

DISCALDIRT™ - Air & Dirt Separator

546 Series

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Application

Air and dirt separators are used to continuously remove the air and debris contained in the hydronic circuits of heating and cooling systems. The air discharge capacity of these devices is very high. They are capable of automatically removing all of the air present in the system down to the micro-bubble level. The DISCALDIRT air and dirt separator also separates any solid impurities in the system. The impurities collect at the bottom of the device and can be removed through the ball valve. The circulation of fully de-aerated and cleaned water enables the equipment to operate under optimum conditions, free from any noise, corrosion, localized overheating or mechanical damage.

Typical Specification

Furnish and install on the plans and described herein, a Caleffi DISCALDIRT Air & Dirt Separator as manufactured by Caleffi. Each separator must be designed with a blowdown drain port, side drain valve and automatic air vent. The separator design must include a stainless steel internal element to automatically remove all air and dirt present in the system. Each separator shall be Caleffi model 546 or approved equal. (See product instructions for specific installation information.)

Technical Data

Materials:

- Body: epoxy resin painted steel
- Int. element: stainless steel
- Drain valve: chrome plated brass
- Release valve: brass
- Seal: EPDM

Suitable fluids: water, glycol solution

Max percentage of glycol: 50%

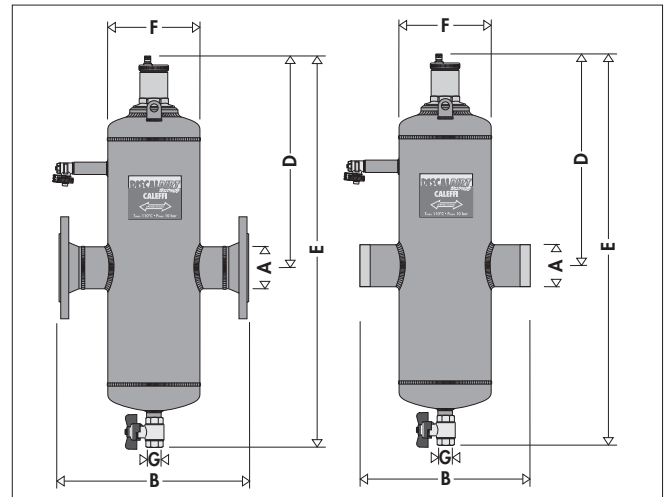
Max working pressure: 150 psi (10 bar)

Temperature range: 32-250°F (0 - 121°C)

Connections:

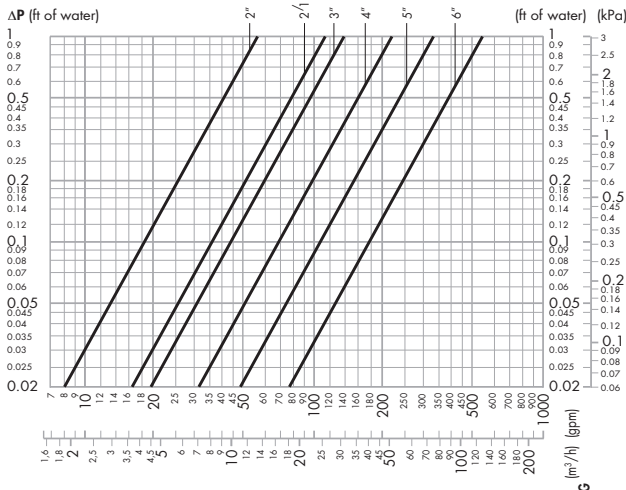
- Flanged: 2" - 6" ANSI B 16.5 Class 150 RF
- Drain: 1" NPT female

Dimensions



Code	A	B	D	E	F	G	Weight (lb)	(kg)
546050A	2"	13 3/4"	14 3/4"	30 1/2"	6 5/8"	1"	39.7	18.0
546060A	2 1/2"	13 3/4"	14 3/4"	30 1/2"	6 5/8"	1"	41.9	19.0
546080A	3"	18 3/8"	17 1/8"	35 7/8"	8 5/8"	1"	72.7	33.0
546100A	4"	18 1/2"	17 1/8"	35 7/8"	8 5/8"	1"	77.1	35.0
546120A	5"	25"	21 7/16"	49"	12 3/4"	1"	180.7	82.0
546150A	6"	25"	21 7/16"	49"	12 3/4"	1"	187.3	85.0

Size	2"	2 1/2"	3"	4"	5"	6"
Cap. (gal)	3.6	3.6	7.6	7.8	22.4	23.0
Cap. (l)	13.6	13.8	28.6	29.6	85.0	87.0



Flow Capacity

The fluid velocity at connections for DISCALDIRT 546 series air and dirt separators is recommended to not exceed 10.0 f/s. Above this speed, heavy internal turbulence and noise can occur and air and dirt elimination efficiency begins to fall measurably. Optimal air and dirt elimination performance occurs at fluid velocities of 4.0 f/s or less. See the flow capacity chart.

	Size	Flow Capacity					
		2"	2 1/2"	3"	4"	5"	6"
Optimal (≤4.0 f/s)	GPM	37.3	63.0	95.0	149.0	259.0	380.0
	L/ Sec.	2.4	4.0	6.0	9.4	16.3	24.0
Max. (10.0 f/s)	GPM	88.8	150.1	227.4	355.3	616.4	903.6
	L/ Sec.	5.6	9.5	14.3	22.4	38.9	57.0
	Cv	87	174	208	324	520	832

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