

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



- 3 in 1 benefits:**
- Hydraulic Separator
  - Air Separator
  - Dirt Trap (with optional Magnetic Separator)

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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.

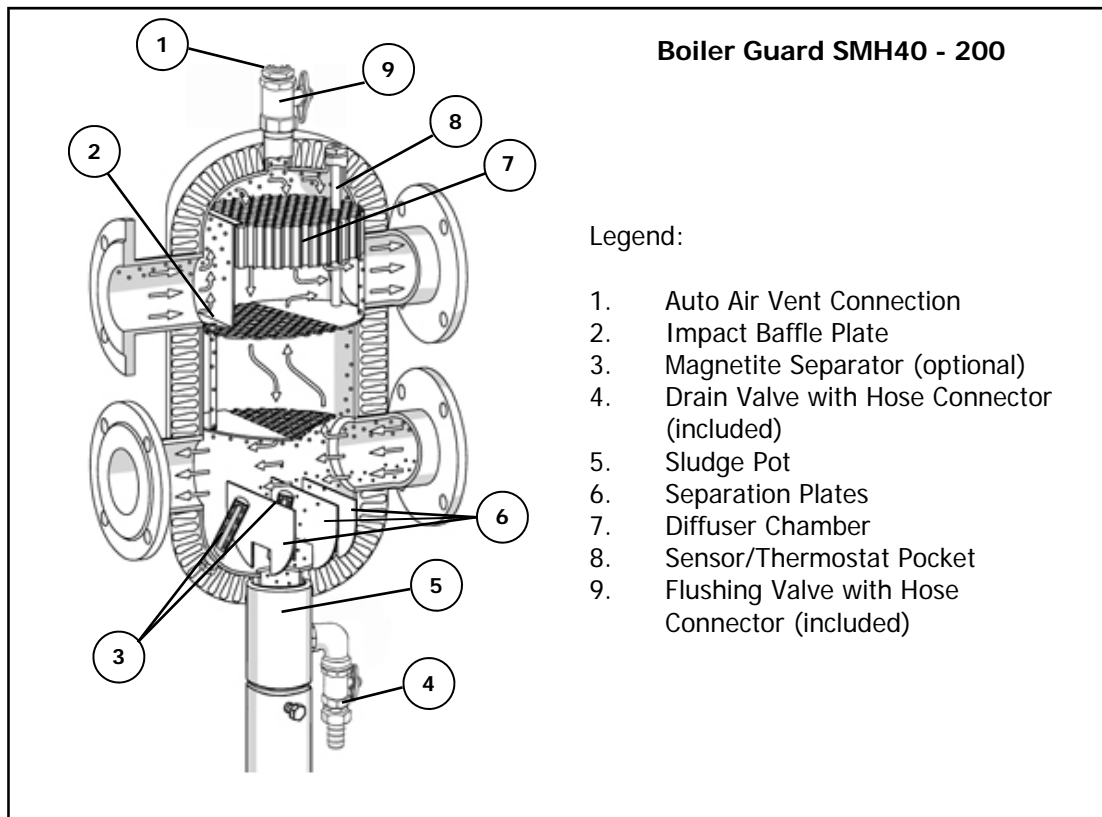
### **The low loss header**

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 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 can be 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.

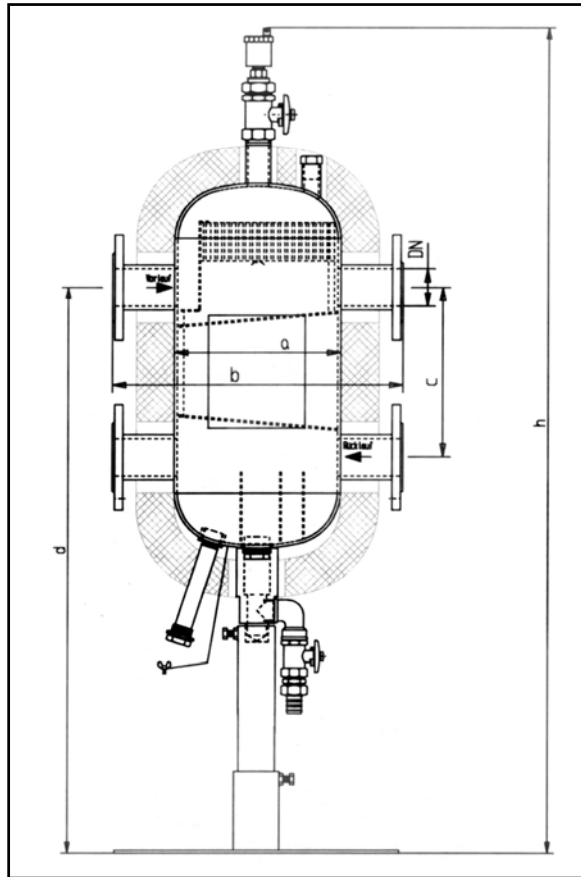
## Internal Diagram.



## Technical Data Table.

Model	Flow Rate (m <sup>3</sup> /hr)	Rating (kW)	Connection Size
SMH40	6	135	DN 40 / PN6
SMH50	6	135	DN 50 / PN6
SMH65	8	180	DN 65 / PN6
SMH80	12	280	DN 80 / PN6
SMH100	20	450	DN 100 / PN6
SMH125	30	700	DN 125 / PN6
SMH150	50	1150	DN 150 / PN6
SMH200	100	2300	DN 200 / PN6

## Technical Specification & Dimensions



Model	Flow Rate m <sup>3</sup> /hr	Rating * kW	Connection Size	a	b	c	d min.-max.	h min.-max.
SMH40	6	135	DN 40 / PN6	220	382	225	700-1100	1000-1400
SMH50	6	135	DN 50 / PN6	220	382	225	700-1100	1000-1400
SMH65	8	180	DN 65 / PN6	220	382	225	700-1100	1000-1400
SMH80	12	280	DN 80 / PN6	220	382	225	700-1100	1000-1400
SMH100	20	450	DN 100 / PN6	300	500	340	900-1300	1250-1650
SMH125	30	700	DN 125 / PN6	300	500	340	900-1300	1250-1650
SMH150	50	1150	DN 150 / PN6	420	660	450	1050-1450	1500-1900
SMH200	100	2300	DN 200 / PN6	420	660	450	1050-1450	1500-1900

## Connection Flange Dimensions

Model	Table	FLD Dia.	PCD	No. Bolts	Dia. Bolts	Dia. Holes	FLD.THK
SMH40	PN6	130mm	100mm	4	M12	14mm	14mm
SMH50	PN6	140mm	110mm	4	M12	14mm	14mm
SMH65	PN6	160mm	130mm	4	M12	14mm	14mm
SMH80	PN6	190mm	150mm	4	M16	18mm	16mm
SMH100	PN6	210mm	170mm	4	M16	18mm	16mm
SMH125	PN6	240mm	200mm	8	M16	18mm	18mm
SMH150	PN6	265mm	225mm	8	M16	18mm	18mm
SMH200	PN6	320mm	280mm	8	M16	18mm	20mm

## Technical Description

### Boiler Guard (SMH40 - 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 (SMH40 - 200)

Max. diameter of the immersion sensor (SMH40 - 200):	10mm
Max. length of the flow temperature (SMH40 - 200):	170mm
Max. length of the flow temperature (SMH100 - 200):	230mm

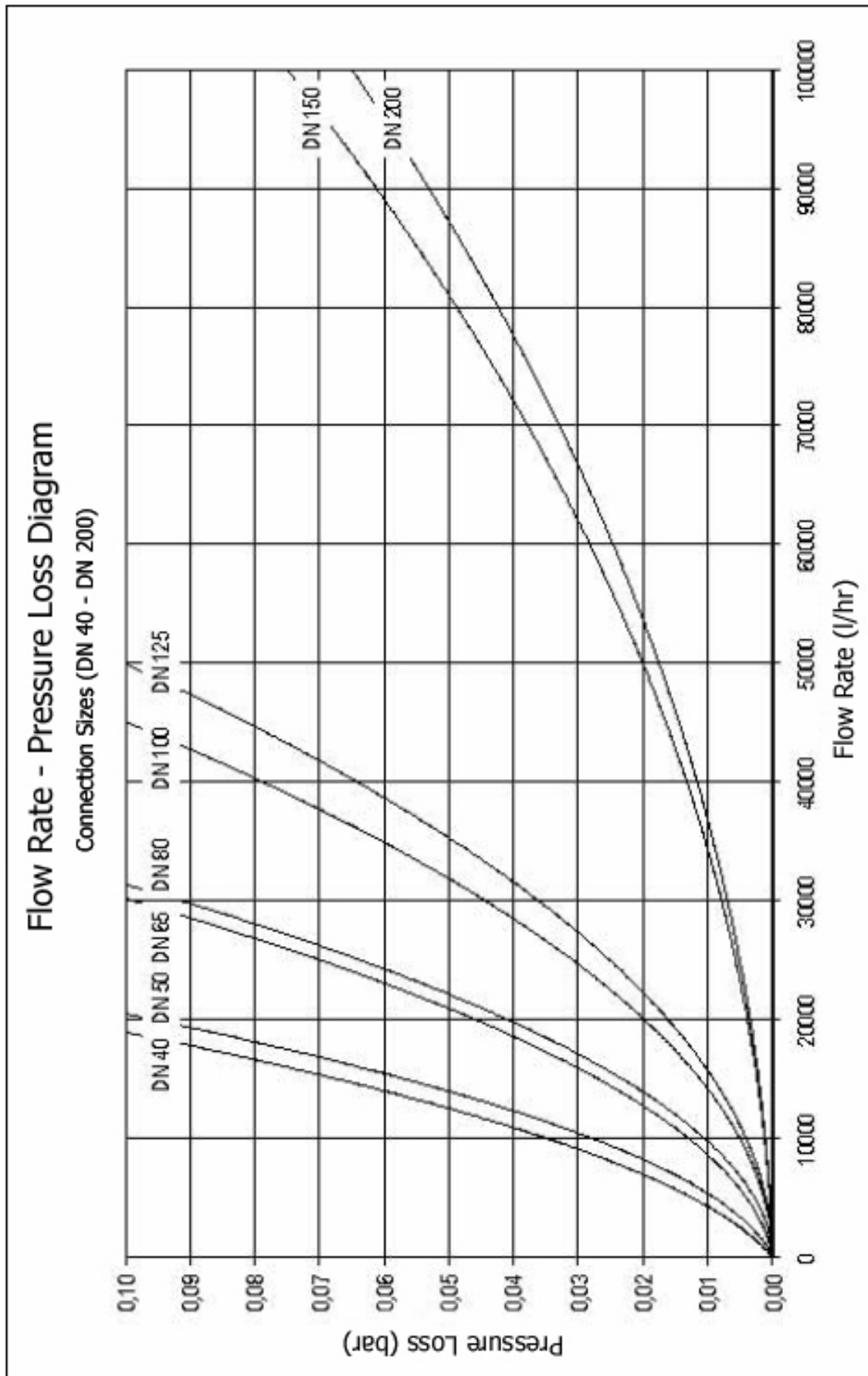
### Notes:

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

To carry out cleaning, remove the closure cap and draw the magnetite separator out of the brass immersion sleeve. The magnetite is drawn to the base, and can be flushed out, via the ball valve.







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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.