure pump

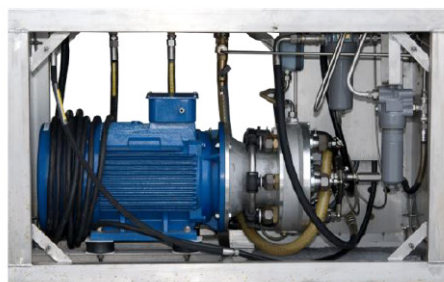


Specifications

Dimensions	1,600 x 860 x 1,500 mm
Weight	700 kg
Engine	Electric 30 kw
Voltage	380-690 v, 50 Hz
Pump	Harben type P8x20
Pressure pump	Haskel ASF 150
Fluid	Water, oil based and non-lubricated liquids - if other liquids or acids, please contact Proserv
Max discharge pressure	345 bar (Harben) 1,035 (Haskel)
Max flow rate	48 l/min @ 50 bar 35 l/min @ 345 bar (Harben) 0-1.2 l/min (Haskel)
Suction connection	3/4" BSP
Discharge connection	1/2" BSP
Utilities required	Fresh water for cooling - filters: 1 HC9800FKP4H, 1 HC9100FKP8H
Standard for design	Onshore
Classification	No
Recommendation	For Haskel use, recommendation 60 strokes per minute
Versatility	Flushing, pressure testing, injection and cleaning

Flushing unit - EFP 59

Industry electric / Harben flushing unit

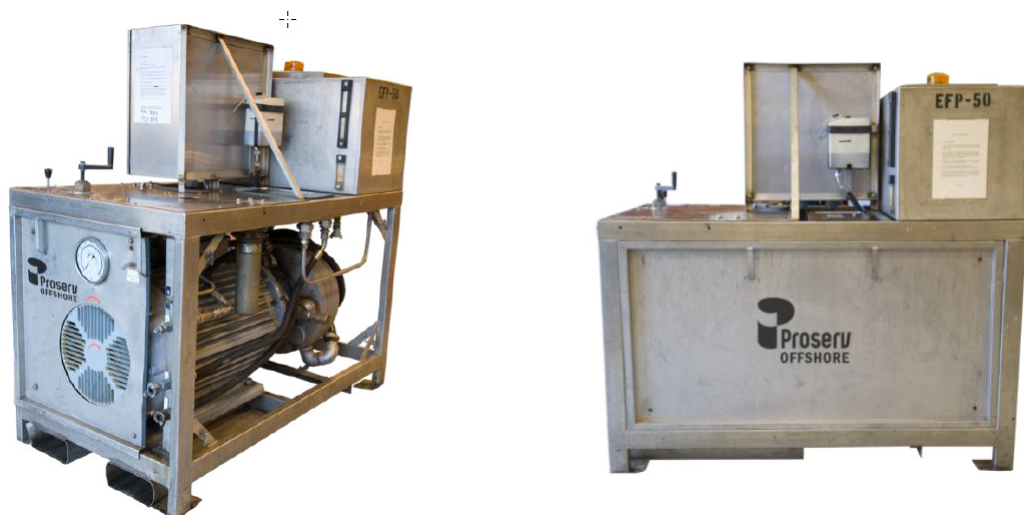


Specifications

Dimensions	1,600 x 860 x 1,500 mm
Weight	700 kg
Engine	Electric 30 kw
Voltage	380-690 v, 50 Hz
Pump	Harben type P8x20
Fluid	Water, oil based and non-lubricated liquids - if other liquids or acids, please contact Proserv
Max discharge pressure	345 bar
Max flow rate	48 l/min @ 50 bar 35 l/min @ 345 bar
Suction connection	3/4" BSP
Discharge connection	1/2" BSP
Utilities required	Fresh water for cooling - filters: 1 HC9800FKP8H, 1 HC9100FKP8H
Standard for design	Onshore
Classification	No
Versatility	Flushing, pressure testing, injection and cleaning

Flushing unit - EFP 50

Industry electric / Harben flushing unit



Specifications

Dimensions	1,660 x 880 x 1,700 mm
Weight	1,350 kg
Engine	Electric 55 kw
Voltage	380-690 v, 50 Hz
Pump	Harben type C 4.25.019
Fluid	Water, oil based and non-lubricated liquids - if other liquids or acids, please contact Proserv
Max discharge pressure	700 bar
Max flow rate	70 l/min @ 500 bar 43 l/min @ 700 bar
Suction connection	3/4" BSP
Discharge connection	1/2" BSP
Utilities required	Fresh water for cooling - filters: HC9020FKP4H, HC9100FKP8H
Standard for design	Onshore
Classification	No
Versatility	Flushing, pressure testing, injection and cleaning

Flushing unit Harben 8.20 pump with frequency converter

Offshore 2.7.1 ATEX II2GCT4, Zone 1, Norsok Z-015

- Motor starter control panel with PLC
- Plug and play design for multi voltage application
- This HPU is fully EX Zone 1 with PLC controlled frequency converter set to 350 bar and 1x 54 litre LP 350 bar separate unit
- 2x outlets LP 210 bar, and HP 350 bar, adjustable with Tescom regulators from 0 – full pressure on both Tescom



Specifications

Dimensions	1,500 x 2,500 x 1,760 mm	Voltage range	380-480 / 660-690 v
Tara weight	2,000 kg	Frequency	50-60 Hz
Filter elements	3µ	Ampere	63 amp
Pump	Harben 8.20	Motor	Bartec Varnost multi voltage (380-690 V)
Max pressure	345 bar	Year of construction	2009
Max flow	47 l/min	Return connection	1" BSP
Reservoir capacity	300 litre	Outlet cooling	1/2" BSP
Outlet connection	3/4" BSP	Inlet cooling	1/2" BSP
Lifting/transport	Frame pockets for forklift and lifting lugs according to DNV 2.7.1		
Equipment / functions	Tapping for bottle sampling, connection for online sampling using particle counter and PCV		

Flushing unit Harben 8.20 pump

Offshore ATEX II3GcT3 Zone 1, Norsok Z-015



Specifications

Dimensions	900 x 1,650 x 1,350	Voltage range	400-480 / 660-690 v
Weight	1,000 kg	Frequency	50-60 Hz
Pump	Harben 8.20	Current consumption	63A
Reservoir capacity	300 litre	Filter house LP	Pall
Max flow 50 Hz	45 l/min	Filter element LP	HC9020FKP4H
Max pressure 50 Hz	345 bar	Filter house HP	Pall
Outlet connection	1/2" BSP	Filter element HP	HC9020FKP4H
Return connection	3/4" BSP	Outlet cooling	1/2" BSP
Year of construction	2005	Inlet cooling	1/2" BSP
Motor	WEG Industrias S. A. 30 Kw Multi voltage (380 – 690 VAC) Ex II 2 G EEx de IIB T4		
Control cabinet (starter)	CEAG EEX de cabinet (modified) ATEX ZONE II 2 EEx de (ia) IIC T6		
Lifting/transport	Frame pockets for forklift / "Maskindirektivet 522"		
Equipment functions	Flow indicator, tapping for bottle sampling, connection for inline sampling using particle monitor, selector valve and PCV		

Suction skid / filtration 3 pump skid

Suction skid/filtration 3 pump skid ATEX approved

With tree pump, separate suction and injection. The pump can run two different chemicals and operate at different flow rates.

- Highest safety in operation
- Simple and safe start-up even under extreme conditions
- Even suitable for pumping from a vacuum
- Very long diaphragm service life



Specifications

Weight	400 kg
Dimensions	1,300 x 900 x 1,050 mm
Lifting / transport	n/a
Required flow pump, Yamada	3 x (150 l/h)
Operating pressure	7-10 bar
Re-manufacture in	2018
Outlet	1" BSP M
Inlet	1" BSP M
Air inlet	Chicago