

BoilerMag®

Ultimate Heating System Protection

Full Flow Magnetic Filters & System Treatment Chemicals



**3 STEP
SOLUTION**



www.boilermag.com/na



A world leader in magnetic technology

HEATING & COOLING SYSTEM PROTECTION

Maintaining system efficiency and reliability in any property is a major challenge for home owners, businesses, contractors, facilities managers, and public organizations.



All heating systems are at risk from magnetite (sludge) which forms when air and water reacts with ferrous components. Left unchecked, this can seriously reduce energy efficiency and cause premature failure of components, resulting in high maintenance costs.



BoilerMag High Performance Filters

BoilerMag high performance filters have been carefully engineered to provide lasting protection for larger heating and cooling systems. Powerful magnetic circuits combined with optimized fluid flow dynamics ensure that virtually every particle of magnetite (sludge) is removed on the first pass through the filter, thereby improving efficiency and protecting system components.



Ideal for systems in:

- Residential properties
- Educational buildings
- Healthcare buildings
- Municipal buildings
- Apartment blocks
- Office buildings
- Retail premises
- Factories
- Hotels



A CHOICE OF FILTERS

The range includes the BoilerMag filter which is ideal for residential installations with 1" NPT (1¼" NPT adaptors included) or Press connections, the BoilerMagXL filter which is ideal for medium sized properties with 1½" connections, while the BoilerMagXT range is ideal for heavy duty commercial heating and cooling systems with 1½" up to 12" connections. The range also includes system treatment chemicals and electrolytic scale reducers.

Added Protection against Corrosion

In addition to providing protection against magnetite (sludge), BoilerMag, BoilerMagXL, and BoilerMagXT units are supplied with Automatic Air Vents.

Air is a catalyst and enables corrosion to develop in heating and cooling systems. It can be trapped in the system when commissioned or released naturally when cold water is heated. This can result in excessive noise, reduction in flow rates, reduced heat exchange, and corrosion.



BoilerMag's Automatic Air Vent continually releases air without any manual intervention, significantly reducing the risk of the problems outlined above.

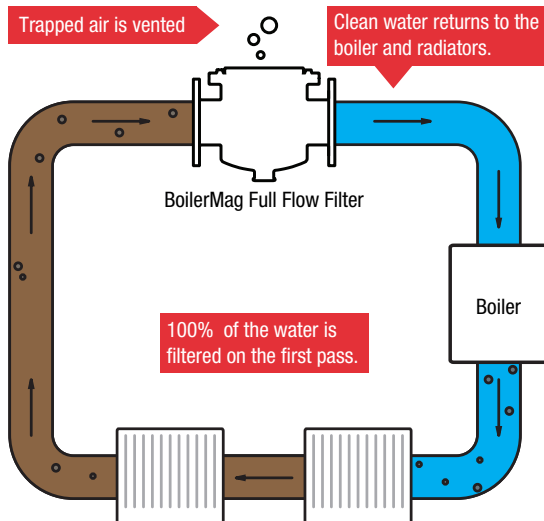


Full Flow Design – filters 100% of water on first pass

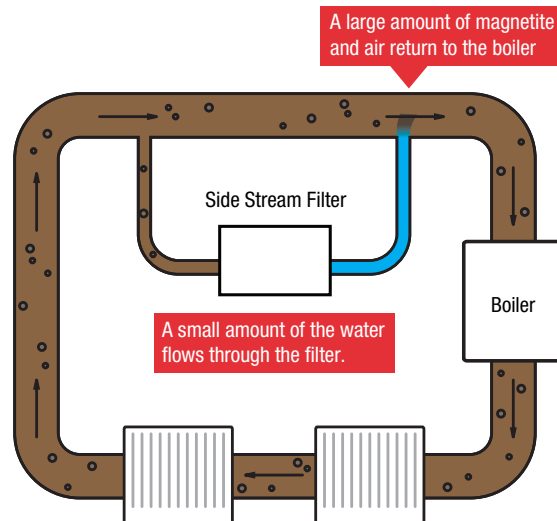
A full flow filter is fitted in-line within the main circulation, hence 100% of system water passes through on each pass. It is vital that magnetite is extracted immediately from the circulation before it reaches the boiler. The alternative side stream filter method allows magnetite (sludge) to circulate several times and may never be captured.



FULL FLOW FILTRATION
A clean, energy efficient system



SIDE STREAM FILTRATION
A contaminated, inefficient system with a boiler prone to failure





INSTALLS IN MINUTES PROTECTS FOR YEARS

Combining high performance with ease of installation and servicing, BoilerMag uses tried and tested patented magnetic technology to remove virtually 100% of magnetite (sludge) and scale on the first pass through the filter.

Featuring “Dual Flow” technology it is the perfect choice for residential, hydronic, and domestic water applications.

- Any direction install (pipework or filter)
- Available in 1” NPT connections (1¼” adaptors included) or 1” Press connections
- High volume collection capacity
- High performance dirt removal
- Easy “in-line” installation
- No block feature
- 3 year warranty
- Lead-Free, built to NSF-61 Standards

It's all in the box

All you need to install and service BoilerMag is contained in a simple retail friendly off-the-shelf package.

- BoilerMag filter unit
- 2 high quality valves with either 1” NPT connections (1¼” NPT adaptors) OR 1” Press connections
- Automatic Air Vent
- Spare o-rings
- Bowl wrench/cleaning tool
- Product guide
- Drain plug wrench
- Boiler sticker



AVAILABLE
IN 1” PRESS
CONNECTIONS

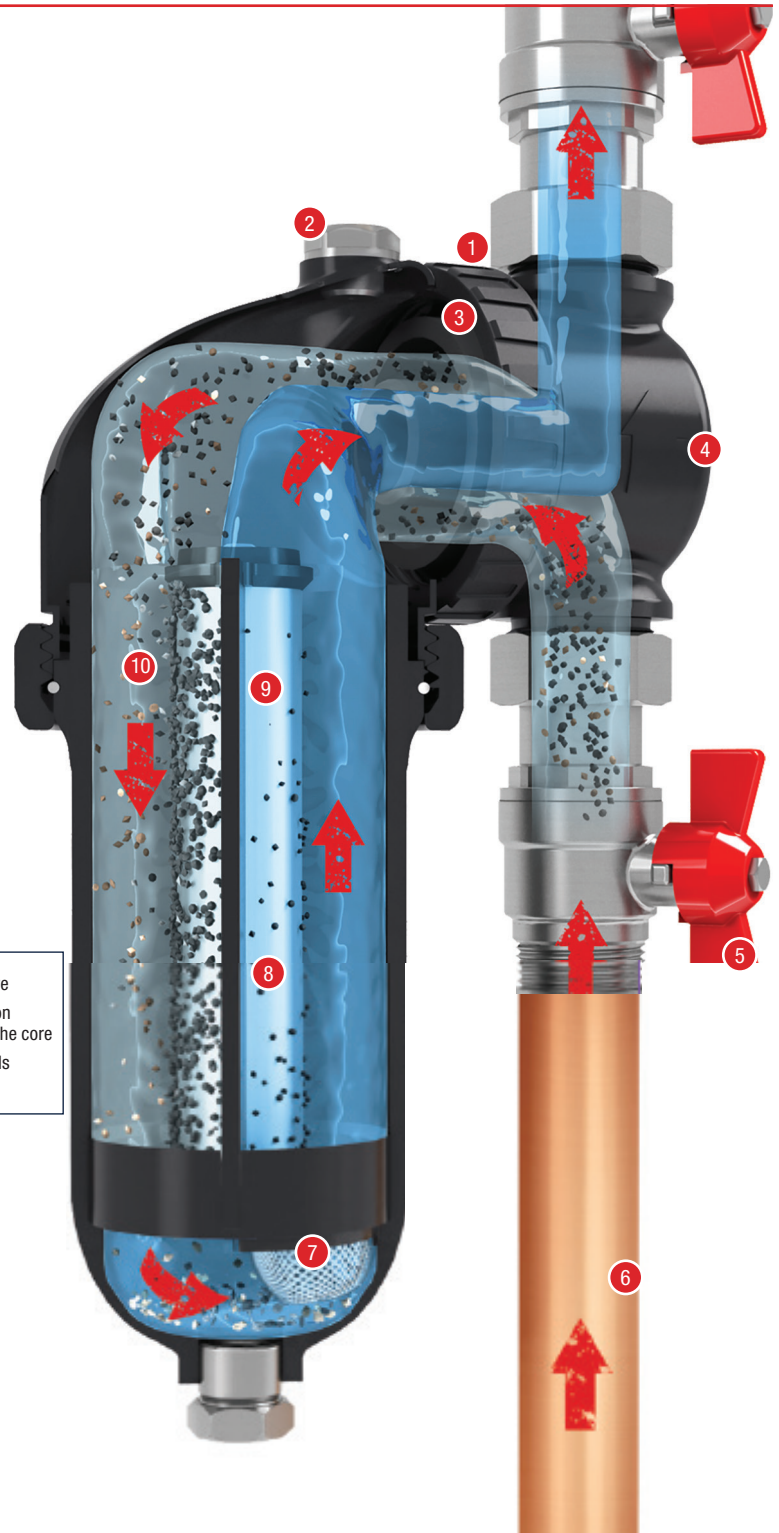
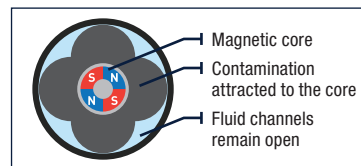
BEST VALUE OPTION

Why go through the trouble of purchasing separate boiler filter components when BoilerMag, The Ultimate Filtration Solution, offers all necessary components in one package?

GETTING TO KNOW YOUR BOILERMAG

BoilerMag is designed for performance and practicality. The illustration below highlights the key features for installers, service contractors, and property owners.

- 1 Simple flush access point - flush attachment available separately
- 2 Air vent/chemical dosing point
- 3 360° Adjustment - allows installation at any angle either pipework or filter
- 4 Requires minimal access space - unit does not have to be fully removed from pipework
- 5 High quality isolation valves included
- 6 Easy "In-Line" installation
- 7 No block mesh guard – removes scale and other non-magnetic debris
- 8 Patented magnetic circuit – ensures system cannot block
- 9 Patented magnetic core – large magnetic surface area
- 10 Dual flow technology – maximizes dirt collection performance by ensuring that magnetite is exposed to the magnetic zone for longer



BOILERMAG

TECHNICAL INFORMATION

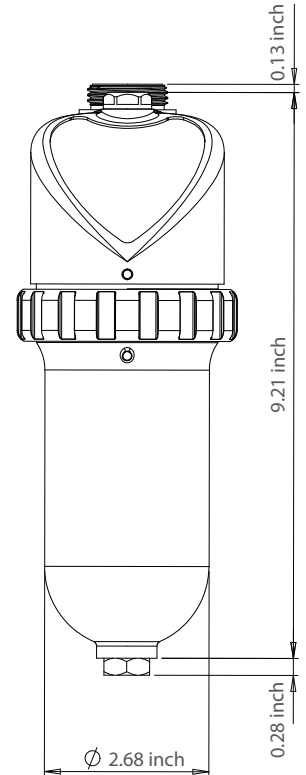
BoilerMag is a high performance air, dirt, and magnetite separator.

Performance

Magnetic performance	4,000 Gauss Patented Micromag style core
Volume	0.13 gal (500 ml)
Pressure	43 psi (3 Bar) operating pressure
Flow rate	14 gpm (3 m ³ /h)
Collection Capacity	0.9 lbs (400 g)
Temperature	212°F (100°C)

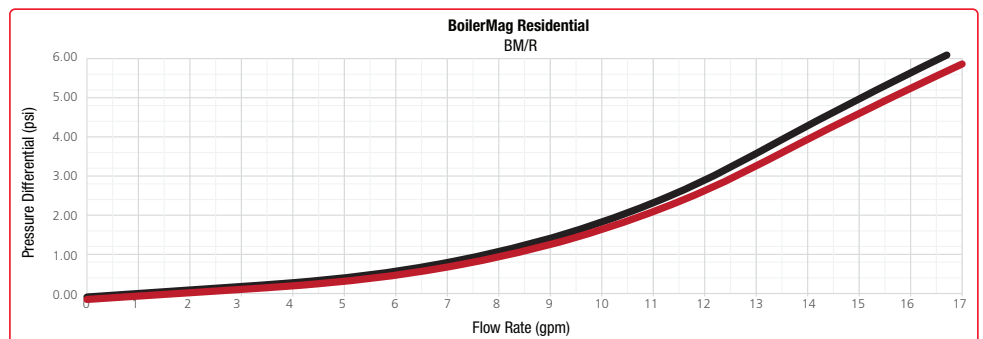
Construction

Construction material	Polyamide 66 (Nylon 66) product filled with 25% glass fiber
Magnet material	Rare Earth Neodymium Iron Boron
Mesh filter	0.5mm, quick release mesh (for cleaning)
Valves	1" NPT (1¼" NPT adaptors included in kit) or 1" Press connections
Includes	Automatic Air Vent that has been packaged along with unit separately. The auto-vent will automatically release trapped air maintaining heating efficiency.
Warranty	Industry leading 3 years



Pressure drop data

BOILERMAG RESIDENTIAL		
Flow	Empty Filter Pressure Differential	Fully Saturated Filter Pressure Differential
gpm	psi	psi
0	0.00	0.00
2	0.10	0.10
4	0.40	0.50
7	0.90	1.00
9	1.60	1.80
11	2.40	2.80
13	3.50	4.10
15	4.80	5.50



— Empty Filter
— Fully Saturated Filter



COST EFFECTIVE PROTECTION FOR MEDIUM SIZED PROPERTIES

BoilerMagXL is a high performance filter for light commercial, retail or large residential properties. It is extremely cost effective for mid-range projects where a typical residential filter is too small and an XT/commercial filter too big or expensive.

Triple Protection

BoilerMagXL provides protection against 3 key areas that are commonly associated with heating and cooling systems, magnetite (sludge), scale, and air.

- Integral mesh guard intercepts limescale and other non-magnetic debris
- High performance magnetic core which removes magnetite (sludge)
- Automatic Air Vent reduces the risk of air generated corrosion

Robust construction delivering excellent performance

- 10 year warranty
- No block feature
- Easy to service and clean
- Large collection capacity
- No consumable or replacement parts
- Dual flow action – excellent dirt removal rates
- Compact design – in comparison to large industrial filters
- Easy installation – fits standard 1½" NPT connections

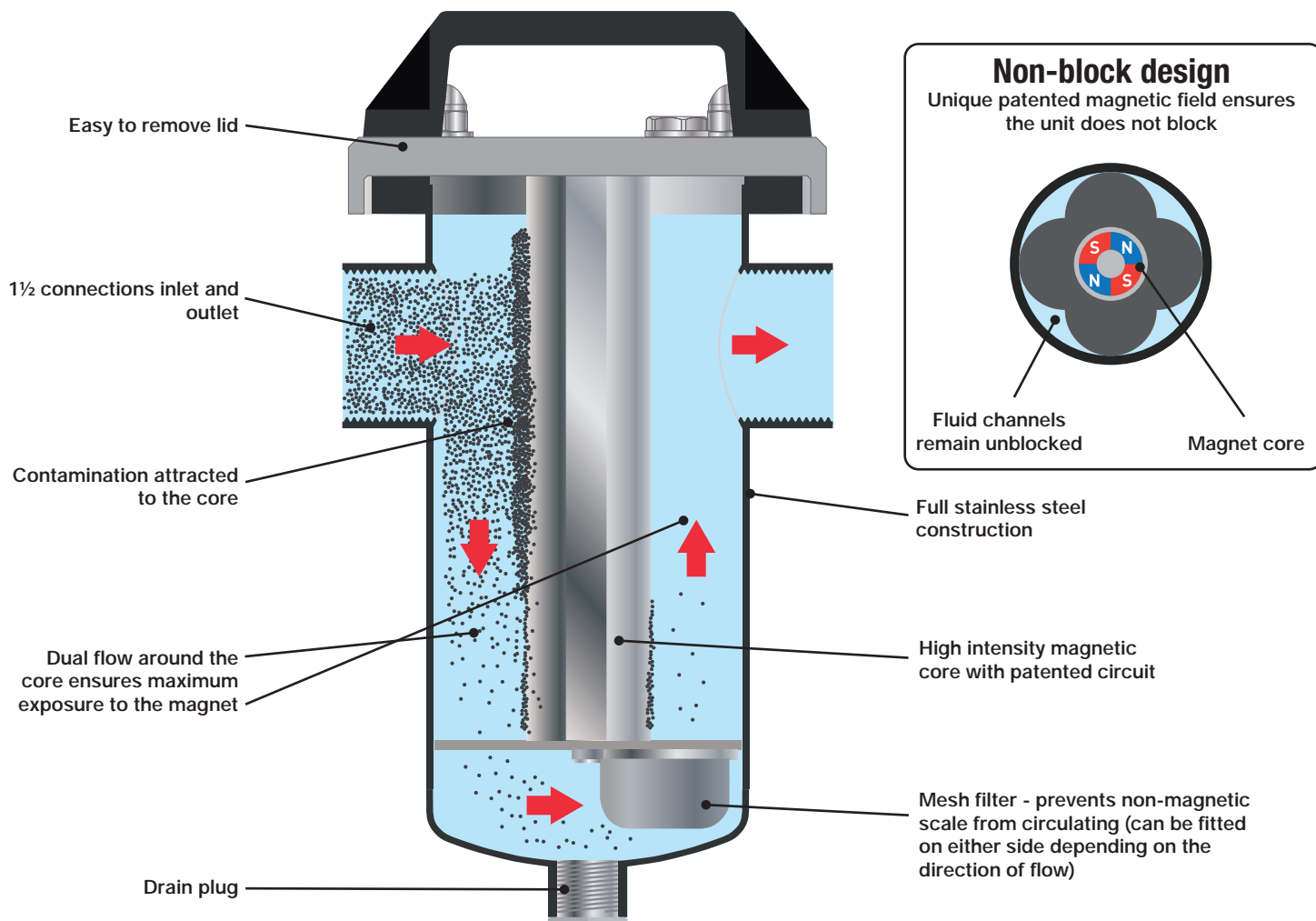
Full
Stainless Steel
construction
**BUILT TO
LAST!**



BoilerMag's Automatic Air Vent continually releases air without any manual intervention for ongoing corrosion protection.

GETTING TO KNOW YOUR BOILERMAG XL

We have utilized our patented magnetic technology and knowledge of fluid flow characteristics to produce an installer friendly filter which delivers outstanding performance.

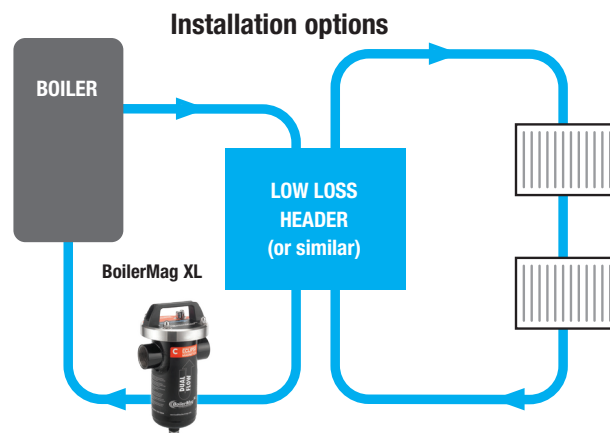


Where to install

BoilerMagXL is ideal for medium sized premises such as retail premises, business units, apartment blocks, and restaurants.

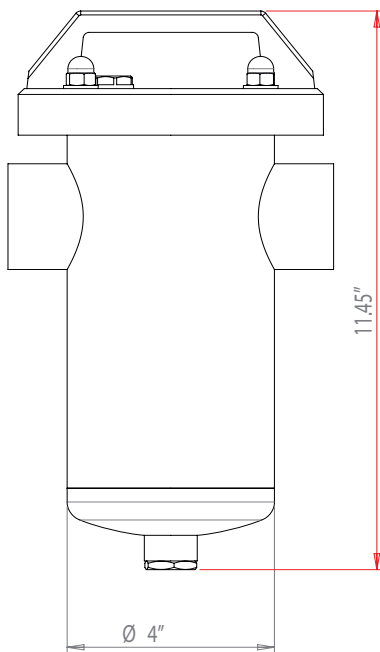
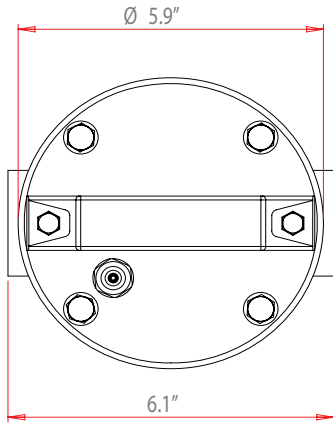
Easy cleaning

Cleaning is simple: isolate the unit, release the nuts on the lid, remove the contaminated core and scrape off the contamination using the tool provided. The mesh filter can also be removed and rinsed off. For full fitting instructions, refer to the installation manual or visit www.boilermag.com/na.



BOILERMAG XL

TECHNICAL INFORMATION



Performance

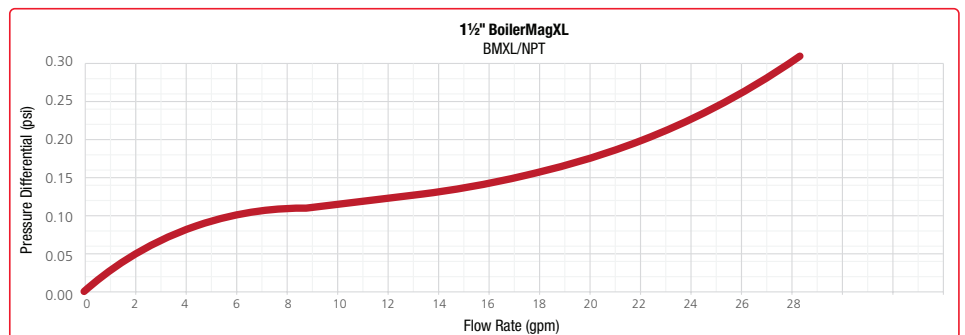
Magnetic performance	4,000 Gauss
	Patented Micromag style core
Volume	0.37 gal (1.4 litres)
Pressure	174 psi (12 Bar) operating pressure (145 psi (10 Bar) if using Automatic Air Vent)
Flow rate	28 gpm (6 m ³ /h)
Collection Capacity	2.2 lbs (1 kg)
Temperature	41-302°F (5°C to 150°C) (212°F (100°C) if using Automatic Air Vent)

Construction

Magnet material	Rare Earth Neodymium Iron Boron
Magnet grade	N42SH high intensity
Mesh filter	1mm, quick release mesh (for cleaning)
Housing	304 stainless steel
Cartridge	304 stainless steel
Fasteners	Lid 4x M8 domed nuts Drain plug ½" NPT
Surface Finish	Powder coated
Ports	1½" NPT
Sealing	EPDM
Warranty	Industry leading 10 years
Options	1½" BSP
Includes	Automatic Air Vent

Pressure drop data

BMXL	
Flow (gpm)	Pressure Differential (psi)
0	0.00
4.4	0.08
8.8	0.11
13.2	0.13
17.6	0.16
22.0	0.20
26.4	0.26
28.0	0.29





COST EFFECTIVE PROTECTION FOR LARGER SIZED PROJECTS

BoilerMagXT is a range of high specification full flow filters for large commercial sized heating and cooling systems. BoilerMagXT features a robust fabricated stainless steel construction which is ideal for the most demanding of applications.

With model sizes compatible for 1½" up to 12" port sizes and ANSI flanges, BoilerMagXT easily handles the efficiency and reliability demands of commercial and industrial heating and cooling systems.

It provides long lasting protection for system components such as heat exchangers, pumps, radiators, and fan coil units.

- Easy installation – fits standard ANSI flanges
- Simple to service and clean – no need to disconnect
- Operating temperature up to 302°F*
- Operating pressure up to 174psi**
- Full flow – filters 100% of fluid
- Minimal pressure reductions
- Huge dirt collection capacity
- No on-going running costs
- 10 year warranty

Full
Stainless Steel
construction
**BUILT TO
LAST!**



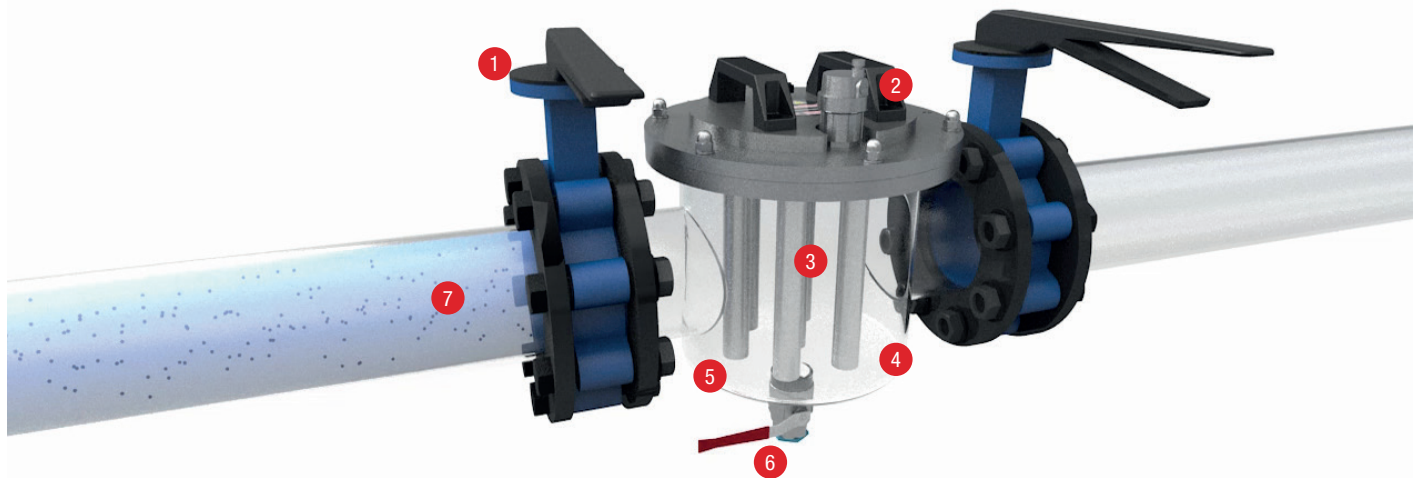
*If using the Automatic Air Vent option, the maximum temperature is 212°F

**If using the Automatic Air Vent option, the working pressure is 145psi

GETTING TO KNOW YOUR BOILERMAG XT

Eclipse Magnetics design and build magnetic systems for large scale applications in the most demanding industries such as automotive and aviation. We are perfectly placed to manufacture filters which can handle the efficiency and reliability demands of large commercial heating systems.

- 1 Easy installation – fits standard ANSI flanges
- 2 Automatic Air Vent
- 3 Multiple high power Neodymium magnetic cores
- 4 Robust fabricated stainless steel body
- 5 Excellent flow dynamics (maximum collection, minimum pressure drop)
- 6 Easy access drain plug
- 7 Port sizes available up to 12"



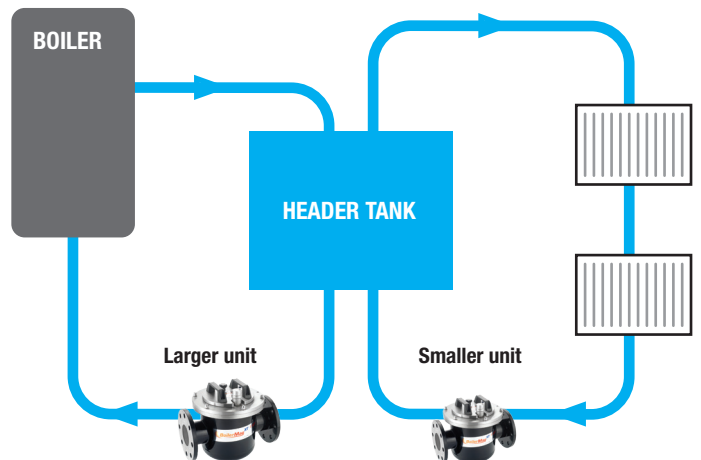
Where to install

BoilerMagXT is generally installed on the return circuit as close to the boiler as possible. On larger systems smaller units may be installed elsewhere giving extra protection for radiators and pipework.

Easy cleaning

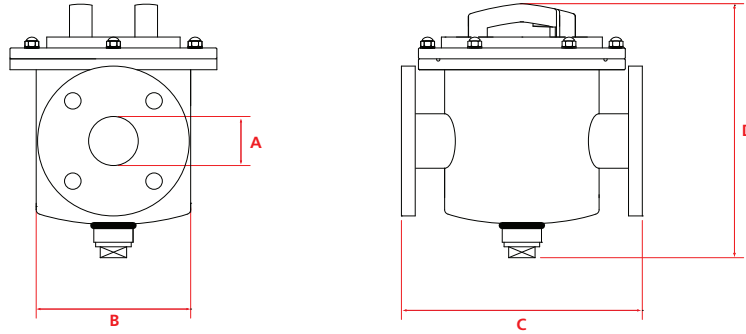
Cleaning is simple: isolate the inlet and outlet valves and release the nuts on the lid. Remove the contaminated cartridge from the housing and remove the magnetic cores from the tube assembly. The attracted contamination can then be removed, quickly and easily. For full fitting instructions, refer to the installation manual or visit www.boilermag.com/na.

Installation options



BOILERMAG XT

TECHNICAL INFORMATION



Item Code	Part No.	Inlet / Outlet Dia. A	Filter Dia. B	Flange spacing C	Height D	No. magnetic rods	Flow rate at 3ft/sec gallons/min. (m ³ /hour)	Flow rate at 5ft/sec gallons/min. (m ³ /hour)	Flow rate at 8ft/sec gallons/min. (m ³ /hour)	Weight lbs/kgs
BMXT/1.5	BMXT100/ANSI	1½" / 38mm	4" / 100mm	10" / 250mm	11" / 280mm	3	17 (4)	28 (6)	44 (10)	20 / 9
BMXT/2	BMXT150/ANSI	2" / 50mm	6¾" / 170mm	11" / 280mm	11" / 280mm	5	20 (5)	48 (11)	78 (18)	42 / 19
BMXT/2.5	BMXT150/2.5/ANSI	2½" / 63mm	6¾" / 170mm	12¾" / 315mm	11" / 280mm	5	46 (10)	77 (17)	122 (28)	44 / 20
BMXT/3	BMXT200/3/ANSI	3" / 75mm	8¾" / 220mm	14¾" / 360mm	13¼" / 335mm	7	65 (15)	110 (25)	175 (40)	82 / 37
BMXT/4	BMXT200/ANSI	4" / 100mm	8¾" / 220mm	14¾" / 380mm	13¼" / 335mm	7	120 (27)	200 (45)	315 (72)	82 / 37
BMXT/6	BMXT300HF/ANSI	6" / 150mm	12¾" / 325mm	19¼" / 490mm	16½" / 420mm	9	260 (59)	440 (100)	700 (159)	133 / 60
BMXT/8	BMXT300HF/8/ANSI	8" / 200mm	12¾" / 325mm	20¾" / 525mm	18¾" / 460mm	9	475 (108)	775 (176)	1250 (284)	140 / 64
BMXT/10*	BMXT400/10/ANSI*	10" / 250mm	16" / 406mm	30" / 760mm	29¾" / 754mm	16	750 (170)	1225 (278)	1950 (443)	190 / 86
BMXT/12*	BMXT400/12/ANSI*	12" / 300mm	16" / 406mm	30" / 760mm	29¾" / 754mm	16	1100 (250)	1780 (404)	2800 (636)	195 / 88

* Made to order sizes

Performance

Magnetic performance 9,000 Gauss high strength
 Performance reading On tube surface
 Magnetic material Rare Earth Neodymium Iron Boron N42SH
 Temperature 41° to 302°F / 5° to 150°C (212°F / 110°C if using Automatic Air Vent)
 Operating pressure +/- 174psi / 12 bar (145psi / 10 bar if using Automatic Air Vent)
 Drain valve ¾" NPT on BMXT/1.5 (BMXT100/ANSI), all others 1¼"NPT

Materials

Housing 304 grade stainless steel
 Tube cartridge 316 grade stainless steel – aerospace quality
 Other parts 304 grade stainless steel
 Surface finish Internal - bead blast
 External - powder coated, black
 Sealing EPDM

Includes

Optional Automatic Air Vent

Options

High temperature Samarium Cobalt magnetic material +482°F / 250°C

Warranty

Industry leading 10 years



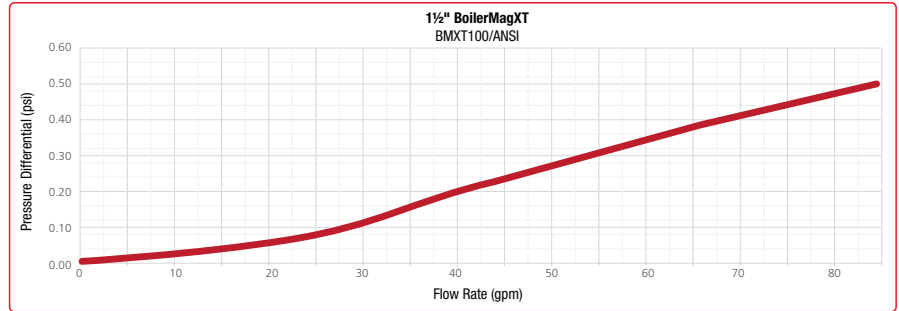
Try our system
treatment chemicals

BOILERMAG XT

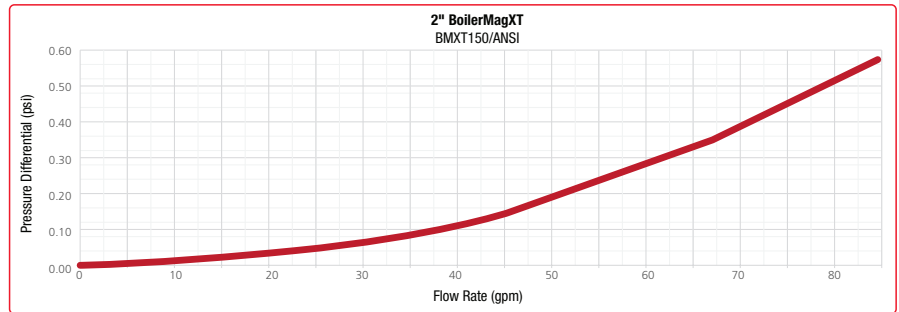
PRESSURE DROP DATA

BoilerMagXT is a full flow filter which has been designed to maximize contamination collection, but without significantly reducing the system pressure. The graphs below show the pressure drop levels at different flow rates.

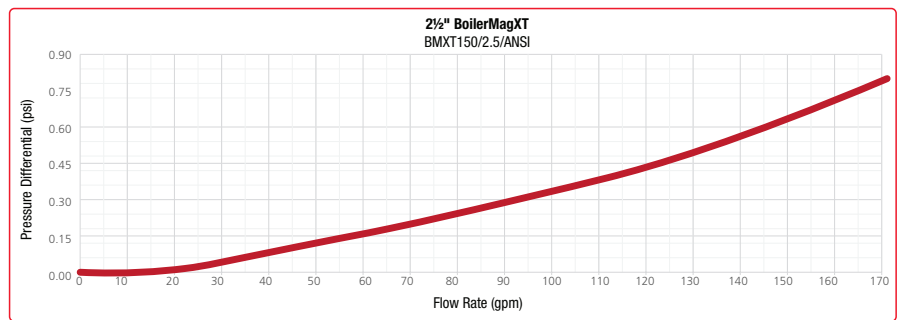
1½" BMXT		
Flow (gpm)	Pressure Differential (psi)	ft of head
0	0.00	0.00
22	0.05	0.12
44	0.24	0.55
66	0.39	0.90



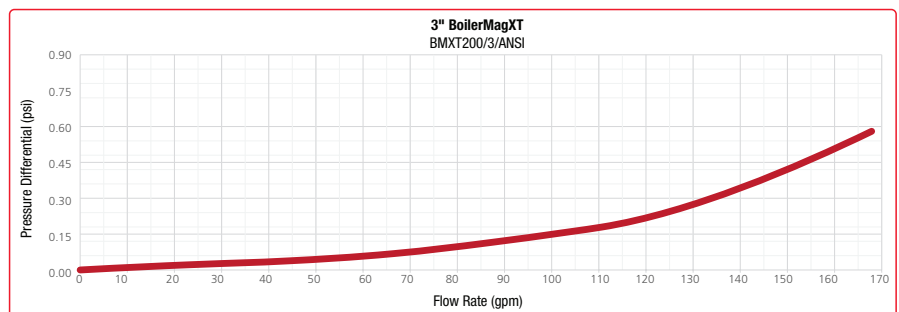
2" BMXT		
Flow (gpm)	Pressure Differential (psi)	ft of head
0	0.00	0.00
22	0.04	0.09
44	0.16	0.37
66	0.36	0.83
88	0.63	1.50



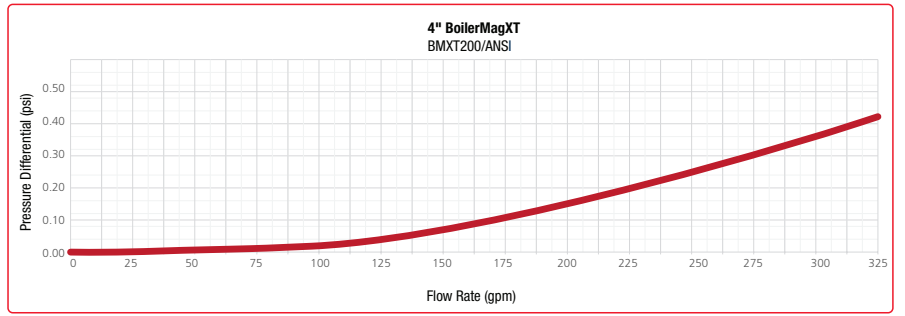
2½" BMXT		
Flow (gpm)	Pressure Differential (psi)	ft of head
0	0.00	0.00
22	0.03	0.07
44	0.12	0.28
66	0.16	0.37
88	0.29	0.67
110	0.40	0.92
198	0.85	1.96



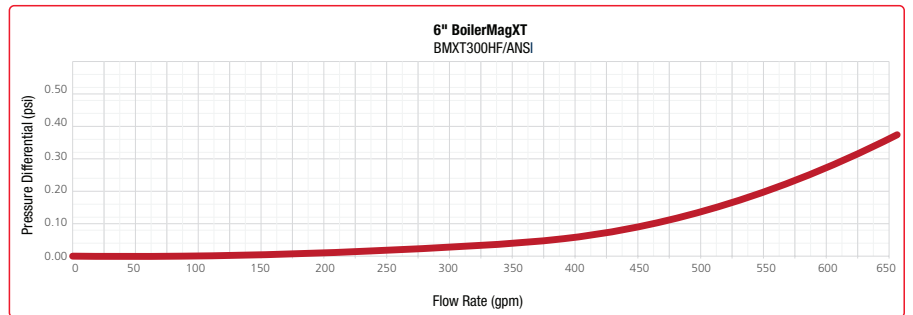
3" BMXT		
Flow (gpm)	Pressure Differential (psi)	ft of head
0	0.00	0.00
22	0.01	0.02
44	0.03	0.05
66	0.06	0.14
88	0.11	0.25
110	0.17	0.39
198	0.69	1.59



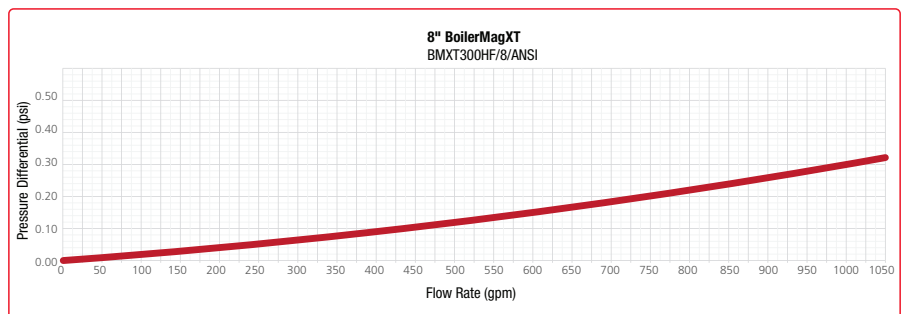
4" BMXT		
Flow (gpm)	Pressure Differential (psi)	ft of head
0	0.00	0.00
22	0.00	0.00
44	0.01	0.02
66	0.02	0.05
88	0.03	0.05
110	0.05	0.12
198	0.15	0.35
220	0.21	0.48
242	0.26	0.60
308	0.42	0.97



6" BMXT		
Flow (gpm)	Pressure Differential (psi)	ft of head
0	0.00	0.00
22	0.00	0.00
44	0.00	0.00
66	0.00	0.00
88	0.00	0.00
110	0.01	0.02
198	0.02	0.05
220	0.02	0.05
242	0.03	0.05
308	0.05	0.12
374	0.07	0.16
616	0.30	0.69
678	0.47	1.08



8" BMXT		
Flow (gpm)	Pressure Differential (psi)	ft of head
0	0.00	0.00
22	0.00	0.00
44	0.00	0.00
66	0.00	0.00
88	0.00	0.00
110	0.00	0.00
198	0.01	0.02
220	0.02	0.05
242	0.02	0.05
308	0.03	0.05
374	0.04	0.09
616	0.12	0.28
678	0.16	0.37
814	0.21	0.48
968	0.31	0.72
1170	0.43	0.99





PREMIUM PROTECTION AGAINST CORROSION AND SCALE

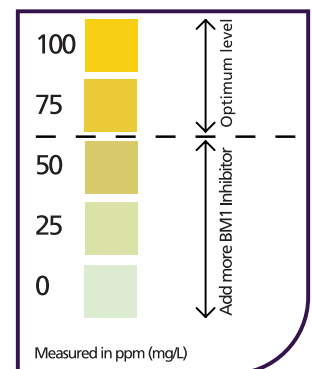
BM1 is a high performance formula used in many properties. It maintains heating efficiency by preventing scale formation and metal corrosion, without any detrimental effects on plastic or rubber plumbing components such as seals.

- Build Cert approved
- Environmentally friendly formula
- 1 Pint bottle (500ml) treats 25 gallons
- Prevents radiator cold spots and boiler damage
- Outstanding, long lasting scale and corrosion reduction results
- Borate free formula (Borate is a known Carcinogen)
- Nitrate & EDTA free formula (Nitrate & EDTA are environmental contaminants)
- Phosphate free formula (Phosphate can block wet bearings of circulator pumps)
- Compatible with all leading boiler types (Including Aluminum heat exchangers)



Fast and Accurate Level Indicator Test for BM1 Inhibitor

BM1 dip strips are a simple cost effective check for levels of BM1 Inhibitor in the system. By simply dip testing a BM1 test strip in a sample of system water, the technician can check if the Inhibitor concentration is optimized at both pre and post dosage stages. During testing the strip displays a colour coded reaction. Simply match the colour to the chart. This will indicate if more BM1 should be applied.



Use in conjunction with a BoilerMag Full Flow Magnetic Filter and BM3 Cleaner
To find out more, visit www.boilermag.com/na or phone 1800-260-2124



DISPERSES IRON OXIDE, LIMESCALE, FLUX AND OTHER SYSTEM DEBRIS

Our unique high performance BM3 formula is great news for service technicians. It delivers outstanding system cleaning results and, by using the BM3 test strips, allows the service technician to get an accurate reading of cleaner levels in the system.

By simply dip testing a BM3 test strip in system water, the technician can check:

- Pre-Flush** - cleaner dosage levels are sufficient for an effective flush
- Post-Flush** - if the flush has been successful or should be repeated

BM3 is a fast acting formula that has outstanding qualities:

- Excellent limescale dispersal rates
- Excellent iron oxide dispersal rates
- Compatible with all flushing equipment
- 1 Pint bottle (500ml) treats 25 gallons
- Phosphate free formula (Phosphate can damage pump bearings)

Use in conjunction with a BoilerMag Full Flow Magnetic Filter and BM1 Inhibitor to maximize efficiency
To find out more, visit www.boilermag.com/na or phone 1800-260-2124



ELECTROLYTIC SCALE REDUCER



- Minimizes limescale deposition

Available from:



BoilerMag North America

442 Millen Road Unit 9, Stoney Creek, ON L8E 6H2 | 1-800-260-2124 | 1-800-260-1410 | sales@eclipsetoolsinc.com | www.boilermag.com/na

