The Complete Instrument Valve Solution.

**TESCOM™ Anderson Greenwood Instrumentation** Product Overview.





# A Complete Range of Instrument Valve Solutions.

Emerson is your best choice for Instrument Valves, Manifolds, and Instrument Enclosure Systems. TESCOM<sup>™</sup> Anderson Greenwood Instrumentation's full range of products are manufactured and built to perform. With decades of innovative engineering expertise, Anderson Greenwood Instrumentation is one of the world's single sources for instrumentation products.

Built on a firm foundation of technical expertise in the 1950s, TESCOM Anderson Greenwood Instrumentation helped set the standard for instrumentation technology advancements in precision valves for the flourishing Aerospace Industry. This knowledge has continually expanded, culminating in the company's present position of manufacturing the broadest range of instrument valve products available. TESCOM Anderson Greenwood Instrumentaion serves many industries and applications. In order to fulfill our continuing commitment of providing customers with complete product choices, we offer a comprehensive range of isolation valves (including root and gauge models), instrument manifolds (for pressure, level and flow measurement), and purpose-designed Instrument Enclosure Systems.

# **PROVEN INNOVATION**

### **Total Quality Management**

Emerson invests in innovative factory and manufacturing automation processes. The continuous improvement inherent in the quality management process helps ensure the integrity and performance of every TESCOM Anderson Greenwood Instrumentaion product.

### **Complete Product Range**

Engineering designs capable of achieving optimum quality and high performance means that Anderson Greenwood Instrumentation can supply the ideal valve for every application — from simple isolation to manifolds for pressure, flow or level measuring instruments.

In addition to its comprehensive family of standard valves and manifolds, TESCOM Anderson Greenwood Instrumentaion can also develop exclusive products for special applications.

For example, when developing a compact design for their Keyblok double block and bleed isolation instrument valve, we successfully solved the weight and space restrictions normally associated with many traditional installations. The monoflange double block and bleed isolation instrument valve is engineered to mount horizontal or vertical, directly on process flanges, helping provide maximum safety with minimal vibration impact. To help protect process instrumentation from dirt, rain, accidental damage, extreme temperatures and other harsh environments, our range of Enclosure Systems fulfills the industry's need for resilient, weatherproof instrument protection.

The Modular Mounting System provides a unique complete range of instrument installations for pressure level and flow measurement. All TESCOM Anderson Greenwood Instrumentaion valves and manifolds are complemented by a full suite of accessories.



### **Easy, Low Cost Installation**

Reduces instrument installation cost by 20-30%. Minimizes pipe connection components reducing the number of potential leak point enhancing meaurement accuracy. Products are 100% seat and shell pressure tested, and shipped complete for immediate, hassle-free installation.



### **Engineered Mounting Systems**

The AGCO Mount offering, (mounting of the manifold rather than the instrument), enables trouble-free instrument installation and removal without disconnecting instrument piping and conduit connections. TESCOM Anderson Greenwood Instrumentation Accumount systems, SaddleMount, and Intellimount products offers direct mounting to the process piping or instrument taps. This reduces the installation envelope, weight of the installation, gauge pulsation error and fluid plugging typical of long instrument impulse lines, and reduces the number of thread connections.



### **Superior Safety Features**

All bonnet assembly designs have a positive back seat that can provide a secondary seal against the fluid pressure extending service packing life and preventing stem blow out. During typical installation or maintenance, when the bonnet assembly is removed and not torqued back into the body correctly, the body to bonnet pin prevents the bonnet assembly under pressure from turning out of the body. A bonnet lock can be provided which does not allow bonnet removal under pressure by hand or other mechanical leverage.

### **Hand Valves**



#### Features

TESCOM Anderson Greenwood Instrumentation hand valves are suitable for all instrument isolation duties, helping provide bubble tight shut-off time after time. With metal or soft seats for gas, vapor or liquid applications, rated up to 10,000 psig (690 barg), there is a hand valve for even the most severe service. Available in standard or exotic materials.

### **Technical Data**

- Materials: CS, SS, Monel<sup>®</sup>, Hastelloy<sup>®</sup>, Duplex and other exotic materials
- Seat: Metal and Soft
- Connections:
- 1/4" to 1" threaded, welded and flanged also available
- Orifice sizes:
  3.0 mm (0.12 in), 4.7 mm (0.19 in),
  6.4 mm (0.25 in), 9.5 mm (0.37 in),
  16.0 mm (0.63 in)
- Pressure max: 10,000 psig (690 barg)
  Temperature max:
- 538 °C (1000 °F)



**Gauge Valves** 

#### Features

TESCOM Anderson Greenwood Instrumentation gauge valves include multi-port and block and bleed styles suitable for gauge isolation, calibration, and venting with a choice of either a globe pattern or straightthrough bore design. A wide choice of end connections and comprehensive range of standard gauge accessories allows complete flexibility for individual installations.

### **Technical Data**

- Materials: CS, SS, Monel<sup>®</sup>, Hastelloy<sup>®</sup>, Duplex and other exotic materials
- Seat: Metal and Soft
- Connections: 1/2" to 3/4" threaded, welded and flanged also available
- Orifice sizes:
  3.0 mm (0.12 in), 4.7 mm (0.19 in),
  6.4 mm (0.25 in), 9.5 mm (0.37 in)
- Pressure max: 10,000 psig (690 barg)
   Temperature max: 538 °C (1000 °F)

### Primary Isolation Gauge Root Valves



### Features

M5K root valves are available in two standard designs: multi-port with three instrument/vent connections and a unique dual-port design for primary isolation on gauge or orifice tap applications. All root valves have a four bolt outside screw and yoke (OS&Y) bonnet design for added strength and reliability. Meets ANSI B31.1 and ANSI B31.3 codes.

### **Technical Data**

- Materials: CS, SS, Monel®, Hastelloy®, Duplex and other exotic materials
  Seat: Metal, Soft and Stellited
  Connections: 1/2" to 3/4" threaded, welded and flanged
  Orifice sizes: 4.7 mm (0.19 in), 6.4 mm (0.25 in), 9.5 mm (0.37 in)
  Pressure max: 6,000 psig (414 barg)
  Temperature max:
  - 538 °C (1000 °F)

### **Pressure Manifolds**



#### Features

Our range of pressure manifolds is suitable for all types of static pressure instruments; from gauges to "smart" pressure transmitters. Available for direct or remote mounting, the pressure manifolds enable isolation, calibration, and venting in a single unit.

### **Technical data**

- Materials: CS, SS, Monel<sup>®</sup>, Hastelloy<sup>®</sup>, Duplex and other exotic materials
- Seat: Metal and Soft
- Connections:
- 1/4" to 1/2" threaded, flanged, also suitable for direct mounting
- Orifice sizes: 3.0 mm (0.12 in) , 4.7 mm (0.19 in)
- Pressure max: 6,000 psig (414 barg)
- Temperature max: 538 °C (1000 °F)

### Flow and Level Manifolds



#### Features

TESCOM Anderson Greenwood Instrumentation has the largest and most innovative range of "differential pressure" flow and level manifolds available with models for virtually every type of D/P instrument. These include: conventional three and five valve manifolds as well as purpose-designed models for special applications.

### Technical data

- Materials: CS, SS, Monel<sup>®</sup>, Hastelloy<sup>®</sup>, Duplex and other exotic materials
  Seat: Metal and Soft
  Instrument connections: 1/4" to 1/2" threaded or flanged mounting
  Process connections: 1/4" to 1/2" threaded or flanged mounting
- Orifice sizes:
  3.0 mm (0.12 in), 4.7 mm (0.19 in),
  6.4 mm (0.25 in), 9.5 mm (0.37 in)
  Pressure max:
- 6,000 psig (414 barg)
- Temperature max: 538 °C (1000 °F)

### IntelliMount™ Systems



#### Features

We offer close couple or remote mounting of differential pressure transmitters. Patented unique twopiece design helps allow transmitter removal for calibration. Block module provides process isolation. Suitable for connection of Coplanar<sup>™</sup> and biplanar style transmitters. For gas or liquid service.

#### **Technical data**

• Materials: SS, Monel<sup>®</sup>, Hastelloy<sup>®</sup>, Duplex and other exotic materials • Seat: Metal and Soft • Instrument connections: Flange Coplanar or biplanar • Process connections: 1/2" and suitable for direct flange mounting • Orifice sizes: 3.0 mm (0.12 in), 6.4 mm (0.25 in), 9.5 mm (0.37 in) • Pressure max: 6,000 psig (414 barg) • Temperature max: 538 °C (1000 °F)

### Saddlemount

### **Keyblok Manifolds**

### Monoflange





#### Features

Close coupling of differential pressure transmitters; close couples on to orifice flange unions. Patented design does not require impulse lines or mounting brackets. Allows for substantial cost savings over conventional installations. Enhanced transmitter performance with 9.5 mm (0.37 in) bore. For gas or liquid service.

### **Technical data**

- Materials: SS, Monel<sup>®</sup>, Hastelloy<sup>®</sup>, Duplex and other exotic materials
- Seat: Metal and Soft
- Instrument connections: Flanged Coplanar or biplanar
- Process connections: Direct mount with1/2" MNPT or 1/2" Socketweld
- Pressure max: 6,000 psig (414 barg)
- Temperature max: 538 °C (1000 °F)

Our range of primary isolation double block and bleed valves meet both instrument and piping engineers' specifications, offering significant savings on space, weight, installation, and cost. Suitable for line isolation, sample connectors and chemical injection service, KEYBLOK manifolds use ball valves, outside screw and yoke (OS&Y) bonnets and threaded bonnet instrument valves. They are also available with a full range of threaded and flanged connections up to API 10K.

### Technical data

- Materials: CS, SS, Duplex and other exotic materials
- Seat:

**Features** 

- Metal and Soft, firesafe as standard • Connections:
- Threaded, flanged ½" to 2" ANSI, DIN and API 10K, other specialist bolted connections also available
  Orifice sizes:
- 10.0 mm (0.39 in) Ball Valves 6.4 mm (0.25 in) – OS&Y Valve Bonnet 4.8 mm (0.19 in) – Instrument Valve Bonnet • Pressure max:
- 10,000 psig (690 barg) • Temperature max:
- 538 °C (1000 °F)



### Features

Monoflange manifolds can be mounted directly on vertical or horizontal flanged connections, allowing a gauge to be kept in an upright position. Suitable for both primary isolation (double block and bleed) and instrument (block and bleed) duties. Monoflange provides isolation, venting, and instrument mounting in a single compact unit. The design incorporates safety features that help limit vibration and reduce the overall height of a gauge installation.

#### **Technical data**

- Materials: CS, SS, Duplex and other exotic materials
- Seat:
- Metal
- Instrument connections: Threaded, 360° swivel connection and flanged
- Process connections: Flanged 1/2" to 2" ANSI, DIN and API 10K
- Pressure max: 10,000 psig (690 barg)
- Temperature max: 538 °C (1000 °F)

### Instrument Protection Modular Mounting **Systems**



#### **Features**

**TESCOM Anderson Greenwood** Instrumentation instrument protection systems help provide a strong weatherproof barrier for every type of instrument installation, both on and offshore. They even have been installed in some of the harshest industrial climates in the world. Instrument enclosures are designed to prevent exposure to harmful UV rays and can be supplied for temperatures from -70 °C to +80 °C (-70 °F to +176 °F). With a range of enclosures and integrated manifolds, heaters and accessories, this unique system helps set the standard in instrument protection.

#### **Technical data**

- Enclosures: Manufactured from tough fire retardant GRP, weatherproof to IP66, anti-static and insulated options available.
- Manifolds: A complete range of integral base and back mounted 2, 3 and 5 valve manifolds suitable for liquid and gas service are available.

# **Systems**



#### **Features**

The Modular Mounting System for instrument impulse line installations has been developed in conjunction with Shell International (SIPM) and has particular applications in the petrochemical and refining industries. Based on a standard mounting plate, it allows components to be either pre-assembled in the workshop or assembled at a later stage, providing maximum flexibility without compromising guality and safety. The Modular Mounting System has a full range of manifolds for differential pressure, pressure and gauge applications, and accessories (including GRP enclosures), heating blocks, seal pots, purge blocks, and test connection boxes.

#### Accessories



#### **Features**

A range of accessories complementary to instrument valves and manifolds allow maximum versatility and flexibility. They include bleeder valves, bleed plugs and bleed tees, gauge adapters and gauge syphon, kidney flanges and air distribution manifolds.

### ACCU-Mount<sup>™</sup> **Systems**



#### Features

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#### **Technical data**

- Materials: CS, SS, Duplex and other exotic materials
- Seat:
- Metal
- Instrument connections: Threaded, 360° swivel connection and flanged
- Process connections: Flanged 1/2" to 2" ANSI, DIN and API 10K
- Pressure max: 10,000 psig (690 barg)
- Temperature max: 538 °C (1000 °F)

## The broadest installation application offering of Instrument Valves, Gauge Valves, Manifolds and Primary Isolation.



TESCOM delivering a wide range of standard and custom-engineered precision product solutions for safe, reliable Pressure Control, Instrument Process Isolation, and Environmental Protection to a diverse world market

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