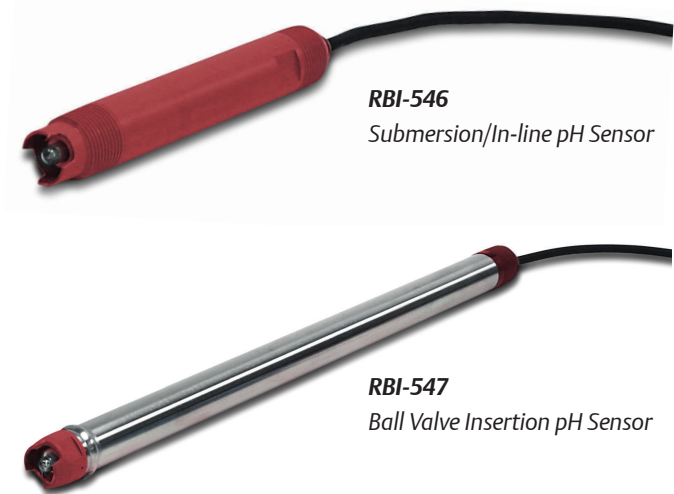


# Threaded In-Line, Submerged or Ball-valve Insertion pH Sensor

- Maximum sensor life due to proprietary multi-junction which hinders reference poisoning.
- Chemically resistant KYNAR®
- Rugged, quick change, quick clean.
- Optional installation methods allows standardization of entire plant with a minimum of sensor part numbers.
- Assembled in a reusable Titanium sheath, Hi-Pressure body (RB-547).



## Installation

### RBI-546

**Threaded in-line:** ¾" MPT threaded nose for installation into process, sample line.

**Submerged:** ¾" MNPT threaded top for connection to ¾" FNPT coupling extension pipe.

### RBI-547

**Insertion:** 1" MPT process fitting or, 1¼" and 1½" ball valve assemblies. Insertion depth is user selectable.

**Submerged:** 1" MNPT process fitting, into 1" FNPT coupling or ¾" submersion extension pipe.

### Sensor & Transmitter types supported:

**pH:** Compatible with all Rosemount Analytical industrial transmitters and analyzers.

### Wetted Materials:

Kynar, Titanium (RBI-547 only), Porous TEFLON, Wood and Glass, choice of: Viton®, EPDM®, or Kalrez®.

### Maximum Pressure & Temperature Ratings:

**Max Temperature:** 266 °F/130 °C at 40 psig/276 KPa

**Max Pressure:** 150 psig/1035 KPa at 158 °F/70 °C

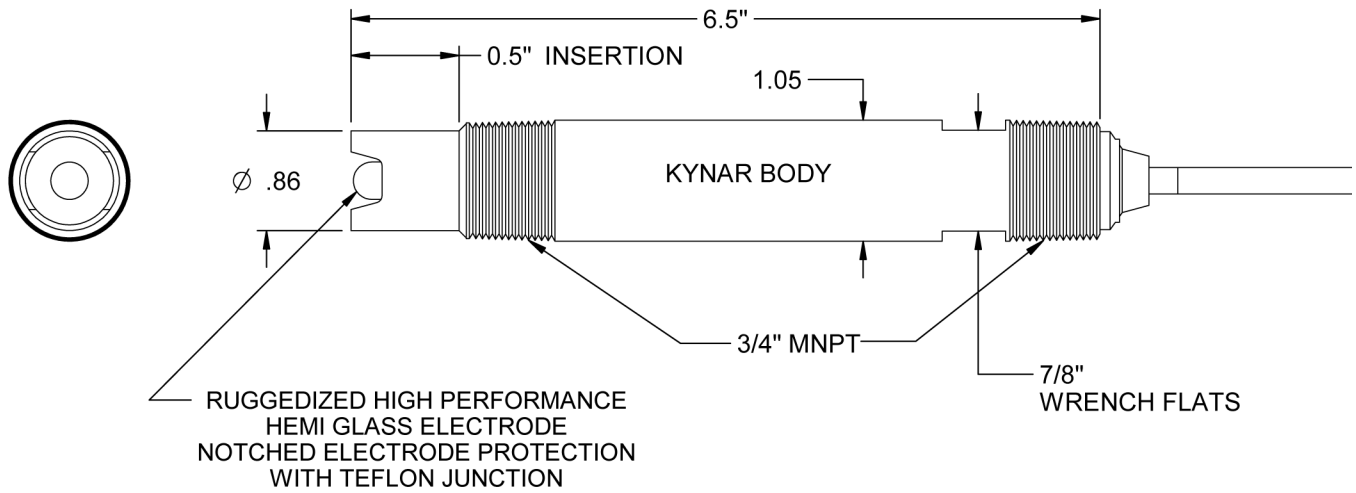
### Maximum Insertion/Retraction Pressure:

(option 546) 65 psig/448 KPa @ 158 °F/70 °C

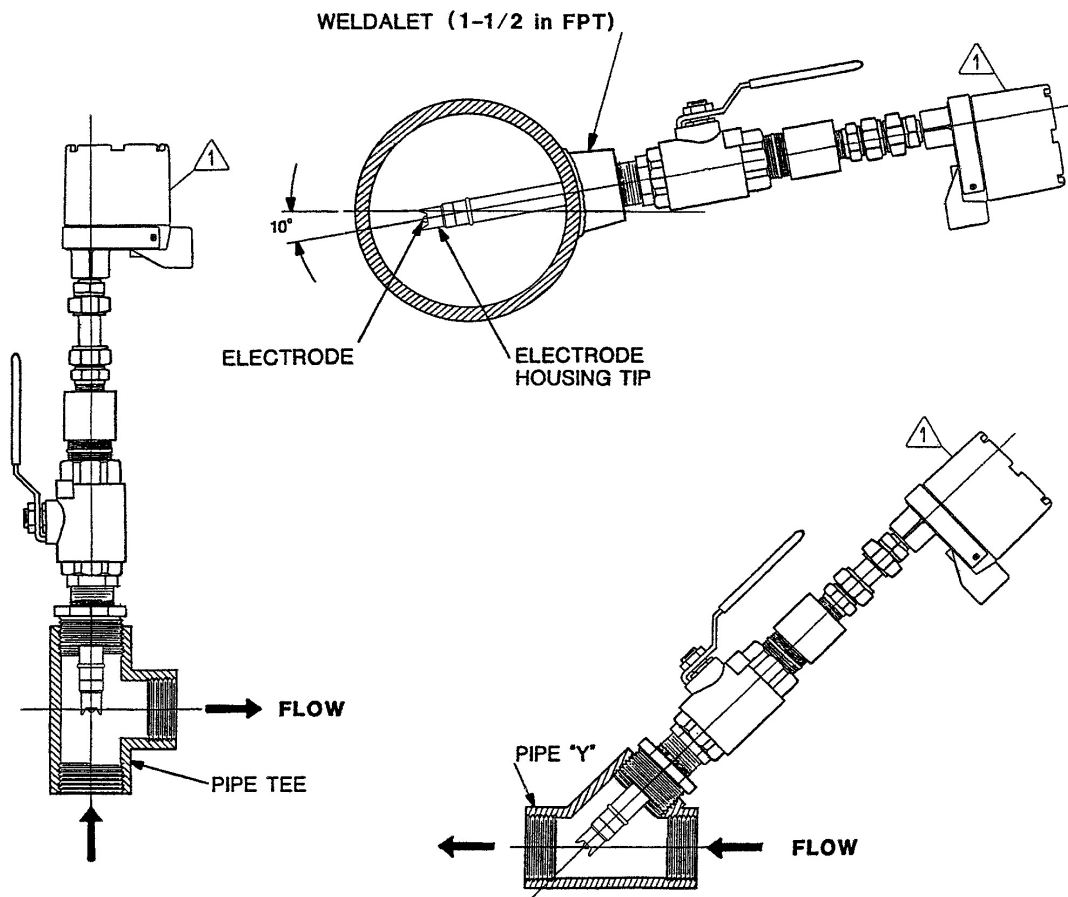
(option 547) 40 psig/276 KPa @ 266 °F/130 °C

### Measurement Range:

pH: 0–14 pH



*Sensor Dimensions, Submersion/In-Line RBI-546*



*Typical Mounting Details - RBI-547 Retraction Version*

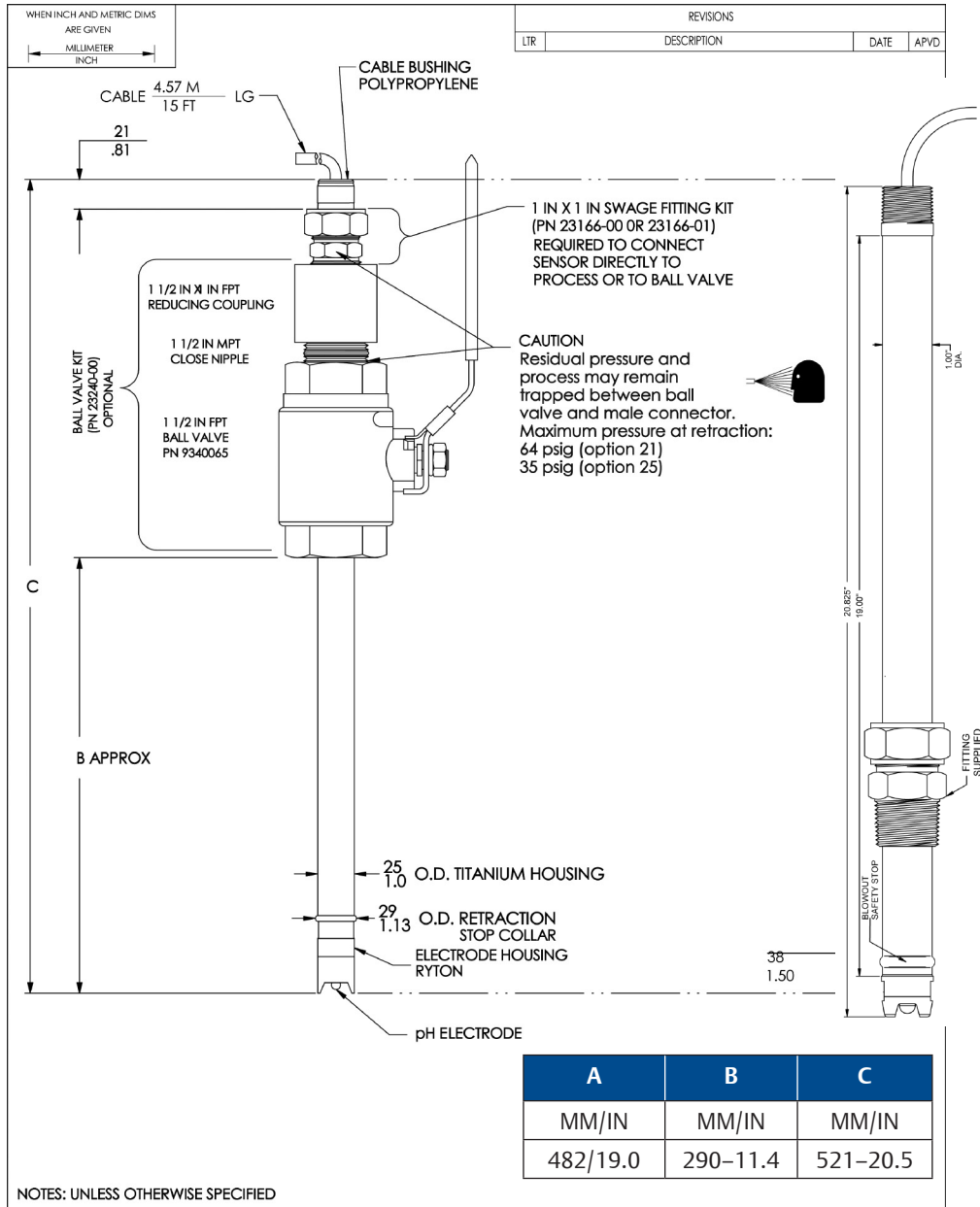
*Note: Sensor must be mounted at an angle between 10° and 90° above the horizontal. Pipe tees and weldalets provided by customer.*



Ball Valve Kit (PN 23240-00) used with RBI-547 retractable sensor

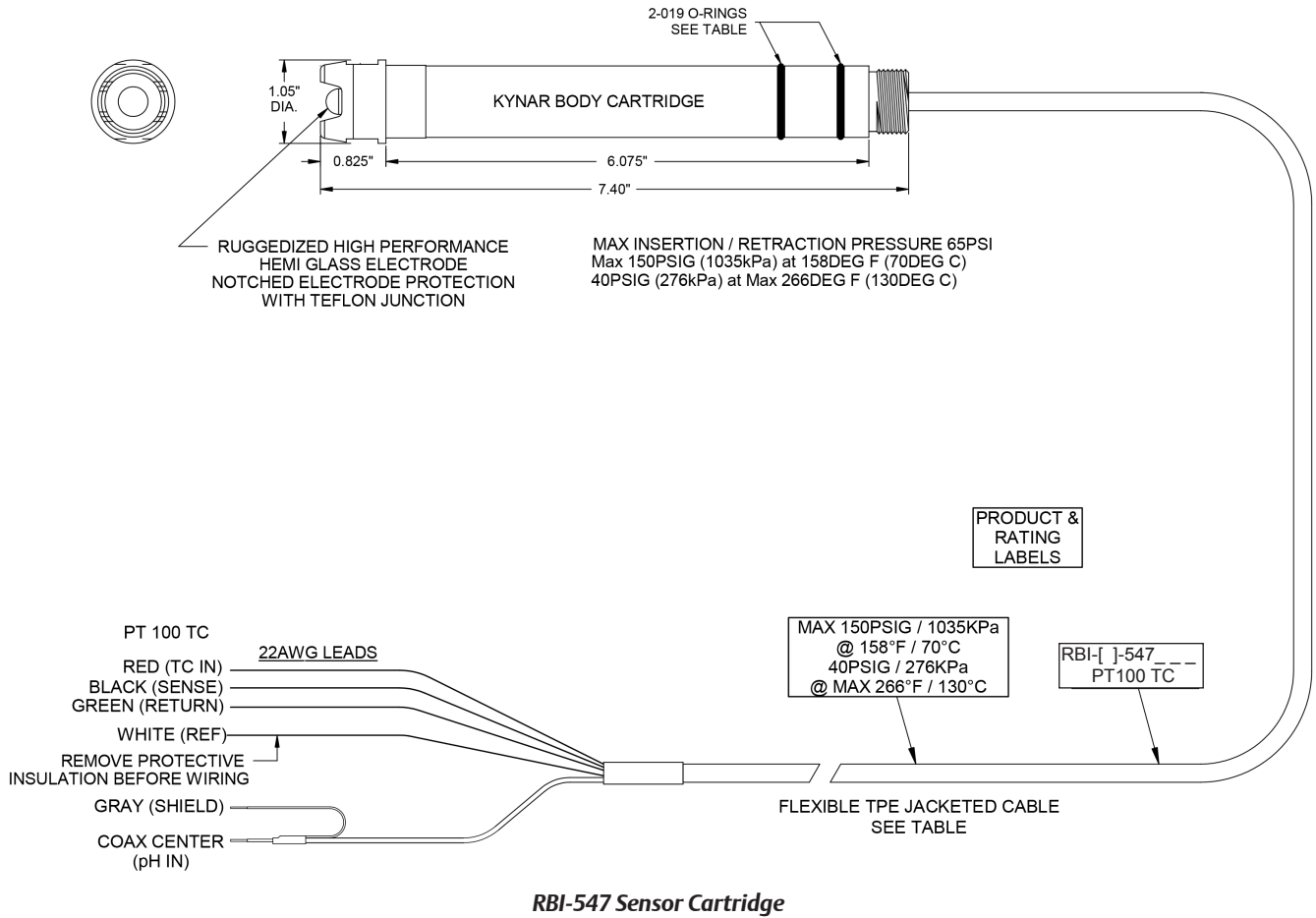


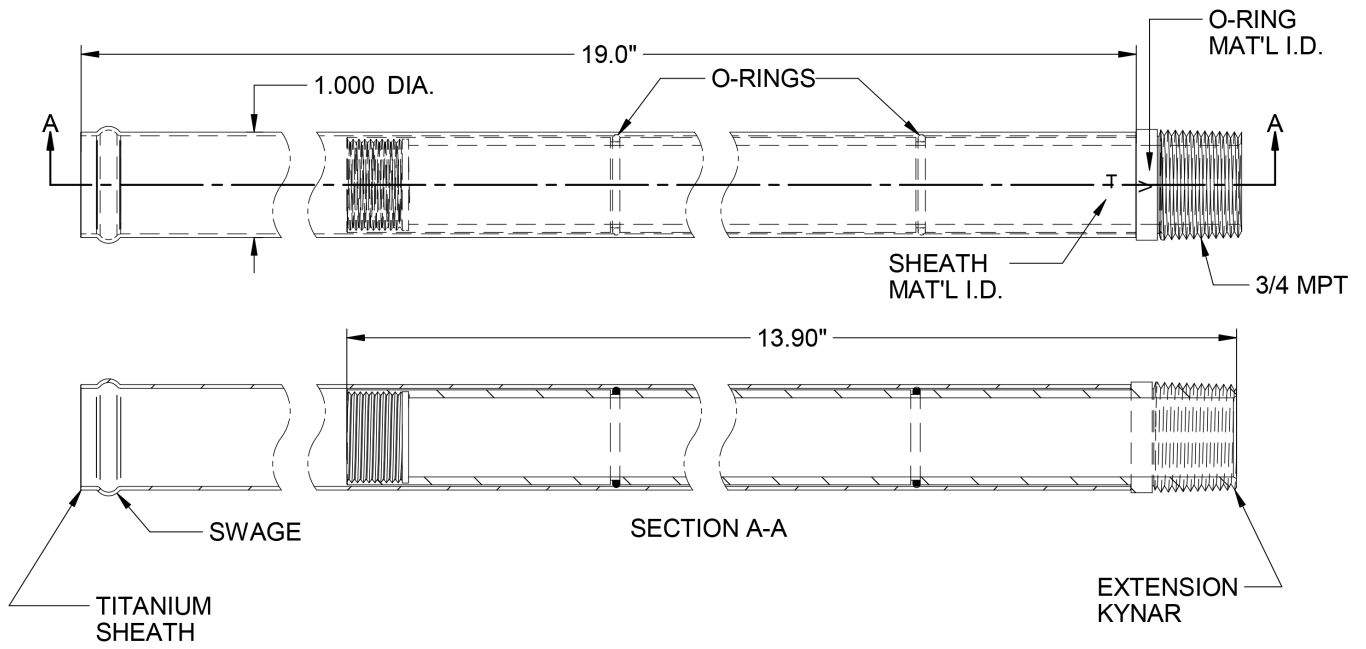
A process connector (PN 23166-00 or -01) must be used to connect the sensor to Ball Valve Kit 23240-00. Process connector can be purchased separately.



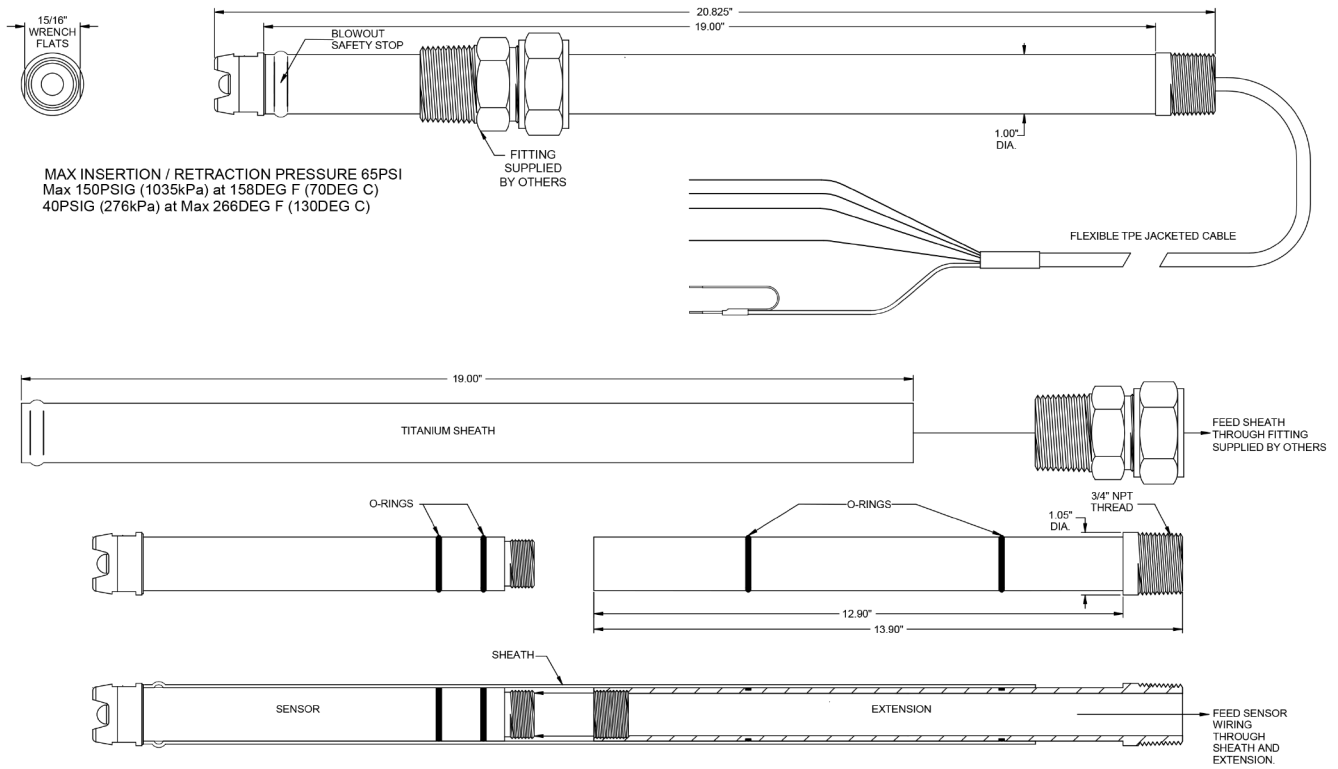
**Dimensional Drawings of RBI-547 with and without 1-½ in. Ball Valve Kit PN 23240-00**

For the ball valve installation shown, the ball valve kit (PN 23240-00) and 1 in. x 1 in. process connector (PN 23166-00 or 23166-01) must be purchased separately. Note: The 1¼" ball valve assembly (PN 23765-00) is not shown, but is compatible with RBI-547. Note: Add five (5) inches to length of sensor if mounting a sensor-head junction box onto the sensor.





**RBI-547 Sheath**



**RBI-547 Assembly (Cartridge and Stretch)**

## Ordering Information - RBI

The RBI pH Sensor is built with a Kynar® body and is designed in two configurations. The 546 sensor is housed in a fully encapsulated body for use in pipe tees or submersed in a tank. The 547 is the ball valve retractable version; the sensor body can be replaced and the titanium sensor sheath assembly (sold separately) can be reused. Both sensor types are built with a high performance J glass, notched tip with a Teflon junction, and a PT100 RTD. The integral cable is prepared with tinned leads for easy wiring.

Model	Description	Example: RBI-V-546-R-DT-C-S-05
RBI	pH Sensor with Multi-Junction	
O-ring Material		
V	Viton	
E	EPDM	
K	FFKM (perfluoro-elasteme), generic Kalrez	
Body		
546	¾" MNPT Inline/Submersion	
547	Replacement cartridge valve insertion (tube ordered separately)	
Measuring Electrode		
R	Ruggedized, Hemi-glass (0–14 pH), 15 to 130 °C	
FG	Ruggedized, Flat-glass (0–14 pH), 15 to 130 °C, Not available with option -546	
PX	Platinum ORP, Flat Solid Billet (0 to ± 1500 m V), 0 to 130 °C	
Tip Configuration		
DT	Dual notch teflon junction	
FT	Flush no tip protection, Not available with option 546, -R and -PX	
Temperature Compensation		
C	PT100 RTD (3-wire), Not available with option -PX	
N	None, Only available with option -PX	
Body Options		
S	Standard body	
Insertion Depth		
05	0.5" for option 546 only	
N	None, standard replacement sensor cartridge for option 547 only	
Cable Configuration		
15	15' cable	
N	30' cable	
Cable Configuration		
E	Reference on separate wire	
Lead Terminations		
TT	All tinned leads	
B2	BNC (with Molex for temp comp), Not available with option -FG, -PX, and -FT	

Retraction Accessories	
Part #	Description
RB5104-0058E	8" Titanium, Kynar, EPDM, 547 retractable insertion tube
RB5104-0078E	8" Hastelloy-C, Kynar, EPDM, 547 retractable insertion tube
RB5104-0120V	20" Titanium, Kynar, Viton, 547 retractable insertion tube
RB5104-0120E	20" Titanium, Kynar, EPDM, 547 retractable insertion tube
RB5104-0320E	20" Hastelloy-C, Kynar, EPDM, 547 retractable insertion tube
RB5104-0136E	36" Titanium, Kynar, EPDM, 547 retractable insertion tube
RB5104-0336E	36" Hastelloy-C, Kynar, EPDM, 547 retractable insertion tube

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