5516

de-aerator for heat pumps

Installation, operation and maintenance

altecnic
CALEFFI group

5516 de-aerator for heat pumps

These installation instructions are for the Altecnic 5516 de-aerator specifically designed for use with heat pumps.

Warning

The following instructions must be read and understood before installing and maintaining the product.

The symbol ⚠ means:

CAUTION! FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN A SAFETY HAZARD!

If the system has a heat pump which uses flammable refrigerant gases (for example R290), it is essential that the Altecnic 5516 de-aerator is installed in a ventilated environment (such as the central heating system room or a technical room), so that any gas entering the hydraulic circuit as a result of a heat exchanger malfunction and separated by the de-aerator is dispersed outside.

Safety

The safety instructions provided in the specific document must be observed.

LEAVE THIS MANUAL AS A REFERENCE GUIDE FOR THE USER

DISPOSE OF THE PRODUCT IN COMPLIANCE WITH CURRENT LEGISLATION

Introduction

The Altecnic 5516 de-aerators automatically and continuously removes the air contained in the hydraulic circuits of heating and cooling systems to micro-bubble level.

The discharge capacity means that up to 99 % of the air within the flow can be removed from the very first passage.

The de-aerator can be installed on horizontal, vertical or angled pipes with two adjustable elbows.

Product Range

These instruction cover the following models;

Ref No		Connections
551602	high efficiency de-aerator	22mm compression
551603	high efficiency de-aerator	28mm compression
551606	high efficiency de-aerator	1" thread female
551607	high efficiency de-aerator	1¼" thread female
551617	high efficiency de-aerator	1½" thread female

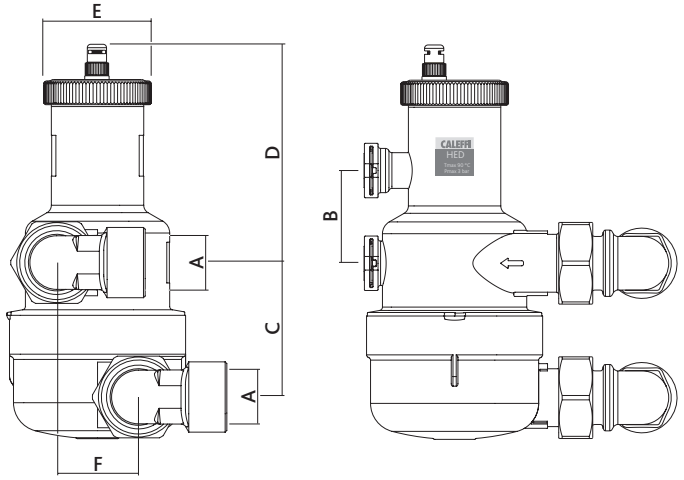
Technical Specification

Medium:	water
Max. working pressure:	3 bar
Max. discharge pressure:	3 bar
Working temperature range:	0 to 90˚C

Materials

Body:	PA66G30
Internal element:	PA66G30
Float:	PP
Float guide and stem:	brass EN 12164 CW614N
Float lever and spring:	stainless steel EN 10270-3 (AISI 302)
Elbows:	brass EN 12165 CW617N
Seals:	EPDM

Dimensions



Ref No	A	B	C	D	ØE	F
551602	Ø22	54.5	78	128	64	48
551603	Ø22	54.5	78	128	64	48
551606	G1	54.5	78	128	64	48
551607	G1¼	54.5	78	128	64	48
551617	G1½	54.5	78	128	64	48

Technical specifications of insulation code CBN551602

Materials:	EPP
Density:	38 g/l
Conductivity (8301):	at 10 °C: 0.039 W/(m·K)
Co-efficient of resistance to water vapour (DIN 52615):	≥ 39700

Hydraulic characteristics

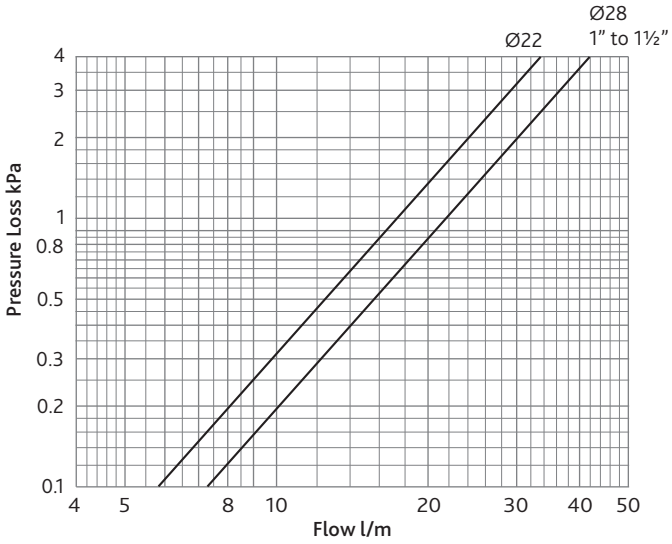
The flowchart show the hydraulic characteristics for each size.

DN	DN20	DN25	DN25	DN32	DN32
Connections	Ø22	Ø28	1" F	1¼" F	1½" F
Kv - m^3h	10	13	13	13	13

Maximum recommended flow rates

DN	DN20	DN25	DN25	DN32	DN32
Connections	Ø22	Ø28	1" F	1¼" F	1½" F
l/s	28.7	45.8	27.7	45.8	45.8
m^3/h	1.72	2.75	1.72	2.75	2.75

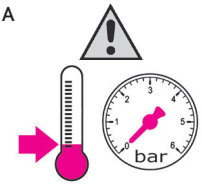
Hydraulic characteristics



Installation

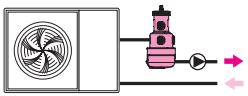
Assembly and disassembly should always be carried out while the system is cold and not under pressure (fig. A).

A

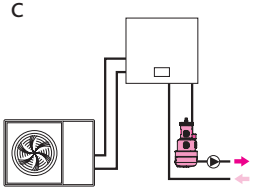


The de-aerator should be installed on the heat pump or boiler flow line and, where there is an external circulator, upstream of the circulator (figs. B - C - D).

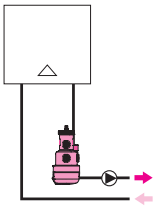
B



C

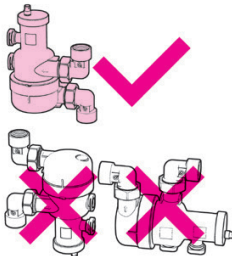


D



Installation must always take place with the air vent valve in a vertical position (fig. E).

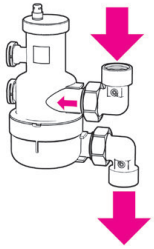
E



Installation

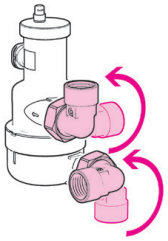
The flow directions indicated on the valve body must be ob served (fig. F).

F



The device can be installed on horizontal, vertical or angled pipes (fig. G).

G



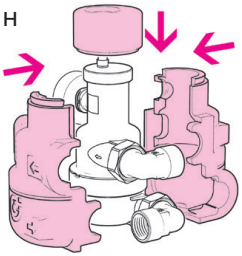
N.B.: for versions with compression connections for copper pipe, codes 551602 and 551603, secure the fittings supplied in the packaging onto the pipes, slot the pipes fully into the tee fitting connections, then tighten the compression nuts.

Insulation assembly procedure

To install the insulation, proceed as follows.

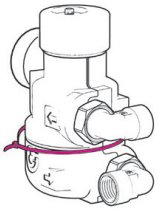
Assemble the two side shells and secure the top cap (fig. H).

H



Complete installation using the clamp supplied (fig. I).

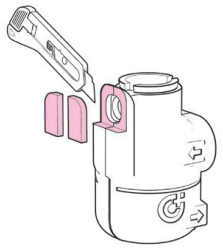
I



Insulation assembly procedure

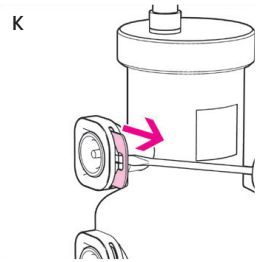
If there are any accessories, cut the side shells (fig. J).

J

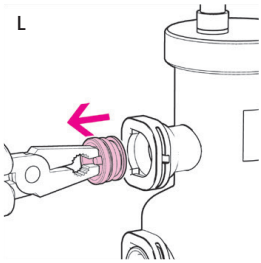


Installing pressure gauge and other accessories

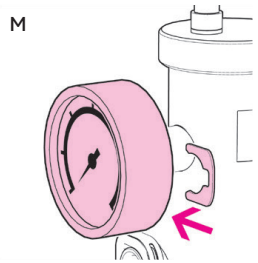
K



L



M



Installation of accessories (fig. K–L)
Remove the safety fixing clip from the plug using a flathead screwdriver (fig. K).
Pull out the plug using a pair of pliers (fig. L).
Insert the pressure gauge fully (fig. M).
Re-fit the safety fixing clip.

Notes:

Please leave this manual for the user

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