

Well Flow Management

Well Testing | Solids management system

Wellhead Desander

The wellhead desander is an innovative product from Expro which enables the recovery of sand product from multi-phase well streams during well clean-up operations.

The well fluids are routed from the wellhead to the cyclone liner located within the upper desander vessel.

The fluids enter the conical cyclone liner tangential to the vessel and the resulting centrifugal force exerted on the spinning fluid pushes the denser phase (sand) to the wall of the liner. Clean well fluids at the core are then forced up and out of the overflow line.

The sand drops into the lower accumulator vessel due to gravity, once filled, the accumulator is isolated from the desander vessel and depressurized. The contents are pushed out using services water into a sieve tank arrangement.

Whilst the accumulator is offline, sand will still collect in the upper vessel, therefore the well does not need to be shut in at any period of the clean-up programme.

Upon completion of the flushing operation the two vessels can be equalized and the process of filling the accumulator continues.

Applications

- Onshore and offshore well testing
- Clean-up and flow back operation

Features and benefits

- High operating pressures allows the well stream to be produced directly to the unit without the need for choking the flow upstream
- Dual isolation allows continuous operation without any down time during well clean-up
- Removable inserts enables ease of changing and gives flexibility for increased performance. Also allows inspection of the insert for wear





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Technical specifications			
Size inches	4	4	4
Working pressure psi (bar)	5,000 (345)	10,000 (690)	15,000 (1,034)
Temperature rating ° F (° C)	-50 to 250 (-45 to 120)	- 50 to 350 (-45 to 177)	-50 to 350 (-45 to 177)
Solids capacity gallons (litres)	Desander vessel 20 (75) Accumulator 80 (300)	Desander vessel 20 (91) Accumulator 25 (113)	Desander vessel 20 (91) Accumulator 50 (227)
Connections			
inlet	4-1/16" 5K API flange	4-1/16" 10K API flange	3-1/16" 15K API flange
outlet	4-1/16" 5K API flange	4-1/16" 10K API flange	3-1/16" 15K API flange
Weight (dry) lbs (kgs)	19,268 (8,740)	31,416 (14,250)	61,729 (28,000)
Dimensions			
(L X W X H)	3.6 x 8.2 x 20.3	8 x 9.5 x 20	8.2 x 13.3 x 27
ft. (m)	(1.1 x 2.5 x 6.2)	(2.43 x 2.87 x 6.06)	(2.50 x 4.05 x 8.25)

Note: Designed and manufactured to ASME VIII Div 2, ANSI B31.3, NACE MR-01-75 (H₂S)

Other sizes, configurations and pressure ratings are available to meet most applications, for more information contact your local Expro representative or email welltesting@expro.com