

FAQ:

Wellhead Desander



What is the maximum working pressure of the Desander?	10,000 PSI (10K)
Is a Canadian Registration Number available?	Yes, Desanders are available with a CRN.
What code is the Desander designed to?	ASME Section VIII, Div. 2, Part 4.
What is the designed temperature range of the Desander?	-50 °F - 250 °F.
What is the designed flowrate of the Desander?	Customized liners (internals) accommodate specific flow ranges: 4" Liner – 4525 to 13575 BPD 3" Liner – 2260 to 6780 BPD 2" Liner – 1130 to 3394 BPD
What is the maximum allowable inlet sand concentration in the Desander?	Inlet sand concentration capacity varies depending on many variables. 5% is a good generic estimate.
What is the pressure drop across the Desander?	Around 30-45 psi when in the operating window of the liner. The pressure drop increases with flow rate.
What happens if I operate above the Desander's turn up envelope?	The separation efficiency will not be affected when exceeding the maximum per operating window. The maximum flow rate of the operating window is based on erosion. The higher the flow rate, the higher the velocity of the solid particles impacting the walls of the cyclone. Operating at flow rates above the stated operating window may be acceptable for limited periods of time provided permission from TechnipFMC is granted upfront. If no upfront permission has been granted by TechnipFMC, excessive erosion detected during liner inspection post service may lead to a charge.
What happens if I operate below the Desanders turn down envelope?	The G-force needed for separation will not be produced, and the cut size will increase. An extremely low flow rate may lead to Desander clogging, due to settling particles around the Desander inlet.
What degree of efficiency can I expect from the Desander?	The solids removal efficiency of the Desander has been proven to be in the range 90%-99% ¹ with 100 mesh frac proppant during well testing and production. Depending on variables such as solids particle size, solids inlet concentration, well pressure, oil properties and gas/liquid flow rates, etc.
Does flushing operation affect my Desander performance?	Yes. The Desander needs to be flushed periodically depending on sand load. If the flushing frequency is too low, the separation efficiency will be adversely affected. During the first week of well testing it is recommended to flush the Desander every 15 minutes. If the sand production turns out low or declines, the period between flushes may be increased.

Operational questions

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What is the capacity of the DeSander sand accumulator?	1 Barrel
What is the size of the Desander connection?	3-1/16" 10K API Flange, with hammer unions
What are the weights of the Desanders?	13,840 lbs.
What is the service classification of the Desander?	Sour
What is the design lifetime of the Desander?	10 years
What is the maintenance schedule of the Desander?	Vessel wall thickness and integrity is evaluated yearly using common NDE methods. Liners are visually inspected and the o-rings are changed after each job.
What is the footprint of the Desander in operating position?	Dimensions: 66"(L) x 49"(W) x 145"(H)
What is the Desanders allowable Gas Volume Fraction (GVF) and its operating and performance limitations?	The Desander 3" and 4" liners have the best performance for Gas Volume Fraction (GVF) range between 0% and 80%. Above 80% GVF the performance declines with increasing GVF. A "high gas" liner has been developed to achieve high efficiencies in the 80% to 100% GVF range. This liner fits in the same Desander pressure vessel as the 3" and 4" liners. TechnipFMC should be consulted for the appropriate liner selection based on anticipated gas/liquid flow rates and Desander operating pressure.
Is it necessary to run a plug catcher upstream of the Desander?	It is not necessary; however, TechnipFMC recommends running a plug catcher to prevent plugging in the liner of the Desander
Should the choke be run upstream or downstream of the Desander?	The Desander is rated at 10K, so downstream of the wellhead to protect the choke is recommended.
Will TechnipFMC offer field support for the Desander?	Yes, TechnipFMC does offer field support for the Desander. TechnipFMC currently offers Flow back crews and Production watch crews if needed.
Will TechnipFMC offer maintenance support for the Desander?	Yes, as issues may arise in the field. TechnipFMC will also take the units in for periodic maintenance and testing.