

**Climate
Control**

IMI Pneumatex

Zeparo ZT turnable



Automatic air vents and separators
Microbubble, dirt, combined

Zeparo ZT turnable

Comprehensive range of products for the venting and separation of microbubbles, sludge, air and magnetite in waterborne heating and cooling systems, and for the protection of key system components such as pumps, boilers, chillers and calorie meters. Unique variety of applications, exceptional modular structure. The improved Helistill separator provides sensational efficiency.

Key features

Cleans and protects the installation
No risk of clogging. Reduces maintenance and associated costs over system lifetime.

Magnet Accessory
Optimizes separation efficiency for sludge and even for finer magnetic particles. Can be ordered together with the Zeparo ZT or as a standalone accessory.

Custom fit
The separation chamber can be rotated 360 degrees, allowing the Zeparo ZT to be mounted in every position.

Easy cleaning
Drain can be removed without pressure, allowing for easy cleaning of the separator.



Technical description

Application:
Heating and chilled water systems.

Media:
Non-aggressive and non-toxic system media. Addition of antifreeze agent up to 50%.

Pressure:
Max. admissible pressure, PS: 10 bar
Min. admissible pressure, PS_{min}: 0 bar

Temperature:
Max. admissible temperature, TS: 110 °C
Min. admissible temperature, TS_{min}: -10 °C

Material:
Body: Brass
Inserts: PP 30% GF (plastic)
Clip: springsteel EN 10270-1 SH

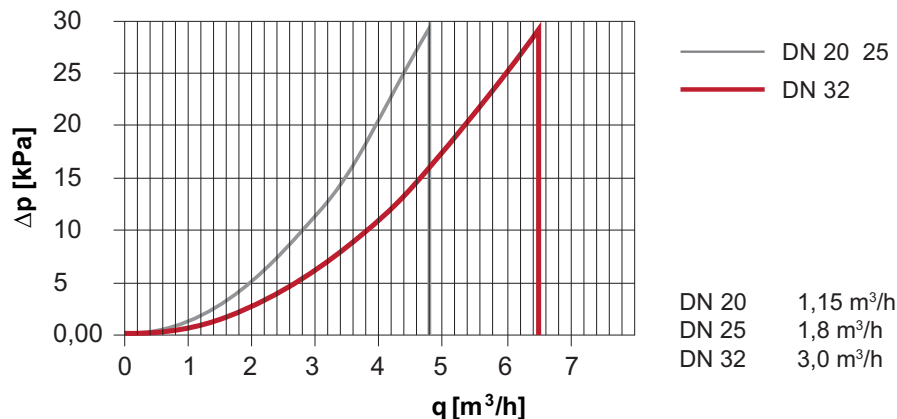
Transportation and storage:
In frostless, dry places.

Magnet and Thermal insulation:
Magnet: NdFeB with Ni-Cu-Ni cover/ protection against rust.
Insulation: Expanded polypropylene (EPP), anthracite.
Insulation value approx. 0.035 W/mk.
Fire rating B2 to DIN 4102 and E in accordance with EN 13501-1.
Max. temperature: 110 °C.
Min. temperature: 6-8 °C (above dew point).

Diagram

Approx. pressure loss (Δp) – Separator

Zeparo ZTV, ZTD, ZTM, ZTK, ZTKM
DN 20 - DN 32

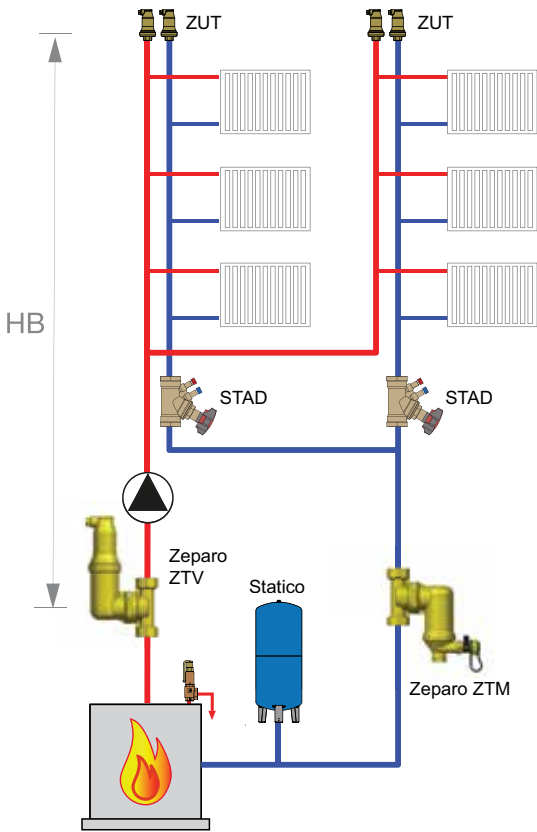


Zeparo DN 20-32 should only be used \leq qN

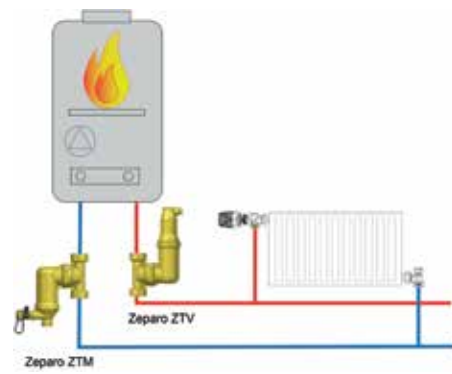
Application examples

The Zeparo ZT dirt separator should be mounted either on the return before 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 Zeparo ZT.

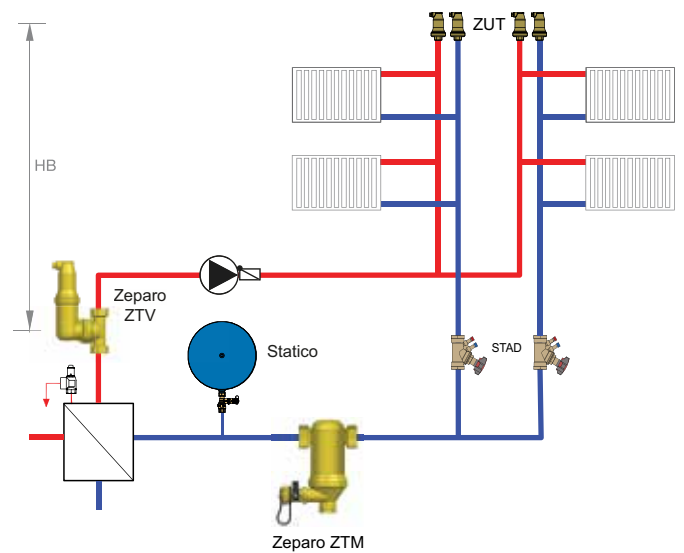
System with boiler



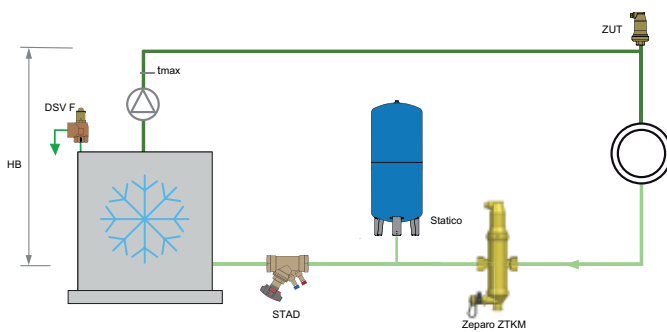
Wall-mounted gas boiler



System with heat exchanger



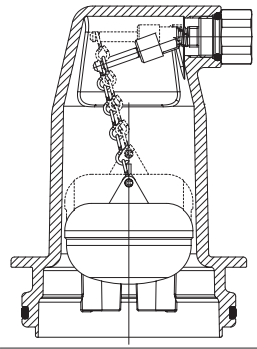
Chiller



Separation principle

The Zeparo ZT family is based on a variety of principles that guarantee its high separation efficiency.

Zeparo Leakfree Air Vent for air separation



Precision valve

With a modulating bleed mechanism for precise water level control without fluctuations.

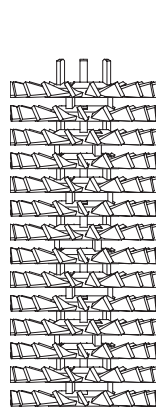
Protected vent hole

With recognisable ventilation. Extremely reliable, as exploding bubbles only cause minimal movement of the float. Even at a 10x pressure increase the water level does not reach the venting mechanism.

Special float design

For maximum stability, minimal vibration and optimal passage of gas bubbles. Fitted with a flexible suspension chain.

Zeparo Helistill dirt separator



Helistill separator

Optimal combination of all known separation principles

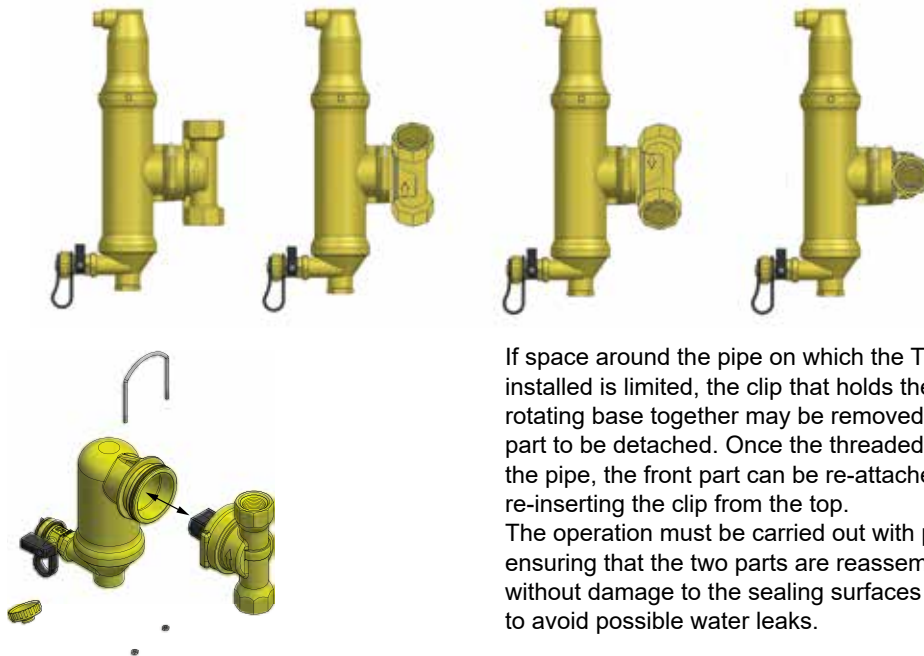
- Reduced flow speed
- Baffle
- Centrifugal effect

With baffles arranged in an upward helix, the insert offers an efficient surface against which the dirt particles can collide, thus losing kinetic energy, so that they can be effectively separated from the water and subsequently flushed into a container, away from flow turbulence. This principle guarantees an excellent degree of separation.

In the designation Helistill, 'heli' is short for helical and indicates the tangential dynamics in the separation process, whereas 'still' refers to the stillness required for the defined separation of gaseous and solid components.

Mounting

The separator can be turned 360 degrees. Please note that this must be done with the system fully depressurised and the media at room temperature, while also making sure the system is properly locked.

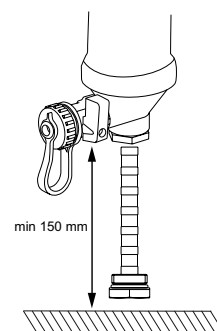


If space around the pipe on which the Turnable needs to be installed is limited, the clip that holds the separator and the rotating base together may be removed, allowing the front part to be detached. Once the threaded base is installed on the pipe, the front part can be re-attached and fixed again by re-inserting the clip from the top.

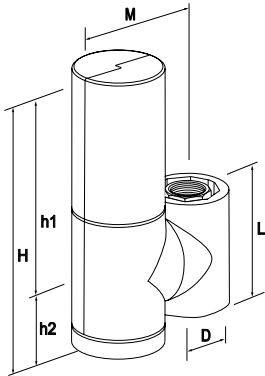
The operation must be carried out with particular care, ensuring that the two parts are reassembled correctly and without damage to the sealing surfaces or materials, in order to avoid possible water leaks.

Magnet and insulation

The strong magnets integrated in the separator's lower section provide extreme efficiency. The insulation comprises four parts, so that one can remain on the Zeparo ZT while the other part from the separation chamber is removed for extracting the magnetic rod and having deposits of dirt and magnetite rinsed out. The unit can be easily reinstalled after cleaning.



Zeparo ZTV - Separator for microbubbles, Vent version

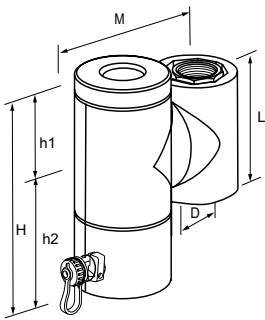


Zeparo ZTVI with insulation

Internal thread or smooth pipes (15, 18 and 22 mm) with additional KOMBI compression coupling. Horizontal and vertical installation.

Type	H	h1	h2	L	M	[kg]	D	qN [m³/h]	qNmax [m³/h]	EAN	Article No
ZTVI 20	268	194	74	110	122	1,97	G 3/4	1,15	2,3	7640161638914	303020-70501
ZTVI 25	268	194	74	110	122	2,07	G 1	1,8	3,8	7640161638938	303020-70601
ZTVI 32	268	194	74	110	122	2,11	G 1 1/4	3,0	7,2	7640161638952	303020-70701

Zeparo ZTM - Separator for sludge particles, Dirt version

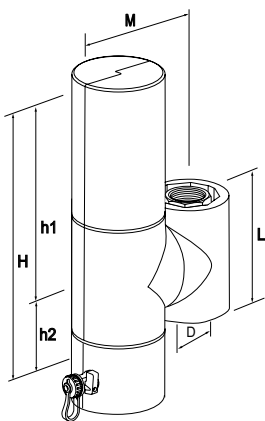


Zeparo ZTMI with magnetic action and insulation

Dry magnetic rod in pocket to increase magnetite capture. Internal thread or smooth pipes (15, 18 and 22 mm) with additional KOMBI compression coupling. Horizontal and vertical installation.

Type	H	h1	h2	L	M	[kg]	D	qN [m³/h]	qNmax [m³/h]	EAN	Article No
ZTMI 20	197	74	123	110	157	1,89	G 3/4	1,15	2,3	7640161639119	303041-70501
ZTMI 25	197	74	123	110	157	1,94	G 1	1,8	3,8	7640161639133	303041-70601
ZTMI 32	197	74	123	110	157	2,04	G 1 1/4	3,0	7,2	7640161639157	303041-70701

Zeparo ZTKM - Separator for microbubbles and sludge particles, Kombi version



Zeparo ZTKMI with insulation

Dry magnetic rod in pocket to increase magnetite capture. Internal thread or smooth pipes (15, 18 and 22 mm) with additional KOMBI compression coupling. Horizontal and vertical installation.

Type	H	h1	h2	L	M	[kg]	D	qN [m³/h]	qNmax [m³/h]	EAN	Article No
ZTKMI 20	317	194	123	110	157	2,8	G 3/4	1,15	2,3	7640161639218	303051-80501
ZTKMI 25	317	194	123	110	157	2,9	G 1	1,8	3,8	7640161639232	303051-80601
ZTKMI 32	317	194	123	110	157	3	G 1 1/4	3,0	7,2	7640161639256	303051-80701

qN = Nominal flow/flow rate
 qN_{max} = Maximum flow

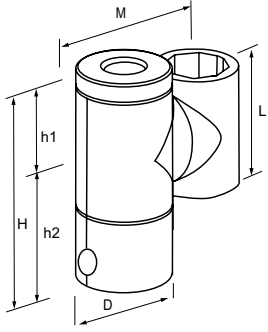
Accessories

Zeparo ZHU - Thermal insulation for Zeparo ZTD, ZTM, ZTK, ZTKM, ZTV

Heating water systems. Expanded polypropylene (EPP), anthracite.

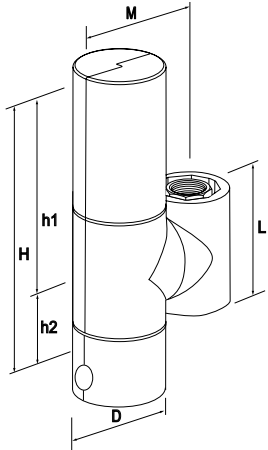
Insulation value approx. 0.035 W/mk. Fire rating B2 to DIN 4102.

Max. admissible temperature: 110 °C. Min. admissible temperature: 10 °C.



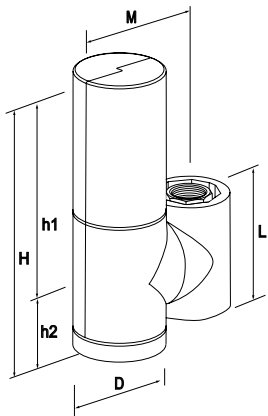
ZHU-ZTD/ZTM

Type	H	h1	h2	L	M	D	m [kg]	EAN	Article No
20 - 32	197	74	123	110	122	75	0,14	7640161639164	303041-90001



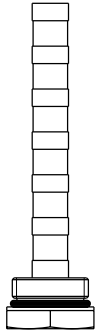
ZHU-ZTK/ZTKM

Type	H	h1	h2	L	M	D	m [kg]	EAN	Article No
20 - 32	317	194	123	110	122	75	0,2	7640161639171	303041-90002



ZHU-ZTV

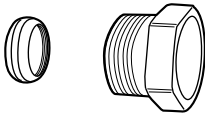
Type	H	h1	h2	L	M	D	m [kg]	EAN	Article No
20 - 32	268	194	74	110	122	75	0,17	7640161639188	303041-90003



Zeparo ZTMA magnetic rod

For retrofitting ZTD dirt separators to add magnetic function. Can be retrofitted without draining the system.

Type	S	[kg]	EAN	Article No
20 - 32	G 1/2	0,3	7640161637405	303041-90010



KOMBI compression coupling

Max.: 100°C

Thrust screw: AMETAL® or brass, nickel plated.

Cone: Brass

(For more information see catalogue leaflet KOMBI.)

Support bush should be used TA 320 for copper pipes and TA 321 for steel pipes, see catalogue leaflet KOMBI.

External pipe threads on thrust screw	For pipes, diameter	EAN	Article No
G3/4	15	7318792875403	53 235-117
G3/4	18	7318792875601	53 235-121
G3/4	22	7318792875700	53 235-123



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