DISCALDIRT®- Air & Dirt Separator

NA546 ASME & CRN Series, Steel

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Application

Air and dirt separators are used to continuously remove 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 the drain pipe, to which a separately sourced drain valve can be mounted. The circulation of fully de-aerated and cleaned water enables the equipment to operate under optimum conditions, free from noise, corrosion, localized or mechancial 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 side drain valve and automatic air vent. The separator design must include a large internal volume, and a stainless steel internal screen to automatically remove all dirt present in the system with particle separating capacity to 5µm (0.2 mil). The separator must be constructed in accordance with the latest revision of the ASME Boiler and Pressure Vessel Code and stamped for 150 psi (10 bar) working pressure. Each separator shall be Caleffi model NA546 or approved equal. (See product instructions for specific installation information.)

Technical Data

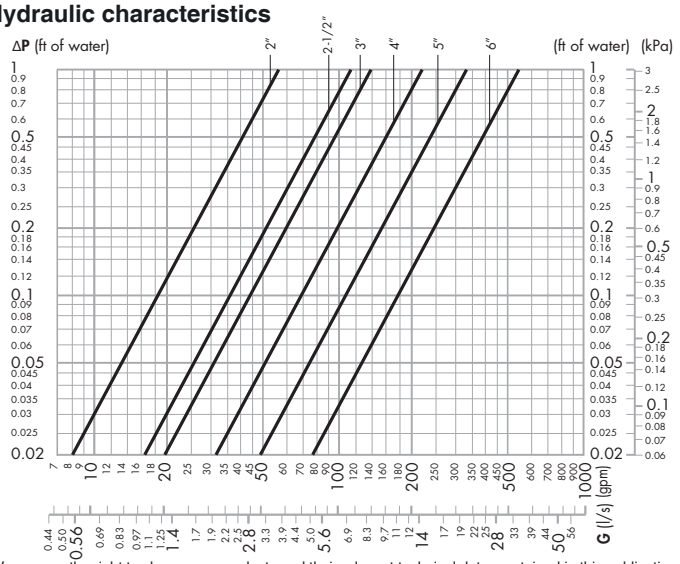
Materials:

- Body: epoxy resin painted steel
- Internal screen: stainless steel
- Automatic air vent body: brass
- Seals: EPDM

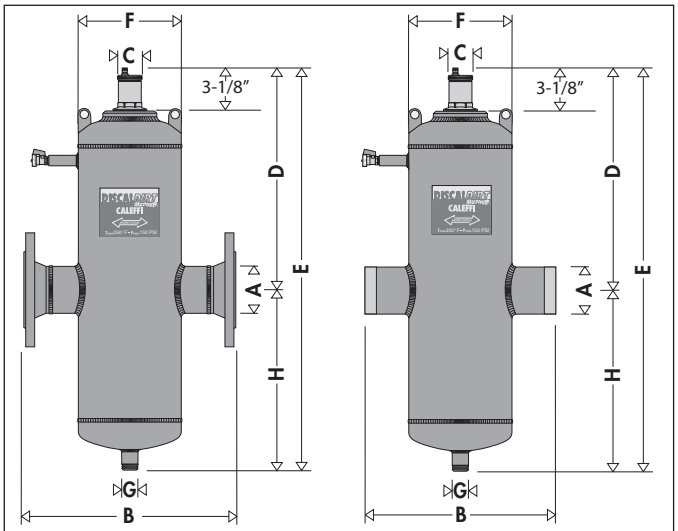
Suitable fluids: water, with up to a 50% glycol solution
Max working pressure: 150 psi (10 bar)
Temperature range: 32–250°F (0–120°C)
Connections:

- Flanged: (ASME & CRN Registered) 2" – 6" ANSI B16.5 Class 150 RF
- Threaded: (ASME & CRN Registered) 2" – 4"
- Drain pipe: 1" NPT male

Hydraulic characteristics



Dimensions



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

Code	A	B	C	D	E	F	G	H	Cap. (gal)	Cap. (liter)	Weight (lb)	Weight (Kg)
NA546050A	2"	13 3/4 "	2 3/16 "	14 3/4 "	28 1/4 "	6 5/8 "	1 "	12 1/2 "	3.6	13.6	39.7	18.0
NA546060A	2 1/2 "	13 3/4 "	2 3/16 "	14 3/4 "	28 1/4 "	6 5/8 "	1 "	12 1/2 "	3.6	13.6	41.9	19.0
NA546080A	3"	18 3/8 "	2 3/16 "	17 1/8 "	34 1/2 "	8 5/8 "	1 "	16 5/16 "	7.6	28.8	72.7	33.1
NA546100A	4"	18 1/2 "	2 3/16 "	17 1/8 "	34 1/2 "	8 5/8 "	1 "	16 5/16 "	7.8	29.5	77.1	35.0
NA546120A	5"	25"	2 3/16 "	21 5/16 "	46 11/16 "	12 3/4 "	1 "	24 5/8 "	22.4	84.8	180.7	82.0
NA546150A	6"	25"	2 3/16 "	21 5/16 "	46 11/16 "	12 3/4 "	1 "	24 7/16 "	23	87.0	187.3	85.0
NA546050T	2"	13 3/4"	2 3/16"	14 3/4"	28 1/4"	6 5/8"	1 "	12 1/2	3.6	13.6	28.7	13.0
NA546060T	2 1/2"	13 3/4"	2 3/16"	14 3/4"	28 1/4"	6 5/8"	1 "	12 1/2	3.6	13.6	28.7	13.0
NA546080T	3"	18 3/8"	2 3/16"	17 1/8"	34 1/2"	8 5/8"	1 "	16 5/16	7.6	28.8	55.1	25.0
NA546100T	4"	18 1/2"	2 3/16"	17 1/8"	34 1/2"	8 5/8"	1 "	16 5/16	7.8	29.5	55.1	25.0

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.

		FLOW CAPACITY					
	Size	2"	2 1/2"	3"	4"	5"	6"
Optimal (≤4.0 f/s)	GPM	37.3	63.0	95	149	259	380
	l/s	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/s	5.6	9.5	14.3	22.4	38.9	57.0
	Cv	87	174	208	324	520	832

Job name _____ Size _____
Job location _____ Quantity _____
Engineer _____ Approval _____
Mechanical contractor _____ Service _____
Contractor's P.O. No. _____ Tag No. _____
Representative _____ Notes _____

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