

X-POT™

ALL-IN-ONE AIR & DIRT SEPARATOR



UK PRODUCT INNOVATION
OF THE YEAR

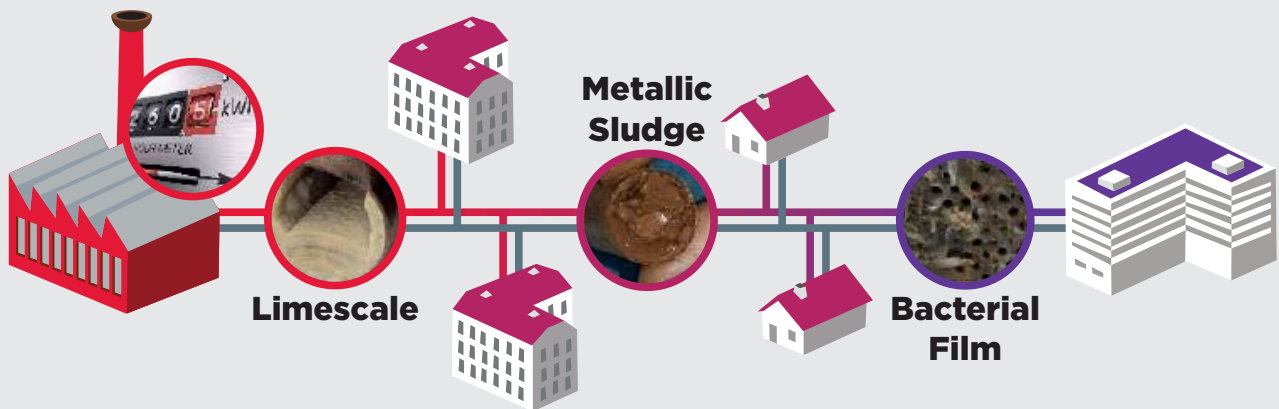




Why X-POT™?

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.**



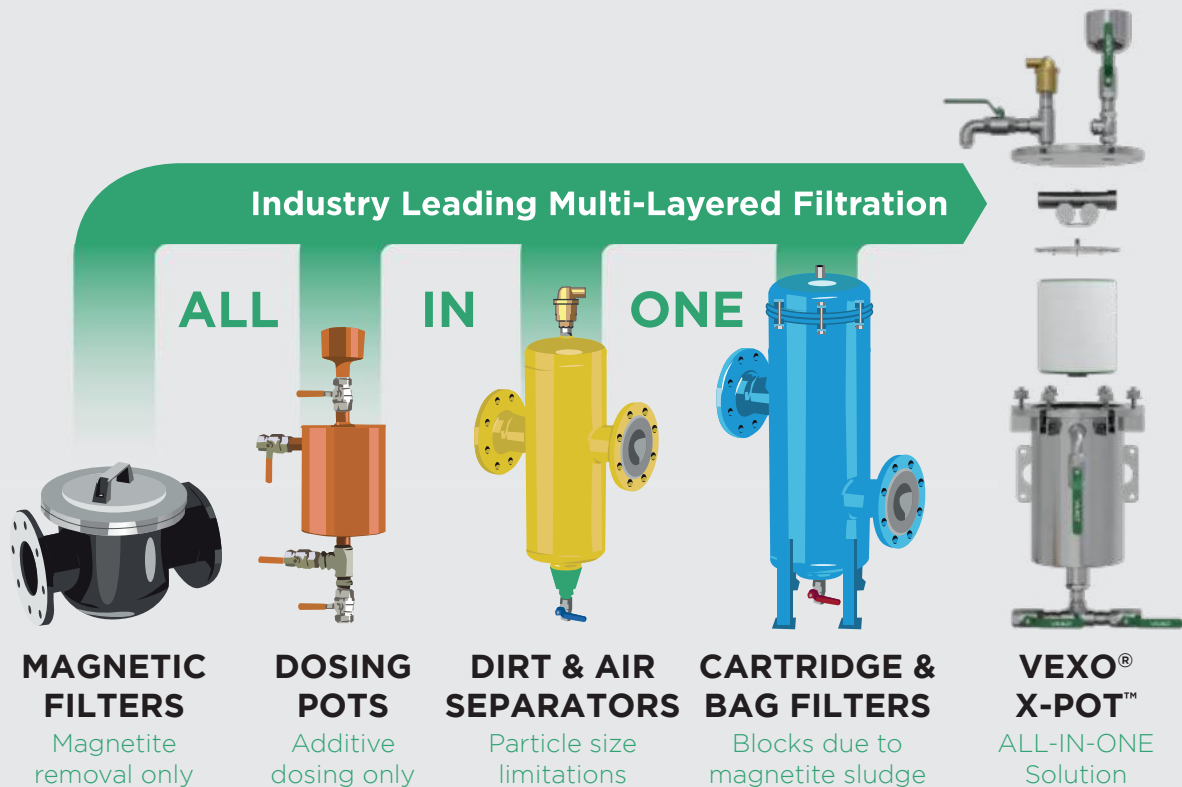
Limescale deposits can clog up your heating or cooling system. Metallic sludge or bacterial film can also cause blockages and cold spots in pipes and radiators. All of this leads to reduced efficiency and high fuel bills. It also means extra stress on pumps, heat exchangers, radiators and sensors causing 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 VEXO® X-POT™?

The VEXO® 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 plant-room 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 VEXO® X-POT™ really work?

Absolutely.

“The X-POT™ Side Stream Filtration system reduced pump energy consumption by an average of 19% in multiple system pressure scenarios.”

Suliman, Amr; Wilkinson, Darren; Eftekhari, Mahroo; Dimitriou, Vanda (2023)

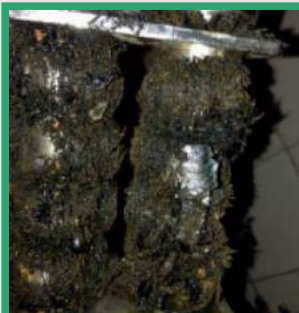
Investigating the efficiency of mechanical filtration in restoring the efficiency of a corroded closed looped heating and cooling system.

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!



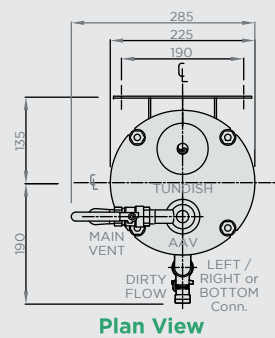
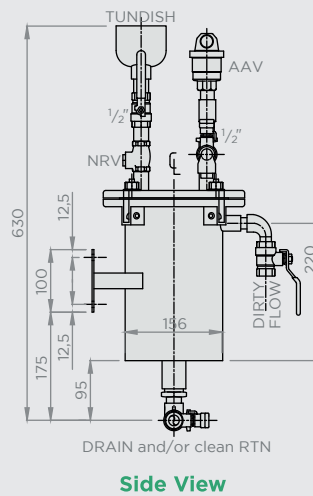
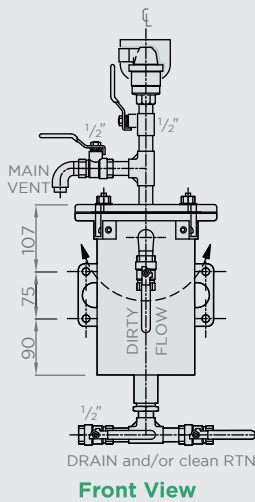


Side Stream Filtration for small to medium commercial systems



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



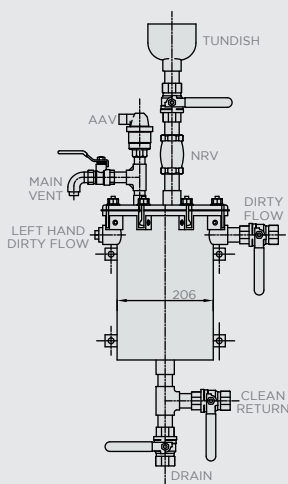


Side Stream Filtration for small to medium commercial systems

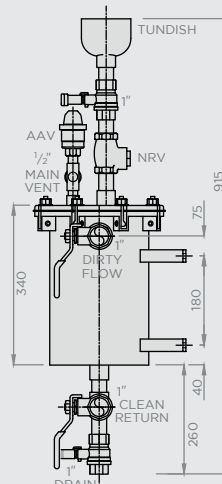


Side stream filtration including a magnetic filter, cartridge filter, air and dirt separator & dosing unit.

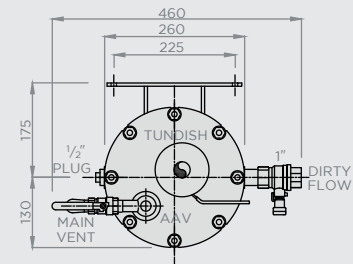
- **Max working pressure:**
7 Bar
- **Max System Volume:**
86,400 Litres
- **Flow Rate:**
Up to 1 l/s
- **Pipe Connection:**
1" BSP
- **Filtration Rate:**
Down to 0.5 micron



Front View



Side View



Plan View

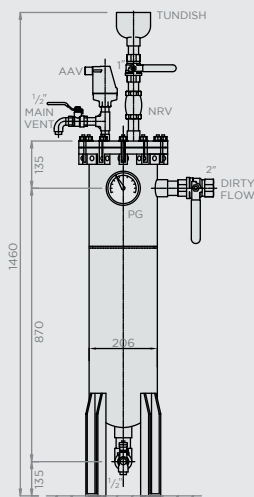


Side Stream Filtration for large to district commercial systems

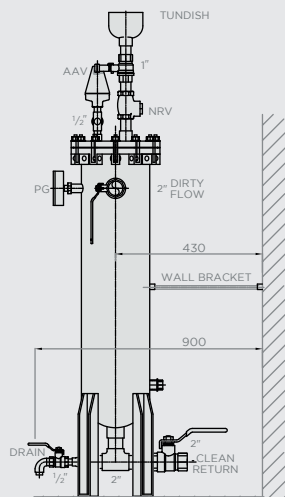


Side stream filtration including a magnetic filter, bag filter, air and dirt separator & dosing unit.

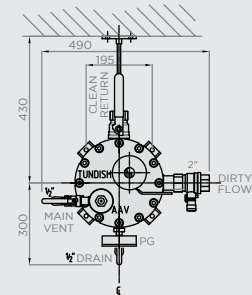
- **Max working pressure:**
16 Bar
- **Max System Volume:**
302,400 Litres
- **Flow Rate:**
Up to 3.5 l/s
- **Pipe Connection:**
2" BSP
- **Filtration Rate:**
Down to 1 micron



Front View



Side View



Plan View



Side Stream Filtration for extremely high pressure/flow



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



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



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



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



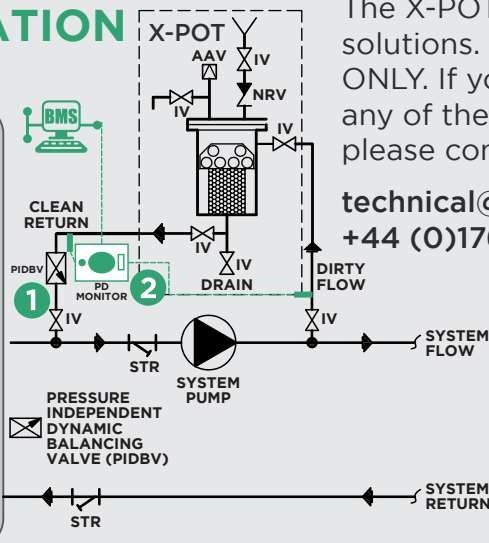
- **Max working pressure:** 16 Bar
- **Max System Volume:** 302,400 Litres
- **Flow Rate:** 1.0 - 3.5 l/s
- **Pipe Connection:** 2" BSP
- **Filtration Rate:** Down to 1 micron

Indicative X-POT Side Stream Filtration Installations

INSTALLATION EXAMPLE

24
Hours

System
Volume



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 VEXO Technical Team:

technical@VEXOint.com
+44 (0)1767 500 150



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.

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

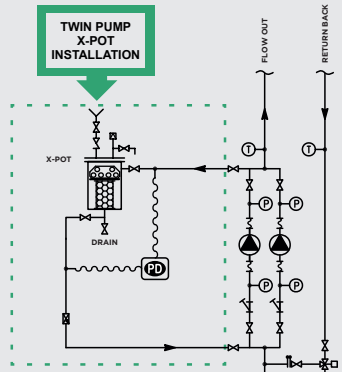
- 0.083 - 0.4 l/s = ½" Conn.
- 0.4 - 0.6 l/s = ¾" Conn.
- 0.6 - 1.0 l/s = 1" Conn.
- 1.0 - 1.2 l/s = 1 ¼" Conn.
- 1.2 - 2.1 l/s = 1 ½" Conn.
- 2.1 - 3.5 l/s = 2" Conn.

EXAMPLES

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

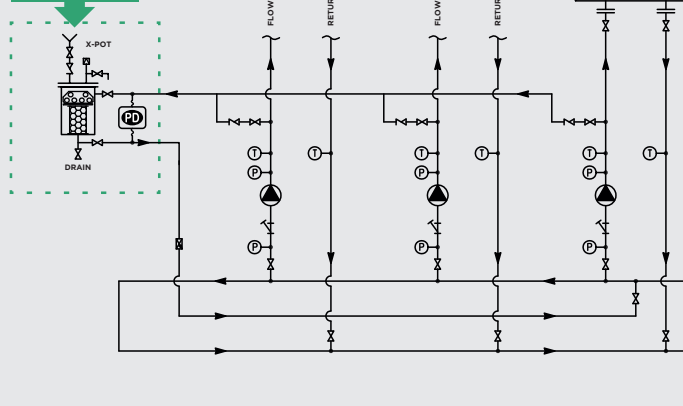
Working Pressure: 10 Bar
System Volume 90,000L = 1.04l/s
Chosen Vessel: X-POT XP
Connection Size: 1 ¼"

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

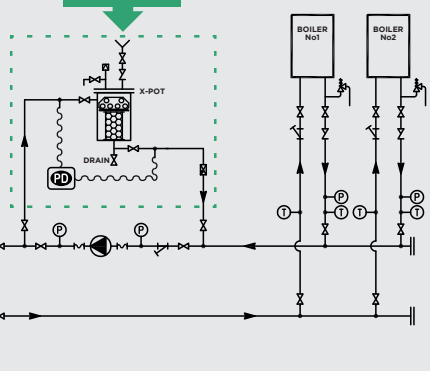


THE X-POT™ SHOULD BE FIT ON THE SECONDARY HEATING CIRCUIT TO ENSURE BULK WATER SYSTEM PROTECTION

ZONE/MULTIPLE PUMP X-POT INSTALLATION



SINGLE PUMP X-POT INSTALLATION





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

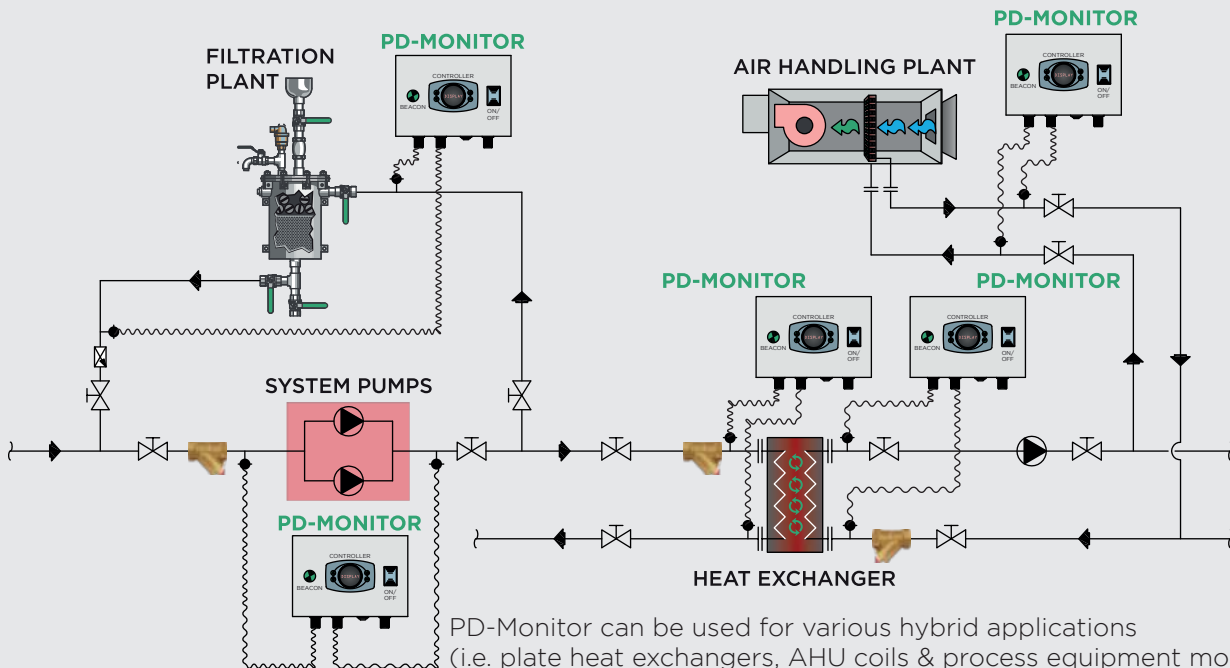


A packaged, wall mounted & IP54 factory tested differential pressure monitoring unit, incorporating controller, two pressure transducers, 240V ac mains cable & BMS capability.



- 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 PICV for simple and accurate commissioning, insulation jacket for the PICV to reduce thermal loss, and the VEXO® 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:
V-XCOMP(CP)PACK

X-POT 6™

DN32
Product Code:
V-XPOT6(CP)PACK

X-POT XP LF™

DN50
Product Code:
V-XPXP-LF(CP)PACK



X-POT XP HF™

DN50 Flanged
Product Code:
V-XPXP-HF(CP)PACK

Each Compliance Pack contains the following:

- **1 Off Pre-Settable PICV**
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 VEXO® 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

VEXO' 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.

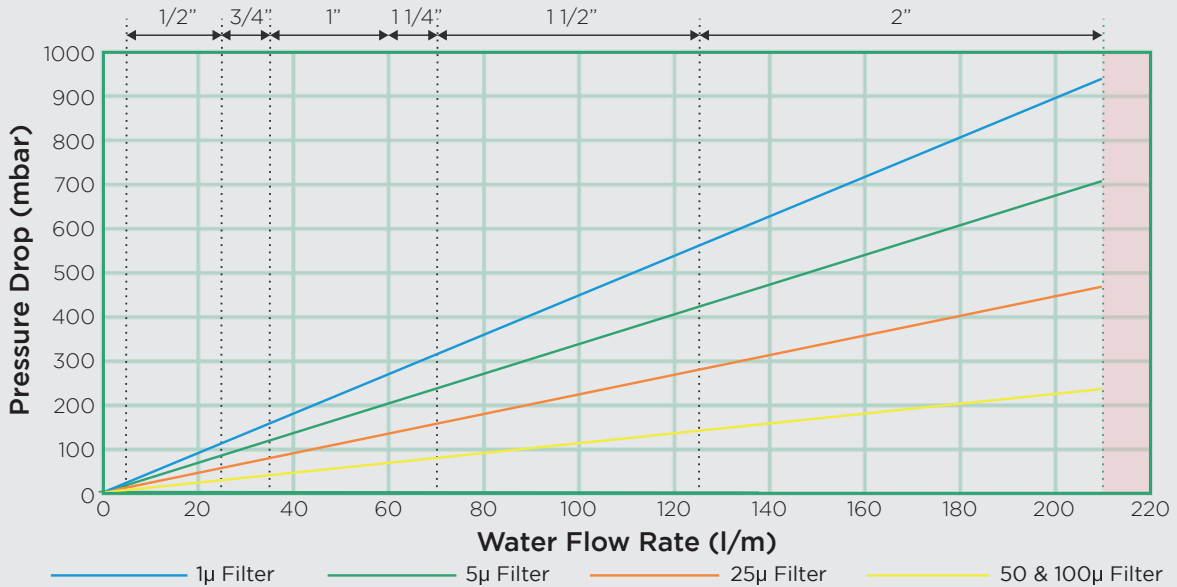
The system contained a dosing pot (closed off), D&A Separator and no trace of water treatment chemicals. The system contained corrosion debris.

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



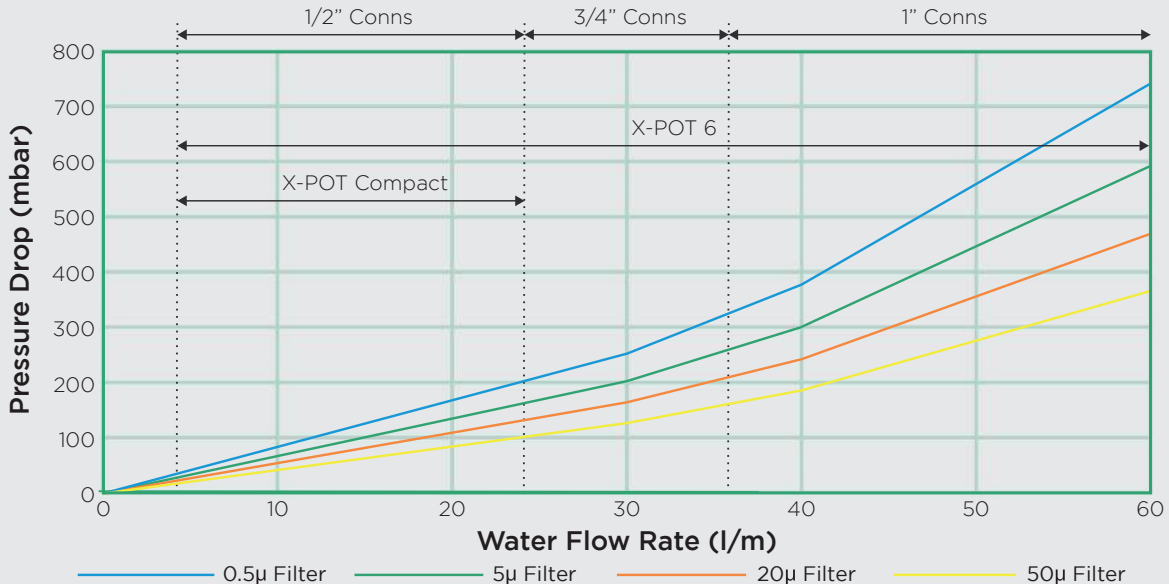
X-POT™ Fine Filtration Filter Performance

Flow DP of X-POT XP Bag Filters Including Magnet Grate
CONNECTION SIZES



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
CONNECTION SIZES



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

<p>X-POT MAIN UNITS</p> <p>Compact V-XPOTCOMPACT 6 V-XPOTXPOT6 XP V-XPOTXP 6+ V-XPOTXPOT6+ XP+ V-X-POTXP-PLUS3.5 XXP V-XPOTXXP HFHP 10Bar V-XPOTHFHP10 HFHP 30Bar V-XPOTHFHP30</p> <p><small>*XP+ & 6+ Units include automatic air vent, filter & insulation jacket.</small></p> <p>PD-MONITOR</p> <p>0-10Bar VX-PDMONITOR 0-30Bar VX-PDMONITOR 030 0-30Bar + Modbus VX-PDMONITOR 030MB</p>	<p>CARTRIDGE FILTERS X-POT COMPACT, 6, 6+</p> <p>(Box of 4)</p> <p>50µ VX-CFILTERS(4)50MIC 20µ VX-CFILTERS(4)20MIC 5µ VX-CFILTERS(4)5MIC 0.5µ VX-CFILTERS(4)0.5MIC</p> <p>(Box of 20)</p> <p>50µ VX-CFILTERS(20)50MIC 20µ VX-CFILTERS(20)20MIC 5µ VX-CFILTERS(20)5MIC 0.5µ VX-CFILTERS(20)0.5MIC</p>	<p>BAG FILTERS X-POT XP, XXP, XP+, HFHP</p> <p>(Box of 5)</p> <p>100µ V-XBFILTERS(5)100MIC 50µ V-XBFILTERS(5)50MIC 25µ V-XBFILTERS(5)25MIC 5µ V-XBFILTERS(5)5MIC 1µ V-XBFILTERS(5)1MIC</p> <p>(Box of 40)</p> <p>100µ V-XBFILTERS(40)100MIC 50µ V-XBFILTERS(40)50MIC 25µ V-XBFILTERS(40)25MIC 5µ V-XBFILTERS(40)5MIC 1µ V-XBFILTERS(40)1MIC</p>
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CONTRACTOR PACKS

Pack Model	Filters	Automatic Air Vent	Insulation Jacket	Instructions	Product Code
X-POT Compact	x20 micron cartridge filters	x1	x1 (2 Parts)	x1	V-XCOMP(CONT)Pack
X-POT 6	x20 micron cartridge filters	x1	x1 (2 Parts)	x1	V-XPOT6(CONT)Pack
X-POT XP	1x 100, 50, 25, 5 & 1 micron	x1	x1 (3 Parts)	x1 + x1 High pressure assembly kit	V-XXP(CONT)Pack

STARTER PACKS

Pack Model	Filters	Automatic Air Vent	Insulation Jacket	X-PO10 Inhibitor	X-PO10 Test Kit	Instructions	Product Code
X-POT Compact	x20 micron cartridge filters	x1	x1 (2 Parts)	x5 Litres	x1 Kit with x10 tests	x1	V-XCOMP (Std)Pack
X-POT 6	x20 micron cartridge filters	x1	x1 (2 Parts)	x5 Litres	x1 Kit with x10 tests	x1	V-XPOT6 (Std)Pack
X-POT XP	1x 100, 50, 25, 5 & 1 micron	x1	x1 (3 Parts)	x5 Litres	x1 Kit with x10 tests	x1 + x1 High pressure assembly kit	V-XXP (Std)Pack



100% Positive Client Feedback

“There was a constant stream of complaints from residents about heating issues, The X-POT has been life changing. We have been able to get the best value in terms of temperatures and efficiency.”

Christopher Collins, Abbeyfield Care Home



“Due to the multiple benefits within one unit, Bmech have now made it compulsory to install an X-POT to all future commercial boiler installs and replacements.”

Bmech Energy Efficient Engineering



“A number of X-POT units are currently in operation in sites in London. Further projects where we will be looking to specify the VEXO equipment in a 42 storey hotel & private residences development. Our team would have no hesitation in recommending the VEXO X-POT range & have since advised out colleagues in our sister teams of the benefits that VEXO equipment have to offer in what has historically been a difficult & un-engineered aspect of hydraulic design in building services systems.”

Ashley Nicholson Associate Director, WSP Consulting Engineers



“Since adding XPO10 to our central heating system, the conversion efficiency from gas to heat output has increased from 83 to 90% & our 50 year old radiators no longer need bleeding. In addition the life of our aluminium heat exchanger has increased from 2 years to more than 8 years because corrosion has been effectively stopped.”

Dr Rayner Mayer, Reading University



“Various costly MRI failures & warranty voids caused by blocked plate heat exchangers has cleared up immediately upon installing an X-POT.”

Maine General Hospital, USA





Solutions for a better tomorrow

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