



FLOWTEC®

ISV-B - INLINE SAMPLING BALL VALVE

ITALPROTEC
INDUSTRIES

Inline Sampling Ball Valves ISV-B Series

for safe and representative sampling of aggressive or even toxic liquids from pressurized pipelines or vessels, without any process interruptions.

Modular Design

Inline Sampling Ball Valves ISV-B Series are available as DIN- or ANSI-valves, with standard handle for 180° operation. The valves are distinguished by its dead-space-free design as well as the extremely short outlet way for the representative sample, even for viscous or solids-containing media.

The sturdy bodies are made of stainless steel casting 1.4408 (CF-8M) or optional with resistant linings such as PFA or PFA-AS (anti-static).



Main Features

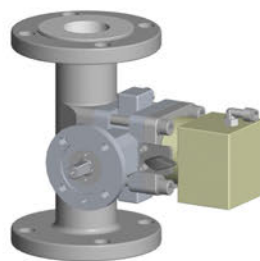
- Full-port design, no pressure drop
- Only one opening to the atmosphere
- Easy and safe operation by handle, 2 stops for 180° motion, optionally with pneum. actuator DA
- One-piece ball/shaft, PFA-encapsulated, for defined sampling volume of appr. 45 ml horizontal, appr. 25 ml vertical inst.
- All-purpose valve unit – installation on large size pipelines, vessels etc.
- Sizes DN15 - 150 PN16, ½" - 6"-150lbs
- Face to face acc. to EN 558-1, range 1 resp. ASME B16.10

Conformity acc. to European Pressure Equipment Directive 97/23/EC (PED)

Standard



with pneum. actuator DA



with vertical bottle adapter

Options / Accessories

- Bottle support with spring-loaded plate, adjustable
- Pneumatic actuator 180° DA (double-acting)
- Safety cabinet SS304 with inspection windows
- Flanges with groove, PN40, ANSI 300lbs etc.
- Safety padlock
- Activated carbon filter
- Vertical adapter
- Safety plug for adapter
- Metal safety basket

other options on request

Inline Sampling Ball Valves, plastomer-lined

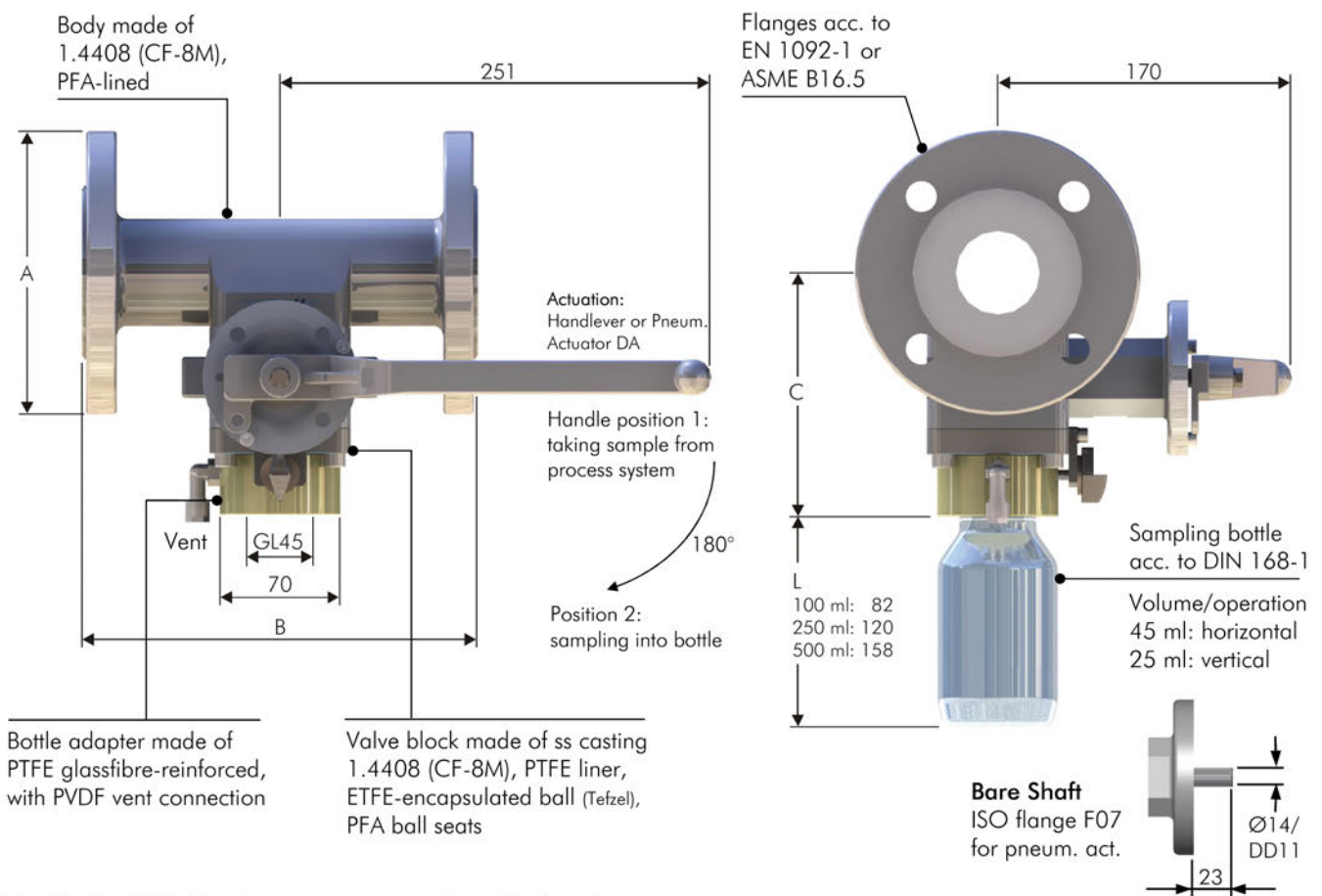
Operating Conditions

- Temperature range standard from -40°C up to +150°C (optional up to 200°C, depending on selected materials)
- Line pressure max. 16 bar

Testing / Marking

- Pressure- and tightness testing acc. to EN 12266-1, leakage rate A, and spark testing at 35 kV to assure lining integrity. Marking of valves on body and name plate acc. to EN 19.
- Material- resp. test certificate acc. to EN 10204-3.1

Construction of Valve



Technical Data Dimensions in mm (Kv = Cv / 1.16)

DN	A DIN	A ANSI	B DIN	B ANSI	C	~Cv usg/min	Nm**	Kg*
15/1/2"	95	95	160	160	119	18	35±5	5.3
20/3/4"	98	98	160	160	125	36	35±5	6.3
25/1"	115	108	160	165	125	70	35±5	6.8
40/1 1/2"	150	127	200	165	132	216	35±5	8.9
50/2"	165	152	230	178	137	321	35±5	10.6
80/3"	200	190	310	203	151	930	35±5	16.0
100/4"	220	228	350	229	168	1'425	35±5	26.6
150/6"	285	279	480	267	193	1'980	35±5	40.5

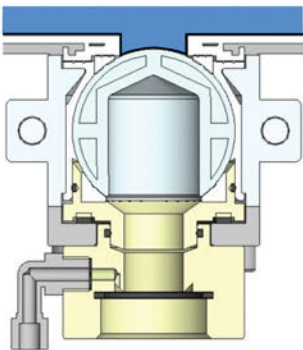
F/F acc. to DIN EN 558-1 range 1 resp. range 3 and ASME B16.10, other sizes and materials upon request

* Weights (estim. values, without bottle)

** Break-away torque without safety factor for pneum. rotary actuators, at standard combination such as ball ETFE/seat PFA

Operating Principle ISV-B Series (Sampling under pressure, with bottle)

Horizontal installation Sampling volume approx. 45 ml

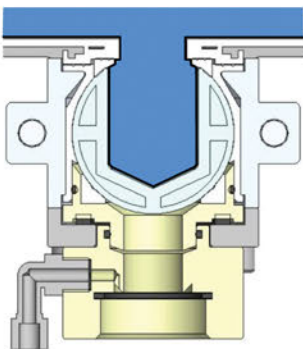


Valve in closed position

The valve is installed into a horizontal pipeline. The process line still provides full passage and allows easy cleaning at any time.

In closed valve position, the handle is in its initial vertical position, assured by two mechanical stops.

In order to prevent any unauthorized operation, the handle can be equipped with a safety padlock.



Valve in opened position for sampling

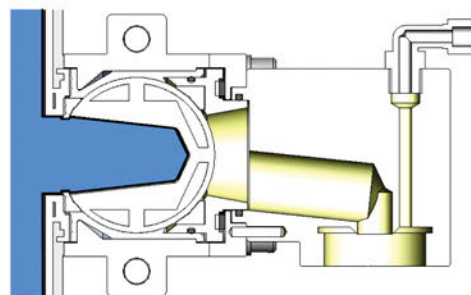
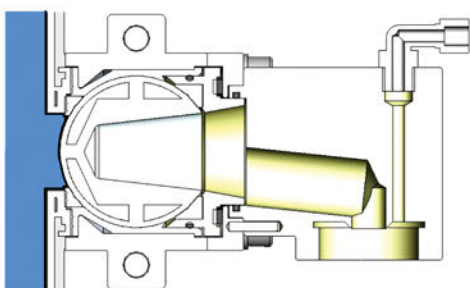
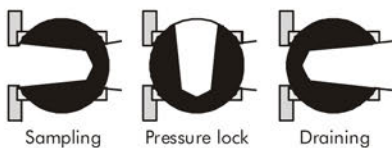
Liquid process media flows through the piping system. For taking out a sample, handle is rotated counter-clockwise at 180° towards the mechanical stop.

The entire volume of the sampling ball is being filled with product.

After a few seconds, lever is rotated 180° backwards into its initial position. Trapped media is moved downwards in order to flow into the lab bottle as a representative sample.

Depending on the required volume, sampling procedure has to be repeated accordingly.

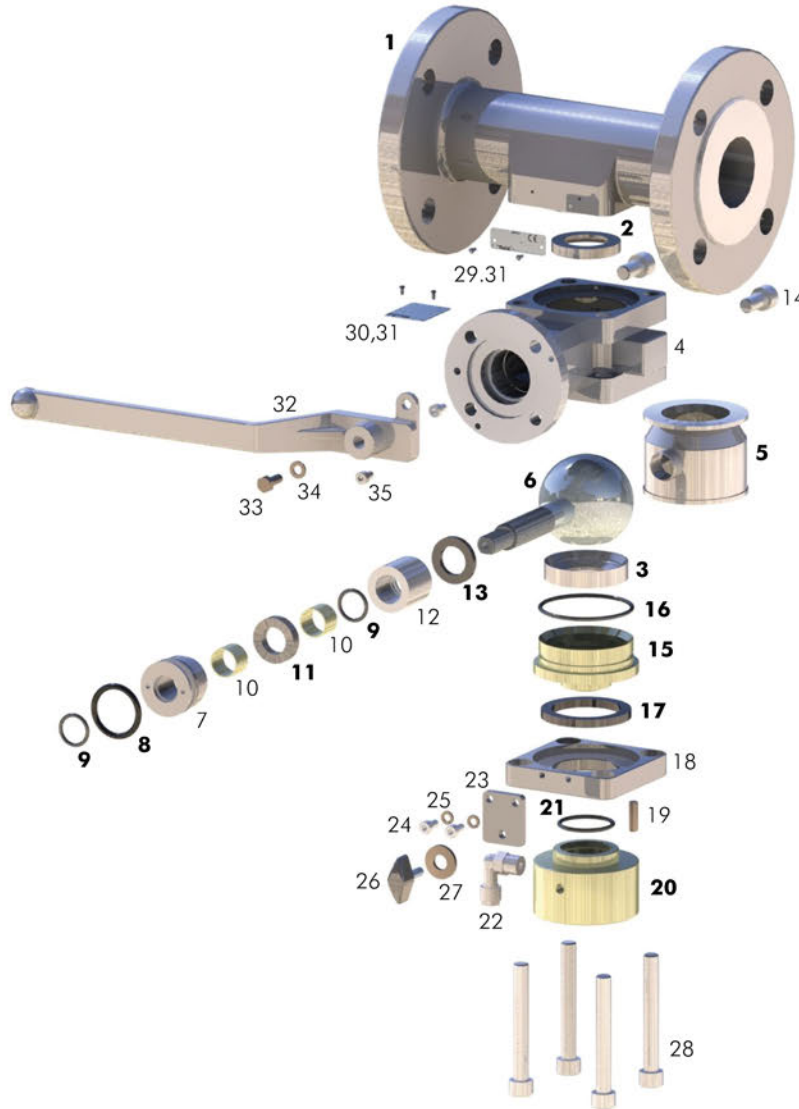
Vertical installation Sampling volume approx. 25 ml



Sampling procedure as described for horizontal version.

Inline Sampling Ball Valves, plastomer-lined

Standard Version (Picture showing DN 50 PN16, stainless steel body PFA-lined/ball ETFE-encapsulated, with handlever)

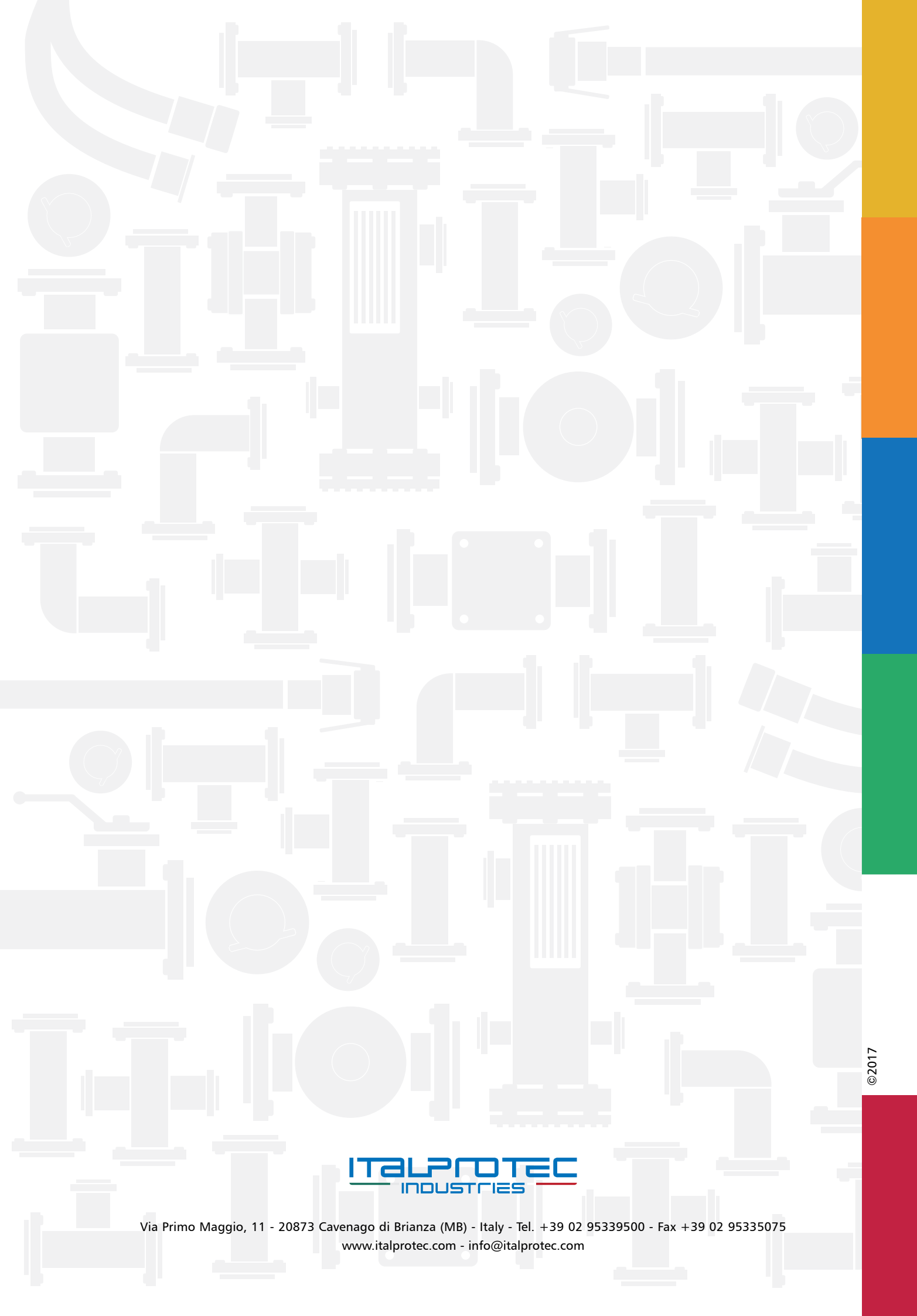


Main Components / Spare Parts

Item	Qty.	Description	S	Materials	Mat. Code
1	1	Body DN50 PN16 1.4408		CF-8M/PFA	1.4408
2	1	Ball Seat	●	PFA	
3	1	Ball Seat vertical	●	PFA	
5	1	Ball Liner		PTFE	
6	1	Ball 1-piece (solid or encapsulated)		Duplex/ETFE	1.4462
8	1	O-Ring (threaded bushing)	○	FPM	
9	2	O-Ring (shaft sealing))	○	FPM	
11	4	Belleville Springs	○	Spring steel	1.8159
13	1	Elastomer Insert (shaft sealing)	○	VMQ	
15	1	Ball Outlet	○	PTFE-R	
16	1	O-Ring (ball outlet)	○	FEP/FPM	
17	1	Elastomer Pressure Ring	●	VMQ	
20	1	Bottle Adapter		PTFE-R	
21	1	O-Ring (adapter)	●	FEP/FPM	

S = Spare Parts ● = recommended ○ = optional
 detailed list on request

Materials: Standard as stated above, others on request



©2017

ITALPROTEC
INDUSTRIES

Via Primo Maggio, 11 - 20873 Cavenago di Brianza (MB) - Italy - Tel. +39 02 95339500 - Fax +39 02 95335075
www.italprotec.com - info@italprotec.com