



# Hamworthy Clenston Air & Dirt Separator

## Features

- Carbon steel body
- Stainless steel concentrator
- Flanged to BS4504 PN16
- Brass automatic air vent
- 1" BSP flushing valve
- Supplied with gaskets and bolts for system mounting

## Ratings

- Max working pressure 10 bar
- Test pressure 16 bar
- Max working temperature 110°C

## Applications

- Combines the removal of both air and dirt in a single unit
- Protects boilers and helps prevent pump failure, energy loss and corrosion
- Dirt particles and sludge are continually collected and drained off manually
- Microbubble de-aerator and automatic air vent removes air continuously from the system.



Heating *at work.*

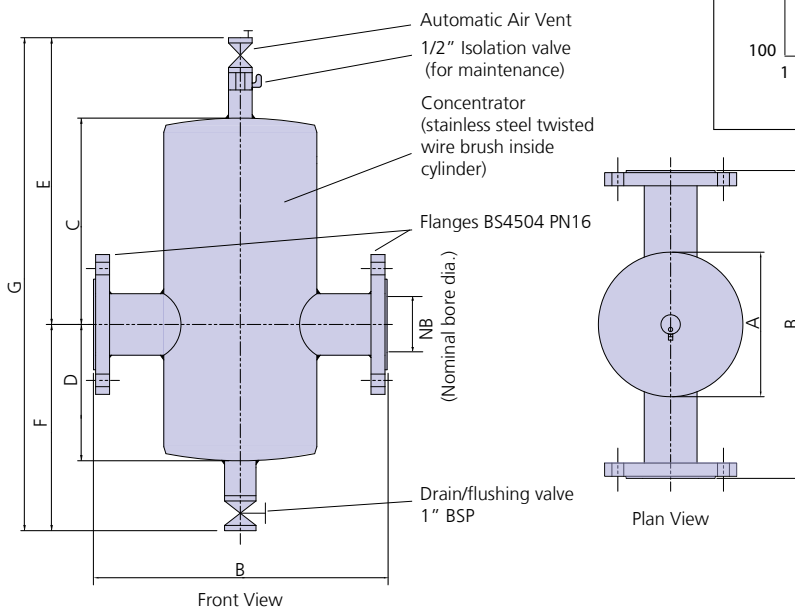
# Hamworthy Clenston Air & Dirt Separator

## Specifications

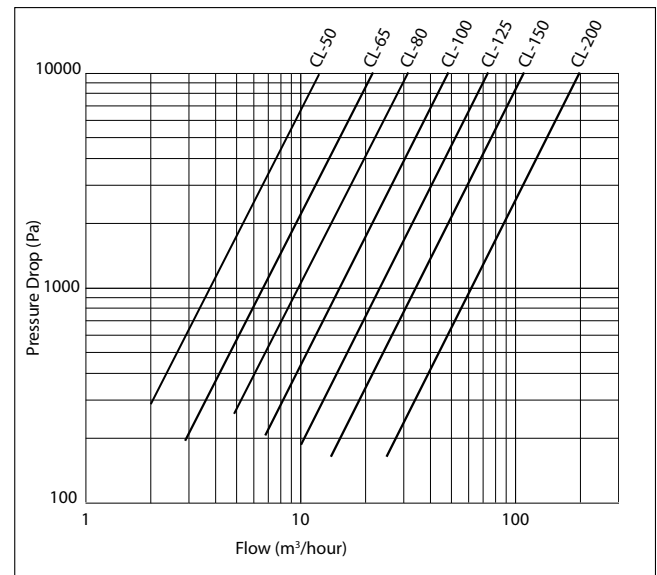
Vertical welded carbon steel body, flanged PN16, with internal stainless steel concentrator. Air collects in the air chamber before being removed by the high capacity AAV (Automatic Air Vent). An isolation valve is included to allow removal of the AAV for maintenance if required, without having to drain the system. A full bore flushing valve is fitted to the dirt collection reservoir.

- Operating temperature range +110°C to -10°C
- Maximum working pressure 10 bar, tested to 16 bar
- Maximum static head for optimum performance = 30m (3 bar)
- Dirt removal down to 10 microns
- Bi-directional flow
- No need to drain system to remove dirt

## Dimensions



## Calculated Pressure Drop vs Volume Flow Rate



## Installation

For the best protection for your Hamworthy boiler from particulate damage and sludge from older heating circuits, install the Clenston Air & Dirt Separator on the return line to the boiler, ideally after the strainer and before the pump on the return line. Allow sufficient clearance to attach a drain hose to safely drain out sludge during periodic maintenance. Take appropriate precautions to prevent any risk of scalding from hot system water when draining dirt and sludge.

Additional AAVs should be considered for placement on the flow side of the boiler circuit close to the boiler and/or at the the highest point in the circuit.

Clenston Product Code	Nominal bore (mm)	Pipe Connection	Dimensions (mm)							Dry Weight (kg)	Volume Flow Rate*		Optimum Boiler Power* (kW)		
			A	B	C	D	E	F	G		(m³/hr)	(l/s)	@11°C ΔT	@20°C ΔT	@30°C ΔT
CL-50	50	DN50-PN16	165	350	225	125	358	225	583	15	12.2	3.39	156	283	425
CL-65	65	DN65-PN16	165	350	225	125	358	225	583	16	20.4	5.67	261	474	711
CL-80	80	DN80-PN16	219	460	300	200	433	300	733	29	28.2	7.83	360	655	982
CL-100	100	DN100-PN16	219	460	300	200	433	300	733	31	47.6	13.22	608	1105	1658
CL-125	125	DN125-PN16	273	630	435	335	568	435	1003	39	72.3	20.08	923	1679	2518
CL-150	150	DN150-PN16	324	630	435	335	568	435	1003	46	103.3	28.69	1319	2399	3598
CL-200	200	DN200-PN16	407	780	475	375	608	475	1083	62	174.3	48.42	2226	4048	6071

\*@ Nominal fluid velocity through Clenston = 1.5m/s



## Customer Service Centre

Hamworthy Heating Limited  
Fleets Corner, Poole,  
Dorset BH17 0HH

Telephone: **0845 450 2865**  
Email: **sales@hamworthy-heating.com**  
Web: **www.hamworthy-heating.com**

Hamworthy reserves the right to make changes and improvements which may necessitate alteration to the specification without prior notice.

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## Hamworthy Heating Accreditations

ISO 9001 Quality Management System

ISO 14001 Environmental Management System

OHSAS 18001 Health & Safety Management System

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