

# DISCAL *DIRTMAG*<sup>®</sup> magnetic air and dirt separator



## NA546M ASME Steel series: 2 - 6 inch

Submittal Data 02920.2 NA — Issue Date 04/2017

### Application

The Caleffi DISCALDIRTMAG<sup>®</sup> magnetic air and dirt separator incorporates three important functions for hydronic systems: air separation, dirt separation and ferrous impurity separation. An internal screen element facilitates the coalescing and capture of micro-bubbles to facilitate high performance automatic air removal, while concurrently causing the capture of non-ferrous debris particles down to 5 micron size. A powerful magnetic field induced by rare-earth neodymium magnets facilitates the capture of ferrous impurities such as iron oxide down to microscopic size thus delivering 2½ times the ferrous impurity removal performance of standard air and dirt separators.

### Typical Specification

Furnish and install on the plans and described herein, a Caleffi DISCALDIRTMAG<sup>®</sup> magnetic air and dirt separator as manufactured by Caleffi. Each separator must be designed with a side drain valve, blowdown drain valve, and automatic air vent. The separator design must include a large internal volume, and a stainless steel internal element to automatically remove all dirt present in the system with particle separating capacity to 5µm (0.2 mil), and a stack of neodymium rare-earth magnets inside a brass dry-well, removable for purging, with up to 100% ferrous impurities, including magnetite, separation efficiency. The separator must be ASME Registered, see below, and shall be a Caleffi model NA546AM or approved equal. (See product instructions for specific installation information.)

### Technical Data

#### Materials

Body: epoxy resin coated steel  
Internal element: stainless steel  
Seals: EPDM  
Drain valves: brass  
Magnet: neodymium rare-earth  
Magnet probe dry-well: brass

#### Performance

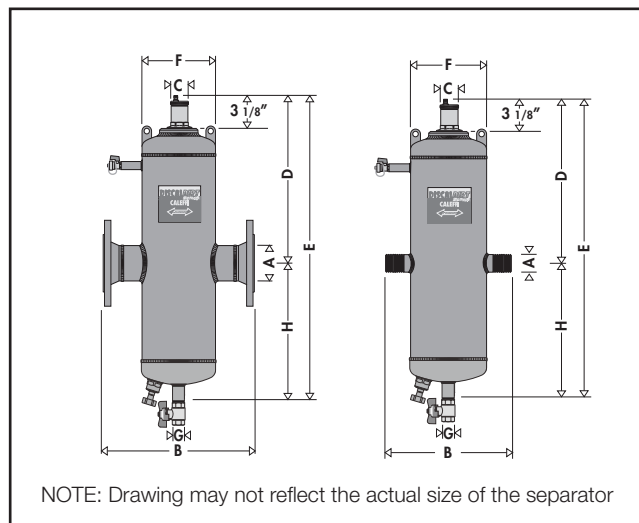
Suitable Fluids: water, glycol solution  
Max. percentage of glycol: 50%  
Max. working pressure: 150 psi (10 bar)  
Temperature range (vessel): 32 - 270°F (0-132°C)  
Air separation efficiency: 100% removal to microbubble level  
Particle separation capacity: to 5 µm (0.2 mil)  
Ferrous impurities separation efficiency: up to 100% removal  
Connections:  
flanged: 2 1/2" - 6" ANSI B16.5 150 CLASS RF  
threaded: 2" NPT male  
drain valve: 1" NPT

### Agency approval

NA546\_M series designed and built in accordance with Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code and tagged, registered with the National Board of Boiler and Pressure Vessel Inspector, and CRN registered, stamped for 150 psi (10 bar) working pressure, with ASME U stamp.

**REFERENCE DOCUMENTATION:** Technical Brochure 1287

### Dimensions



Code	A	B	C	D	E	F	G	H	Cap. (gal)	Wt. (lb)	Wt. (kg)
NA546050TM	2"	13"	2 <sup>3</sup> / <sub>16</sub> "	14 <sup>9</sup> / <sub>16</sub> "	28 1/4"	6 <sup>5</sup> / <sub>8</sub> "	1"	13 <sup>11</sup> / <sub>16</sub> "	3.6	31	14.0
NA546060AM	2 1/2"	13 3/4"	2 <sup>3</sup> / <sub>16</sub> "	14 <sup>9</sup> / <sub>16</sub> "	28 1/4"	6 <sup>5</sup> / <sub>8</sub> "	1"	13 <sup>11</sup> / <sub>16</sub> "	3.6	45	20.4
NA546080AM	3"	18 <sup>3</sup> / <sub>8</sub> "	2 <sup>3</sup> / <sub>16</sub> "	17"	34 1/2"	8 <sup>5</sup> / <sub>8</sub> "	1"	17 1/2"	7.6	76	34.5
NA546100AM	4"	18 1/2"	2 <sup>3</sup> / <sub>16</sub> "	17"	34 1/2"	8 <sup>5</sup> / <sub>8</sub> "	1"	17 1/2"	7.8	81	36.7
NA546120AM	5"	25"	2 <sup>3</sup> / <sub>16</sub> "	21 <sup>1</sup> / <sub>16</sub> "	46 <sup>11</sup> / <sub>16</sub> "	12 3/4"	1"	25 <sup>5</sup> / <sub>8</sub> "	22.4	184	83.5
NA546150AM	6"	25"	2 <sup>3</sup> / <sub>16</sub> "	21 <sup>1</sup> / <sub>16</sub> "	46 <sup>11</sup> / <sub>16</sub> "	12 3/4"	1"	25 <sup>5</sup> / <sub>8</sub> "	23.0	191	86.6

\*These models are ASME tagged and registered with the National Board of Boiler and Pressure Vessel Inspector and CRN pending. Consult Caleffi.

		FLOW RATE					
	Size	2"	2 1/2"	3"	4"	5"	6"
4.0 f/s	GPM	39	60	90	160	245	355
10.0 f/s	GPM	100	155	220	400	615	880
	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 _____	Size _____
Job location _____	Quantity _____
Engineer _____	Approval _____
Mechanical contractor _____	Service _____
Contractor's P.O. No. _____	Tag No. _____
Representative _____	Notes _____