

Strebel SMH Boiler Guard Combined Low Loss Header, Air & Dirt Separator, and Magnetic Separator



3 in 1 benefits:

- Hydraulic Separator
- Air Separator
- Dirt Trap (with magnetic rods pre-fitted)

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Important Notes:

- Work on the heating system must be carried out by qualified personnel only.
- Be sure to install isolation valves, so that the Boiler Guard unit can be isolated for maintenance purposes. The dirt and magnetite cannot be removed from the trap unless isolation is in place.

Regulations and standards

Please note and adhere to:

- The legal accident prevention (health & safety) regulations
- The legal environmental protection regulations
- The professional trade association provisions
- The relevant safety provisions in the DIN, EN, DVGW, Including all new and regionally valid regulations and standards.

Working on the plant

- Disconnect the plant from the supply and check that it is safely isolated from the supply.
- Secure the plant against being switched back on again.

IMPORTANT: Risk of scalding: Water temperature > 60°C



READ THE INSTALLATION INSTRUCTIONS BEFORE USE



RISK OF CUTS



RISK OF CRUSHING OR BRUISING



RISK DUE TO INCREASED TEMPERATURE



RISK DUE TO ELECTRICAL VOLTAGE



RISK OF FALLING DURING INSTALLATION



Product Description

Combined air and gas separator with dirt and sludge traps, with low loss header to hydraulically separate circuits in boiler and heating installations.

The Air Separator

The water flowing from the boiler comes up against an impact plate. It is then conducted through a honeycomb system, as a result of which the air is reliably separated from the water and completely conducted away by an automatic air bleeder. Due to reduced pressures during the multiple manipulation of the water flowing through the system, the air molecules present in the water are separated out to the maximum possible. After passing the Boiler Guard, the water is starved of air and can absorb the air present in the main system. The water flowing back from the heating circuits can release the air bubbles it is carrying along and deposit them via the perforated base and air pipes into the upper chamber.

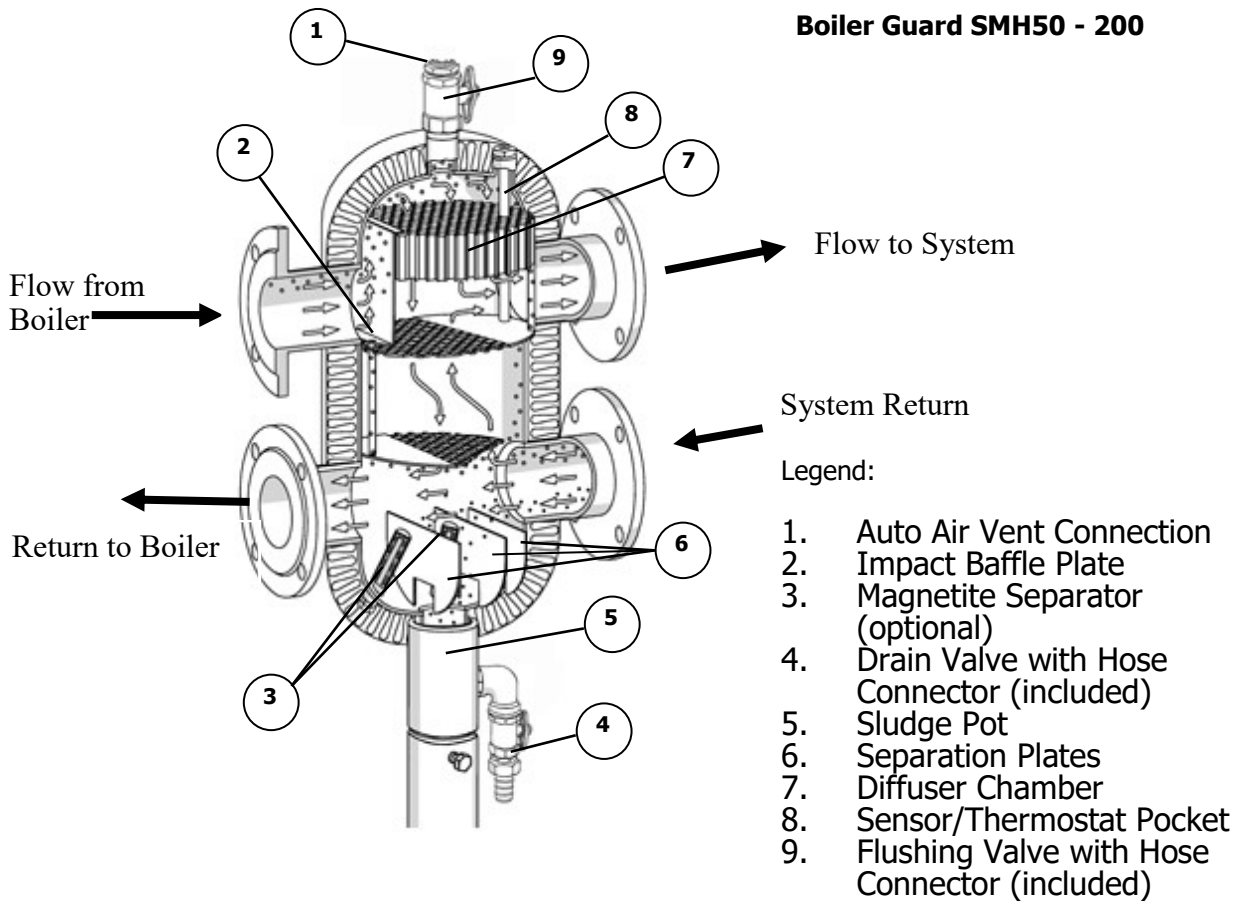
The Low Loss Header

The water flowing from the boiler enters the Boiler Guard. Depending on the flow rate, it can either flow via the integrated perforated plates to the heating circuits or to the boiler return. The resultant hydraulic separation makes the Strebel Boiler Guard a neutral zone for dynamic pressures. The perforated plates prevent turbulence and also allows for clean temperature layering despite having a much lower installation height than conventional branches.

The Dirt and Sludge Trap

The speed of the water coming in from the mains is slowed down by a impact plate and clarification box which becomes constantly larger and deeper. Impurities carried along with it are conducted downwards into the sludge pot and drained off via the large sludge valve. In addition to this, a magnetite separator are integrated which magnetically binds rust particles and continually draws them out of the system. With the closed system the magnets can be taken out. The magnetite sinks to the base and can be drained off.

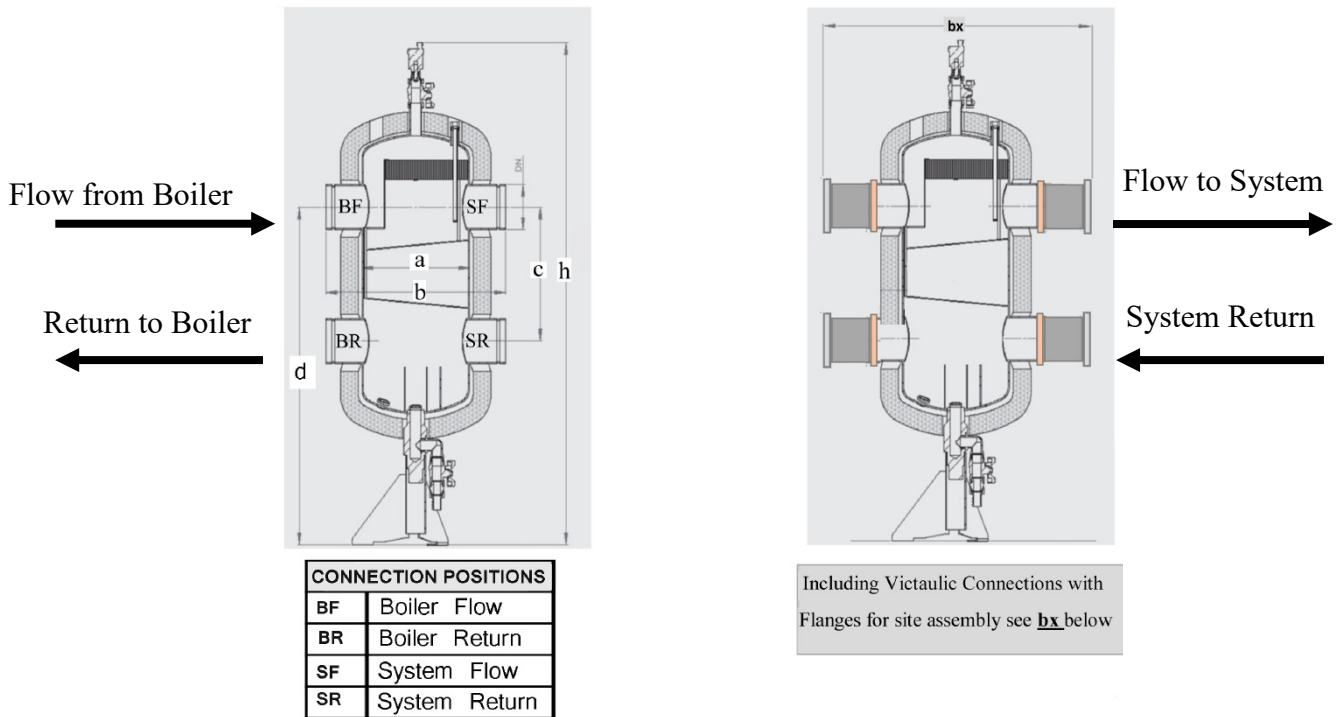
Internal Diagram.



Technical Data Table.

Model	Flow Rate (m ³ /hr)	Rating (kW)	Connection Size
SMH50	6	135	DN 50 / PN6
SMH80	12	280	DN 80 / PN6
SMH100	30	700	DN 100 / PN6
SMH150	50	1150	DN 150 / PN6
SMH200	100	2300	DN 200 / PN6

Technical Specification & Dimensions



MODEL	FLOW RATE m ³ /hr	RATING Kw	CONNECTION SIZE	a (in mm)	b (in mm)	bx (with Flanged connections) (in mm)	c (in mm)	d (min - max) (in mm)	h (min-max) (in mm)
SMH50	6	135	DN 50 / PN6	220	410	690	225	680 - 780	1040 - 1140
SMH80	12	280	DN 80 / PN6	220	410	700	225	680 - 780	1040 - 1140
SMH100	30	700	DN 100 / PN6	300	500	890	340	860 - 960	1280 - 1380
SMH150	50	1150	DN 150 / PN6	420	660	1060	450	1005 - 1105	1460 - 1560
SMH200	100	2300	DN 200 / PN6	420	660	1080	450	1005 - 1105	1460 - 1560

Connection Flange Dimensions

MODEL	TABLE	FLD Dia	PCD	No. of Bolts	Dia Bolts	Dia Holes	FLD THK
SMH50	PN6	140mm	110mm	4	M12	14mm	12mm
SMH80	PN6	190mm	150mm	4	M16	18mm	14mm
SMH100	PN6	210mm	170mm	4	M16	18mm	14mm
SMH150	PN6	265mm	225mm	8	M16	18mm	16mm
SMH200	PN6	320mm	280mm	8	M16	18mm	16mm

Technical Description

Boiler Guard (SMH 50 - 200)

Housing: Welded round container with connection sockets of threaded pipe (up to 2 1/2") or steel pipe with front welded flange as per DIN PN 6, cleaning opening with drain cock 1", four sleeves 3/4" for the insertion of magnetite separators in the base closed off with blind plugs. Automatic air bleeder, flushing ball valve, immersion sleeves for temperature sensor in the cover.

Height-adjustable foot, insulation covers (from connection DN 150 with sheet metal jacket insulation) in accordance with heating regulation.

- Maximum pressure = 6 bar
- Maximum temperature = 110 °C

Dimensions of the Internal Pocket for installation of a Flow Temperature Sensor:

Boiler Guard (SMH 50 - 200)

Max. diameter of the immersion sensor (SMH 50 - 200):	10mm
Max. length of the flow temperature (SMH 50 - 200):	170mm
Max. length of the flow temperature (SMH100 - 200):	230mm

Notes:

The max. sensor diameter given corresponds to the internal diameter of the immersed sleeve. The length of the flow sensor given, already takes into account the length of the threaded connector. Please use heat transfer compound if necessary, to improve the heat transfer.

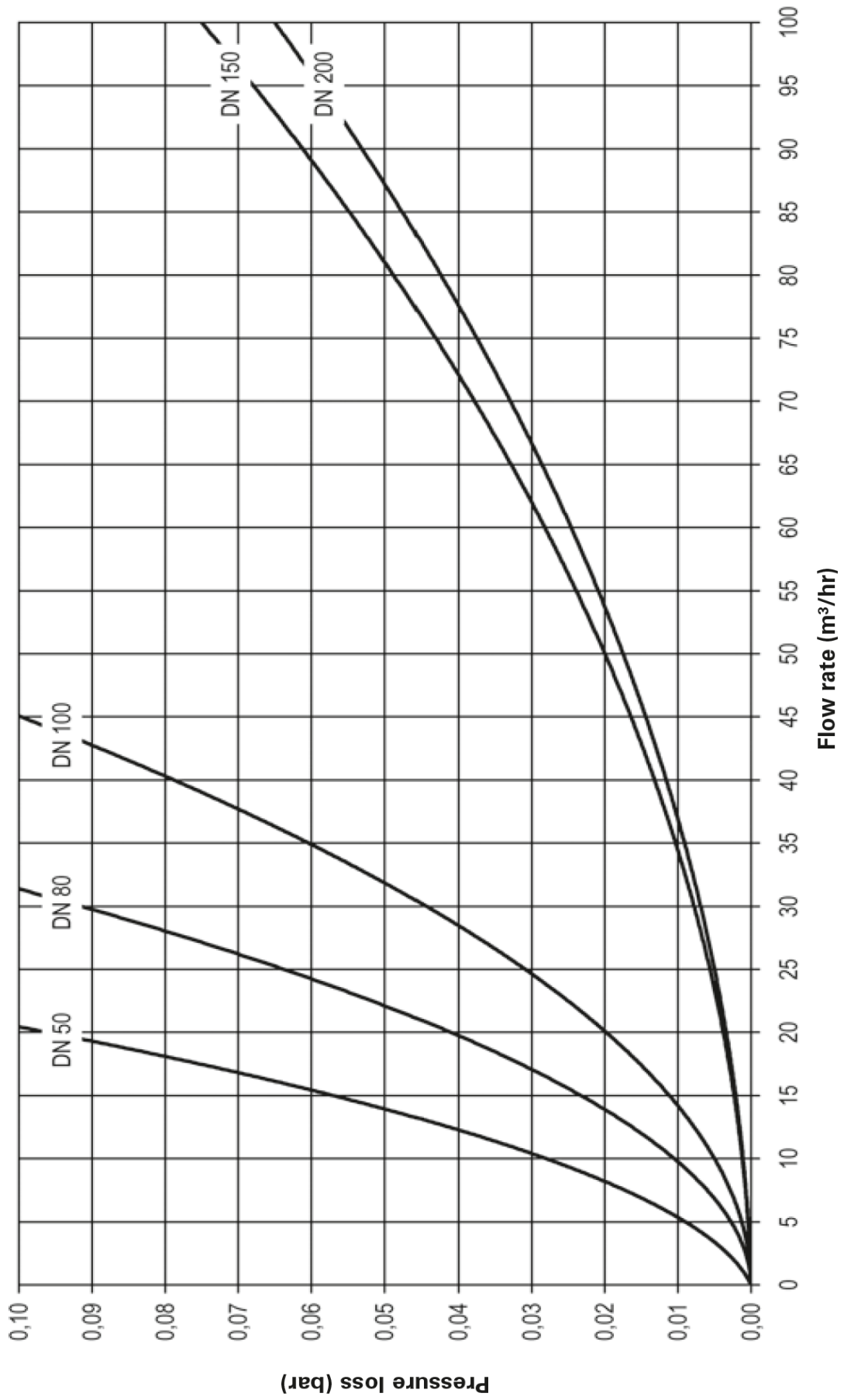
Service

The SMH Boiler Guard should be clean once every 6 or 12 months pending the type of heating system.

If possible, isolate the SMH boiler Guard from the system. To carry out cleaning, remove the closure cap and draw the magnetite separator out of the brass immersion sleeve. The magnetite debris is drawn to the base, and can be flushed out, via the ball valve at the base of the body.

Once there is no more evidence of magnetic debris within the body, close the ball valve. Pending the strength / condition of the magnets, either fit them back in place or install new magnets. Fit the closure cap back in place and open the SMH Boiler Guard back to the system.

Flow and pressure loss diagram
 Boiler Guard (DN50 - DN200)





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E&OE - The company reserves the right to change the specification and dimensions without prior notice.

We are pleased to inform you that additional information and literature is also available on our website.