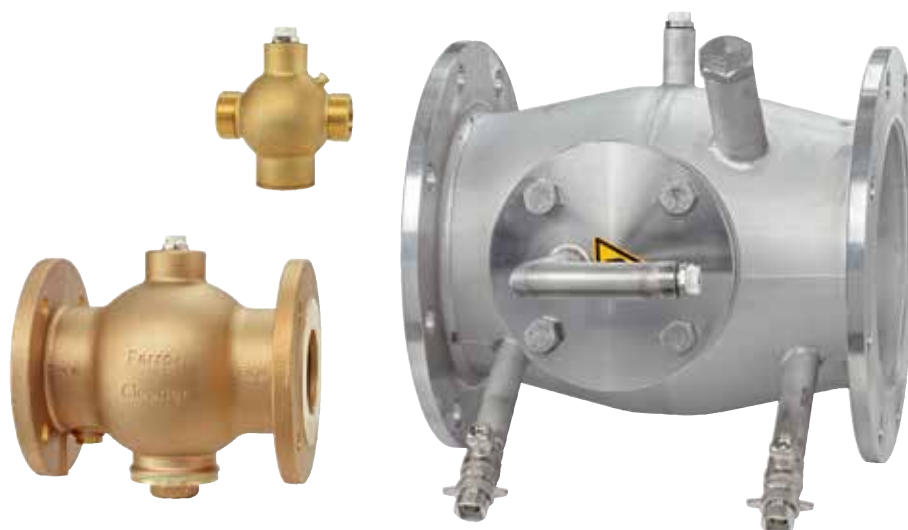


# Ferro-Cleaner



## Automatic air vents and separators Magnetic flux filter system

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# Ferro-Cleaner

The Ferro-Cleaner magnetic flux filter system protects heating and cooling systems against sludge and corrosion. It is simple, practical, effective and safe to install, operate and maintain. Vertical or horizontal, the Ferro-cleaner can be installed in any position without performance losses. Its compact design simplifies installation and effective use. Installing it will have a positive effect on the performance and service life of the system.

## Key features

- > **The filter system captures the finest magnetic particles**
- > **Can be installed in any position**
- > **Compact dimensions**



## Technical description

### Application:

Heating, solar and chilled water systems.

### Pressure loss:

< 5 kPa

### Pressure:

PN: 16 bar (Types 80 and 150)

PN: 10 bar (Types 273, 323, 406 and 606)

### Temperature:

Max. admissible temperature, TS: 110 °C

Min. admissible temperature, TSmin: -10 °C

### Media:

Non-aggressive and non-toxic system media.

Addition of antifreeze agent up to 50%.

### Material:

Type 80: Brass

Type 150: Gunmetal

Type 273, 323, 406 and 606: Stainless Steel (1.4307)

### Magnet:

Material: N 40 H Neodymium - Fe - Bor  
min. 1050 mT (Remanence)

Anode (optional): Magnesium

## Separation principle

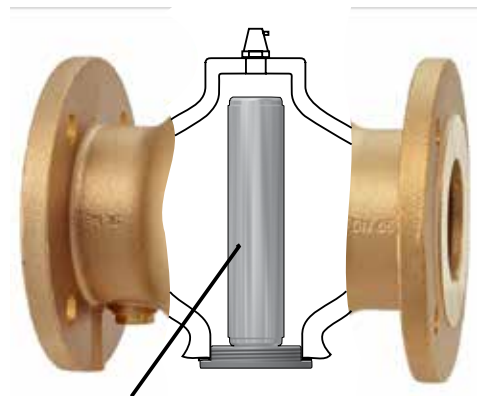
The Ferro-Cleaner filters the volume flow and removes the finest magnetite particles from the system water with a very strong magnet. The N 40 H Neodymium - Fe - Bor Magnet is one of the strongest permanent magnets on the market.

In this way, these particles are prevented from circulating further and damage or destroy components such as boilers, pumps, valves, plate exchangers, underfloor heating pipes, etc.

The maintenance process is simple and fast. For plants that have too high oxygen content due to diffusions, use of a magnesium sacrificial anode is recommended. The Ferro-Cleaner Type 80 is available either with a magnet or an anode. Types 150, 273, 323 and 606 are supplied with both magnet and anode. The anode binds the oxygen and thus stabilizes the corrosion process. As binding causes a loss in volume the anode must be replaced every 3-5 years.



Type 150



Magnet

## Sizing

For best results, the flow speed of the media inside the Ferro-Cleaner should not exceed 1 m/s.

$q_{nom}$ : recommended flow for 1 m/s speed in the pipe.

Pressure loss below 5 kPa for flow below  $q_{nom}$ .

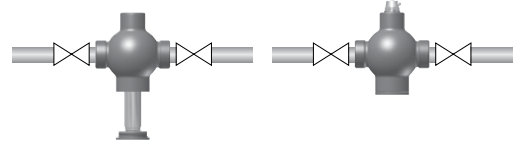
DN	$q_{nom}$ (l/h)	$q_{max}$ (l/h)
32	3 700	5 500
65	14 000	21 000
80	19 000	28 000
100	32 000	48 000
125	48 000	72 000
150	68 000	102 000
200	120 000	180 000
250	195 000	287 000
300	275 000	410 000
400	430 000	645 000
500	685 000	1 010 000

## Installation

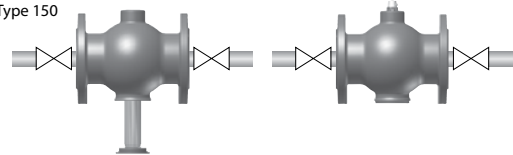
The Ferro-Cleaner can be mounted in any position in horizontal and vertical pipes. It must be taken care that there is enough space to dismount the magnet from the Ferro-Cleaner for cleaning.

It is recommended to mount a shut-off valve in front and after the Ferro-Cleaner to allow the cleaning. For the Typ 80 we recommend a screw connection with threaded nipple and Globo H ball valves with and without draining. See datasheet Globo H.

Type 80

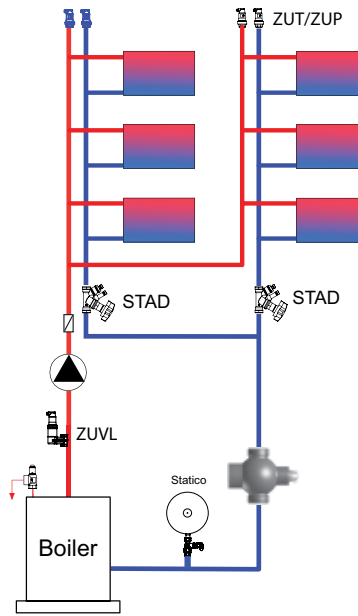
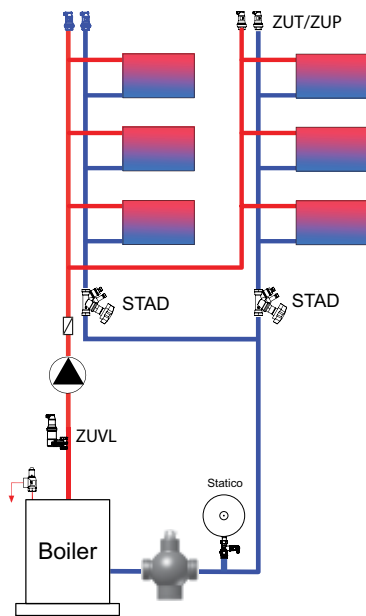


Type 150

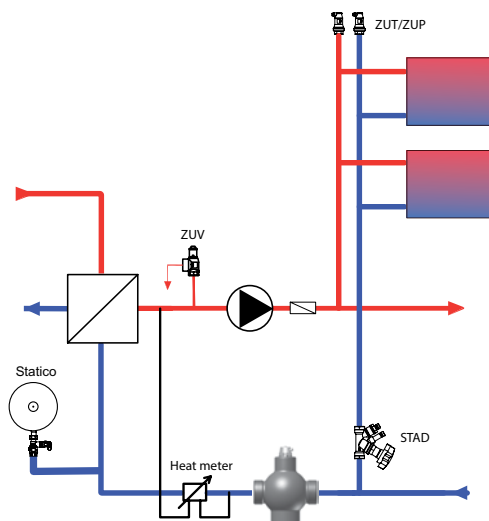


## Application examples

### System with boiler

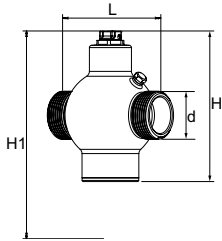


### System with heat exchanger



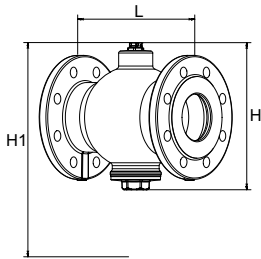
The Ferro-Cleaner magnet separator should be mounted either on the return in front of the unit to be protected or directly in front of the energy source. There is no minimum distance required to pipe bends etc. before or after the Ferro-Cleaner.

## Articles



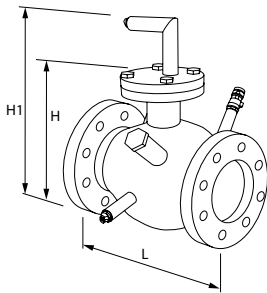
### Type 80 - PN 16 with magnet or anode

DN	d	H	H1	L	Weight [kg]	q <sub>max</sub> [l/h]	Number of magnets	EAN	Article No
<b>with Magnet</b>									
32	1 1/4	140	220	110	1,5	5 500	1	7640153570314	792 1100
<b>with Anode</b>									
32	1 1/4	140	220	110	1,2	5 500	-	7640153570321	792 1101



### Type 150 - PN 16 with magnet and anode

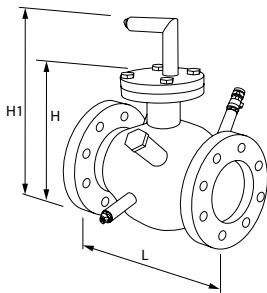
DN	H	H1	L	Weight [kg]	q <sub>max</sub> [l/h]	Number of magnets	EAN	Article No
65	230	350	232	12,5	21 000	1	7640153570338	792 1102
80	230	350	232	13,5	28 000	1	7640153570345	792 1103
100	230	350	232	14,0	48 000	1	7640153570352	792 1104



### Type 273 - PN 10 with magnet and anode

Flanges PN 16

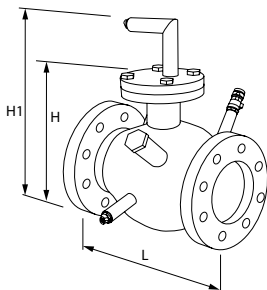
DN	H	H1	L	Weight [kg]	q <sub>max</sub> [l/h]	Number of magnets	EAN	Article No
125	500	800	375	22,0	72 000	1	7640153570369	792 1125
150	500	800	366	25,0	102 000	1	7640153570376	792 1126
200	500	800	366	30,0	180 000	1	7640153570383	792 1127



### Type 323 - PN 10 with magnet and anode

Flanges PN 16

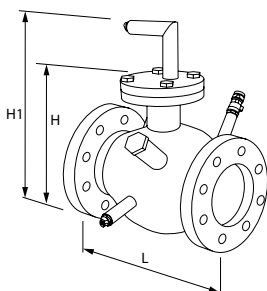
DN	H	H1	L	Weight [kg]	q <sub>max</sub> [l/h]	Number of magnets	EAN	Article No
250	550	850	416	45	287 000	2	7640153570390	792 1128



### Type 406 - PN 10 with magnet and anode

Flanges PN 16

DN	H	H1	L	Weight [kg]	q <sub>max</sub> [l/h]	Number of magnets	EAN	Article No
300	590	890	512	50	410 000	2	7640161626560	792 1112



### Type 606 - PN 10 with magnet and anode

Flanges PN 16

DN	H	H1	L	Weight [kg]	q <sub>nom</sub> [l/h]	Number of magnets	EAN	Article No
400	780	1100	634	80	645 000	3	7640161626577	792 1113
500	780	1100	634	100	1 010 000	3	7640161629141	792 1114

H1 - Space required for magnet removal

## Accessories

### Replacement anode

Type	DN	d	L	EAN	Article No
80	1 1/2	22	80	7640161632165	792 2001
150	1/2	18	60	7640153571007	792 2003
273-606	1	22	300	7640161626546	789 0919

Other PN and DN available on request

### Shut-off valves for Type 80 - see datasheet Globo H

Please use for 1 set: 2 screw connection and one ball valve each.

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