Automatic Air Vent

SYSCA®

Automatic Air Vent

Patent NO. ZL 2008 2 0001277.6
ZL 2008 3 0130241.3
ZL 2008 3 0130240.9
ZL 2010 3 0167441.3

Application

The automatic air vent is a good choice for you when

filling or draining a system

venting high point

eliminating air locks

Distinguishing features

Maintain free

Continuous uninterrupted air venting.

The air relief is resistant of polluting.

Fast removal of large air bubbles

The system is connected automatically with air when draining.

Deflating automatically saves maintenance costs.

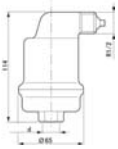
Three years guarantee

Note

Automatic air vent only removes free air. Please use Air Separator and Smart Degasser produced by BCSCO to remove micro-bubble in system

Special modles

· High pressure
· High temperature
· High pressure and high temperature
· With stainless steel jacket
· Mini model

Modle	Diameter of connection	Material	Maximum operating temperature (℃)	Operating pressure (MPa)	Maximum testing pressure (MPa)	weight (kg)	
YHDN15–1.0–110	DN15	Brass/Stainless Steel/Nickel Plating	110	1.0	1.5	0.66	
YHDN20–1.0–110	DN20	Stainless Steel	110	1.0	1.5	0.66	
YHDN25–1.0–110	DN25	Stainless Steel	110	1.0	1.5	0.66	
YHDN15–1.6–110	DN15	Brass	110	1.6	2.5	0.93	
YHDN15–2.5–110	DN15	Brass	110	2.5	4.0	0.93	

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Air Separator

Patent NO. ZL 2008 2 0004385.9
ZL 2008 3 0130236.2
ZL 2006 2 0138158.6
ZL 2010 3 0167436.2
ZL 2011 3 0040616.9
ZL 2010 2 0003901.3

Air in system water causes many problems.

Noisy pipes and other water pump noises are often considered as the signs of a running installation. Excessive pump noise in terminal units is considered normal.

However, serious problems will follow.

Corrosion, reduced efficiency, poorly heated or inadequately cooled rooms, accelerated component wear, and ongoing complaints.

Result

Unnecessary maintenance costs and a dissatisfied owner.

There is a solution!

A system without air-related problems is possible! There is a device that will keep your system free of air permanently with less maintenance, quiet operation and fewer costs!

The name

Air Separator

Distinguishing features

- Greatly reduced the start-up time after initial fill, no more venting required.
- Optimum heat transfer.
- Increased component life.
- No oxygen based corrosion or pump cavitations.
- Quiet operation.

Certificate of Chinese key new products for energy-conservation and environment-protection

Air Separator

Air Separator

Advantages to the specifier and owner.

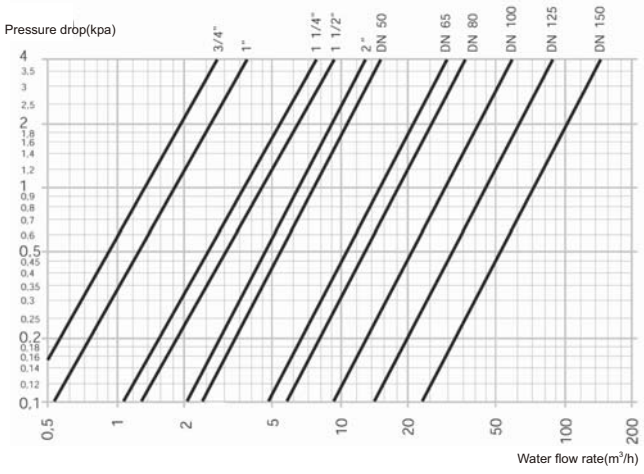
The Magictube makes the difference.

The Magictube is the core of the Air Separator. It allows the device to remove the free air and microbubbles in the system. The Magictube is made from soldered copper mesh which creates a relative still area of water. Even the smallest microbubbles have the opportunity to rise. The air collects in the air chamber and then is released from Automatic air vent, which makes minor pressure drop in Magictube. Floating dirt can be removed via the scum valve.

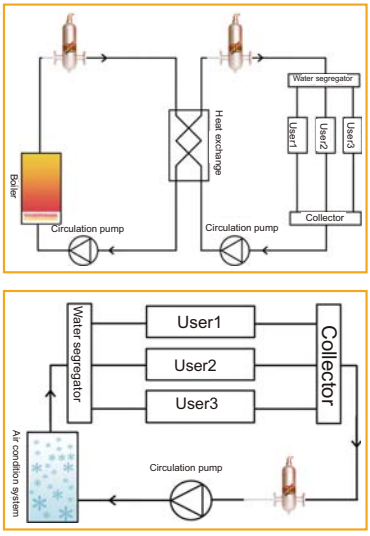
Install the device for optimum performance

The device must be installed at the hottest point in the system. For a heating system, installation should be in the outlet pipe of the boiler. For cooling system, the hottest point is on the water return pipe. The higher temperature is, the more easily microbubbles rise. The air releases based on Henry's Law, which states that air is released from water as the temperature increases or the pressure decreases. The Air Separator makes clever use of this very phenomenon and conducts a deaeration cycle through the system.

Pressure drop diagram

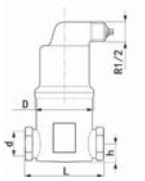


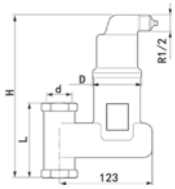
Installation diagram



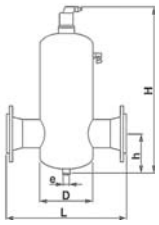
Modles and parameters

Modle	Diameter of Pipe	H (mm)	h (mm)	d (mm)	D (mm)	L (mm)	Water flow rate(m^3/h)	Weight (kg)
YH–CA–DN20	DN20	165	20	20	65	100	1.3	1.16
YH–CA–DN22	DN22	165	20	20	65	100	1.3	1.16
YH–CA–DN25	DN25	180	35	25	65	100	2	1.37
YH–CA–DN40	DN40	235	45	40	65	100	5	1.7
YH–CA–DN50M	DN50	246	50	50	88	135	7.5	4
YH–CA–DN65M	DN65	246	55	65	88	135	15	4
YH–CA–DN20V	DN20	205	–	20	65	85	1.25	1.8
YH–CA–DN22V	DN22	205	–	20	65	85	1.25	1.8
YH–CA–DN25V	DN25	205	–	25	65	85	2	1.8





Modle	Diameter of Pipe	H (mm)	h (mm)	D (mm)	e (mm)	L (mm)	Water flow rate (m^3/h)	Weight (kg)
YH–CA–DN50	DN50	510	140	160	DN20	350	12.5	24
YH–CA–DN50H	DN50	510	160	220	DN20	470	25	33
YH–CA–DN65	DN65	510	150	160	DN20	350	20	27
YH–CA–DN65H	DN65	510	150	220	DN20	470	40	29
YH–CA–DN80	DN80	640	170	220	DN25	470	27	39
YH–CA–DN80H	DN80	640	200	330	DN25	640	55	57
YH–CA–DN100	DN100	640	180	220	DN25	480	47	45
YH–CA–DN100H	DN100	640	210	330	DN25	640	95	61
YH–CA–DN125	DN125	830	220	330	DN25	640	72	75
YH–CA–DN125H	DN125	830	290	410	DN25	780	145	97
YH–CA–DN150	DN150	830	280	330	DN25	640	108	80
YH–CA–DN150H	DN150	830	300	410	DN25	780	220	114
YH–CA–DN200	DN200	980	330	410	DN25	780	180	121
YH–CA–DN200H	DN200	980	360	510	DN25	890	360	189
YH–CA–DN250	DN250	1220	380	510	DN50	890	288	230
YH–CA–DN250H	DN250	1220	400	610	DN50	1010	575	300
YH–CA–DN300	DN300	1580	430	610	DN50	1010	405	370
YH–CA–DN300H	DN300	1580	450	710	DN50	1200	810	390
YH–CA–DN350	DN350	1720	480	710	DN50	1200	500	481
YH–CA–DN350H	DN350	1720	500	810	DN50	1420	1030	563
YH–CA–DN400	DN400	1810	530	810	DN50	1420	650	607
YH–CA–DN400H	DN400	1810	550	920	DN50	1520	1350	670
YH–CA–DN450	DN450	2030	580	920	DN50	1520	850	772
YH–CA–DN450H	DN450	2030	610	1020	DN50	1620	1710	870
YH–CA–DN500	DN500	2170	630	1020	DN50	1620	1060	974
YH–CA–DN500H	DN500	2170	660	1120	DN50	1720	2120	1118



Note:

1. Other products with different diameters of pipe can be supplied by our company(under DN750 usually). Please contact us for detail parameters.
2. Products from DN20 to DN65 are with brass or stainless steel jacket, while DN80 and larger than that are with carbon steel jacket.
3. Please use high water flow rate products when rate is faster than 1.5m/s.
4. The pressure drop is minor than 0.01MPa.
5. The standard operating pressure of product with DN20 to DN65 diameter of pipe is 1.0MPa, maximum operating pressure is 1.5MPa, maximum operating temperature is 110℃. High pressure and high temperature products can be supplied by our company.(operating temperature is 180℃, and operating pressure is 1.6MPa or 2.5MPa)
6. The standard operating pressure of product with diameter of pipe bigger than DN50 is 1.0MPa, maximum operating pressure is 1.5MPa. Our company can also produce special model to meet client requirement.

Dirt Separator

SYSCA®

Patent NO. ZL 2008 2 0004386.3
ZL 2008 3 0130239.6
ZL 2006 2 0138158.6
ZL 2010 3 0167445.1
ZL 2011 3 0040617.3
ZL 2010 2 0003901.3

Dirt Separator

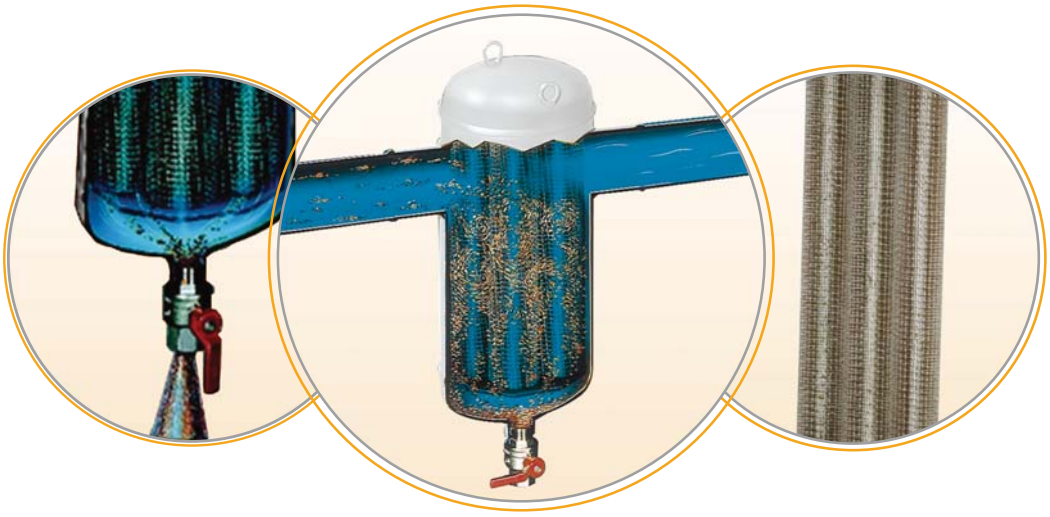
Clean system water throughout the life of installation

The life and efficiency of a heating or cooling system are greatly dependent on the quality of system water. Dirt can cause many problems such as increased component wear and frequent break down. Corrosion, pump wear and reduced efficiency result in increased maintenance, unnecessary costs and dissatisfied owners. Traditionally filters are able to overcome dirt problems, but require frequent maintenance and if not cleaned on a regular bases cause increased pressure drops and eventually blockage.

There is a solution
A system totally without dirt is possible.
There is an unique device which will remove all dirt down to the smallest particle, permanently. It works continuously and is maintenance free.

The name

Dirt Separators



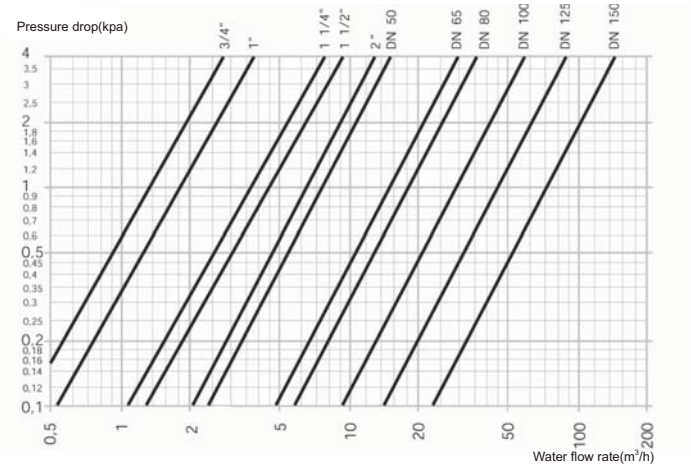
Advantages to the specifier and owner.
Distinguishing features

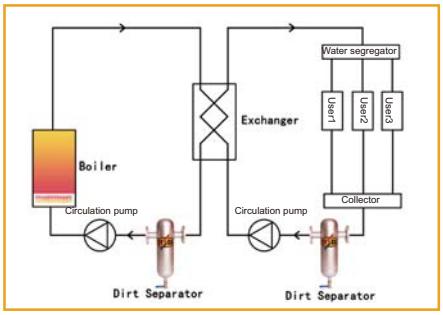
- Dirt can be flushed while system is operating.
- All dirt can be removed in one central location in the plant room virtually with no maintenance and no replacement filters.
- No by-pass or isolating valves required with minor pressure drop, always constant without blocking the flow.
- In addition to conventional dirt it also removes dirt particles of minimal size to micron.

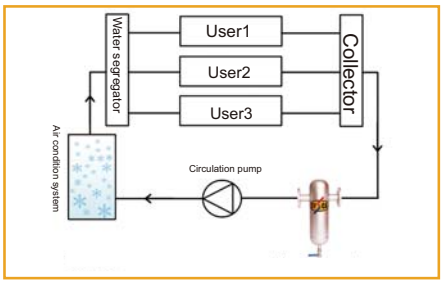
Install the device for optimum performance

The unique construction of the dirt separator allows for quick and easy dirt removal while system is operating. This offers time saving over traditionally filters which need to be taken apart for cleaning. All this is not required with our device, the system can remain operating and no replacement parts are required. The Magictube, which is the core of the Dirt separators, ensures that all particles sink to the bottom of the dirt collector. The device works continuously and will be not affected by the trapped dirt. Unlike traditionally filters, the pressure drop through the device remains constant.

Independent tests prove that even the smallest particles are removed. It is safe to say that all particles with a specific weight heavier than water are removed.





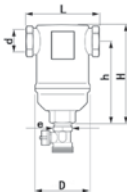


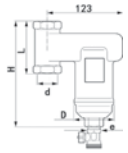
Dirt Separator

Dirt Separator

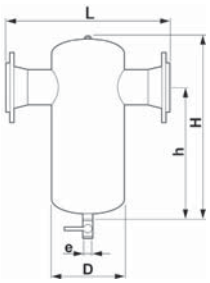
Modles and parameters

Modle	Diameter of Pipe	H (mm)	h (mm)	d (mm)	D (mm)	e (mm)	L (mm)	Water flow rate(m^3/h)	Weight (kg)
YH-CD-DN20	DN20	126	100	20	65	DN15	100	1.3	0.92
YH-CD-DN22	DN22	126	100	20	65	DN15	100	1.3	0.92
YH-CD-DN25	DN25	145	130	25	65	DN15	100	2	1.15
YH-CD-DN40	DN40	200	160	40	65	DN15	100	5	1.7
YH-CD-DN50M	DN50	246	196	50	88	DN15	135	7.5	4
YH-CD-DN65M	DN65	246	160	65	88	DN15	135	15	4
YH-CD-DN20V	DN20	170	–	20	65	DN15	85	1.25	1.75
YH-CD-DN22V	DN22	170	–	20	65	DN15	85	1.25	1.75
YH-CD-DN25V	DN25	170	–	25	65	DN15	85	2	1.75





Modle	Diameter of Pipe	H (mm)	h (mm)	D (mm)	e (mm)	L (mm)	Water flow rate(m^3/h)	Weight (kg)
YH-CD-DN50	DN50	440	320	160	DN25	350	12.5	23
YH-CD-DN50H	DN50	440	320	220	DN25	470	25	32
YH-CD-DN65	DN65	440	300	160	DN25	350	20	26
YH-CD-DN65H	DN65	440	300	220	DN25	470	40	28
YH-CD-DN80	DN80	570	410	220	DN25	470	27	38
YH-CD-DN80H	DN80	570	410	330	DN25	640	55	56
YH-CD-DN100	DN100	570	420	220	DN25	480	47	44
YH-CD-DN100H	DN100	570	420	330	DN25	640	95	60
YH-CD-DN125	DN125	760	510	330	DN25	640	72	74
YH-CD-DN125H	DN125	760	510	410	DN25	780	145	96
YH-CD-DN150	DN150	760	520	330	DN25	640	108	79
YH-CD-DN150H	DN150	760	520	410	DN25	780	220	113
YH-CD-DN200	DN200	910	620	410	DN25	780	180	120
YH-CD-DN200H	DN200	910	620	510	DN25	890	360	188
YH-CD-DN250	DN250	1150	800	510	DN50	890	288	229
YH-CD-DN250H	DN250	1150	800	610	DN50	1010	575	299
YH-CD-DN300	DN300	1510	1000	610	DN50	1010	405	369
YH-CD-DN300H	DN300	1510	1000	710	DN50	1200	810	389
YH-CD-DN350	DN350	1650	1100	710	DN50	1200	500	480
YH-CD-DN350H	DN350	1650	1100	810	DN50	1420	1030	562
YH-CD-DN400	DN400	1740	1300	810	DN50	1420	650	606
YH-CD-DN400H	DN400	1740	1300	920	DN50	1520	1350	669
YH-CD-DN450	DN450	1960	1450	920	DN50	1520	850	771
YH-CD-DN450H	DN450	1960	1450	1020	DN50	1620	1710	869
YH-CD-DN500	DN500	2100	1580	1020	DN50	1620	1060	973
YH-CD-DN500H	DN500	2100	1580	1120	DN50	1720	2120	1117



Note:

1. Other products with different diameters of pipe can be supplied by our company(under DN750 usually). Please contact us for detail parameters.
2. Products from DN20 to DN65 are with brass or stainless steel jacket, while DN80 and larger than that are with carbon steel jacket.
3. Please use high water flow rate products when rate is faster than 1.5m/s.
4. The pressure drop is minor than 0.01MPa.
5. The standard operating pressure of product with DN20 to DN65 diameter of pipe is 1.0MPa, maximum operating pressure is 1.5MPa, maximum operating temperature is 110℃. High pressure and high temperature products can be supplied by our company.(operating temperature is 180℃, and operating pressure is 1.6MPa or 2.5MPa)
6. The standard operating pressure of product with diameter of pipe bigger than DN50 is 1.0MPa, maximum operating pressure is 1.5MPa. Our company can also produce special model to meet client requirement.

SYSCA®

Combined Air and Dirt Separator

Patent NO. ZL 2006 2 0138158.6

ZL 2011 3 0040618.8

Air and dirt free system water through a single device.

The life and efficiency of a heating or cooling system are greatly dependent on the quality of the system water. Air and dirt problems cause frequent breakdowns and increased customer complaints. Corrosion, cavitation, and component wear are consequences of air-saturated, dirty system water.

Recurring problems and increased maintenance results in unnecessary costs and dissatisfied owners.

There is a solution

A system without air and dirt is possible! There is an unique dual-purpose device that will remove air and dirt down to the smallest particle, keeping the system free from air and dirt, permanently. It works differently over traditional filters, with less maintenance and fewer costs.

The name：**Combined Air and Dirt Separator**

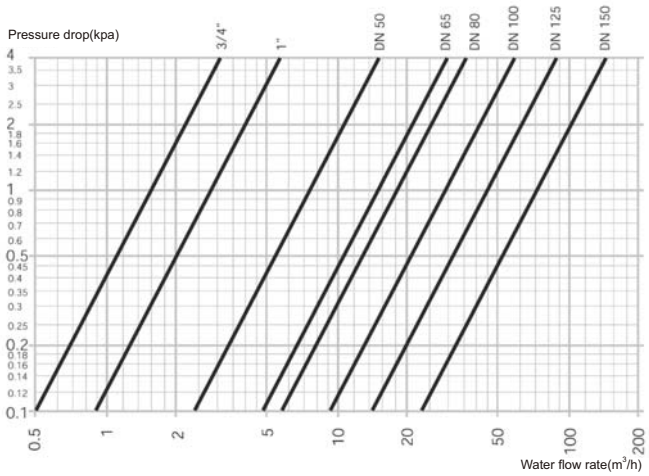
Combined Air and Dirt Separator

Combined Air and Dirt Separator

Distinguishing features

- Water throughout the device can protect system to greatest extent
- Improved efficiency
- Reduce the risk of system failure
- Increased component life
- Reduced oxygen-based corrosion and pump cavitation
- Quiet operation
- No bypass, isolating valves or replacement filters to clog and reduce pressure drop
- Dirt can be flushed while system is operating

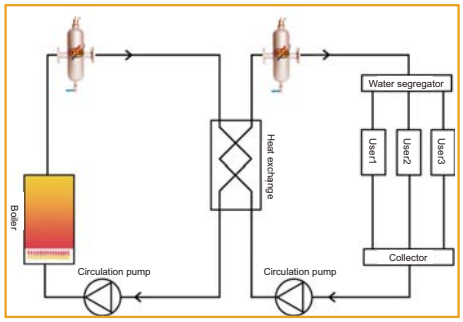
Pressure drop diagram

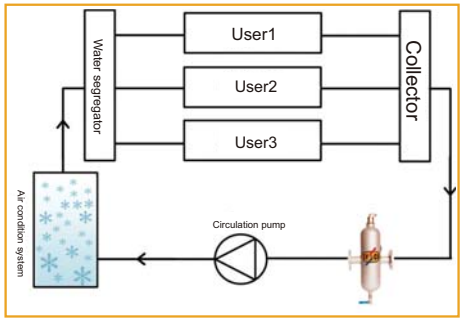


Install the device for optimum performance

Microbubble is mostly released when system temperature is to the highest base on Henry's Law, which states that air is released from water as the temperature increases or the pressure decreases. For this reason, the Microbubble deaerators and dirt separators are typically installed in the hottest point in the system. For a heating system, installation should be in the outlet pipe of the boiler. For cooling system, the hottest point is on the water return pipe. When for dirt clean use, the most important conditions are the separation performance of microbubble, not the location of device installation.

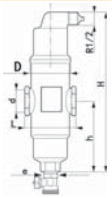
Installation diagram



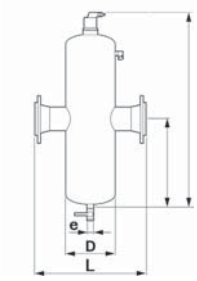


Modles and parameters

Modle	Diameter of Pipe	H (mm)	h (mm)	d (mm)	D (mm)	e (mm)	L (mm)	Water flow rate(m^3/h)	Weight (kg)
YH-CAD-DN20	DN20	265	112	20	65	DN15	100	1.3	1.7
YH-CAD-DN25	DN25	265	112	25	65	DN15	100	2	1.7
YH-CAD-DN40	DN40	265	112	40	65	DN15	100	5	1.7
YH-CAD-DN50M	DN50	332	137	50	88	DN15	135	7.5	6



Modle	Diameter of Pipe	H (mm)	h (mm)	D (mm)	e (mm)	L (mm)	Water flow rate(m^3/h)	Weight (kg)
YH-CAD-DN50	DN50	630	270	160	DN25	350	12.5	22
YH-CAD-DN50H	DN50	910	410	160	DN25	350	25	37
YH-CAD-DN65	DN65	630	270	160	DN25	350	20	25
YH-CAD-DN65H	DN65	910	410	160	DN25	350	40	39
YH-CAD-DN80	DN80	790	350	220	DN25	470	27	58
YH-CAD-DN80H	DN80	1150	530	220	DN25	470	55	68
YH-CAD-DN100	DN100	790	350	220	DN25	480	47	60
YH-CAD-DN100H	DN100	1150	530	220	DN25	480	95	70
YH-CAD-DN125	DN125	1050	480	330	DN25	640	72	95
YH-CAD-DN125H	DN125	1570	750	330	DN25	640	145	153
YH-CAD-DN150	DN150	1050	480	330	DN25	640	108	116
YH-CAD-DN150H	DN150	1570	750	330	DN25	640	220	156
YH-CAD-DN200	DN200	1150	530	410	DN25	780	180	177
YH-CAD-DN200H	DN200	1150	530	510	DN25	890	360	223
YH-CAD-DN250	DN250	1320	620	510	DN50	890	288	232
YH-CAD-DN250H	DN250	1320	620	610	DN50	1010	575	315
YH-CAD-DN300	DN300	2050	990	610	DN50	1010	405	420
YH-CAD-DN300H	DN300	2050	990	710	DN50	1200	810	526
YH-CAD-DN350	DN350	2040	1030	710	DN50	1200	500	556
YH-CAD-DN350H	DN350	2040	1030	810	DN50	1420	1030	658
YH-CAD-DN400	DN400	2350	1130	810	DN50	1420	650	765
YH-CAD-DN400H	DN400	2350	1130	920	DN50	1520	1350	855
YH-CAD-DN450	DN450	2640	1270	920	DN50	1520	850	960
YH-CAD-DN450H	DN450	2640	1270	1020	DN50	1620	1710	1079
YH-CAD-DN500	DN500	2820	1400	1020	DN50	1620	1060	1182
YH-CAD-DN500H	DN500	2820	1400	1120	DN50	1720	2120	1320



Note:

1. Other products with different diameters of pipe can be supplied by our company(under DN750 usually). Please contact us for detail parameters.
2. Products from DN20 to DN25 are with brass jacket, while DN50 and larger than that are with carbon steel jacket.
3. Please use high water flow rate products when rate is faster than 1.5m/s.
4. The pressure drop is minor than 0.01MPa.
5. The standard operating pressure of product with DN20 to DN25 diameter of pipe is 1.0MPa, maximum pressure is 1.5MPa, maximum operating temperature is 110℃. High pressure and high temperature products can be supplied by our company.(operating temperature is 180℃, and operating pressure is 1.6MPa or 2.5MPa)
6. The standard operating pressure of product with diameter of pipe bigger than DN50 is 1.0MPa, maximum pressure is 1.5MPa. Our company can also produce special model to meet client requirement.

Combined Air and Dirt Separator

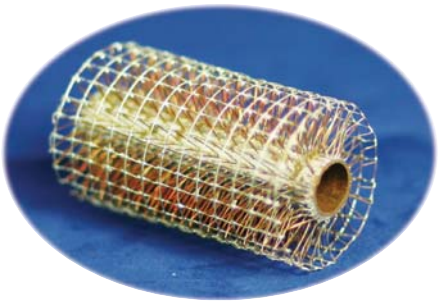
Solar

SYSCA®

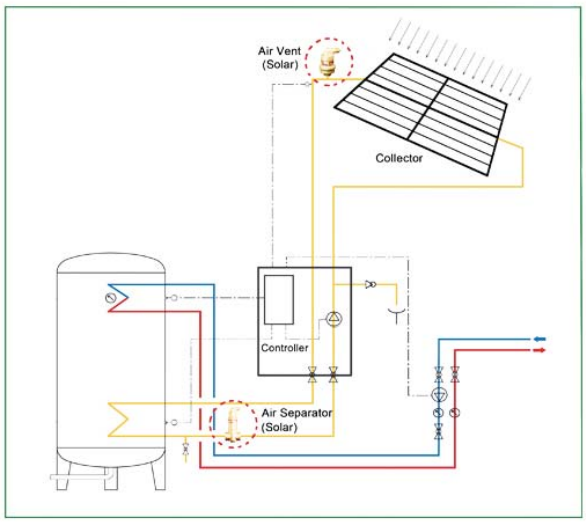
Patent NO. ZL 2008 2 0001277.6
ZL 2008 3 0130241.3
ZL 2008 3 0130240.9
ZL 2010 3 0167441.3

Air vents & Air separators
For solar system

- For solar water heating systems.
- Brass body.
- Patent Honeycomb filter net inside.
- Remove air and micro-bubbles from water fast.
- High efficiency degassing.
- No leakage.
- Working temperature:-30~180℃/-40~260℃.
- Max working pressure:10 bar.(high pressure also availible)
- Safe and simple installation.
- Three-year guarantee.
- High quality products with reasonable price.



Patent NO. ZL 2006 2 0138158.6



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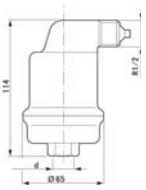
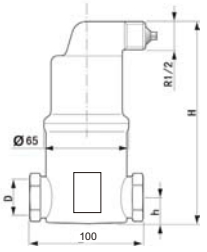
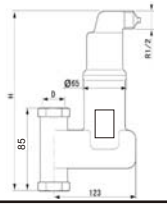
Modles and parameters

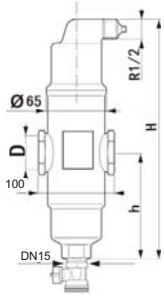
Automatic Air Vent(Solar)

Modle	Diameter of connection	Material	Maximum operating temperature (℃)	Operating pressure (MPa)	Weight (kg)	
YHDN15–1.0–180	DN15	Brass/Stainless Steel	–30 ~ 180	1.0	0.66	
YHDN20–1.0–180	DN20	Stainless Steel	–30 ~ 180	1.0	0..60	
YHDN25–1.0–180	DN25	Stainless Steel	–30 ~ 180	1.0	0.66	
YHDN15–1.0–260	DN15	Brass	–40 ~ 260	1.0	0.66	
YHDN20–1.0–260	DN20	Stainless Steel	–40 ~ 260	1.0	0.60	
YHDN25–1.0–260	DN25	Stainless Steel	–40 ~ 260	1.0	0.66	

Air Separator(Solar)

Modle	Diameter of connection	H (mm)	h (mm)	Material	Maximum operating temperature (℃)	Operating pressure (MPa)	Weight (kg)	
YH–CA–DN20–1.0–180	DN20	165	20	Brass	–30 ~ 180	1.0	1.22	
YH–CA–DN22–1.0–180	DN22	165	20	Brass	–30 ~ 180	1.0	1.36	
YH–CA–DN25–1.0–180	DN25	180	35	Brass	–30 ~ 180	1.0	1.42	
YH–CA–DN40–1.0–180	DN40	235	45	Brass	–30 ~ 180	1.0	1.58	
YH–CA–DN20–1.0–260	DN20	165	20	Brass	–40 ~ 260	1.0	1.22	
YH–CA–DN22–1.0–260	DN22	165	20	Brass	–40 ~ 260	1.0	1.36	
YH–CA–DN25–1.0–260	DN25	180	35	Brass	–40 ~ 260	1.0	1.42	
YH–CA–DN40–1.0–260	DN40	235	45	Brass	–40 ~ 260	1.0	1.58	
YH–CA–DN20V–1.0–180	DN20	205	–	Brass	–30 ~ 180	1.0	1.84	
YH–CA–DN22V–1.0–180	DN22	205	–	Brass	–30 ~ 180	1.0	1.76	
YH–CA–DN25V–1.0–180	DN25	205	–	Brass	–30 ~ 180	1.0	1.90	
YH–CA–DN20V–1.0–260	DN20	205	–	Brass	–40 ~ 260	1.0	1.84	
YH–CA–DN22V–1.0–260	DN22	205	–	Brass	–40 ~ 260	1.0	1.76	
YH–CA–DN25V–1.0–260	DN25	205	–	Brass	–40 ~ 260	1.0	1.90	

Combined Air and Dirt Separator(Solar)

Modle	Diameter of connection	H (mm)	h (mm)	Material	Maximum operating temperature (℃)	Operating pressure (MPa)	Weight (kg)	
YH-CAD-DN20-1.0-180	DN20	265	112	Brass	-30～180	1.0	1.7	
YH-CAD-DN25-1.0-180	DN25	265	112	Brass	-30～180	1.0	1.7	
YH-CAD-DN20-1.0-260	DN20	265	112	Brass	-40～260	1.0	1.7	
YH-CAD-DN25-1.0-260	DN25	265	112	Brass	-40～260	1.0	1.7	

Solar