



SAMSON LIQUID RING VACUUM PUMPS

OFFSHORE

VACLEAN STATIONARY UNIT

Technical specifications:

Tank capacity: 2.600 liter

Suction capacity: 600 m³/h (air)

Max vacuum: 33 mbar abs.

Max pressure: 4,5 barg

Air velocity in 2" pipe: 85 m/sec

Power supply :400–690V/50 or 60Hz

Power requirements: 55 KW

Dimensions: L:3.200 W:2.400 H:2.350

Weight: 4.500 kg



SAMSON

SAMSON VaClean Station Unit

SAMSON central VaClean cleaning system can secure environmental correct and safe cleaning of oil rigs and other offshore production facilities.

SAMSON VaClean is based on more than 40 years know-how in design and production of mobile vacuum tankers for collection of industrial waste. The VaClean unit is made of proven components. Main component of the unit is a liquid ring pump, which is known for its strength and liability.

VaClean is designed for installation in Ex and Safe Zone.

VaClean units are placed in central area of production and are connected to a ring pipe system, which is connected to drain reservoirs on different floors of the rig. The ring pipe is equipped with a number of connection points for the vacuum hoses for collection of waste and for cleaning of the deck.

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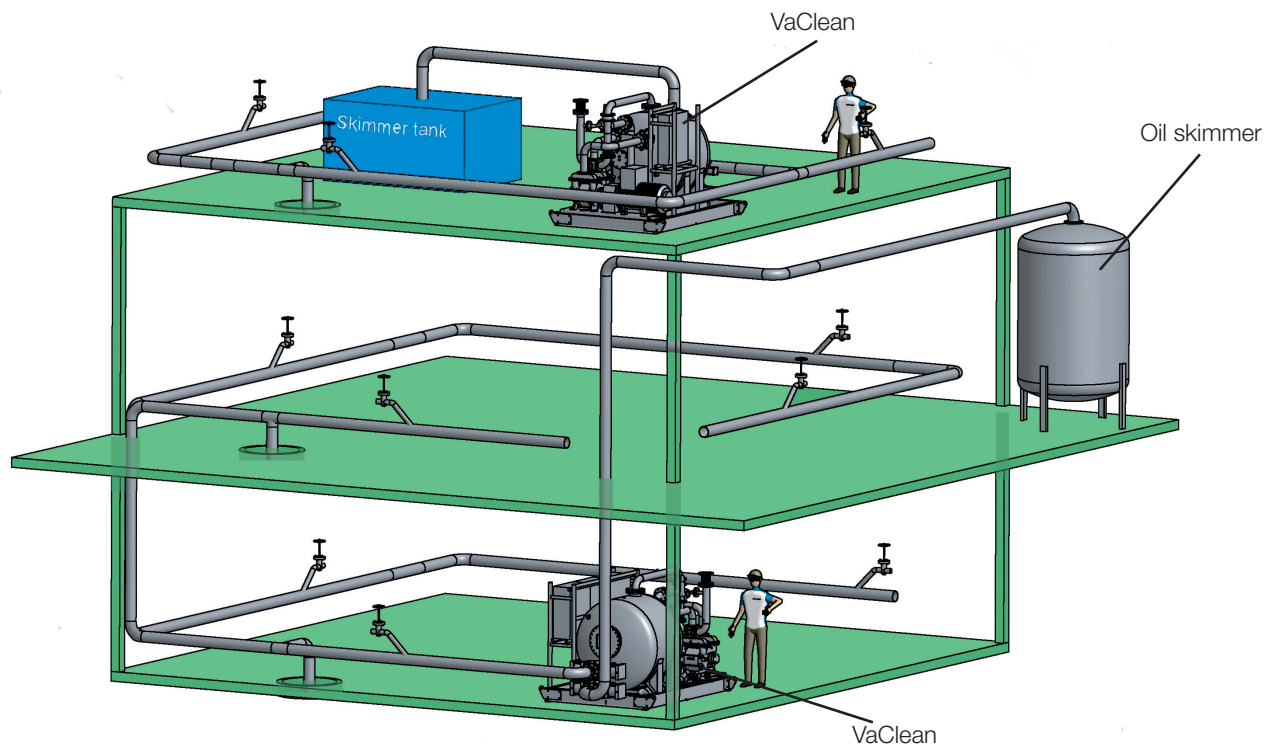


Fig.1: VaClean stationary unit

The liquid ring creates vacuum in the tank and the ring vacuum pipe through the inlet valve. The VaClean unit transports the waste from the drain reservoir into the tank by vacuum. Spill and other waste from the deck and equipment are vacuum cleaned by the hoses on the ring pipe.

When the vacuum tank is full, the four-way valve changes the position and start to create pressure in the tank. The content of the tank discharges into an oil skimmer from separation or to a storage container.

When the level of the vacuum tank reaches the low level, a switch will automatically change the position of the four-way valve to “vacuum” position and the cleaning process will continue. The discharge time is only 2 - 3 minutes.

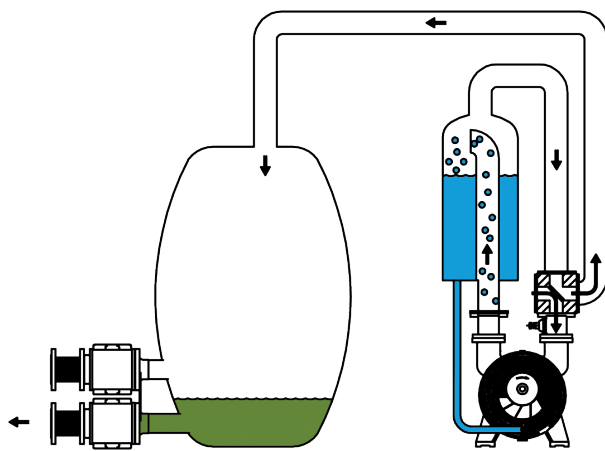


Fig.2: Working principle, cleaning position (vacuum)

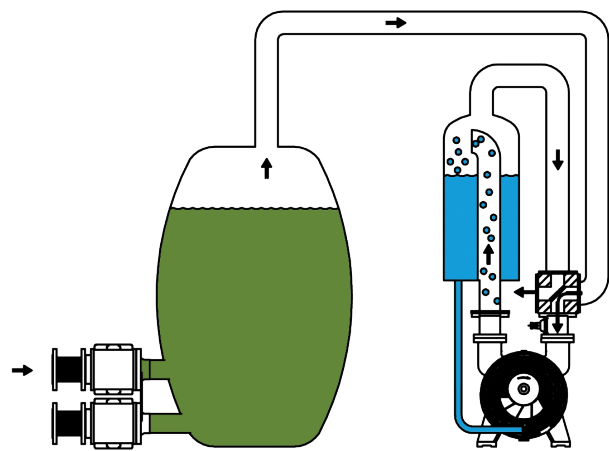


Fig.3: Working principle principle, discharge position (pressure)

Vacuum pump operation principle

The liquid ring vacuum pump uses only water as a sealing media and there is no mechanical contact between the rotating parts inside the pump.

When the pump rotor is turning, the water is pushed against the pump cover by the centrifugal force.

As the rotor is placed in eccentric position inside the pump, the sealing water works as a piston between the rotor blades.

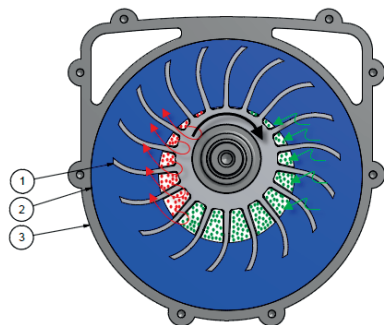








































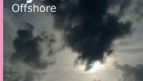
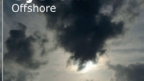











Fig.4: Operation principle

1. Rotor
2. Water ring
3. Pump cover

Product range

September 2011

Serie  Absolute vacuum Max pressure Max capacity	ME65  33 mbar 0.5 bar gauge 90 m³/h	ME160  33 mbar 0.5 bar gauge 180 m³/h	KE180  100 mbar 0.5 bar gauge 250 m³/h	KE200  33 mbar 0.5 bar gauge 300 m³/h	KE225  100 mbar 0.5 bar gauge 300 m³/h	KE300  33 mbar 0.5 bar gauge 320 m³/h	NE180  100 mbar 0.5 bar gauge 250 m³/h	NE200  33 mbar 0.5 bar gauge 300 m³/h
NE225  100 mbar 0.5 bar gauge 250 m³/h	NE300  33 mbar 0.5 bar gauge 320 m³/h	KL350  100 mbar 1.0 bar gauge 400 m³/h	KL400  33 mbar 1.0 bar gauge 500 m³/h	KL430  100 mbar 1.0 bar gauge 530 m³/h	KS500  100 mbar 3.0 bar gauge 600 m³/h	KS725  100 mbar 3.0 bar gauge 850 m³/h	KS1025  100 mbar 3.0 bar gauge 1300 m³/h	KS1800  100 mbar 1.0 bar gauge 1800 m³/h
KS510  65 mbar 3.0 bar gauge 625 m³/h	KS625  65 mbar 3.0 bar gauge 750 m³/h	KS910  65 mbar 3.0 bar gauge 1050 m³/h	KM2200  150 mbar 2.0 bar gauge 2200 m³/h	KM2700  150 mbar 2.0 bar gauge 2950 m³/h	DELTA 5  33 mbar 0.5 bar gauge 180 m³/h	DELTA 10  33 mbar 0.5 bar gauge 300 m³/h	DELTA 20  33 mbar 0.5 bar gauge 320 m³/h	DELTA 30  33 mbar 1.0 bar gauge 500 m³/h
DELTA 40  33 mbar 1.0 bar gauge 530 m³/h	DELTA 50  65 mbar 3.0 bar gauge 625 m³/h	DELTA 60  65 mbar 3.0 bar gauge 850 m³/h	DELTA 70  65 mbar 3.0 bar gauge 1300 m³/h	DELTA 80  100 mbar 1.0 bar gauge 1800 m³/h	GAMMA 10  33 mbar 0.5 bar gauge 300 m³/h	GAMMA 20  33 mbar 0.5 bar gauge 320 m³/h	GAMMA 30  33 mbar 1.0 bar gauge 500 m³/h	GAMMA 40  33 mbar 1.0 bar gauge 530 m³/h
GAMMA 50  65 mbar 3.0 bar gauge 625 m³/h	GAMMA 60  65 mbar 3.0 bar gauge 850 m³/h	GAMMA 70  65 mbar 3.0 bar gauge 1300 m³/h	GAMMA 80  100 mbar 1.0 bar gauge 1800 m³/h	System Offshore  VaCut	System Offshore  VaClean	Valve  4-way valve DN100	Valve  4-way valve DN125	Valve  Service liquid valve
Valve  Vacuum limiter	Valve  Overflow valve 2,5"	Liquid separator  5 0-200 m³/h	Liquid separator  10-40 200-530 m³/h	Liquid separator  50-70 530-1300 m³/h	Liquid separator  80-100 1300-3000 m³/h			

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