VERIS Verabar.

ABLE Instruments & Controls

Regular Models

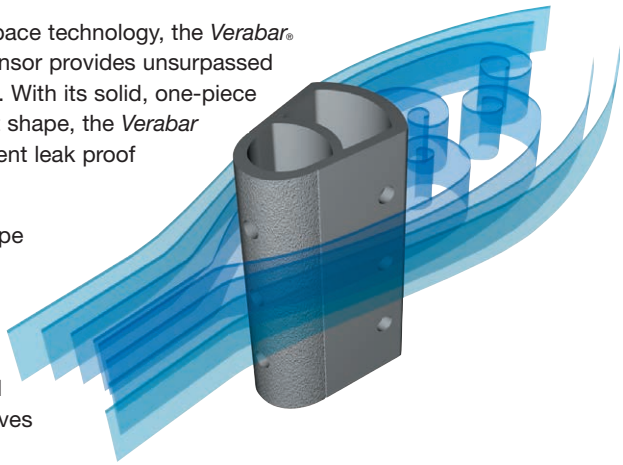
Differential Pressure Flow Sensors

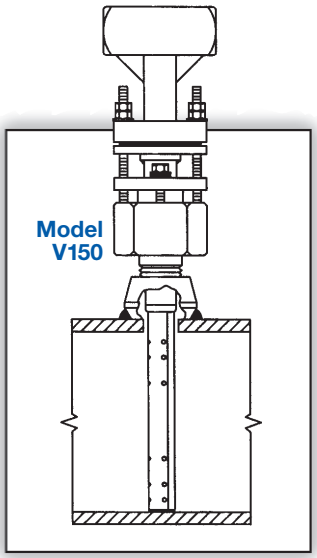
V150 Spring Lock
Threaded Components

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

Developed from aerospace technology, the *Verabar*® averaging pitot flow sensor provides unsurpassed accuracy and reliability. With its solid, one-piece construction and bullet shape, the *Verabar* makes flow measurement leak proof and precise.

The unique sensor shape reduces drag and flow induced vibration. The location of the low-pressure ports eliminates the potential for clogging and improves signal stability.





V150 Spring Lock	
Pipe Connection	Threaded (NPT)
Mounting Type	Spring loaded sensor with packing gland
Features and Benefits	• Best valued model • Blow-out and leak proof design • Preloads sensor to opposite wall • Four times stronger than conventional mountings • Eliminates need for opposite end support • Compensates for changes in pipe diameter due to pressure, temperature or mechanical force
Applications	• Air (compressed, combustion) • Natural gas • Water (raw, cooling, feedwater) • High velocity fluids • Steam
Special Designs – Consult Factory	• Custom mounting, lengths, materials, instrument connections, etc. • Short straight run

Temperature Pressure Limits (ANSI Class)*
600#
1440 psig @ 100°F (99.3 Bars @ 38°C)
825 psig @ 800°F (56.9 Bars @ 426°C)

Model Specifications	V150		
Sensor Code	**05**	**10**	**15**
Sensor Diameter	7/16" (11mm)	7/8" (22mm)	1-3/8" (35mm)
Accuracy	±1% of flow rate; ±0.5% if calibrated		
ANSI Class*	600#	600#	600#
Pipe Size	2"- 6" (50mm - 150mm)	6"- 42" (150mm - 1050mm)	12"- 60" (300mm - 1500mm)
Instrument Connection	1/2" NPT	1/2" NPT or Direct Mount	
Components Furnished	Weld coupling, Spring lock mounting assembly		
Weld Coupling Size	3/4" NPT	1" NPT	2" NPT

* DIN and JIS flanges available. Consult factory.

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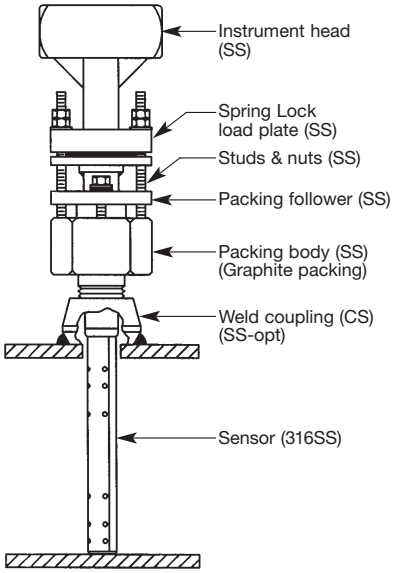
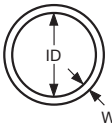
V150 Spring Lock

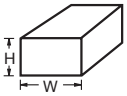


Furnish the following information:

1. Enter Pipe Dimensions or Duct Dimensions



Pipe Size _____ Sch _____
Pipe ID _____ and
Wall _____ Pipe Mat'l _____



Dimension Verabar spans (H) or (W)

Height (H) _____
Width (W) _____
Wall _____
Duct Mat'l _____

2. Pipe or Duct Orientation

(H) Horizontal

(V) Vertical

Short Straight Run
Consult Factory

3. Enter Flow Conditions

Fluid Name:		Maximum	Normal	Minimum	Units
Flow Rate					
All Fluids	Temperature @ Flow				
	Pressure @ Flow				
Gas	Specific Gravity, or Molecular Weight				
Liquid	Specific Gravity				
Steam	Veracalc Program can calculate Density from Temperature and Pressure				

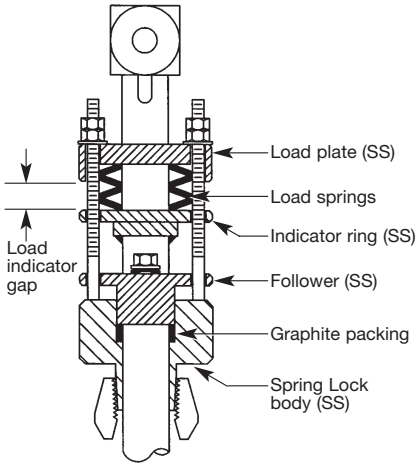
4. Select Model from Page 3

Use the Ordering Information table on Page 3 to determine your model number.

5. Flow Calculation

All Verabar applications require a flow calculation to verify the DP, pressure and temperature limits, structural limits and to size the transmitter. The Veracalc PC Program is for use by representatives and end users. It is easy to operate and ***includes steam tables.***

Model V150



Spring Lock Mount

- Design ensures the sensor is sealed, locked and pre-loaded to the opposite wall, regardless of changes in pipe diameter due to pressure, temperature or mechanical vibrations.
- Leak-proof…compensates for differential in packing and body growth rates due to increased temperatures.
- Increases sensor strength (eliminates the need for an opposite wall support). A locked, pre-loaded sensor is four times stronger than a non pre-loaded, cantilevered sensor.
- Spring Lock is engineered with three standard spring configurations equivalent to ANSI class 150#, 300# and 600# ratings.
- By loading the sensor and packing independently, the sensor can move axially to maintain a precise load on the pipe wall.

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Ordering Information

Model	Regular
V150	Spring Lock

Pipe Size and Schedule or Exact ID and Wall Thickness

Code	Sensor Pipe Size Range
05	2” to 6” (50mm to 150mm)
10	6” to 42” (150mm to 1050mm)
15	12” to 60” (300mm to 1500mm)

Code	Pipe Orientation
H	Horizontal
V	Vertical

Instrument Connections (Select Remote or Direct Mount)
(Transmitter sold separately)

Remote Mount Transmitter (1/2” NPT)

Parallel	Regular	RTD*	Valve
		Explsn. Proof	Integral
P	R	D	T

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

Transmount	Mass Transmount*		Manifold
	Integral RTD	Remote RTD	Integral
F	G	E	M

Instrument Valves (Opt.) — **Remote Mount**

Needle	Gate
1/2” NPT	1/2” NPT
C2NC (CS) **C2NS** (SS)	**C2GC** (CS) **C2GS** (SS)

Manifolds (Optional) — **Direct Mount**

3-Valve		5-Valve	
Soft Seat	Hard Seat	Soft Seat	Hard Seat
F3SC (CS) **F3SS** (SS)	**F3HC** (CS) **F3HS** (SS)	**F5SC** (CS) **F5SS** (SS)	**F5HC**(CS) **F5HS** (SS)

Optional

Code	Options
WNS	For stainless steel pipes. For V150, furnished with one SS weld coupling.

V150	8”sch40	10	H	R	C2NC	Typical Model Number

* For high pressure (>500psig) or high temperature (>500°F), remote mount RTD in a thermowell is preferred.
† Assuming adequate heat dissipation for transmitter.

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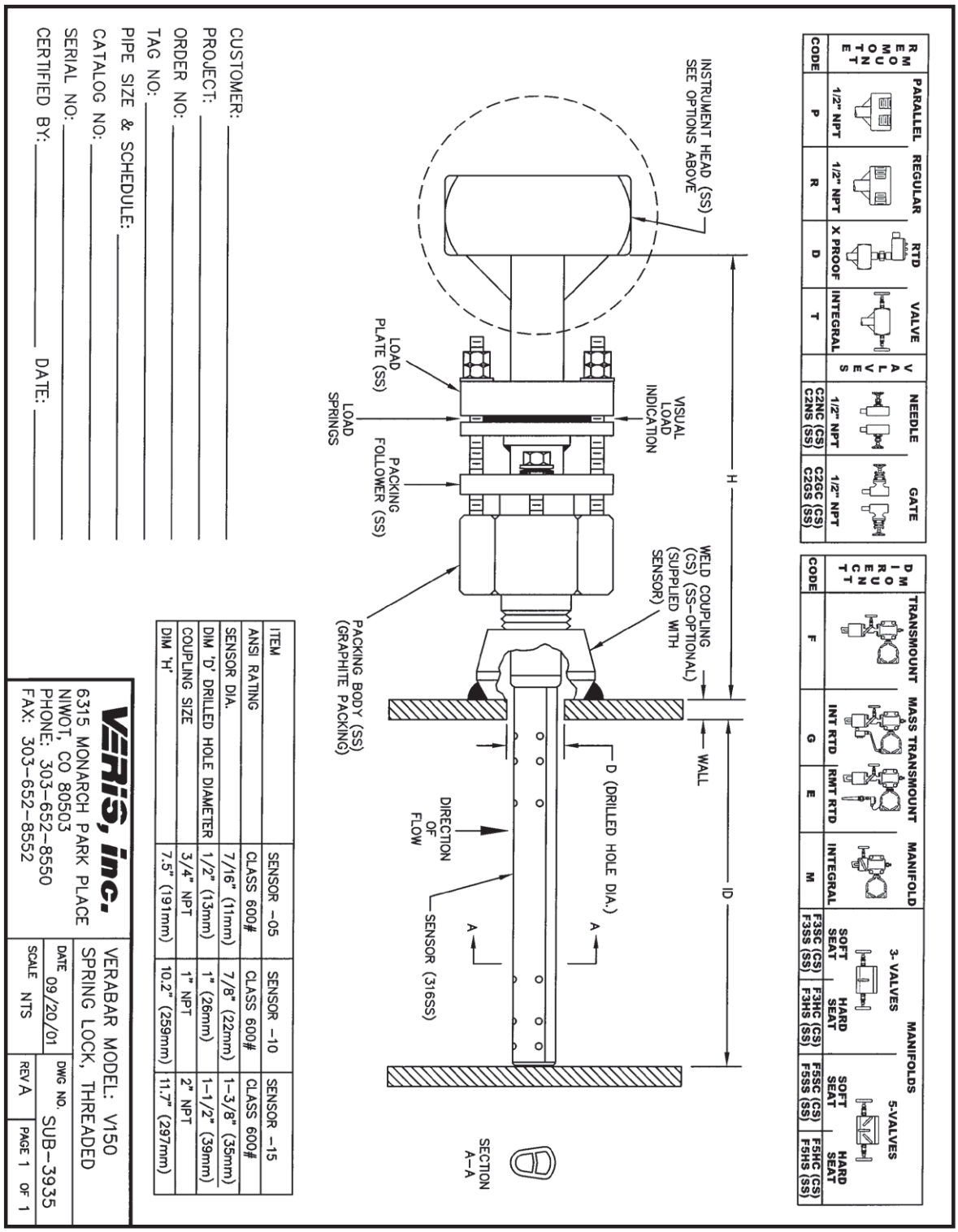

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