

Well Flow Management

Well Testing | Separation

Mega Flow Separator

The Expro Mega Flow separator is unlike conventional portable test separators, it breaks new ground in separation technology within a flexible, modular system designed to deliver precise data from high rate, High Pressure High Temperature (HPHT) gas condensate wells.

The Mega Flow separator satisfies the need for an easily transportable high capacity separator for use both onshore and offshore. This portability has been made possible as the separator can be dismantled into separate skids to minimise the overall weight and size during mobilization / demobilization.

The increased flow capacity of the Mega Flow has been achieved by combining horizontal and vertical separation technology. The fluids enter the vertical separator where free liquid is removed from the gas by centrifugal force.

Any entrained liquid left in the gas is removed using vertical recycling separation technology.

Liquid is collected in the bottom horizontal vessel section allowing a far greater retention time than a traditional vertical gas separator. The larger bottom vessel also allows for handling greater liquid volumes than previously seen with vertical gas separators.

The Mega Flow has been specifically designed for use in HPHT gas condensate testing to resolve the poor separation efficiency typically experienced with the use of conventional horizontal separators in this application.



Applications

- Onshore and offshore
- Oil and gas well testing
- Clean-up operations
- HPHT operations

Features and benefits

- Large liquid vessel
- High capacity gas / liquid rate separation
- Large temperature range
- Greater operational flexibility
- Higher working pressure
- Combines horizontal and vertical separation technology
- Portable

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Technical specifications		
Mega flow	MKI	MKII
Working pressure psi (bar)	2,160 (150)	2,160 (150)
Vertical vessel size inches x ft. (mm x m)	30" x 7 (0.762 x 2.134)	30" x 7 (0.762 x 2.134)
Lower vessel size (Horizontal) inches (m)	78" spherical (1.98)	36" x 12 (0.92 x 3.66)
Temperature rating °F (°C)	-50 to 350 (-46 to 175)	-50 to 300 (-46 x 150)
Inlet connections	6" fig. 206 Hammer union	6" 900# flange
Gas line outlet	6" # 900 lbs flange	6" # 900 lbs flange
Oil line outlet	3" # 900 lbs flange	3" # 900 lbs flange
Water line outlet	2" fig. 206 Hammer Union	2" 900# flange
Weight (dry) tonnes (kgs)	12 (12,193)	33.96 (34,500) Total 21.65 (22,000) Horizontal vessel 12.30 (12,500) Vertical vessel
Dimensions (L x W x H) ft. (m)	25 x 8 x 22 (7.8 x 2.5 x 7)	22 x 8 x 26 (6.70 x 2.44 7.95)
Maximum gas rate MMscf/d (MM m ³ /day)	175 (5)	175 (5)
Maximum oil rate bbl/d (m ³ /day)	25,000 (4,000)	15,000 (2,384)
Maximum water rate bbl/d (m ³ /day)	6,290 (1,000)	3,000 (477)
Gas meter run	8" Daniel senior orifice meter	2 x 4" Micro motion Coriolis
Oil metering	2 x 2" turbine 1 x 1½" turbine	3" Micro motion Coriolis
Water metering	1 x 1½" turbine	2" Micro motion Coriolis
Lower vessel capacity bbl (m ³)	38 (6)	15 (2.37)
Relief valve (fire protection)	N/A	1" x 2" - D orifice
Relief valves (Full Flow)	2 x 3" x 6" - K orifice	4" x 6" - P orifice
Design codes	PD 5500 cet 1, ANSI B31.3 NACE MR-01-075	DNV 2.7-1 ANSI B31.3 NACE MR-01-075

Note: Specific configuration changes can be considered on a project by project basis, for more information contact your local Expro representative or email welltesting@expro.com