

Climate
Control

IMI Pneumatex

Zeparo Aero



Automatic air vents and separators
Industrial microbubble separator
DN50 - DN300

Zeparo Aero

For applications of all sizes, the Zeparo range offers a reliable solution to issues with microbubbles in heating, solar, and chilled water systems. The Helistill separator makes these products incredibly efficient. The Zeparo Industrial have been specially developed to meet the high demands of large installations with the single objective of ensuring air-free operation.

Key features

Helicoidal microbubble separation

The helicoidal microbubble separation combines and expands the main known separation principles into an unrivalled overall concept. By reducing the flow, large bubbles are channelled directly upwards into the quiet zone to the deaerator. Microbubbles, on the other hand, adhere to the spirally arranged vanes, combine there to form larger bubbles and, after detaching from the vanes, can rise upwards to the deaerator in a central column with little turbulence.

Safe, durable and reliable venting

The automatic air vent ensures safe and dry discharge of the separated gas bubbles into the environment. The special arrangement and design of the air vent allows the float to work stably in a large, flow-calmed chamber. This keeps dirt and water away from the precision vent valve, even at high pressures.



Technical description

Application:

Heating, solar and chilled water systems.

Media:

Non-aggressive and non-toxic system media.
Ethylene or propylene glycol-based antifreeze up to 50%.

Pressure:

Max. admissible pressure, PS: 10 bar
Min. admissible pressure, PSmin: 0 bar

Temperature:

Max. admissible temperature, t_{Smax} : 110°C
Min. admissible temperature, t_{Smin} : -10°C

Material:

Steel. Color beryllium.
Helistil separator: Plastic PP - 30% glass fibre

Connection:

Flanges PN 16 according to EN 1092-1.

Standard:

Constructed according to PED 2014/68/EU.

Transportation and storage:

In frostless, dry places.

Volumes and Flows

DN	VN [l]	qN [m³/h]	q _{max} [m³/h]
50	11	6	24
65	11	11	40
80	23	18	56
100	24	33	95
125	70	58	148
150	73	93	216
200	175	184	375
250	370	336	575
300	430	535	815

VN = Nominal volume
 qN = Nominal flow/flow rate
 q_{max} = Maximum flow

Operating Limits

Hstm = static height required for microbubble separation at maximum system temperature upstream of the separator.

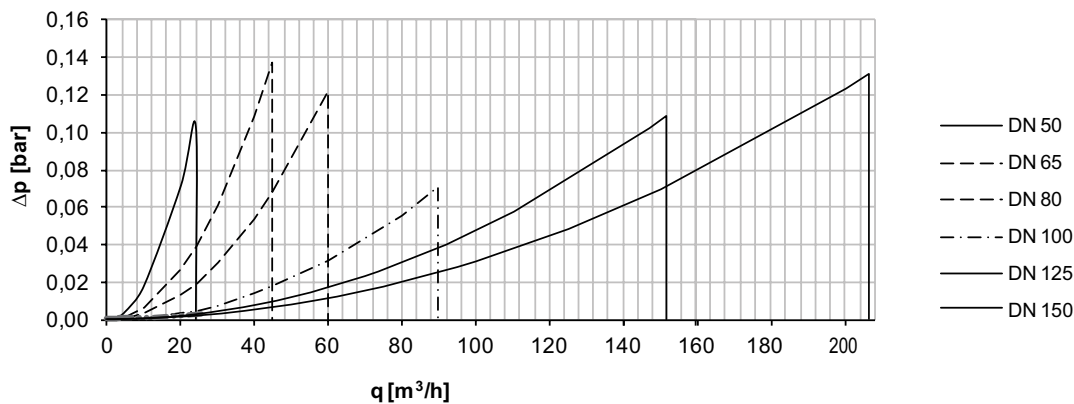
tmax °C	90	80	70	60	50	40	30	20	10
Hstm mWs	15,0	13,4	11,7	10,0	8,4	6,7	5,0	3,3	1,7

Diagrams

Approx. pressure loss (Δp) – Separator

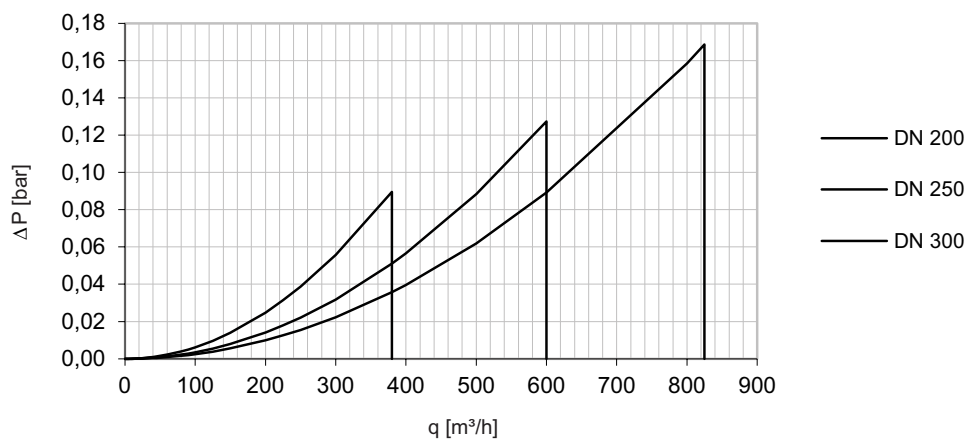
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DN 50 – DN 150



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DN 200 – DN 300



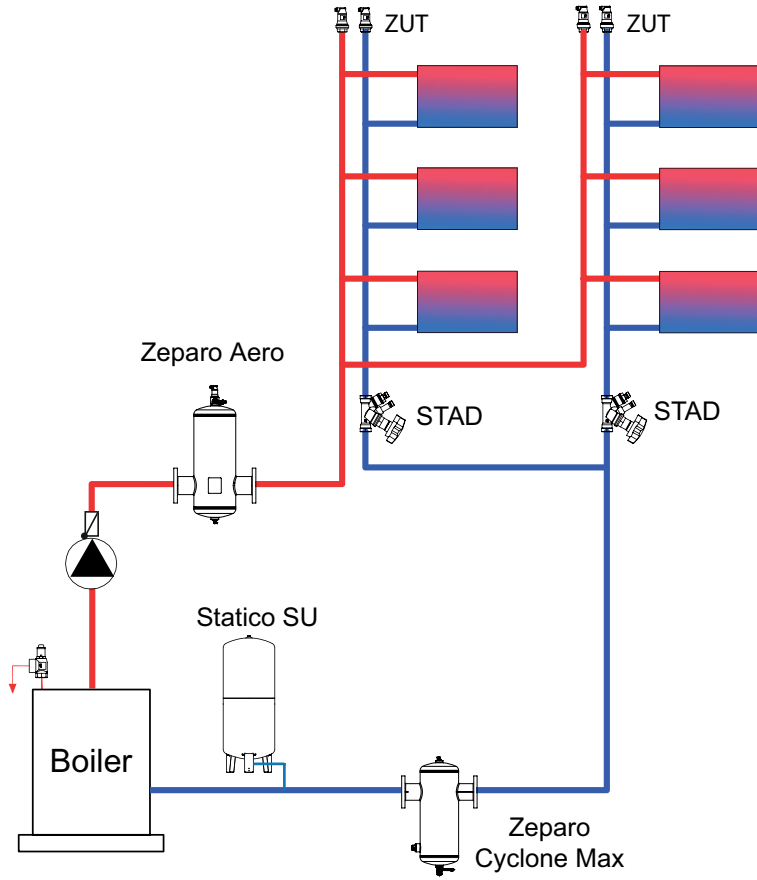
DN 200 – DN 300 operation is limited to:

Continuous flow ≤ qN

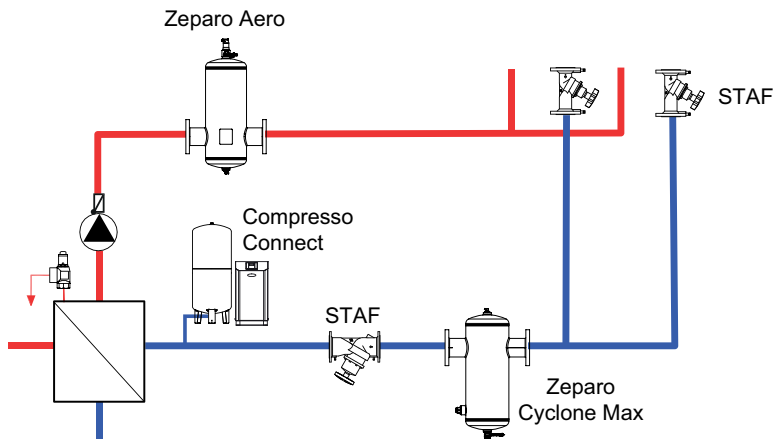
Intermittent flow ≤ q_{max}

Application examples

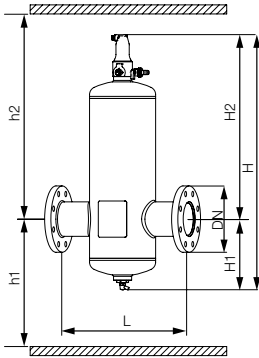
System with boiler



System with heat exchanger



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Zeparo Aero DN 50-150

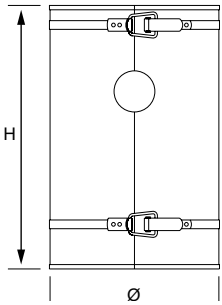
Separator for microbubbles. Industrial type.
Flanged connection. Horizontal installation.
Fitted with one air separator ZUTX and one drain ball valve.

Valve body PN 10. Flanges PN 16.

Type	DN	H	h1	h2	H1	H2	L	q_N [m ³ /h]	q_{max} [m ³ /h]	Weight [kg]	EAN	Article No
ZA 50	50	725	575	695	210	515	350	6	24	13	7640161646049	303041-30900
ZA 65	65	725	575	695	210	515	350	11	40	13	7640161646056	303041-31001
ZA 80	80	865	605	805	240	625	470	18	56	25	7640161646063	303041-31101
ZA 100	100	865	605	805	240	625	470	33	95	26	7640161646070	303041-31201
ZA 125	125	1085	665	965	300	785	635	58	148	72	7640161646087	303041-31301
ZA 150	150	1085	665	965	300	785	635	93	216	75	7640161646094	303041-31401
ZA 200	200	1365	740	1170	375	990	775	184	375	167	7640161646100	303041-31501
ZA 250	250	1605	795	1355	430	1175	890	336	575	242	7640161646117	303041-31601
ZA 300	300	1755	835	1465	470	1285	1005	535	815	277	7640161646124	303041-31701

Versions PN 16 and PN 25, applications TS > 160 °C and dimensions DN 350 - DN 600 are available upon request.

Accessories for separators



Zeparo ZCXAI

Thermal insulation for Zeparo ZCX and Zeparo Aero.
Heating water systems.

Type	DN	Ø	H	S*	Weight [kg]	EAN	Article No
ZCXAI 50/65	50/60	250	540	40	3,7	7640161646131	303040-70000
ZCXAI 80/100	80/100	300	680	40	7,3	7640161646148	303040-70001
ZCXAI 125/150	125/150	400	900	40	14,4	7640161646155	303040-70002
ZCXAI 200	200	535	1135	40	22,3	7640161646162	303040-70003
ZCXAI 250	250	690	1380	40	38,0	7640161646223	303040-70004
ZCXAI 300	300	690	1530	40	41,5	7640161646230	303040-70005

*) Insulation thickness

Additional dimensions available upon request.