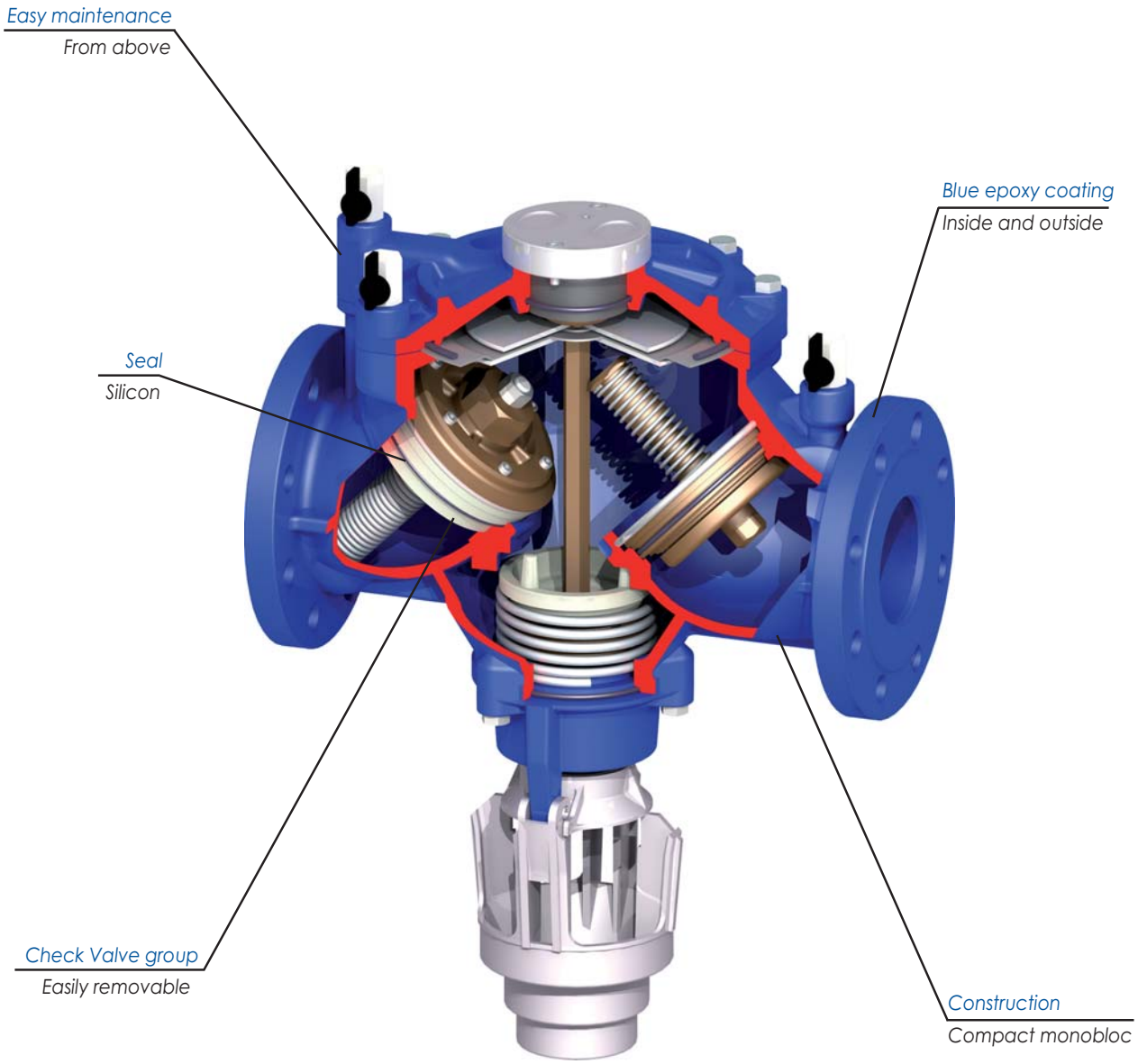
ECO3F

Flanged backflow preventer with controllable reduced pressure zone

- Reduced pressure principle prevents potentially contaminated fluid polluting the Supply system.
- Highly reliable, easy to install and to maintain.
- **Homologated EN 12729**

Backflow preventer



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brandoni S.p.A. VALVOLE INDUSTRIALI

ECO3F

Flanged backflow preventer with controllable reduced pressure zone

Nominal pressure: PN 10

Mod. ECO3F
DN 65-80-100-150

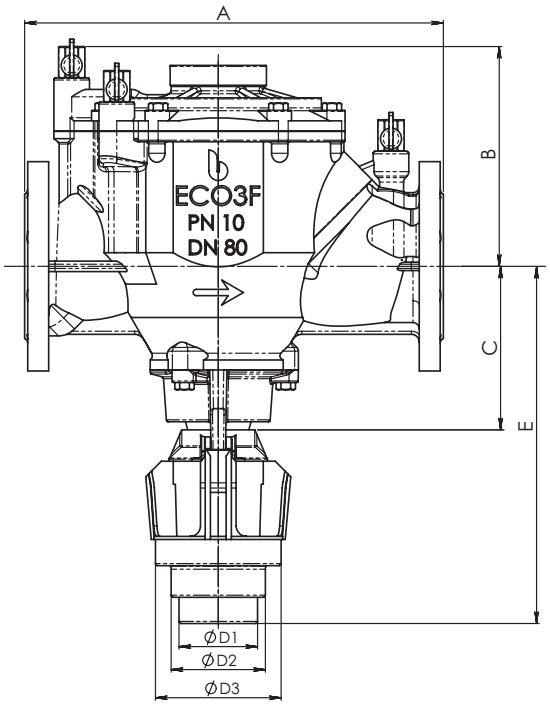
characteristics

Dimensions:
Connections: UNI 2223 - DIN 2501/1
PN10/16
Operating range
Max. temperature: 65°C

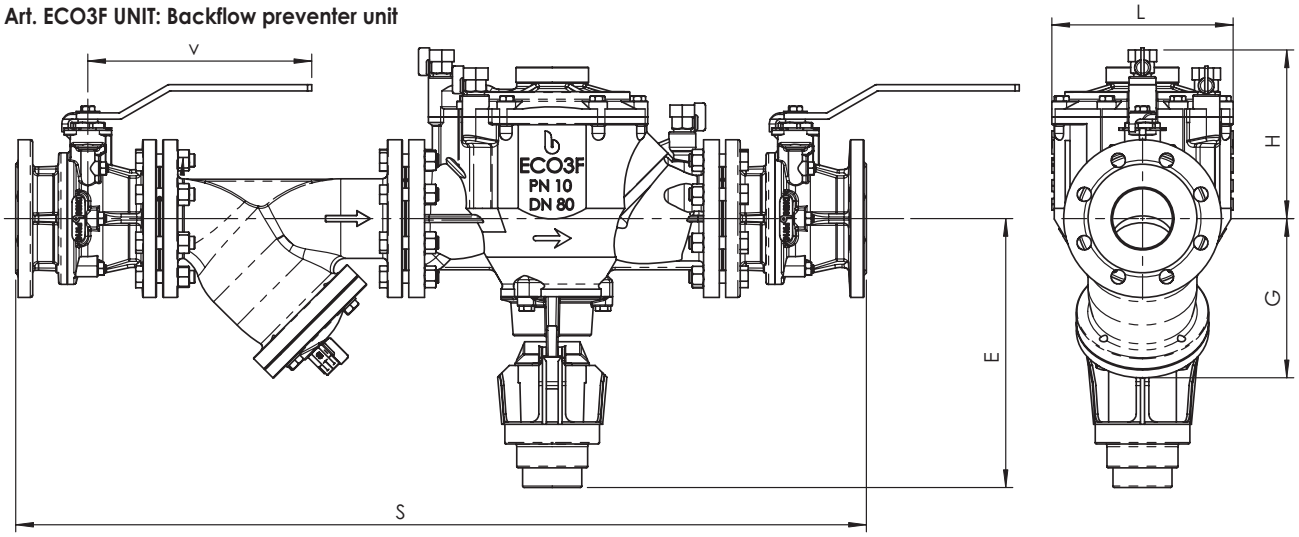
technical data

Dimension *(mm)*				
Art. ECO3F				
DN	**65**	**80**	**100**	**150**
A	360	400	450	540
B	200	214	234	259
C	137,5	157	163	185
D 1/2/3	75/90/120			
E	290	342	350	370
Weight Kg	30	40	46	73
Art. ECO3F UNIT with ball valves				
S	360	400	450	540
H	200	214	234	259
G	160	200	240	330
L	189	230	230	276
V	230	280	360	560
Weight Kg	63	90	110	208
Art. ECO3F UNIT with butterfly valves				
S	742	802	904	1132
H	205	219	239	290
V	206	206	206	285
Weight Kg	51	69,4	87	155

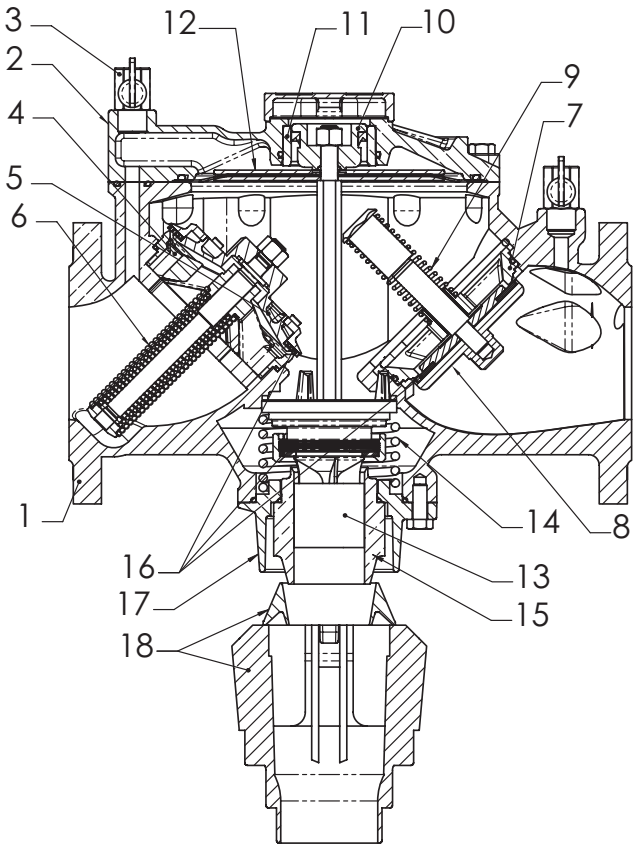
Art. ECO3F



Art. ECO3F UNIT: Backflow preventer unit



construction details



Construction details					
N°	**Components**	**Q.ty**	**Materials**		
1	Body	1	**DN 65**	**DN 80-100**	**DN 150**
			GG25		
2	Upper cover	1	GG25		
3	1/2" F valve	3	DLR brass		
4	Upstream valve seat	1	Noryl (PPO)		G-CuSn5Zn5Pb5
5	Upstream valve shutter	1	Noryl (PPO)		G-CuSn5Zn5Pb5
6	Upstream valve spring	1	AISI 302		
7	Downstream valve seat	1	Noryl (PPO)		G-CuSn5Zn5Pb5
8	Downstream valve shutter	1	DLR brass		G-CuSn5Zn5Pb5
9	Downstream valve spring	1	AISI 302		
10	Compensator	1	DLR brass		
11	Compensator liner	1	PTFE+C		
12	Membrane	1	Neoprene+Nylon		
13	Relief valve obturator	1	Noryl (PPO)		
14	Relief valve spring	1	AISI 302		
15	Relief valve seat	1	DLR brass	AISI 304	
16	Seal gasket	1	Silicone rubber		
17	Behind cover	1	GG25		
18	Conveyor	1	Polypropylene		
	O-Ring	_	NBR		
	Bolts and screws	_	AISI 304		

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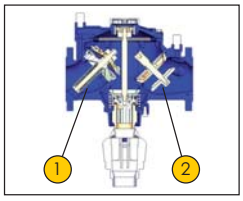
Nominal pressure: PN 10

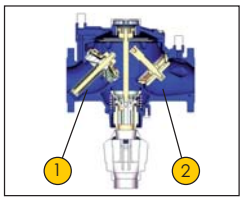
Data and specifications are only available as information. Brandoni S.p.A. reserves the right to modify one more valve specifications without warning.

Serie ECO3F/07-2009/GB

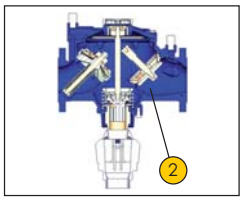
working principle



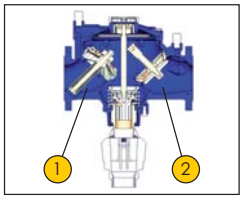
1) normal operation: regular flow
In normal condition the relief valve is closed and water flows through the 2 check valves (1 and 2). Due to the head loss of valve 1, the pressure in the intermediate section is at least 140 millibars lower than the upstream pressure. Such difference acts upon the membrane and closes the relief valve.



2) No flow: normal pressure
The check valves (1 and 2) are closed and the relief valve remains closed.



3) Back pressure: upstream overpressure sovrapressure
The downstream check valve (2) closes, preventing potentially contaminated water from flowing into the supply pipe. If the downstream check valve is not perfectly watertight, the polluted water can seep into the central chamber. As the pressure in the central chamber increases, the relief valve opens and the polluted fluid discharges.



4) Back-siphonage: upstream depression
If the upstream pressure accidentally decreases, the check valves (1 and 2) automatically close; so the pressure difference between the upstream section and the central section is reduced; the spring opens the relief valve and the central chamber empties.

installation

A correct installation of the backflow preventer requires an upstream ball valve and strainer and a resilient downstream ball valve.
Adequate clearence is required for testing and maintenance.

N°	Denomination
1	Ball valve
2	Strainer
3	Backflow preventer
4	Ball valve