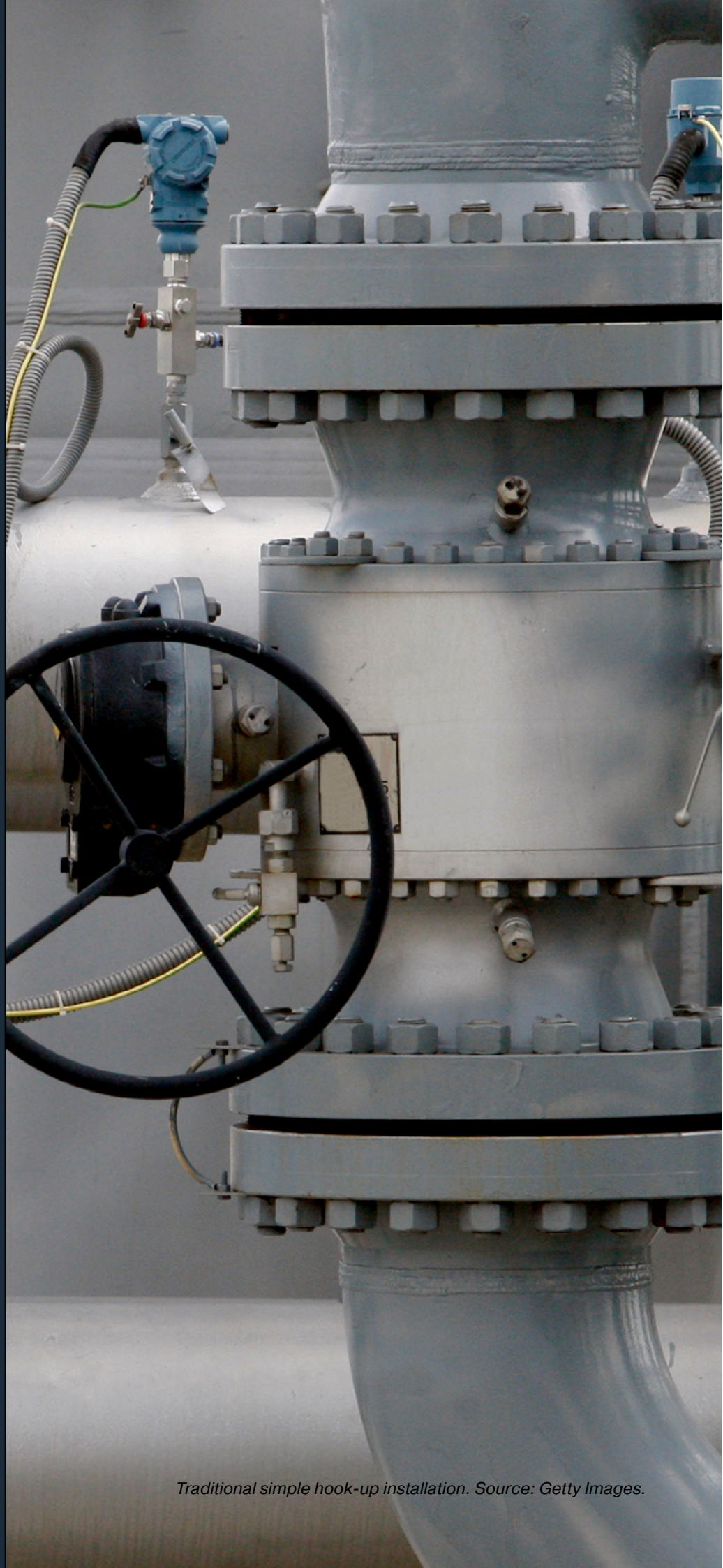


# CLOSE-COUPLED INSTRUMENTATION SOLUTIONS

Standard and custom close-coupled solutions for safer, more efficient operations in demanding process applications.

## Table of Contents

What is Close-Coupling? .....	1
Examples of Close-Coupled Instrument Mounting .....	1
The Benefits of Close- Coupled Assemblies .....	2
Associated Products .....	3



*Traditional simple hook-up installation. Source: Getty Images.*

# CLOSE-COUPLED INSTRUMENTATION

Smarter. Safer. More Reliable.

## What is Close-Coupling?

Close coupling is a **direct-mount installation method** for pressure instruments such as transmitters, gauges, and switches. By using compact, integrated valve manifolds, instruments connect directly to the process line – **eliminating long impulse lines, excessive fittings, and bulky support assemblies.**

## The Limits of Conventional Hook-Ups

Traditional instrumentation hook-ups rely on multiple isolation valves, long tubing runs, pipe supports, and impulse lines.

This approach:

- Increases installation time and cost
- Creates multiple potential leak points
- Adds weight and stress to piping
- Can distort measurement accuracy.



## Examples of Close-Coupled Instrument Mounting



### Static Pressure Measurement

A close-coupled monoflange enables direct mounting of a static pressure transmitter by integrating the instrument manifold into a single isolation unit. With only two connections and a short flow path, it can cut installation time and leak paths by up to **85%**, improving safety, accuracy, and reliability for pressures up to 10,000 psi (689 bar).



### Level Measurement

A compact assembly integrates a manifold into a monoflange for direct DP transmitter mounting. The result: shorter flow path, fewer leak points, and up to **85% faster, safer, and more accurate** level measurement.

# THE BENEFITS OF CLOSE-COUPLED ASSEMBLIES

## Example: Dual-Instrument Monoflange Assembly

This solution integrates **two separate instrument outlets into a single flanged body**. Instead of requiring two monoflanges - one for each device - only a single process outlet is needed.

This configuration allows:

- **Continuous operation** - if one instrument fails, the second remains online.
- **Double verification** - Two instruments provide measurement assurance.
- **Safe maintenance** - Each device can be isolated and vented for calibration or replacement without disturbing the other.

The assembly combines **twin OS&Y primary isolation valves** with **H-series needle valves** for drain, vent, and calibration. A wide variety of flow paths and valve arrangements can be configured to meet specific process requirement.

### Standards Compliance:

Engineered in line with ANSI and ASME codes.

By consolidating two instruments into one compact body, the design reduced potential leak paths from **12,000 to just 1800**, while also cutting space, weight, and costs. Because each instrument can be serviced independently, maintenance is faster and far less disruptive - avoiding costly shutdowns and ensuring continuous measurement in critical operations.

# 85%

## Fewer Leak Paths

Reduced from 12,000 to just 1,800.



## Key Benefits of Close-Coupled Instrumentation



### Reduced Leak Paths

Up to 85% fewer compared to traditional hook-ups.



### Lower Total Cost of Ownership

Fewer components, less maintenance, and increased uptime.



### Faster Installation

Pre-engineered assemblies cut installation time from hours to minutes.



### Improved Safety

Fewer connections mean fewer opportunities for leaks, emissions, or installation errors.



### Compact & Lightweight

Saves space and weight - ideal for offshore platforms, FPSOs, skids, and tight plant spaces.



### Improved Accuracy

Shorter flow paths deliver faster, more precise readings.

# ASSOCIATED PRODUCTS



## Pro-Bloc® Valves

A process-to-instrument valve combining multiple valves in various configurations in a single body.

- Conforms to EEMUA 182
- Available in Low Emission (ISO 15848) versions
- Saves space and weight

[Learn More](#)



## Monoflange Valves

A process-to-instrument valve combining multiple valves in various configurations in a single body.

- Available in Low Emission (ISO 15848) versions
- Saves space and weight
- Available with integral A-LOK® or CPI™ tube connections

[Learn More](#)

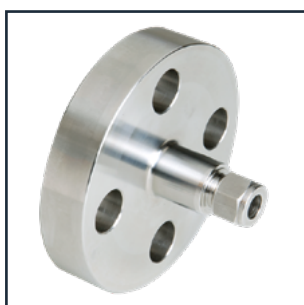


## Instrument Manifolds

A multi-valve assembly for direct installation to pressure or differential pressure devices.

- DIN/IEC 61518 compliant
- Rated up to 6,000 psi (414 bar)
- Available with integral A-LOK® or CPI™ tube connections
- Compact and lightweight design

[Learn More](#)



## Flanged Connectors

A one-piece connector allowing a safe transition from process piping flanges to compression fittings.

- Eliminates additional adaptors or connectors
- Simplifies assembly and maintenance
- Compact and lightweight design

[Learn More](#)

## Optimize Your System with Parker

Whether you need a standard assembly or a fully customized solution, Parker delivers close-coupled designs that reduce leak paths, save space and weight and enable accurate measurement without costly shutdowns. With a broad alloy portfolio, engineering expertise and rigorous manufacturing standards, we help customers improve safety, ensure compliance, extend uptime, and lower lifecycle costs.

[Contact your local Parker support team](#) today to discuss your requirements.



Parker Hannifin Manufacturing Ltd.  
**Instrumentation Products Division**  
**Europe**  
Riverside Road  
Barnstaple  
United Kingdom  
phone 0044 1271 313131  
[www.parker.com/ipd](http://www.parker.com/ipd)

4190-CC 23.09.2025

Your Local Authorized Parker Distributor

© 2025 Parker Hannifin Corporation

