

V200 Screw Drive – Threaded 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.

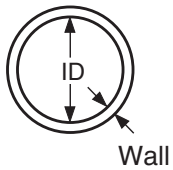
V200S**V200D**

V200 Hot Tap	
Pipe Connection	Threaded (NPT)
Mounting Type	Ball or gate access valve
Features and Benefits	• Most commonly used hot tap model • Installation, insertion & retraction without system shutdown • Economical single threaded rod for most applications • Two threaded rods for high pressures • Synchro drive simultaneously rotates both rods (double rod drives only) • Patented, anti-seize orbital bearing aligns threaded rods and eliminates galling • Can mount to existing valves
Applications	• Air (compressed, combustion) • Natural gas • Water (raw, cooling, feedwater) • Steam
Special Designs - Consult Factory	• Custom mounting, lengths, materials, instrument connections, etc. • Short straight run

Temperature Pressure Limits (ANSI Class)*
150#
275 psig @ 100°F (19 bar @ 38°C)
80 psig @ 800°F (5.5 bar @ 426°C)
600#
1440 psig @ 100°F (99.3 bar @ 38°C)
825 psig @ 800°F (56.9 bar @ 426°C)

Model Specifications	V200S			V200D	
Sensor Code	05	10	15	10	15
Sensor Diameter	7/16" (11mm)	7/8" (22mm)	1-3/8" (35mm)	7/8" (22mm)	1-3/8" (35mm)
Accuracy	±1% of flow rate; up to +/-0.5% if calibrated				
ANSI Class*	600#	150#	150#	600#	600#
Drive Rods	Single			Double	
Pipe Size	2" - 6" (50mm-150mm)	6" - 42" (150mm-1050mm)	12" - 60" (300mm-1500mm)	6" - 42" (150mm-1050mm)	12" - 60" (300mm-1500mm)
Instrument Connection	1/2" NPT or Direct Mount			1/2" NPT or Direct Mount	
Components Furnished	Weld coupling, close nipple, access nipple and valve				
Weld Coupling Size	3/4" NPT	1-1/4" NPT	2" NPT	1-1/4" NPT	2" NPT

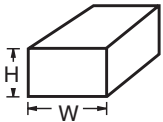
* DIN and JIS flanges available. Consult factory.

1. Enter Pipe Dimensions or Duct Dimensions

Pipe Size _____ Sch _____

Pipe ID _____ and

Wall _____ Pipe Material _____

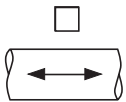


Height (H) _____

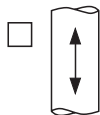
Width (W) _____

Wall _____

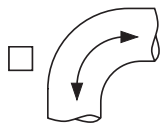
Duct Material _____

Dimension
Verabar® spans
(H) or (W)**2. Pipe or Duct Orientation (Check one box)**

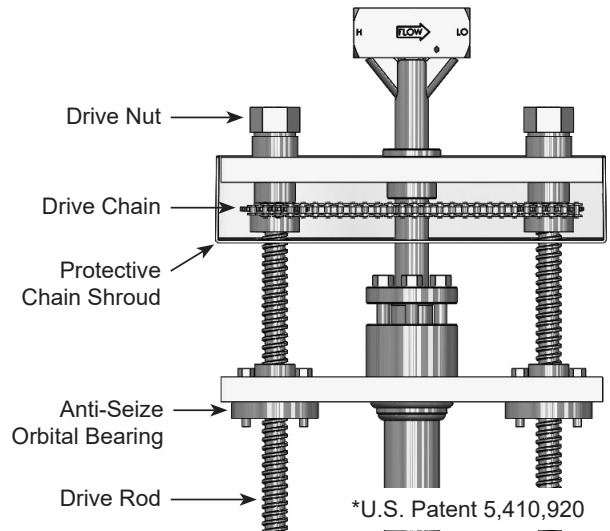
(H) Horizontal



(V) Vertical

Short
Straight Run
Consult Factory**Synchro-Drive (Option SYN)****Synchro-Drive Description**

Designed for pressures greater than ANSI Class 150#, Synchro-Drive is equipped with two drive rods that are coupled together by a protected chain drive system. Turning either drive nut simultaneously rotates both rods.

**Synchro-Drive Benefits**

95% faster and easier insertion and retraction.
Equal load distribution over both rods maintains sensor alignment and eliminates binding.

3. Enter Flow Conditions

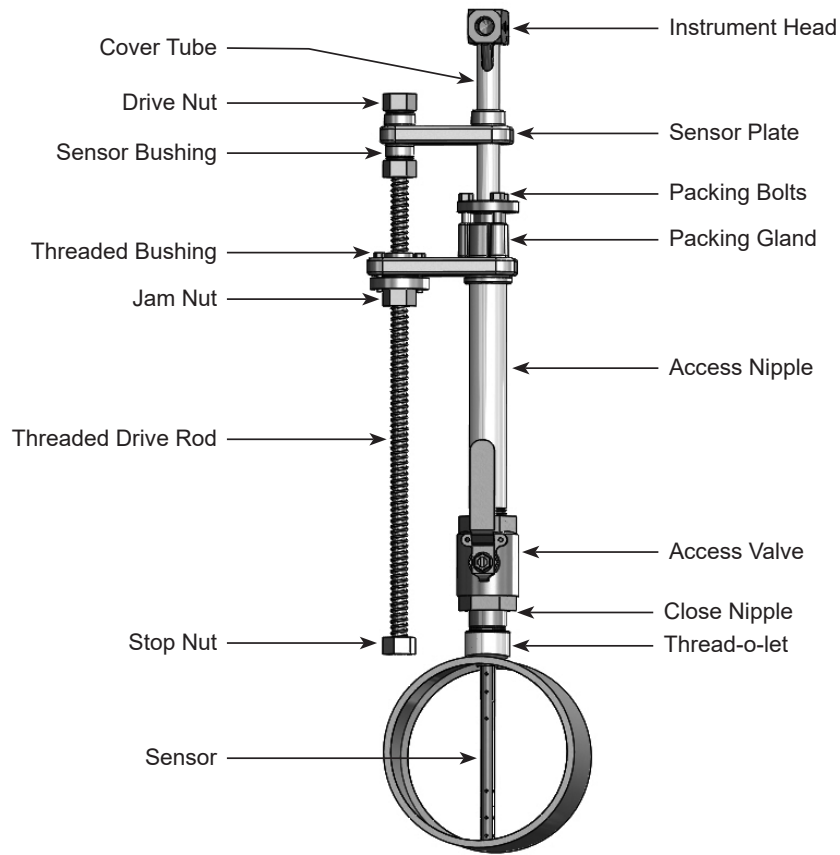
Fluid Name:		Maximum	Nominal	Minimum	Units
Flow Rate					
All Fluids	Pressure @ Flow				
	Temperature @ Flow				
Gas	Specific Gravity, or Molecular Weight				
Liquid	Specific Gravity				
Steam	VeraCalc Program can calculate Density from Temperature and Pressure				

4. Select Model from Page 3

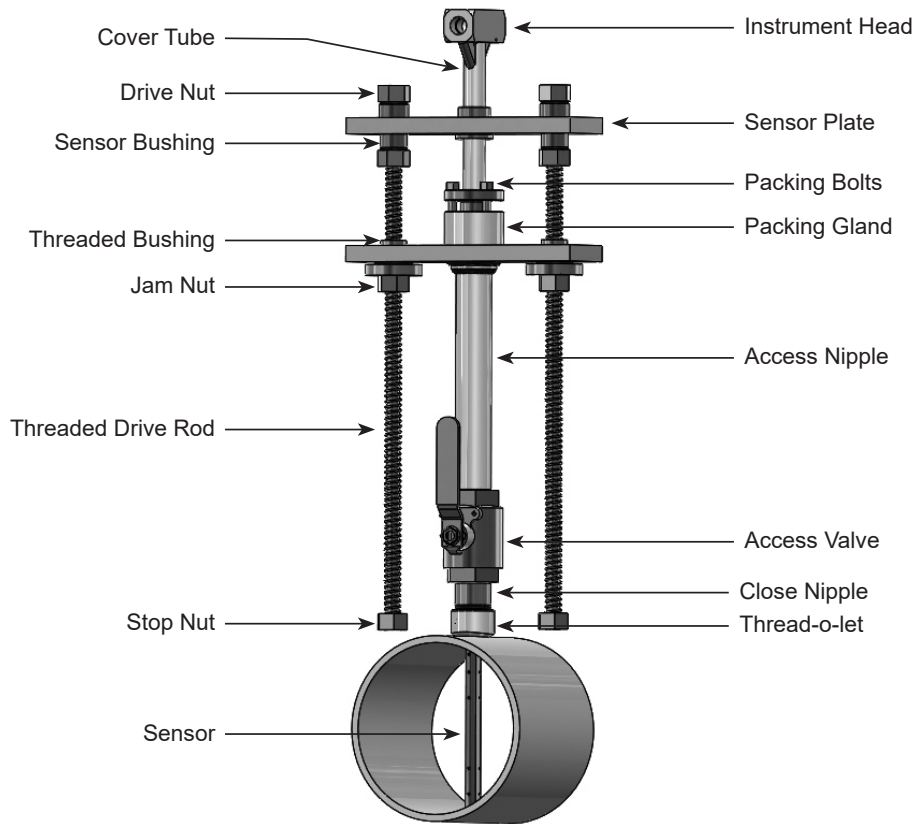
Use the Ordering Information table on Page 3 to determine your model number.

5. Flow Calculation

All 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.



V200S (Single Rod)



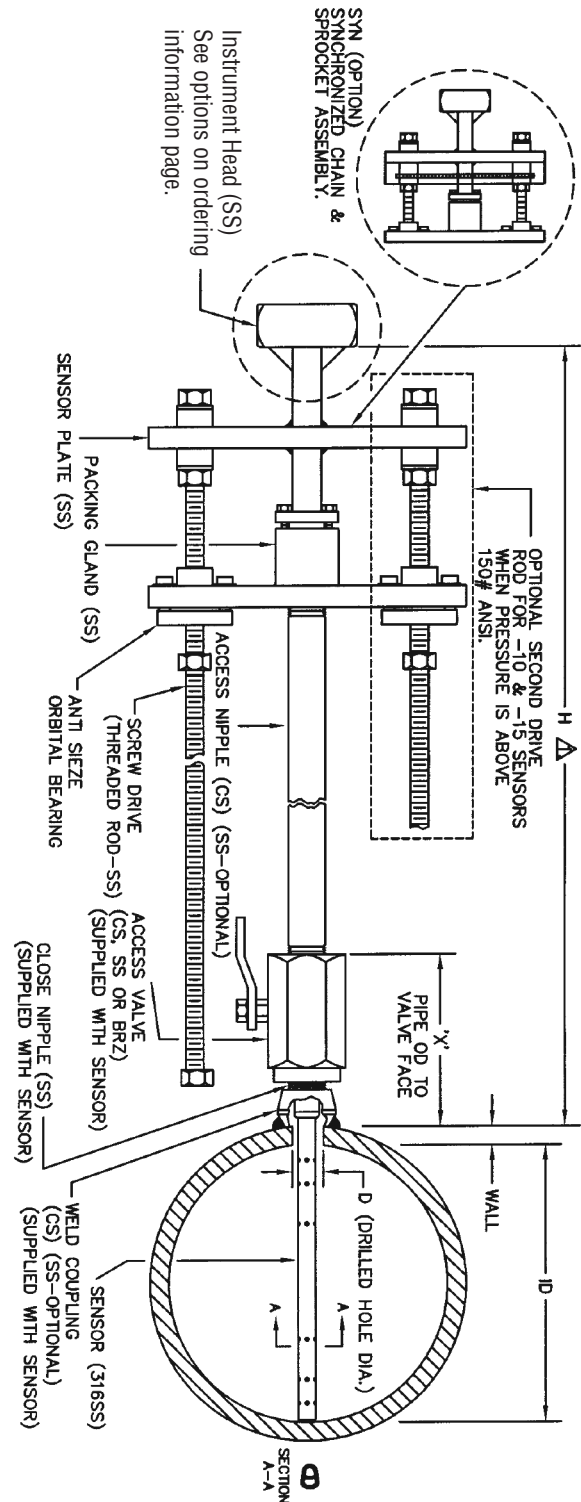
V200D (Double Rod)

Model	Hot Tap • Threaded Pipe Connections and Components						
V200S	Single Rod, Insert/Retract, General Purpose (05 Class 600#, 10 and 15 Class 150#)						
V200D	Double Rod, Insert/Retract, Higher Pressures (600# max.) (10 and 15 only)						
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)				Direct Mount Transmitter (Flanged 450°F/232°C Max.)†			
Parallel	Regular	RTD*	Valve	Transmount	Mass Transmount	Manifold	
			 Integral		 Integral RTD	 Integral	
P	R	D	T	F	G	M	
Instrument Valves (Opt.)				Manifolds (Optional)			
Remote Mount				Direct Mount			
Needle	Gate	3-Valve		5-Valve			
 1/2" NPT	 1/2" NPT	 Soft Seat Hard Seat		 Soft Seat Hard Seat			
C2NC (CS) C2NS (SS)	C2GC (CS) C2GS (SS)	F3SC (CS) F3SS (SS)	F3HC (CS) F3HS (SS)	F5SC (CS) F5SS (SS)	F5HC (CS) F5HS (SS)		
Optional				Mounting Assembly — Select Valve Type & Material (Includes valve, close nipple & weld coupling)			
Sensor (Valve Size NPT)			Type, Material & Rating				
05 (3/4")	10 (1-1/4")	15 (2")					
Code							
B3B	B5B	B8B	Ball, Brz., 600 psig @ 100°F, 100 psig @ 400°F				
B3C	B5C	B8C	Ball, CS, 1000 psig @ 100°F, 100 psig @ 400°F				
B3S	B5S	B8S	Ball, SS, 1000 psig @ 100°F, 100 psig @ 400°F				
G3C G3S	G5C G5S	G8C G8S	Gate, CS, ANSI Class 600# Gate, SS, 1200 psig @ 100°F, 660 psig @ 800°F				
Code		Options					
SYN		Synchronized Two Rod Drive System (Available for V200D-10 and V200D-15 sensors only)					
WPS		SS Wetted Components (Furnished with SS weld coupling, close & access nipple) Must be ordered with SS access valve.					
V200D	8"sch40	10	H	R	C2NC	B5C	SYN
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.

 VERIS Flow Measurement Group armstronginternational.com/veris			VERIS Verabar® V200 Single & Double Rod, Threaded		
DATE: 09/20/01			DWG. No. SUB-3936		
Scale: NTS			Rev: A Page 1 of 1		



- NOTES:
- $H=ID+WALL+X+10.2"$ (SENSOR -05 INSERTED).
 $H=ID+WALL+X+11.6"$ (SENSOR -10 INSERTED).
 $H=ID+WALL+X+13.6"$ (SENSOR -15 INSERTED).
 $H=2(ID+WALL+X)+10.1"$ (SENSOR -05 RETRACTED).
 $H=2(ID+WALL+X)+11.4"$ (SENSOR -10 RETRACTED).
 $H=2(ID+WALL+X)+13.3"$ (SENSOR -15 RETRACTED).
ADD 1.5" TO "H" FOR -10 SYNCHRO DRIVE.
ADD 1.75" TO "H" FOR -15 SYNCHRO DRIVE.
 - INSTRUMENT HEAD AND ACCESS VALVE ORIENTATION FOR SHOWN 90 DEGREES FROM ACTUAL ORIENTATION FOR CLARITY.

ITEM	SENSOR -05	SENSOR -10	SENSOR -15	PRESSURE RATING
SENSOR DIA.	7/16" (11mm)	7/8" (22mm)	1-3/8" (35mm)	-
COUPLING SIZE	3/4" NPT	1-1/4" NPT	2" NPT	-
DIM "D" DRILLED HOLE DIAMETER	1/2" (13mm)	1" (26mm)	1-1/2" (39mm)	-
DIM "X" FOR BRONZE BALL VALVE	5.6" (142mm)	7.2" (183mm)	8.4" (213mm)	600PSI • 100F/100PSI • 400F
DIM "X" FOR CS BALL VALVE	6.2" (157mm)	7.6" (193mm)	9.1" (231mm)	1000PSI • 100F/100PSI • 400F
DIM "X" FOR SS BALL VALVE	6.0" (152mm)	7.7" (196mm)	9.1" (231mm)	1000PSI • 100F/100PSI • 400F
DIM "X" FOR CS GATE VALVE	6.5" (165mm)	7.7" (196mm)	10.1" (257mm)	ANSI CLASS 600#
DIM "X" FOR SS GATE VALVE	6.0" (152mm)	7.7" (196mm)	8.8" (224mm)	1200PSI • 100F/660PSI • 800F

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



Armstrong VERIS Flow Measurement Group

5820 Glacier Way, Frederick, CO 80516 - USA Phone: 303-652-8550 Fax: 303-652-8552

armstronginternational.com