VERIS Verabar® Flanged Models

V500 Single Support & V510 Double Support – Flanged Components

The Most Accurate and Reliable Technology for Measuring Gas, Liquid and Steam...

Developed from aerospace technology, the VERIS Verabar® averaging pitot flow sensor provides unsurpassed accuracy and reliability.

With its solid, one-piece construction and bullet shape, the VERIS Verabar® makes flow measurement leak resistant and precise. The unique sensor shape reduces drag and flow induced vibration. The location of the low-pressure ports significantly reduces the potential for clogging and improves signal stability.

<table>
<thead>
<tr>
<th>Pipe Connection</th>
<th>Flanged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting Type</td>
<td>Flanged up to ANSI Class 2500#</td>
</tr>
</tbody>
</table>
| Features and Benefits | • All welded mounting  
• Preferred mounting in power, petrochemical and refining industries  
• Can mount to existing flanges |
| Applications    | • Air  
• Natural gas  
• Hydrocarbon liquids and gases  
• Water (raw, cooling, feedwater)  
• Hazardous fluids  
• Steam  
• Large pipes and ducts |
| Special Designs - Consult Factory | • Custom mounting, lengths, materials, instrument connections, etc.  
• Short straight run |

<table>
<thead>
<tr>
<th>V500 and V510</th>
<th>Model Specifications</th>
</tr>
</thead>
</table>
| Sensor Code   | 05  
10  
15 |
| Sensor Diameter | 7/16” (11mm)  
7/8” (22mm)  
1-3/8” (35mm) |
| Accuracy      | ±1% of flow rate; up to +/-0.5% if calibrated |
| ANSI Class*   | 150#, 300#, 600#, 1500# and 2500# |
| Pipe Size     | 2”- 6” (50mm-150mm)  
6”- 48” (150mm-1200mm)  
12”-192” (300mm-5000mm) |
| Instrument Connection | 1/2” NPT, Socket Weld or Direct Mount |
| Components Furnished | Weld coupling, weldneck flange, gasket, studs & nuts  
V510 includes additional weld coupling and pipe cap |
| Flange Size   | 1”  
1-1/2”  
2” |

<table>
<thead>
<tr>
<th>Temperature Pressure Limits (ANSI Class)*</th>
</tr>
</thead>
</table>
| 150# | 275 psig @ 100°F  
(19 bar @ 38°C)  
80 psig @ 800°F  
(5.5 bar @ 426°C) |
| 300# | 720 psig @ 100°F  
(49.6 bar @ 38°C)  
410 psig @ 800°F  
(28.3 bar @ 426°C) |
| 600# | 1440 psig @ 100°F  
(99.3 bar @ 38°C)  
825 psig @ 800°F  
(56.9 bar @ 426°C) |
| 1500# | 3600 psig @ 100°F  
(248.2 bar @ 38°C)  
190 psig @ 1500°F  
(13.1 bar @ 815°C) |
| 2500# | 6000 psig @ 100°F  
(413.7 bar @ 38°C)  
315 psig @ 1500°F  
(21.7 bar @ 815°C) |

* DIN and JIS flanges available. Consult factory.

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for up-to-date information.
1. Enter Pipe Dimensions or Duct Dimensions

Pipe Size _____ Sch _____
Pipe ID _____ and
Wall _____ Pipe Material _____________

Height (H) _____
Width (W) _____
Wall _____
Duct Material _________________

Dimension
Verabar® spans
(H) or (W)

2. Pipe or Duct Orientation (Check one box)

(H) Horizontal
(V) Vertical
Short Straight Run
Consult Factory

3. Enter Flow Conditions

<table>
<thead>
<tr>
<th>Fluid Name:</th>
<th>Maximum</th>
<th>Nominal</th>
<th>Minimum</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Fluids</td>
<td>Pressure @ Flow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Temperature @ Flow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>Specific Gravity, or Molecular Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid</td>
<td>Specific Gravity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steam</td>
<td>VeraCalc Program can calculate Density from Temperature and Pressure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Select Model from Page 3
Use the Ordering Information table on Page 3 to determine your model number.

5. Flow Calculation
All VERIS Verabar® applications require a flow calculation to verify the DP, pressure and temperature limits, structural limits and to size the transmitter. VeraCalc is for use by representatives and end users. It is easy to operate and includes steam tables.
High Pressure and Temperature Head Option

**Unique Design Features**

High Pressure Threaded (HPT) and High Pressure Socket (HPS) designs offer the highest possible pressure and temperature capabilities. When pressure containment and safety are primary concerns, the HPT/HPS has the strongest and safest design in the industry.

As with all VERIS designs, it meets ANSI/ASME B31.1 and can be supplied with code welding (ASME Section IX), hydrostatic testing, N.A.C.E. and material traceability.

**Applications**

**Main Header Steam Lines**

Used for high pressure and temperature applications such as main header steam lines.

For these applications, pipe mounting assemblies are available in chrome-moly material (ASTM A182 F11, F22 & F91).

**Other Applications**

- High pressure and temperature gases and liquids
- Natural gas transmission lines
- Boiler feed water lines
- Oil well injection lines

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Visit armstronginternational.com for up-to-date information.
**Instrument Connections (Select Remote or Direct Mount)**

**Remote Mount Transmitter**
- (1/2" NPT)

**Direct Mount Transmitter**
- (Flanged 450°F/232°C Max.)

- **Parallel**
- **Regular**
- **RTD**
- **Valve**
- **Transmount**
- **Mass Transmount**

**Mounting Assembly — Select Material & Rating**
- **High Pressure Instrument Head (ANSI Class 1500# & 2500#)**

**Sensor (Flange Size)**
- **Mating Flange**
- **Material & ANSI Class**
- **Code**

**Model Number**
- **Model Flanged**
- **Model Single Support**

**Pipe Size and Schedule or Exact ID and Wall Thickness**
- **Code**
- **Pipe Orientation**
- **H** — Horizontal
- **V** — Vertical

**Optional**
- High Pressure Instrument Head (ANSI Class 1500# & 2500#)

**High Pressure Mounting Assy (HPT & HPS Connections)**
- **Sensor (Flange Size)**
- **Mating Flange**
- **Material & ANSI Class**

**Pipe Size and Schedule or Exact ID and Wall Thickness**
- **Code**
- **Pipe Orientation**
- **H** — Horizontal
- **V** — Vertical

**Instrument Valves (Opt.)**
- **Manifolds (Optional)**
- **Remote Mount**
- **Direct Mount**

**Needle Gate**
- **3-Valve**
- **5-Valve**

**C2NC**
- (CS)
- (SS)

**C2NS**
- (CS)
- (SS)

**C2GC**
- (CS)
- (SS)

**C2GS**
- (CS)
- (SS)

**F3SC**
- (CS)
- (SS)

**F3SS**
- (CS)
- (SS)

**F5SC**
- (CS)
- (SS)

**F5SS**
- (CS)
- (SS)

**F5HC**
- (CS)
- (SS)

**F5HS**
- (CS)
- (SS)

**1/2" NPT**
- **Soft Seat**
- **Hard Seat**

**Model Flanged**
- **V500**
- **Single Support**
- **V510**
- **Double Support**

**Typical Model Number**
- **V500**
- **8" sch40**
- **10**
- **H**
- **R**
- **C2NC**
- **F615C**

**Model Single Support**
- **V510**
- **6" to 48" (150mm to 1200mm)**

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