

# Hydro separator



## 548 series, 1" through 2" union connections

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### Application

The hydraulic separator creates a zone with a low pressure loss, which enables connected primary and secondary circuits to be hydraulically independent of each other; the flow in one circuit does not create or interrupt flow in another. Hydraulically decoupling primary and secondary circuits eliminates pump conflict.

### Typical Specification

Furnish and install on the plans and described herein, a Caleffi Hydro Separator as manufactured by Caleffi. Each separator must be designed with an epoxy resin painted steel body, 300 series stainless steel internal baffle, preformed insulation, a 1/2" threaded thermometer pocket well front center, a brass blowdown valve with garden hose connection and automatic brass air vent isolated manually with service check valve. The separator design must include sweat, press or NPT female connections with cast iron union nuts. Each separator shall be a Caleffi model 548 series or approved equal. (See product instructions for specific installation information.)

### Technical data

**Materials**

- body: epoxy resin painted steel
- internal baffle: 300 series stainless steel
- air vent body: brass
- shut off and drain valve body: brass
- union nuts: cast iron

### Performance

Suitable fluids: water and non-hazardous glycol solution up to 50%  
 Max. operating pressure: 150 psi (10 bar)  
 Working temperature range with insulation: 32–210°F (0–100°C)  
 Working temperature range without insulation: 32–250°F (0–120°C)

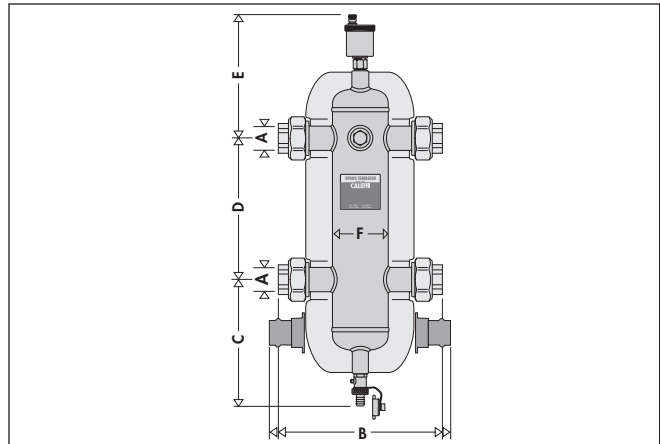
**Connections - main:** 1", 1-1/4", 1-1/2", 2" NPT female with unions  
 1", 1-1/4", 1-1/2", 2" sweat with unions  
 1", 1-1/4", 1-1/2", 2" press with unions

- thermo well tap: 1/2" straight thread female
- lay length (press connections): size 1 inch : 9"
  - size 1-1/4 inch: 9-3/4"
  - size 1-1/2 inch: 11-1/4"
  - size 2 inch: 12-3/4"
- drain valve: 3/4" garden hose thread

### Technical specifications of insulation

Materials: double density closed cell expanded PEX  
 Thickness: 3/4" (20 mm)  
 Density: - internal part: 2 lb/ft<sup>3</sup> (30 kg/m<sup>3</sup>)  
 - external part: 3.1 lb/ft<sup>3</sup> (50 kg/m<sup>3</sup>)  
 Thermal conductivity: 32°F (0°C): 9 BTU-in/hr-ft<sup>2</sup>-°F (0.038 W/(m-K))  
 -40°F (-40°C): 11 BTU-in/hr-ft<sup>2</sup>-°F (0.045 W/(m-K))  
 Coefficient of resistance to the diffusion of vapor: >1,300  
 Temperature range: 32–210°F (0–100°C)  
 Reaction to fire (DIN4102): class B2

### Dimensions



Code*	A	B swt/ press	B fnpt	C	D	E	F	Wt. (lbs.)	Wt. (kg)
548006A/96A	1"	8 3/4"	8 1/2"	7"	8 3/8"	8 1/2"	3"	13	6.0
548007A/97A	1 1/4"	9 1/2"	9"	8 1/2"	9 1/2"	8 1/2"	3 1/2"	17	7.7
548008A/98A	1 1/2"	11"	10 1/2"	8 1/2"	10 1/4"	9 1/4"	4 1/2"	25	11.3
548009A/99A	2"	12 3/8"	11 1/2"	9 1/2"	11 1/8"	9 1/4"	5 3/4"	27	12.2
548066A	1"	10 3/4"	--	7"	8 3/8"	8 1/2"	3"	13	6.0
548067A	1 1/4"	11 1/4"	--	8 1/2"	9 1/2"	8 1/2"	3 1/2"	17	7.7
548068A	1 1/2"	14"	--	8 1/2"	10 1/4"	9 1/4"	4 1/2"	25	11.3
548069A	2"	15 1/4"	--	9 1/2"	11 1/8"	9 1/4"	5 3/4"	27	12.2

\*54800: NPT female union connections; 54809: sweat union connections; 54806: press union connections.

### Hydraulic characteristics

The hydraulic separator 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.

### Union connections

Size	1"	1 1/4"	1 1/2"	2"
gpm	11	18	26	37
l/s	0.7	1.1	1.6	2.3
gallons	0.5	0.7	1.3	3.5
liters	1.9	2.6	4.9	13.2

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 \_\_\_\_\_