Flow MD Small Volume Prover Data Sheet

FMD-060

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-060 includes 10" 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-060 is an excellent choice for your meter proving application.

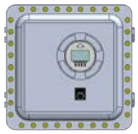
Flow Rates & Displaced Volumes:

FMD-060 Max Flow Rates*				
FMD-060	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.
	8,500	6,000	1,350	

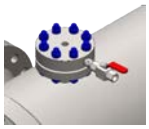
Displaced Volumes**					
FMD-060	Gallons		Liters*		**Please Note: Standard prover volume is in gallons, liters are optional. Prover requires non-standard switchbar for liters. Alternate displaced volumes are available for liters, please contact factory for additional information.
	Primary	Secondary	Primary	Secondary	
	50	40	195	150	

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:

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

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 0.004% (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/Density 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, 17025:2017
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: 0F1072.2

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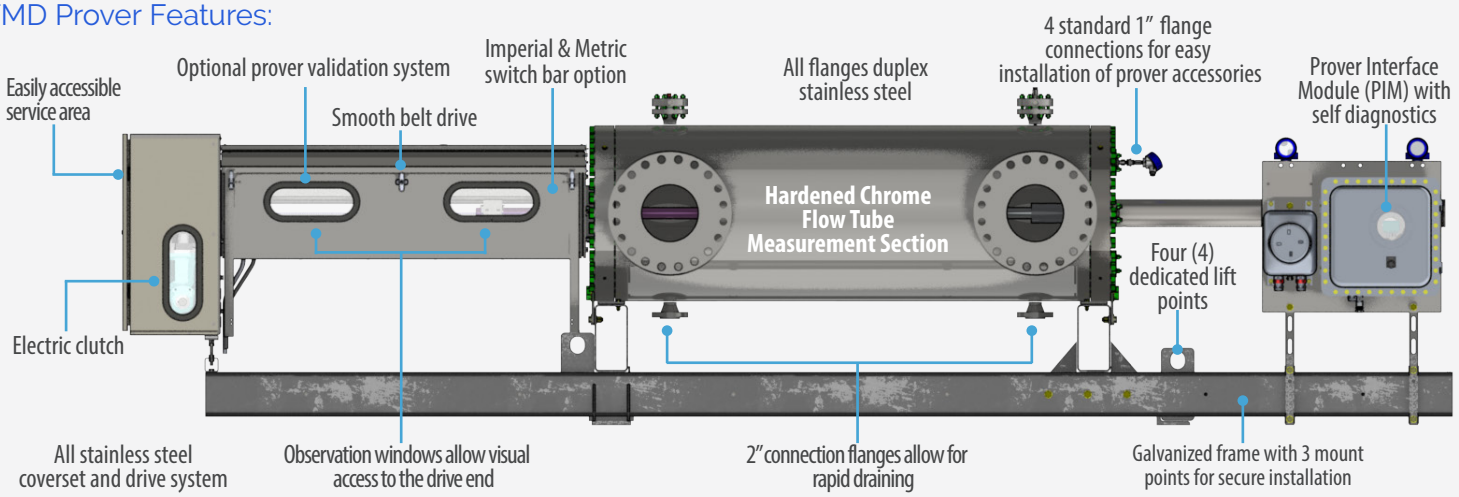
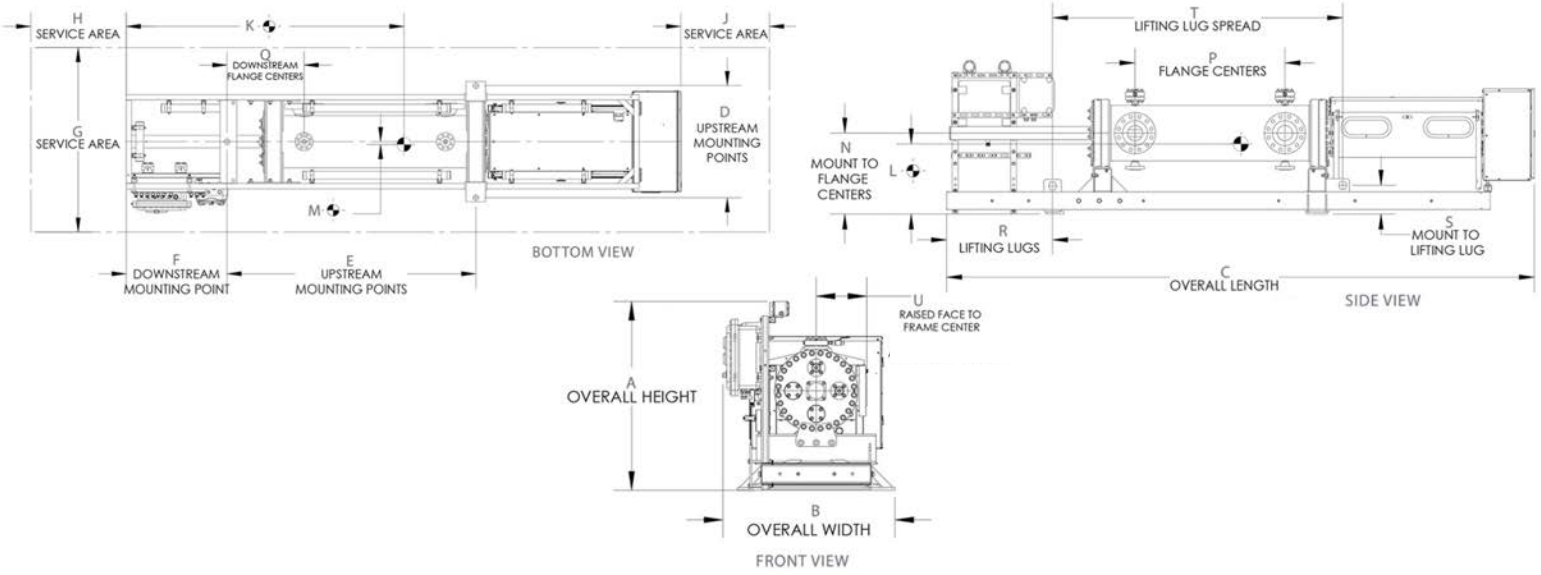
FMD Prover Features:



FMD-060 Prover Dimensions:



FMD-060 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#	53.14	58.21	236.75	51.50	100.50	49.25	120	32	94	30	120	30	1	34.50	68	24.75	49	14	106.69	15.5
300#	53.14	58.21	236.75	51.50	100.50	49.25	120	32	94	30	120	30	1	34.50	68	24.75	49	14	106.69	16.13
600#	53.14	58.21	236.75	51.50	100.50	49.25	120	32	94	30	120	30	1	34.50	68	24.75	49	14	106.69	17.88
900#	55.63	58.21	236.75	51.50	100.50	49.25	120	32	95	30	116	32	1	35	67.25	23.88	49	14.25	106.78	19.75

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 32".

FMD-060 Weights	Weight (+/- 5%)		Weight with Crate (+/- 5%)		Weight Filled w/ Water (+/- 5%)	
ANSI Pressure - 150#	8,090	3,680	9,380	4,255	9,075	4,120
ANSI Pressure - 300#	8,265	3,755	9,405	4,270	9,250	4,200
ANSI Pressure - 600#	8,440	3,840	9,555	4,340	9,425	4,275
ANSI Pressure - 900#	9,950	4,515	11,065	5,020	10,935	4,960

Energy Consumption
Motor Voltage / Phase Availability & Amperage Draw

FMD-060 Motor Horsepower	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