

General Specifications

Model PR10

pH/ORP

Retractable fitting

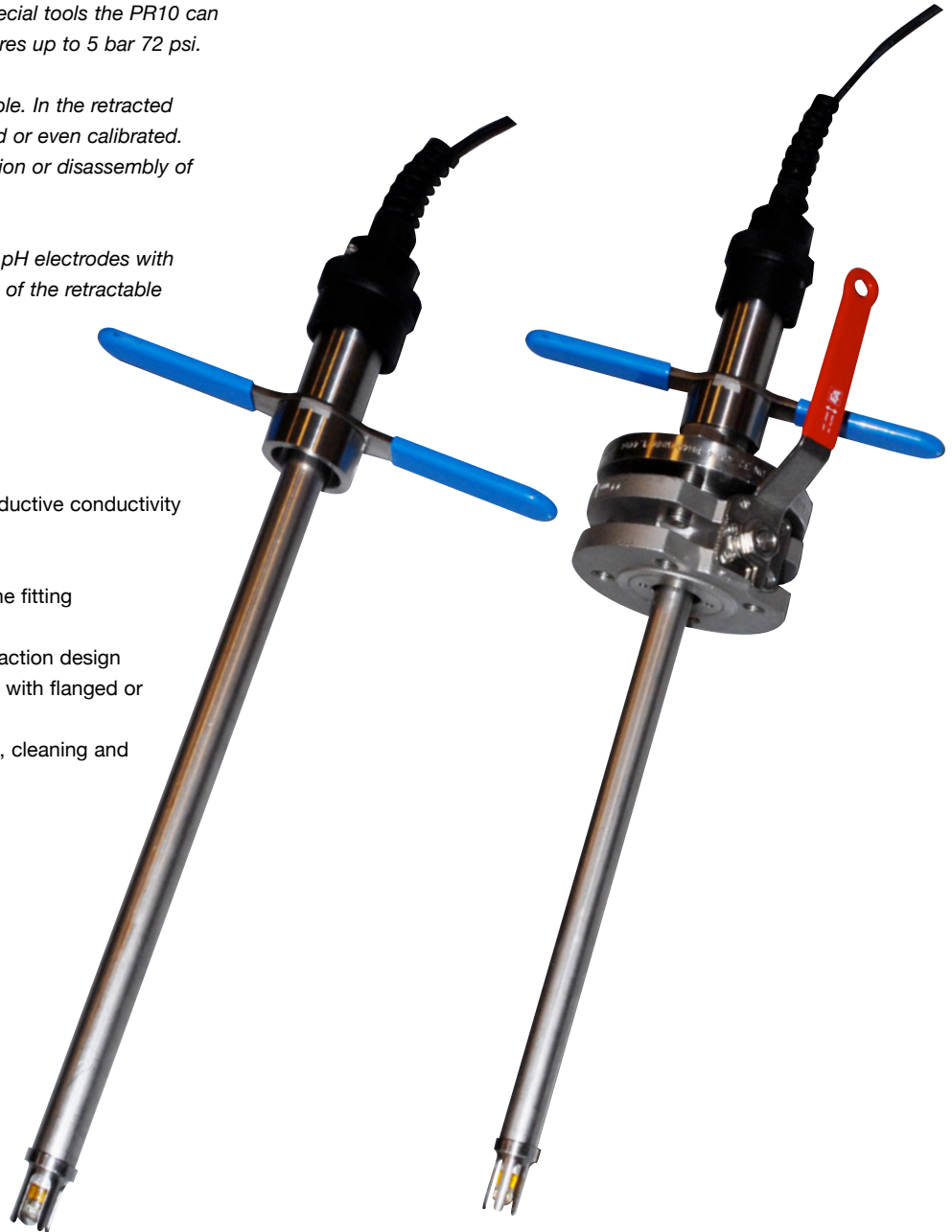
On-line measurements often present extra challenges, especially when routine maintenance is required. The PR10 is ideally suitable for applications where the sensors must be removed without interrupting or shutting down the process. Without any special tools the PR10 can be retracted safely from the process at pressures up to 5 bar 72 psi.

For ease of use optional flush ports are available. In the retracted position the sensor can be kept moist, cleaned or even calibrated. This can all be done without process interruption or disassembly of the armature.

The model PR10 can be adapted for use with pH electrodes with PG13.5 connection by changing only one part of the retractable assembly.

Features

- One model used for pH, conductivity and inductive conductivity sensors
- Integrated protection cage
- Built in scraper to avoid contamination of the fitting
- Usable for wide range of sensors
- A safe "through the valve" insertion and retraction design
- Simplified installation by optional ball valves with flanged or threaded connections
- Optional flush port for keeping sensor moist, cleaning and calibration



General Specifications

A. Wetted materials

- For sensor check Instruction Manual
- Stainless steel AISI 316L
- O-ring seals: Viton 70° shore

B. Non-wetted materials

- For sensor check Instruction Manual
- Stainless steel AISI 316, 304
- Polypropylene glass filled

C. Insertion length

- Ref. mechanical drawings Fig. 2-4 and Table 4

D. Pressure/temperature ratings

- Static conditions: max pressure 10 bar (142 psi); max temperature 150°C (302°F), see Fig 1
- Operating conditions during extraction and insertion max. 500 kPa, max. 100°C

E. Flange ratings:

- DIN flange DN32 PN10
- ANSI flange 1¼" 150 lbs

F. Specifications of the sensor used

- Please check sensor specifications

G. Weight

- Approx 2.5 kg excl. ball valve

H. Specifications of the sensor used

Yokogawa pH-sensors

- All SC21D sensors (PG13.5 connector) and can be used with the standard spare part cable (see table 1).
- All sensors without PG13.5 connector spare part cable is needed to fit in the PR10.
- Maximum sensor length is 120 mm

Competitor pH sensors

- All pH sensors with PG13.5, VP or Smart connector with a max sensor length of 120 mm can be used (see table 1 and 2 for yokogawa sensors).

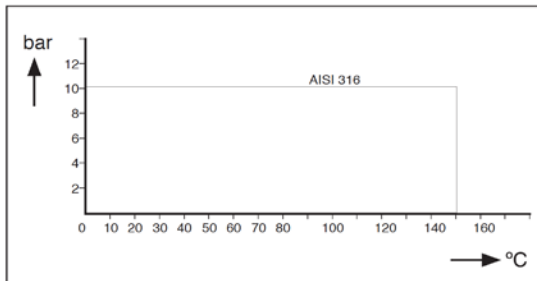


Fig. 1 Pressure / Temperature graphic

Table 1 Specifications Combined pH Electrodes (non-flow)

Type	Membrane	Resistance in MΩ/25°C	pH-range	Temp. range (°C)	Pressure range kPa	Reference liquid	Reference system	Diaphragm	Flow
SC21(D)-AGP24	Universal pH-glass bulb	50 - 100	0 - 14	0 - 80	1-500	3.3 m. KCl Thickened	Ag/AgCl (wire) Silver-silverchloride	Porous PTFE	0
SC21(D)-ASP23	Low ohmic pH-glass bulb	40 - 100	0 - 10	0 - 80	1-500	3.3 m. KCl Thickened	Ag/AgCl (wire) Silver-silverchloride	Porous PTFE	0
SC21(D)-AAP26	Chem. res. pH-glass bulb steam-sterillisable % bulb	250 - 400	0 - 14	0 - 110	1-500	Oversaturated KCl thickened	Ag/AgCl (wire) Silver-silverchloride	Porous PTFE	0
SC21(D)-ALP26	Chem. res. pH-glass dome	500 - 900	0 - 14	10 - 120	1-500	Oversaturated KCl thickened	Ag/AgCl (wire) Silver-silverchloride	Porous PTFE	0
SC21(D)-AGP26	Universal pH-glass bulb	120 - 200	0 - 14	-10 - 100	1-500	Oversaturated KCl thickened	Ag/AgCl (wire) Silver-silverchloride	Porous PTFE	0
SC21(C)-AGP64	Universal pH-glass bulb	50 - 100	0 - 14	0 - 80	1-500	3.3 m. KCl Thickened	Ag/AgCl (wire) Silver-silverchloride	Porous PTFE	0

Note 1: with D connector No Temperature compensation is possible

Note 2: with YEF connector PR20 cable is needed with integral T sensor K1520LP, K1520LQ, K1520LS and K1520LT.

Table 2 Specifications Redox Electrodes

Type	Temperature range	Process pressure	Metal surface
SM29-PT9	0 - 130°C	max. 1000 kPa	Platinum
SC29C(D)-PTP29	-10 - 100°C	max. 500 kPa	Platinum
SC29-PTG29	0 - 100°C	max. 1000 kPa	Platinum

Note 1: with D connector No Temperature compensation is possible

Table 3 Model- and suffix codes

Model	Suffix	Option	Description
PR10			Retractable Conductivity Fitting 19 mm
Fitting	-S		SS Type AISI 316
O-ring	-V		Viton O-ring sealing
Tube length	-L5		0.5 meter tube length
Connection	-D32		DN32 / 1¼" mounting
Sensor adapter for	-PH12 -PH13		12mm Y-cap 12mm (PG13.5) sensors
Screw-in adapters (SS AISI 316)		/SA125	ISO 228/1 G1¼ to 1¼" M-NPT
Flange adapters (SS AISI 316)		/FA125 /FN125 /FAD32 /FND32	Flange adapter drain 1¼" 150 lbs Flange adapter no drain 1¼" 150 lbs Flange adapter drain DN32 PN10 Flange adapter no drain DN32 PN10
Weld-in adapter (SS AISI 316)		/WA125	Straight weld-in adapter ISO 228/1 G1¼
Ball valves (SSI AISI 316)		/BF125 /BFD32 /BS125	Flanged ball valve 1¼" 150 lbs Flanged ball valve DN32 PN10 Screw-in ball valve 1¼" F-NPT
Certificate		/M	3.1 according EN 10024 for wetted metal parts

***Note:** With a ball valve, either a screw-in or flanged adapter is required

Note: Please order the K1525AF O-ring pick-up tool for maintenance purposes

****Note:** -PH13 option does not need to be ordered. All units will be stocked as PH12 & have the capability of being with PG13.5 sensor. PH13 can be ordered, however expect longer lead time.

Dimensions

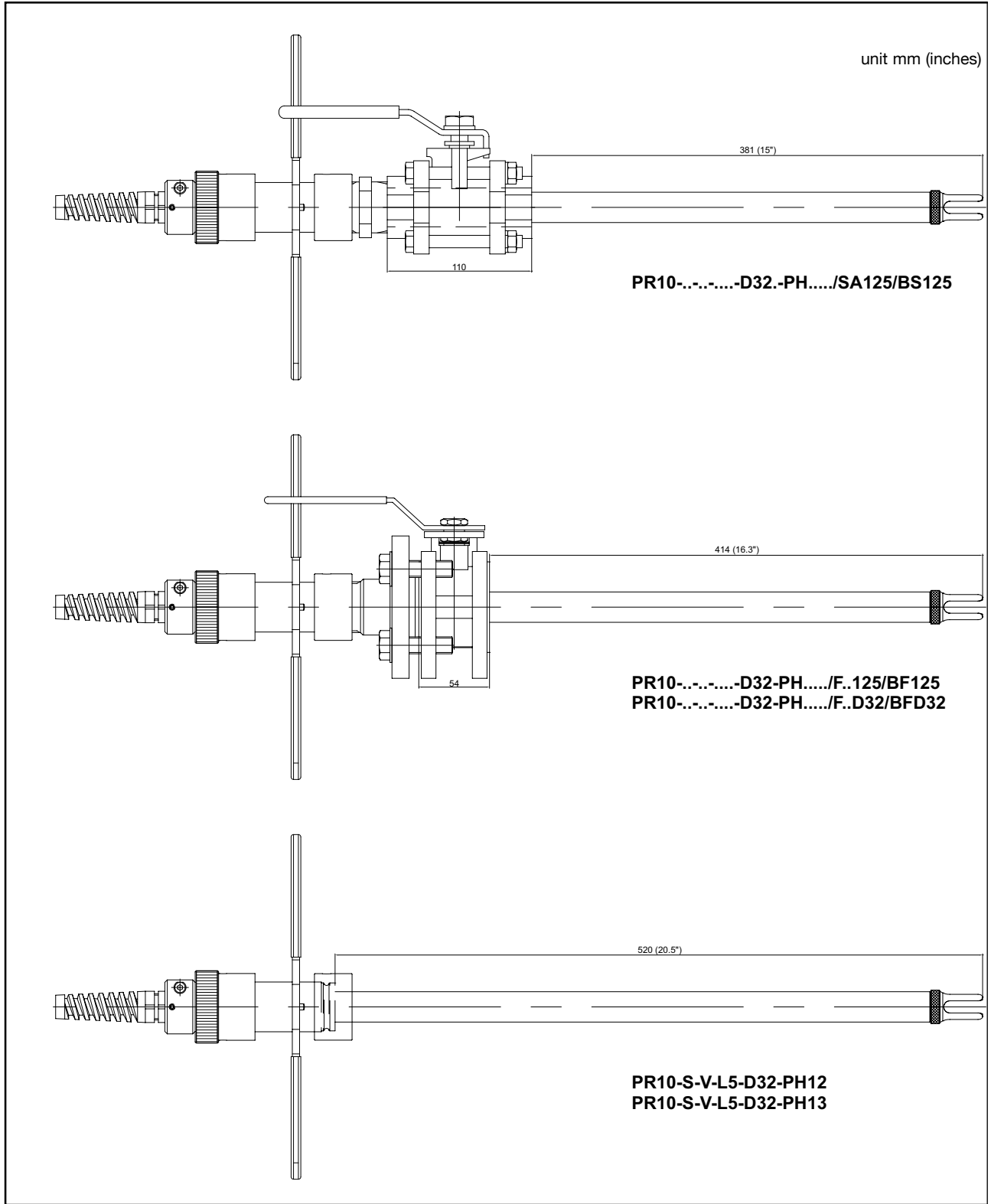


Fig. 2 Dimensional drawing PR10...-D32 with mounted PH12 + PH13 sensor

Options PR10

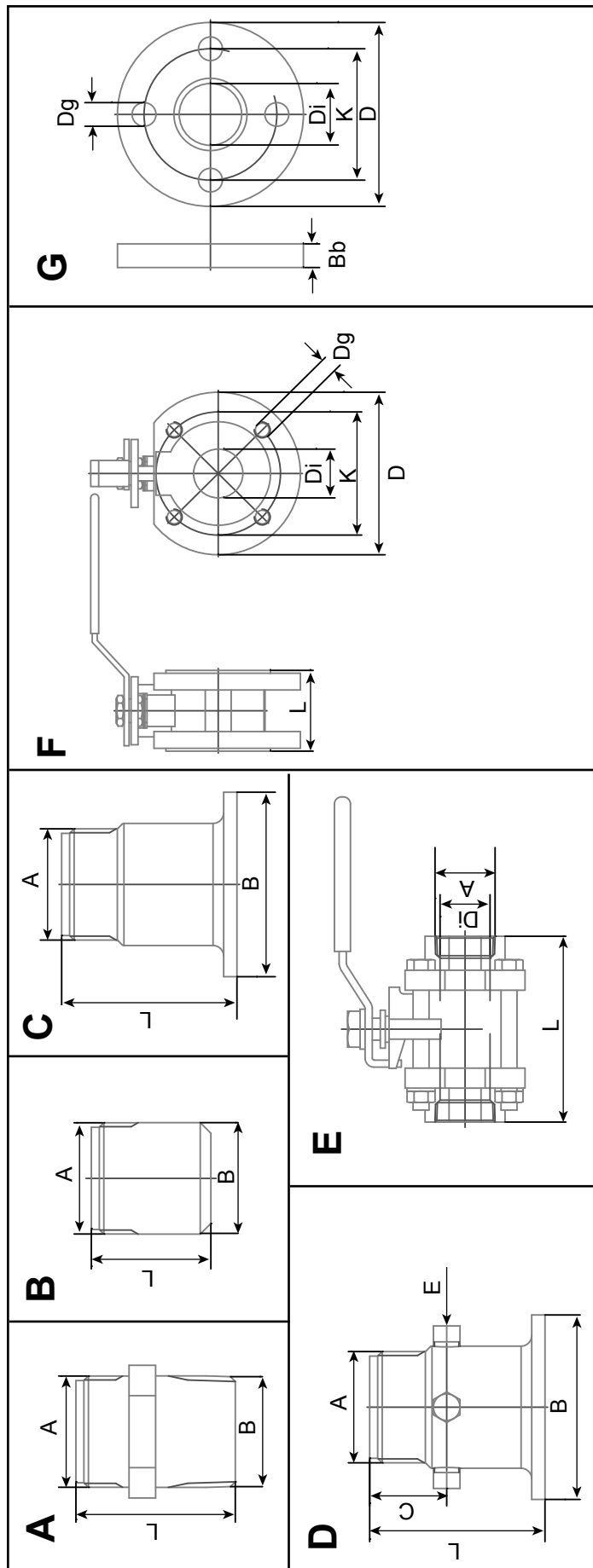


Fig. 3 Dimensions of the PR10 options

Table 4 Dimensions options in mm (inches)

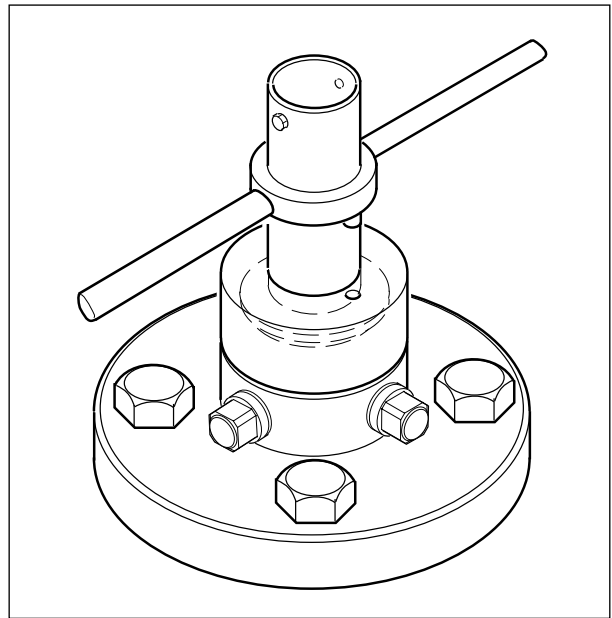
Option	Description	Fig.	A	B	L	C	Bb	D	E	Di	Dg	K
/SA125	ISO 228/1 G1 ¹ / ₄ to 1 ¹ / ₄ " M-NPT	A	ISO 228/1 - G1 ¹ / ₄	1 ¹ / ₄ " NPT	60 (2.4)	29 (1.1)	15.7 (0.6)	117.3 (4.6)	1/8" NPT	47 (1.9)	15.7 (0.6)	88.9 (3.5)
/FA125	Flange adapter drain 1 ¹ / ₄ " 150 Lbs	D, G	ISO 228/1 - G1 ¹ / ₄	69.5 (2.7)	66 (2.6)	29 (1.1)	15.7 (0.6)	117.3 (4.6)		47 (1.9)	15.7 (0.6)	88.9 (3.5)
/FN125	Flange adapter no drain 1 ¹ / ₄ " 150 Lbs	C, G	ISO 228/1 - G1 ¹ / ₄	69.5 (2.7)	66 (2.6)	29 (1.1)	16 (0.6)	140 (5.5)	1/8" NPT	47 (1.9)	18 (0.7)	100 (3.9)
/FAD32	Flange adapter drain DN32 PN10	D, G	ISO 228/1 - G1 ¹ / ₄	69.5 (2.7)	66 (2.6)	29 (1.1)	16 (0.6)	140 (5.5)		47 (1.9)	18 (0.7)	100 (3.9)
/FND32	Flange adapter no drain DN32 PN10	C, G	ISO 228/1 - G1 ¹ / ₄	69.5 (2.7)	66 (2.6)	29 (1.1)	16 (0.6)	140 (5.5)		47 (1.9)	18 (0.7)	100 (3.9)
/WA125	Straight weld-in adapter ISO 228/1 G1 ¹ / ₄	B	ISO 228/1 - G1 ¹ / ₄	42 (1.7)	45 (1.8)					32 (1.3)	M14	89 (3.5)
/BF25	Ball-valve flanged 1 ¹ / ₄ " 150 Lbs	F			54 (2.1)			118 (4.6)		32 (1.3)	M16	100 (3.9)
/BED32	Ball-valve flanged DN32 PN10	F			54 (2.1)			140 (5.5)		32 (1.3)	M16	100 (3.9)
/BS125	Ball-valve screw-in 1 ¹ / ₄ " F-NPT	E	1 ¹ / ₄ " NPT		110(4.3)					32 (1.3)		

Table 5 Spareparts

K1525AG	Adapter Y-cap
K1525AB	Sensor holder PG13.5
K1525AA	Outer tube
K1525AF	O-ring pick up tool
K1525BA	O-ring set PR10-S-V-L5-D32
K1525BC	Key set
K1525BD	Squeezing set
K1520LP	Cable retractable fitting 5M PT100
K1520LQ	Cable retractable fitting 5M PT1000
K1520LS	Cable retractable fitting 10M PT100
K1520LT	Cable retractable fitting 10M PT1000
K1525BE	Set M16 bolt & washer (8 pcs)
K1525BF	Set M14 bolt & washer (8 pcs)
K1525BH	Gaskets ball valves - D32 + 1/4"
K1525YA	PR10/SA125
K1525YB	PR10/FA125
K1525YC	PR10/FN125
K1525YF	PR10/FAD32
K1525YG	PR10/FND32
K1525YH	PR10/WA125
K1525YK	PR10/BF125
K1525YM	PR10/BFD32
M1263MD	PR10/BS125

Drain port connection

The PR10 retractable fitting can be equipped with optional drain (or flush) ports on the flanged adapter. The drain ports are tapered 1/8" NPT female for small diameter connectors.

**Fig. 4 Drain Port Connection**

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