

Sand filters

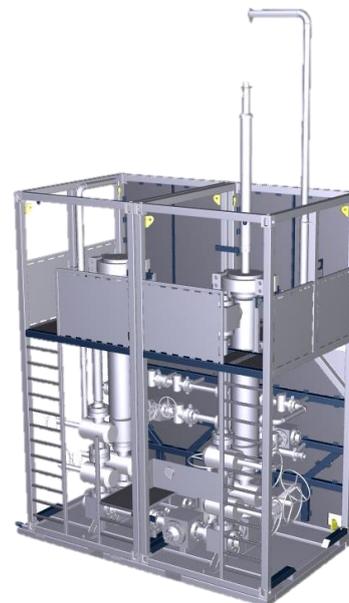
Expro's sand filter is designed to remove formation sand, frac proppant, and other solid particles from the well effluent.

It is normally positioned upstream of the choke manifold to prevent damage to downstream equipment caused by erosion.

The sand filter incorporates an ISO sized container skid frame housing the following:

- One or two filter vessels
- Double valve isolation on each vessel
- Inlet, outlet, drain, and flush line on each vessel
- Common bypass line
- Telescopic lifting arm and pneumatic hoist to aid removal and installation of the filter screens
- Differential pressure sensing port on each vessel
- Work platform at top of each vessel to allow access for remove and installation of filter screens

The two filter vessels are connected in parallel and can either be used independently or together. Independently the filter vessels are split into 'duty' and 'standby'. The flow is passed through the duty vessel until the screen requires to be emptied. The standby vessel is brought on-line and the duty vessel taken off-line for flushing.



Features and benefits

On-line solids removal

Dual vessels and dual valve isolation allow for continued use while cleaning standby vessel

Integrated flushing system to remove solids without having to break containment and remove screen

Clamp and hub assembly on vessel hatch reduces time to open/close vessels

Pneumatic lift hoist to assist with removal and installation of filter screens

Reduces the risk of choke manifold washout and damage to downstream equipment.

Applications

Onshore and offshore

Well testing

Clean-up operations

Post-frac operations

HPHT

Technical specifications

Service	H ₂ S	H ₂ S	H ₂ S	H ₂ S
Working pressure Psi (bar)	5,000 (345)	10,000 (690)	10,000 (690)	15,000 (1,034)
Temperature rating, °F (°C)	-20 to 250 (-29 to 121)	-20 to 250 (-29 to 121)	-20 to 250 (-29 to 121)	-20 to 350 (-29 to 177)
Inlet connection	3" 602 Union or C23 Hub (3.1/16" flange)	3" 1502 Union or C25 Hub (3.1/16" flange)	4" D31 Hub (4.1/16" flange)	4" D27 Hub (4.1/16" flange)
Outlet connection	3" 602 Union or C23 Hub (3.1/16" flange)	3" 1502 Union or C25 Hub (3.1/16" flange)	4" D31 Hub (4.1/16" flange)	4" D27 Hub (4.1/16" flange)
Flush water inlet	2" 1502F Union	2" 1502F Union	2" 1502F Union	3" C25 Hub
Drain Outlet	2" 1502M Union	2" 1502M Union	2" 1502M Union	4" D27 Hub
Maximum dry gas rate per filter pot MMscfd (MMm ³ /d)	20 (0.6)	35 (1.0)	100 (2.8)	120 (3.4)
Maximum liquid flow bbl/d (m ³ /d)	5,000 (795)	5,000 (795)	8,000 (1,272)	10,000 (1,590)
Filter size µm	100, 150, 200, 400	100, 150, 200, 400	100, 150, 200, 400, 800	100, 150, 200, 400
Solids volume Bbl (L)	0.3 (47)	0.3 (47)	0.51 (82)	0.47 (75)
Dimensions m (Ft) (L x W x H)	4.20 x 2.15 x 1.83	3.80 x 1.80 x 2.10	5.00 x 2.50 x 2.80	6.19 x 5.15 x 2.87
Weight lbs (kg)	(5,000)	9,500 kg	15,000kg	34,250 kg
Design Code	ASME VIII Div 2, API6A ANSI B31.3, NACE MR-01-075	ASME VIII Div 2, API 6A ANSI B31.3, NACE MR-01-075	ASME VIII Div 2, API 6A ANSI B31.3, NACE MR-01-075	ASME VIII Div 3, API6A ANSI B31.3, NACE MR-01-075

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