

X-POT[®]

ALL-IN-ONE AIR &
DIRT SEPARATOR



UK PRODUCT INNOVATION
OF THE YEAR



www.bssboss.com

BOSStechnicalteam@bssgroup.com

03330 341920

BSS, Ashcroft Way, Cross Point Business Park, Coventry CV2 2TU
BSS, Duncrue Industrial Estate, 36-38 Duncrue Rd, Belfast BT3 9BP

BOSSTM

X-POT[®] Brochure

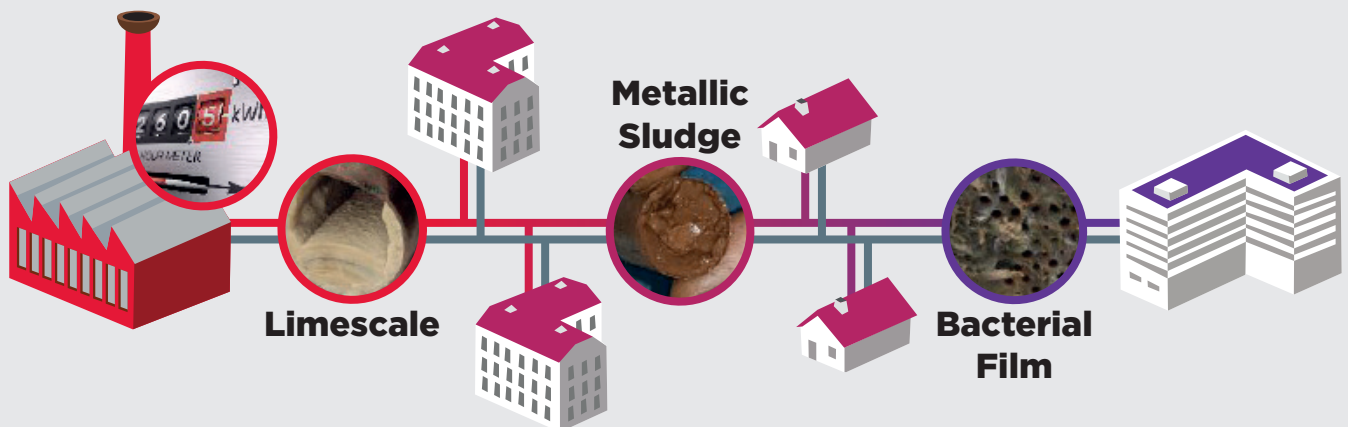
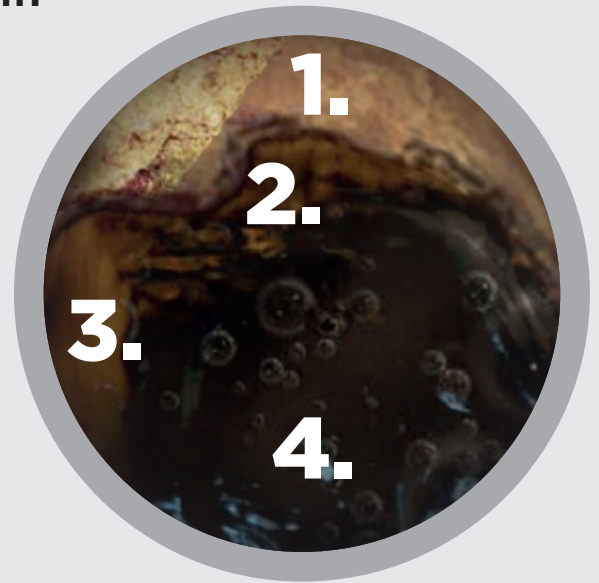
Last Updated - 05/06/2023

PAGE 1

Why do you need side stream filtration?

Water is the main means of closed system temperature distribution. It affects every single piece of equipment and every person that occupies the spaces that you manage. Wherever there is a closed water system loop, there are **four** problems that will occur:

1. **Scale formation**
2. **Corrosion**
3. **Fouling**
4. **Microbial growth.**

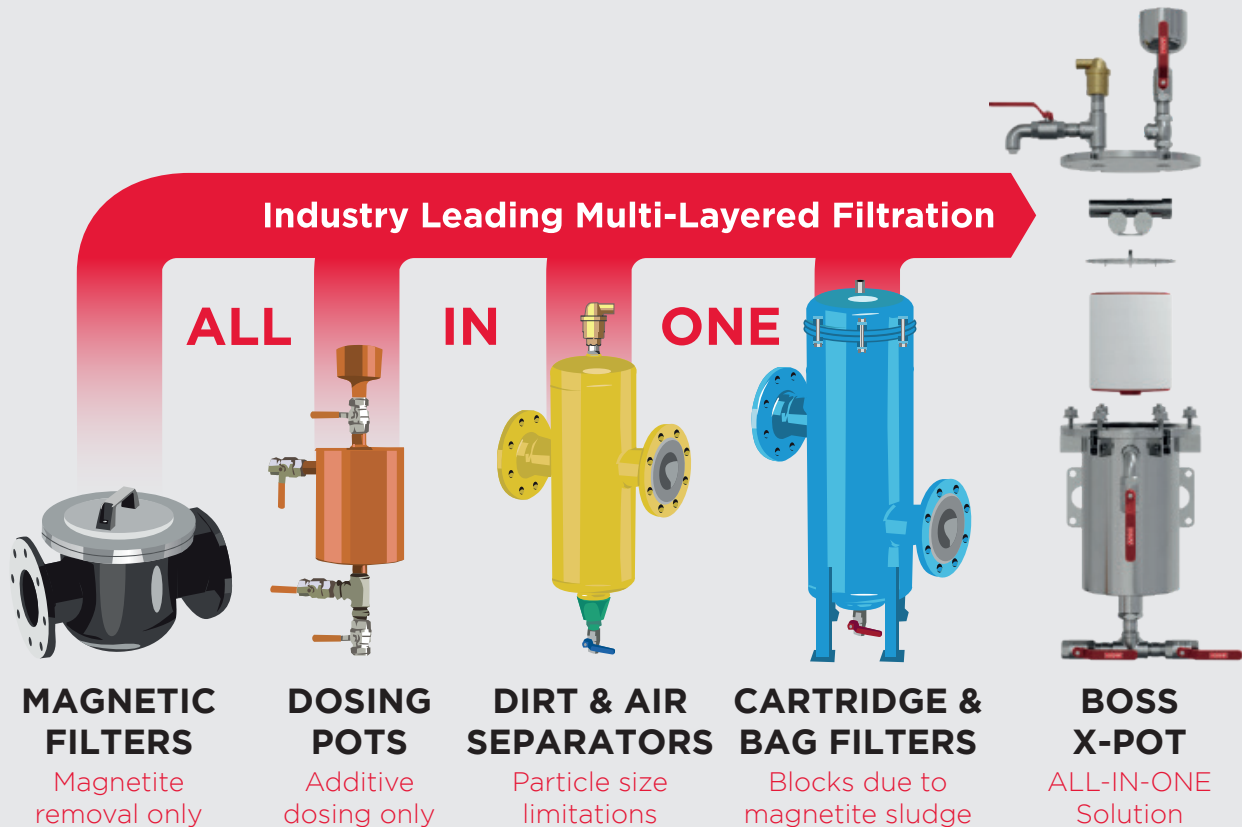


Limescale deposits can clog up your heating or cooling system. Metallic sludge or bacterial film can also cause blockages and cold spots in pipes and radiators. All of this leads to reduced efficiency and high fuel bills. It also means extra stress on pumps, heat exchangers, radiators and sensors causing the risk of breakdown and inevitable expensive repairs.

X-POT Side Stream Filtration units can prevent all these issues with proven energy savings and thousands of installations worldwide with 100% client satisfaction!

What is a BOSS X-POT?

The X-POT is an award-winning, patented side stream filtration unit that maintains systems in accordance with BG 29/2021 and BG50/2021. It has been highly specified since 2014 in both new and retrofit applications due to its **ALL-IN-ONE** benefits.



The X-POT combines most current system filtration solutions into one easy to install & service water conditioning product which is also acknowledged by BSRIA.

- Save plantroom space with multi-functional design and retro-fit applications.
- Improve system life cycle and save on capital expenditures.
- Enhance system water quality leading to increased efficiency and less operating expenses.

Does the BOSS X-POT really work?

Absolutely.

“The X-POT Side Stream Filtration system reduced energy consumption by 3.5% within the first 7 days of use.”

Jonathan 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, there are thousands of X-POTs installed, all with 100% positive client feedback.

Below are examples of what the X-POT range is capable of removing from your system!



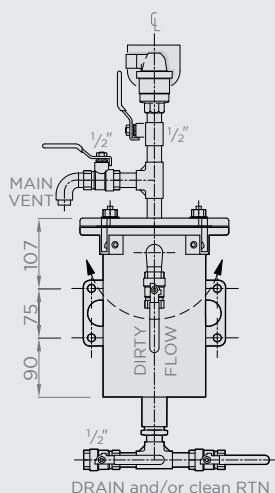
Side Stream Filtration for small to medium commercial systems
optimised for space saving & maximised results

X-POT[®] COMPACT

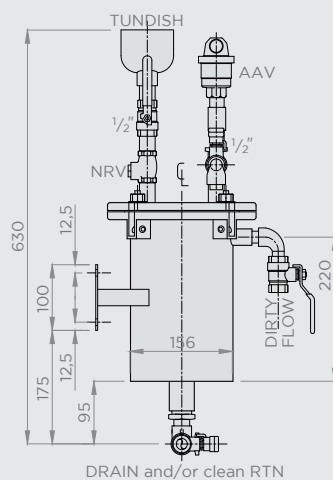


Side stream filtration including a magnetic filter, cartridge filter, air and dirt separator & dosing unit.

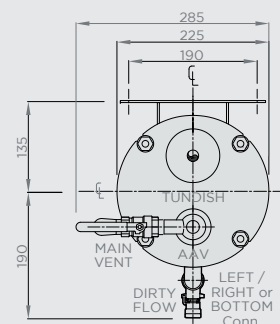
- **Max working pressure:**
4 Bar
- **Max System Volume:**
34,560 Litres
- **Flow Rate:**
Up to 0.4 l/s
- **Pipe Connection:**
1/2" BSP
- **Filtration Rate:**
Down to 0.5 micron



Front View



Side View



Plan View

Side Stream Filtration for small to medium commercial systems

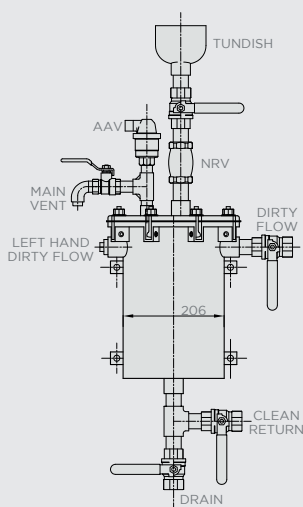
X-POT6[®]



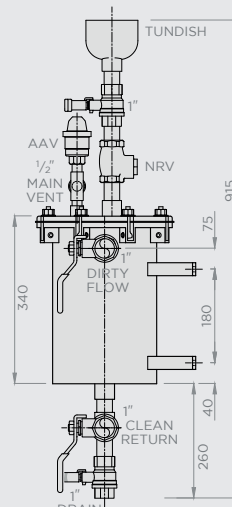
Side stream filtration including a magnetic filter, cartridge filter, air and dirt separator & dosing unit.



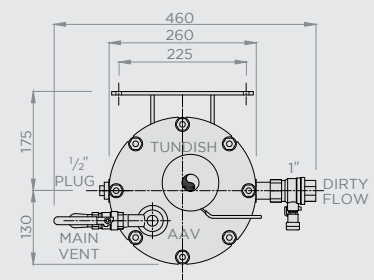
- **Max working pressure:**
7 Bar
- **Max System Volume:**
86,400 Litres
- **Flow Rate:**
Up to 1 l/s
- **Pipe Connection:**
1" BSP
- **Filtration Rate:**
Down to 0.5 micron



Front View



Side View



Plan View

Side Stream Filtration for large to district commercial systems

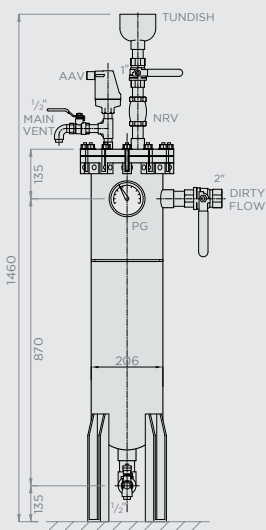
X-POTXP[®]



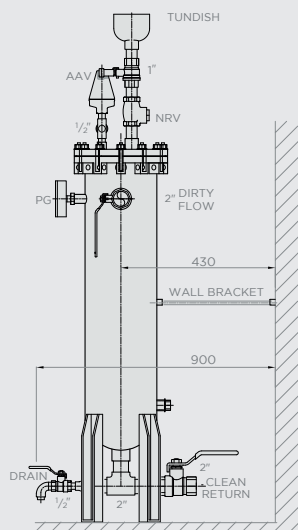
Side stream filtration including a magnetic filter, bag filter, air and dirt separator & dosing unit.



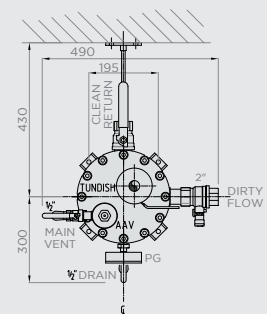
- **Max working pressure:**
16 Bar
- **Max System Volume:**
302,400 Litres
- **Flow Rate:**
Up to 3.5 l/s
- **Pipe Connection:**
2" BSP
- **Filtration Rate:**
Down to 1 micron



Front View



Side View



Plan View

Side Stream Filtration for extremely high pressure/flow

X-POTXXP®



Side stream filtration including a magnetic filter, bag filter, air and dirt separator & dosing unit.

**MADE TO
ORDER**

- **Max working pressure:** 30 Bar
- **Max System Volume:** 302,400 Litres
- **Flow Rate:** Up to 3.5 l/s
- **Pipe Connection:** 2" BSP
- **Filtration Rate:** Down to 1 micron

X-POTHFHP®



Side stream filtration including a magnetic filter, bag filter, air and dirt separator & dosing unit.

**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 with integrated pump, alarm & BMS capable

X-POT6+®



Standard X-POT 6 unit features plus an integrated pump, fault alarm and enhanced BMS compatibility.



- **Max working pressure:** 10 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

X-POTXP+®



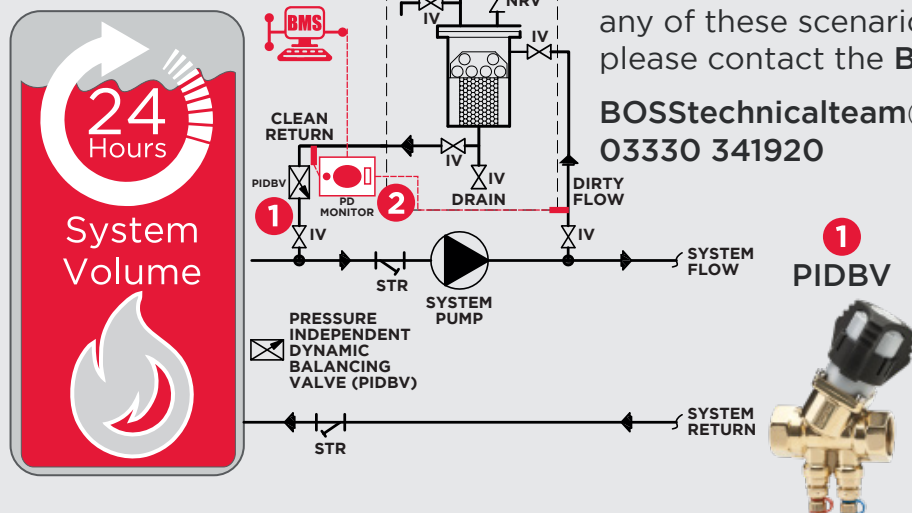
Standard X-POT XP unit features plus an integrated pump and BMS compatibility



- **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

Indicative X-POT Side Stream Filtration Installations

INSTALLATION EXAMPLE



The X-POT provides a dumber 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**:

BOSStechteam@BSSgroup.com
03330 341920

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.

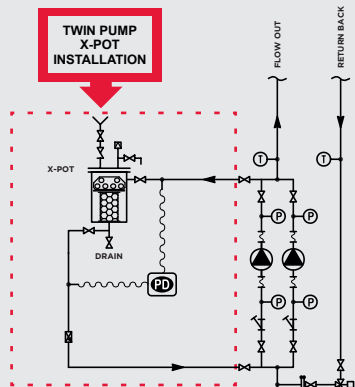
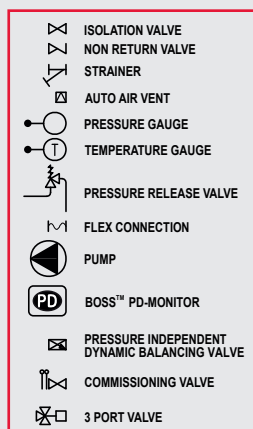
$$\frac{\text{SYSTEM VOLUME}}{86,400\text{sec}} = \text{l/sec}$$

- 0.083 - 0.4 l/s = ½" Conn.
- 0.4 - 0.6 l/s = ¾" Conn.
- 0.6 - 1.0 l/s = 1" Conn.
- 1.0 - 1.2 l/s = 1 ¼" Conn.
- 1.2 - 2.1 l/s = 1 ½" Conn.
- 2.1 - 3.5 l/s = 2" Conn.

EXAMPLES

Working Pressure: 3 Bar
System Volume 22,500L = 0.26l/s
Chosen Vessel: X-POT Compact
Connection Size: ½"

Working Pressure: 10 Bar
System Volume 90,000L = 1.04l/s
Chosen Vessel: X-POT XP
Connection Size: 1 ¼"

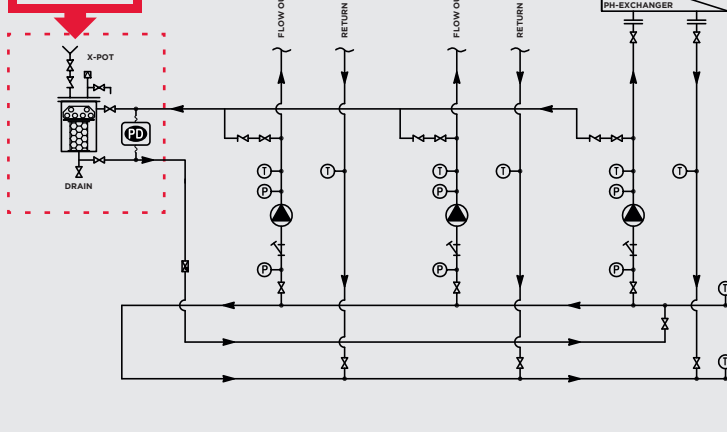


PACKAGED DIFFERENTIAL PRESSURE MONITOR

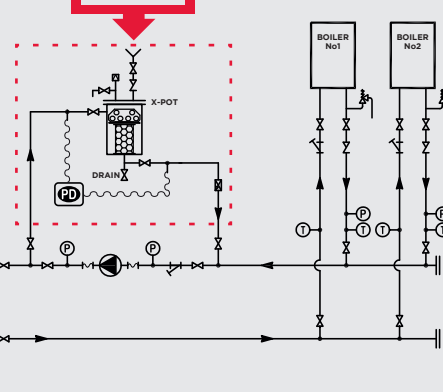


THE X-POT® SHOULD BE FIT ON THE SECONDARY HEATING CIRCUIT TO ENSURE BULK WATER SYSTEM PROTECTION

ZONE/MULTIPLE PUMP X-POT INSTALLATION



SINGLE PUMP X-POT INSTALLATION



Upgrade your X-POT with a PD-Monitor for system flow issues

PD-Monitor®

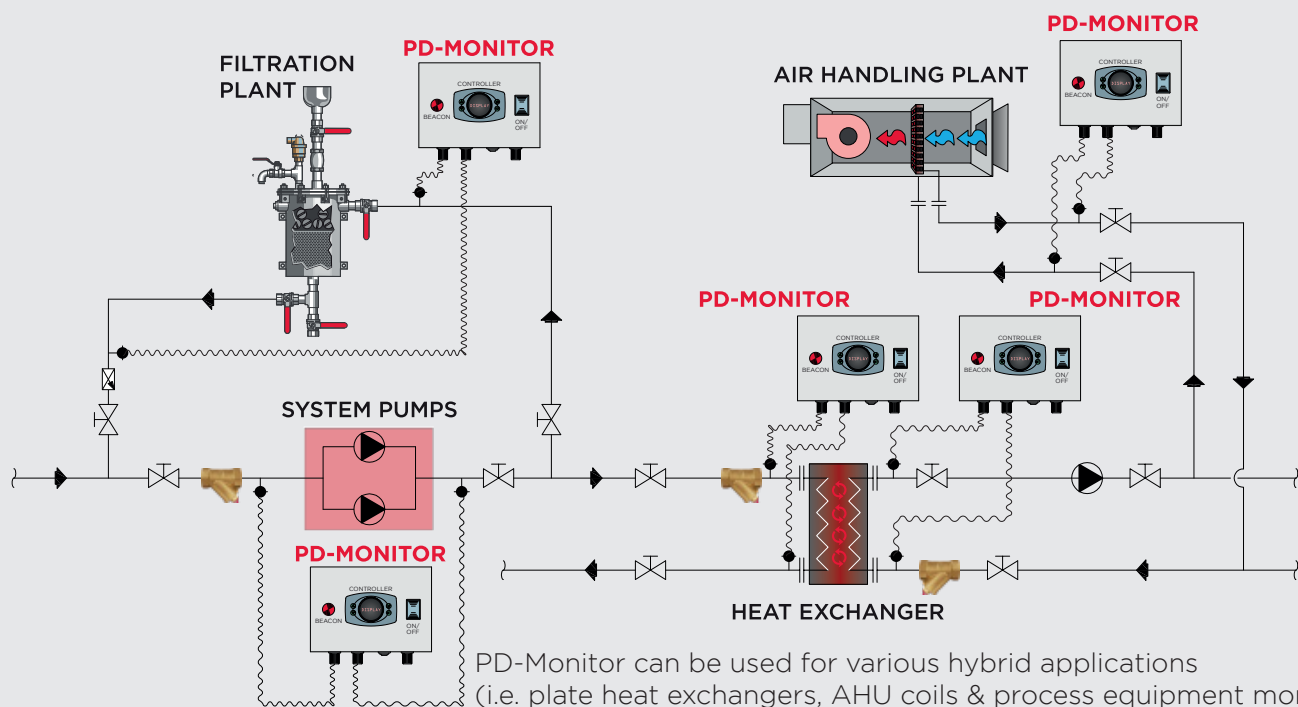


A packaged, wall mounted & IP54 factory tested differential pressure monitoring unit, incorporating controller, two pressure transducers, 240V ac mains cable & BMS capability.



- Remote alarm for blocked X-POT filters
- Modbus RS485
- 30 Bar Max. Working Pressure
- Can be linked to BMS
- Audible alarm & flashing beacon
- Simple, adaptive monitor for flow issues

Compatible with all PD applications.



PD-Monitor can be used for various hybrid applications (i.e. plate heat exchangers, AHU coils & process equipment monitoring).

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 PIDBV for simple and accurate commissioning, insulation jacket for the PIDBV 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 & fitted with a differential pressure indicator or BMS sensor'.



X-POT COMPLIANCE PACK VARIATIONS & ORDER CODES



X-POT Compact
DN20
Product Code: 16920750

X-POT 6
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 the following:

- **1 Off Pre-Settable PIDBV**
X-POT Compact - DN20
X-POT 6 - 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.

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.



- Cartridge Filter

0.5 Micron
5 Micron
20 Micron
50 Micron



- Bag Filter

1 Micron
5 Micron
25 Micron
50 Micron
100 Micron

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

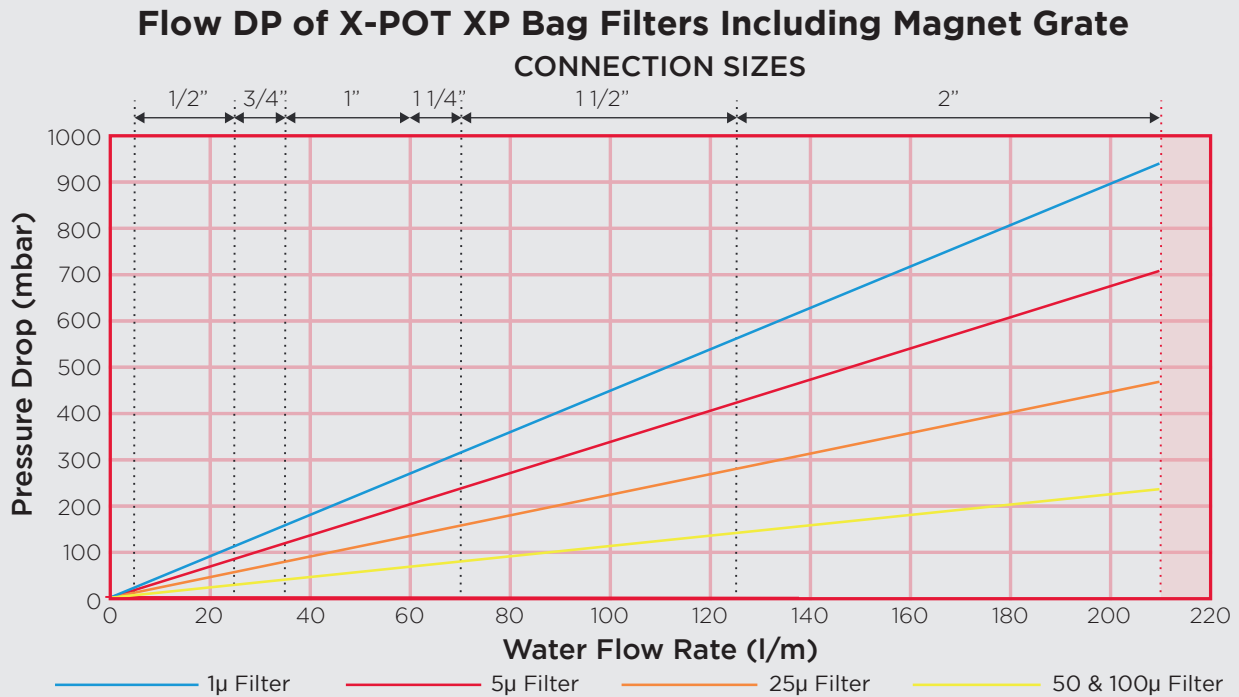


The water samples to the left were taken from a 2 year old LTHW Heating System.

The system contained a dosing pot (closed off), D&A Separator and no trace of water treatment chemicals. The system contained corrosion debris.

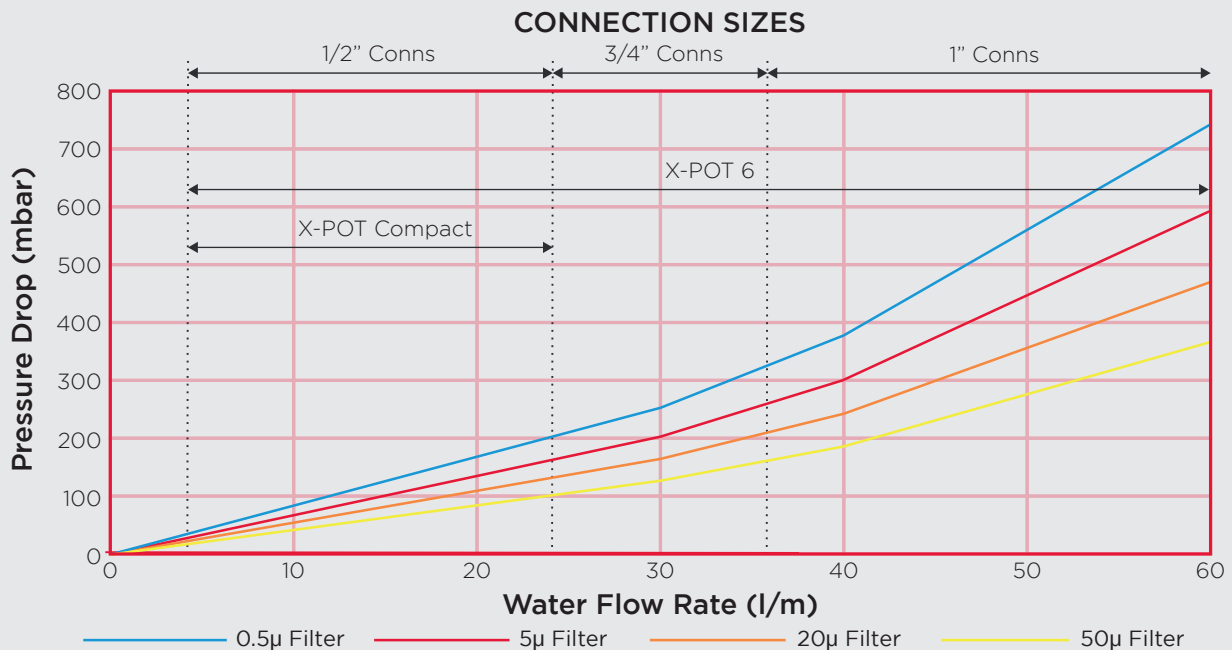
After installing an X-POT and Commercial Inhibitor, the results speak for themselves. Simple and very effective!

X-POT Fine Filtration Filter Performance



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 Compact & 6 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.

The X-POT and Ancillary Order Codes

X-POT PRODUCT CODES		REPLACEMENT FILTER PRODUCT CODES	
X-POT UNIT ONLY Compact 16920503 6 16920514 XP 16920525 6+ 16920536 XP+ 16920547 XXP 16920558 <small>*XP+ & 6+ Units include automatic air vent, filter & insulation jacket</small>		CARTRIDGE FILTERS X-POT COMPACT, 6, 6+ (Box of 4) 50µ 16920643 20µ 16920632 5µ 16920621 0.5µ 16920610 (Box of 20) 50µ 16920687 20µ 16920676 5µ 16920665 0.5µ 16920654	
PD-MONITOR 1 off 16923007		BAG FILTERS X-POT XP, XXP, XP+, HFHP (Box of 5) 100µ 16920739 50µ 16920728 25µ 16920717 5µ 16920706 1µ 16920698	

Order an X-POT with a Contractor or Starter pack for best installation results!

UNIT + CONTRACTOR PACKS					
Pack Model	Filters	Automatic Air Vent	Insulation Jacket	Instructions	Assembly Code
X-POT Compact	x1 cartridge filter (20 micron)	x1	x1 (2 Parts)	x1	16920857
X-POT 6	x1 cartridge filter (20 micron)	x1	x1 (2 Parts)	x1	16920868
X-POT XP	x1 each of 100, 50, 25, 5 & 1 micron	x1	x1 (3 Parts)	x1 + x1 High pressure assembly kit	16920879

UNIT + STARTER PACKS							
Pack Model	Filters	Automatic Air Vent	Insulation Jacket	BOSS Inhibitor	BOSS Test Kit	Instructions	Assembly Code
X-POT Compact	x1 cartridge filter (20 Micron)	x1	x1 (2 Parts)	x5 Litres	x1 Kit with x10 tests	x1	16920824
X-POT 6	x1 cartridge filter (20 micron)	x1	x1 (2 Parts)	x5 Litres	x1 Kit with x10 tests	x1	16920835
X-POT XP	x1 each of 100, 50, 25, 5 & 1 micron	x1	x1 (3 Parts)	x5 Litres	x1 Kit with x10 tests	x1 + x1 High pressure assembly kit	16920846

EXCLUSIVE TO



EMAIL

BOSStechanicalteam@bssgroup.com

TELEPHONE

03330 341920

WEBSITE

www.bssboss.co.uk

ADDRESS 1

BSS, Ashcroft Way
Cross Point Business Park
Conventry
CV2 2TU

ADDRESS 2

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