Flow MD Small Volume Prover Data Sheet

FMD-045

SERVICE, EXPERIENCE, INNOVATION & EXCELLENCE

Flow MD is the leader in compact meter prover technology. With an innovative and patented design, the FMD line of provers provides superior performance, design, and functionality. All FMD Provers conform to API MPMS Chapter 4 Standards. The FMD-045 includes 8" ANSI B16.5 flanges on both the inlet and outlet, 2" drain flanges, and 2" vents with thermowell and ports for temperature and pressure verification. The FMD-045 is an excellent choice for your meter proving application.

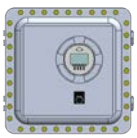
Flow Rates & Displaced Volumes:

FMD-045 Max Flow Rates*				
	BPH	GPM	M^3H	*We want to ensure that you get the proper FMD Meter Prover for your application. Please contact us to discuss your specific application and the optimal FMD Prover for your application. Meter type, brand, operating conditions, and fluid characteristics will affect prover sizing.
FMD-045	6,400	4,500	1,022	

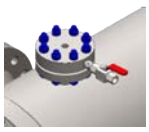
Displaced Volumes**					
	Gallons		Liters*		**Please Note: Standard prover volume is in gallons, liters are optional. Prover requires non-standard switchbar for liters. Alternate displaced volumes are available for liters, please contact factory for additional information.
	Primary	Secondary	Primary	Secondary	
FMD-045	35	25	130	100	

Included with Standard Prover Package:

Electrical Connections



P.I.M Electronics Module



Vent Manifolds (2)

*Please Note: Proving calculations require switch bar temperature, tube temperature, and tube pressure. FMD quotes these as standard options with the prover package.

Field Installation Pictures:

FMD Prover - Meter Compatability
Coriolis - Turbine & Helical Turbine - Positive Displacement - Ultrasonic

FMD Prover Performance Specifications	
Repeatability	< 0.02% - Exceeds API Standard
Performance	Exceeds 0.005% (ISO17025 Calibration Lab)
Uncertainty	Typically 0.004% (Water Draw)
Pressure Drop	5 psi at max flow rate of each prover (calculated with water)
Turndown	1200:1*

*1200:1 Turndown is typical of normal operations. Turndown ratio can vary significantly depending on installation and process conditions. Actual turndown may be much greater than 1200:1 in some conditions such as water draw, or much less in high pressure, dry product applications such as NGL service.

FMD Prover Available Options
Prover Flange Configuration Options Electrical Panel Placement Options Transmitter Type Options

FMD Prover Spare Parts & Accessory Kits	
Seal Kits & Spare Parts Pressure Relief Valves Insulation Jacketing Shaft Seal Monitor Kit Mass Proving/Denisty Kit Prover Validation Kit Spring Assist Kit	Drain Kit Internal or External Leak Detector Kit Thermal Relief Kit Spectacle Blind Kit PDAQ Kit

Approvals & Certifications	
ISO	9001:2015, 17025:2005
EC	Mach Dir:2006/42/EC, EN 12100-2:2003, ATEX Directive 94/9/EC, EN 13463-1:2009, EN 13463-5:2003, EN 60079-0, EN 60079-7, EN 60079-11
CSA (US & Canada	Class 3218 06, Class 1 Div 1 Group D; Class 1 Div 2 Group D / Clutch & Brake Assembly - EX m IIC T5
IECEx	USA /ETL/QAR 15.0014/00 , 101653329CRT-002
ABSA	CRN: OF1072.2

Contact us today to discuss the benefits provided by FMD Small Volume Provers

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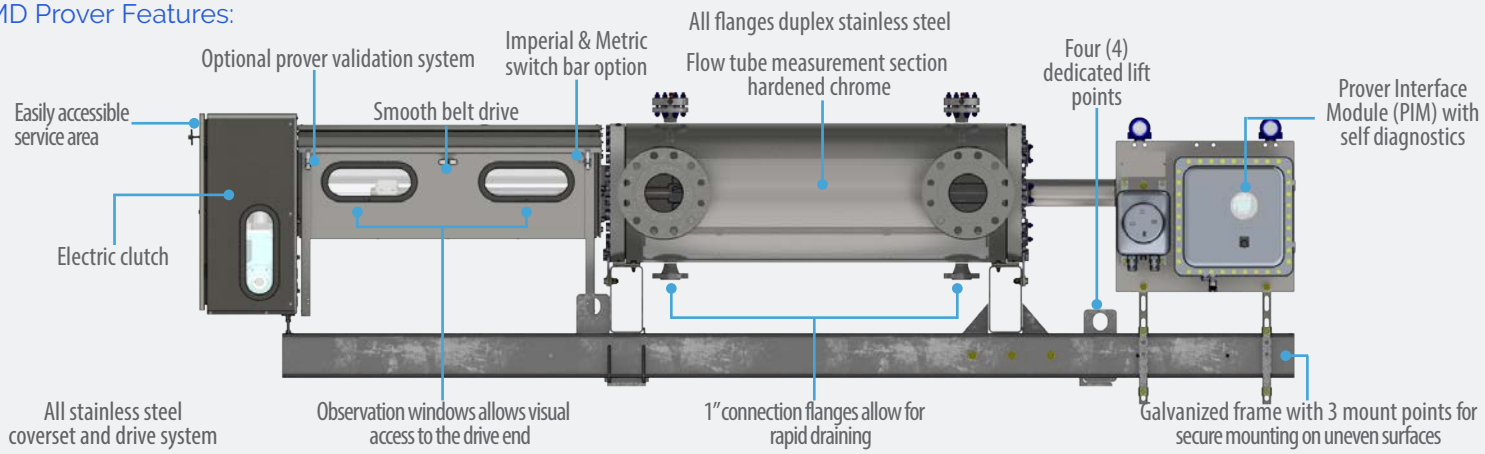
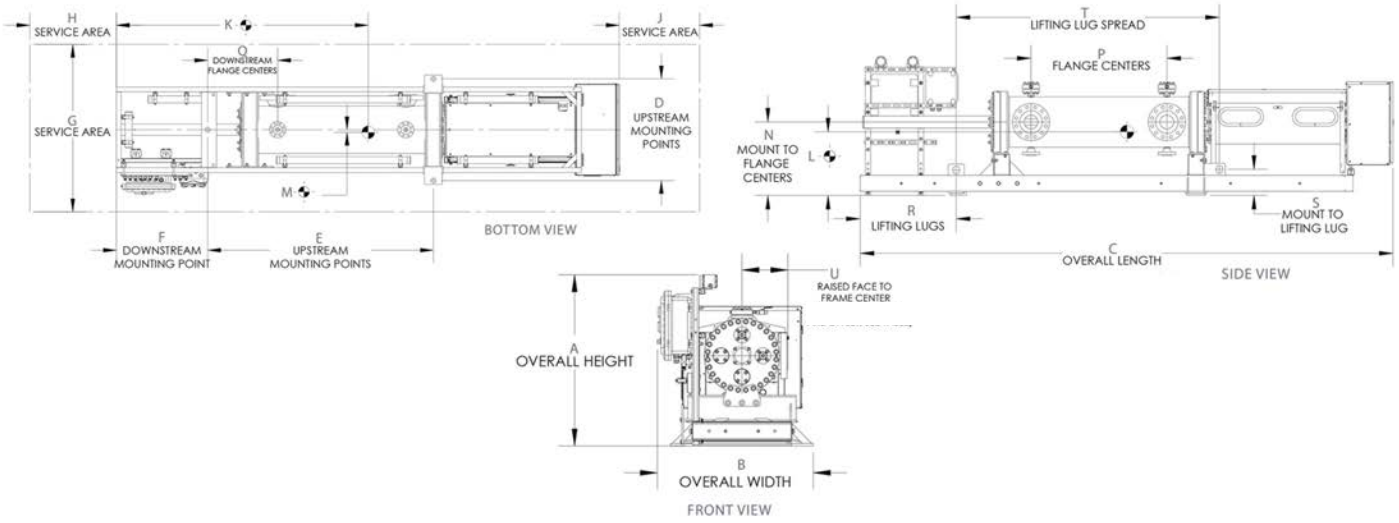
FMD-045 Features & Technical Specifications

FMD Prover Features:



FMD-045 Prover Dimensions:



FMD-045 Dimensions	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
Pressure Rating																			
150#	53.12	58.21	195.50	51.50	84.25	35	120	30	30	95	30	1	34.38	54.25	24.50	34.69	14.25	90.57	15.88
300#	53.12	58.21	195.50	51.50	84.25	35	120	30	30	95	30	1	34.38	54.25	24.50	34.69	14.25	90.57	16.25
600#	53.12	58.21	195.50	51.50	84.25	35	120	30	30	95	30	1	34.38	54.25	24.50	34.69	14.25	90.57	17.50
900#	55.36	58.21	195.50	51.50	84.25	35	120	30	30	93	31	1	35	53.38	23.25	34.69	14.25	90.57	19.13

Drawing Notes: 1. Dimensions "K" and "L" are for center of gravity within 6 inches. 2.Spacial dimensions have a tolerance of 1.00 inches. 3. Dimension "P" is inlet-to-outlet flange distance, drains and vents may vary. 4. All FMD-130 600# and FMD-200 models have 8 lifting lugs. Table gives dimensions to outermost lugs. 5. All dimensions are subject to change without notice. 6. For TT configurations see specific outline. 7. Dimension "H" is the distance required to remove fully assembled piston assembly from the prover. Complete seal change may be done with piston not completely removed which requires 32" (FMD-007 thru FMD-130) and 42" (FMD-200 & FMD-200 EV50).

FMD-045 Weights	Weight (+/- 5%)		Weight with Crate (+/- 5%)		Weight Filled w/ Water (+/- 5%)	
ANSI Pressure - 150#	7,130	3,240	8,055	3,650	7,925	3,595
ANSI Pressure - 300#	7,230	3,285	8,155	3,700	8,025	3,640
ANSI Pressure - 600#	7,330	3,330	8,255	3,750	8,125	3,690
ANSI Pressure - 900#	8,750	3,970	9,675	4,390	9,545	4,330

Energy Consumption Motor Voltage / Phase Availability & Amperage Draw					
FMD-045 Motor Horespower	120 VAC 1 Phase 50-60 Hz	220 VAC 1 Phase 50-60 Hz	208-240 VAC 3 Phase 50-60 Hz	380-400 VAC 3 Phase 50-60 Hz	440-480 VAC 3 Phase 50-60 Hz
2.0	22	11.6	8.6	5.2	2.9

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