



Duraflex

Ecotwin combined microbubble and sludge separator for continuous air and contaminant separation of water systems



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Automatic Heating
efficiency performance solutions



Microbubbles & Dirt Separators

duraflex **ecotwin**: combined microbubble and sludge separator for continuous contaminant separation of heating, chilled and condenser water systems

'ecotwin'

Ecotwin combined microbubble separator for free gas bubbles, dirt and sludge particles.

- Sludge removal is possible while the system is in operation
- Much faster hydraulic equalization after filling operations
- No closing valves or bypass lines required
- Minimal, constant pressure drop
- Complete range of products in terms of operating pressures and materials
- Removes circulating free air bubbles
- Also removes very small sludge particles above 5 μm (= 0.005 mm)
- Fully automatic continuous operation
- Maintenance takes just 5 seconds
- Connection diameter Rp $\frac{3}{4}$ to DN 300

Information in brief

The systematic design of air and sludge separators also makes sizing very easy. The size depends on the speed of the liquid flow, regardless of the variant you choose. See the graph or table for the maximum volumetric flow rate possible for a size.

Pressure loss graph

"ecovent", "ecotrap", "ecotwin"

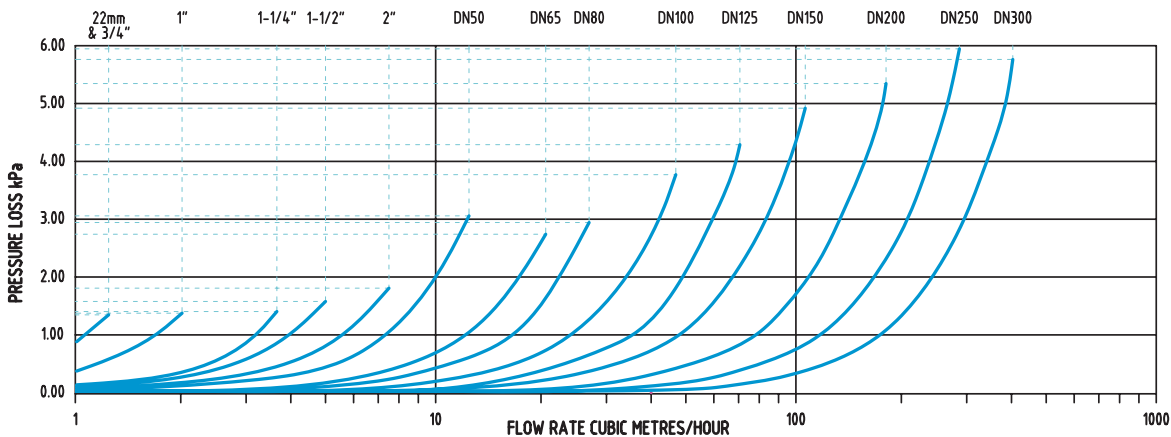


Table of c VFR values

Size	c VFR in m3/h	V* max m3/h
Rp $\frac{3}{4}$	10.7	1.25
Rp 1	17.2	2.00
Rp 1 $\frac{1}{4}$	31.8	3.70
Rp 1 $\frac{1}{2}$	40.0	5.00
Rp 2	56.1	7.50
DN 50	72.2	12.50
DN 65	121.7	20.00

Size	c VFR in m3/h	V* max m3/h
DN 80	158.5	27.00
DN 100	244.3	47.00
DN 125	351.3	72.00
DN 150	487.9	108.00
DN 200	780.6	180.00
DN 250	1,185.7	288.00
DN 300	1,696.4	405.00
DN 350	-	500.00
DN 400	-	650.00
DN 450	-	850.00
DN 500	-	1,060.00
DN 600	-	1,530.00

Conclusion

By using properly installed and maintained air and dirt separators the problems arising from air and system sludge can be virtually eradicated. Hence the wear on equipment will be reduced and so maintenance costs will be smaller. Apart from operational benefits commissioning and setting up of the systems is likely to be far more consistent. Oxygen corrosion inhibitors have been widely used to control corrosion, but by deaeration the root cause of corrosion, oxygen, is virtually eliminated.



duraflex **ecotwin**: combined microbubble and sludge separator specifications

Type	Connection	Vmax m3/hr	L mm	ø mm	H mm	h mm	Weight (kg)
Duraflex "ecotwin" BRASS ~ 110°C ~ 10 BAR							
TW 22	*22 mm	1.3	106	65	257		
TW 1	Rp 1	2	88	65	257		

* Compression coupling

Duraflex "ecotwin" STEEL WITH FLANGED CONNECTION ~ 110°C ~ 10 BAR							
TW 50	DN50/PN16	12.5	350	160	630	270	35
TW 65	DN65/PN16	20	350	160	630	270	36
TW 80	DN80/PN16	27	470	220	790	350	58
TW 100	DN100/PN16	47	480	220	790	350	60
TW 125	DN125/PN16	72	640	330	1050	480	113
TW 150	DN150/PN16	108	640	330	1050	480	116
TW 200	DN200/PN16	180	780	410	1150	530	200
TW 250	DN250/PN16	288	890	510	1320	620	362
TW 300	DN300/PN16	405	1010	610	2050	990	609
TW 350	DN350/PN16	500	1200	710	2040	1030	775
TW 400	DN400/PN16	650	1420	810	2350	1130	840
TW 450	DN450/PN16	850	1520	920	2640	1270	987
TW 500	DN500/PN16	1,060	1620	1020	2820	1400	1003
TW 600	DN600/PN16	1,530	-	-	-	-	-

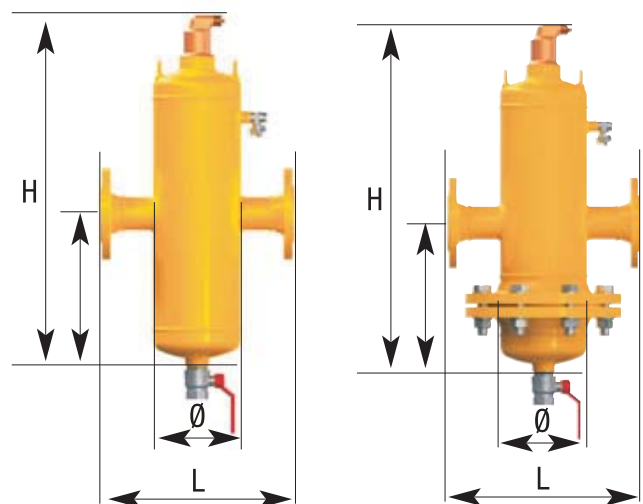
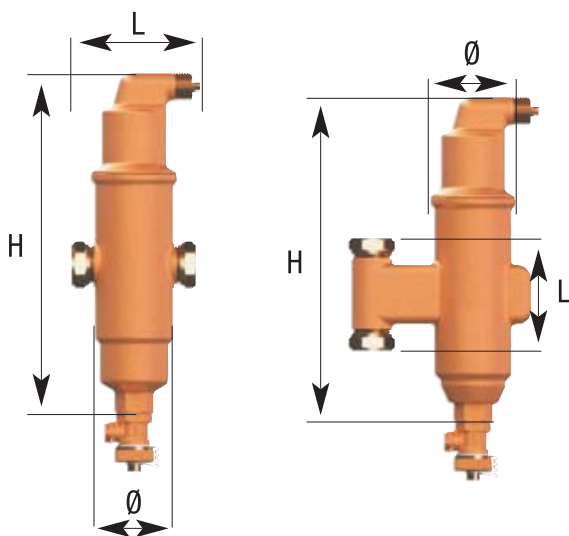
Duraflex "ecotwin" HI-FLOW STEEL WITH FLANGED CONNECTION ~ 110°C ~ 10 BAR							
TW 50 HF	DN50/PN16	25	350	160	910	410	43
TW 65 HF	DN65/PN16	40	350	160	910	410	44
TW 80 HF	DN80/PN16	54	470	220	1150	530	68
TW 100 HF	DN100/PN16	94	480	220	1150	530	70
TW 125 HF	DN125/PN16	144	640	330	1570	750	153
TW 150 HF	DN150/PN16	215	640	330	1570	750	156
TW 200 HF	DN200/PN16	360	890	510	1150	530	270
TW 250 HF	DN250/PN16	575	1010	610	1320	620	522
TW 300 HF	DN300/PN16	810	1010	710	2050	990	920
TW 350 HF	DN350/PN16	1,000	1420	810	2040	1030	990
TW 400 HF	DN400/PN16	1,300	1520	920	2350	1130	1120
TW 450 HF	DN450/PN16	1,700	1620	1020	2640	1270	1222
TW 500 HF	DN500/PN16	2,120	1720	1120	2820	1400	1417
TW 600 HF	DN600/PN16	3,000	-	-	-	-	-

Type	Connection	Vmax m3/hr	L mm	ø mm	H mm	h mm	Weight (kg)
Duraflex "ecotwin" VERTICAL ~ BRASS ~ 180°C ~ 10 BAR							
TW 22 V	*22 mm	1.3	97	65	246		

* Compression coupling

Duraflex "ecotwin" STEEL, FLANGED CONNECTION ~ 110°C ~ 10 BAR ~ INSPECTION FLANGE							
TW 50 R	DN50/PN16	12.5	350	160	630	270	35
TW 65 R	DN65/PN16	20	350	160	630	270	36
TW 80 R	DN80/PN16	27	470	220	790	350	58
TW 100 R	DN100/PN16	47	480	220	790	350	60
TW 125 R	DN125/PN16	72	640	330	1050	480	113
TW 150 R	DN150/PN16	108	640	330	1050	480	116
TW 200 R	DN200/PN16	180	780	410	1150	530	200
TW 250 R	DN250/PN16	288	890	510	1320	620	362
TW 300 R	DN300/PN16	405	1010	610	2050	990	609
TW 350 R	DN350/PN16	500	1200	710	2040	1030	775
TW 400 R	DN400/PN16	650	1420	810	2350	1130	840
TW 450 R	DN450/PN16	850	1520	920	2640	1270	987
TW 500 R	DN500/PN16	1,060	1620	1020	2820	1400	1003
TW 600 R	DN600/PN16	1,530	-	-	-	-	-

Duraflex "ecotwin" HI-FLOW STEEL, FLANGED CONN. ~ 110°C ~ 10 BAR ~ INSP FLANGE							
TW 50 R-HF	DN50/PN16	25	350	160	910	410	43
TW 65 R-HF	DN65/PN16	40	350	160	910	410	44
TW 80 R-HF	DN80/PN16	54	470	220	1150	530	68
TW 100 R-HF	DN100/PN16	94	480	220	1150	530	70
TW 125 R-HF	DN125/PN16	144	640	330	1570	750	153
TW 150 R-HF	DN150/PN16	215	640	330	1570	750	156
TW 200 R-HF	DN200/PN16	360	890	510	1150	530	270
TW 250 R-HF	DN250/PN16	575	1010	610	1320	620	522
TW 300 R-HF	DN300/PN16	810	1010	710	2050	990	920
TW 350 R-HF	DN350/PN16	1,000	1420	810	2040	1030	990
TW 400 R-HF	DN400/PN16	1,300	1520	920	2350	1130	1120
TW 450 R-HF	DN450/PN16	1,700	1620	1020	2640	1270	1222
TW 500 R-HF	DN500/PN16	2,120	1720	1120	2820	1400	1417
TW 600 R-HF	DN600/PN16	3,000	-	-	-	-	-



Other sizes, materials, pressures and temperatures are available on request.



More in the Duraflex range

Duraflex Forte

Duraflex Forte series:

- ▶ Expansion control of potable water applications
- ▶ Butyl diaphragm



Duraflex Cobalt

Duraflex Cobalt series:

- ▶ For potable water, water heating and hydro-pneumatic well applications
- ▶ Replaceable diaphragm



Duraflex OEM

Duraflex OEM series:

- ▶ flat vessels for wall hung boiler applications



Duraflex EcoFill refill unit

- ▶ Automatic water make-up
- ▶ Backflow prevention according to AS3500 National Plumbing and Drainage Code
- ▶ 100 kPa – 500 kPa
- ▶ Including break tank, pump and pressure switch



Duraflex Air and Dirt Separation

Duraflex 'EcoVent'

- ▶ Automatic air removal



Duraflex 'EcoTrap'

- ▶ Dirt and Sludge Separation



Duraflex 'EcoTwin'

- ▶ Combined microbubble and sludge separation



Duraflex EcoPress

Pump-controlled 'EcoPress' opens a total new dimension to pressure maintenance.

Duraflex 'EcoPress':

- ▶ Pressure control within the narrowest limits
- ▶ Central deaeration of system water content
- ▶ Automatic water make-up



Duraflex EcoVac



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