Flow Measurement & Contro

The Tube-Cube®



With the Tube-Cube[®] you can quickly and easily change flow ranges without having to disconnect the flowmeter from your system to change the entire frame.

Description

The Tube-Cube[®] is an innovative design developed and patented by Matheson. It allows the interchange of flow tubes within a single frame. The Tube-Cube[®] is standard on all Matheson FM-1050 and FM-1000 Series Flowmeters and tube assemblies.

The Tube-Cube® was designed so that it could be fitted into any standard 150mm or 65mm flowmeter unit*. This includes all meters supplied by Matheson prior to the Tube-Cube® style design as well as those of most other manufacturers. Retro-fit Kits complete with end seal adapters (filler plugs and O-ring) are available.

The Tube-Cube® offers you:

- Easier and faster installation
- Automatic centering and alignment
- Elimination of chipped tube ends
- Insurance of safer and proper installation. (whenever the tube is installed the seals are correctly located)

- Protection from tube breakage because the glass tube is always encased in a protective plastic rectangle that can't roll off a bench
- 1.5 X magnification of meter scale and float for easier, more accurate reading

The Tube-Cube[®] consists of two side plates of ABS resin, two molded end pieces of high density polypropylene, and a clear molded acrylic front shield which also serves as a magnifying lens. This lens magnifies the flowmeter tube numerals and float by a factor of 1.5 to allow more precise flow reading than is possible with conventional flowmeter shields.

The flowmeter tube end seals are also contained in the Tube-Cube[®] package. These seals assure that the glass tube is precisely centered and positively retained within the Tube-Cube[®]. These end seals are Viton as standard but are also available with Teflon in fluid contact, Buna N, and EPR (Ethylene Propylene Rubber) when specified as optional extras.

To complete the package, a yellow, flexible, polished vinyl rear panel is fitted into the Tube-Cube[®]. This panel not only provides a reflective, easy tube reading background, but it also acts as a protective rear cube-cover which keeps dust and dirt out of the Tube-Cube[®] itself.

Materials of Construction

Centering Seal: Tube-Cube®: End Seal Adapters: (Retro-fit Kits) Buna-N, Viton, EPR, Teflon or Kalrez ABS plastic, polypropylene Filler plugs – aluminum, brass, 316 stainless steel or Monel O-rings – Buna-N, Viton or EPR

*Cannot be used on Fisher and Porter Models, 10A 1450, 10A 1460, 10A 1300, 10A 3135 and Porter Models F65A, and F15A Forged Body Meters.



Five Easy Steps

1. Loosen end seal



l 2. Remove Tube-Cube®



3. Select replacement Tube-Cube®



4. Reposition Tube-Cube®



5. Tighten end seals

Ordering Information

Ordering Tube-Cube®

The Tube-Cube[®] is standard equipment with the FM-1050 and FM-1000 series flowmeters. When ordering an entire flowmeter, refer to those pages (356-359). To order a replacement for these flowmeters, please refer to Replacement Parts, on page 364.

| Seal Materials | Materials |
|-----------------|-----------|
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Retro-fit Kits for Non-Matheson 65mm and 150mm Design Frames

Note: Both this kit and a Tube-Cube® package must be purchased to retrofit other 65mm and 150mm design frames.

SEAL MATERIAL

- 0 = Buna-N
- 1 = EPR
- 2 = Viton
- 3 = Teflon
- 4 = Kalrez

MATERIALS AO = Aluminum BO = Brass

BO = Brass SA = Stainless Steel MA= Monel