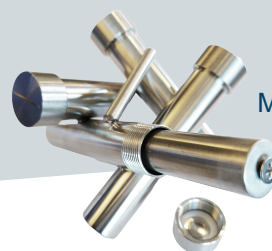


DATA SHEET.

Prod Code.	BSP Ref	Product Description.
FMP202011	BSP Filter Pot mini	BSP Filter Pot mini Side Stream Filter and Dosing Unit
Feature.	Description.	
Maximum system working pressure	10 bar	
Suitable for system volumes	2,000 litres to 90,000 litres	
Flow rate through the vessel	0.08 l/min to 1.04 l/min (4.8 l/min to 60 l/min)	
Temp range	0°C to 90°C	
Filtration rate	Magnetic only + 50, 20, 5, 0.5 micron cartridges	
Dirty Flow inlet connection	1" BSP Female (ISO 228 - 1)	
Clean Return Outet connection	1" BSP Female (ISO 228 - 1)	
Dosing Capacity	5.5 litres	
Filter Body Mounting	Wall Mounted	
Weight	16 kg	
Magnets x 4no	Neodymium Rare Earth encased in 316 SS shell	
Cartridge Filters	Polypropylene Anti-Microbial – 2 per pack	
Isolation Valves, NRV and fittings	Class 150 316 SS Full Bore (ISO 228-1)	

BSP Filter Pot mini



Magnet Grate



Baffle Plate



Cartridge Included



Bespoke Insulation Jacket Included



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Feature.	Description.
Compliance	Fully compliant with BSRIA guidelines BG29 and BG50 for side stream filtration, chemical dosing, corrosion inhibitor treatment, magnetic filtration, passive deaeration, fill water pre-treatment, solids removal and filtration, bacteria and bio-fouling inhibition, CPD dynamic filling, maintenance and inspection, dynamic flushing procedure and on-line cleaning.
Vessel Body	The Vessel Body is manufactured from 316SS to reduce the possibility of corrosion and bacterial growth. Complies with PED 2014/68/EU(SEP) & PED (S) R2016 N°1105
4No 8,000 Gauss Neodymium Rare Earth encased in 316 SS shell & housed in a 316 SS Magnet Grate	Removes magnetic system debris before reaching the Cartridge Filter below, helps to increase the lifespan of the boiler, chiller and cooling system components, reduces carbon emissions, increases fuel efficiency and increases the lifespan of the Cartridge Filter. Each 8,000 Gauss magnet is fully encased in a 316SS shell, they are easily removable from the 316SS Magnet Grate for cleaning and are fully submerged direct into the system flow for optimal filtration and dirt capture.
Anti-Microbial Polypropylene Cartridge Filter	BSP's Anti-Microbial Spun Cartridge Filters remove nonmagnetic system debris, available in 50, 20, 5 and 0.5 micron filtration rates, ensures coalescence micro-bubble formation on the surface of the Filter and surpasses BSRIA guidance for filtration rates.
Replacement Sizes Available: 0.5 micron (Prod. code: CFR202041) 5 micron (Prod. code: CFR 202042) 20 micron (Prod. code: CFR202043) 50 micron (Prod. code: CFR202044)	BSP Cartridge Filters catch and hold large volumes of dirt particles before they become blocked. The Polypropylene filtration media is impregnated with Silver Ions which block the bacterial respiratory system of bacteria thereby destroying the energy production of the cell, leading to the bursting of the cell membrane and neutralising the bacteria. Tested to ASTM 2149. Max working temperature is 90°C.
1No 0.5 micron supplied with Filter Pot	
Automatic Air Vent	Ensures the system micro-bubbles and air are emitted from the system, helps reduce noisy pipework and decreases stress on system components. 304 SS / 110°C / 10 bar MWP
5.5L Dosing Pot Capacity	5.5L Dosing Pot capacity enables installers and maintenance personnel to quickly dose the system with water treatment chemicals
1" BSP Dirty Flow and Clean Return Connections	1" BSP Dirty Flow and Clean Return connections suitable for all types of LTHW heating and cooling water systems up to 90,000 Litres in system volume.



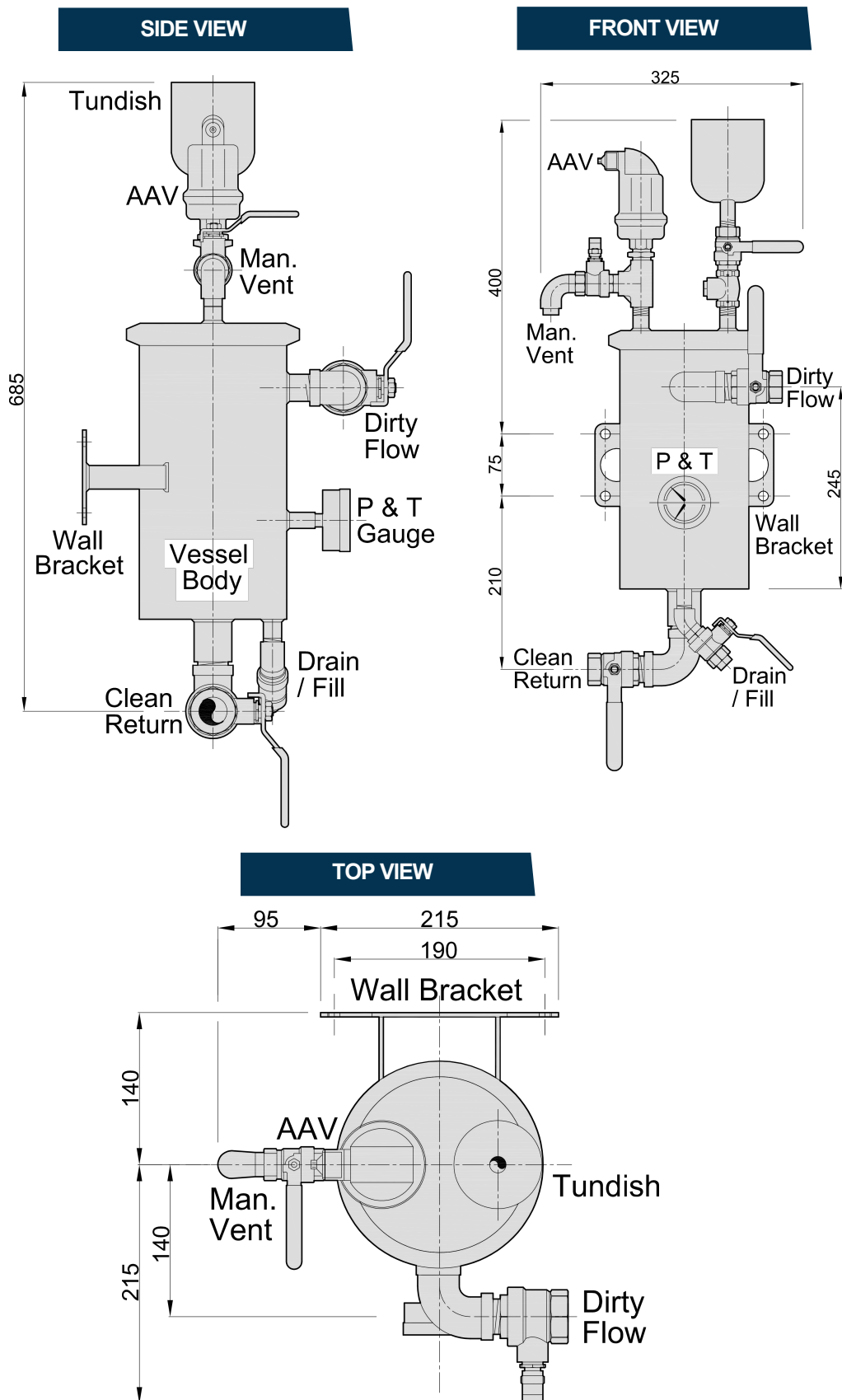
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Feature.	Description.
1/2" BSP System Fill and Drain Connection	Utilising the System Fill feature with the 0.5micron Anti-Microbial Cartridge Filter reduces the possibility of bacteria,dirt and debris entering the system. Further, the fill feature can also be used to add larger volumes of inhibitor when an external pump is required for dosing. The unique dedicated 1/2" Drain Connection ensures the system water is safely drained from the vessel during filter cleaning, leading to faster, safer filter replacement
Installation	Complete with backing plate for simple installation to wall or frame (4 x M12 holes)
Servicing	The cleaning of the filters can be simply achieved without the need to shut the main system down. Dosing of water treatment chemicals is achieved safely, again without the need to shut the system down.
Unblockable System	Even if the filters are never serviced the ingenious design ensures that the filter will not inhibit system performance.
Stainless Steel Components	All major components are manufactured from 316SS for longevity, easy cleaning and servicing of the filters.
Pressure / Temperature Gauge	A combined 0 -10 bar Pressure and 0 -120°C Temperature gauge is included on the front of the vessel to give extra reassurance the vessel is empty and safe to open before cleaning the filters.
Full Bore Flat Face Isolation Valves	The 316SS isolation valves do not restrict system flow, decrease corrosion and increases the ease of installation. Thread type to ISO 228-1.
Bespoke Insulation Jacket	A bespoke insulation jacket is supplied as standard to ensure heat loss is minimised.
Warranty	Vessel body - 25 years, Valves and Fittings - 2 Years from the date of installation. Refer to the warranty document.



FILTER POT mini

Side Stream Filtration & Dosing Unit



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SIZING THE CORRECT PIPEWORK TO/FROM THE FILTER POT MINI AND SETTING THE DANFOSS

PICV TO COMPLY WITH BSRIA GUIDANCE

To size the pipe to/from a Filter Pot Mini and control the flow rate, this can be broken down into three simple steps:

1. PRESSURE

Make sure the system working pressure is below 10bar for the Filter Pot Mini unit.

2. SYSTEM WATER VOLUME

The BSRIA guide advises the total system water volume of the system should pass through the Filter Pot Mini in a 24-hour period.

3. If you don't know the system volume, you can estimate the system volume by multiplying the kW rating:
For example: Heating kW x 12 = Litres or for Cooling kW x 15 = Litres

Once you confirm the system volume, then the chart below will confirm the pipe size to/from the Filter Pot.

If you know the system volume:

Total Volume of System	Pipe size to/from System
2,000L to 36,000L	½" pipe to the Filter Pot Mini
36,100L to 53,000L	¾" pipe to the Filter Pot mini
53,000L to 90,000L	1" pipe to the Filter Pot miini

If the system volume is between 2,000L and 7,300L the minimum flow rate is to be no less than 0.085L/s through ½" pipework.

If you know the kW rating of the heating system:

Total heating system kW	Pipe size to/from heating system
660kW to 3,000kW	½" pipe to the Filter Pot Mini
3,000kW to 4,400kW	¾" pipe to the Filter Pot mini
4,400kW to 7,500kW	1" pipe to the Filter Pot miini

If you know the kW rating of the cooling system:

Total cooling system kW	Pipe size to/from cooling system
530kW to 2,400kW	½" pipe to the Filter Pot Mini
2,400kW to 3,500kW	¾" pipe to the Filter Pot mini
3,500kW to 6,000kW	1" pipe to the Filter Pot miini



4. FLOW RATE CONTROL

To control the flow rate through the Filter Pot Mini, use the following calculation:

$$\frac{\text{Total Volume of System}}{86400} = \text{L/Sec}$$

NOTE: You can estimate the system volume by multiplying the kW rating:
Heating kW x 12 = Litres or for Cooling kW x 15 = Litres

Example:

$$\frac{37,500}{86400} = 0.43 \text{ L/Sec}$$

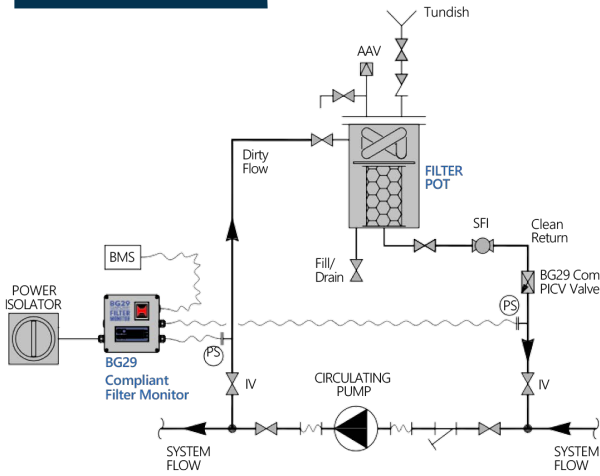
through ¾" Pipework

You can then set the Danfoss PICV (within the BSP BG29 Compliant Valve Pack) to 0.43L/sec. This will now limit the flow through the Filter Pot to comply with BSRIA regulations (see typical installation drawings on page 6).

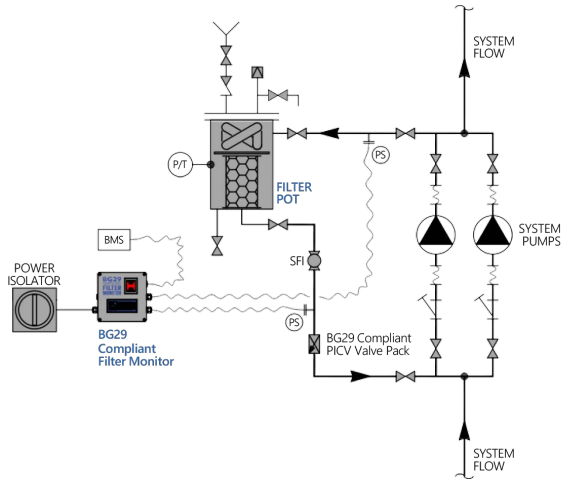


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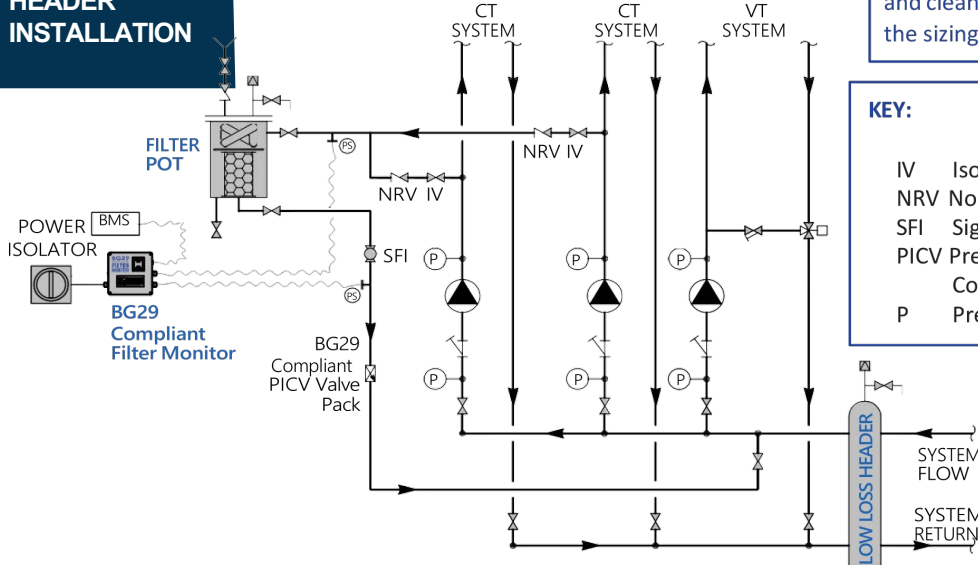
SINGLE PUMP INSTALLATION



TWIN PUMP INSTALLATION



LOW LOSS HEADER INSTALLATION



For the sizing of the dirty flow and clean return pipework, see the sizing details on page 5.

KEY:

- IV Isolaton Valve
- NRV Non-Return Valve
- SFI Sight Flow Indicator
- PICV Pressure Independent Control Valve
- P Pressure Gauge