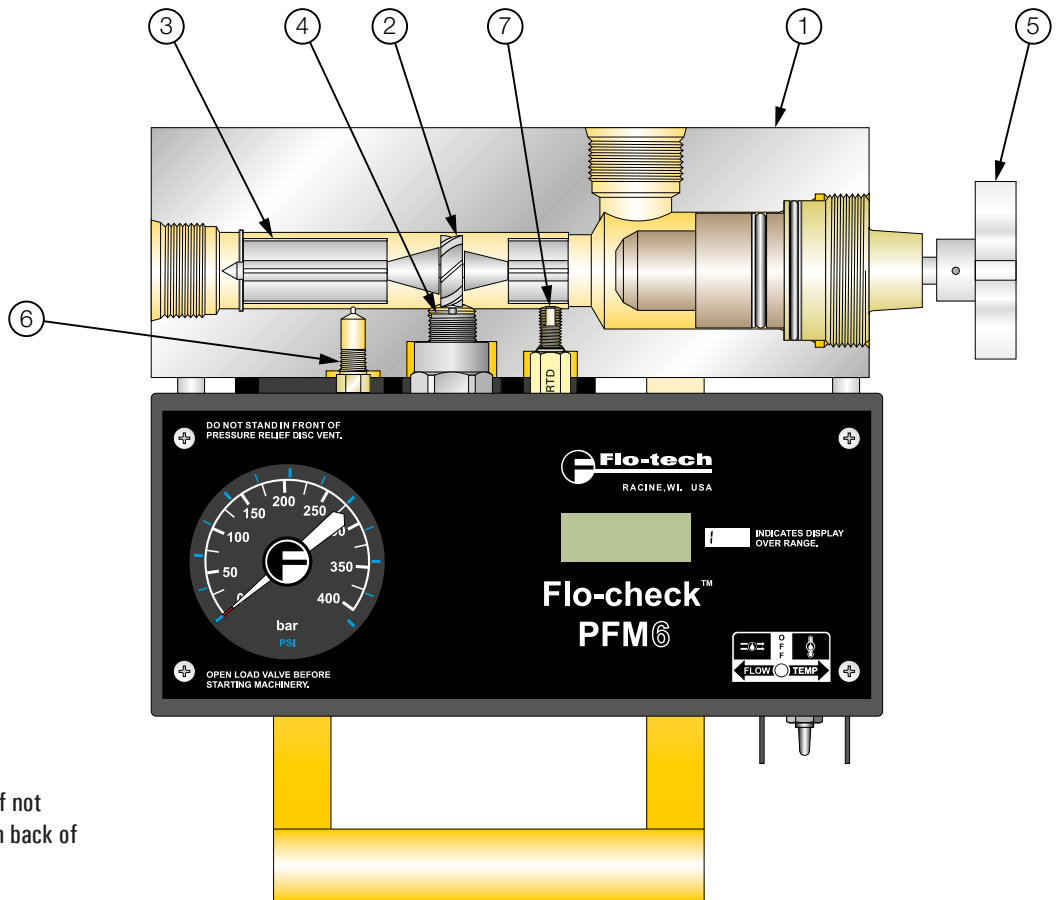


General design features



1. Housing
2. Turbine rotor
3. Rotor supports
4. Magnetic pick-up
5. Loading valve
6. Pressure sensor
7. Temperature sensor
8. Internal pressure relief not illustrated. Located on back of housing.

Operating principle

Flo-tech's portable hydraulic testers simultaneously measure the flow rate, temperature, pressure and optionally, power of hydraulic fluid. Designed for testing pumps, valves, cylinders, motors, hydrostatic or power shift transmissions and power steering systems in both mobile and stationary applications, these compact units utilize turbine flow meter technology.

Flow: As fluid passes through the tester, it turns the turbine rotor. As each turbine blade passes the magnetic pick-up, an electrical signal is generated. This frequency signal is proportional to the flow rate and is transmitted to the tester's electronics for display on a PC screen or the front panel LCD of the tester's electronic case.

Temperature: All testers contain an internal temperature sensor for measuring the temperature of the fluid as it passes through the flow meter body.

Pressure: Pressure is provided in either analog or digital format, depending on the model of the tester. PFM6 and PFM6BD testers are equipped with helical type pressure gauges, while the PFM8 tester includes a silicon strain gauge pressure sensor and the Flo-Check® USB tester utilizes a piezoelectric pressure sensor.

Power: Power measurements are derived from the product of flow and pressure. The Flo-Check® USB and the PFM8 are designed to calculate this measurement and display the results in either horsepower or kilowatts. When using the PFM6 or PFM6BD, power can be calculated using the following formulas:

$$\text{H.P.} = \frac{\text{gal/min} \times \text{psi}}{1714} \qquad \text{H.P.} = \frac{\text{l/min} \times \text{bar}}{447.4}$$

$$\text{kW} = \frac{\text{l/min} \times \text{bar}}{600}$$

Designed for both ease of operation and safety, all testers feature loading valves with fingertip control and pressure surge protection.

PFM6 digital portable hydraulic tester

Simultaneously measures flow, pressure, 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 414 bar (6000 psi)
- Temperatures up to 150 °C (300 °F)
- 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:	≤ 200 ms
Temperature:	
Fluid	-20 to +150 °C (-4 to +300 °F)
Ambient	-20 to +55 °C (-4 to +131 °F)
Flow readout:	Linearity and zero shift ± 1 digit
Operating pressure:	Up to 414 bar, 41.4 MPA, 420 kg/cm ² (6000 psi)
Pressure drop:	See ΔP charts on page 12
Readout accuracy:	± 1 digit

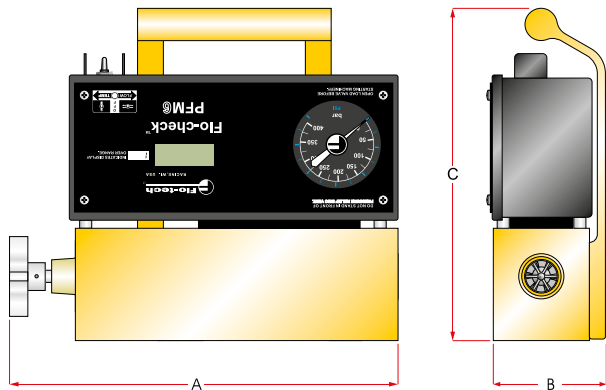
Material

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:	12L14 steel; zinc plate, dichromate finish
Poppet:	T303 stainless steel
Sleeve:	12L14 steel; hardened
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)

PFM6 digital portable hydraulic tester

Simultaneously measures flow, pressure and temperature

DIMENSIONS



Series	A Length mm (inches)	B Depth mm (inches)	C Height mm (inches)	Weight kg (lbs)
PFM6-15	287 (11.3)	92 (3.6)	262 (10.3)	6.3 (13.85)
PFM6-30	287 (11.3)	92 (3.6)	262 (10.3)	6.3 (13.85)
PFM6-60	292 (11.5)	92 (3.6)	262 (10.3)	7.5 (16.50)
PFM6-85	292 (11.5)	92 (3.6)	262 (10.3)	7.5 (16.50)
PFM6-200	311 (12.3)	105 (4.1)	275 (10.8)	9.1 (20.00)

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 gal/min	F5080 * - XXX	Leave blank for standard model or CE for CE option	psi bar MPA kg/cm ²
PFM6-30	SAE 12	2 - 30 gal/min	F5079 * - XXX		
PFM6-60	SAE 16	3 - 60 gal/min	F5078 * - XXX		
PFM6-85	SAE 16	4 - 85 gal/min	F5077 * - XXX		
PFM6-200	SAE 24	7 - 199.9 gal/min	F5076 * - XXX		
PFM6-15	G 3/4	4 - 56 l/min	F5110 * - XXX		
PFM6-30	G 3/4	7.5 - 113.6 l/min	F5111 * - XXX		
PFM6-60	G 1	12 - 227 l/min	F5112 * - XXX		
PFM6-85	G 1	15 - 321 l/min	F5113 * - XXX		
PFM6-200	G 1 1/2	26 - 757 l/min	F5114 * - XXX		

EXAMPLES:

F5076-PSI = PFM6-200
SAE 24 ports
7 - 199.9 gal/min flow range
Standard model
Psi pressure units

F5111CE-BAR = PFM6-30
G 3/4 ports
7.5 - 113.6 l/min 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.