

Expansion Automats and Pressurisation Equipment

2



For sealed systems with large volumes or static height traditional expansion vessels are not the most efficient solution in terms of operational pressure or physical footprint. Flamco Expansion Automats balance the system pressure using a highly efficient vessel design and control equipment.

We produce a comprehensive range of models that offer high-quality performance and versatility which may be further enhanced by the addition of numerous optional accessories. This makes the Flamco expansion automats suitable for use in a variety of situations.

As demands and preferences differ worldwide, Flamco has opted for an adaptable, modular range to suit every client's requirements.

Flexcon M-K/U - internal coating



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Flexcon M-K/U



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Flexcon M-K - internal coating



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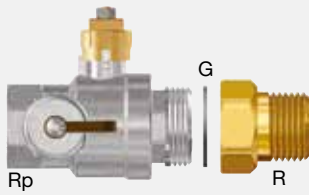
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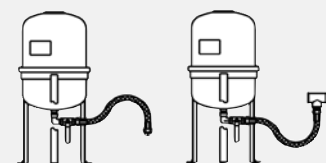
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Impulse Output Water Meter



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FLEXCON M-K/U COMPRESSOR EXPANSION AUTOMAT

For sealed heating installations (acc. to EN12828) and chilled water (cooling) installations.

Ideal for larger systems and systems which cannot tolerate the rise in pressure associated with standard sealed system equipment. These units are distinguished by their wide range of applications. The Flexcon M-K/U is delivered completely pre-assembled and ready for operation. Installation is both simple and cost-effective due to the adjustable system connection. The unit is combined with the latest technology SPC control unit.

The benefits of the Flexcon M-K/U

- Stable system pressure and a large working vessel volume.
- Compact, space saving unit, which has a low noise, oil free compressor.
- Replaceable butyl bladder.
- Intuitive SPC controller. This is a 'plug and play' control system, with operating values, clear on-screen instructions, intuitive and easy to use and with economic energy-save mode.
- 20 languages to choose from.
- Easy to install and commission.
- For single or master/slave operation (failure changeover operation available on request).
- Connectivity for pressurisation unit and Building Management System or system monitoring device.
- Operation with one or two compressors possible.
- Delivered with oil free compressor, flexible connecting hose, weight-capacity sensor and height adjustable feet.
- As an option, the Flexcon M-K/U can be fitted with a Flexvent Super automatic air vent.
- With RS 485 interface.
- Suitable for addition of glycol-based anti-freeze up to 50%.
- Vessels 400 - 1,000 litres: in accordance with EN13831 / 1,200 - 10,000 litres: in accordance with AD2000.
- Suitable for systems with a maximum flow temperature of 120 °C.
- Maximum temperature bladder: 70 °C.
- In accordance with European Pressure Equipment Directive 2014/68/EU and Machinery Directive 2006/42/EC.
- Electricity supply: 230 v ~ 50 Hz.
- Maximum heating capacity: 12 MW.
- Maximum cooling capacity: 24 MW.
- Red (RAL 3002) epoxy powder coating.

Accurate pressure monitoring

• When the temperature rises:

Pressure rises and reaches the upper limit (1):

The solenoid valve blows off air =>

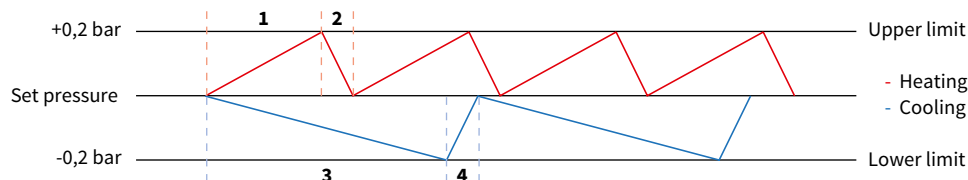
Pressure drops to the set pressure (2).

• When the temperature drops:

Pressure drops and reaches the lower limit (3):

The compressor pumps in air =>

Pressure rises to the set pressure (4).



* Graph concerns a heating system.

How a Flexcon M-K/U works

(1) Cold

The automat contains a small amount of water. The automat is at rest.

(2) Warming up

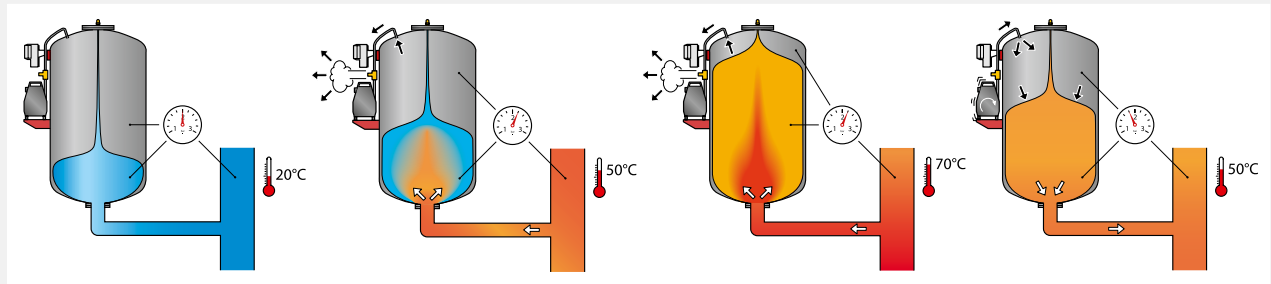
The volume of water, and thus the system pressure, increases. The controller responds to this by discharging air from the vessel and, as a result, the expansion water flows into the bladder.

(3) Full power

By storing increasing amounts of water in the vessel the controller keeps the system pressure at a constant level. When the system has warmed up completely, the vessel will be almost full to capacity.

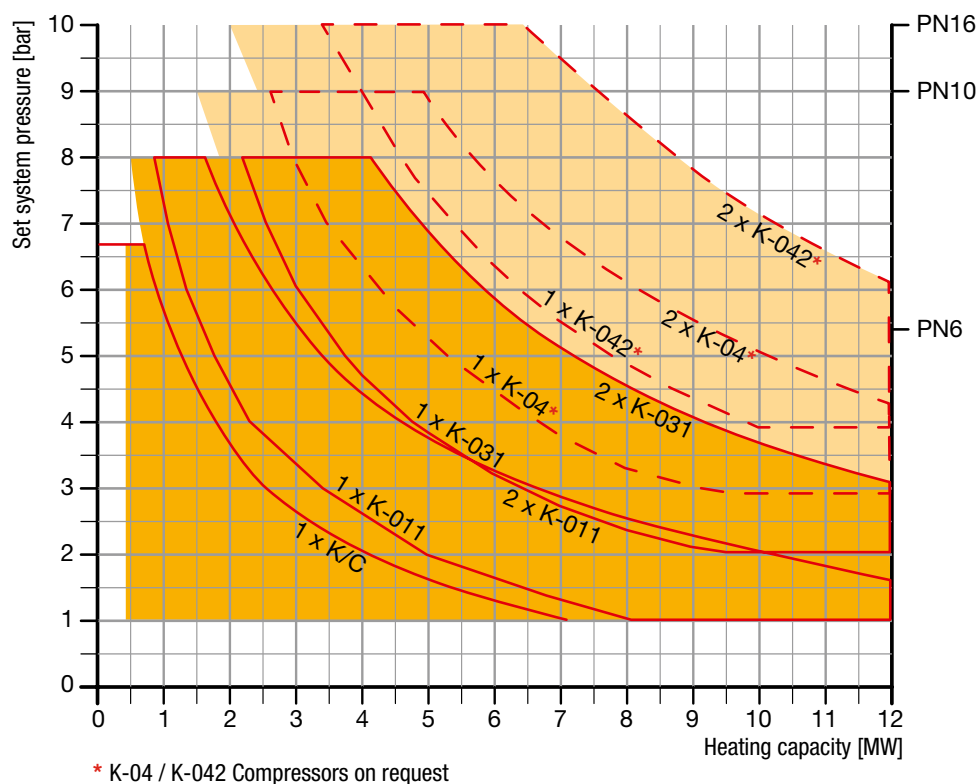
(4) Cooling down

When the volume of water and thus the system pressure decreases, the controller will respond by increasing the airpressure in the vessel with displacement of water back into the system as a result. This restores equilibrium in the system pressure.



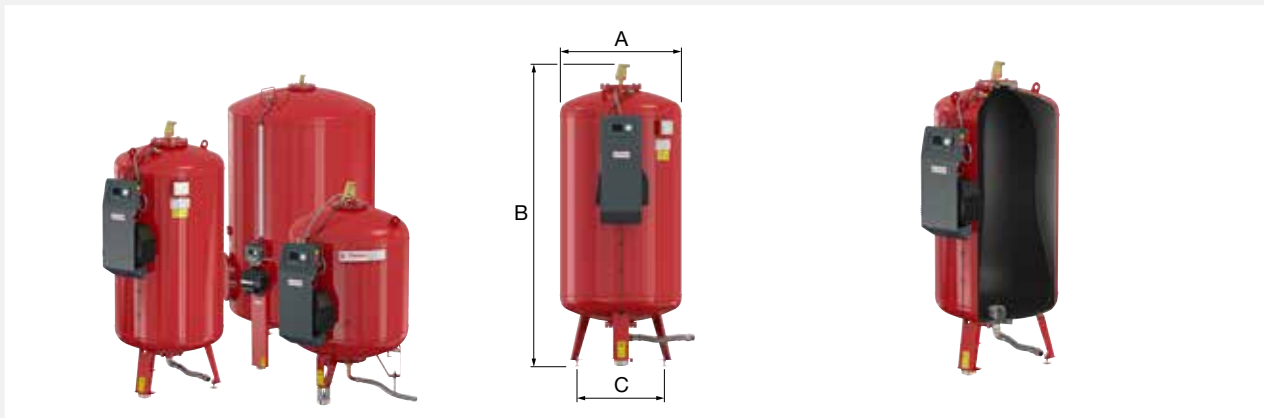
Flexcon M-K compressor curves

Flexcon M-K compressor selection graph. Heating Installation (nominal characteristics).



Flexcon M-K/U - internal coating

- With internal coating.

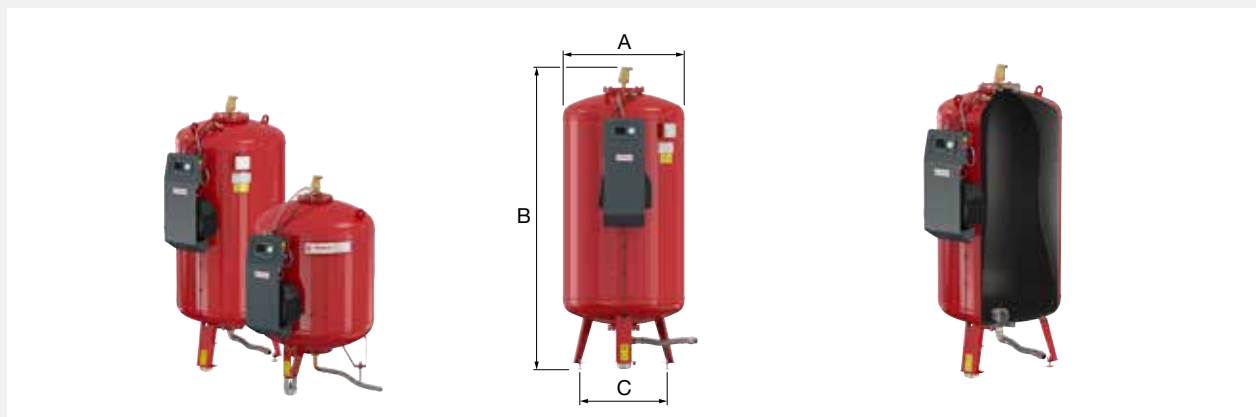


Type	Capacity [l]	Max. working pressure (Compressor) [bar]	Design pressure [PN]	Dimensions			Com- pressor	Syst. conn.	Weight [kg]		Order Code
				A [mm]	B [mm]	C [mm]					
Flexcon M-K/U 400	400	5.4	6.0	790	1437	610	K-011	G 1 1/4" M	90	1	23450
Flexcon M-K/U 400	400	8.0	10.0	790	1437	610	K-011	G 1 1/4" M	117	1	23470
Flexcon M-K/U 600	600	5.4	6.0	790	1737	610	K-011	G 1 1/4" M	105	1	23451
Flexcon M-K/U 600	600	8.0	10.0	790	1737	610	K-011	G 1 1/4" M	140	1	23471
Flexcon M-K/U 800	800	5.4	6.0	790	2144	610	K-031	G 1 1/4" M	120	1	23452
Flexcon M-K/U 800	800	8.0	10.0	790	2144	610	K-031	G 1 1/4" M	165	1	23472
Flexcon M-K/U 1000	1000	5.4	6.0	790	2493	610	K-031	G 1 1/4" M	135	1	23453
Flexcon M-K/U 1000	1000	8.0	10.0	790	2493	610	K-031	G 1 1/4" M	190	1	23473
Flexcon M-K/U 1200	1200	5.4	6.0	1000	2110	850	K-031	R 1 1/2"	313	1	23554
Flexcon M-K/U 1200	1200	8.0	10.0	1000	2110	850	K-031	R 1 1/2"	418	1	23574
Flexcon M-K/U 1600	1600	5.4	6.0	1000	2610	850	K-031	R 1 1/2"	368	1	23555
Flexcon M-K/U 1600	1600	8.0	10.0	1000	2610	850	K-031	R 1 1/2"	508	1	23575
Flexcon M-K/U 2000	2000	5.4	6.0	1200	2362	1050	K-031	R 2"	453	1	23556
Flexcon M-K/U 2000	2000	8.0	10.0	1200	2362	1050	K-031	R 2"	618	1	23576
Flexcon M-K/U 2800	2800	5.4	6.0	1200	2962	1050	K-031	R 2 1/2"	538	1	23557
Flexcon M-K/U 2800	2800	8.0	10.0	1200	2962	1050	K-031	R 2 1/2"	785	1	23577
Flexcon M-K/U 3500	3500	5.4	6.0	1200	3762	1050	K-031	R 2 1/2"	648	1	23558
Flexcon M-K/U 3500	3500	8.0	10.0	1200	3762	1050	K-031	R 2 1/2"	938	1	23578
Flexcon M-K/U 5000	5000	2.4	3.0	1500	3635	1520	K-031	Rp 1 1/2"	976	1	23559
Flexcon M-K/U 6500	6500	2.4	3.0	1800	3550	1820	K-031	Rp 1 1/2"	1476	1	23560
Flexcon M-K/U 8000	8000	2.4	3.0	1900	3650	1920	K-031	Rp 1 1/2"	1581	1	23561
Flexcon M-K/U 10000	10000	2.4	3.0	2000	4070	2020	K-031	Rp 1 1/2"	1821	1	23562

CE

Flexcon M-K/U

- Without internal coating.



Type	Capacity [l]	Max. working pressure (Compressor) [bar]	Design pressure [PN]	Dimensions			Com- pressor	Syst. conn.	Weight [kg]		Order Code
				A [mm]	B [mm]	C [mm]					
Flexcon M-K/U 400	400	5.4	6.0	790	1437	610	K-011	G 1 1/4" M	90	1	23430
Flexcon M-K/U 400	400	8.0	10.0	790	1437	610	K-011	G 1 1/4" M	117	1	23440
Flexcon M-K/U 600	600	5.4	6.0	790	1737	610	K-011	G 1 1/4" M	105	1	23431
Flexcon M-K/U 600	600	8.0	10.0	790	1737	610	K-011	G 1 1/4" M	140	1	23441
Flexcon M-K/U 800	800	5.4	6.0	790	2144	610	K-031	G 1 1/4" M	120	1	23432
Flexcon M-K/U 800	800	8.0	10.0	790	2144	610	K-031	G 1 1/4" M	165	1	23442
Flexcon M-K/U 1000	1000	5.4	6.0	790	2493	610	K-031	G 1 1/4" M	135	1	23433
Flexcon M-K/U 1000	1000	8.0	10.0	790	2493	610	K-031	G 1 1/4" M	190	1	23443
Flexcon M-K/U 1200	1200	5.4	6.0	1000	2110	850	K-031	R 1 1/2"	313	1	22422
Flexcon M-K/U 1200	1200	8.0	10.0	1000	2110	850	K-031	R 1 1/2"	418	1	22472
Flexcon M-K/U 1600	1600	5.4	6.0	1000	2610	850	K-031	R 1 1/2"	368	1	22427
Flexcon M-K/U 1600	1600	8.0	10.0	1000	2610	850	K-031	R 1 1/2"	508	1	22477
Flexcon M-K/U 2000	2000	5.4	6.0	1200	2362	1050	K-031	R 2"	453	1	22432
Flexcon M-K/U 2000	2000	8.0	10.0	1200	2362	1050	K-031	R 2"	618	1	22482
Flexcon M-K/U 2800	2800	5.4	6.0	1200	2962	1050	K-031	R 2 1/2"	538	1	22437
Flexcon M-K/U 2800	2800	8.0	10.0	1200	2962	1050	K-031	R 2 1/2"	758	1	22487
Flexcon M-K/U 3500	3500	5.4	6.0	1200	3762	1050	K-031	R 2 1/2"	648	1	22442
Flexcon M-K/U 3500	3500	8.0	10.0	1200	3762	1050	K-031	R 2 1/2"	938	1	22492



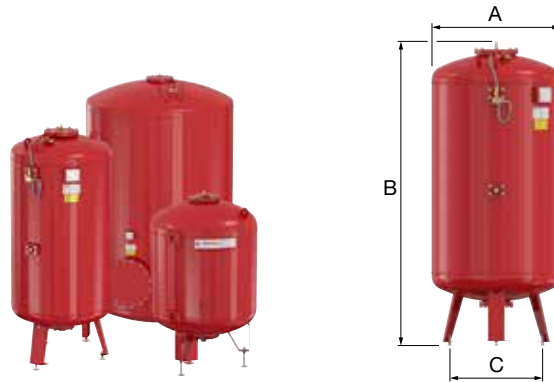
FLEXCON M-K AUXILIARY VESSELS

Auxiliary vessels for Flexcon M-K/U automats. For sealed heating installations (acc. to EN12828) and chilled water (cooling) installations.

- Without control unit and compressor.
- Replaceable butyl bladder.
- Delivered with height adjustable feet.
- Accessories to be ordered separately.
- As an option, the Flexcon M-K can be fitted with a Flexvent Super automatic air vent.
- Suitable for addition of glycol-based anti-freeze up to 50%.
- Vessels 400 - 1,000 litres: in accordance with EN13831 / 1,200 - 10,000 litres: in accordance with AD2000.
- Suitable for systems with a maximum flow temperature of 120 °C.
- Max. temperature bladder: 70 °C.
- In accordance with European Pressure Equipment Directive 2014/68/EU and Machinery Directive 2006/42/EC.
- Red (RAL 3002) epoxy powder coating.

Flexcon M-K - internal coating

- With internal coating.



Type	Capacity [l]	Design pressure [PN]	Dimensions			Syst. conn.	Weight [kg]		Order Code
			A [mm]	B [mm]	C [mm]				
Flexcon M-K 400	400	6.0	790	1352	610	G 1 1/4" F	77	1	23460
Flexcon M-K 400	400	10.0	790	1352	610	G 1 1/4" F	104	1	23480
Flexcon M-K 600	600	6.0	790	1652	610	G 1 1/4" F	92	1	23461
Flexcon M-K 600	600	10.0	790	1652	610	G 1 1/4" F	127	1	23481
Flexcon M-K 800	800	6.0	790	2059	610	G 1 1/4" F	107	1	23462
Flexcon M-K 800	800	10.0	790	2059	610	G 1 1/4" F	152	1	23482
Flexcon M-K 1000	1000	6.0	790	2408	610	G 1 1/4" F	122	1	23463
Flexcon M-K 1000	1000	10.0	790	2408	610	G 1 1/4" F	177	1	23483
Flexcon M-K 1200	1200	6.0	1000	2025	850	Rp 1 1/2"	290	1	23524
Flexcon M-K 1200	1200	10.0	1000	2025	850	Rp 1 1/2"	395	1	23544
Flexcon M-K 1600	1600	6.0	1000	2525	850	Rp 1 1/2"	345	1	23525
Flexcon M-K 1600	1600	10.0	1000	2525	850	Rp 1 1/2"	485	1	23545
Flexcon M-K 2000	2000	6.0	1200	2277	1050	Rp 2"	430	1	23526
Flexcon M-K 2000	2000	10.0	1200	2277	1050	Rp 2"	595	1	23546
Flexcon M-K 2800	2800	6.0	1200	2877	1050	Rp 2 1/2"	515	1	23527
Flexcon M-K 2800	2800	10.0	1200	2877	1050	Rp 2 1/2"	735	1	23547
Flexcon M-K 3500	3500	6.0	1200	3677	1050	Rp 2 1/2"	625	1	23528
Flexcon M-K 3500	3500	10.0	1200	3677	1050	Rp 2 1/2"	915	1	23548
Flexcon M-K 5000	5000	3.0	1500	3550	1520	Rp 1 1/2"	953	1	23529
Flexcon M-K 6500	6500	3.0	1800	3465	1820	Rp 1 1/2"	1453	1	23530
Flexcon M-K 8000	8000	3.0	1900	3565	1920	Rp 1 1/2"	1558	1	23531
Flexcon M-K 10000	10000	3.0	2000	3985	2020	Rp 1 1/2"	1798	1	23532

Flexcon M-K Connecting Kit (pneumatic)



- Pressure hose connection.
For pressure equalisation between air chambers of multiple vessels.
- Length: 3 metre.

Type	Suitable for		Order Code
Connecting kit (2 vessels)	Flexcon M-K/U / Flexcon M-K	1	22380
Connecting kit (3 or more vessels)	Flexcon M-K	1	22381

Flange Connection



- Adapter with flange connection PN 16 and fill and drain valve.
- Suitable for 6.0 and 10.0 bar vessels.

Volume of tank [l]	Connections		L. [mm]	Suitable for		Order Code
	In	PN 16				
400 - 1000	G 1 1/4" M	DN 32	350	Flexcon M-K / M-K/U	1	23795
1200 - 1600	G 1 1/2" M	DN 40	470	Flexcon M / M-K / M-K/U	1	23796
2000	G 2" M	DN 50	560	Flexcon M / M-K / M-K/U	1	23797
2800 - 5200	G 2 1/2" M	DN 65	560	Flexcon M / M-K / M-K/U	1	23798

EXTRA COMPRESSORS

The second compressor unit is assembled on a second console on the Flexcon M-K/U compressor expansion automat. Both compressors must be of equal capacity and type. Delivered complete, assembled and ready for use.

Note: This configuration comes with failure changeover operation option only.

Second Compressor Unit



Type	Application	Max. operating pressure [bar]		Order Code
2nd Compressor unit K-011	Flexcon M-K/U	8	1	On Request
2nd Compressor Unit K-031	Flexcon M-K/U	8	1	On Request

FLEXCON M-K/C COMPRESSOR EXPANSION AUTOMAT

Compressor controlled expansion vessel with fixed diaphragm for smaller sealed heating installations (acc. to EN12828) and chilled water (cooling) installations. This product is especially designed for smaller commercial systems with limited space, providing all the benefits of an automat at an affordable price.

- Delivered completely pre-assembled and ready for operation.
 - With oil free compressor, flexible connecting hose, weight-capacity sensor, height adjustable feet and diaphragm rupture sensor.
 - Connectivity for pressurisation unit and Building Management System or system monitoring device.
 - Intuitive and programmable SCU controller with graphic display and 17 languages to choose from.
 - Easy to install and commission.
 - Diaphragm: Fixed flexible rubber diaphragm with rolling action (not replaceable).
 - With RS 485 interface.
 - Accessories to be ordered separately.
- Suitable for addition of glycol-based anti-freeze up to 50%.
 - Vessels in accordance with EN13831.
 - Suitable for systems with a maximum flow temperature of 120 °C.
 - Maximum temperature diaphragm: 70 °C.
 - Minimum temperature at (heating) outlet: -10 °C.
 - Electricity supply: 230 v ~ 50 Hz.
 - Maximum heating capacity: 7 MW.
 - Maximum cooling capacity: 11 MW.
 - In accordance with European Pressure Equipment Directive 2014/68/EU and Machinery Directive 2006/42/EC.
 - Red (RAL 3002) epoxy powder coating.

For stand-alone applications only.

Flexcon M-K/C



Type	Capacity [l]	Max. working pressure [bar]	Design pressure [PN]	Dimensions		Syst. conn.	Weight [kg]		Order Code
				Ø [mm]	H. [mm]				
Flexcon M-K/C 110	110	5.4	6.0	509	1215	G 1" F	37	1	23225
Flexcon M-K/C 200	200	5.4	6.0	600	1391	G 1" F	71	1	23226
Flexcon M-K/C 350	350	5.4	6.0	790	1459	G 1" F	81	1	23227
Flexcon M-K/C 425	425	5.4	6.0	790	1612	G 1" F	91	1	23228



FLAMCOMAT - PUMP UNITS

For pressurisation, deaeration and topping up in sealed heating installations (acc. to EN12828) and chilled water (cooling) installations.

Flamcomats with pump units are used for storage of expansion water, deaeration and topping up your installation automatically as an integrated controlled unit carried out with state of the art micro-electronics. The Flamcomat balanced pressure expansion equipment is sized according to the total system volume and the boiler or chiller load. The Flamcomat vessel is 80% efficient irrespective of the static height of the system. It is the ideal solution for large installations or high installations where standard diaphragm expansion equipment is limited.



- Automatically performs volumetric control and automatic topping-up during the heating or cooling cycles.
- Integrated turbo degassing allows for very rapid degassing.
- The degassing function allows for continuous degassing if desired.
- The user-friendly control unit displays all operating and error conditions in a comprehensible and convenient way.
- Advanced technology ensures low power consumption, long service life and easy maintenance.
- Operating modes: single (mono), automatic change-over or load dependent (duo) and combined operation.
- Microprocessor control, self-learning, with graphical display and RS 485 interface.
- 20 languages can be selected in the menu of the SPC controller (eg: D, GB, NL and F).
- Due to the hydraulic design of the Flamcomat G3 and the connection sets the vessel can be positioned anywhere around the Flamcomat.
- Beams are fitted to the Flamcomat G3 for protection of components and easy transport into hard to reach places.
- The position of the second pump on a double pump Flamcomat G3 can be positioned on either side of the Flamcomat.
- The Flamcomat G3 pump units require approximately 50% less surface area compared to the previous model.
- Deaeration modes: fast, normal or off.
- Suitable for addition of glycol-based anti-freeze up to 50%.
- Working temperature: 3 °C / 70 °C.
- In accordance with Machinery Directive 2006/42/EC.

Flamcomat pump units - Technical specifications

Type	Nominal voltage	Rated current [A]	Rated power [kW]	Protection class of pump unit *
MM / G3	230 V ~1 N PE 50 Hz	0.43	0.09	IP44
M02 / G3	230 V ~1 N PE 50 Hz	2.77	0.62	IP54
M10 / G3	230 V ~1 N PE 50 Hz	4.4	0.75	IP54
M20 / G3	230 V ~1 N PE 50 Hz	7.2	1.1	IP54
M60 / G3	230 V ~1 N PE 50 Hz	7.4	1.1	IP54
M80 / G3	400 V ~3 N PE 50 Hz	3.4	1.5	IP54
M100	400 V ~3 N PE 50 Hz	4.75	2.2	IP54
M130	400 V ~3 N PE 50 Hz	6.4	3.0	IP54
DM / G3	230 V ~1 N PE 50 Hz	0.86	0.18	IP44
D02 / G3	230 V ~1 N PE 50 Hz	5.54	1.24	IP54
D10 / G3	230 V ~1 N PE 50 Hz	8.8	1.5	IP54
D20 / G3	230 V ~1 N PE 50 Hz	14.4	2.2	IP54
D60 / G3	230 V ~1 N PE 50 Hz	14.8	2.2	IP54
D80 / G3	400 V ~3 N PE 50 Hz	6.8	3.0	IP54
D100	400 V ~3 N PE 50 Hz	9.5	4.4	IP54
D130	400 V ~3 N PE 50 Hz	12.8	6.0	IP54

* Protection, Control unit SPCx-lw / hw: IP54.

Single Pump Control

- For the correct Flamcomat pump selection, see ('Flamcomat Pump Selection Graphs').
- Maximum system pressure: 6, 10 and 16 bar.



Type*	Design pressure [PN]	Pump orientation	For boiler output [kW]	Working pressure [bar]	Dimensions L. x W. x H. [mm]	Connection to				Order Code
						Vessel	System conn.	Water supply		
MM / G3	PN 6	hor.	100 - 200	1.2 - 3.0	506 x 227 x 922	G 1" M	G 1 1/4" F	Rp 1/2"	1	17940
M02 / G3	PN 10	hor.	500 - 2300	1.2 - 3.5	540 x 227 x 922	G 1" M	G 1 1/4" F	Rp 1/2"	1	17943
M10 / G3	PN 10	hor.	900 - 4700	2.0 - 5.0	513 x 227 x 922	G 1" M	G 1 1/4" F	Rp 1/2"	1	17944
M20 / G3	PN 10	hor.	1600 - 8400	2.0 - 5.0	553 x 227 x 922	G 1" M	G 1 1/4" F	Rp 1/2"	1	17945
M60 / G3	PN 10	vert.	1400 - 4700	3.5 - 8.5	561 x 227 x 922	G 1" M	G 1 1/4" F	Rp 1/2"	1	17946
M80 / G3	PN 16	vert.	1400 - 4900	4.7 - 10.0	593 x 299 x 937	G 1" M	G 1 1/4" F	Rp 1/2"	1	17947
M100	PN 16	vert.	1300 - 5200	5.9 - 14.1	540 x 605 x 1030	G 1 1/2" F	G 1 1/2" F	Rp 1/2"	1	17884
M130	PN 16	vert.	3300 - 5300	8.0 - 14.4	540 x 605 x 1190	G 1 1/2" F	G 1 1/2" F	Rp 1/2"	1	17886

* For larger, more powerful systems please contact Flamco.

Double Pump Control

- For the correct Flamcomat pump selection, see ('Flamcomat Pump Selection Graphs').
- Maximum system pressure: 6, 10 and 16 bar.



Type*	Design pressure [PN]	Pump orientation	For boiler output [kW]	Working pressure [bar]	Dimensions L. x W. x H. [mm]	Connection to				Order Code
						Vessel	System conn.	Water supply		
DM / G3	PN 6	hor.	100 - 400	1.2 - 3.0	506 x 267 x 942	G 1" M	G 1 1/4" F	Rp 1/2"	1	17948
D02 / G3	PN 10	hor.	500 - 4400	1.2 - 3.5	603 x 452 x 974	G 1" M	G 1 1/4" F	Rp 1/2"	1	17949
D10 / G3	PN 10	hor.	900 - 9200	2.0 - 5.0	583 x 452 x 974	G 1" M	G 1 1/4" F	Rp 1/2"	1	17950
D20 / G3	PN 10	hor.	1600 - 10000	2.0 - 5.0	620 x 446 x 974	G 1" M	G 1 1/4" F	Rp 1/2"	1	17951
D60 / G3	PN 10	vert.	1400 - 9400	3.5 - 8.5	594 x 444 x 974	G 1" M	G 1 1/4" F	Rp 1/2"	1	17952
D80 / G3	PN 16	vert.	1400 - 9400	4.7 - 10.0	594 x 515 x 975	G 1" M	G 1 1/4" F	Rp 1/2"	1	17953
D100	PN 16	vert.	1300 - 10000	5.9 - 14.1	930 x 530 x 1030	G 1 1/2" F	G 1 1/2" F	Rp 1/2"	1	17885
D130	PN 16	vert.	3300 - 10000	8.0 - 14.4	930 x 530 x 1190	G 1 1/2" F	G 1 1/2" F	Rp 1/2"	1	17887

* For larger, more powerful systems please contact Flamco.

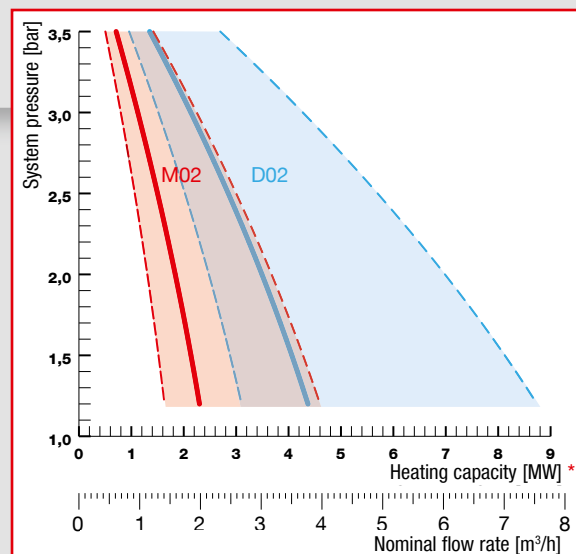
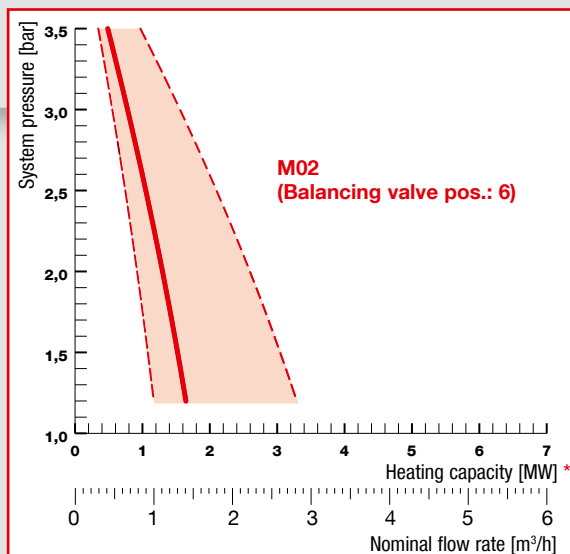
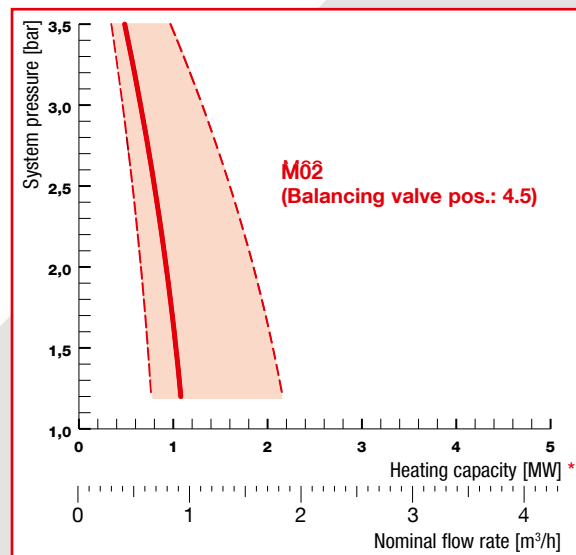
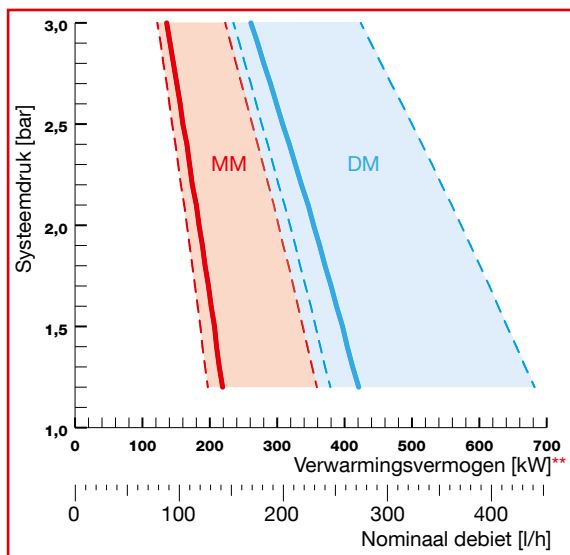
Flamcomat Pump Selection Graphs

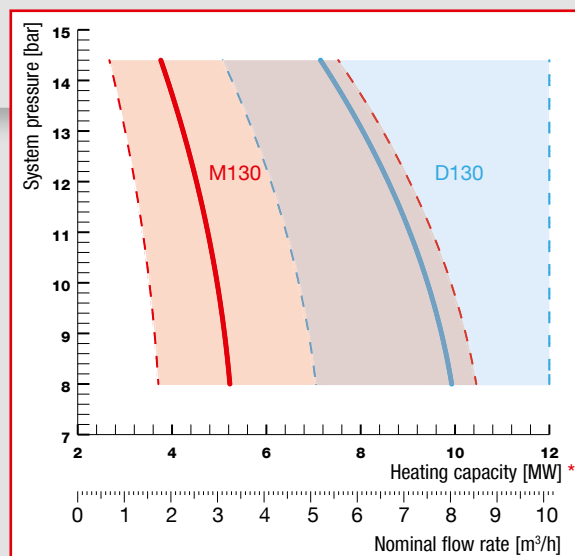
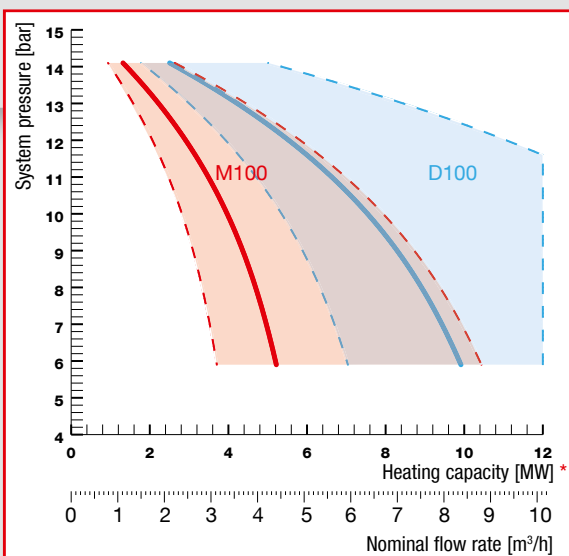
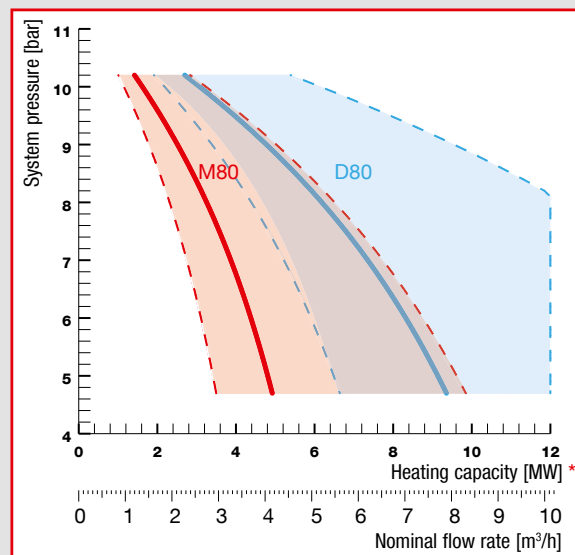
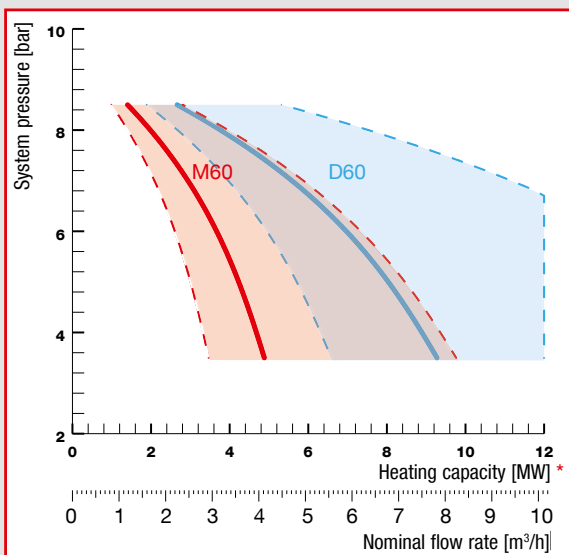
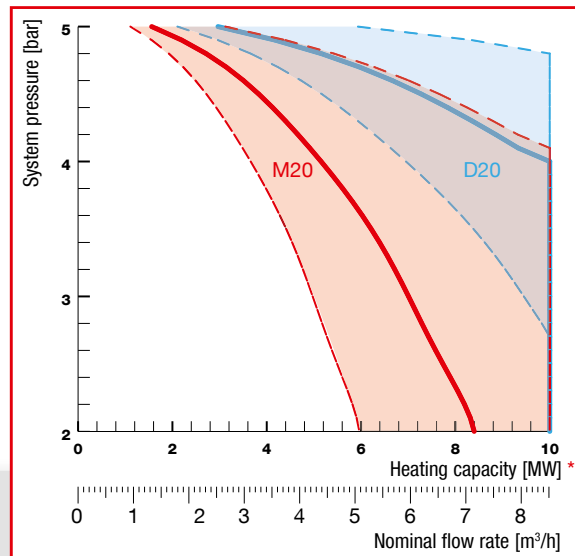
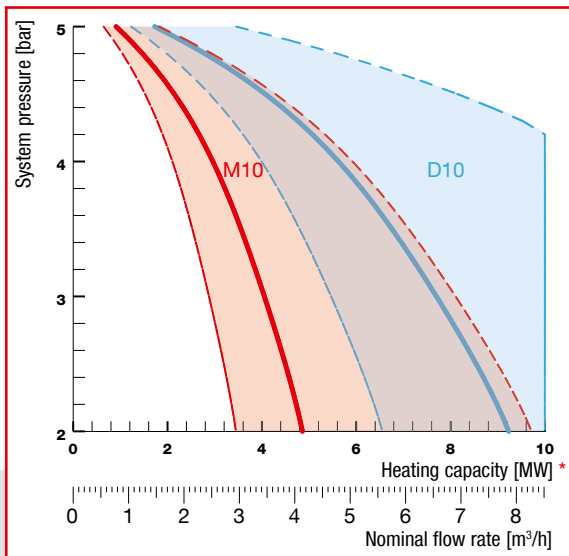
The Flamco calculation program for expansion automats determines the flow according to the exact contraction flow factor (VDI4708-2). You can find the calculation program for expansion automats at www.flamcogroup.com.



* based on 0.85 l/(kW*h)

** based on 0.65 l/(kW*h)





FLAMCOMAT VESSELS

For sealed heating installations (acc. to EN12828) and chilled water (cooling) installations.

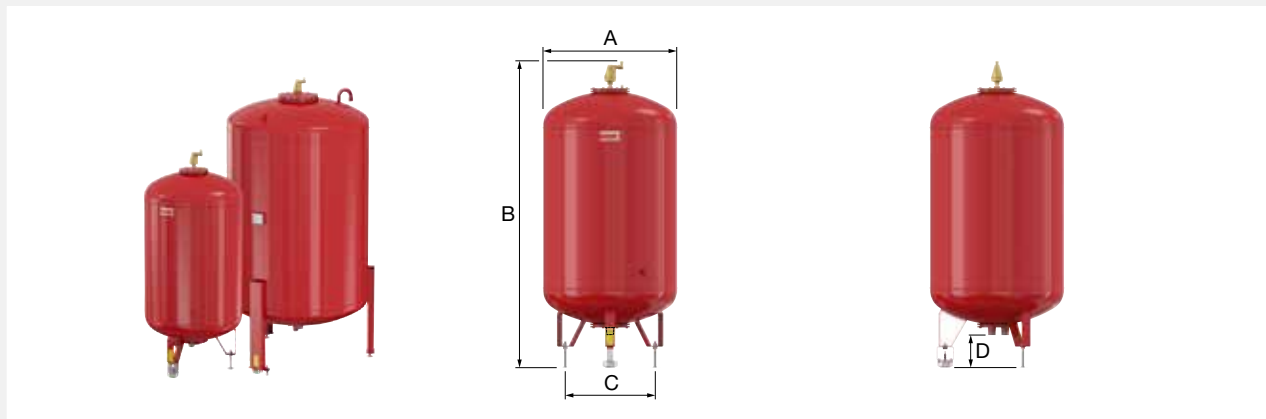
A multi function product which provides all the essential requirements for a sealed chilled or heated water system i.e. automatic expansion control, pressurisation, deaeration and make-up.

- Unique pressure step degassing process, even when the system is in equilibrium, by combination of pressure drop and application of patented PALL-ring technology.
- Replaceable butyl bladder.
- Expansion fluid is stored at atmospheric pressure in the bladder.
- Flexible connections and hoses between pump unit and vessel to be ordered separately.
- Suitable for addition of glycol-based anti-freeze up to 50%.
- Vessels 100 - 1,000 litres: in accordance with EN13831 / 1,200 - 10,000 litres: in accordance with AD2000.
- Suitable for systems with a maximum flow temperature of 120 °C.
- Maximum temperature bladder: 70 °C.
- In accordance with European Pressure Equipment Directive 2014/68/EU and Machinery Directive 2006/42/EC.
- Red (RAL 3002) epoxy powder coating.

Flamcomat FG Main Vessels

Pressureless vessel without automat for the Flamcomat pump units.

- Delivered with Flexvent Super, height adjustable feet and weight-capacity sensor.

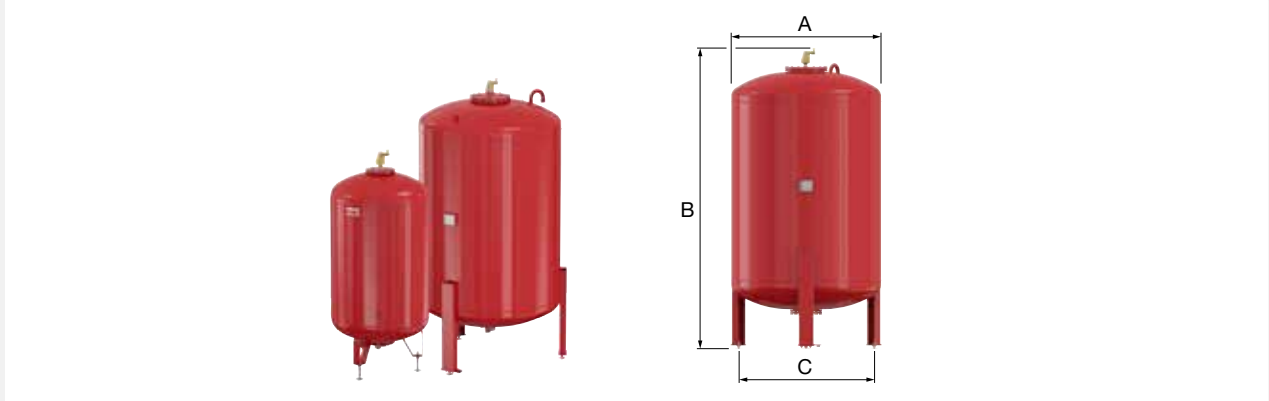


Type	Capacity [l]	Design pressure [PN]	Dimensions				Syst. conn.	Weight [kg]		Order Code
			A [mm]	B [mm]	C [mm]	D [mm]				
FG 100	100	PN 6	484	1050	360	150	G 1 1/2" M	35	1	17828
FG 200	200	PN 6	484	1560	360	150	G 1 1/2" M	31	1	17820
FG 300	300	PN 6	600	1596	450	185	G 1 1/2" M	41	1	17821
FG 400	400	PN 6	790	1437	610	185	G 1 1/2" M	62	1	17822
FG 500	500	PN 6	790	1587	610	185	G 1 1/2" M	70	1	17823
FG 600	600	PN 6	790	1737	610	185	G 1 1/2" M	77	1	17824
FG 800	800	PN 6	790	2144	610	185	G 1 1/2" M	92	1	17825
FG 1000	1000	PN 6	790	2493	610	185	G 1 1/2" M	106	1	17826
FG 1200	1200	PN 3	1000	2210	1060	170	G 1 1/2" M	291	1	17717
FG 1600	1600	PN 3	1000	2710	1060	170	G 1 1/2" M	346	1	17718
FG 2000	2000	PN 3	1200	2440	1265	220	G 1 1/2" M	431	1	17719
FG 2800	2800	PN 3	1200	3040	1265	225	G 1 1/2" M	516	1	17720
FG 3500	3500	PN 3	1200	3840	1265	225	G 1 1/2" M	626	1	17721
FG 5000	5000	PN 3	1500	3570	1570	225	G 1 1/2" M	1241	1	17722
FG 6500	6500	PN 3	1800	3500	1885	225	G 1 1/2" M	1711	1	17723
FG 8000	8000	PN 3	1900	3650	1985	225	G 1 1/2" M	1831	1	17724
FG 10000	10000	PN 3	2000	4050	2085	225	G 1 1/2" M	2026	1	17725

Flamcomat FB Auxiliary Vessels

Pressureless auxiliary vessel (more expansion volume, in combination with FG).

- Delivered with Flexvent Super and height adjustable feet.



Type	Capacity [l]	Design pressure [PN]	Dimensions			Syst. conn.	Weight [kg]		Order Code
			A [mm]	B [mm]	C [mm]				
FB 100	100	PN 6	484	1050	360	G 1 1/2" M	35	1	17829
FB 200	200	PN 6	484	1560	360	G 1 1/2" M	31	1	17830
FB 300	300	PN 6	600	1596	450	G 1 1/2" M	41	1	17831
FB 400	400	PN 6	790	1437	610	G 1 1/2" M	62	1	17832
FB 500	500	PN 6	790	1587	610	G 1 1/2" M	70	1	17833
FB 600	600	PN 6	790	1737	610	G 1 1/2" M	77	1	17834
FB 800	800	PN 6	790	2144	610	G 1 1/2" M	92	1	17835
FB 1000	1000	PN 6	790	2493	610	G 1 1/2" M	106	1	17836
FB 1200	1200	PN 3	1000	2210	1060	G 1 1/2" M	290	1	17767
FB 1600	1600	PN 3	1000	2710	1060	G 1 1/2" M	345	1	17768
FB 2000	2000	PN 3	1200	2440	1265	G 1 1/2" M	430	1	17769
FB 2800	2800	PN 3	1200	3040	1265	G 1 1/2" M	515	1	17770
FB 3500	3500	PN 3	1200	3840	1265	G 1 1/2" M	625	1	17771
FB 5000	5000	PN 3	1500	3570	1570	G 1 1/2" M	1240	1	17772
FB 6500	6500	PN 3	1800	3500	1885	G 1 1/2" M	1710	1	17773
FB 8000	8000	PN 3	1900	3650	1985	G 1 1/2" M	1830	1	17774
FB 10000	10000	PN 3	2000	4050	2085	G 1 1/2" M	2025	1	17775



ACCESSORIES FOR FLAMCOMAT

Flamcomat drain sets



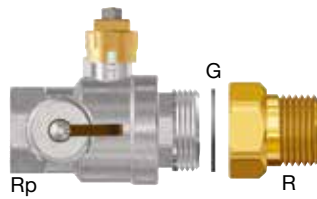
Drain off module for Flamcomat with SPC controller. Prevents against overfilling of main vessel when the expansion volume is temporarily larger than the volume of the vessel. Available with water meter or pulse water meter for a flow (Kvs) of 16 or 20 m³/h. The versions with a pulse water meter allow the monitoring of the flow rate by the SPC controller.

- Nominal pressure: PN 10.
- Working temperature flow: 3 °C / 105 °C.
- Working temperature backflow: 3 °C / 70 °C
- Electricity supply: 230V 1Ph N PE 50Hz ca. 10W.
- Applicable with controller: SPC-lw respectively -hw.

Type		Order Code
Drain set with water meter pulse large - 20 m³/h	1	17651
Drain set with water meter large - 20 m³/h	1	17653

Ball Valve

With drain connection, PN 16, 120 °C.



Type	Connection			Drain connection	Application			Order Code
	Rp	G	R		Pump	Vessel		
Ball valve DN 32 with adapter	1 1/4"	1 1/2"	1 1/4"	G 3/4"	-	Flamcomat FB	1	17738
Ball valve DN 25 without adapter (set)	1"	1 1/4"	-	G 3/4"	MM - M80 (G3), DM - D80 (G3)	Flamcomat FG	2	17660
Ball valve DN 32 without adapter (set)	1 1/4"	1 1/2"	-	G 3/4"	M100 - M130 D100 - D130	Flamcomat FG	2	17661

Flexible Connecting Kit (set of 2)

For connecting the Flamcomat main or auxiliary vessel to the pump-unit, face sealed female, with ball valve and drainage valve.



Type	Suitable for		Connection		Length [mm]	Weight [kg]		Order Code
	Pump-unit	Vessel sizes [l]	Vessel	Pump-unit				
Flexible connection 1 / G3	MM - M80, DM - D80	100 - 1600	G 1 1/2" F	G 1" F	940	1.4	1	17610
Flexible connection 2 / G3	MM - M80, DM - D80	2000 - 5000	G 1 1/2" F	G 1" F	1240	1.5	1	17611
Flexible connection 3 / G3	MM - M80, DM - D80	6500 - 10000	G 1 1/2" F	G 1" F	1440	1.6	1	17612
Flexible connection 5	M100 - M130, D100 - D130	200 - 1000	G 1 1/2" F	G 1 1/2" M	500	5.0	1	17755
Flexible connection 6	M100 - M130, D100 - D130	1200 - 5000	G 1 1/2" F	G 1 1/2" M	750	5.5	1	17756
Flexible connection 7	M100 - M130, D100 - D130	6500 - 10000	G 1 1/2" F	G 1 1/2" M	1000	6.5	1	17757

Gas Sensor Connecting Group

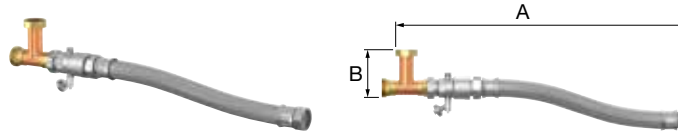
For connecting the Flamcomat main vessel to the pump unit, face sealed female, with ball valve and drainage valve. Includes a deaeration sensor for signalling the control unit to continue or stop active deaeration.



Type	Optional for		Connection to			Order Code
	Pump-unit	Vessel sizes [l]	Vessel	Pump-unit		
Sensor connecting group 1 / G3	MM - M80, DM - D80	100 - 1600	G 1 1/2" F	G 1" F	1	17615
Sensor connecting group 2 / G3	MM - M80, DM - D80	2000 - 5000	G 1 1/2" F	G 1" F	1	17616
Sensor connecting group 3 / G3	MM - M80, DM - D80	6500 - 10000	G 1 1/2" F	G 1" F	1	17617
Sensor connecting group 5	M100 - M130, D100 - D130	200 - 1000	G 1 1/2" F	G 1 1/2" M	1	17814
Sensor connecting group 6	M100 - M130, D100 - D130	1200 - 5000	G 1 1/2" F	G 1 1/2" M	1	17815
Sensor connecting group 7	M100 - M130, D100 - D130	6500 - 10000	G 1 1/2" F	G 1 1/2" M	1	17816

Auxiliary vessel connection Flamcomat

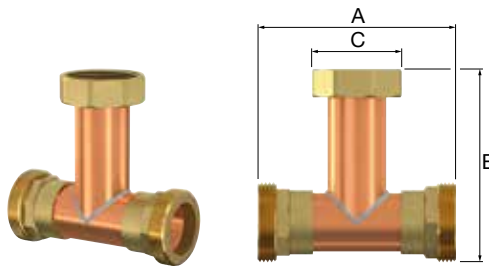
Connection set including T-piece PN10, hose and a block & bleed valve for easy installation of a Flamcomat FB auxiliary vessel. Use the pump connection from the FG main vessel for installing a FB auxiliary vessel with the connection set.



Type	Connection		Dimensions		Weight [kg]		Order Code
	Flamcomat FG	Flamcomat FB	A [mm]	B [mm]			
Auxiliary vessel connection Flamcomat	G 1 1/2" F	G 1 1/2" F	710	105	3.2	1	17647

T-piece

T-piece PN 10 for an easy installation of a Flamcomat FB auxiliary vessel. Use the pump connection from the FG main vessel for installing an FB auxiliary vessel with the T-piece.



Type	Dimensions			Weight [kg]		Order Code
	A [mm]	B [mm]	C [mm]			
T-Piece G 1 1/2"	120	105	52	0.6	1	17664

Rotating Connection, Face Sealed

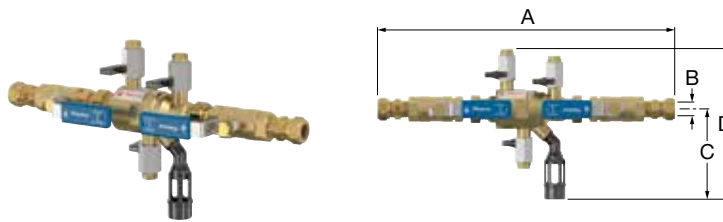


Type	Suitable for		Connection to		Weight [kg]		Order Code
	Pump	Nom.	Vessel	Pump			
Vessel connection type 4	MM - M80 (G3), DM - D80 (G3)	DN 25	G 1 1/2" F	R 1"	0.4	1	17730
Vessel connection type 5	M100 - M130, D100 - D130	DN 32	G 1 1/2" F	R 1 1/4"	0.5	1	17731

Prescor BFP BA

Backflow preventer Prescor BFP type BA suitable for installations with liquid class 4.

- Low pressure drop.
- Lowest sound class: ≤ 20 dB(A) according to DIN-52 218 Group I.
- Easy to install both horizontally and vertically.
- Provided with strainer.
- Smallest in its class.
- Complete set.
- Material: brass, SST, plastic and EPDM.
- Working temperature: 1 °C / 65 °C.
- Nominal design pressure: PN 10.



Type	DN (syst.)	Connec- tion (B)	Dimensions			Vessel capacity [l]	Ball valves (2x)	Weight [kg]		Order Code
			A [mm]	C [mm]	D [mm]					
Prescor BFP BA 1/2 M	15	G 1/2" M	171	105	175	≤ 3500	-	0.83	1	27400
Prescor BFP BA G 3/4 M Unit	15	G 3/4" M	288	105	175	≤ 3500	•	1.46	1	27402
Prescor BFP BA K15 Unit	15	K 15	351	105	175	≤ 3500	•	1.52	1	27406

kiwa

RELIGIONA



Backflow preventer BA



Backflow preventer BA suitable for pump controlled pressurisation units for heating and chilled water (cooling) installations.

- Including strainer and shut-off valves.
- Maximum working pressure: 10 bar.
- Maximum working temperature: 65 °C.

Type	Connection	Vessel capacity [l]	K _{vs} [m³/h]	Weight [kg]		Order Code
Backflow preventer	Rp 1/2" - R 1/2"	> 3500	3.5	0.6	1	17736

Pressure Safety Switch



Type	Connection ["]		Order Code
Minimum pressure switch	G 1/2"	1	27459
Maximum pressure switch	G 1/2"	1	27458

Bimetallic Temperature Switch



Electromechanical switch with fixed switching temperature of 70 °C.

Flamcomat: Reaching 70 °C is detected as an error and is stored in the error memory. When this temperature is reached the temperature switch prevents the system from degassing until the temperature falls below 70 °C again.

M-K automats: Reaching 70 °C is detected as an error and is stored in the error memory.

- Maximum working pressure: 25 bar.
- Working temperature: 3 °C/ 95 °C.
- Switching point: 70 °C.
- Applicable with controller: SPC-lw respectively -hw.

Type		Order Code
Bimetallic Temperature Switch	1	17659

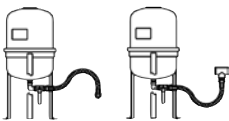
Impulse Output Water Meter



- PN 10, 90 °C.
- 50 Hz.

Type	Features	Length [mm]		Order Code
Impulse output water meter	1 impulse/10 litres	80	1	17739

Surge Vessel (PN 6)



Type	Capacity [l]	Dimensions		Syst. conn.	Weight [kg]		Order Code
		Ø [mm]	H. [mm]				
Surge vessel type M	18	286	600	1/2"	8.5	1	17732
Surge vessel type D	18	286	600	1 1/4"	10	1	17733

OPTIONAL CONTROL UNITS

Easycontact

Remote volt free failure contacts for pressure, level and thermal motor protection.



Type	Control unit		For automat				Order Code
	SCU	SPC	M-K/C	M-K/U	Flamco-mat		
Easycontact	✓	✓	✓	✓	✓	1	23649

Diaphragm Rupture Sensor

- Remote monitoring.
- Can be integrated at a later date.



Type	Control unit		For automat				Order Code
	SCU	SPC	M-K/C	M-K/U	Flamco-mat		
Diaphragm rupture sensor	-	✓	-	✓	✓	1	22386

Analogue Signalling



For analogue signalling (0-10 V) of vessel volume (0-100%) and system pressure (0-16 bar).

- Internal.
- Build-in afterwards is possible.
- Setting up data processing and visualisation is the responsibility of the installer.

Type	Control unit		For automat				Order Code
	SCU	SPC	M-K/C	M-K/U	Flamco-mat		
Analogue signalling	-	✓	-	✓	✓	1	17802

SD Card Module



External SD Card module used for:

- Saving of SPC parameter files.
- Downloading of files via SD Card to PC.
- Transmission of the files to Service Centre.
- Firmware updates by the service support.

Type	Control unit		For automat				Order Code
	SCU	SPC	M-K/C	M-K/U	Flamco-mat		
SD card module	-	✓	-	✓	✓	1	17803

SPC Extension module



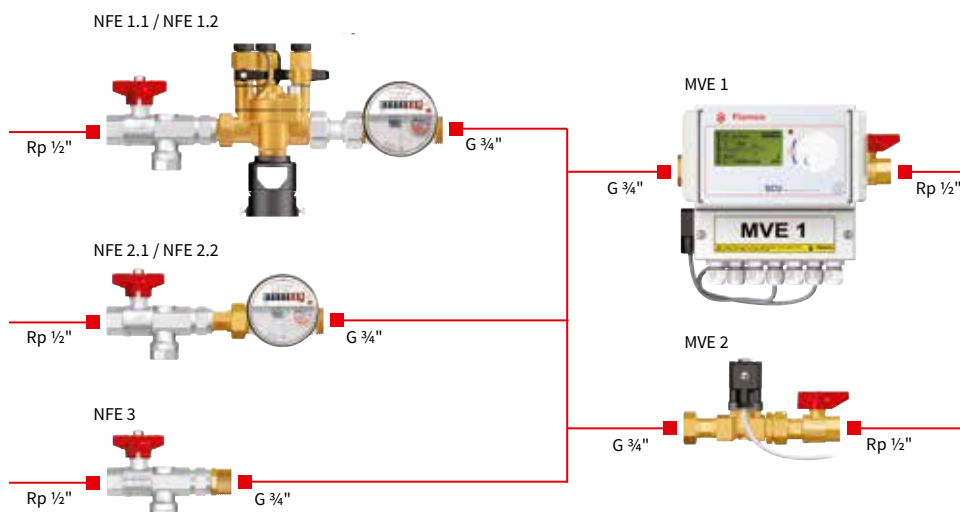
Connection module for communication between two controls.

- For SPC control.
- Makes linked operating options possible (Configuration and Commissioning by Flamco Service Only).

Type	Control unit		For automat				Order Code
	SCU	SPC	M-K/C	M-K/U	Flamco-mat		
SPC Extension modules Master + Slave	-	✓	-	✓	✓	1	17500
Extra Slave Module	-	✓	-	✓	✓	1	17501

ACCESSORIES FOR FILLING

For heating and chilled water (cooling) installations.



MVE 1 Direct Pressurisation Control



Automatic topping-up direct from water mains expansion automats (signal controlled) or self supported with pressure sensor.

- With digital control, pressure sensor and ball valve.
- Maximum working pressure: 10 bar.
- Maximum working temperature: 90 °C.
- Electricity supply: 230 V / 50 Hz.

Type	L. [mm]	Connection to		Weight [kg]		Order Code
		Potable water	System			
MVE 1	300	G 3/4"	Rp 1/2"	9	1	23785

MVE 2 Solenoid Valve Unit



Solenoid valve units for systems with expansion automats with SPC / SCU-control or other 230 V refill signal.

- With ball valve.
- Maximum working pressure: 10 bar.
- Maximum working temperature: 90 °C.

Type	L. [mm]	Connection to		Weight [kg]		Order Code
		Potable water	System			
MVE 2	175	G 3/4"	Rp 1/2"	2	1	23786

NFE 1 Top-up Unit



Used for direct top up from potable water supply according to DIN 1988 and DIN EN 1717.

- Consists of a backflow preventer, water meter, ball valve and non-return valve.
- Maximum operating pressure: 10 bar.
- Maximum operating temperature: 65 °C.

Type	L. [mm]	Connection to		K _{vs} (Backflow- preventer) [m³/h]	Weight [kg]		Order Code
		Potable water	System				
NFE 1.1	355	Rp 1/2"	G 3/4"	2	3	1	23780
NFE 1.2 *	355	Rp 1/2"	G 3/4"	2	3	1	23781

* NFE 1.2 has an impulse output water meter (10 litres / impulse).

NFE 2 Top-up Unit



Used for top up from a water supply where a backflow preventer is not needed.

- Consists of a water meter, ball valve and non-return valve.
- Maximum operating pressure: 10 bar.
- Maximum operating temperature: 90 °C.

Type	L. [mm]	Connection to		Weight [kg]		Order Code
		Potable water	System			
NFE 2.1	200	Rp 1/2"	G 3/4"	2	1	23782
NFE 2.2 *	200	Rp 1/2"	G 3/4"	2	1	23783

* NFE 2.2 has an impulse output water meter (10 litres / impulse).

NFE 3 Top-up Unit



Used for top up from a water supply, where a backflow preventor is not needed.

- Consists of a ball valve and non-return valve.
- Maximum operating pressure: 10 bar.
- Maximum operating temperature: 90 °C.

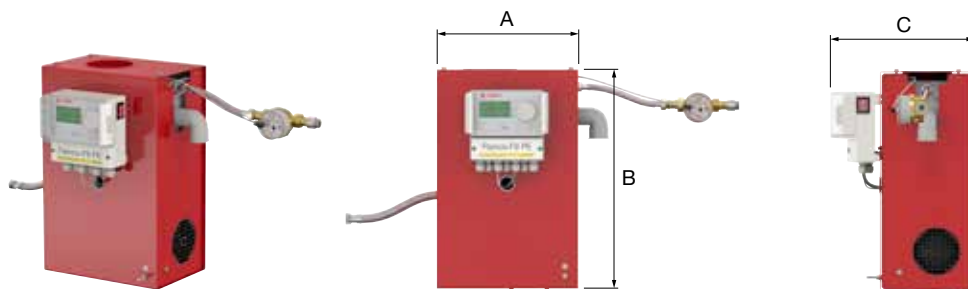
Type	L. [mm]	Connection to		Weight [kg]		Order Code
		Potable water	System			
NFE 3 *	130	Rp 1/2"	G 3/4"	0.5	1	23784

* NFE 3 is not necessary if the top-up water is free from impurities > 0.2 mm, the system has not been filled from a district-heating system and sufficient filters have been fitted for the solenoid valve (MVE).

Flamco-Fill PE Top-up Unit (pressurisation)

The Flamco-Fill PE pressurisation units monitor the pressure in sealed heating and cooling installations and tops them up as necessary. Topping-up depends on the pressure or level at a pre-set interval. There are two working methods available. One for installations with expansion automats (command based on level in automat) and one for installations with Flexcon expansion vessels (command based on installation pressure).

- Particularly suitable for small feed pressures for medium and large heating and cooling systems.
- For separating potable water supply and the closed system a break tank is used which does not require any backflow preventer.
- With impulse water meter for monitoring the amount of water added.
- Any malfunctions will result in a visible alarm and may be made visible automatically in the malfunction log, even via remote control (dead socket).
- Convenient operation with constant display of all important operating parameters.
- Active process menu (active diagram with the status of switching elements and sensors).
- Topping-up according to DIN EN 1717 and DIN 1988.
- Control unit can also be used in water preparation systems.
- 17 languages can be selected in the menu (eg: D, GB, NL and F)
- RS 485 interface.
- Electricity supply: 230 V / 50-60 Hz.
- Mains water pressure (potable water inlet): 1 - 10 bar.
- Nominal system pressure: 1 - 9 bar (PN 10).
- Working temperature (inlet side): 3 °C / 30 °C.
- Maximum flow rate: 210 l/h.
- In accordance with European Pressure Equipment Directive 2014/68/EU and Machinery Directive 2006/42/EC.



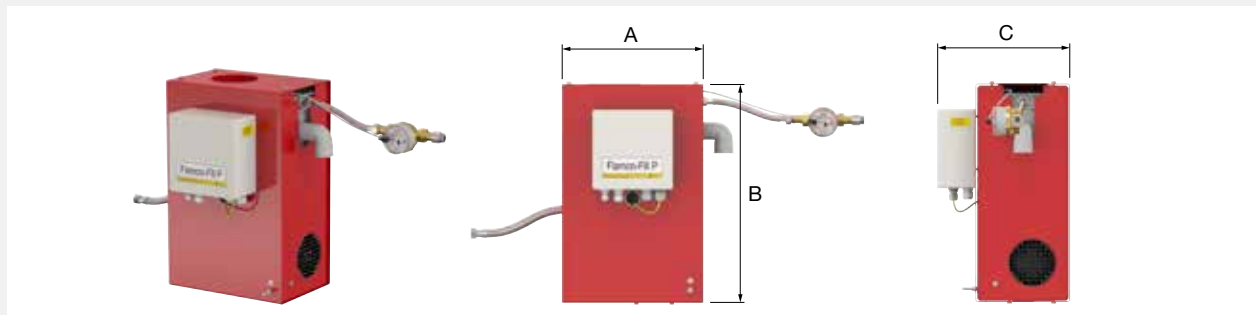
Type	Dimensions			Connection to		Weight [kg]		Order Code
	A [mm]	B [mm]	C [mm]	Potable water	System			
Flamco-Fill PE	400	495	320	G 1/2"	G 1/2"	25	1	23757

kiwa

Flamco-Fill P

Flamco-Fill P refills water in heating and chilled water (cooling) installations. Same construction as Flamco-Fill PE, but without a controller.

- Specially developed for use in conjunction with a pressurisation automat (Flamcomat, M-K/U) with SPC controller.
- The controller of the automat monitors and manages all functions of the Flamco-Fill P.



Type	Dimensions			Connection to		Weight [kg]		Order Code
	A [mm]	B [mm]	C [mm]	Potable water	System			
Flamco-Fill P	400	495	305	G 1/2"	G 1/2"	24	1	17665

Feet for Flamco-Fill PE / P

Set of two feet for a floor standing installation of the Flamco-Fill PE and Flamco-Fill P.



Type		Order Code
Feet for Flamco-Fill PE / P (2x)	1	17666

Flamco pressurisation equipment

The Flamco compact wall mounted and free standing pressurisation units are fully automatic heating / chiller system topup devices, offering accurate control and reliability. They are suitable for pressure management in domestic, commercial and industrial sealed heating and cooling systems. With a choice of single or twin pump system for topping up water using a break-tank and a digital controller. With AB type break tank for back flow protection.

Digital pressurisation equipment including:

- Digital equipment comes with bright LED display scrolling messages including pump operation and alarm modes.
- Single or twin pump configurations.
- Complete with integral AB type water break tank utilising a WRAS approved float valve.
- Twin pump equipment operates as cyclic duty - standby with automatic changeover.
- Internal alarm with mute function.
- Security password protected.
- Auto resetting low water detection, for pump protection.
- Auto resetting high and low pressure alarm.
- Digital pressure setpoint with adjustable differential.
- Flood protection through a pump run limit timer.
- Normally closed, common fault, volt free contact (Boiler interlock).
- Normally open, individual volt free contacts for pump trip, high pressure, low pressure and sensor health.
- All volt free contacts are for use with electrical supplies up to 240V with a maximum current draw of 5 amps.
- RS 485 Connectivity with MODBUS protocol.
- Hours run counter (per pump).
- 12 month service reminder.
- Excessive start alarm (>3 times in 8 hours).
- Pump pulse option (2 second pulse per pump if inactive for 60 days).
- Fill system option (Not available on 130D/230D).

Selection Essentials

- Static Height of the building above the pressurisation unit (metres).
- Systems content [ltr] or boiler power [kW] (which can be used to estimate the systems content).
- Flow and return temperatures (or maximum ambient temperature in the case of a chilled water system).
- Glycol content (%) if required.
- Maximum allowable system pressure and/or safety relief valve setting.

Flexfiller Standard

- Floor standing, high flow rate (<18 l/min) top-up pressurisation unit.
- 18 litre break tank.
- 60Hz version available on request.



Flexfiller Midi / IP66

- Wall mounted, <12 l/min flow rate top-up pressurisation unit.
- 4 litre break tank.
- IP66: With IP66 rated cabinet.



PressDS

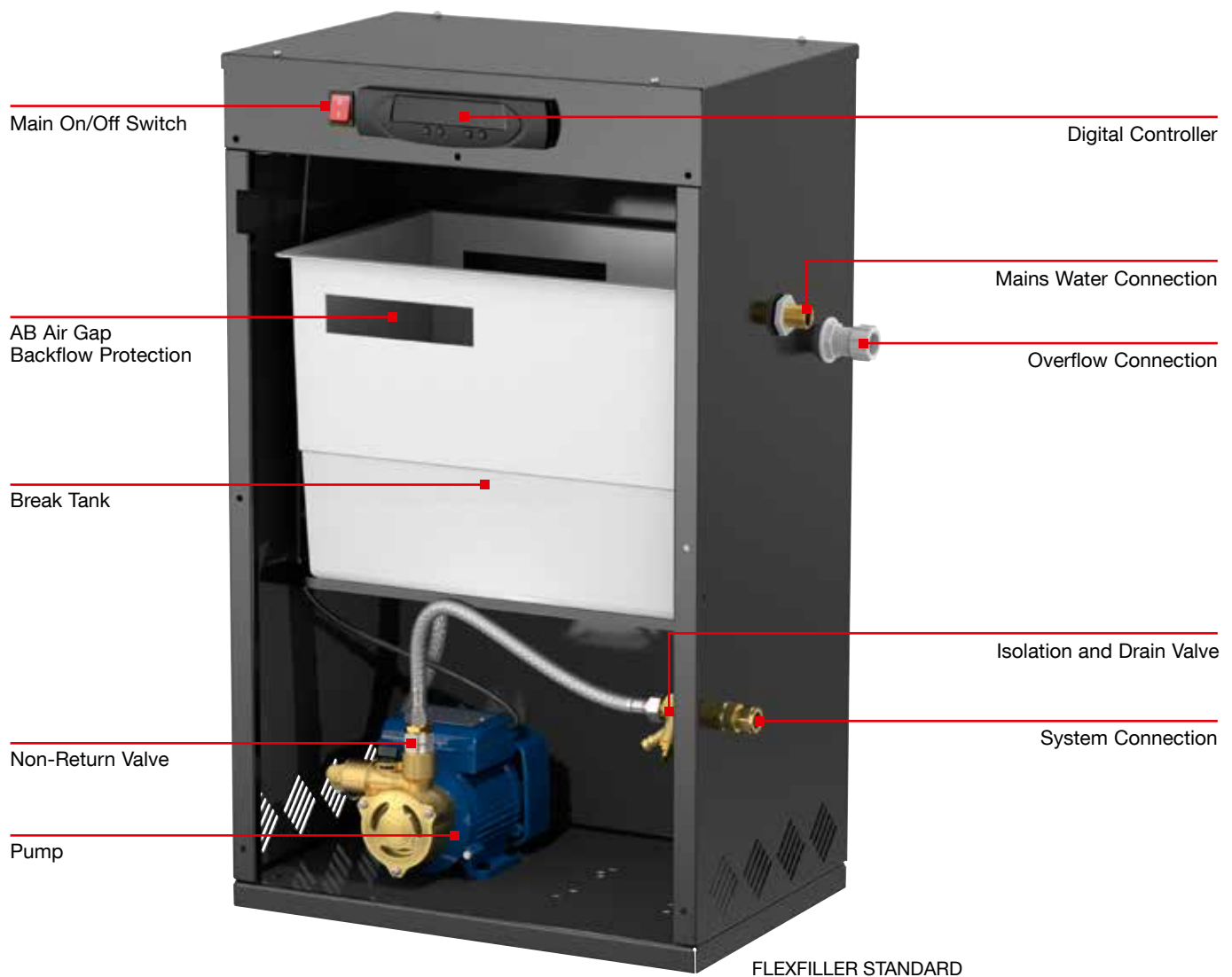
- Floor standing, high flow rate (<18 l/min) top-up glycol mixing pressurisation unit.
- 4 litre break tank.
- 18 litre tank for glycol top-up.
- The correct fluid mix is blended on demand at the time of system top-up.



Flexfiller Twin System

- Floor standing unit, with two high flow rate (<18 l/min) top-up pressurisation units.
- 18 litre break tank.
- Ideal where space restrictions make it beneficial to locate two systems in a single enclosure.





Digifiller

- Wall mounted, <12 l/min flow rate digital top-up pressurisation unit.
- 4 litre break tank.
- A self-bleed pump configuration.



Flexfiller Plus & Midifill Plus

- Combined digital top-up pressurisation unit with vacuum degasser.
- 18 litre break tank (Midifill: 4 litre).



Flexfiller Mini Digital

- Wall mounted, low flow rate (<0.4 l/min) digital top-up pressurisation unit.
- 2 litre break tank.
- Ideal for residential or small commercial application.



PressDS Plus

- Combined digital top-up ressurisation unit with vacuum degasser and additive tank.
- 4 litre break tank.
- 18 litre additive tank.



Pressurisation Units Features & Options

Pressurisation units are required anywhere where the mains water supply must be kept wholesome and protected from sealed system water, and essential anywhere where the mains water pressure is insufficient to fill and maintain the integrity of a sealed system.

General Technical Data and System Limits

Materials & Technical:

Housing: Mild Steel CR4.

Finish: Powder Coating.

Break Tank: WRAS Approved material.

Pump: See pump details.

Fluid Category Protection: Type AB Weir Overflow gap / Category 5.

Controller: MODBUS.

Directive: PED 2014/68/EU.

Required Supply Voltage: 230V/1/50Hz

(2160D: 415V/3/50Hz).

Flamco have created a range of pressurisation equipment to meet every need. While the standard range will meet most demands, at Flamco we also offer a bespoke equipment service when the out of the ordinary occurs.

System:

International Protection Marking: IP 54.

Ambient Temperature: 5 - 40 °C.

Operating Temperature: 5 - 85 °C.

Noise rating : <75 dBA.

Pressure rating: PN10 (2160D: PN16).

Nominal Operating Pressure Range: 1-16 bar.

Type		Function			Number of Pumps	Pressure Rating [PN]	Max. Delivery Pressure [bar]	Max. Delivery Flow Rate [l/min]	Floor Standing / Wall Mounted	Break Tank Capacity [l]	System Volume (guide) [l]
		Pressurisation	De-gasser	Dosing							
Flexfiller + Flexfiller 60Hz	125D	•			1	10	2.5	18	floor	18	< 60000
	225D	•			2	10	2.5	18	floor	18	< 60000
	150D	•			1	10	5.0	18	floor	18	< 60000
	250D	•			2	10	5.0	18	floor	18	< 60000
	180D	•			1	16	8.0	18	floor	18	< 60000
	280D	•			2	16	8.0	18	floor	18	< 60000
	2160D	•			2	16	16.0	18	floor	18	< 60000
Midi + IP66	125D	•			1	10	2.5	12	wall	4	< 16000
	225D	•			2	10	2.5	12	wall	4	< 16000
	150D	•			1	10	5.0	12	wall	4	< 16000
	250D	•			2	10	5.0	12	wall	4	< 16000
Mini Digital	130D	•			1	10	3.0	0.4	wall	2	< 2600
	230D	•			2	10	3.0	0.4	wall	2	< 2600
Digifiller	0.5	•			1	10	2.5	12	wall	4	< 16000
	1.0	•			1	10	2.5	12	wall	4	< 16000
	1.5	•			1	10	2.5	12	wall	4	< 16000
	2.0	•			1	10	2.5	12	wall	4	< 16000
Twin System	2x125D	•			2 *	10	2.5	18	floor	18	< 60000
	2x225D	•			4 **	10	2.5	18	floor	18	< 60000
	2x250D	•			4 **	10	5.0	18	floor	18	< 60000
PressDS	225	•			2	10	2.5	18	floor	4	< 60000
	250	•			2	10	5.0	18	floor	4	< 60000
	280	•			2	16	8.0	18	floor	4	< 60000
Flexfiller Plus	Midifill Plus 150D	•	•		1	10	5.0	12	wall	4	< 50000
	250D	•	•		2	10	6.0	12	floor	18	< 300000
	280D	•	•		2	10	8.0	12	floor	18	< 300000
	2160D	•	•		2	16	16.0	12	floor	18	< 300000
PressDS Plus	250	•	•	•	2	10	6.0	18	floor	4	< 300000
	280	•	•	•	2	10	8.0	18	floor	4	< 300000
	2160	•	•	•	2	16	16.0	18	floor	4	< 300000

* = 1 pump for each system

** = 2 pumps for each system.

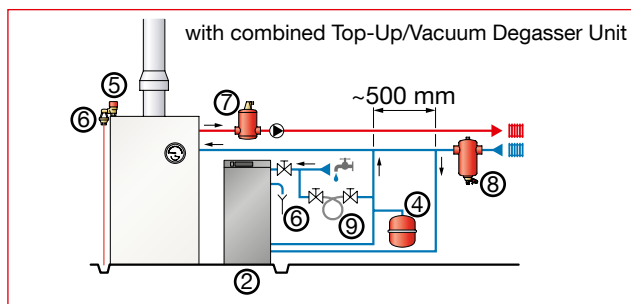
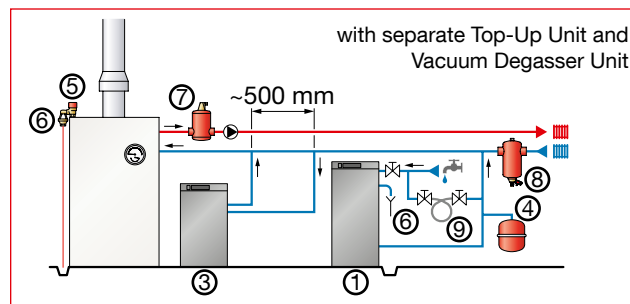
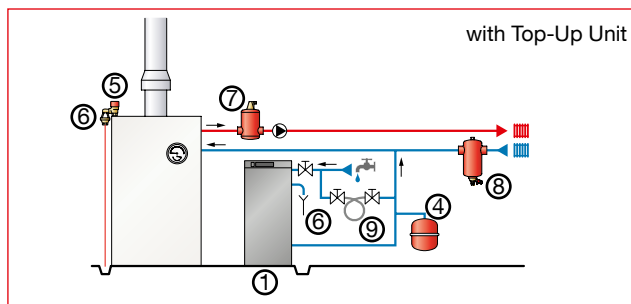
Installation and Schematic Layouts

Installation and Placement

The pressurisation unit should be installed in the return header of the system on the suction side of the circulating pump, in a frost-free and low humidity area. The point of connection will be the same as the system expansion vessel.

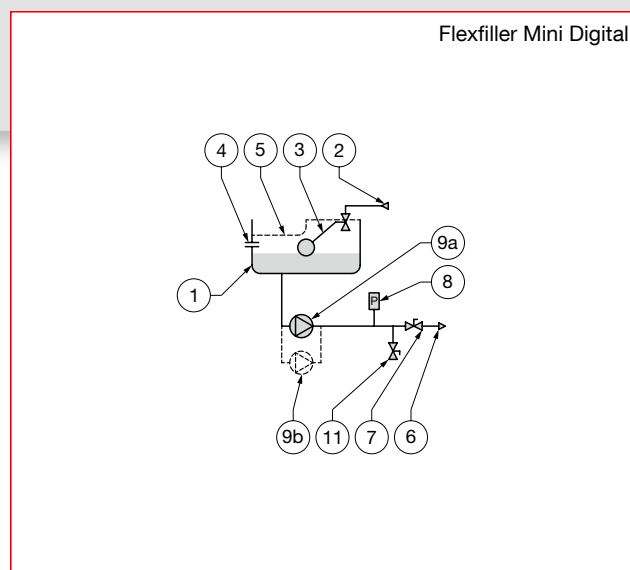
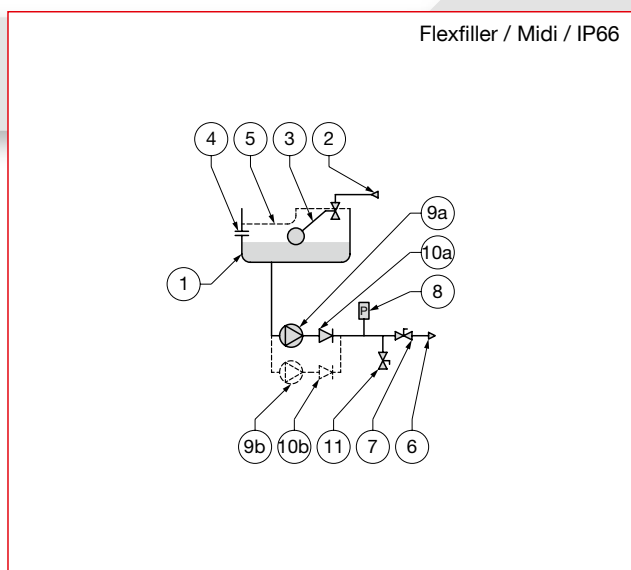
Connected to the system return pipe, to provide a neutral pressure reading. With combined units the two system connections must be installed on the return pipe approximately 0.5 metre apart.

System Schematics

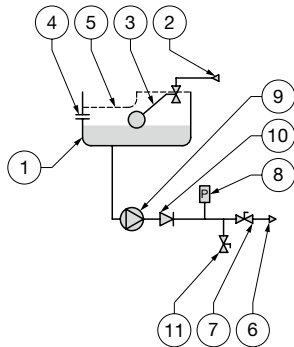


Nr	Description
1	Flexfiller Top-Up Unit
2	Flexfiller Plus / PressDS Plus Combined Unit
3	PSD Pressure Step Degasser
4	Flexcon Expansion Vessel
5	Prescor Safety Valve
6	Tundish
7	Flamcovent Smart Deaerator
8	Flamco Clean Smart Dirt Separator
9	Filling Loop (Optional)

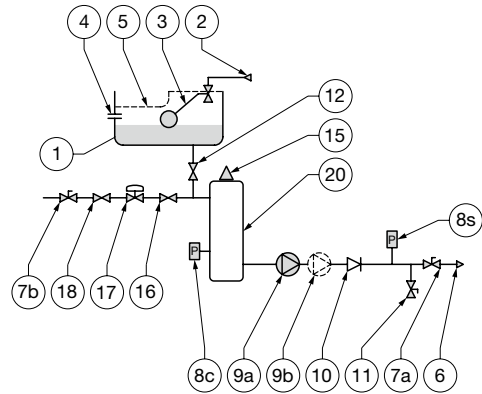
Product Schematics



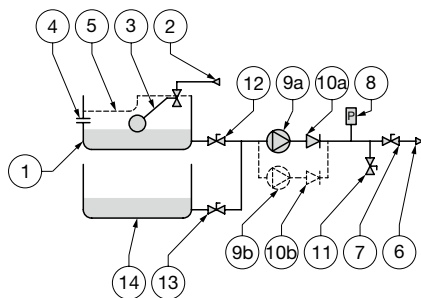
Digifiller



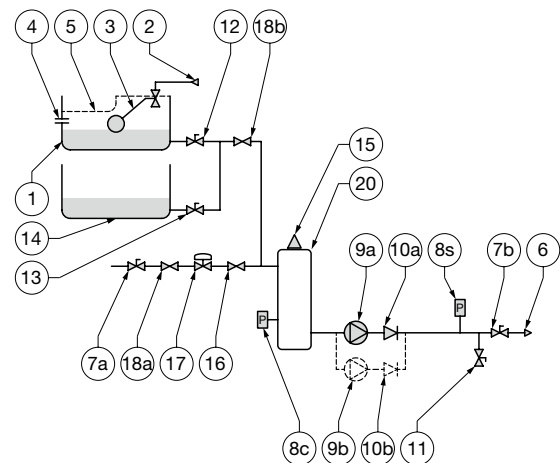
Flexfiller Plus



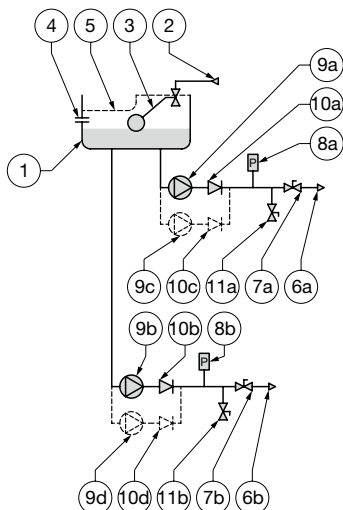
PressDS



PressDS Plus



Flexfiller Twin



Number	Description
1	Break tank
2	Mains water inlet
3	Float Operated valve
4	Overflow connection
5	AB air gap backflow protection
6	Supply to sealed system
7 (7a/7b)	Isolation valve
8 (8a/8b)	Pressure transmitter
8s	Pressure sensor (system)
8c	Pressure sensor (cylinder)
9 (9a/9b)	Pump(s)
10 (10a/10b)	Non Return valve
11 (11a/11b)	Drain valve
12	Water balancing valve
13	Additive balancing valve
14	Additive tank
15	Automatic air vent
16	Variable bypass valve
17	Reducing valve
18(18a/18b)	Solenoid valve
20	Cylinder
PS	Pressure switch
H/L	High/Low switch (boiler control)

Pressurization Units Pump Details

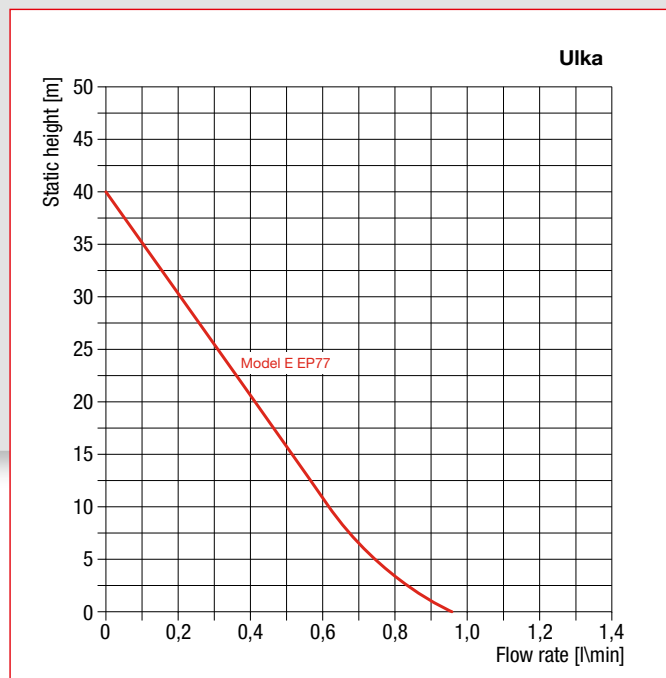
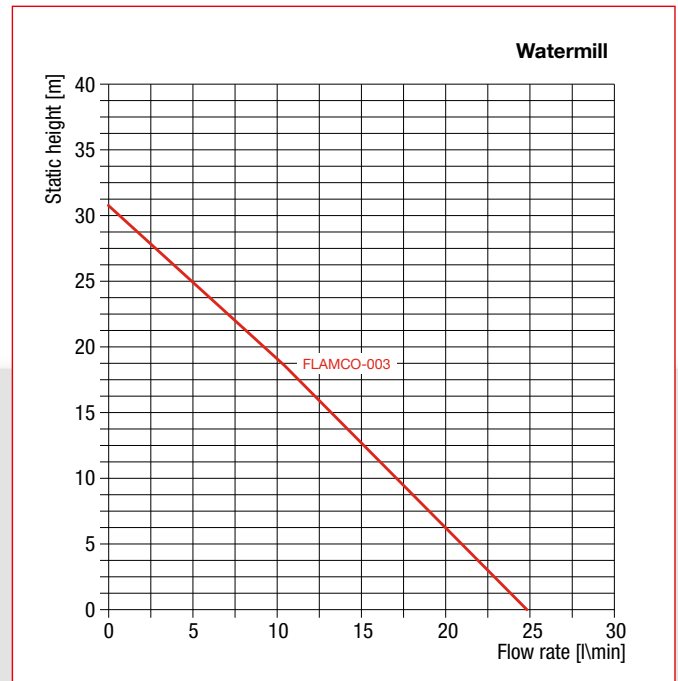
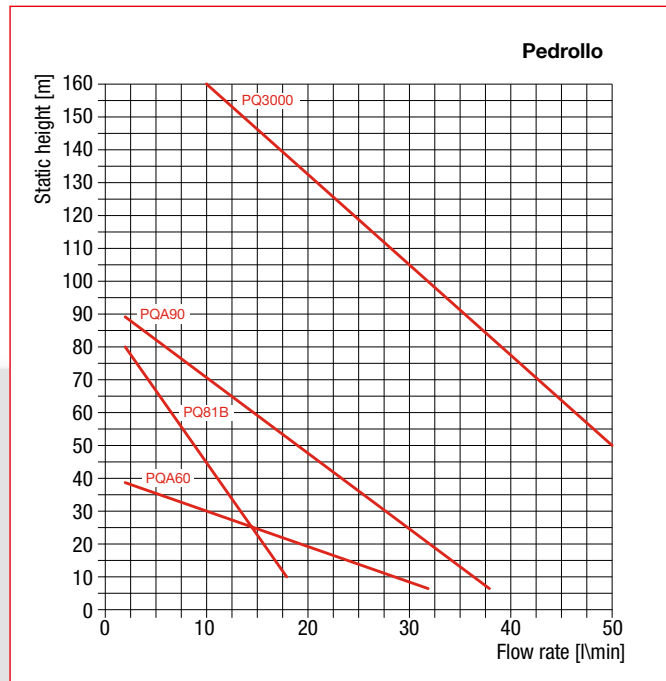
Before pumps are introduced to Flamco equipment, they are subjected to rigorous testing. Each pump is run for 744 hours (1 month, day and night) and then checked that the delivery pressure is within the design parameters.

Pump Characteristics

Type		Pump Qty	Pump Type	Pump Body	Impeller	Insulation Class	IP rating
Flexfiller	125D	1	Pedrollo PQA60	Ryton	Brass	F	IPX4
	225D	2	Pedrollo PQA60	Ryton	Brass	F	IPX4
	150D	1	Pedrollo PQ81B	Brass	Brass	F	IPX4
	250D	2	Pedrollo PQ81B	Brass	Brass	F	IPX4
	180D	1	Pedrollo PQA90	Ryton	Brass	F	IPX4
	280D	2	Pedrollo PQA90	Ryton	Brass	F	IPX4
	2160D	2	Pedrollo PQ3000	Cast Iron	Bronze	H	IPX5
Flexfiller 60Hz	125D - 60Hz	1	Pedrollo PQA60 - 60Hz	Ryton	Brass	F	IPX4
	225D - 60Hz	2	Pedrollo PQA60 - 60Hz	Ryton	Brass	F	IPX4
	150D - 60Hz	1	Pedrollo PQ81B - 60Hz	Brass	Brass	F	IPX4
	250D - 60Hz	2	Pedrollo PQ81B - 60Hz	Brass	Brass	F	IPX4
	180D - 60Hz	1	Pedrollo PQA90 - 60Hz	Ryton	Brass	F	IPX4
	280D - 60Hz	2	Pedrollo PQA90 - 60Hz	Ryton	Brass	F	IPX4
	2160D - 60Hz	2	Pedrollo PQ3000 - 60Hz	Cast Iron	Bronze	H	IPX5
Flexfiller Midi + Flexfiller IP66	125D	1	Pedrollo PQA60	Ryton	Brass	F	IPX4
	225D	2	Pedrollo PQA60	Ryton	Brass	F	IPX4
	150D	1	Pedrollo PQ81B	Brass	Brass	F	IPX4
	250D	2	Pedrollo PQ81B	Brass	Brass	F	IPX4
Flexfiller Mini Digital	130D	1	Ulka Model E EP77	Metal	Plastic	F	IPX2
	230D	2	Ulka Model E EP77	Metal	Plastic	F	IPX2
Digifiller	0.5	1	Watermill Flamco-003	Brass	Brass	F	IPX2
	1.0	1	Watermill Flamco-003	Brass	Brass	F	IPX2
	1.5	1	Watermill Flamco-003	Brass	Brass	F	IPX2
	2.0	1	Watermill Flamco-003	Brass	Brass	F	IPX2
Twin System	2 x 125D	1 per sys	Pedrollo PQA60	Ryton	Brass	F	IPX4
	2 x 225D	2 per sys	Pedrollo PQA60	Ryton	Brass	F	IPX4
	2 x 250D	2 per sys	Pedrollo PQ81B	Brass	Brass	F	IPX4
PressDS	225	2	Pedrollo PQA60	Ryton	Brass	F	IPX4
	250	2	Pedrollo PQ81B	Brass	Brass	F	IPX4
	280	2	Pedrollo PQA90	Brass	Brass	F	IPX4
PressDS Plus	250	2	Pedrollo PQ81B	Brass	Brass	F	IPX4
	280	2	Pedrollo PQA90	Brass	Brass	F	IPX4
	2160	2	Pedrollo PQ3000	Cast Iron	Bronze	H	IPX5
Flexfiller Plus	Midifill	1	Pedrollo PQ81B	Brass	Brass	F	IPX4
	250D	2	Pedrollo PQ81B	Brass	Brass	F	IPX4
	280D	2	Pedrollo PQA90	Ryton	Brass	F	IPX4
	2160D	2	Pedrollo PQ3000	Cast Iron	Bronze	H	IPX5

Pump Graphs

Characteristics curves and operating range of the pumps used in Flamco Pressurization units.



Spare Parts Pressurisation Units

Type		Spare Part	
		Article number	
Flexfiller + Flexfiller 60Hz	125D	•	Controller
	225D	•	Mini Transformer
	150D	•	Rock switch
	250D	•	Pressure Transducer (0-10 Bar, 1-6V)
	180D	•	Pressure Sensor 16b (1-6V)
	280D	•	Combined Isolation & Drain Valve
Flexfiller Midi + Flexfiller IP66	125D	•	1/2" Non-Return Valve
	225D	•	1/2" x 15mm C x M Coupling
	150D	•	Float Valve
	250D	•	Mini Float Valve
	180D	•	Overflow Connection
	280D	•	Float Switch L90 cm wire
Digifiller	0.5	•	Float Switch L55 cm wire
	1.0	•	Float switch for glycol tank
	1.5	•	Mesh Strainer
	2.0	•	1/4" Brass Locking Nut
	0.5	•	1/4" BSP M x 8mm Push-Fit
	1.0	•	Flanged Tank Connector 15 mm
Flexfiller Mini Digital	130D	•	Extended Tank Connector 1/2" x 15 mm
	230D	•	1/4" BSP F Tee
	225D	•	1/4" Ball Valve
	250D	•	40 mm Pressure Gauge c/w Capillary
	280D	•	8mm Push-Fit Tee
	250D	•	Pump Control Pressure Switch
PressDS	2 x 125D	•	High/Low Pressure Switch
	2 x 225D	•	Fused Terminal Block
	2 x 250D	•	6mm x 8mm Push-Fit Manifold
	250D	•	DN15 Balancing Valve - Glycol / Water
	280D	•	1/2" Tee Brass
	250D	•	Pump Elbow 4mm
Flexfiller Twin System	250D	•	Tank Elbow 4mm
	280D	•	4mm Tube
	250D	•	1/2" x 15 mm M Elbow
	280D	•	Flexible Pump Support
	250D	•	6 mm Poly-tube
	280D	•	8 mm Hose Tail
Flexfiller Plus	250D	•	8 mm Poly-tube
	280D	•	PSD Controller
	250D	•	Vacuum Cylinder 4.8ltr
	280D	•	Vacuum Cylinder Midi
	250D	•	Vacuum Pressure Sensor
	280D	•	Solenoid Valve 1/2" (Slam shut)
PressDS Plus	250D	•	Solenoid Valve 1/2" 1mm Hole (Bypass)
	280D	•	AC Solenoid Coil Clip-on BB240AS
	250D	•	RSF86V100R Cynergys3
	280D	•	Pressure Reducing Valve
	250D	•	PSD & SPC Air Vent With Air Intake Preventor
	280D	•	Gauze
Flexfiller Plus	250D	•	22 mm x 1/2" F Coupling
	280D	•	Prescor B 6 bar 3/4" Inlet 1" Outlet
	250D	•	Prescor 1/2" 3 Bar Safety Relief Valve
	280D	•	Flexible Hose
	250D	•	Pump Pedrollo PQA60
	280D	•	Pump Pedrollo PQ81B
PressDS Plus	250D	•	Pump Pedrollo PQA90
	280D	•	Pump Pedrollo PQ3000
	250D	•	Pump Flamco 003 2.5 bar
	280D	•	Pump UKLA EP77 Model E
	250D	•	
	280D	•	

STANDARD DIGITAL PRESSURISATION PRODUCT RANGE

Compact and totally enclosed digital pressurisation units with electronic pressure transducer and user-friendly microprocessor for use on sealed system in order to provide a minimum system pressure requirement.
Available with single pump or double pump (for duty/standby configuration).

Application:

- Commercial.
- Industrial.
- Residential.

System Volume (Guide): < 300,000 litres - Flexfiller

System Volume (Guide): < 50,000 litres - Flexfiller Midi

System Volume (Guide): < 2,600 litres - Flexfiller Mini Digital

Certifications and Standards Applied:

- PED 2014/68/EU Sound Engineering Practice.
- IEE - Electrical Safety Guidance.
- EMC 2004/108/EC.
- BS 7074 Parts 1 to 3.
- Machinery Directive 95/16/EC.
- Electronic Components have been tested and comply with the EMC Directives.
- EN 61000-6-2: Generic Standards – Immunity standard for industrial environments.
- EN 61000-6-3: Generic Standards – Emission standard for residential, commercial and light industrial environment.
- CE marked components, where applicable.
- WRAS approved float valve to BS1212.
- IP54 (BS EN60529) rated controller.

Operating Conditions:

- Maximum system temperature: 85 °C.
- Maximum ambient temperature: 40 °C.
- Relative humidity 95% non-condensing.
- Noise Rating Data: < 75 dBA.

Material of Construction:

- Cabinet: Mild steel CR4.
- Float: WRAS Approved Torbeck Side Entry.
- Break Tank: Stainless Steel 304.
- Pump: PEDROLLO / ULKA (Unit dependant. See pump details for more information).
- Connection: Brass / Polypropylene.
- Pipework: Braided flexihose / EPDM.
- Finish: Powder coated.



Flexfiller

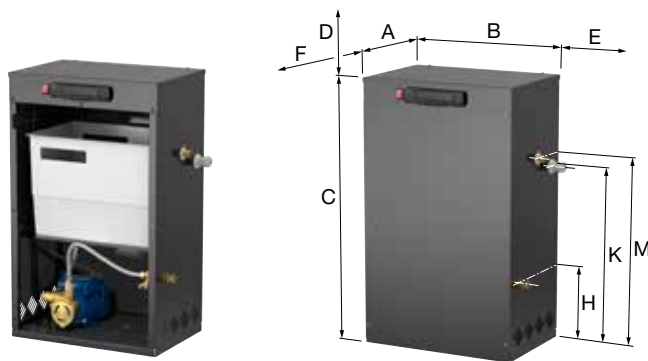
The Flexfiller is a floor standing, high flow rate (<18 l/min) top-up pressurisation unit with 18 litre break tank.

Product Features:

- For system volumes up to 300,000 litres.
- Break Tank: 18 litre break tank with type AB Air Gap Fluid Cat 5.
- MODBUS Communication output.
- System quick-fill mode.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- High flow applications (<18.0 l/min).
- Event logging for pump start, individual pump run hours counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer fault.
- Electric pump, 230V 50Hz 1ph (60Hz 1ph available upon request).
- Colour: Black (RAL 9005).

Factory fit options:

- Single or twin pump version.
- High water level.
- BACnet communication protocol in place of MODBUS connection.



Type	Pump quantity	Connections			Max. Delivery Pressure [bar]	Power Consumption [kW]	Full Load Current [A]	Weight [kg]		Order Code
		System [mm]	Mains Supply [mm]	Over-flow [mm]						
Flexfiller 125D	1	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	29	1	17395
Flexfiller 150D	1	15 (1/2" M)	15 (1/2" M)	22	5	0.5	3.4	31	1	17396
Flexfiller 225D	2	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	35	1	17397
Flexfiller 250D	2	15 (1/2" M)	15 (1/2" M)	22	5	0.5	3.4	39	1	17398
Flexfiller 180D	2	15 (1/2" M)	15 (1/2" M)	22	8	0.75	5.6	34	1	45049
Flexfiller 280D	2	15 (1/2" M)	15 (1/2" M)	22	8	0.75	5.6	45	1	17394
Flexfiller 2160D	2	15 (1/2" M)	15 (1/2" M)	22	16	2.2	6.6	67	1	17393

kiwa

Dimensions Flexfiller

Type	Dimensions								
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	K [mm]	M [mm]
Flexfiller 125D - 280D	470	320	800	500	150	800	225	550	590
Flexfiller 2160D	600	390	800	500	150	800	225	550	590

Flexfiller Mini Digital

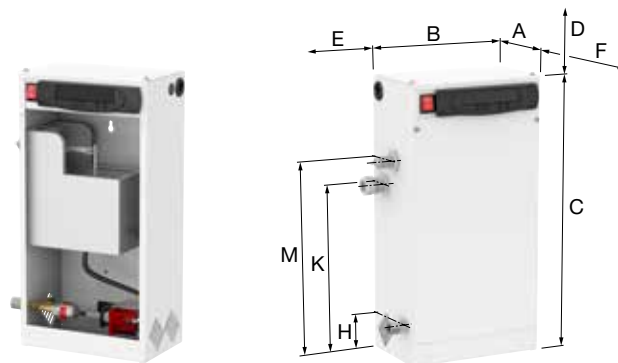
The Flexfiller Mini Digital is a narrow wall mounted, low flow rate (0.4 l/min) top-up pressurisation unit with 2 litre break tank. Ideal for large residential or small commercial application. For use on heating systems utilising a 300 litre expansion vessel or less, or chilled systems utilising a 50 litre expansion vessel or less.

Product Features:

- For system volumes up to 2,600 litres.
- Break Tank: 2 litre break tank with type AB Air Gap Fluid Cat 5.
- MODBUS Communication output.
- System quick-fill mode.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- Flow applications (0.4 l/min).
- Event logging for pump start, individual pump run hours counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer fault.
- Electric pump, 230V 50Hz 1ph.
- Colour: White (RAL 9910).

Factory fit options:

- Single or twin pump version.
- High water level.
- BACnet communication protocol (in addition to MODBUS communications).



Type	Pump quantity	Connections			Max. Delivery Pressure [bar]	Power Consumption [kW]	Full Load Current [A]	Weight [kg]		Order Code
		System [mm]	Mains Supply [mm]	Over-flow [mm]						
Flexfiller Mini 130D	1	8 (1/4" M)	15 (1/2" M)	22	3	0.035	0.3	7	1	17455
Flexfiller Mini 230D	2	8 (1/4" M)	15 (1/2" M)	22	3	2 x 0.035	2 x 0.3	8	1	17456

kiwa 

Dimensions Flexfiller Mini Digital

Type	Dimensions								
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	K [mm]	M [mm]
Flexfiller Mini 130D/230D	150	240	480	500	150	800	70	305	345

Flexfiller Midi

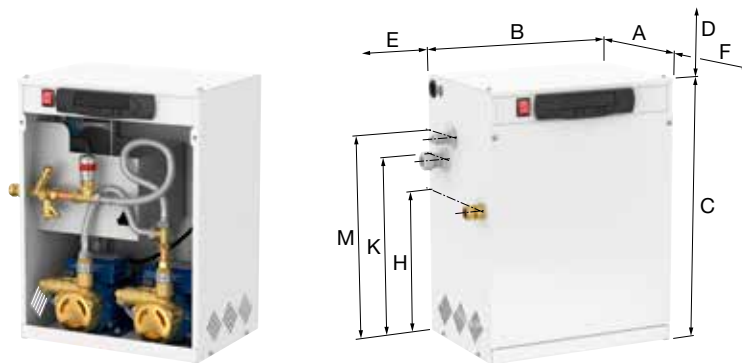
The Midi is a deep wall mounted, 12 l/min flow rate top-up pressurisation unit with 4 litre break tank.

Product Features:

- For system volumes up to 50,000 litres.
- Break Tank: 4 litre break tank with type AB Air Gap Fluid Cat 5.
- MODBUS Communication output.
- System quick-fill mode.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- High flow applications (12.0 l/min).
- Event logging for pump start, individual pump run hours counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer fault.
- Electric pump, 230V 50Hz 1ph.
- Colour: White (RAL 9910).

Factory fit options:

- Single or twin pump version.
- High water level.
- BACnet communication protocol in place of MODBUS connections.



Type	Pump quantity	Connections			Max. Delivery Pressure [bar]	Power Consumption [kW]	Full Load Current [A]	Weight [kg]		Order Code
		System [mm]	Mains Supply [mm]	Over-flow [mm]						
Flexfiller Midi 125D	1	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	17	1	17460
Flexfiller Midi 150D	1	15 (1/2" M)	15 (1/2" M)	22	5	0.5	3.4	32.5	1	17461
Flexfiller Midi 225D	2	15 (1/2" M)	15 (1/2" M)	22	2.5	2 x 0.37	2 x 2.6	25.5	1	17462
Flexfiller Midi 250D	2	15 (1/2" M)	15 (1/2" M)	22	5	2 x 0.5	2 x 3.4	42	1	17463

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Dimensions Flexfiller Midi

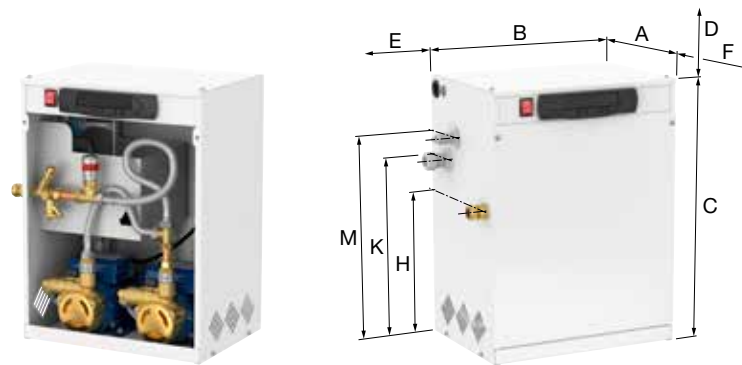
Type	Dimensions								
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	K [mm]	M [mm]
Flexfiller Midi 125D	230	240	480	500	150	800	330	335	380
Flexfiller Midi 150D - 250D	260	360	485	500	150	800	330	335	380

Flexfiller IP66

The Flexfiller IP66 is a deep, compact and totally enclosed wall mounted, 12 l/min flow rate digital top-up pressurisation unit with electronic pressure transducer, user-friendly microprocessor and a 4 litre break tank.

Product Features:

- For system volumes up to 50,000 litres.
- Break Tank: 4 litre break tank with type AB Air Gap Fluid Cat 5.
- AB air gap to EN13077:2008.
- WRAS approved break tank and float valve.
- IP66 rated cabinet.
- Internal thermostat & heater.
- Neon power indicator.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- High flow applications (12.0 l/min).
- Event logging for pump start, individual pump run hours counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer fault.
- Electric pump, 230V 50Hz 1ph.
- Colour: White (RAL 9910).



Type	Pump quantity	Connections			Max. Delivery Pressure [bar]	Power Consumption [kW]	Full Load Current [A]	Weight [kg]		Order Code
		System [mm]	Mains Supply [mm]	Over-flow [mm]						
Flexfiller IP66 125D	1	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	28	1	45090
Flexfiller IP66 150D	1	15 (1/2" M)	15 (1/2" M)	22	5	0.5	3.4	28	1	45123
Flexfiller IP66 225D	2	15 (1/2" M)	15 (1/2" M)	22	2.5	2 x 0.37	2 x 2.6	34	1	45091
Flexfiller IP66 250D	2	15 (1/2" M)	15 (1/2" M)	22	5	2 x 0.5	2 x 3.4	36	1	45124

Dimensions Flexfiller IP66

Type	Dimensions								
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	K [mm]	M [mm]
Flexfiller IP66 125D	230	240	480	500	150	800	330	335	380
Flexfiller IP66 150D - 250D	260	360	485	500	150	800	330	335	380

DIGIFILLER PRESSURISATION PRODUCT RANGE

Compact, wall mounted, totally enclosed digital pressurisation unit with electronic pressure transducer and user-friendly microprocessor for use on sealed systems in order to provide a minimum system pressure requirement. Self bleeding pumps can be factory preset to meet your system requirements.

Application:

- Commercial.
- Industrial.
- Residential.

System Volume (Guide): < 50,000 litres

Certifications and Standards Applied:

- PED 2014/68/EU Sound Engineering Practice.
- IEE - Electrical Safety Guidance.
- EMC 2004/108/EC.
- BS 7074 Parts 1 to 3.
- Machinery Directive 95/16/EC.
- Electronic components have been tested and comply with the EMC Directives.
- EN 61000-6-2: Generic Standards – Immunity standard for industrial environments.
- EN 61000-6-3: Generic Standards – Emission standard for residential, commercial and light industrial environment.
- CE marked components, where applicable.
- WRAS approved float valve to BS1212.
- IP54 (BS EN 60529) rated controller.
- IPX2 (BS EN60529) rated pump.

Operating Conditions:

- Maximum system temperature: 85 °C.
- Maximum ambient temperature: 40 °C.
- Relative humidity 95% non-condensing.
- Noise Rating Data: < 75 dBA.

Material of Construction:

- Cabinet: Mild steel CR4.
- Float: WRAS Approved Torbeck Side Entry.
- Break Tank: Stainless Steel 304.
- Pump: Watermill Flamco-003 (See pump details for more information).
- Connection: Brass / Polypropylene.
- Pipework: Braided flexihose / EPDM.
- Finish: Powder coated.

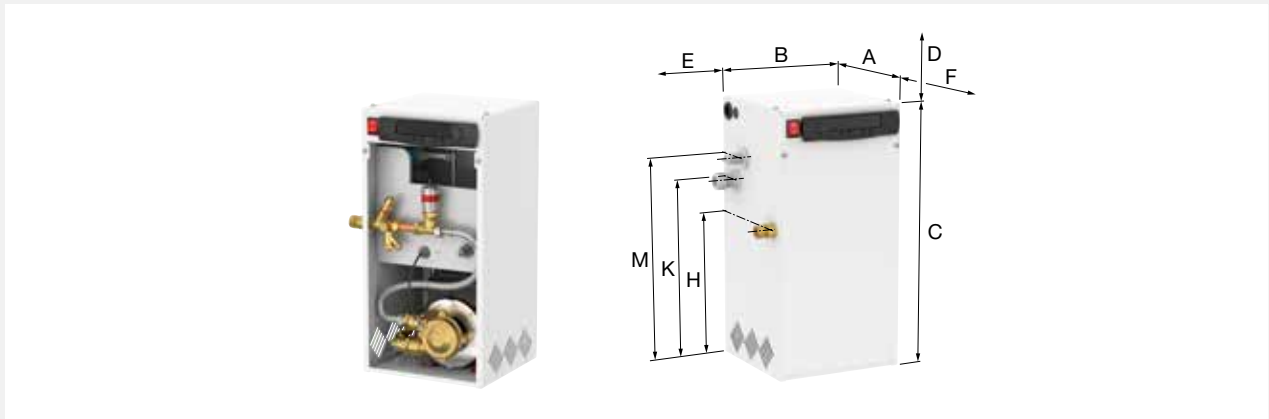


Digifiller

The Digifiller is a deep wall mounted, 12 l/min flow rate top-up pressurisation unit with 4 litre break tank. A self-bleed pump configuration.

Product Features:

- For system volumes up to 50,000 litres.
- Break Tank: 4 litre break tank with type AB Air Gap Fluid Cat 5.
- Pre-commissioned.
- Pre-set (Bar).
- Plug & play, but easily adjustable on site if required.
- System quick-fill mode.
- Self-bleed pump.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- High flow applications (12.0 l/min).
- Event logging for pump start, individual pump run hours counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer fault.
- Electric pump, 230V 50Hz 1ph.
- Colour: White (RAL 9910).



Type	Pump quantity	Connections			Max. Delivery Pressure [bar]	Power Consumption [kW]	Full Load Current [A]	Weight [kg]	Preset Settings				Order Code
		System [mm]	Mains Supply [mm]	Over-flow [mm]					Cold Fill	Low Alarm	High Alarm		
Digifiller 0.5	1	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	0.5	0.2	2.7	17	1	45115
Digifiller 1.0	1	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	1.0	0.5	2.7	17	1	45034
Digifiller 1.5	1	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	1.5	1.0	2.7	17	1	45035
Digifiller 2.0	1	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	2.0	1.5	2.7	17	1	45036

Dimensions Digifiller 0.5 - 2.0

Type	Dimensions									
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	K [mm]	M [mm]	
Digifiller 0.5 - 2.0	230	240	480	500	150	800	330	335	380	

OTHER PRESSURISATION PRODUCT RANGE

Twin System

Compact, totally enclosed digital pressurisation unit with electronic pressure transducer and user-friendly microprocessor for use on two sealed systems in order to provide a minimum system pressure requirement.
Available with single pump or double pump (for duty/standby configuration) per system.

System Volume (Guide): < 300,000 litres per system

PressDS (Pressurisation/Dosing System)

Compact, totally enclosed digital pressurisation unit with electronic pressure transducer and user-friendly microprocessor for use on sealed systems in order to provide a minimum system pressure requirement. The correct fluid mix is blended on demand at the time of system top-up.
Available with double pump (for duty/standby configuration).

System Volume (Guide): < 300,000 litres

Application:

- Commercial.
- Industrial.
- Residential.

Certifications and Standards Applied:

- PED 2014/68/EU Sound Engineering Practice.
- IEE - Electrical Safety Guidance.
- EMC 2004/108/EC.
- BS 7074 Parts 1 to 3.
- Machinery Directive 95/16/EC.
- Electronic Components have been tested and comply with the EMC Directives.
- EN 61000-6-2: Generic Standards – Immunity standard for industrial environments.
- EN 61000-6-3: Generic Standards – Emission standard for residential, commercial and light industrial environment.
- CE marked components, where applicable.
- WRAS approved float valve to BS1212.
- IP54 (BS EN60529) rated controller.

Operating Conditions:

- Maximum system temperature: 85 °C.
- Maximum ambient temperature: 40 °C.
- Relative humidity 95% non-condensing.
- Noise Rating Data: < 75 dBA.

Material of Construction:

- Cabinet: Mild steel CR4.
- Float: WRAS Approved Torbeck Side Entry.
- Break Tank: Stainless Steel 304.
- Pump: PEDROLLO (Unit dependant. See pump details for more information).
- Connection: Brass / Polypropylene.
- Pipework: Braided flexihose / EPDM.
- Finish: Powder coated.



Flexfiller Twin System

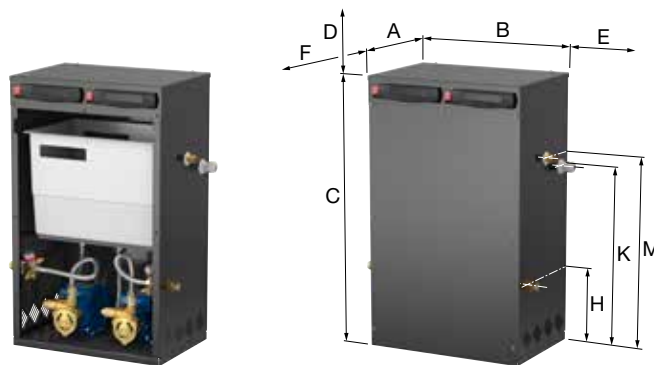
The Twin system is a floor standing unit, ideal where space restrictions make it beneficial to locate two systems in a single enclosure. The system combines two high flow rate (<18 l/min) top-up pressurisation units and two controllers with a single 18 litre break tank.

Product Features:

- For system volumes up to 300,000 litres per system.
- Break Tank: 18 litre break tank with type AB Air Gap Fluid Cat 5.
- MODBUS Communication output.
- System quick-fill mode.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- High flow applications (<18.0 l/min).
- Event logging for pump start, individual pump run hour's counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer fault.
- Electric pump, 230V 50Hz 1ph.
- Colour: Black (RAL 9005).

Factory fit options:

- High water level.
- BACnet communication protocol in place of MODBUS connection.



Type	Pump quantity	Connections			Max. Delivery Pressure [bar]	Power Consumption [kW]	Full Load Current [A]	Weight [kg]		Order Code
		System [mm]	Mains Supply [mm]	Drain [mm]						
Twin System 2 x 125D	2 *	2 x 15 (1/2" M)	15 (1/2" M)	22	2.5	2 x 0.37	2 x 2.6	29	1	17425
Twin System 2 x 225D	4 **	2 x 15 (1/2" M)	15 (1/2" M)	22	2.5	2 x 0.37	2 x 2.6	35	1	45062
Twin System 2 x 150D	2 *	2 x 15 (1/2" M)	15 (1/2" M)	22	5	2 x 0.5	2 x 3.4	31	1	17426
Twin System 2 x 250D	4 **	2 x 15 (1/2" M)	15 (1/2" M)	22	5	2 x 0.5	2 x 3.4	39	1	45063

* 1 pump for each system.

** 2 pumps for each system.



Dimensions Flexfiller Twin System 125D - 250D

Type	Dimensions								
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	K [mm]	M [mm]
Twin System 2 x 125D - 2 x 250D	320	470	800	500	150	800	225	549	590

PressDS

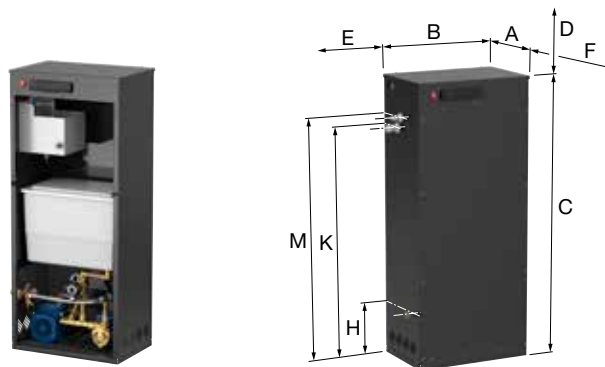
The PressDS (Pressurisation/Dosing System) is a floor standing, high flow rate (<18 l/min) additive top-up mixing pressurisation unit with a 4 litre break tank. 18 litre tank for additive top-up. Each time the unit tops-up the system with water, it also automatically adds additive from a dedicated tank at a predetermined rate, reducing intervention and maximising system protection.

Product Features:

- For system volumes up to 300,000 litres.
- Break Tank: 4 litre water break tank with type AB Air Gap Fluid Cat 5.
- MODBUS communication output.
- System quick-fill mode.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- Event logging for pump start, individual pump run hours counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer fault.
- 18 litre additive tank.
- Mix ratios from 1% to 50% user configurable balancing valves.
- Top-up pressurisation unit (<18.0 l/min).
- Electric pump, 230V 50Hz 1ph.
- Colour: Black (RAL 9005)

Factory fit options:

- High water level.
- BACnet communication protocol in place of MODBUS connection.



Type	Pump quantity	Connections			Max. Delivery Pressure [bar]	Power Consumption [kW]	Full Load Current [A]	Weight [kg]		Order Code
		System [mm]	Mains Supply [mm]	Drain [mm]						
PressDS 225	2	15 (1/2" M)	15 (1/2" M)	22	2.5	0.37	2.6	35	1	45046
PressDS 250	2	15 (1/2" M)	15 (1/2" M)	22	5	0.5	3.5	39	1	45047
PressDS 280	2	15 (1/2" M)	15 (1/2" M)	22	8	0.75	5.6	45	1	17392

Dimensions PressDS 225 - 280

Type	Dimensions								
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	K [mm]	M [mm]	N [mm]
PressDS 225 - 280	470	320	1160	500	150	800	125	160	260

COMBINED PRESSURISATION AND DEGASSING PRODUCT RANGE

Flexfiller Plus & Midifill Plus

Compact, totally enclosed combined digital pressurisation unit with vacuum degasser for use on sealed systems in order to provide a minimum system pressure requirement and effective dissolved gas removal.
Available with single pump (Midifill Plus) or double pump (for duty/standby configuration).

PressDS Plus

Compact, totally enclosed combined digital pressurisation unit with vacuum degasser and additive tank for use on sealed systems in order to provide a minimum system pressure requirement and effective dissolved gas removal and adding additive to system. The correct fluid mix is blended on demand at the time of system top-up.
Available with double pump (for duty/standby configuration).

System Volume (Guide): < 300,000 litres (Midifill Plus 150D: < 50,000 litres)

Application:

- Commercial.
- Industrial.
- Residential.

Certifications and Standards Applied:

- PED 2014/68/EU Sound Engineering Practice.
- IEE - Electrical Safety Guidance.
- EMC 2004/108/EC.
- BS7074 Parts 1 to 3.
- Machinery Directive 95/16/EC.
- Electronic Components have been tested and comply with the EMC Directives.
- EN61000-6-2: Generic Standards – Immunity standard for industrial environments.
- EN61000-6-3: Generic Standards – Emission standard for residential, commercial and light industrial environment.
- CE marked components, where applicable.
- WRAS approved float valve to BS1212 part 2.
- IP54 (BS EN60529) rated controller.

Material of Construction:

- Cabinet: Mild steel CR4.
- Float: WRAS Approved Beta Side Entry.
- Break Tank: WRAS Approved Polypropylene.
- Cylinder: Stainless steel 304.
- Pump: PEDROLLO (Unit dependant. See pump details for more information).
- Valves: Brass.
- Connection: Brass / Polypropylene.
- Pipework: Braided flexihose / EPDM / Copper.
- Finish: Powder coated.



Flexfiller Plus & Midifill Plus

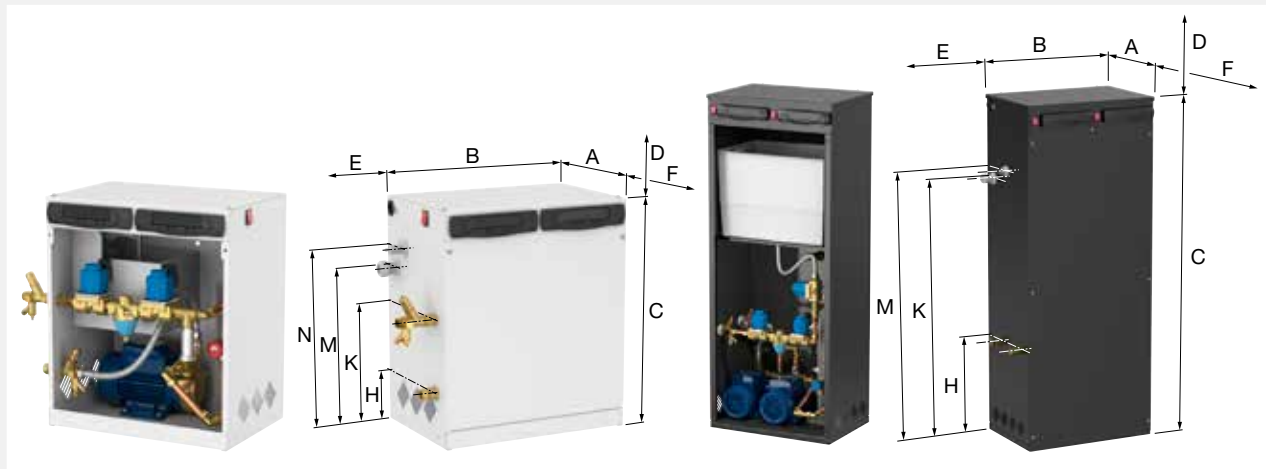
The Flexfiller Plus and Midifill Plus are compact, totally enclosed combined digital pressurisation units with vacuum degasser for use on sealed systems in order to provide a minimum system pressure requirement and effective dissolved gas removal.

Product Features:

- For system volumes up to 300,000 litres.
- Break Tank: 18 litre break tank with type AB Air Gap Fluid Cat 5 (Midifill Plus: 4 litre).
- System quick-fill mode.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- Event logging for pump start, individual pump run hours counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer (Top-up controller only).
- Individual controllers for pressurisation and degassing function.
- Vacuum degassing, turbo and normal interval modes.
- Electric pump, 230V 50Hz 1ph (2160D: 415V 50Hz 3ph).

Operating Conditions:

- System Temperature Range: 0 - 90 °C.
- Ambient Temperature Range: 0 - 45 °C.
- Maximum system temperature at the Point of connection: 70 °C.
- Safety Rating: IP 54.
- Maximum Turbo Runtime: 168 hours (1 week).
- Maximum Normal Downtime: 180 minutes (3 hours).
- Relative humidity 95% non-condensing.
- Noise Rating Data: < 75 dBA.



Type	Pump quantity	Mounting	Dimensions		Pressure Rating [PN]	Operating Pressure [bar]	Power Consumption [kW]	Full Load Current [A]		Order Code
			System [mm]	Overflow [mm]						
Midifill Plus 150D	1	Wall	2 x 15 (1/2")	22	10	1 - 5	0.5	3.4	1	45053
Flexfiller Plus 250D	2	Floor	2 x 15 (1/2")	22	10	1 - 6	2 x 0.52	2 x 3.4	1	45045
Flexfiller Plus 280D	2	Floor	2 x 15 (1/2")	22	10	1 - 8	2 x 0.75	2 x 5.6	1	45121
Flexfiller Plus 2160D	2	Floor	2 x 15 (1/2")	22	16	8 - 16	2 x 2.2	2 x 2.2	1	45043

Dimensions Flexfiller Plus & Midifill Plus

Type	Dimensions									
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	K [mm]	M [mm]	N [mm]
Midifill Plus 150D	280	410	480	500	150	800				
Flexfiller Plus 250D	320	470	1160	500	150	800	455	915	955	-
Flexfiller Plus 280D	320	600	1160	500	150	800	455	915	955	-
Flexfiller Plus 2160D	320	600	1160	500	150	800	455	915	955	-

PressDS Plus

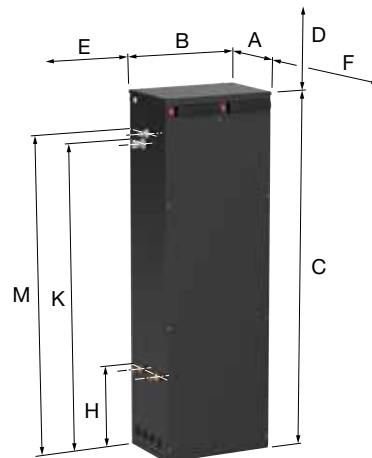
The PressDS Plus (Pressurisation/Degassing/Dosing System) is a compact, totally enclosed combined digital pressurisation unit with vacuum degasser and additive tank for use on sealed systems in order to provide a minimum system pressure requirement, effective dissolved gas removal and adding additives to the system. The correct fluid mix is blended on demand at the time of system top-up.

Product Features:

- For system volumes up to 300,000 litres.
- Break Tank: 4 litre break tank with type AB Air Gap Fluid Cat 5.
- MODBUS Communication output.
- System quick-fill mode.
- Password protection for parameter entry.
- Pressure settings in 0.1 bar increments.
- Service reminder option (12 months).
- Pump pulse option (2 second pulse if inactive for 60 days).
- Flood protection options.
- Event logging for pump start, individual pump run hours counter, electrical interruption and common alarm.
- Volt free contacts for common fault, high pressure, low pressure, pump fault, pressure transducer (Top-up controller only).
- Individual controllers for pressurisation and degassing function.
- Vacuum degassing, turbo and normal interval modes.
- 18 litre additive tank.
- Mix ratios from 1% to 50% user configurable balancing valves.
- Top-up pressurisation unit (<18.0 l/min).
- Electric pump, 230V 50Hz 1ph (2160D: 415V 50Hz 3ph).

Operating Conditions:

- Maximum system temperature: 85 °C.
- Maximum ambient temperature: 40 °C.
- Relative humidity 95% non-condensing.



Type	Pump quantity	Connections		Pressure Rating [PN]	Operating Pressure [bar]	Power Rating [kW]	Full Load Current [A]	Nom. Weight [kg]		Order Code
		System [mm]	Overflow [mm]							
PressDS Plus 250D	2	2 x 15 (1/2")	22	10	1 - 6	2 x 0.52	2 x 3.4	62.7	1	45102
PressDS Plus 280D	2	2 x 15 (1/2")	22	10	1 - 8	3 x 0.52	3 x 3.4	71.5	1	45119
PressDS Plus 2160D	2	2 x 15 (1/2")	22	16	8 - 16	4 x 0.52	4 x 3.4	91.3	1	45120

Dimensions PressDS Plus

Type	Dimensions								
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	K [mm]	M [mm]
PressDS Plus 250D	470	320	1475						
PressDS Plus 280D	600	320	1475						
PressDS Plus 2160D	600	320	1475						

