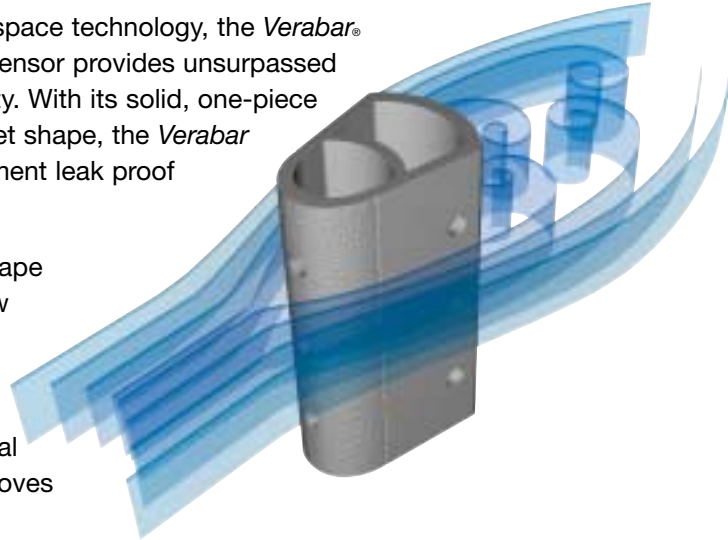


*Differential Pressure Flow Sensors*

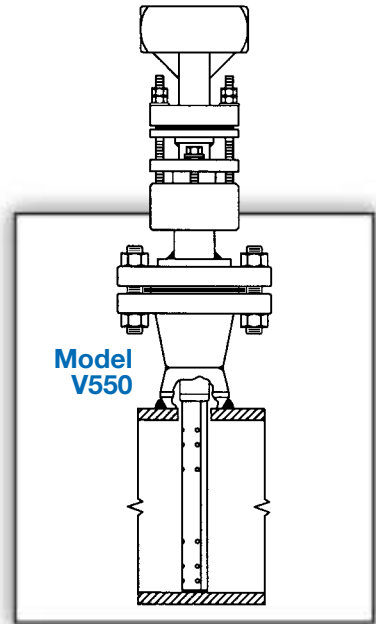
**The Most Accurate and Reliable Technology for Measuring Gas, Liquid and Steam...**

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.



**V550 Spring Lock Flanged Connection with Packing Gland**



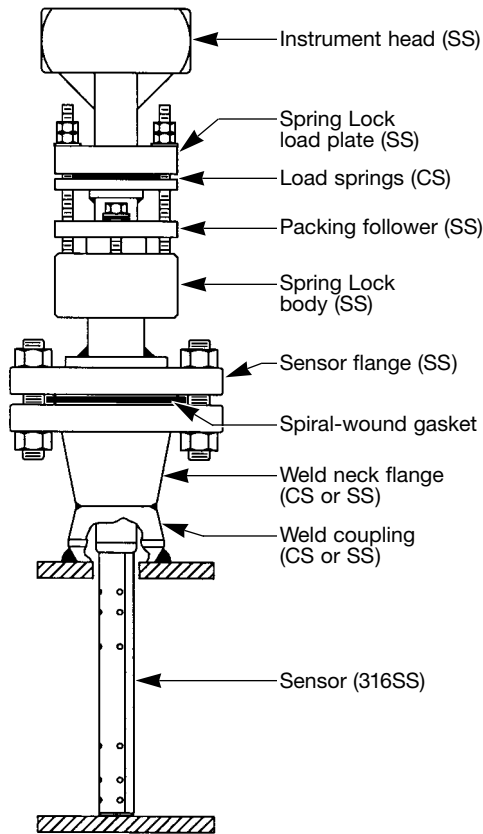
<b>V550 Flanged Spring Lock</b>	
<b>Pipe Connection</b>	Flanged
<b>Mounting Type</b>	Spring loaded sensor mounted on flange with packing gland
<b>Features and Benefits</b>	<ul style="list-style-type: none"> <li>• Blow-out and leak proof design</li> <li>• Preloads sensor to opposite wall</li> <li>• Four times stronger than conventional mountings</li> <li>• Eliminates need for opposite end support</li> <li>• Compensates for changes in pipe diameter due to pressure, temperature or mechanical force</li> <li>• Can mount to existing flanges</li> </ul>
<b>Applications</b>	<ul style="list-style-type: none"> <li>• Air</li> <li>• Natural gas</li> <li>• Water (raw, cooling, feedwater)</li> <li>• Hydrocarbon liquids and gases</li> <li>• High velocity fluids</li> <li>• Hazardous fluids</li> <li>• Steam</li> </ul>
<b>Special Designs—Consult Factory</b>	<ul style="list-style-type: none"> <li>• Custom mounting, lengths, materials, instrument connections, etc.</li> <li>• Short straight run</li> </ul>

<b>Temperature Pressure Limits (ANSI Class)</b>
<b>150#</b>
275 psig @ 100°F (19 Bars @ 38°C)
80 psig @ 800°F (5.5 Bars @ 426°C)
<b>300#</b>
720 psig @ 100°F (49.6 Bars @ 38°C)
330 psig @ 800°F (22.8 Bars @ 426°C)
<b>600#</b>
1440 psig @ 100°F (99.3 Bars @ 38°C)
660 psig @ 800°F (45.5 Bars @ 426°C)

<b>Model Specifications</b>	<b>V550</b>		
<b>Sensor Code</b>	<b>05</b>	<b>10</b>	<b>15</b>
<b>Sensor Diameter</b>	7/16" (11mm)	7/8" (22mm)	1-3/8" (35mm)
<b>ANSI Class</b>	150#, 300# and 600#		
<b>Pipe Size</b>	2"-6" (50mm-150mm)	6"-42" (150mm-1050mm)	12"-60" (300mm-1500mm)
<b>Instrument Connection</b>	1/2" NPT	1/2" NPT or Direct Mount	
<b>Components Furnished</b>	Spring lock mounting assembly, weld coupling, weldneck flange, gasket, studs & nuts		
<b>Flange Size</b>	1"	1-1/2"	2"

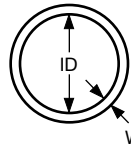
# Verabar® Flanged Models

## V550 Spring Lock

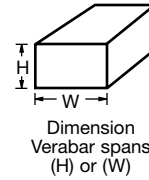


Furnish the following information:

### 1. Enter Pipe Dimensions or Duct Dimensions

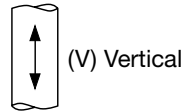
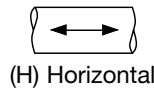


Pipe Size \_\_\_\_ Sch \_\_\_\_  
 Pipe ID \_\_\_\_ and  
 Wall \_\_\_\_ Pipe Mat'l \_\_\_\_



Height (H) \_\_\_\_  
 Width (W) \_\_\_\_  
 Wall \_\_\_\_  
 Duct Mat'l \_\_\_\_

### 2. Pipe or Duct Orientation



### 3. Enter Flow Conditions

Fluid Name:		Maximum	Normal	Minimum	Units
<b>Flow Rate</b>					
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.

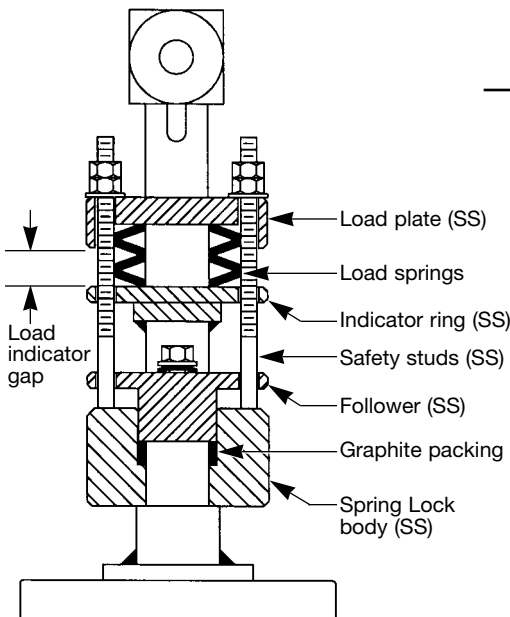
Use the Ordering Information table on page 3 to determine your model number.

### 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**.





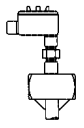

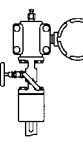
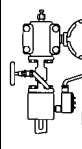
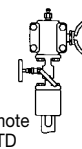



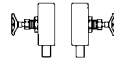
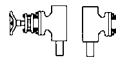
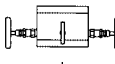
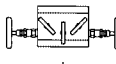
## Model V550



## Spring Lock Mount

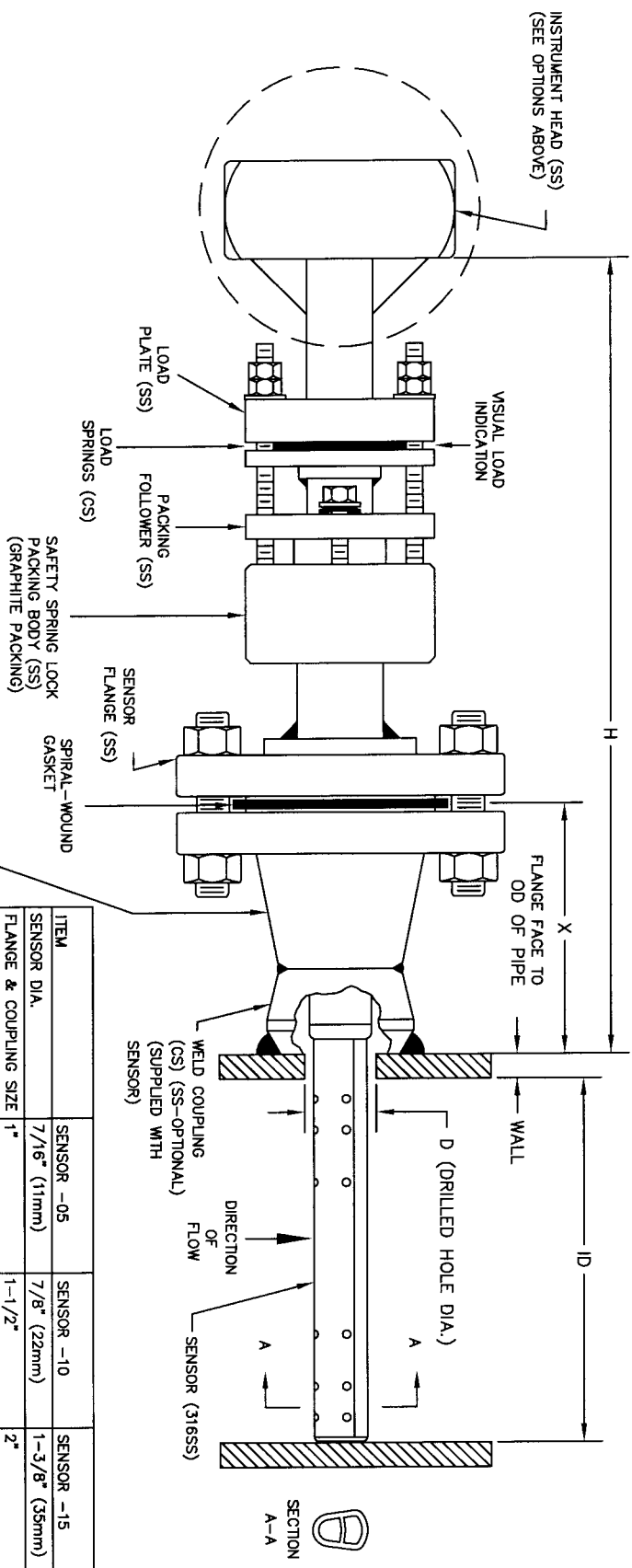
- Design ensures the sensor is sealed, locked and pre-loaded to the opposite wall, regardless of changes in pipe diameter due to pressure, temperature or mechanical vibrations.
- Leak-proof...compensates for differential in packing and body growth rates due to increased temperatures.
- Increases sensor 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.

# Ordering Information

<b>Model</b>	<b>Flanged</b>						
<b>V550</b>	Spring Lock						
<b>Pipe Size and Schedule or Exact ID and Wall Thickness</b>							
<b>Code</b>	<b>Sensor Pipe Size Range</b>						
<b>05</b>	2" to 6" (50mm to 150mm)						
<b>10</b>	6" to 42" (150mm to 1050mm)						
<b>15</b>	12" to 60" (300mm to 1500mm)						
<b>Code</b>	<b>Pipe Orientation</b>						
<b>H</b>	Horizontal						
<b>V</b>	Vertical						
<b>Instrument Connections (Select Remote or Direct Mount)</b> (Transmitter sold separately; see Field Flow Systems literature)							
 <b>Remote Mount Transmitter</b> (1/2" NPT)				 <b>Direct Mount Transmitter</b> (Flanged 250°F/120°C Max.)			
Parallel	Regular	RTD*	Valve	Transmount	Mass Transmount*	Manifold	
		 Explsn. Proof	 Integral		 Integral RTD	 Remote RTD	 Integral
<b>P</b>	<b>R</b>	<b>D</b>	<b>T</b>	<b>F</b>	<b>G</b>	<b>E</b>	<b>M</b>
<b>Instrument Valves (Opt.)</b>				<b>Manifolds (Optional)</b>			
 <b>Remote Mount</b>		 <b>Direct Mount</b>					
Needle	Gate	3-Valve		5-Valve			
							
1/2" NPT	1/2" NPT	Soft Seat	Hard Seat	Soft Seat	Hard Seat		
<b>C2NC (CS)</b> <b>C2NS (SS)</b>	<b>C2GC (CS)</b> <b>C2GS (SS)</b>	<b>F3SC (CS)</b> <b>F3SS (SS)</b>	<b>F3HC (CS)</b> <b>F3HS (SS)</b>	<b>F5SC (CS)</b> <b>F5SS (SS)</b>	<b>F5HC (CS)</b> <b>F5HS (SS)</b>		
<b>Mounting Assembly — Select Material &amp; Rating</b> (Includes SS sensor flange, WN flange, weld coupling, spiral-wound gasket, studs & nuts)							
<b>Sensor (Flange Size)</b>						<b>Mating Flange Material &amp; ANSI Class</b>	
<b>05 (1")</b>	<b>10 (1-1/2")</b>	<b>15 (2")</b>					
<b>Code</b>							
<b>F415C</b> <b>F415S</b>	<b>F615C</b> <b>F615S</b>	<b>F815C</b> <b>F815S</b>				CS 150# SS 150#	
<b>F430C</b> <b>F430S</b>	<b>F630C</b> <b>F630S</b>	<b>F830C</b> <b>F830S</b>				CS 300# SS 300#	
<b>F460C</b> <b>F460S</b>	<b>F660C</b> <b>F660S</b>	<b>F860C</b> <b>F860S</b>				CS 600# SS 600#	
<b>Optional</b>							
<b>V550</b>	<b>8"sch40</b>	<b>10</b>	<b>H</b>	<b>R</b>	<b>C2NC</b>	<b>F615C</b>	<b>Typical Model Number</b>

\* For high pressure (>500psig) and high temperature (>500°F) remote mount RTD in a thermowell is preferred.

REMOUNT CODE	PARALLEL	REGULAR	RTD	VALVE	NEEDLE	GATE
	1/2" NPT	1/2" NPT	X PROOF	INTEGRAL	1/2" NPT	1/2" NPT
	P	R	D	T	C2NC (CS) C2NS (SS)	C2GC (CS) C2GS (SS)
DMOUNT CODE	TRANSMOUNT	MASS TRANSMOUNT	MANIFOLD	MANIFOLDS		
	F	INT RTD	INTGRTD	3-VALVES	5-VALVES	
	G	RMT RTD	M	SOFT SEAT F3SC (CS) F3SS (SS)	HARD SEAT F3HC (CS) F3HS (SS)	SOFT SEAT F5SC (CS) F5SS (SS)
	E					HARD SEAT F5HC (CS) F5HS (SS)



ITEM	SENSOR -05	SENSOR -10	SENSOR -15
SENSOR DIA.	7/16" (11mm)	7/8" (22mm)	1-3/8" (35mm)
FLANGE & COUPLING SIZE	1"	1-1/2"	2"
DIM "D" DRILLED HOLE DIA.	1/2" (13mm)	1" (26mm)	1-1/2" (39mm)
DIM "H" ANSI CLASS 150#	10.7" (271mm)	14.0" (355mm)	16.0" (406mm)
DIM "H" ANSI CLASS 300#	11.3" (287mm)	14.5" (369mm)	16.5" (420mm)
DIM "H" ANSI CLASS 600#	11.8" (299mm)	15.2" (385mm)	17.3" (440mm)
DIM "X" ANSI CLASS 150#	3.31" (84mm)	3.81" (97mm)	4.06" (103mm)
DIM "X" ANSI CLASS 300#	3.56" (90mm)	4.06" (103mm)	4.51" (113mm)
DIM "X" ANSI CLASS 600#	3.81" (97mm)	4.38" (111mm)	4.69" (119mm)

\* "H" & "X" DIMENSIONS ARE APPROXIMATE (FOR SIZING PURPOSES ONLY)

CUSTOMER: \_\_\_\_\_

PROJECT: \_\_\_\_\_

ORDER NO: \_\_\_\_\_

TAG NO: \_\_\_\_\_

PIPE SIZE & SCHEDULE: \_\_\_\_\_

CATALOG NO: \_\_\_\_\_

SERIAL NO: \_\_\_\_\_

CERTIFIED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**Veris, inc.**

6315 MONARCH PARK PLACE  
NIWOT, CO 80503  
PHONE: 303-652-8550  
FAX: 303-652-8552

VERABAR MODEL: V550  
SPRING LOCK FLANGED

DATE: 09/20/01  
SCALE: NTS

DWG NO. SUB-3943  
REV A PAGE 1 OF 1