

HydroCal™ combination hydraulic, air and dirt separator



NA549 series ASME/CRN with flanges

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Application

The Caleffi HydroCal™ combination hydraulic, air and dirt separator is a device that combines high performance air and dirt removal with hydraulic separation. Primary and secondary circuits connected to it become hydraulically decoupled thus eliminating pump conflict. A proven, time tested stainless steel internal coalescing element continuously and automatically eliminates all entrained air, including micro-bubbles, in the system. Air discharge capacity is very high. Over time, dirt particles as tiny as 5 microns are captured and collected away from the flow stream. The 3-in-1 high performance functionality of the HydroCal saves system installation and maintenance cost as there is no need to include separate air and dirt separators. It can be used on either hot or chilled water systems.

Typical Specification

Furnish and install on the plans and described herein, a Caleffi HydroCal as manufactured by Caleffi. Each separator must be designed with an epoxy resin painted steel body, 300 series stainless steel internal coalescing mesh, a brass blowdown drain valve and automatic brass air vent with brass shutoff valve. The separator design must include ANSI B16.5 Class 150 RF flanges. The separator must be designed and built in accordance with Section VIII, Div. 1 of the ASME Boiler and Pressure Vessel Code and tagged and registered with the National Board of Boiler and Pressure Vessel Inspector, CRN Registered, and stamped for 150 psi (10 bar) working pressure, with ASME U stamp. Each separator shall be Caleffi model NA549 or approved equal.

Technical specifications

Connections - flanged: 2-6" ANSI B16.5 150 CLASS RF
- drain valve: 1-1/4" NPT female

Materials - separator body: epoxy resin painted steel body
- air vent body: brass
- shut-off and drain valve body: brass
- internal element: 300 series stainless steel
- air vent seal: VITON
- air vent float: stainless steel

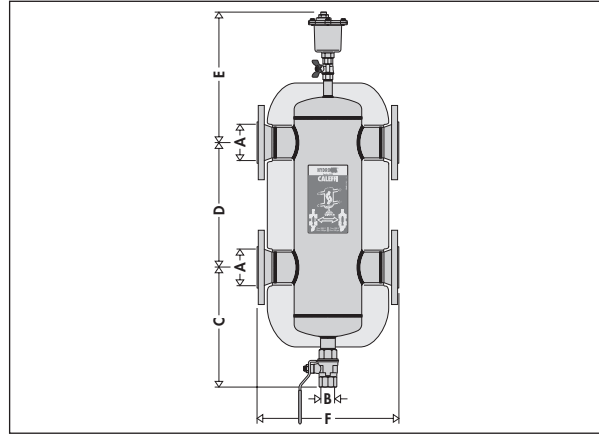
Performance

Suitable fluids: water and non-hazardous glycol solutions up to 50%
Max. operating pressure: 150 psi (10 bar)
Temperature range: - with insulation 32-220°F (0-105°C)
- without insulation (vessel) 32-270°F (0-132°C)
Particle separation capacity: to 5 µm (0.2 mil)
Air separation capacity: 100% removal to micro-bubble level

Agency approval

Series NA549 is designed and built in accordance with Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code and tagged and registered with the National Board of Boiler and Pressure Vessel Inspector, and CRN registered and stamped for 150 psi (10 bar) working pressure, with ASME U stamp.

Dimensions



Code	A	B	C	D	E	F	Wt. (lbs.)	Flow (gpm)	Vol (gal.)
NA549052A*	2"	1 1/4"	13"	13"	13 1/2"	14"	73	60	4.0
NA549062A*	2 1/2"	1 1/4"	13"	13"	13 1/2"	14"	79	80	4.0
NA549082A*	3"	1 1/4"	15"	17 3/4"	15 1/4"	18"	108	124	8.0
NA549102A*	4"	1 1/4"	15"	17 3/4"	15 1/4"	18"	117	247	8.0
NA549120A	5"	1 1/4"	23 1/8"	22"	18 1/8"	25"	190	300	23.2
NA549150A	6"	1 1/4"	23 1/8"	22"	18 1/8"	25"	231	484	23.2

*With insulation.

ASME tagged and registered with the National Board of Boiler and Pressure Vessel Inspectors and CRN registered with ASME U stamp.

Technical specifications of insulation

Inner part

Material: rigid closed cell expanded polyurethane foam
Thickness: 2-3/8" (60 mm)
Density: 3 lb/ft³ (45 kg/m³)
Conductivity (ISO 2581): 0.16 BTU-in/hr-ft²-°F (0.023 W/(m·K))
Temperature range: 32-220°F (0-105°C)

Outer part

Material: embossed aluminium
Thickness: 7-mil (0.70 mm)
Fire resistance (DIN 4102): class 1

Head covers

Heat formed material: PS

Hydraulic characteristics

The HydroCal should be sized according to the maximum flow rate value at the inlet. The selected design value must be the greatest required flow rate of either the primary circuit or the secondary circuit.

Size	2"	2 1/2"	3"	4"	5"	6"
gpm	60	80	124	247	300	484
m ³ /h	13.6	18.2	28.2	56	68	110
l/s	3.8	5.0	7.8	15.6	19	30.5

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice. Contractors should request production drawings if prefabricating the system.

Job name _____
Job location _____
Engineer _____
Mechanical contractor _____
Contractor's P.O. No. _____
Representative _____

Size _____
Quantity _____
Approval _____
Service _____
Tag No. _____
Notes _____