

The Data Industrial flow sensor features a six-bladed impeller design with a proprietary, non-magnetic sensing mechanism. The forward-swept impeller shape provides higher, more constant torque than four-bladed impeller designs and is less prone to be fouled by water-borne debris. The forward curved shape coupled with the absence of magnetic drag provides improved operation and repeatability even at lower flow rates. This is more

important where the impeller may be exposed to metallic or rust particles found in steel or iron pipes. As liquid flow turns the impeller, a low impedance 8VDC square wave signal is transmitted with a frequency proportional to the flow rate. This signal can travel up to 2,000' between the sensor and the display unit without the need for amplification. All sensors are supplied with 20' of Belden type 9320 (two conductor shield) cable.

## Model 220B (Brass) and 220S (Stainless Steel) Sensor

The Model 220B (Brass) and 220SS (Stainless Steel) sensors are used in most general flow measuring applications in metallic, non-metallic, or PVDF Pipes. The sensor mounts in a 2" NPT pipe saddle or Thredolet® for installation in pipe sizes from 2½" to over 40". Positioning nuts on the three threaded retaining rods allow the sensor to be accurately positioned to a standard insertion depth of 1½ inches into the pipe. When this insertion depth is maintained, and there is at least 10 upstream and 5 downstream diameters of straight uninterrupted flow, an accuracy of +/-1% of full scale can be obtained between flow velocities of 1 to 30 feet/second. (Specification details are listed on reverse side.)

## Hot Tap Sensor Models 225 and 226

The Hot Tap Sensor Series features an elongated sensor, special mounting adapter, pipe nipple, and isolation valve, to allow the non-magnetic impeller sensor to be installed into a pressurized pipe while the pipe is in service. This is accomplished by first attaching a saddle or Thredolet® to the pipe and screwing the nipple and isolation valve into the saddle or Thredolet fitting. A hole is then drilled through the pipe using a commercial tapping machine. When completed the tapping apparatus is removed, the isolation valve is closed, and the sensor is installed.

The Hot Tap Sensor is also recommended for any application where it would be difficult to shut down or drain the pipeline to remove the sensor for service. The overall length of the sensor tube is 18 inches (457mm). However, a clearance height of 50 inches (127cm) should be allowed for the fully extended length of the insertion tool.

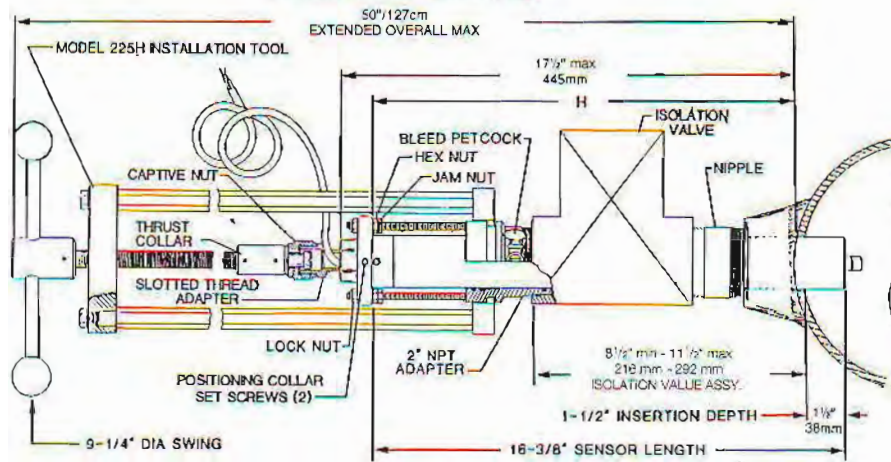


**Model 225B**  
Brass unit with a gate-type  
isolation valve.

**Model 226B  
and 226SS**  
Brass or stainless steel sensor  
and ball type isolation  
valve.

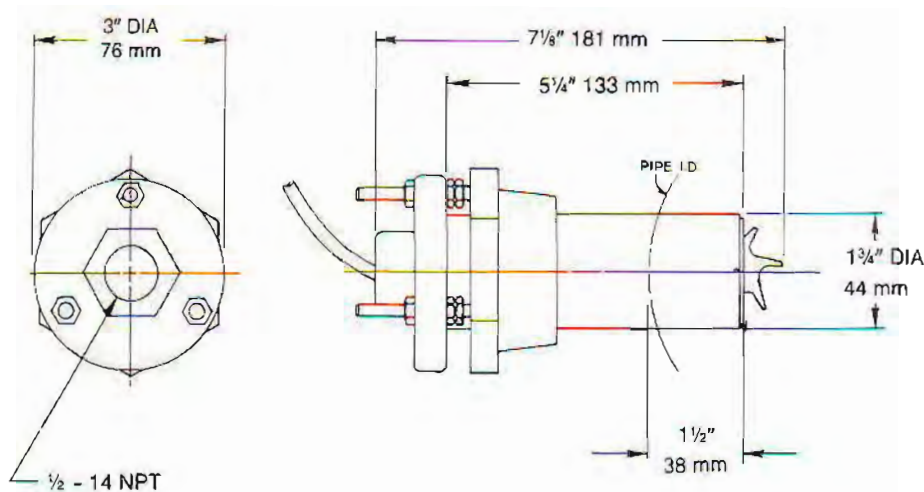
**Model 225H**  
Insertion tool is provided  
separately to insert or  
remove the sensor when  
under pressure.

**DIMENSIONS 225/226  
with Insertion Tool in place**



NOTE: ALL DIMENSIONS ARE FOR REFERENCE ONLY.  
CUTTING TOOL MAY REQUIRE ADDITIONAL CLEARANCE.

**DIMENSIONS 220B, 220SS**



**Specifications: 220B, 220SS, 225B, 226B, 226SS.**

Accuracy: +/-1% of full scale.  
Linearity: +/-1%  
Repeatability: +/-0.3%  
Rangeability: 30:1  
Flow Rate: 1-30 feet/sec.  
Max Pressure: 400psi  
(200psi for model 225B)  
Max Temperature: 221°F (105°C).

**Wetted Materials**  
Impeller: Glass reinforced nylon.  
Bearing: Pennlon® (UHMWPE).  
Ultra High Molecular Weight Polyethylene.  
Shaft: Tungsten Carbide  
Housing: Glass reinforced polyphenylene sulfide (PPS).  
O-Rings: Ethylene propylene (EPDM).

220B, 225B and 226B Sleeve  
Admiralty brass UNS C44300.  
Hex adapter valve bronze UNS C92200.  
2200SS and 226SS Sleeve  
300 Series Stainless Steel and  
Hex adapter.

Consult Factory for other Impeller, Shaft, Bearing, O-Ring Options



Data Industrial Corporation, 11 Industrial Drive, P.O. Box 740, Mattapoisett, MA 02739, Telephone: (508) 758-6390 FAX: (508) 758-4057