

Diafil

MAGNETIC DEPOSIT SEPARATOR FILTER FOR HEATING PLANT



USE

Diafil is the serviceable deposit separator filter for thermal power station, equipped with magnet and drain for the periodic cleaning, pre-set for the clogging measurement with threaded-coupling pressure fittings.

FUNCTIONS

- interception by mechanical filtration of impurities circulating in the system
- trapping of ferrous impurities in water using a magnet
- sedimentation action - deposit separator
- discharge of collected impurities via manual valve (not included)
- possibility to measure clogging by reading the pressure differential
- inspection and cleaning by removing filter element



THREADED



FLANGED

KEY FEATURES

Diafil is recommended if the thermal station needs to be preserved from deterioration due to the presence of impurities, plastic residues, process waste and iron dust in the circulating water. Thanks to the special drain sleeve, cleaning can be carried out quickly and easily without the need to remove parts of the filter. In addition, the pressure taps upstream and downstream of the filter allow the installation of pressure gauges which can assess when the filter needs cleaning.

Diafil must be periodically drained and opened to clean the filtering element. If pressure gauges are replaced by pressure switches or pressure transducers, by connecting these sensors to a control unit it is possible to remotely send a warning signal when the filter needs to be cleaned.

TECHNICAL FEATURES	Diafil
Maximum operating pressure	5 bar
Maximum fluid temperature	90°C
Minimum fluid temperature	5°C
Degree of filtration	900 micron *
Exterior paint	Water-based primer, red: DIAFIL magnetic filter
Body material	Carbon steel EN10255
Filter element material	AISI 304
Inspection flange seal	NBR and aramidic fibers
Magnet	1,4 T Neodymium

* different filtration grades on request



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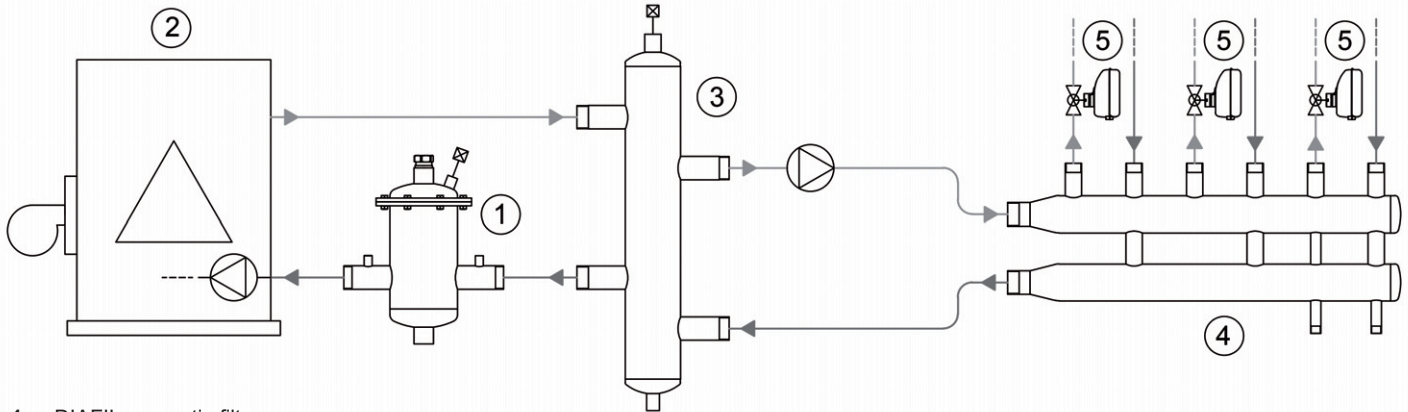
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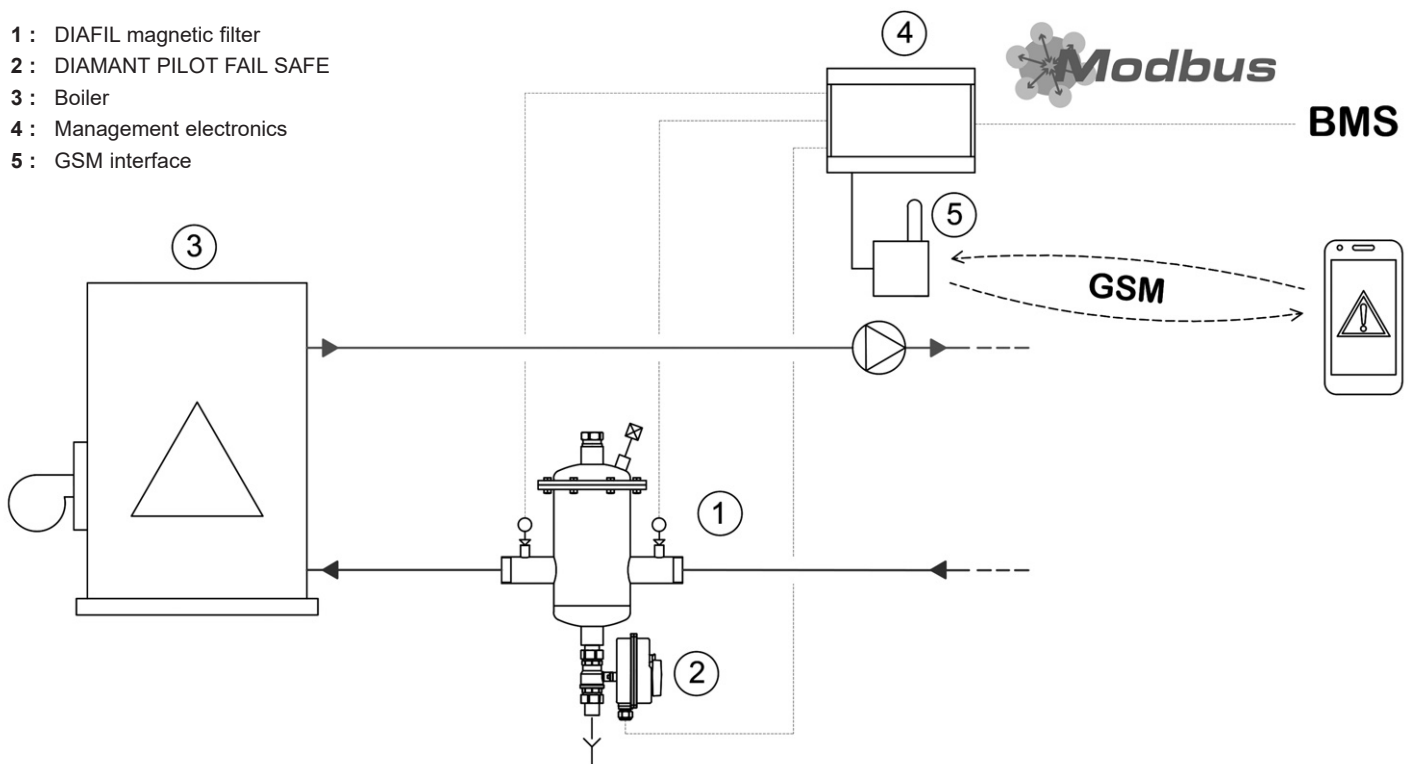
APPLICATION EXAMPLES



- 1 : DIAFIL magnetic filter
- 2 : Boiler
- 3 : DIACOM hydraulic compensator
- 4 : DIACOL manifold
- 5 : SINTESI zone motorized valve

AUTOMATIC MANAGEMENT

- 1 : DIAFIL magnetic filter
- 2 : DIAMANT PILOT FAIL SAFE
- 3 : Boiler
- 4 : Management electronics
- 5 : GSM interface



By installing pressure switches or pressure transducers on the appropriate connections at the inlet and outlet of the filter, it is possible to automatically measure its clogging status and to control the motorized exhaust valve equipped with the fail Safe system (automatic closing in case of lack of electrical power) **DIAMANT PILOT**.

Thanks to a connection to a supervision system (BMS) or remote management, the need for manual cleaning is automatically signaled, thus keeping the plant always in efficiency and optimizing management and maintenance costs.



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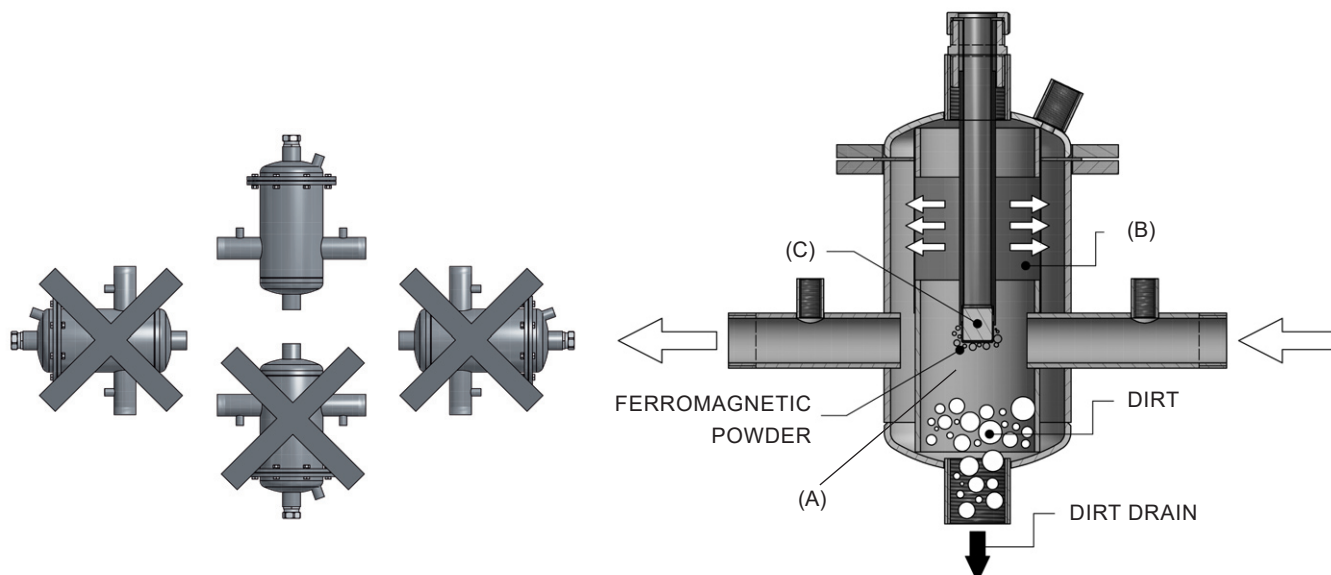
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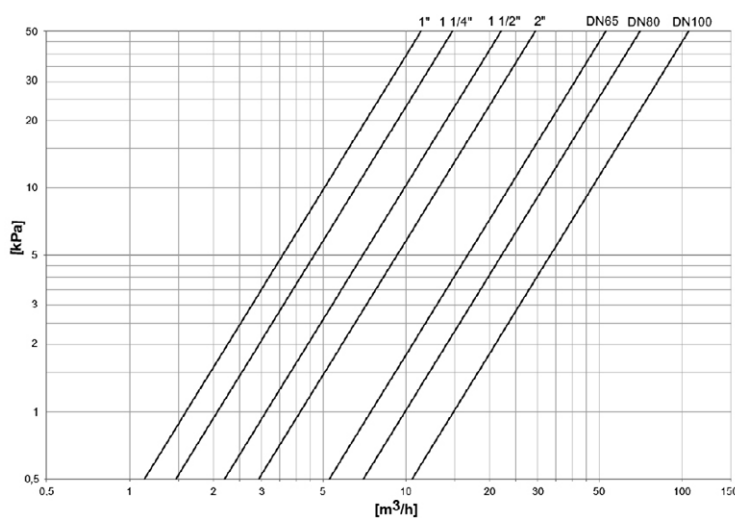


OPERATION AND INSTALLATION

The fluid enters the central body of the filter where, thanks to the sudden increase of the section (A), it slows down allowing the heavier particles to fall down due to gravity, with a typical action of the deposit separator. Then, the flow is forced to enter the filtration septum (B) for the mechanical separation of the remaining suspended particles. In the center there's the magnet (C), which is completely immersed in the flow: in this way the attraction effect of the ferromagnetic powder is maximized. The low-speed vertical path facilitates the upwards air separation and the subsequent deaeration from the relief valve (not included).



HYDRAULIC FEATURES AND VERSIONS



TYPE OF CONNECTION					
THREADED					
Connections	Body	Flow [m³/h]	Volume [l]	Kv _s [m³/h]	Code
R 1"	4"	1,6 ÷ 2,3	1,8	16	FT001
R 1 1/4"	4"	2,1 ÷ 2,9	2	20,8	FT114
R 1 1/2"	5"	3,1 ÷ 4,4	4	31,2	FT112
R 2"	5"	4,1 ÷ 5,9	4,3	41,5	FT002
FLANGED					
Connections	Body	Flow [m³/h]	Volume [l]	Kv _s [m³/h]	Code
DN 65	8"	7,5 ÷ 10,5	14	74,7	FT212
DN 80	8"	9,9 ÷ 14	15	99,3	FT003
DN 100	10"	15 ÷ 21	30	149	FT004

Δp 100 daPa

Δp 200 daPa

MAGNET

During the drain phase, the removable magnet in the plug allows the release of the captured ferromagnetic particles and their evacuation.



1 : diamagnetic plug • 2 : removable magnet holder • 3 : magnet

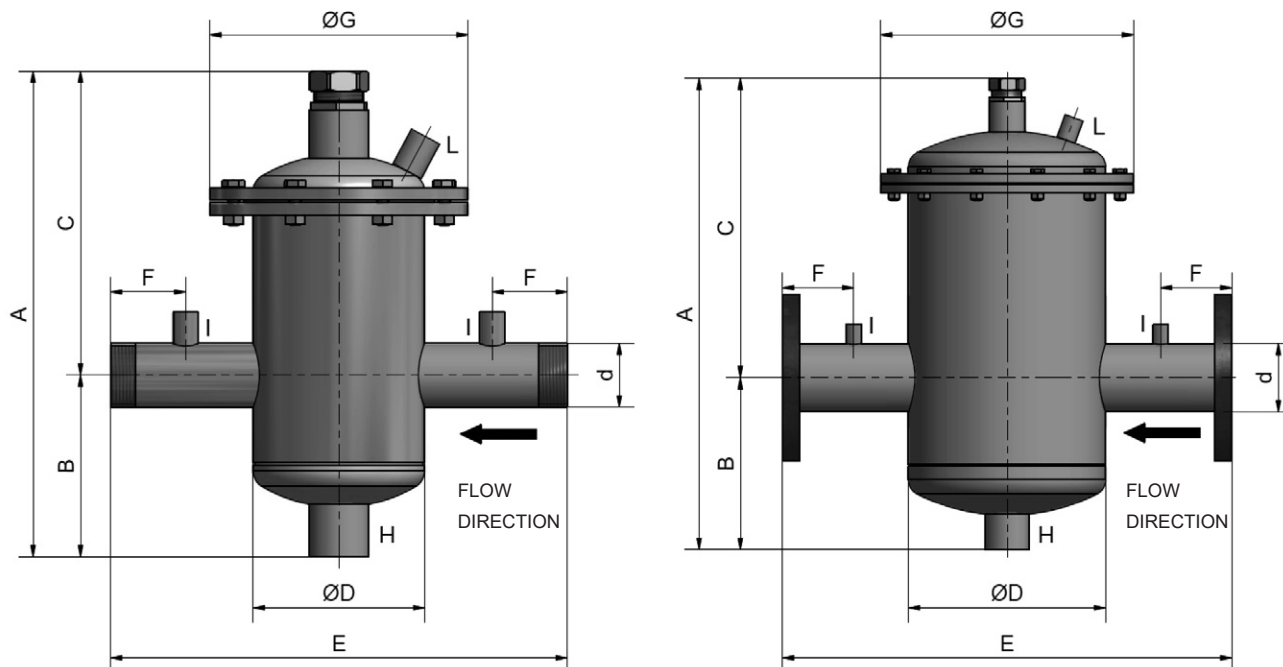


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OVERALL SIZE


d	A	B	C	ØD	E	F	ØG	H	I	L
THREADED (UNI EN 10226-1)										
R 1"	313	112	201	4"	304	50	172	Rp 1"	Rp 1/4"	Rp 3/8"
R 1 1/4"	324	121	203	4"	304	50	172	Rp 1"	Rp 1/4"	Rp 3/8"
R 1 1/2"	390	137	253	5"	330	50	197	Rp 1"	Rp 1/4"	Rp 3/8"
R 2"	405	147	258	5"	350	60	197	Rp 1"	Rp 1/4"	Rp 3/8"

d	A	B	C	ØD	E	F	ØG	H	I	L
FLANGED										
DN65	524	191	333	8"	499	80	281	Rp 1 1/4"	Rp 1/4"	Rp 3/8"
DN80	543	205	338	8"	499	80	281	Rp 1 1/4"	Rp 1/4"	Rp 3/8"
DN100	656	242	414	10"	553	82	376	Rp 1 1/4"	Rp 1/4"	Rp 3/8"

Ø	flange	No. of holes
FLANGE TYPE		
DN 65	PN10-16	4
DN 80	PN10-16	8
DN 100	PN10-16	8

EXAMPLE OF SPECIFICATIONS

Serviceable magnetic filter for thermal power station with deposit separator function – **DIAFIL**, in-line connections, filtration grade 900 µm, capture of ferrous impurities thanks to the action of the neodymium magnet N52, material: EN10255 carbon steel, max. working pressure 5 bar, maximum operating temperature 90°C, minimum operating temperature 5°C, paint type water-based primer, color red, complete with threaded coupling for relief valve and exhaust valve, equipped with threaded couplings for pressure taps. Version: Threaded connections 2" M - Flow rate: 4,1 m³/h (ΔP 100 daPa) ÷ 5,9 m³/h. (ΔP 200 daPa) – Volume 4,3 l.

Brand: **COMPARATO**

Code: **FT002**

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