Better Than Ever: The Rosemount™ 485 Annubar™ Pak-Lok Assembly

1.0 Results

- Safe and simple installation
- Reduce installation costs
- Quick delivery available

2.0 Application

Simple, low-cost installations are key benefits of insertion-type differential pressure flow devices. The Rosemount 485 Annubar patented Pak-Lok configuration exemplifies these benefits by introducing an easy-to-use bolt design that meets the traditional ANSI 600# (100 Bar) requirements. This new design exerts three times as much sealing force as previous Pak-Lok designs that relied on a large thread type sealing.

The Pak-Lok hardware and installation is less expensive than the flanged assembly by as much as 35 percent per measurement point and quick delivery to meet critical application deadlines.

3.0 Solution

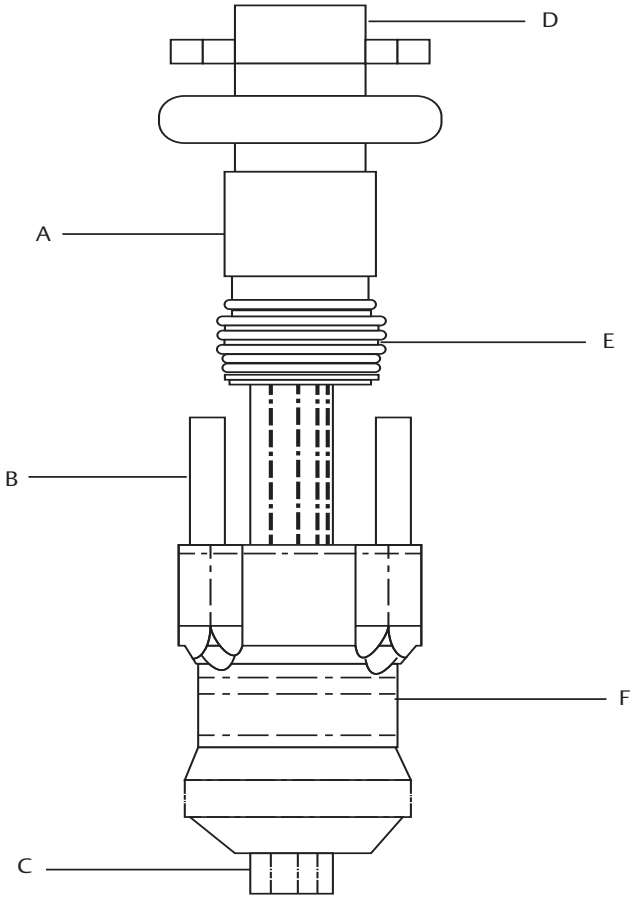
3.1 Safe and simple installation

A compression mechanism is used to pin the sensor to the inside opposite pipe wall. This configuration meets the same requirements as an ANSI 600# (100 Bar) flanged assembly.

The sensor remains sealed against the opposite wall regardless of changes in pipe diameter due to pressure, temperature, or mechanical force. This eliminates the need for opposite side support to ensure structural integrity.

The Rosemount 485 Pak-Lok design facilitates simple installation. No special pipe sections, flanges, or pipe modification is required.

Figure 1-1. Rosemount 485 Pak-Lok Assembly



A. Packing follower
B. Studs
C. Rosemount 485 Annubar Sensor
D. Compression plate
E. Packing rings (3)
F. Pak-Lok body

The Pak-Lok body is a single cast part that arrives ready-to-weld, with no parts to assemble. It can be easily centered over the mounting hole and welded to the pipe. Packing rings are used to create a tight seal between the welded Pak-Lok body and Annubar sensor, eliminating any potential leak paths or fugitive emission points. Split-ring lock washers are used so the installer knows to stop tightening the bolts. The tight seal created by the packing also safely seals the Annubar sensor in the mounting hardware.

Standard size studs and nuts are used to secure the Annubar assembly in the Pak-Lok body. This is an improvement over previous designs based on a single, non-traditionally sized nut Pak-Lok body. A standard wrench can be used to torque the nuts and the small threads on the studs are not susceptible to galling.

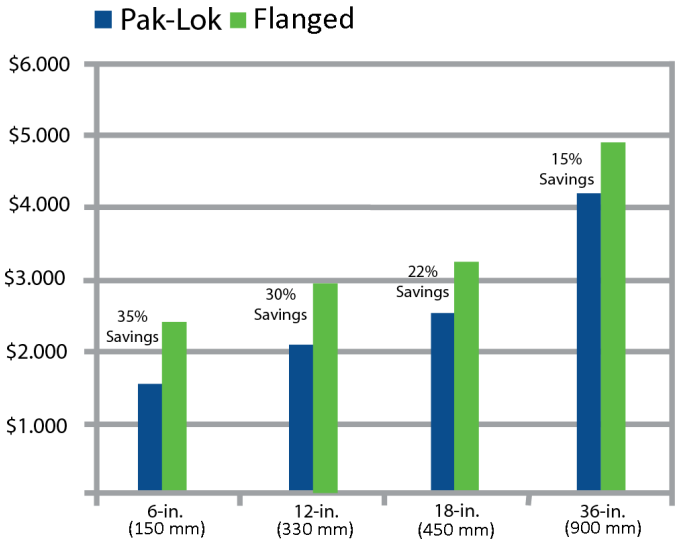
Unique to the Rosemount 485 Pak-Lok is the ability to remove the entire flow meter from the process and re-install it by simply replacing the graphite packing rings. Other compression designs, such as ferrule mounting systems, do not possess this flexibility.

3.2 Reduce installation costs

In addition to simple installation, the Pak-Lok assembly also provides considerable cost savings when compared to other mounting types.

Instead of flanges, nuts, and bolts, a single cast Pak-Lok body is used, which significantly reduces material costs.

Figure 1-2. Pak-Lok Savings Compared



Since the Pak-Lok assembly pins the sensor to the inside wall of the pipe, a second pipe penetration is not required for additional support. This further reduces the cost associated with hardware and installation time.

Pak-Lok hardware and installation time is less expensive than a flanged assembly. This can result in savings of as much as 35 percent per installation. This makes the Pak-Lok assembly a practical and cost efficient mounting choice.

3.3 Quick delivery available

The Rosemount 485 Annubar offers quick delivery on the most popular models. See below for quick ship product specifications.

3.4 Rosemount 485 Pak-Lok Assembly – better than ever

The Rosemount 485 Annubar Pak-Lok assembly is a low cost assembly with simple installation and quick delivery capabilities. When these features are combined with the high performance of the device, it offers quality measurements, simple installation, and unsurpassed reliability.

3.5 Pak-Lok quick ship product specifications

- Line sizes 2- to 12-in. (50 to 300 mm)
- Carbon steel and stainless steel piping
- 316 stainless steel annubar sensor
- Available with (or without) an integral RTD
- As a direct mounted flow meter with an integral 3-valve manifold: The Rosemount 3051SFA Annubar Flow Meter

Note
A wide variety of transmitter options are available: Refer to Annubar Product Data Sheet.

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