

ART.2164



Hydraulic separator complete with flanged connections, automatic air vent valve with shut-off valve, drain cock and anti-condensation insulation.

ART.2236-2241



Dirt separator for heating systems complete with flanged connections, drain cock and anti-condensation insulation.

Art.2236 Suitable for magnetic inserts.
Art.2241 Complete with magnetic inserts.

ART.2258



Deaerator for heating systems complete with flanged connections, swivelling air vent valve with shut-off valve, manual air vent valve, additional 1" connection and anti-condensation insulation.

1

DESCRIPTION

Hydraulic separator

The FAR Hydraulic Separator is designed for installation in heating and cooling systems requiring a distribution manifold and equipped with 2 or more pumps. Its function is to separate the primary circuit coming from the boiler, or "packaged chiller" from the secondary circuit which distributes the heating or cooling fluid. The Hydraulic Separator operates as a by-pass between delivery and return circuits, avoiding any kind of interference to either primary or secondary circuit pumps and thus ensuring proper functioning of each and every circuit.

Moreover FAR separator is equipped with a mesh type strainer. Any impurities, including bubbles in the delivery water, can thus be removed from the system, protecting the pumps against any eventual damage.

Dirt separator

The FAR dirt separator, installed in cooling and heating systems, is designed to filter out any impurities in the water supply, thus improving heat exchange and ensuring good thermal fluid circulation. Any impurities (such as rust or welding debris) drop down into an appropriate seating where, once settled, they can no longer return to the system.

The dirt separator **art.2241** with magnetic inserts is ideal for systems with a high concentration of iron particles, deposits or debris caused by corrosion.

Deaerator

The FAR deaerator is used in heating and cooling systems to remove air bubbles from the circuit. Air may be present in the circuit for several reasons:

- It may already be present during the filling phase and not properly discharged.
- It may be released from the water as the temperature increases.
- Air may be released with a decrease in pressure, such as might occur near pump aspirations or narrow sections of pipework.

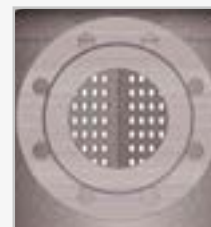
The presence of air within the system can create corrosion in the pipes internal parts and lead to the malfunctioning or the damaging of components like the circulators. It can also reduce the radiators energy efficiency and create noise in the system.

FLANGES

The raised face height flanges of components for FAR central heating systems are made to the requirements of EN 1092-1 PN16.

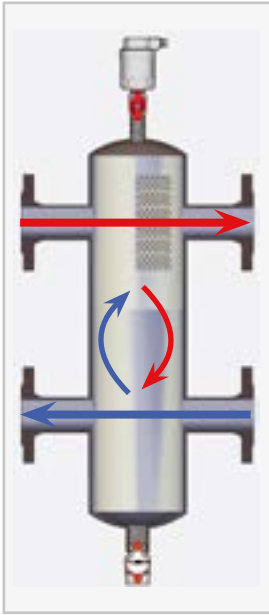
The DN50 flanges provide 4 fixing holes, while for sizes DN65, DN80, DN100, DN125 and DN150 there are 8 fixing holes.

DN50

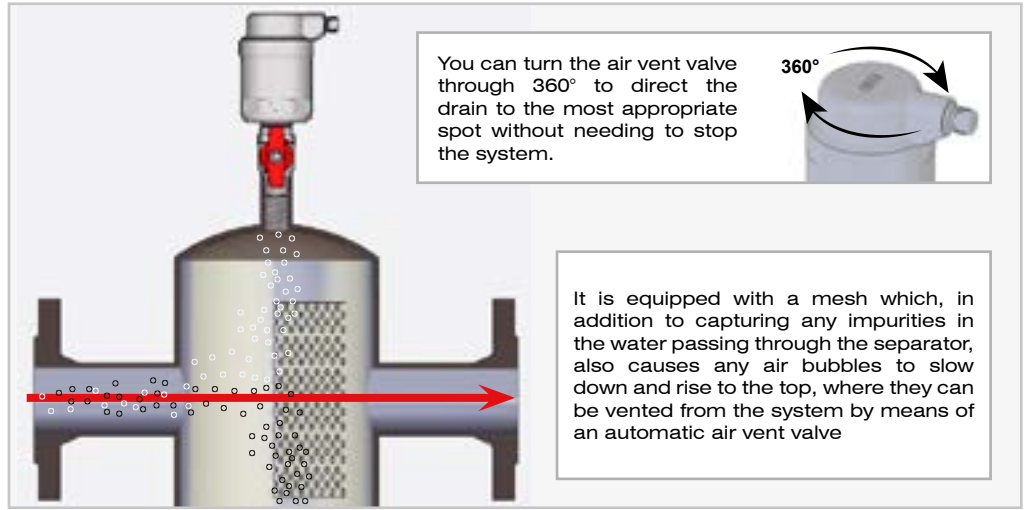

 DN65-DN80-DN100
DN125-DN150


2 WORKING PRINCIPLE AND CONSTRUCTION DETAILS

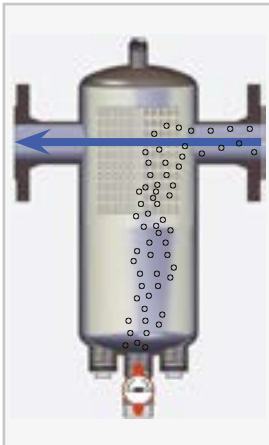
Hydraulic separator



The hydraulic separator maintains a virtually zero pressure drop between the supply and return manifolds, thus avoiding any chance of flow direction contrary to design requirements. Depending on the system, the hydraulic separator ensures the required flow is always maintained to the secondary circuit - bypassing the water in one direction or another according to system requirements.



Dirt separator



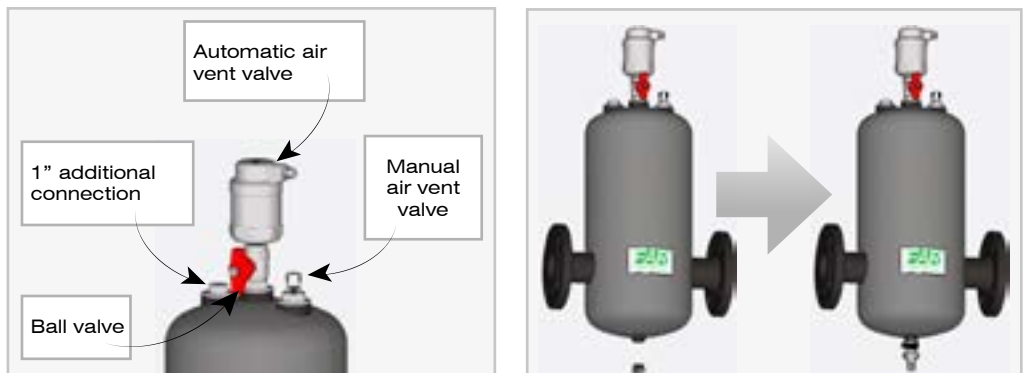
A threaded connection with a plug is located on top of the dirt separator, so that an automatic air vent valve can be installed to make the gas purging easier. The FAR automatic air vent valve can be installed simply by removing the upper plug and screwing the valve onto the dirt separator. All versions of the dirt separator are available with 1/2" upper connection.



Deaerator



A 1/2" threaded connection with a plug is located on the bottom part of the deaerator, so that a drain cock can be installed (Art.3439).

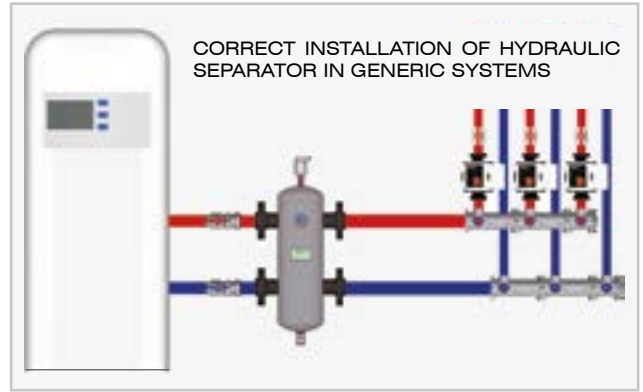
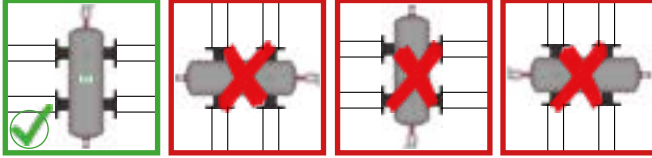


3 INSTALLATION

Hydraulic separator

The separator is designed for installation in heating and cooling systems requiring a main pump and two or more secondary distribution pumps. For safe connection of the components we recommend installation on support legs.

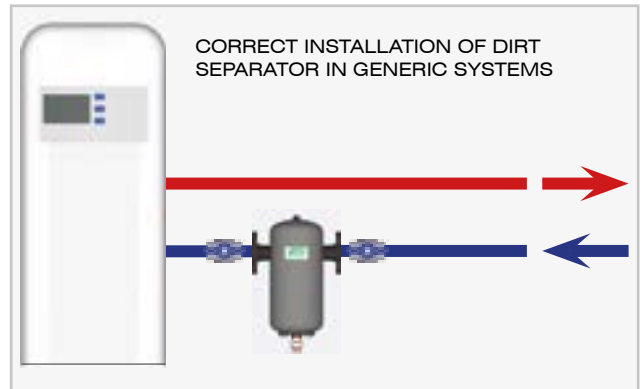
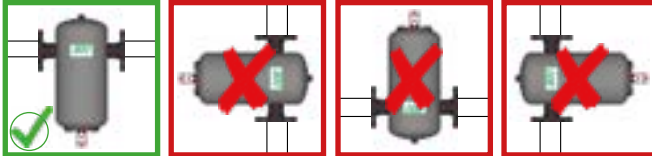
Warning! For proper operation the hydraulic separator should always be installed in a vertical position.



Dirt separator

It is recommended that the dirt separator is installed on the return line before the boiler, so as to stop the impurities which could damage boiler and pump. We also advise installation of shut-off valves for maintenance operations.

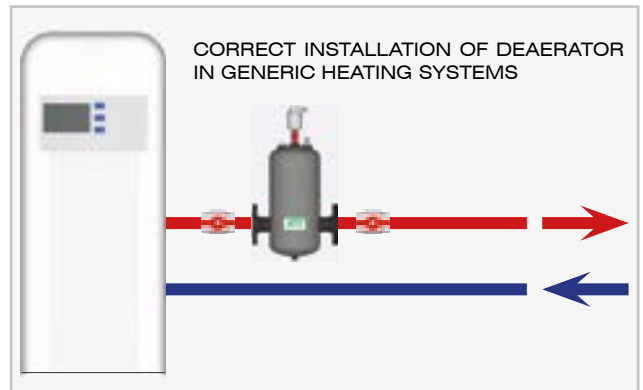
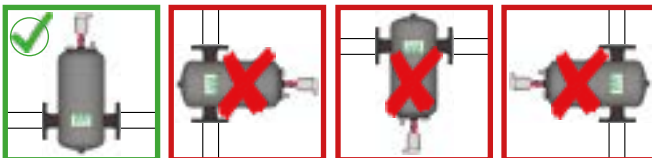
Warning! For proper operation the dirt separator should always be installed in a vertical position.



Deaerator

The ideal deaerator position in the heating system is between two shut-off valves, on the supply pipe just after the boiler, where the flow temperature is higher.

Warning! For proper operation the deaerator should always be installed in a vertical position.



Warning! In cooling systems the deaerator should be installed on the return pipe.

4 MAINTENANCE

The dirt separator and hydraulic separator require a periodical cleaning, in order to remove any impurities deposited.

Open the drain cock located in the lower section and drain the impurities.



In the event of leakage from the air vent valve it is necessary to clean or replace it. Once the ball valve is closed, the air vent valve can be unscrewed by means of a 4mm Allen wrench. Unscrew the stem to proceed with cleaning or replacement.

For correct insertion of the stem on the float, turn the air vent valve upside down and screw on the stem.



Dirt separator with magnetic inserts art.2241

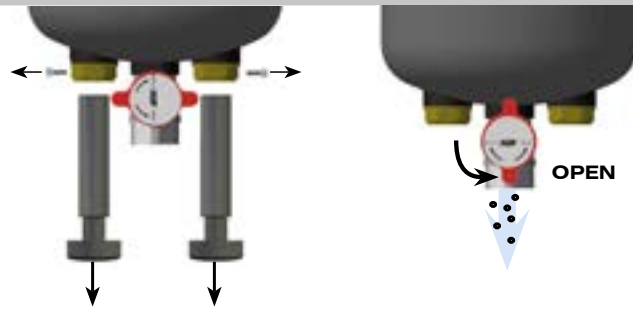


NB: Because of the magnetic inserts, anybody fitted with a pacemaker is advised to maintain a safe distance during operation and maintenance. Attention should also be paid to the use of electronic equipment near magnetic inserts to avoid interference.



Remove the magnets from the seat before proceeding with maintenance

Open the drain cock located in the lower section of the dirt separator and drain the impurities.



5 TECHNICAL FEATURES

Body: painted steel
Upper plug: CW617N brass
Lower cock: CW617N brass

O-Ring: EPDM
Insulation shell: PE
Available sizes: DN50 DN65 DN80
DN100 DN125 DN150

Nominal pressure: 10 bar
Max. working temperature: 100°C

6 FLUID DYNAMIC FEATURES

Hydraulic separators

MAX. RECOMMENDED FLOW RATE

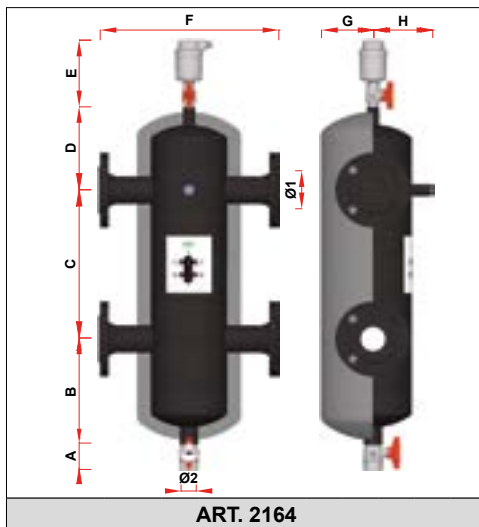
DN	Q [m³/h]
50	10
65	18
80	30
100	55
125	78
150	114

Deaerators and dirt separators

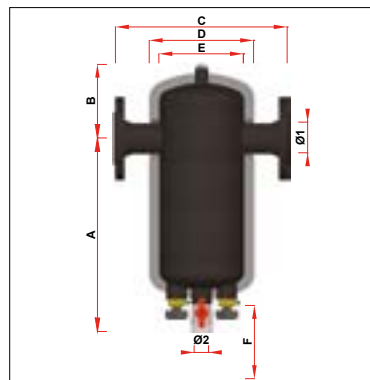
MAX. RECOMMENDED FLOW RATE

DN	Q [m³/h]
50	9.2
65	15.5
80	23.5
100	36.8
125	60.6
150	89.8

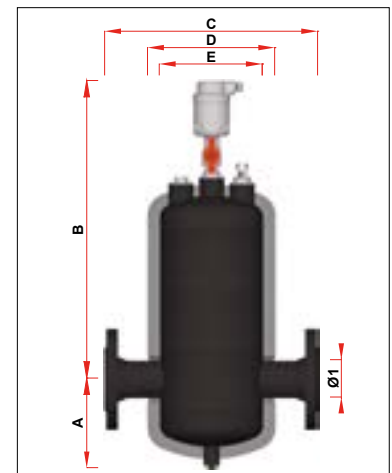
7 DIMENSIONAL FEATURES



CODE	Ø1	Ø2	A	B	C	D	E	F	G	H
2164 50	DN50	1"	57	234	330	184	148	399	114	132
2164 65	DN65	1"	57	234	330	184	148	399	114	132
2164 80	DN80	1"	57	280	450	230	148	517	167	184
2164 100	DN100	1"	57	280	450	230	148	517	167	184
2164 125	DN125	1"	57	280	560	230	148	627	188	216
2164 150	DN150	1"	57	280	560	230	148	627	188	216



ART. 2236-2241										
CODE	Ø1	Ø2	A	B	C	D	E	F		
2236 50	DN50	1"	387	148	350	208	168	-		
2236 65	DN65	1"	387	148	350	208	168	-		
2236 80	DN80	1"	497	178	517	313	273	-		
2236 100	DN100	1"	497	178	517	313	273	-		
2236 125	DN125	1"	557	228	580	364	324	-		
2236 150	DN150	1"	557	228	580	364	324	-		
2241 50	DN50	1"	387	148	350	208	168	140		
2241 65	DN65	1"	387	148	350	208	168	140		
2241 80	DN80	1"	497	178	517	313	273	140		
2241 100	DN100	1"	497	178	517	313	273	140		
2241 125	DN125	1"	557	228	580	364	324	140		
2241 150	DN150	1"	557	228	580	364	324	140		



ART. 2258						
CODE	Ø1	A	B	C	D	E
2258 50	DN50	148	490	350	208	168
2258 65	DN65	148	490	350	208	168
2258 80	DN80	178	600	517	313	273
2258 100	DN100	178	600	517	313	273
2258 125	DN125	228	660	580	364	324
2258 150	DN150	228	660	580	364	324