

# Vacuum deaerator

Pneumatex Vento

AT 8080S

Art. No.	R S K	Application	Performance	Body material	Sealing material	D N	P N	Temperature (°C)	Operating pressure (bar)
		F	F	F,R		R	R	R	R
80 80 S4 A		Deaerating	Suppressed Deaerating	Steel		15	10	0-90	1-4,5
80 80 S4 A-R		Deaerating with re-fill	Suppressed Deaerating	Steel		15	10	0-90	1-4,5
80 80 S6 A		Deaerating	Suppressed Deaerating	Steel		20	10	0-90	1-6
80 80 S6 A-R		Deaerating with re-fill	Suppressed Deaerating	Steel		20	10	0-90	1-6
80 80 S1 0A		Deaerating	Suppressed Deaerating	Steel		20	16	0-90	5-10
80 80 S1 0A-R		Deaerating with re-fill	Suppressed Deaerating	Steel		20	16	0-90	5-10

<b>Dimension range</b> DN 15-20	<b>PN</b> 10/16	<b>Temperature range</b> 0 °C to 90°C	<b>Material</b> Steel
------------------------------------	--------------------	--	--------------------------

# Vacuum deaerator

Pneumatex Vento

AT 8080S



AT 8080S

## Range of application

Releases loose gas from the fluid through pressure reduction to vacuum. For de-aerating of heating and cooling systems with high static height and/or low system pressure. Applies especially to large and medium systems. The most effective way of venting closed heating and cooling systems.

Our vacuum deaerators are primarily intended for use where the fluid is water. Our larger models (S6A and S10A) can also be used in systems where the fluid is a mixture of water/glycol (max. 40%), if control and surveillance are expanded. Do not use salt/water mixtures.

## Program text

PSF.141 Air deflector

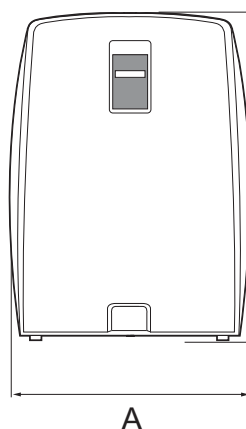
Vacuum deaerator AT8080S-... for heating and cooling systems. With a pump and automatics for operation pressure ... bar and a control unit for automatic function and gas indication.

## Quality assurance

The equipment is in compliance with MD 2006/42/EG, LVD 2006/95/EG and EMC 2004/108/EG and is CE-marked.

1	Automatic air deflector which removes released gas
2	Degassing chamber
3	Magnetic valve supply of partial flow from the system resp. filling
4	Multi-stage pump for pressure retention and suppression
5	Controller
6	SmartSwitch senses the amount of gas, stops the deaerating at minimum level

## Dimensions and weight



Article	AT		AT		AT	
	8080S4A	8080S4A-R	8080S6A	8080S6A-R	8080S10A	8080S10A-R
A	340	340	590	590	744	744
B	490	490	880	880	1272	1272
C	340	340	350	350	400	400
Conne- ction	G 1/2 x 2pcs	G 1/2 x 2pcs	G 3/4 x 2pcs	G 3/4 x 2pcs	G 3/4 x 2pcs	G 3/4 x 2pcs
Weight	15	16	57	59	77	79

Dimensions in mm, weight in kg

Rätten till ändringar utan föregående meddelande förbehålls.  
Armatec ansvarar inte för eventuella tryckfel eller misstäckning.  
Dokumentet får kopieras endast i sin helhet.

# Vacuum deaerator

Pneumatex Vento

AT 8080S

## Function and design

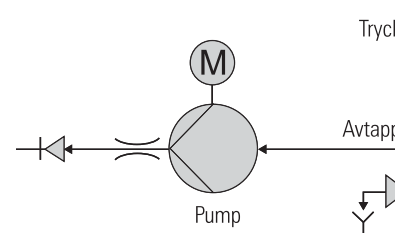
Fully automatic vacuum deaerator for liquid-filled heating or cooling systems. The liquid always contains both dissolved and unresolved gases. The unit's function is to reduce these gases to an absolute minimum. A separate subflow from the system is subjected to a vacuum in the unit's deaerating vessel. In this situation the dissolved gas is released and can be diverted to the atmosphere via the air deflector. This method provides a highly efficient deaerating in both heating and cooling systems, even in high buildings and/or low temperatures. The deaerator should always be mounted in the pipe's main line to get a 100% successful result on the liquid exchange.

A subflow is taken from the system and pumped into the deaerating vessel. The solenoid valve, which is in the inlet line, closes within a few seconds. The pump, that still is in operation, creates a vacuum. Acc. to Henry's law (the liquids natural solution of gas depends on pressure and temperature), the dissolved gas will be released and separated from the liquid and acts as free gas bubbles in the top of the deaerator chamber. In the next phase, the solenoid valve opens again, the pressure rises and a new part flows into the exhaust gas vessel. The new flowing subset presses the free gas blowers into the air deflector, on top of the deaerating chamber and leads them to the atmosphere via the float.

This shifting between having the solenoid valve open or closed causes the deaerating process to continue and the system's fluid becomes increasingly free of dissolved gases. In a period of time, usually 2-3 weeks, the amount of dissolved gas has decreased to a minimum. That's when the built-in SmartSwitch-component stops the deaerating process if it does not detect any gas in ten minutes. The built-in clock does, if necessary, activate the deaerating process at a certain pre-set time, usually 8:00 in the morning. However, if no gas is detected, the unit returns to standby mode, ready to restart 24 hours later. This smart feature minimizes the energy demand and increases the product's life.

All models have the features presented above. The R-models also have an integrated auto-filling equipment. This is controlled by preset start- and stop pressures. It can also be controlled by signals from e.g. level indication on an expansion vessel. Maximum filling amount, filling time and number of fillings can be limited.

np.givare



## Technical information

Article	AT 8080S	AT 8080S4	AT 8080S	AT 8080S6	AT 8080S1	AT 8080S10
	4A	A-R	6A	A-R	0A	A-R
Operating pressure (bar) within	1,0 – 4,5	1,0 – 4,5	1,0 – 6,0	1,0 – 6,0	5,0 – 10,0	5,0 – 10,0
Systemvol. max (m <sup>3</sup> )	25	25	300	300	300	300
Systemtemp. (°C)	0 – 90	0 – 90	0 – 90	0 – 90	0 – 90	0 – 90
Max. operating pressure (bar)	10,0	10,0	10,0	10,0	16,0	16,0
Treated fluid (l/h)	70	70	1000	1000	1000	1000
Filling amount(l/h)	-	50	-	450	-	500
Noise level (dB(A))	52	52	57	57	57	57
Voltage (V)	1-phase 230	1-phase 230	1-phase 230	1-phase 230	3-fas 400	3-fas 400
Effect (W)	100	100	800	800	1150	1150
Enclosure class (IP)	40	40	40	40	40	40

## Accessories and options

All models are designed to work in both heating and cooling systems. Earlier models specially made for refrigeration systems with condensation insulation are therefore no longer necessary.

## Installing

The deaerator shall be connected to the system's main line (which might be the inlet- or outlet line). It is important that the space between the connections is at least 500mm and that they are placed on the side of the main pipe, not at the bottom or the top.

## Maintenance and spare parts

Carefully study the manual, especially the parts about operating, status reports and error messages. Attempt to fix the malfunction by studying the troubleshooting table. If the error persists, contact Armatec.

If you are about to disconnect the pressure deaerator, first make sure that the main power switch is turned off. Close the shut-off valve in the inlet- resp. the outlet line and an eventual filler valve. Then the deaerator can be dismantled. Be careful with any water remaining in the deaerating vessel.

## Marking

Details on maximum pressure, temperature, electrical info, year of manufacture, manufacturing number, type number and the name of the manufacturer are indicated on the product nameplate.

## How to order

AT-nr	Max. systemvolume	Operating pressure	Refill
8080S4A	25 m <sup>3</sup>	1,0 – 4,5 bar	No
8080S4A-R	25 m <sup>3</sup>	1,0 – 4,5 bar	Yes
8080S6A	300 m <sup>3</sup>	1,0 – 6,0 bar	No
8080S6A-R	300 m <sup>3</sup>	1,0 – 6,0 bar	Yes
8080S10A	300 m <sup>3</sup>	5,0 – 10,0 bar	No
8080S10A-R	300 m <sup>3</sup>	5,0 – 10,0 bar	Yes