

PFM6 Digital Portable Hydraulic Tester

Simultaneously Measures Flow, Pressure and Temperature



- Five flow ranges
- Large 3-1/2 digit LCD for flow and temperature
- Helical tube pressure gauge
- One toggle switch to control power and select flow and temperature
- Loading valve with fingertip control of pressure
- Platinum resistance temperature sensor
- Pressure surge protection with internal pressure relief
- Turbine flow sensor provides fast response
- Available with SAE or BSPP ports
- Pressures up to 6000 PSI (414 Bar)
- Temperatures up to 300 °F (150 °C)
- Flow accuracy $\pm 1\%$ of full scale
- Repeatability $\pm 0.2\%$

The PFM6 Series is a compact, lightweight portable tester designed for fast diagnostic troubleshooting of all types of mobile or stationary hydraulic systems and components. These self-contained testers feature laboratory accuracy and provide flow, pressure and temperature measurements simultaneously from one point.

Simple operation includes a toggle switch to display either flow or temperature readings and a loading valve that operates with fingertip control. The dual scale helical tube pressure gauge offers pulsation dampening and high overpressure capacity. For safe operation, all testers include an internal pressure relief system.

SPECIFICATIONS

Performance

Flow Accuracy:	$\pm 1\%$ of full scale
Repeatability:	$\pm 0.2\%$
Turbine Response:	$\leq 200\text{ms}$
Temperature:	
Fluid	-4 to +300 °F (-20 to +150 °C)
Ambient	-4 to +131 °F (-20 to +55 °C)
Flow Readout:	Linearity and zero shift ± 1 digit
Operating Pressure:	up to 6000 PSI (414 Bar, 41.4 MPa, 420 kg/cm ²)
Pressure Drop:	See ΔP charts on page 14
Readout Accuracy:	± 1 digit

Material

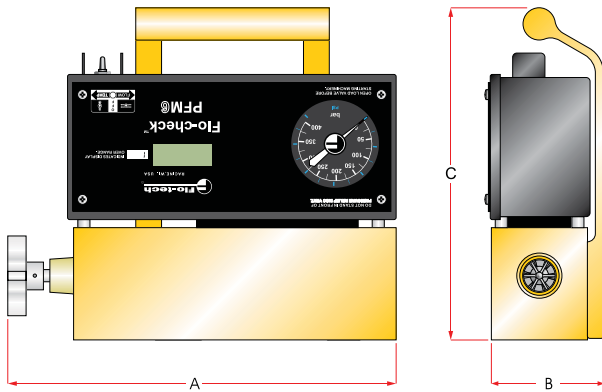
Housing:	6013-T651 Aluminum; anodized
Turbine Rotor:	T416 Stainless steel
Ball Bearings:	440C Stainless steel
Rotor Shaft:	T303 Stainless steel
Rotor Supports:	
PFM6-15/30	CA360 Brass
PFM6-60/85/200	6061-T6 Aluminum alloy
Hub Cones:	6061-T6 Aluminum alloy
Valve Body:	
PFM6-15/30	Cold rolled steel; zinc plate, dichromate finish
PFM6-60/85/200	12L14 Steel; zinc plate, dichromate finish
Valve Stem:	T303 Stainless steel
Poppet:	12L14 Steel; hardened
Sleeve:	
PFM6-200 only	D.O.M. steel tube
Temperature Probe:	T303 Stainless steel
Magnetic Pick-up:	
Body	T303 Stainless Steel
Nut	T303 Stainless Steel
Seals:	Buna N standard; Viton® and EPR optional
Carrying Handle:	Cast aluminum; anodized
Electronic Case & Cover:	Cold rolled steel; zinc plate with clear seal, epoxy black paint
Battery:	4 AA size alkaline, ~ 50 hours of service

Ports:	SAE Straight thread O-ring boss, female J1926/1; ISO1179 (BSPP)
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PFM6 Digital Portable Hydraulic Tester

Simultaneously Measures Flow, Pressure and Temperature

DIMENSIONS



SERIES	A LENGTH IN (mm)	B DEPTH IN (mm)	C HEIGHT IN (mm)	WEIGHT LBS (KG)
PFM6-15	11.3 (287)	3.5 (89)	9.8 (249)	13.85 (6.3)
PFM6-30	11.3 (287)	3.5 (89)	9.8 (249)	13.85 (6.3)
PFM6-60	11.5 (292)	3.5 (89)	9.8 (249)	16.50 (7.5)
PFM6-85	11.5 (292)	3.5 (89)	9.8 (249)	16.50 (7.5)
PFM6-200	12.3 (311)	4.0 (101)	10.3 (262)	20.00 (9.1)

ORDERING INFORMATION

SERIES	NOMINAL PORT SIZE	FLOW RANGE	MODEL NUMBER	STD or CE MODEL	PRESSURE GAUGE UNITS OF MEASURE
PFM6-15	SAE 12	1 - 15 GPM	F5080 * - XXX	Leave blank for standard model or CE for CE option	PSI BAR MPA KG/CM2
PFM6-30	SAE 12	2 - 30 GPM	F5079 * - XXX		
PFM6-60	SAE 16	3 - 60 GPM	F5078 * - XXX		
PFM6-85	SAE 16	4 - 85 GPM	F5077 * - XXX		
PFM6-200	SAE 24	7 - 199.9 GPM	F5076 * - XXX		
PFM6-15	G 3/4	4 - 56 LPM	F5110 * - XXX		
PFM6-30	G 3/4	7.5 - 113.6 LPM	F5111 * - XXX		
PFM6-60	G 1	12 - 227 LPM	F5112 * - XXX		
PFM6-85	G 1	15 - 321 LPM	F5113 * - XXX		
PFM6-200	G 1-1/2	26 - 757 LPM	F5114 * - XXX		

Examples:

F5076-PSI = PFM6-200
SAE 24 ports
7 - 199.9 GPM flow range
Standard model
PSI pressure units

F5111CE-BAR = PFM6-30
G 3/4 ports
7.5 - 113.6 LPM flow range
CE certified
Bar pressure units

ACCESSORIES

MODEL NUMBER	DESCRIPTION	SERIES
F4934-1530	Carrying Case	PFM6-15 & PFM6-30
F4934-6085	Carrying Case	PFM6-60 & PFM6-85
F4934-200	Carrying Case	PFM6-200
F1614-7500	Pressure Relief Disc, 7500 PSI (1 per Tester)	All PFM6s
F001109	5-Point Calibration Certificate ¹	All PFM6s
F001110	10-Point Calibration Certificate ¹	All PFM6s

¹ Certificates are traceable to NIST, ISO 9001.

PFM6BD Bi-Directional Hydraulic Tester

Simultaneously Measures Flow, Pressure and Temperature



- Bi-directional in-line testing capabilities in three flow ranges
- Large 3-1/2 digit LCD for flow and temperature
- Helical tube pressure gauge
- One toggle switch to control power and select flow and temperature
- Loading valve with fingertip control of pressure
- Platinum resistance temperature sensor
- Pressure surge protection with internal pressure relief
- Turbine flow sensor provides fast response
- SAE ports
- Pressures up to 6000 PSI (414 Bar)
- Temperatures up to 300 °F (150 °C)
- Flow accuracy $\pm 1\%$ of full scale
- Repeatability $\pm 0.2\%$

The PFM6BD Series includes all the features of the standard PFM6 Series with the added benefit of bi-directional flow measurement. Designed for fast diagnostic troubleshooting of all types of mobile or stationary hydraulic systems and components, these compact testers offer laboratory accuracy and provide flow, pressure and temperature measurements simultaneously from one point.

SPECIFICATIONS

Performance

Flow Accuracy:

- Forward $\pm 1\%$ of full scale
- Reverse $\pm 2\%$ of full scale

Repeatability: $\pm 0.2\%$

Turbine Response: $\leq 200\text{ms}$

Temperature:

- Fluid -4 to +300 °F (-20 to +150 °C)
- Ambient -4 to +131 °F (-20 to +55 °C)

Flow Readout: Linearity and zero shift ± 1 digit

Operating Pressure: up to 6000 PSI (414 Bar, 41.4 MPa, 420 kg/cm²)

Pressure Drop: See ΔP charts on page 14

Readout Accuracy: ± 1 digit

Material

Housing: 6013-T651 Aluminum; anodized

Turbine Rotor: T416 Stainless steel

Ball Bearings: 440C Stainless steel

Rotor Shaft: T303 Stainless steel

Rotor Supports: 6061-T6 Aluminum alloy

Hub Cones: 6061-T6 Aluminum alloy

Valve Body: 12L14 Steel; zinc plate, dichromate finish

Valve Stem: T303 Stainless steel

Spool/Sleeve: 4340 Alloy steel; hardened

Temperature Probe: T303 Stainless steel

Magnetic Pick-up:

Body: T303 Stainless Steel

Nut: T303 Stainless Steel

Seals:

Buna N standard;
Viton® and EPR optional

Carrying Handle: Cast aluminum; anodized

Electronic Case

& Cover: Cold rolled steel; zinc plate with clear seal, epoxy black paint

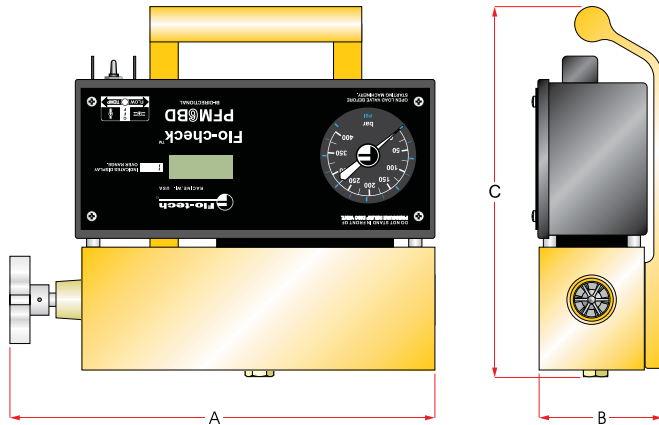
Battery: 4 AA size alkaline, ~ 50 hours of service

Ports: SAE Straight thread O-ring boss, female J1926/1

PFM6BD Bi-Directional Hydraulic Tester

Simultaneously Measures Flow, Pressure and Temperature

DIMENSIONS



SERIES	A LENGTH IN (mm)	B DEPTH IN (mm)	C HEIGHT IN (mm)	WEIGHT LBS (KG)
PFM6BD-60	11.3 (287)	3.5 (89)	10.1 (256)	16.50 (7.5)
PFM6BD-85	11.3 (287)	3.5 (89)	10.1 (256)	16.50 (7.5)
PFM6BD-200	11.8 (300)	4.0 (101)	10.6 (268)	19.50 (9.0)

ORDERING INFORMATION

SERIES	NOMINAL PORT SIZE	FLOW RANGE	MODEL NUMBER	STD or CE MODEL	PRESSURE GAUGE UNITS OF MEASURE
PFM6BD-60	SAE 16	3 - 60 GPM (12 - 227 LPM)	F5082 * - XXX	Leave blank for standard model or CE for CE option	PSI BAR MPA KG/CM2
PFM6BD-85	SAE 16	4 - 85 GPM (15 - 321 LPM)	F5083 * - XXX		
PFM6BD-200	SAE 24	7 - 199.9 GPM (26 - 757 LPM)	F5084 * - XXX		

Examples:

F5083-PSI = PFM6BD-85
SAE 16 ports
4 - 85 GPM (15 - 321 LPM)
Standard model
PSI pressure units

F5082CE-PSI = PFM6BD-60
SAE 16 ports
3 - 60 GPM (12 - 227 LPM)
CE certified
PSI pressure units

ACCESSORIES

MODEL NUMBER	DESCRIPTION	SERIES
F4934-6085	Carrying Case	PFM6BD-60 & PFM6BD-85
F4934-200	Carrying Case	PFM6BD-200
F1614-7500	Pressure Relief Disc, 7500 PSI (2 per Tester)	All PFM6BDs
F001109	5-Point Calibration Certificate ¹	All PFM6BDs
F001110	10-Point Calibration Certificate ¹	All PFM6BDs

¹ Certificates are traceable to NIST, ISO 9001.

PFM8 Digital Hydraulic Tester & Dynamometer

Simultaneously Measures Flow, Pressure, Power and Temperature



- Five flow ranges
- Front panel selectable US or metric readings
- Dynamometer reads power (HP & kW) directly
- 3-1/2 digit LCDs for digital display of flow, temperature, pressure and power
- Large easy-to-use membrane switch
- Loading valve with fingertip control of pressure
- Silicon strain gauge pressure sensor
- Platinum resistance temperature sensor
- Pressure surge protection with internal pressure relief
- Turbine flow sensor provides fast response
- Pressures up to 6000 PSI (414 Bar)
- Temperatures up to 300 °F (150 °C)
- Flow accuracy $\pm 1\%$ of full scale
- Repeatability $\pm 0.2\%$

The all digital PFM8 Series combines a compact, lightweight hydraulic tester and a dynamometer in one unit. Designed for fast diagnostic troubleshooting of all types of hydraulic systems and components, including engine-pump combinations. These testers make all flow, temperature, pressure and power measurements from one point. A bonus feature of this series is the capability to switch from US to metric units of measure in the field.

Each tester utilizes two digital displays, one for flow and temperature and a second display for pressure and power. Simple operation includes a large format membrane switch for on/off control and selection of units of measure to be displayed. A loading valve with fingertip control and an internal pressure relief system are standard features.

SPECIFICATIONS

Performance

Flow Accuracy:	$\pm 1\%$ of full scale
Repeatability:	$\pm 0.2\%$
Turbine Response:	$\leq 200\text{ms}$
Temperature:	
Fluid	-4 to +300 °F (-20 to +150 °C)
Ambient	-4 to +131 °F (-20 to +55 °C)
Flow Readout:	Linearity and zero shift ± 1 digit
Operating Pressure:	up to 6000 PSI (414 Bar, 41.4 MPa, 420 kg/cm ²)
Pressure Drop:	See ΔP charts on page 14
Readout Accuracy:	± 1 digit

Material

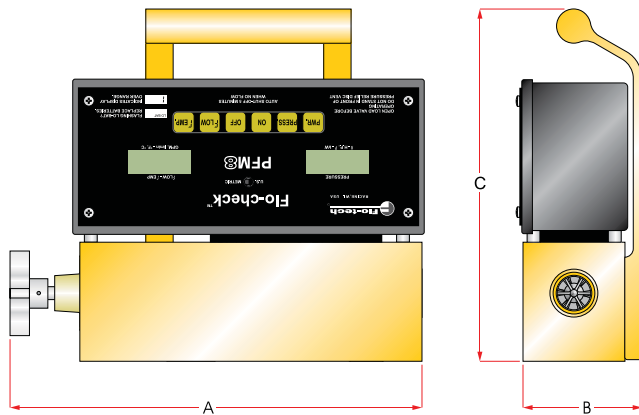
Housing:	6013-T651 Aluminum; anodized
Turbine Rotor:	T416 Stainless steel
Ball Bearings:	440C Stainless steel
Rotor Shaft:	T303 Stainless steel
Rotor Supports:	
PFM6-15/30	CA360 Brass
PFM6-60/85/200	6061-T6 Aluminum alloy
Hub Cones:	6061-T6 Aluminum alloy
Valve Body:	
PFM6-15/30	Cold rolled steel; zinc plate, dichromate finish
PFM6-60/85/200	12L14 Steel; zinc plate, dichromate finish
Valve Stem:	T303 Stainless steel
Poppet:	12L14 Steel; hardened
Sleeve:	
PFM6-200 only	D.O.M. steel tube
Temperature Probe:	T303 Stainless steel
Magnetic Pick-up:	
Body	T303 Stainless Steel
Nut	T303 Stainless Steel
Seals:	Buna N standard; Viton® and EPR optional
Carrying Handle:	Cast aluminum; anodized
Electronic Case & Cover:	Cold rolled steel; zinc plate with clear seal, epoxy black paint
Battery:	AA size alkaline, ~ 50 hours of service

Ports:	SAE Straight thread O-ring boss, female J1926/1
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PFM8 Digital Hydraulic Tester & Dynamometer

Simultaneously Measures Flow, Pressure, Power and Temperature

DIMENSIONS



SERIES	A LENGTH IN (mm)	B DEPTH IN (mm)	C HEIGHT IN (mm)	WEIGHT LBS (KG)
PFM8-15	11.3 (287)	3.5 (89)	9.8 (249)	13.85 (6.3)
PFM8-30	11.3 (287)	3.5 (89)	9.8 (249)	13.85 (6.3)
PFM8-60	11.5 (292)	3.5 (89)	9.8 (249)	16.50 (7.5)
PFM8-85	11.5 (292)	3.5 (89)	9.8 (249)	16.50 (7.5)
PFM8-200	12.3 (311)	4.0 (101)	10.3 (262)	20.00 (9.1)

ORDERING INFORMATION

SERIES	NOMINAL PORT SIZE	FLOW RANGE	POWER HP (kW)	MODEL NUMBER
PFM8-15	SAE 12	1 - 15 GPM (4 - 56 LPM)	52.5 (39)	F5061
PFM8-30	SAE 12	2 - 30 GPM (7.5 - 113.6 LPM)	105 (78)	F5058
PFM8-60	SAE 16	3 - 60 GPM (12 - 227 LPM)	210 (157)	F5052
PFM8-85	SAE 16	4 - 85 GPM (15 - 321 LPM)	298 (222)	F5053
PFM8-200	SAE 24	7 - 199.9 GPM (26 - 757 LPM)	700 (522)	F5054

Examples:

F5061 = PFM8-15
SAE 12 ports
1 - 15 GPM (4 - 56 LPM)

F5053 = PFM8-85
SAE 16 ports
4 - 85 GPM (15 - 321 LPM)

ACCESSORIES

MODEL NUMBER	DESCRIPTION	SERIES
F4934-1530	Carrying Case	PFM8-15 & PFM8-30
F4934-6085	Carrying Case	PFM8-60 & PFM8-85
F4934-200	Carrying Case	PFM8-200
F1614-7500	Pressure Relief Disc, 7500 PSI (1 per Tester)	All PFM8s
F001109	5-Point Calibration Certificate ¹	All PFM8s
F001110	10-Point Calibration Certificate ¹	All PFM8s

¹ Certificates are traceable to NIST, ISO 9001.