

Discal™ Air Separator

NA551 ASME Steel Series

Submittal Data 02905 NA - Issue Date 01/2010



Application

Air separators are used to continuously remove the air 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 the air present in the system, down to the micro-bubble level. The circulation of fully de-aerated water enables the equipment to operate under optimum conditions, free from any noise, corrosion, localized overheating and mechanical damage.

Typical Specification

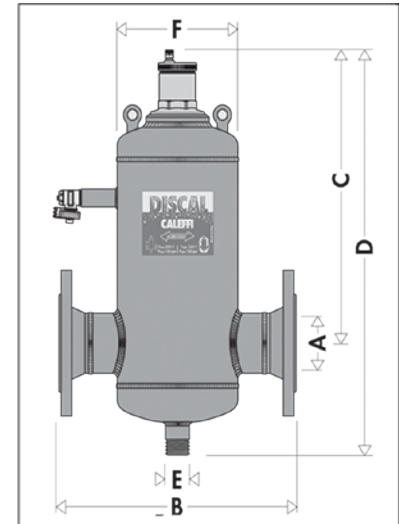
Furnish and install on the plans and described herein, a Caleffi Discal Air Separator as manufactured by Caleffi. Each separator must be designed with a blowdown drain port, side drain valve and automatic air vent. The separator design must include a stainless steel coalescing medium to automatically remove all air present in the system. 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 NA551 or approved equal. (See product instructions for specific installation information.)

Technical Data

Materials:

- Body: epoxy resin painted steel
 - Coalescing Medium: stainless steel
 - Seal: 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: 2" – 6" ANSI B16.5 Class 150 RF
 - Blowdown: 1" NPT male

Dimensions



Code	A	B	C	D	E	F	Weight (lb)	(kg)
NA551050A	2"	13 3/4"	14 3/4"	19 15/16"	1"	6 5/8"	33.1	15.0
NA551060A	2 1/2"	13 3/4"	14 3/4"	19 15/16"	1"	6 5/8"	34.2	15.5
NA551080A	3"	18 3/8"	17 1/8"	23 7/16"	1"	8 5/8"	61.7	28.0
NA551100A	4"	18 1/2"	17 1/8"	23 7/16"	1"	8 5/8"	66.1	30.0
NA551120A	5"	25"	21 7/16"	30 1/2"	1"	12 3/4"	105.8	48.0
NA551150A	6"	25"	21 7/16"	30 1/2"	1"	12 3/4"	116.8	53.0
NA551050T	2"	10 1/4"	14 3/4"	19 15/16"	1"	6 5/8"	20.5	0.9
NA551060T	2 1/2"	11 1/4"	14 3/4"	19 15/16"	1"	6 5/8"	21.0	1.0
NA551080T	3"	14 5/8"	17 1/8"	23 7/16"	1"	8 5/8"	44.0	2.0
NA551100T	4"	15 5/8"	17 1/8"	23 7/16"	1"	8 5/8"	46.3	2.1

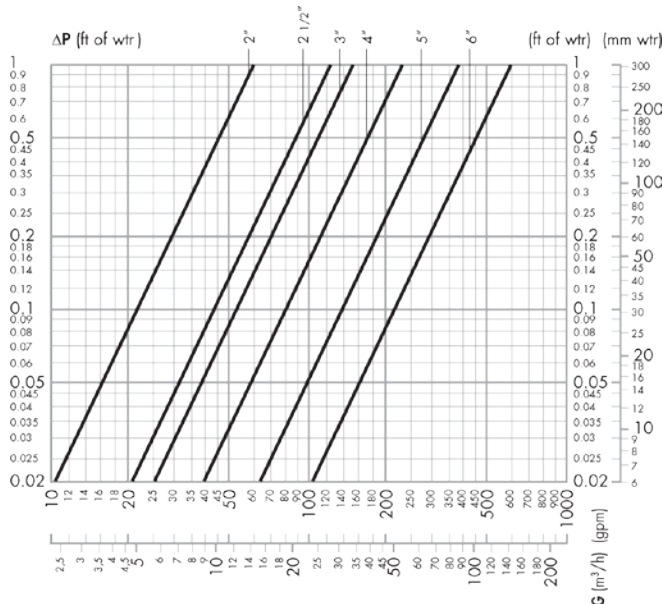
(NPT Connections are also available for sizes 2" to 4")

Size	2"	2 1/2"	3"	4"	5"	6"
Cap. (gal)	1.8	1.8	4.8	4.8	13.7	13.7
Cap. (l)	7.0	7.0	18.0	18.0	52.0	52.0

Flow capacity

The fluid velocity at connections for Discal 551 series air separators is recommended to not exceed 10.0 f/s. Above this speed, heavy internal turbulence and noise can occur and air elimination efficiency begins to fall measurably. Optimal air 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	87.0	174.0	208.0	324.0	520.0	832.0



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 _____

DISCAL® Air separator



NA551 ASME Steel 8, 10, 12 inch

Submittal Data 02905.1 NA — Issue Date 04/2016

Application

Air separators are used to continuously remove the air contained in the hydronic circuits of heating and cooling systems. The air discharge capacity of these devices is very high. They are capable of removing automatically all the air present in the system down to the micro-bubble level.

The circulation of fully de-aerated water enables the equipment to operate under optimum conditions, free from noise, corrosion, localized or mechanical damage. Micro-bubbles, fusing with each other, increase in volume (get larger) until they become large enough to rise to the top where they are automatically released.

Typical Specification

Furnish and install on the plans and described herein, a Caleffi Discal Air 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 coalescing internal element to automatically remove all air present in the system. 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 NA551 or approved equal. (See product instructions for specific installation information.)

Technical specification

- Materials**
- body: epoxy resin painted steel
 - internal element: stainless steel
 - seal: EPDM
 - air vent float guide pin and linkage: stainless steel

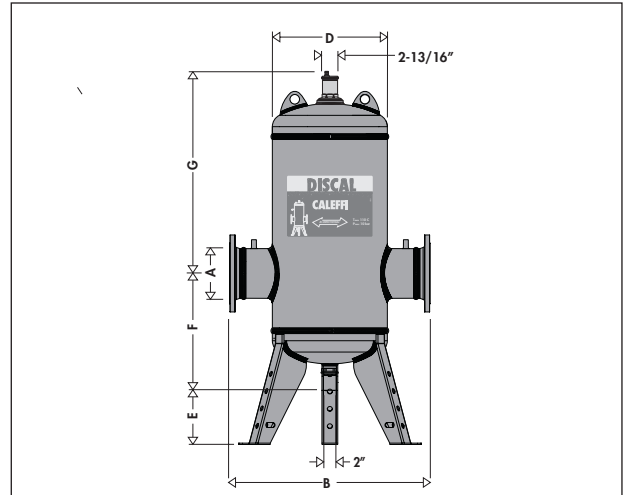
Performance

- Suitable fluids: water, glycol solution
- Max. percentage of glycol: 50%
- Max. working pressure: 150 psi (10 bar)
- Temperature range: 32–270°F (0–132°C)

- Connections**
- flanged: 8"–12" ANSI B16.5 150 CLASS RF
 - drain pipe: 2" NPT male

Agency Approval - NA551 series is designed and built in accordance with Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code and tagged and registered with the National Board of Boiler and Pressure Vessel Inspector, and CRN registered.

Dimensions



Code	A	B	D	E	F	G	Wt(lb)
NA551200A	8"	35 7/16"	20"	8 1/2"	20"	32 1/2"	335
NA551250A	10"	41 3/4"	26"	8 1/2"	22 5/8"	38 1/4"	617
NA551300A	12"	46 1/2"	30"	8 1/2"	25 3/8"	43 3/8"	871

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