

SEP 4™ combination hydraulic, air, dirt and magnetic separator



NA5495 series with union connections, 1" - 2"

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Application

The Caleffi SEP4™ 4-in-1 combination separator is a device that incorporates four critical functions for hot or chilled water systems. It combines high performance air and dirt (magnetic and non-magnetic) removal into the hydraulic separation function which makes the primary and secondary circuits connected to it hydraulically independent. The SEP4™ features an internal coalescing element that continuously and automatically eliminates air micro-bubbles with the simultaneous removal of dirt particles as tiny as 5 microns. The air discharge capacity is very high, with the capability of automatically removing all the air present in the system down to the micro-bubble level. The 4-in-1 high performance functionality of the SEP4™ saves system installation and maintenance costs as there is no need to include separate air and dirt separators. In addition to removing solid impurities in the system without isolating the separator or shutting down the system, the added powerful removable external magnet probe in the lower body removes up to 100% of the ferrous impurities, including magnetite, that can form in a hydronic system. The SEP4™ has 2½ times the ferrous impurities removal performance of standard air and dirt separators.

Typical Specification

Furnish and install on the plans and described herein, a Caleffi SEP4™ combination hydraulic, air, dirt and magnetic separator as manufactured by Caleffi. Each separator must be designed with an epoxy resin painted steel body, a brass blowdown drain valve and automatic brass air vent. The separator design must include a 300 series HDPE internal element and an external removable magnet belt, neodymium rare-earth with up to 100% ferrous impurities, including magnetite, separation efficiency. The separator shall be a Caleffi model 5495 or approved equal. (See product instructions for specific installation information.)

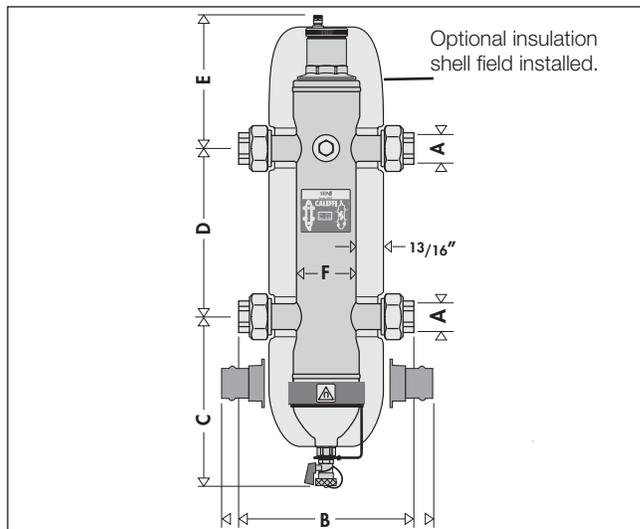
Technical Data

Materials	- separator body:	epoxy resin painted steel
	- air vent body:	brass
	- drain valve body:	brass
	- internal element:	HDPE
	- air vent hydraulic seal:	peroxide-cured EPDM
	- air vent float:	PP
	- air vent float linkages and guide pin:	stainless steel
	- magnet:	neodymium rare-earth
	- insulation:	closed-cell expanded PE-X (separately purchased, field installed)

Performance

Suitable fluids:	water and non-hazardous glycol solution up to 50%
Max. operating pressure:	150 psi (10 bar)
Temperature range:	-with insulation: 32–210°F (0–100°C)
	-without insulation (vessel) 32–230°F (0–110°C)
Particle separation capacity:	5 µm (0.2 mil)
Air separation efficiency:	100% removal to micro-bubble level
Ferrous impurities separation efficiency:	up to 100% removal

Dimensions



NOTE: Drawing may not reflect the actual size of the separator.

Code*	A	B swt	B npt	C	D	E	F	Wt. (lbs.)	Wt. (kg)
549506A/96A	1"	8¾"	8½"	7"	8½"	6"	3"	15	6.8
549507A/97A	1¼"	9¾"	9"	7"	9½"	6"	3½"	19	8.6
549508A/98A	1½"	11"	10½"	8½"	10¼"	7¼"	4½"	27	12.2
549509A/99A	2"	12¾"	11½"	8½"	11¼"	7¼"	5¾"	29	13.1
549566A	1"	10½"	--	7"	8½"	6"	3"	15	6.8
549567A	1¼"	11¾"	--	7"	9½"	6"	3½"	19	8.6
549568A	1½"	14¼"	--	8½"	10¼"	7¼"	4½"	27	12.2
549569A	2"	15½"	--	8½"	11½"	7¼"	5¾"	29	13.1

*54950: NPT female union connections; 54959: sweat union connections; 54956: press union connections; 54950xUS: no tailpieces (not shown above).

Connections	- main:	1", 1-¼", 1-½", 2" NPT female with unions 1", 1-¼", 1-½", 2" sweat with unions 1", 1-¼", 1-½", 2" press with union
	- thermowell tap:	½" female straight thread
	- drain valve:	¾" garden hose connection

The SEP4 should be sized according to the maximum flow rate of either the primary circuit, or secondary circuit, whichever is largest.

Size	1"	1¼"	1½"	2"
gpm	11	18	26	37
m³/h	2.5	4.0	6.0	8.5
l/s	0.7	1.1	1.6	2.3
Gallons	0.5	0.7	1.3	3.5

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 _____