

X-POT[®]

CLOSED LOOP HEATING AND
COOLING SIDE STREAM FILTRATION

The internationally trusted choice in its class

SUPERIOR PROTECTION FOR HVAC SYSTEMS UP TO 95°C



UK Product innovation
of the year



UK Product of the Year

ZERO CARBON PROTECTION READY

BOSS IT WITH **BOSS**

BOSSTM

How neglecting your hydronic thermal fluid can affect your bottom line

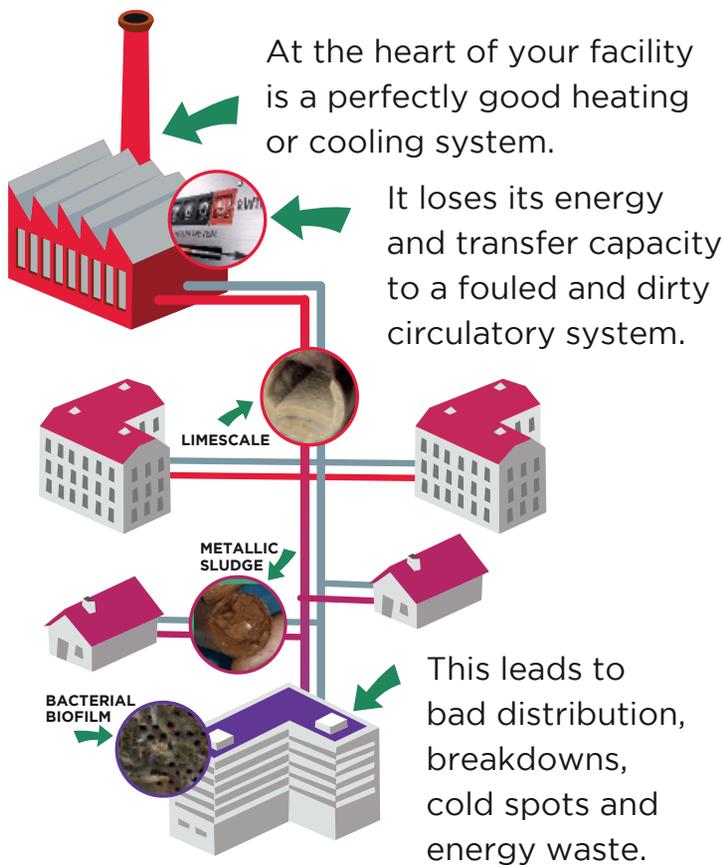
Your investment reduces as dirty system water slowly erodes your OPEX and reputation.



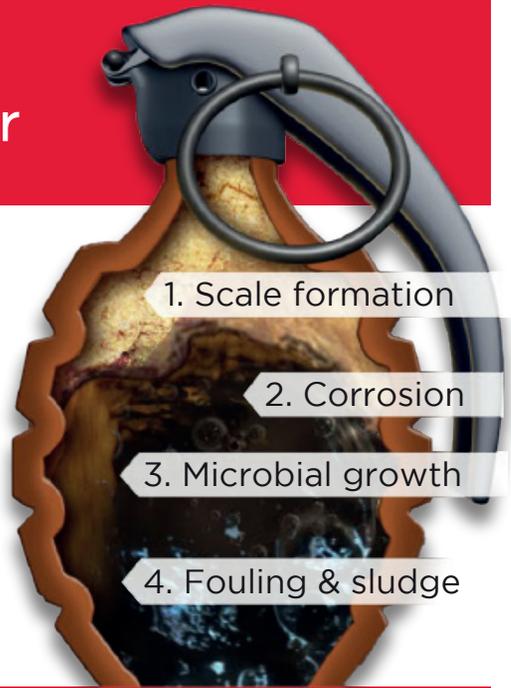
Why X-POT?

The problem with dirty water

Water is the main means of closed system temperature distribution. It affects every single piece of equipment and every single person in the spaces that you manage. Wherever there is closed loop system water four problems will occur: scale formation, corrosion, fouling and microbial growth.



You could be losing over 10% energy from dirty system water alone!



Potential dangers hiding in closed system water.

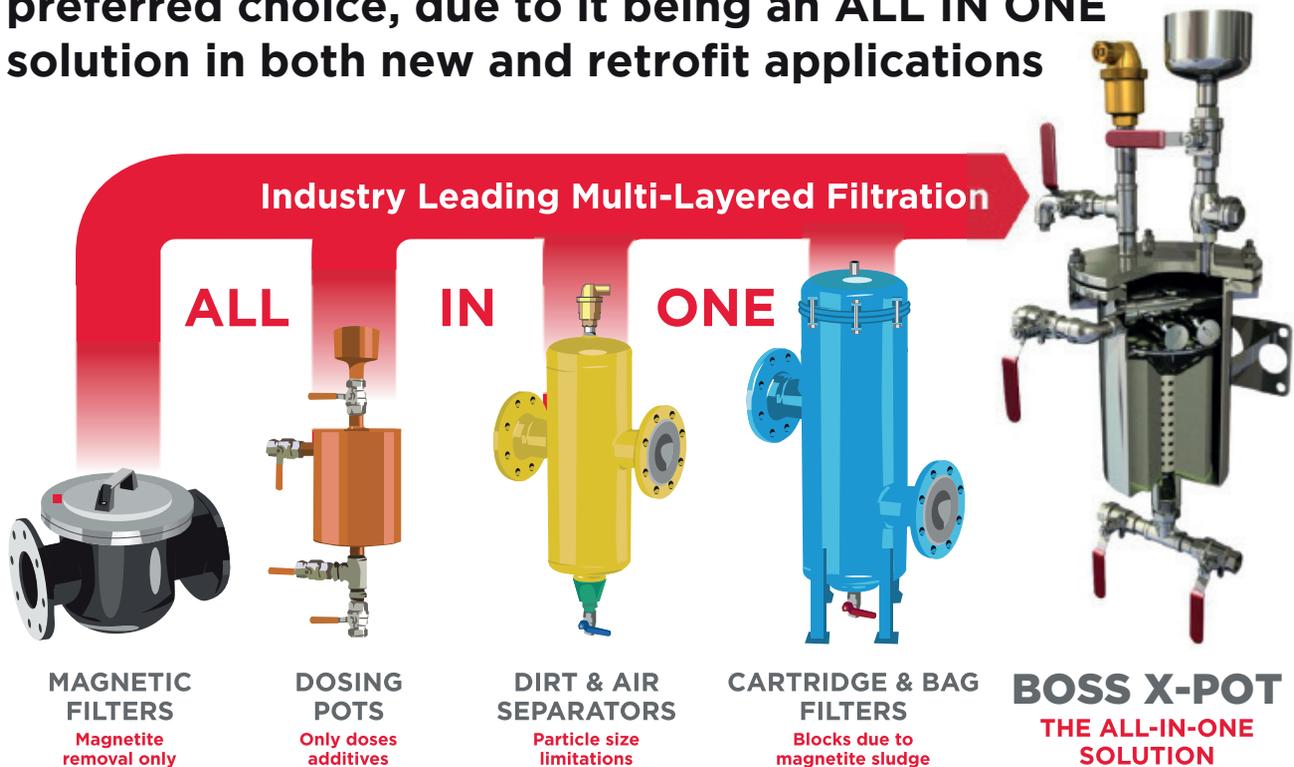


What dirty system water can do if left untreated.

What is the BOSS X-POT?



The Patented Award Winning BOSS X-POT is the preferred choice, due to it being an ALL IN ONE solution in both new and retrofit applications



The X-POT combines most current system filtration units into one easy-install, easy-service, BSRIA acknowledged water conditioning product.

- Higher System performance at a smaller budget
- Greater reliability with reduced critical down time, increased heat distribution, AND fewer call outs.
- Retro-fit all-in-one Solution
- Multi-Functional Design
- Improved system life cycle resulting in CAPEX savings, reductions in reactive maintenance and operational cost savings.
- Protection for new zero carbon sensitive technologies and improved system efficiency for aged systems; with less flushing, a reduction in CO₂ and a more environmentally friendly facility.

Does the BOSS X-POT really work?

Absolutely. We have independently proven **3.5% energy saving** after just **1 week**

"The X-POT Side Stream filtration system reduced energy consumption by 3.5% within the first 7 days of use"

Johnathan Cripps, MSc Dissertation:

Low Energy Building Services Engineering (Effects of Corrosion on Heat Transfer Efficiency within a Heating System)

Loughborough University



The results speak for themselves with thousands of X-POT's installed, all with **100% positive client feedback**. Below are examples of the X-POT's ability to remove contaminants.



Side stream filtration for small to medium commercial systems

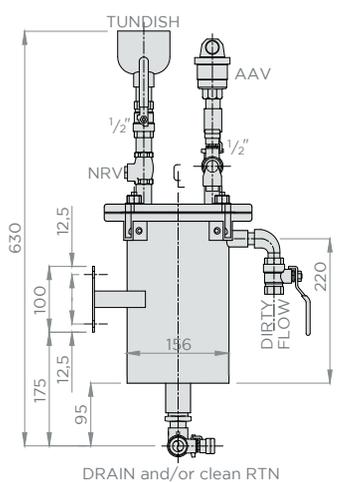


X-POT COMPACT

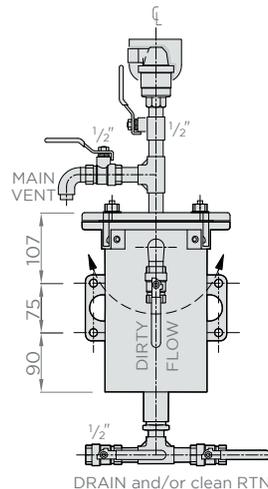


Side stream filtration including a magnetic filter, cartridge filter, air and dirt separator and dosing unit for small to medium commercial systems.

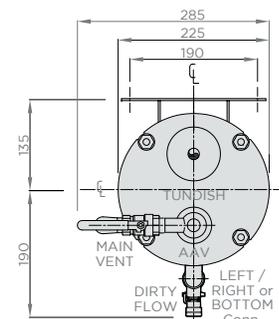
- **Max working pressure:**
4 Bar
- **Max system volume:**
34,560 litres
- **Flow rate:**
Up to 0.4 l/s
- **Pipe connection:**
1/2" BSP
- **Filtration rate:**
Down to 0.5 micron



Side View

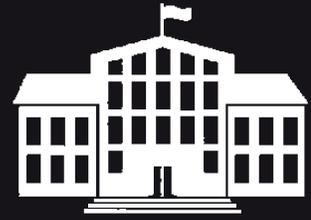


Front View

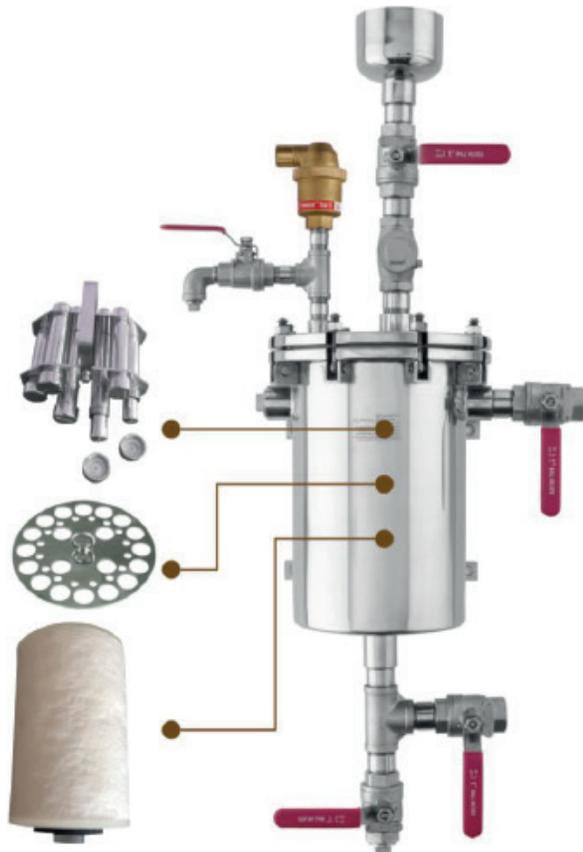


Plan View

Side stream filtration for medium to large commercial systems

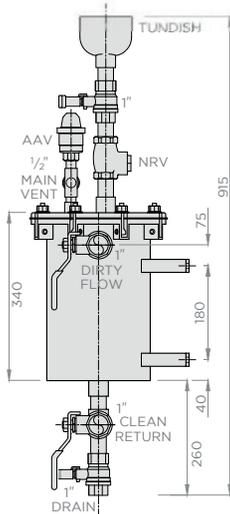


X-POT6

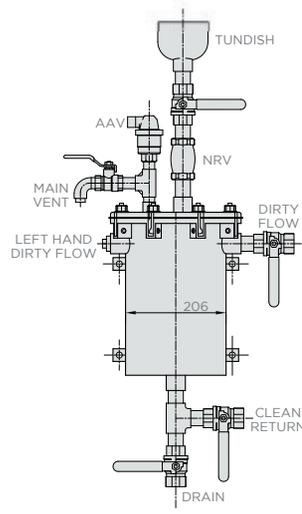


Side stream filtration including a magnetic filter, cartridge filter, air and dirt separator and dosing unit for medium to large commercial systems.

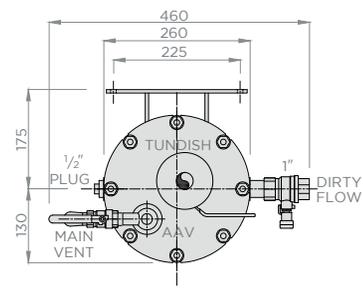
- **Max working pressure:** 7 Bar
- **Max system volume:** 86,400 litres
- **Flow rate:** Up to 1 l/s
- **Pipe connection:** 1" BSP
- **Filtration rate:** Down to 0.5 micron



Side View

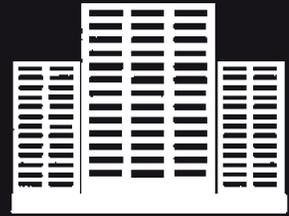


Front View

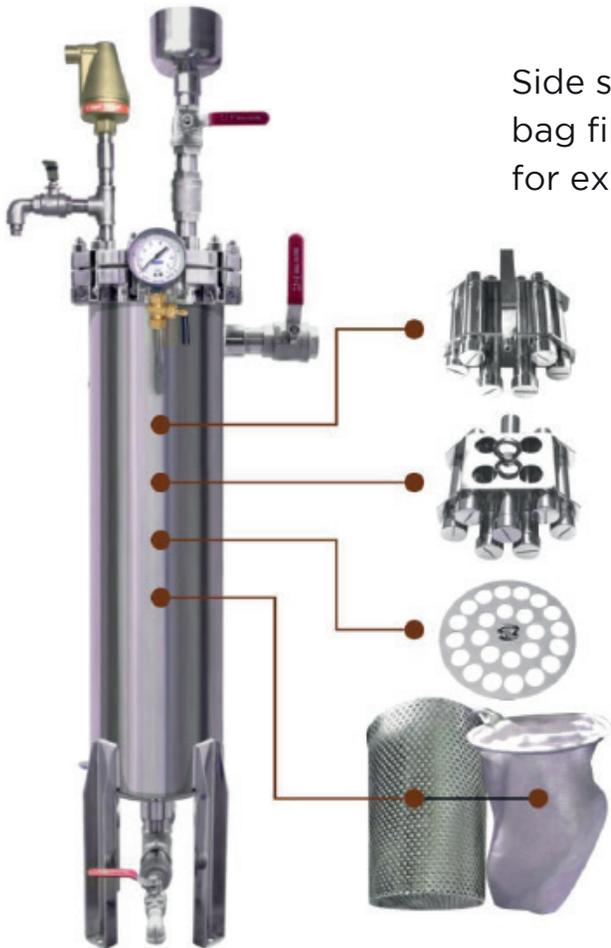


Plan View

Side stream filtration for large to district commercial systems

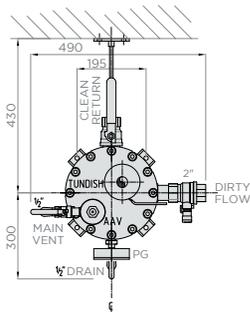


X-POT XP

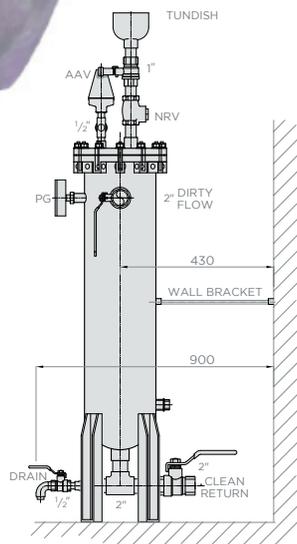


Side stream filtration including a magnetic filter, bag filter, air and dirt separator and dosing unit for extreme high-pressure systems

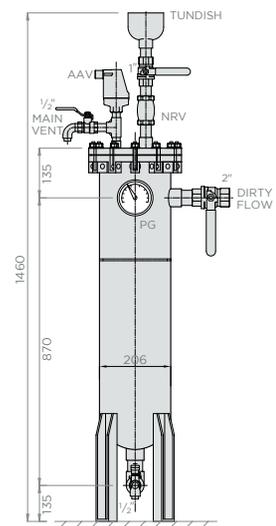
- **Max working pressure: 16Bar**
- **Max system volume: 302,400 litres**
- **Flow rate: Up to 3.5 l/s**
- **Pipe connection: 2" BSP**
- **Filtration rate: Down to 1 micron**



Plan View

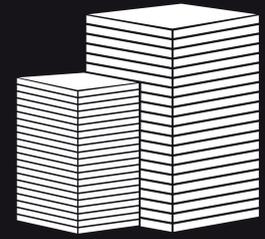


Side View



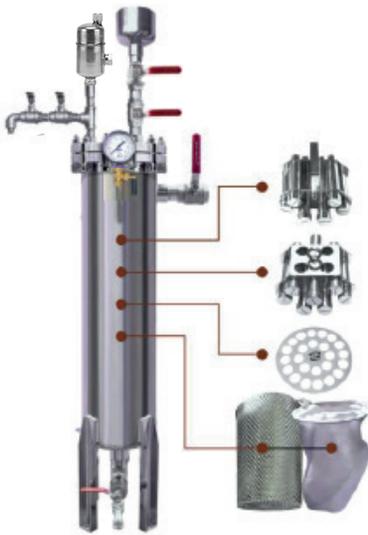
Front View

Made to order filtration for extreme high pressure or flow



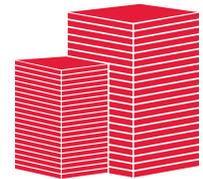
X-POT XXP

MADE TO ORDER



- **Max working pressure:** 30Bar
- **Max system volume:** 302,400 litres
- **Flow rate:** Up to 3.5 l/s
- **Pipe connection:** 2" BSP
- **Filtration rate:** Down to 1 micron

Side stream filtration including a magnetic filter, bag filter, air and dirt separator and dosing unit for very large commercial systems.



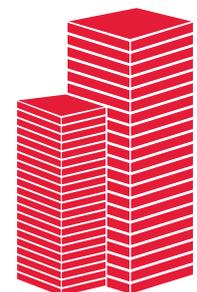
X-POT HFHP

MADE TO ORDER



- **Max working pressure:** 10 or 30 Bar options
- **Max system volume:** 2,592,000 litres
- **Flow rate:** Up to 30 l/s
- **Pipe connection:** 6" PN 10 or 6" PN 30
- **Filtration rate:** Down to 1 micron.

Side stream filtration including a magnetic filter, bag filter, air and dirt separator and dosing unit for extremely high pressure, high flow commercial systems.



Side stream filtration with integrated pump, alarm and BMS compatibility

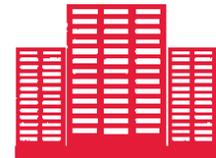


X-POT6+



- **Max working pressure:** 10 Bar
- **Max system volume:** 86,400 litres
- **Flow rate:** 1.0 l/s
- **Pipe connection:** 1" BSP
- **Filtration rate:** Down to 0.5 micron

BOSS™ X-POT6+ Side Stream Filtration & Dosing Unit with integrated pump, fault alarm and enhanced BMS compatibility for medium to large commercial systems.

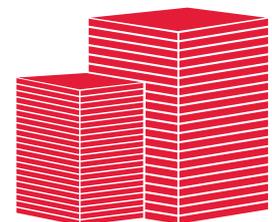


X-POT XP+



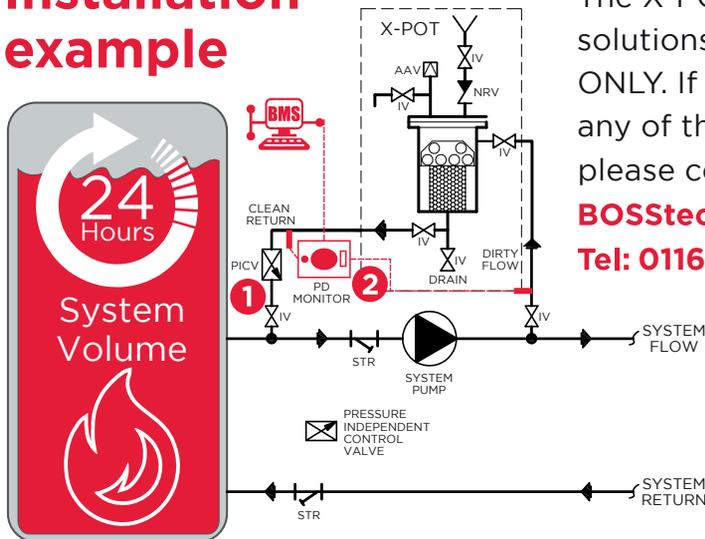
- **Max working pressure:** 16 Bar
- **Max system volume:** 302,400 litres
- **Flow rate:** 1.0-3.5 l/s
- **Pipe connection:** 2" BSP
- **Filtration rate:** Down to 1 micron.

BOSS™ X-POT XP+ Side Stream Filtration & Dosing Unit with integrated pump and BMS compatibility for district and data centre systems.



Indicative X-POT Side Stream Filtration Installations

Installation example



The X-POT provides a number of installation solutions. These examples are INDICATIVE ONLY. If your system cannot accommodate any of these scenarios due to complexity, please contact the **BOSS Technical Team:**
BOSstechnicalteam@bssgroup.com
Tel: 0116 245 5940



1
PICV

Which connections and X-POT?

The size of the connections to the X-POT is determined by the total system volume being circulated through the X-POT in a 24 Hour period.

$$\frac{\text{SYSTEM VOLUME}}{86,400\text{sec}} = \text{l/sec}$$

- 0.083 - 0.4 l/s = 1/2" Conn.
- 0.4 - 0.6 l/s = 3/4" Conn.
- 0.6 - 1.0 l/s = 1" Conn.
- 1.0 - 1.2 l/s = 1 1/4" Conn.
- 1.2 - 2.1 l/s = 1 1/2" Conn.
- 2.1 - 3.5 l/s = 2" Conn.

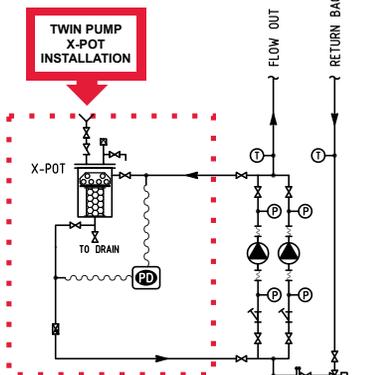
EXAMPLES

Working Pressure : 3Bar
 System volume : 22,500Litres = 0.26 l/sec
 Chosen Vessel : **X-POT Compact**
 Connection Size : 1/2"

Working Pressure : 10Bar
 System volume : 90,000Litres = 1.04 l/sec
 Chosen Vessel : **X-POT XP**
 Connection Size : 1 1/4"

Indicative system placement

- ISOLATION VALVE
- NON RETURN VALVE
- STRAINER
- AUTO AIR VENT
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- PRESSURE RELEASE VALVE
- FLEX CONNECTION
- PUMP
- BOSS™ PD-MONITOR
- PRESSURE INDEPENDENT CONTROL VALVE
- COMMISSIONING VALVE
- 3 PORT VALVE

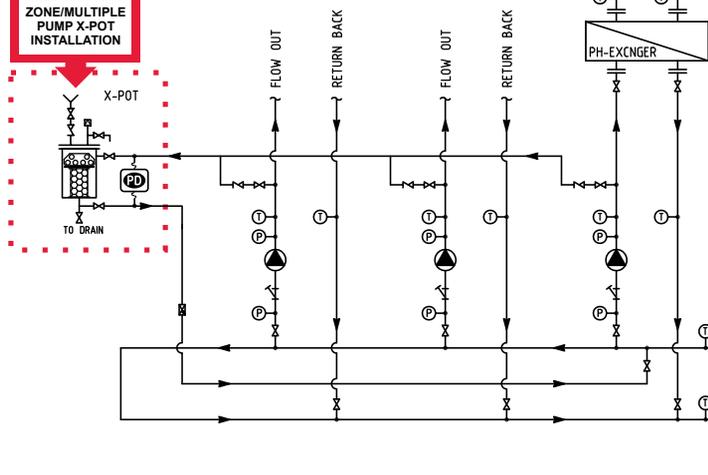


2
Packaged Differential Pressure Monitor

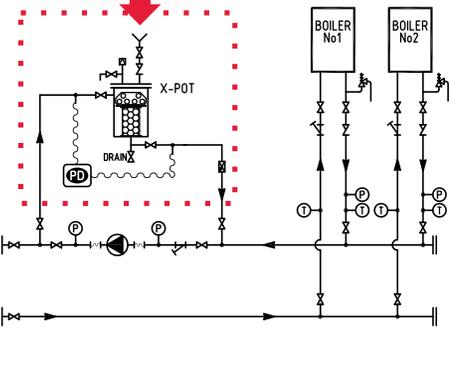


THE X-POT SHOULD BE FITTED ON THE SECONDARY HEATING CIRCUIT TO ENSURE BULK WATER SYSTEM PROTECTION

ZONE/MULTIPLE PUMP X-POT INSTALLATION



SINGLE PUMP X-POT INSTALLATION



Upgrade your X-POT with a simple and adaptive monitor for system flow issues

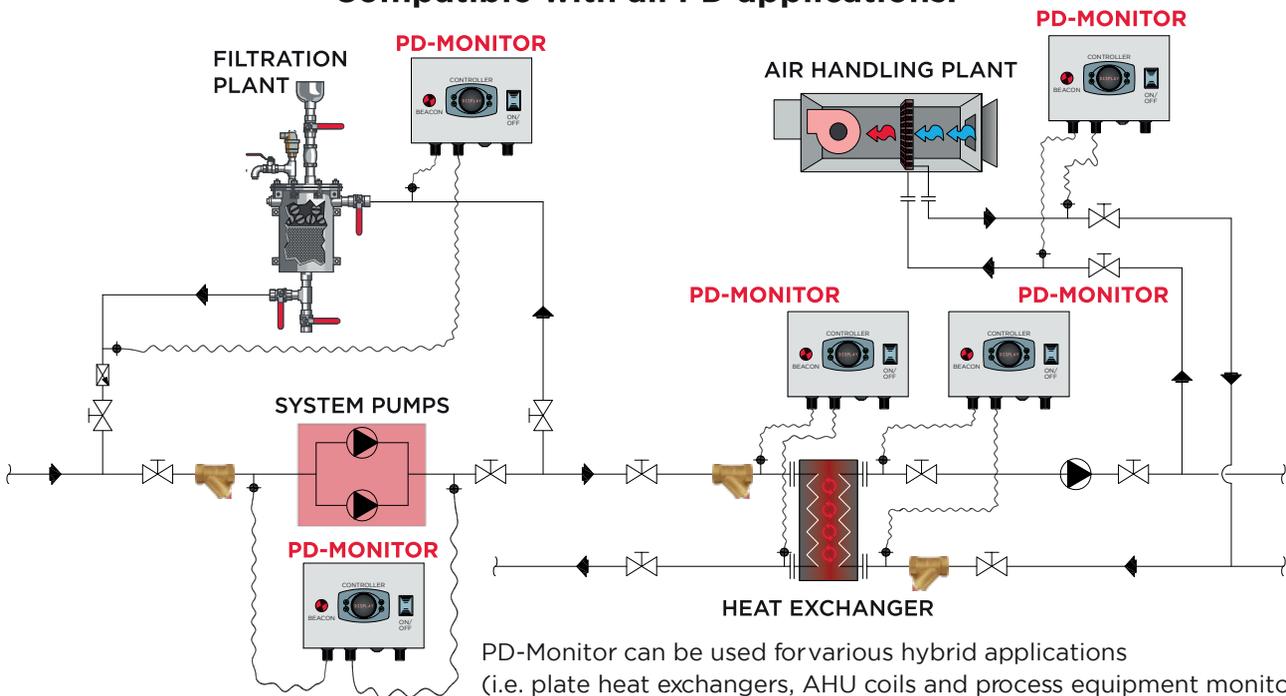
FD-Monitor®



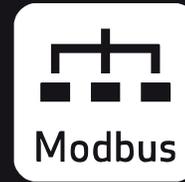
A packaged, wall mounted, and IP54 factory tested differential pressure monitoring unit incorporating controller, two pressure transducers, 240V ac mains cable and BMS capability.

- **Remote alarm for blocked X-POT filters**
- **Modbus RS485**
- **30 Bar Max. working pressure**
- **Can be linked to BMS**
- **Audible alarm and flashing beacon**
- **Simple, adaptive monitor for system flow issues**

Compatible with all PD applications.



The X-POT Compliance Packs



The X-POT Compliance Pack completes your X-POT installation in accordance with BSRIA BG29/2021 & BG50/21 Best Practice Guidance.

The X-POT Compliance Pack features a pre-settable PICV for simple and accurate commissioning, insulation jacket for the PICV to reduce thermal loss, and the BOSS PD-Monitor to accurately notify of a blocked filter state – ensuring best practice water quality is maintained



BSRIA BG29/21 '6th Edition' & BSRIA BG50/2021 recommends '5% of the circulating water should be diverted through the side stream filter' and 'filters should be easily maintainable and fitted with a differential pressure indicator or BMS sensor'.



X-POT COMPLIANCE PACK VARIATIONS & ORDER CODES



X-POT Compact
DN20
Product Code: 16920750

X-POT6
DN32
Product Code: 16920761

X-POT XP LF
DN50
Product Code: 16920772



X-POT XP HF
DN50 Flanged
Product Code: 16920783

Each Compliance Pack contains:

- **1 off Pre-Settable PICV**
(X-POT Compact - DN20) (X-POT6 - DN32)
(X-POT XP LF - DN50) (X-POT XP HF - DN50 Flanged)
- **1 off Insulation Jacket**
- **1 off BOSS PD-Monitor 0-30 Bar Modbus**

X-POT fine filtration

Our range of superior quality filters provides top class filtration, surpassing international Industry Standards.



MICRON SIZES
Cartridge filters
0.5, 5, 20 & 50
Bag filters
1, 5, 25, 50 & 100

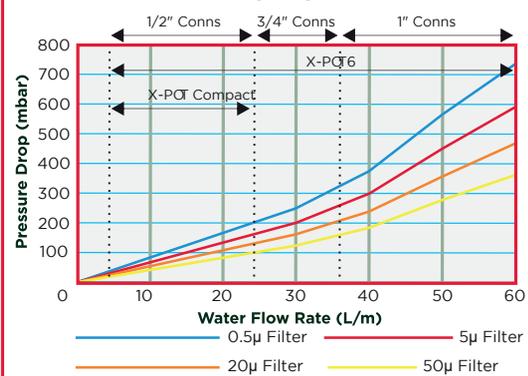
BSRIA BG29/21 '6th Edition' Pre-commission 'Cleaning of Pipe Work Systems' recommends a 5 micron filtration rate. The X-POT utilizes industry leading 0.5 micron Cartridge Filters (10x Finer) and 1 micron Bag Filters (5x Finer), capturing more debris resulting in greater energy savings and prolonged life cycle realisation.

BOSS's industry leading side stream filtration range is fully compliant with BS EN ISO 9001:2015

The water samples below were taken from a 2 year old LTHW Heating System. The system contained a dosing pot (closed off), D&A Separator and no trace of water treatment chemicals. The system contained corrosion debris. After installing an X-POT and Commercial Inhibitor, the results speak for themselves. Simple and very effective!

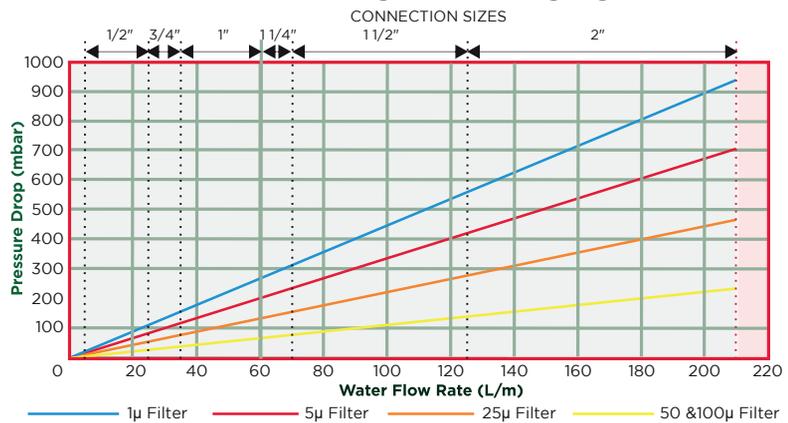


Flow DP of X-POT Compact & X-POT6 Cartridge Filters including Magnet Grate



NOTE - Choice of X-POT is dependent upon system working pressure and system volume. Dirty filter state can be estimated by multiplying the clean filter state by a factor of 2.

Flow DP of X-Pot XP Bag Filters including Magnet Grate



NOTE - Choice of X-POT is dependent upon system working pressure and system volume. Dirty filter state can be estimated by multiplying the clean filter state by a factor of 2.

The X-POT and ancillary order codes

Order your X-POT, filter or PD-Monitor below by quoting the BSS code (shown in red text) and quantity of units.

X-POT PRODUCT CODES		REPLACEMENT FILTERS PRODUCT CODES		
PD-MONITOR 16910467				
UNIT & STARTER PACK		CARTRIDGE FILTERS X-POT COMPACT, X-POT6 & X-POT6+ (Box of 4)	CARTRIDGE FILTERS X-POT COMPACT, X-POT6 & X-POT6+ (Box of 20) BIG SAVINGS PER FILTER	
X-POT Compact	16920824	50µ	16920643	
X-POT 6	16920835	20µ	16920632	
X-POT XP	16920846	5µ	16920621	
		0.5µ	16920610	
			50µ	16920687
			20µ	16920676
			5µ	16920665
			0.5µ	16920654
UNIT ONLY		BAG FILTERS X-POT XP, X-POT XXP, X-POT XP+, X-POT HFHP (Box of 5)		
X-POT 6+	16920536	100µ	16920739	
X-POT XP+	16920547	50µ	16920728	
X-POT XXP	16920558	25µ	16920717	
			5µ	16920706
			1µ	16920698

Essential for Installation (2 of 2 product)

Remember to include your X-POT[®] Starter Pack in your order



X-POT COMPACT **X-POT6**

- 1 off Cartridge Filter (20 micron)
- 1 off Automatic Air Vent
- Insulation Jacket (2 parts)
- BOSS Inhibitor and Test Kit

X-POT XP

- 1 off each bag filter 100, 50, 25, 5 and 1 micron
- 1 off Automatic Air Vent
- Insulation Jacket (3 parts)
- 1 off Pressure Assembly
- BOSS Inhibitor and Test Kit





Exclusive to BSS

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W: www.bssboss.co.uk

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BSS, Duncrue Industrial Estate, 36-38 Duncrue Road, Belfast, BT3 9BP