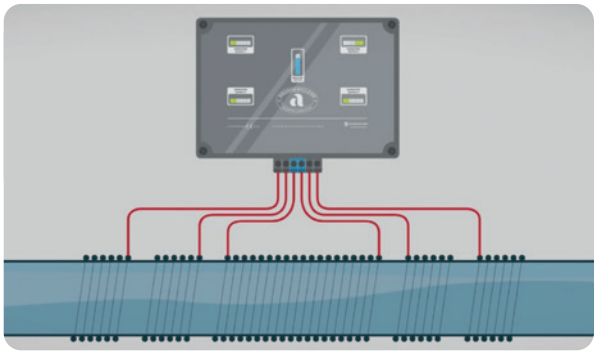

Cleaning
heating system

What is the problem?

The problem with today's heating and cooling systems is that there is a constant process of corrosion in the systems. The most common causes of corrosion are oxygen in the system water, incorrect pH value, mixed metals and high temperatures. Corrosion means that rust and magnetite are formed and this increases the risk of downtime and leads to poorer efficiency and durability in the systems.

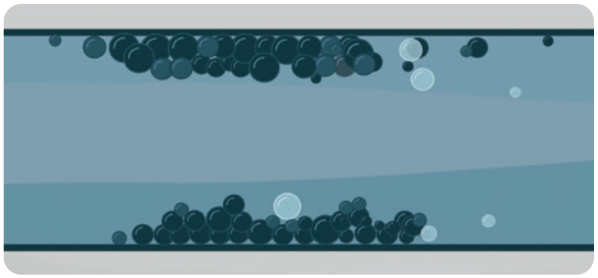
What is the solution?

AquaHeatClean is a technical solution with advanced technology that is installed together with a full-flow magnetite filter. The installation means that you have a continuous cleaning of a heating system with district heating or heat pump and you then get safer, more efficient and more durable heating systems. The products can also be installed on cooling systems that contain water, glycol or bioethanol.



How does it work?

When AquaHeatClean is mounted on a pipe system, it emits a frequency that causes the minerals in the water to flocculate around the various metal ions present in the water and it is this activity that prevents iron and magnetite from sticking to the systems.



In connection with this process, a little carbonic acid is also released, which keeps the systems clean. Carbonic acid is a weak acid that cannot be concentrated and therefore does not affect the metals in the system

The method is effective and environmentally friendly - no chemical additives are needed!

Technical specification AquaHeatClean

AquaHeatClean is available in three sizes and is dimensioned according to the size of the property, system flow and pipe dimension.

The product is CE-approved, IP-classified and approved according to the Low Voltage Directive within the EU.

AquaHeatClean (S)

District heat exchangers and heat pumps

Flow:	50 l/m
Max. pipe diameter:	65 mm
Power:	4 W
Weight:	1,1 kg
Dimensions:	130x95x55 mm
Voltage:	230 V
Protection class:	IP33

AquaHeatClean (M)

Properties up to 1 000 m^2

Flow:	200 l/m
Max. pipe diameter:	80 mm
Power:	25 W
Weight:	4 kg
Dimensions:	180x130x65 mm
Voltage:	230 V
Alarm output:	Potential-free with maximum power of 500 mA and 125 VAC
Protection class:	IP65

AquaHeatClean (L)

Properties from 4 000 m^2 and above

Flow:	850 l/m
Max. pipe diameter:	270 mm
Power:	40 W
Weight:	6 kg
Dimensions:	255x180x65 mm
Voltage:	230 V
Alarm output:	Potential-free with maximum power of 500 mA and 125 VAC
Protection class:	IP65

Technical specification of Dirtmag magnetite filter

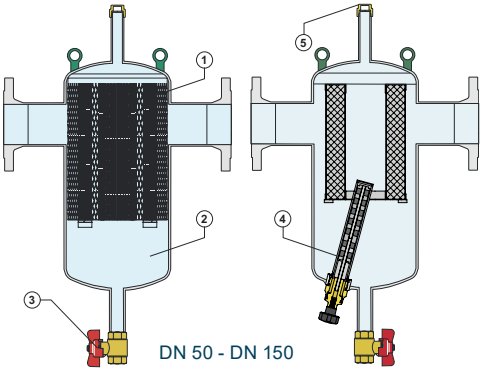
Dirtmag is a magnetite filter for horizontal installation on heating and cooling systems. The filter is easy to clean thanks to the extendable magnetic rod, and can even be cleaned during operation. It is also possible to connect an air vent valve to the top of the filter.

Dirtmag 5466

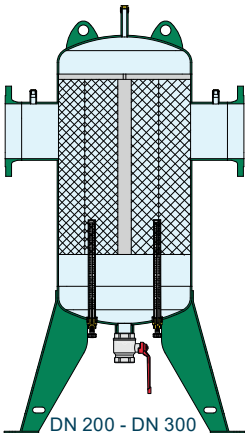
Filter housing:	Epoxy-treated steel
Top nut:	Brass CW617N
Insulation:	Polyurethane foam DN50-100
Housing:	PEX with cell filling
Inner element:	Stainless steel AISI 302 and HDPE
Gaskets:	Fibre
Drain valve:	Brass CW617N
Magnet:	DN 50–DN 65 7 x 0,475 T DN 80–DN 150 12 x 0,475 T DN 200–DN 300 3 x 17 x 0,475 T
Applications:	Heating and cooling systems (max. 50% glycol)
Max. working pressure:	10 bar
Working temperature:	0ºC/100ºC

Functional drawing

1. Filter (inner element)
2. Collection chamber
3. Drain valve
4. Magnetic rod
5. Magnetic rod



DN 50 - DN 150


DN 200 - DN 300

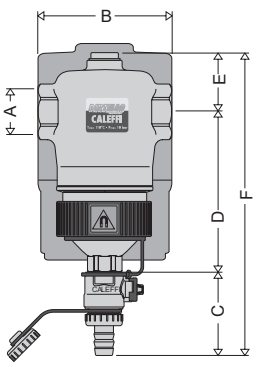
Dirtmag 5462

Applications:	Heating and cooling systems (max 30 % glycol)
Material:	Brass
Max. working pressure:	10 bar
Working temperature:	0ºC/110ºC

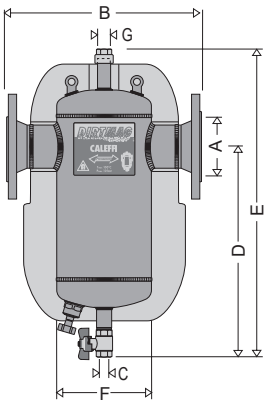
Dimensions in mm

(DN)	A	B	C	D	E	F	Mass (kg)
32	1 1/4"	124	67,5	151,5	49	268	2,22
40	1 1/2"	124	67,5	151,5	49	268	2,22
50	2"	127	67,5	145,5	55	268	2,36

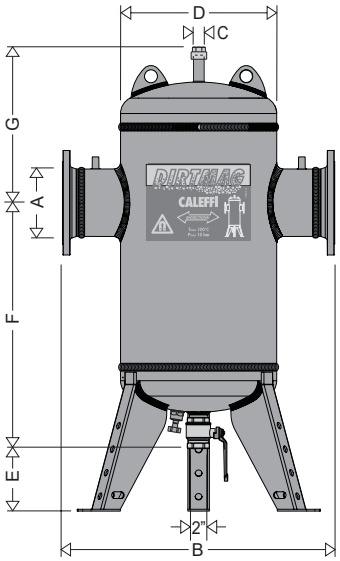
A (DN)	B	C	D	E	F	G	Mass (kg)
50	350	1"	425	620	169	3/4"	13
65	350	1"	425	620	169	3/4"	15
80	466	1"	500	740	219	3/4"	23
100	470	1"	500	740	219	3/4"	25
125	635	1"	600	900	324	3/4"	52
150	635	1"	600	900	324	3/4"	54
200	900	3/4"	508	215	875	470	152
250	1060	3/4"	660	215	1015	540	280
300	1180	3/4"	762	215	1145	610	395



DN 32 - DN 50



DN 50 - DN 150



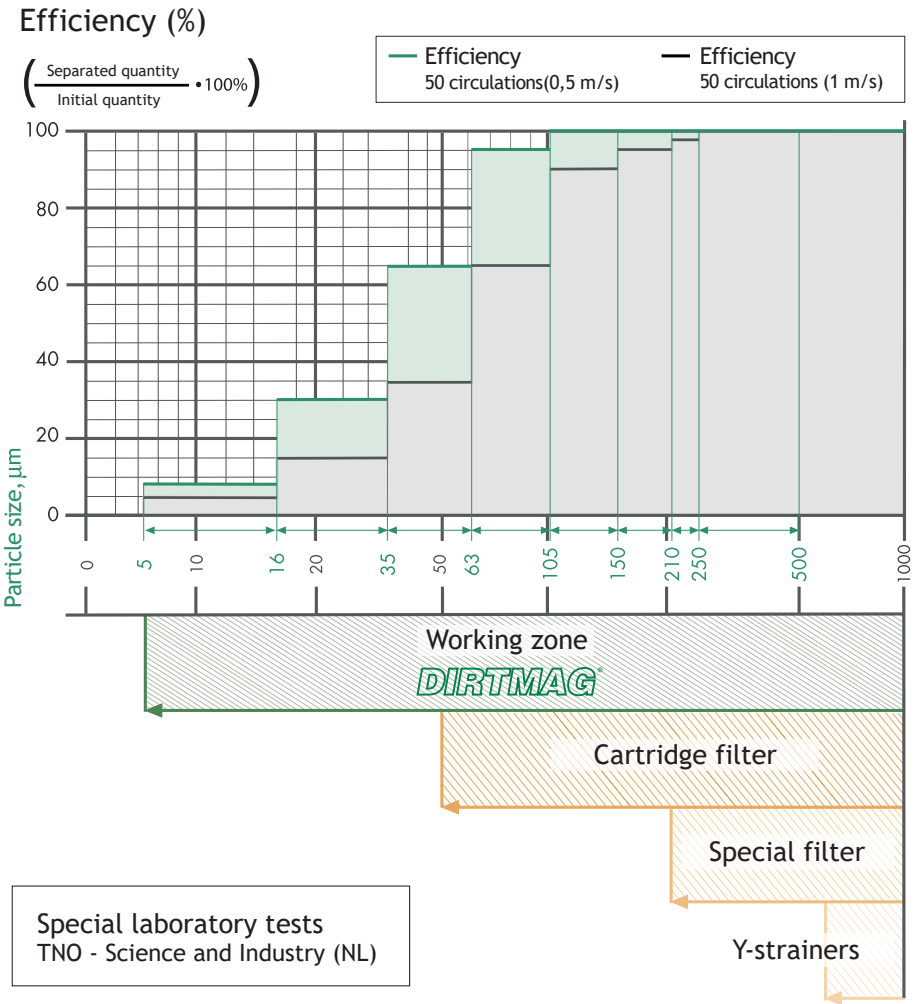
DN 200 - DN 300

Dirtmag effectively separates even the smallest particles by enabling the medium to make several passes through the strainer and the magnetic rod effectively collects the iron particles. The large chamber causes the flow rate of the medium to drop and the special shape of the strainer facilitates particle separation due to gravity. This means that the filter is not clogged like a traditional dirt filter and therefore does not increase the pressure drop in the same way.

The recommended maximum flow rate of the medium is 1.2 m/s. The table below shows the maximum flow rate to meet this recommendation. The table also shows the Kv value for the product.

DN	Flange/connection	Kv (m^3/h)	l/min	m^3/h
32	Inner flange 1 1/4	48,8	57,85	3,47
40	Inner flange 1 1/2	63,2	90,36	5,42
50	Inner flange 2	70,0	136,6	8,20
50	PN16	60,5	141,2	8,47
65	PN16	110	238,6	14,32
80	PN16	160	361,5	21,69
100	PN16	216	564,8	33,89
125	PN16	365	980	58,80
150	PN16	535	1436,6	86,20
200	PN10	900	2433	146
250	PN10	1200	3866	232
300	PN10	1500	5416	325

The diagram illustrates tests carried out independently by specialist lab TNO - Science and Industry (NL), showing that DIRTMAG models 5462, 5463 and 5466 can quickly separate almost all particles and magnetite. The smallest separable particle size is 5 µm. During normal and continuous operation, the system will gradually be completely cleaned of impurities, see table.



Fastighetsklimat i Sverige AB

+46 227-138 00

info@fastighetsklimat.se
www.fastighetsklimat.se