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**Mag-Tek™ Sphere  
Detector Switches**

# Uni-Flo Provers



## DESIGNED FOR:

- compact installation
- lighter weight
- speed of operation
- ease of water-draw calibration

The UNI-FLO Reduced Volume Prover has been developed for use with pulse-interpolation counters to increase resolution between switches. API Chapter 4, section 2 include complete discussions of these designs. The UNI-FLO Reduced Volume Prover is designed to exploit both pulse-interpolation and minimum pipe prover volumes based upon switch and sphere geometry. The UNI-FLO Reduced Volume Prover is the best combination of conventional prover design matched to today's advanced double chronometry flow computers.

RATINGS AND SIZE				
Model Number	Prover BBL Dia	Prover Vol.	Normal Flow Range	Overall Dims (approx.)
UFM-8	8"	100 gallons	Min. 200 BPH Max. 2000 BPH	5' wide 25' long, 9' high
UFM-10	10"	160 gallons	Min. 350 BPH Max. 3500 BPH	6' wide 30' long, 10' high
UFM-12	12"	200 gallons	Min. 500 BPH Max. 5000 BPH	6' wide 35' long, 12' high

WeamcoMetric is a leader in the liquid measurement industry, upholding the standards of quality design and fabrication which are essential for the equipment used by measurement specialists. Because of the demand in the industry, WeamcoMetric has developed an improved interchange mechanism for our unidirectional prover.

## DESIGN FEATURES:

The most compact design on the market.

“One-button” PLC controls.

Adjustable “self-induced” differential pressure switch for seal indication.

“Oversized” sealing section.

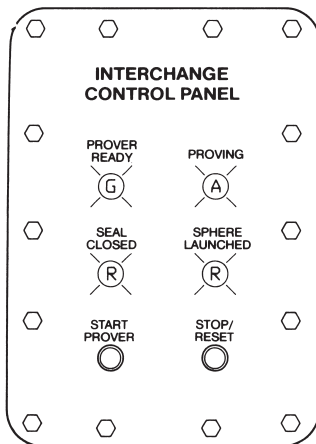
Quick-opening closure for sphere loading and retrieval.

Rugged hydraulic power unit with pressure compensating pump and directional control valves.

## THE SYSTEM IS TOTALLY INTERLOCKED!

- Seal must be indicated before launching sphere
- Launch Valve must be closed before seal is retracted.

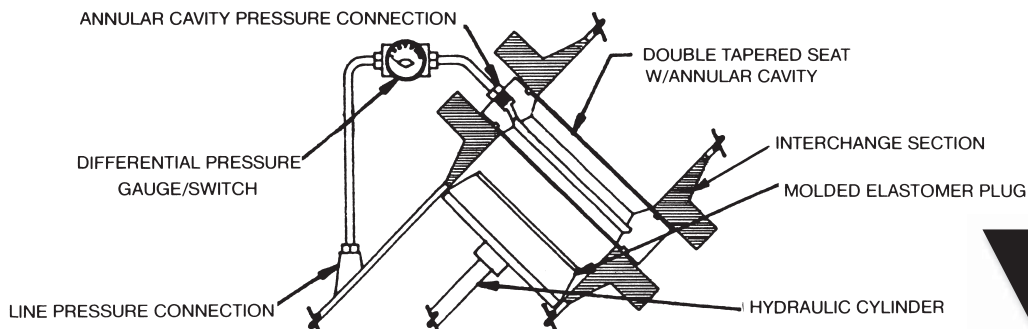
There’s no guessing with the UNI-FLO PLC interchange control, its “one-button” operation assures correct meter proving operation.



## PROVING CYCLE & CONTROL SEQUENCE:

- A) Power On - Prover is automatically set to the “ready” position.
- B) “Start” Button - Seal Cylinder is activated and seal is determined by the self-induced Differential Pressure Switch, launch valve is opened and sphere enters prover barrel.
- C) “Proving” light shows sphere “in-flight”.
- D) Cycle completes after last detector switch is made, prover is set to “ready” position again.

## SEAL VERIFICATION DESIGN:



# Uni-Flow Provers

## Typical Prover Specifications

### Design and Construction:

API Manual of Petroleum Measurement Standards, Chapter 4.2 Proving Systems, ASME/ANSI B31.4, ASME/ANSI B31.3.

### NEC Class:

Class I, Div. 1, 220/440 Volt/3 phase 50 or 60 cycle.

### Radiography:

Spot or 100% in accordance with API 1104.

### Hydrotest:

1.5 times design pressure with chart recording.

### Inspection Flanges:

Match bored, dowel pinned and O-ring groove for metal to metal seat.

### Seal Plug:

Buna-N - Molded

### Materials:

Pipe - ASTM A-106/53-Gr B Seamless (to 24" size)

Flanges and threaded fittings - ASTM A-105

Weld fittings - ASTM A-234 WPB

Studs - ASTM A-193-B7

Nuts - ASTM A-194-2H

Gaskets - Spiralwound, 304SS

O-Rings - Viton

### Calibration:

Water draw method, repeatability within 0.02 percent per API Chapter 4.2 and Chapter 12.2.4.

### Internal Coating:

Sandblast to white metal and 5 to 7 mils air dried epoxy or baked on phenolic.

### External Coating:

Sandblast to white metal and one coat zinc chromate primer.

### Standard Equipment and Trim:

Uni-Flo Interchange with PLC controls and hydraulic power unit

Detector switches - Mag-Tek M-6D, SS construction with viton seals

Sphere - Inflatable polyurethane, nitrile, or neoprene with accessories (pump and sizing ring)

Quick opening closure, hinged or davit type

Thermometer - mercury in glass with 0.20°F divisions and SS thermowell

Pressure gauge with isolation valve

Pressure relief valve

Vent valve

Drain valve

Skid mounted

*All materials and equipment selected for WeamcoMetric provers are of the highest quality and consistency. Selection is based on proven industry standards. We accept no substitute.*

***Other materials and options available.***

P.O. Box 9555 • Tulsa, OK 74157-0555

Phone: (918) 445-1141 • Toll Free: (800) 331-3790

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