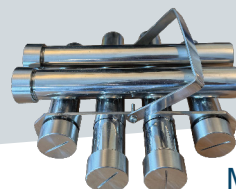


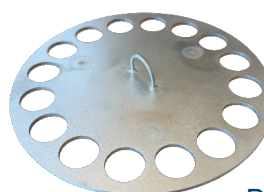
DATA SHEET.

Prod Code.	BSP Ref	Product Description.
FPM202012	BSP Filter Pot MIDI	BSP Filter Pot MIDI Side Stream Filter and Dosing Unit
Feature.	Description.	
Maximum system working pressure	16 bar	
Suitable for system volumes up to	375,000 Litres	
Flow rate through the vessel	0.08 l/sec to 4.34 l/sec (4.8 l/min to 260 l/min)	
Temp range	-10°C to 90°C	
Filtration rate	Magnetic only + 50, 20, 5, 0.5 micron cartridges	
Dirty Flow inlet connection	2½" BSP Female (ISO 228 - 1)	
Clean Return Outlet connection Dosing	2½" BSP Female (ISO 228 - 1)	
Capacity	24 Litres	
Filter Body Mounting	Wall Mounted	
Weight	39 kg	
Magnets x 6no	Neodymium Rare Earth encased in 316 SS shell	
Cartridge Filters	Polypropylene Anti-Microbial – 1 per pack	
Isolation Valves, NRV and fittings	Valves - Class 300 316SS Full Bore (ISO 228-1) Fittings - Class 150 316SS BSP (ISO 228-1)	

BSP Filter Pot MIDI



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
6No 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 Replacement Sizes Available: 0.5 micron (Prod. code: CFR202045) 5 micron (Prod. code: CFR 202046) 20 micron (Prod. code: CFR202047) 50 micron (Prod. code: CFR202048) 1No 0.5 micron supplied with Filter Pot	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. 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.
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 / 16 bar MWP
24L Dosing Pot Capacity	24L Dosing Pot capacity enables installers and maintenance personnel to quickly dose the system with water treatment chemicals.
2½" BSP Dirty Flow and Clean Return Connections	2½" BSP Dirty Flow and Clean Return connections suitable for all types of LTHW heating and cooling water systems up to 375,000 Litres in system volume.

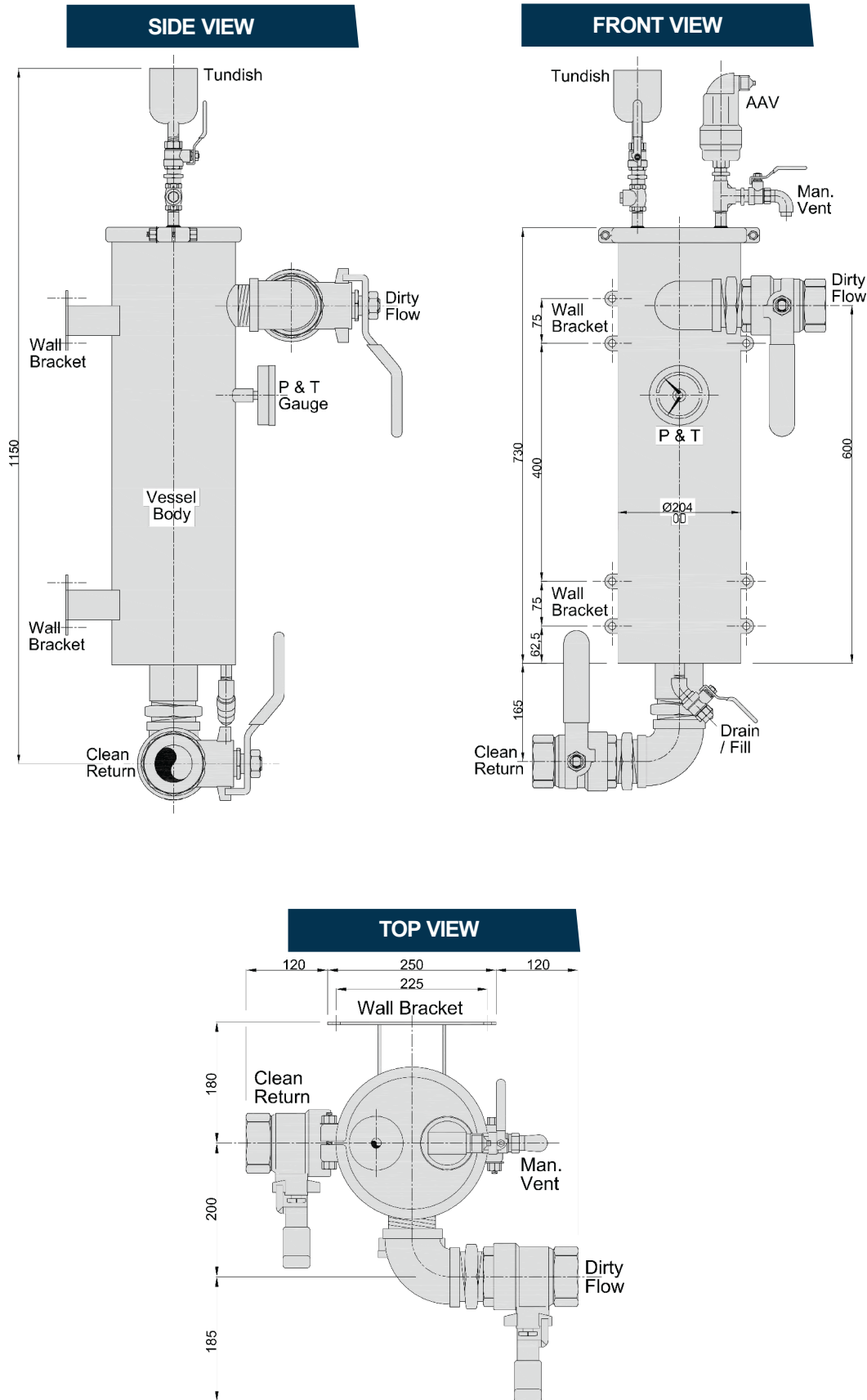


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Feature.	Description.
1/2" BSP System Fill and Drain Connection	Utilising the System Fill feature with the 0.5micron Anti-Microbial Cartridge Filter reduces the possibility of bacteria,dirt and debris entering the system. Further, the fill feature 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 2No backing plates for simple installation to wall or frame (8 x M12 holes)
Servicing	Filter cleaning 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 -25 bar Pressure and 0 -100°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 BSP 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.



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FILTER POT MIDL

Side Stream Filtration & Dosing Unit

SIZING THE CORRECT PIPEWORK TO/FROM THE FILTER POT MIDI AND SETTING THE DANFOSS PICV TO COMPLY WITH BSRIA GUIDANCE

To size the pipe to/from a FILTER POT MIDI and control the flow rate, this can be broken down into three simple steps:

1. **PRESSURE:** Make sure the system working pressure is below 16Bar for the FILTER POT MIDI unit.
2. **SYSTEM WATER VOLUME:** The BSRIA guide advises the total water volume of the system should pass through the FILTER POT MIDI within 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
8,000L to 36,000L	DN15 - ½" pipe to the FILTER POT MIDI
36,100L to 53,000L	DN20 - ¾" pipe to the FILTER POT MIDI
53,100L to 90,000L	DN25 - 1" pipe to the FILTER POT MIDI
90,100L to 103,000L	DN32 - 1½" pipe to the FILTER POT MIDI
103,100L to 141,000L	DN40 - 1½" pipe to the FILTER POT MIDI
141,100L to 213,000L	DN50 - 2" pipe to the FILTER POT MIDI
213,100L to 375,000L	DN65 - 2½" pipe to the FILTER POT MIDI

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	DN15 - ½" pipe to the FILTER POT MIDI
3,000kW to 4,400kW	DN20 - ¾" pipe to the FILTER POT MIDI
4,400kW to 7,500kW	DN25 - 1" pipe to the FILTER POT MIDI
7,500kW to 8,500kW	DN32 - 1½" pipe to the FILTER POT MIDI
8,500kW to 11,750kW	DN40 - 1½" pipe to the FILTER POT MIDI
11,750kW to 17,750kW	DN50 - 2" pipe to the FILTER POT MIDI
17,750kW to 30,750kW	DN65 - 2½" pipe to the FILTER POT MIDI

If you know the kW rating of the cooling system:

Total cooling system kW	Pipe size to/from cooling system
530kW to 2,400kW	DN15 - ½" pipe to the FILTER POT MIDI
2,400kW to 3,500kW	DN20 - ¾" pipe to the FILTER POT MIDI
3,500kW to 6,000kW	DN25 - 1" pipe to the FILTER POT MIDI
6,000kW to 6,900kW	DN32 - 1½" pipe to the FILTER POT MIDI
6,900kW to 9,400kW	DN40 - 1½" pipe to the FILTER POT MIDI
9,400kW to 14,200kW	DN50 - 2" pipe to the FILTER POT MIDI
14,200kW to 24,500kW	DN65 - 2½" pipe to the FILTER POT MIDI



4. FLOW RATE CONTROL

To control the flow rate through the FILTER POT MIDI, use the following calculation:

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

Example:

$$\frac{135,500\text{L}}{86400} = 1.57 \text{ L/sec through DN40 pipework to/from the FILTER POT MIDI}$$

NOTE: You can estimate the system volume by multiplying the kW rating:

Heating kW x 12 = Litres or for Cooling kW x 15 = Litres

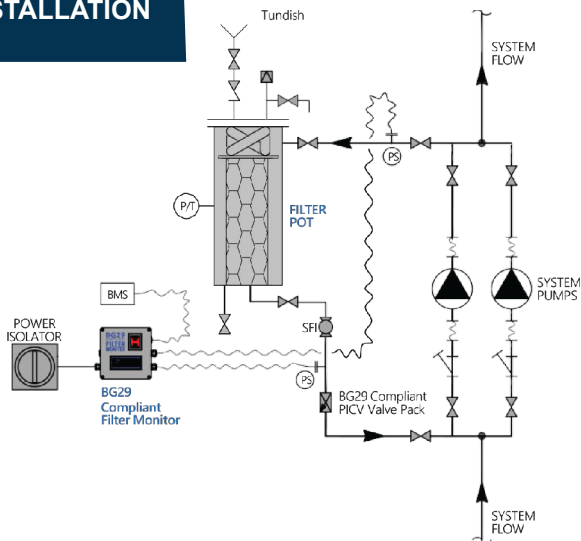
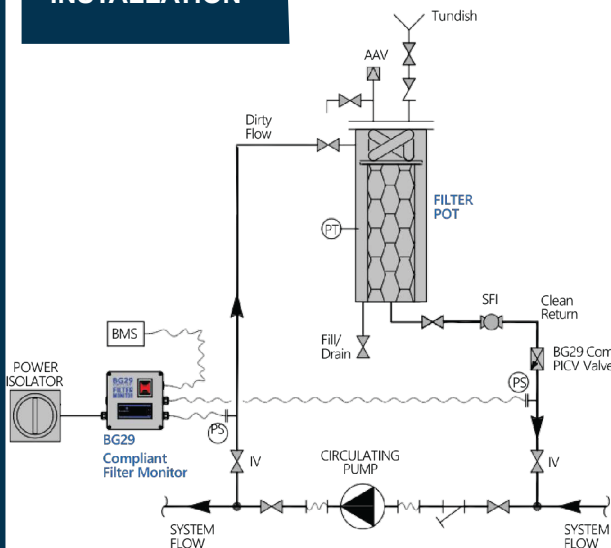
You can then set the Danfoss PICV (within the BSP BG29 Compliant Valve Pack) to 1.57L/sec. This will now limit the flow through the Filter Pot to comply with BSRIA regulations (see typical installation drawings on page 6).



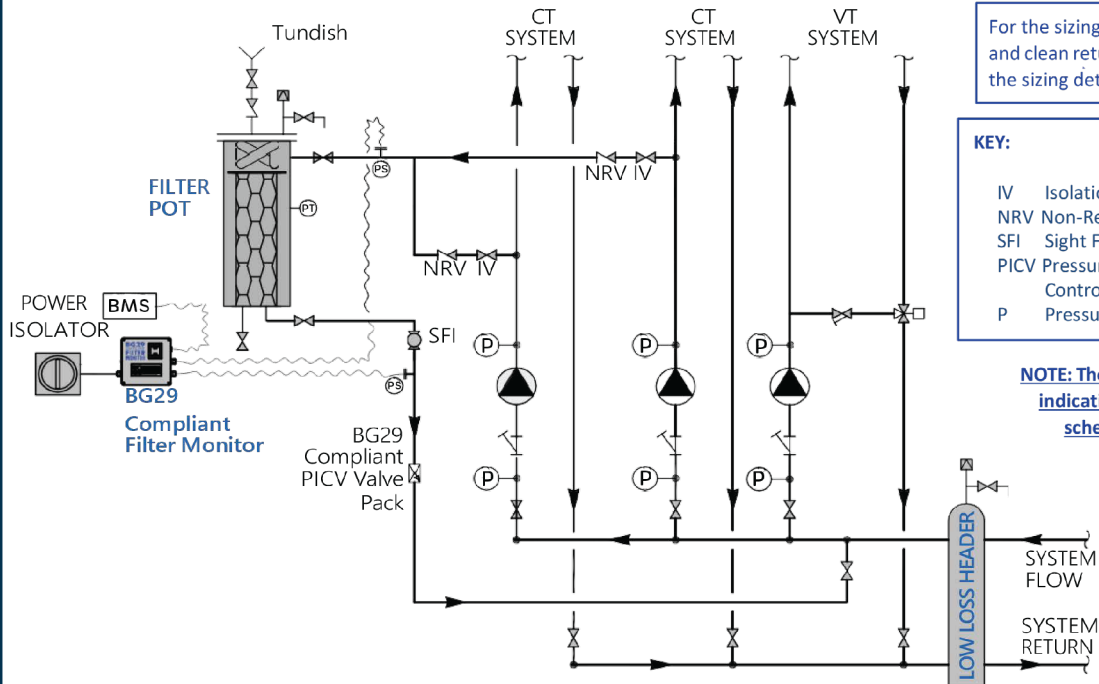
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SINGLE PUMP INSTALLATION

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

NOTE: These schematics are indicative of pipework schematics only.



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