

# DISCALDIRT® Air & Dirt Separator

## 546 Series, Brass



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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 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 a drain shut-off cock. The circulation of fully de-aerated and cleaned water enables the equipment to operate under optimum conditions, free from noise, corrosion, localized or mechanical damage.

### Typical Specification

Furnish and install on the plans and described herein, a Caleffi DISCALDIRT air and dirt separator as manufactured by Caleffi. Each separator must be designed with a brass body with large internal volume, seals in EPDM, blowdown drain port, and removable internal glass-reinforced nylon fiber mesh (PA66GF30) internal element screen/coalscing medium to automatically remove all air present in the system and all dirt present in the system, with particle separating capacity to 5µm (0.2 mil). Each air and dirt separator shall be a Caleffi model 546 or approved equal. (See product instructions for specific installation information.)

### Technical specifications

#### Materials:

- Body: brass
- Dirt separation chamber: brass
- Automatic air vent body: brass
- Internal element: PA66GF30
- Float: PP
- Float guide: brass
- Stem: brass
- Float lever: stainless steel
- Spring: stainless steel
- Seals: EPDM
- Drain shut-off valve: brass

Suitable fluids: water, with up to a 50% glycol solution

Max working pressure: 150 psi (10 bar)

Temperature range: 32–230°F (0–110°C)

Particle separation capacity: 5 µm (0.2 mil)

#### Connections:

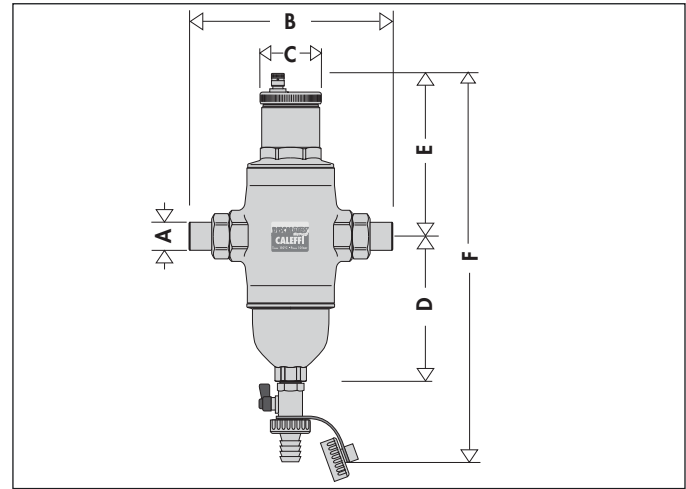
- Main: 3/4" and 1" sweat union  
1" NPT male union  
1- 1/4" integral sweat  
hose connection
- Drain valve: hose connection

### 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.

		FLOW CAPACITY			
		Size	3/4"	1"	1-1/4"
Optimal (≤4.0 f/s)	GPM		8.0	9.3	10.0
	l/s		0.5	0.6	0.63
Max. (10.0 f/s)	GPM		19.0	22.1	25.0
	l/s		1.2	1.4	1.6
	Cv		19.1	32.5	40.0

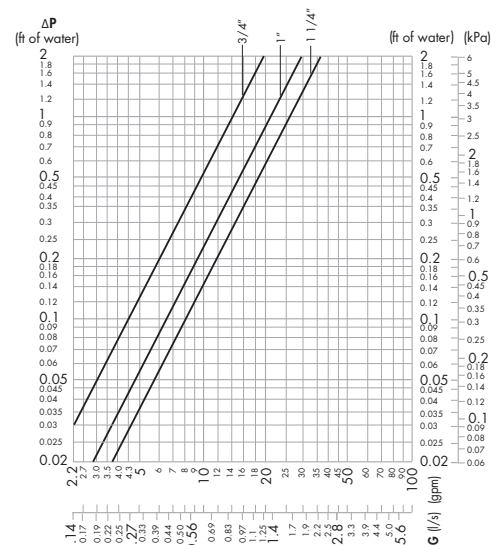
### Dimensions



Code	Connections	A	B	C	D	E	F
546095A	Sweat union	3/4"	7-3/8"	2-1/8"	5"	5-1/2"	12-3/4"
546096A	Sweat union	1"	7-3/8"	2-1/8"	5"	5-1/2"	12-3/4"
546016A	NPT union	1"	7-3/8"	2-1/8"	5"	5-1/2"	12-3/4"
546097A	Integral sweat	1-1/4"	6-3/16"	2-1/8"	5"	5-1/2"	12-3/4"

Code	Connections	A	Weight (Kg)	Weight (lb)
546095A	Sweat union	3/4"	3.8	8.3
546096A	Sweat union	1"	3.8	8.3
546016A	NPT union	1"	3.8	8.3
546097A	Integral sweat	1-1/4"	3.8	8.3

### Hydraulic characteristics



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 \_\_\_\_\_