Flow MD Small Volume Prover Data Sheet

FMD-200

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 small volume provers conform to API MPMS Chapter 4 Standards. The FMD-200 includes 20" 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-200 is an excellent choice for your meter proving applications.

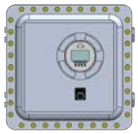
Flow Rates & Displaced Volumes:

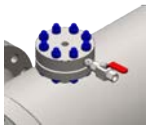
FMD-200 Max Flow Rates*				
FMD-200	BPH	GPM	M^3H	*We want to ensure that you get the proper FMD Meter Prover for your application. Please contact us to discuss your specific application and the optimal FMD Prover for your application. Meter type, brand, operating conditions, and fluid characteristics will affect prover sizing.
	28,500	20,000	4,500	

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-200	140	100	520	400	

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 Compatibility

Coriolis - Turbine & Helical Turbine - Positive Displacement - Ultrasonic

FMD Prover Performance Specifications

Repeatability	< 0.02% - Exceeds API Standard
Performance	Exceeds 0.02% (ISO17025 Calibration Lab)
Uncertainty	Typically 0.005% (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	Drain Kit
Pressure Relief Valves	Internal Leak Detector Kit
Insulation Jacketing	External Leak Detector Kit
Shaft Seal Monitor Kit	Thermal Relief Kit
Mass Proving/Density Kit	Spectacle Blind Kit
PDAQ Kit	Prover Validation Kit
Spring Assist Kit	

Approvals & Certifications

ISO	9001:2015, 17025:2017
CE	Mach Dir:2006/42/EC, EN 12100-2:2003
ATEX	2014/34/EU II 2(1)G Ex db mb [ia Ga] IIB T3 Gb -20 °C to + 40 °C Cert#: CSANe 25ATEX1007X
CSA (US & Canada)	Class I, Division 1, Groups C and D; Class I Division 2, Groups C and D; Maximum Operation Ambient 60°C Class I, Division 1, Group D; Class I, Division 2, Group D; Maximum Operation Ambient 40°C Cert#: 213767
IECEx	Ex db mb [ia Ga] IIB T3 Gb -20 °C to + 40 °C Cert#: IECEx CSA 25.0009X
ABSA	CRN: OF1072.2

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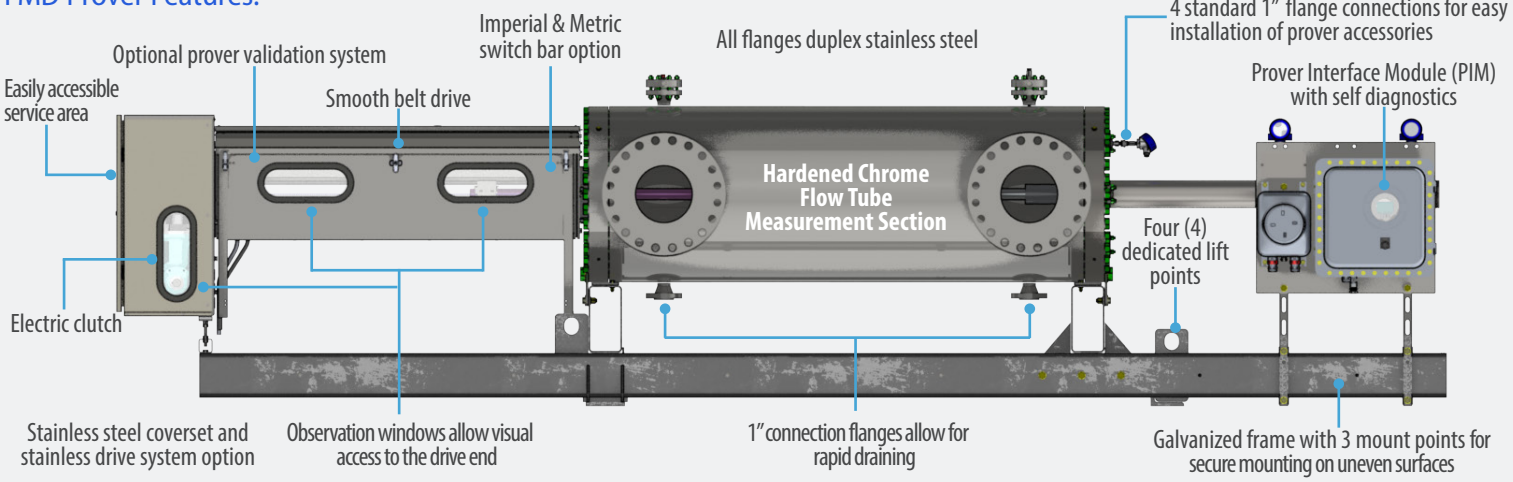
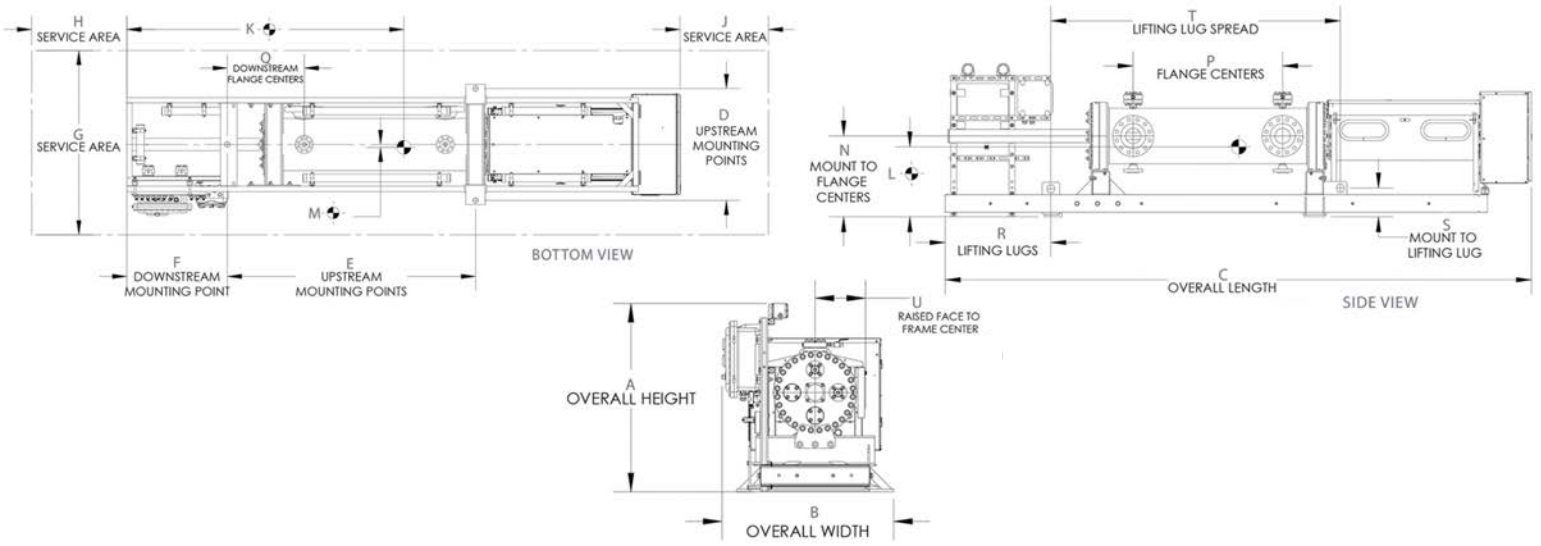
FMD Prover Features:



FMD-200 Prover Dimensions:



FMD-200 Dimensions	A	B	C	D	E	F	G	H		J	K	L	M	N	P	Q	R	S	T	U
								Min	Max											
Pressure Rating																				
150#	73.59	71.98	293.75	64	108.13	86.50	132	42	125.37	30	152	39	1	45.38	80	14.13	75.63	15.75	126	25.75
300#	73.84	71.98	298.50	64	115.13	84.50	132	42	124.44	30	162	39	2	45.50	80	18.50	75.50	17.25	131	26.38
600#	76.26	71.98	307.50	64	121.13	87.50	132	42	127.44	30	163	42	2	46.75	79.50	21.75	81.25	17.63	134.38	29.60

Drawing Notes: All dimensions are shown in inches. 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" max 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 42".

FMD-200 Weights	Weight (+/- 5%)		Weight w/ Crate (+/- 5%)		Weight Filled w/ Water (+/- 5%)	
ANSI Pressure - 150#	20,480	9,290	24,840	11,270	24,960	11,325
ANSI Pressure - 300#	23,680	10,740	28,040	12,720	28,160	12,780
ANSI Pressure - 600#	33,850	15,355	38,210	17,335	38,330	17,390
ANSI Pressure - 900#	46,000	20,865	51,000	23,140	54,800	24,860

Energy Consumption
Motor Voltage / Phase Availability & Amperage Draw

FMD-200 Motor Horsepower	208-240 VAC 3 Phase 50-60 Hz	380-400 VAC 3 Phase 50-60 Hz	440-480 VAC 3 Phase 50-60 Hz
7.5	19	11	9.5

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