ZETKAMA Sp. z o.o.
ul. 3 Maja 12
PL 57-410 Ścinawka Średnia

USER MANUAL

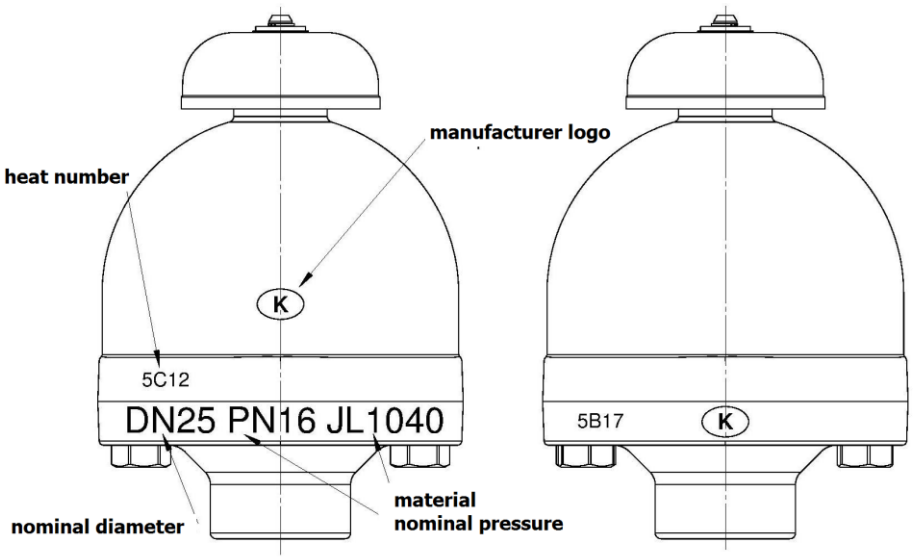
AIR RELEASE VALVE zAIR	Fig. 917, 918	Edition: 02/2016 Date: 13.12.2016

CONTENTS

1. Product description

Air release valves are provided with casted marking according to the requirements of PN-EN19 standard. The marking facilitates technical identification and contains:

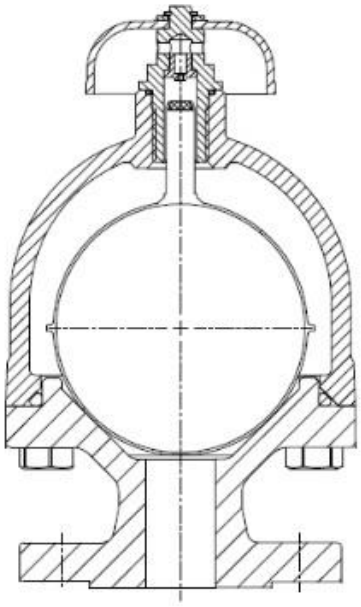
- diameter nominal DN (inch),
- pressure nominal PN (bar),
- body and cover material marking,
- manufacturer marking,
- heat number.



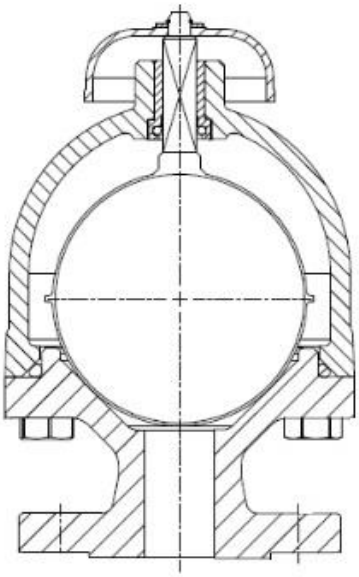
There are two types of manufactured air release valves:

Valve fig. 917

Type 06

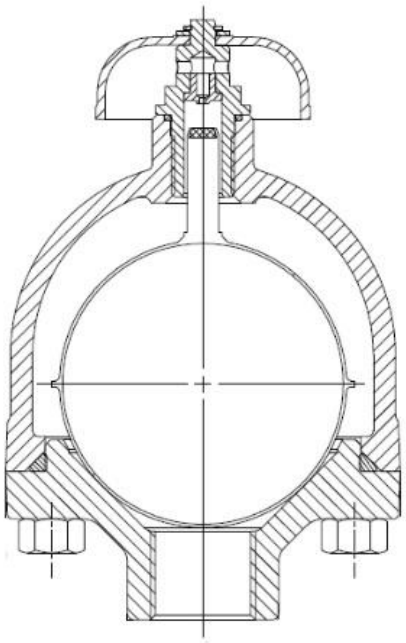


Type 16

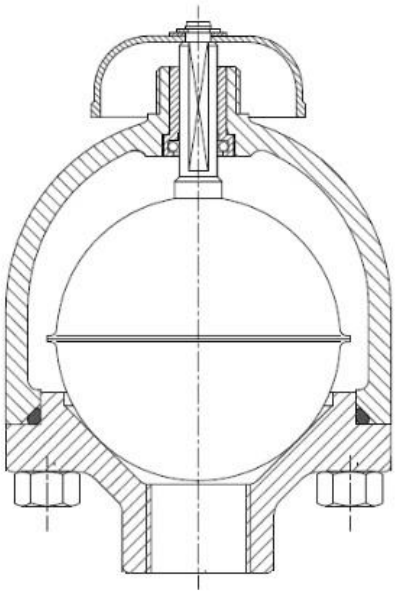


Valve fig. 918

Type 06



Type 16



Type 06
- has a vent nozzle closed by a seal mounted on a stem of the float

Type 16
- venting is carried out by a chamfer on the stem and closing on the O-ring inserted into the sleeve seat
- does not provide overpressure venting in the pipeline

2. REQUIREMENTS FOR MAINTENANCE STAFF

The staff assigned to assembly, operating and maintaining tasks should be qualified to carry out such jobs.
During valve operation heat parts of the valve, e.g. body or cover parts could cause burn.
If necessary the user should fit insulation shields and warning signs.

3. TRANSPORT AND STORAGE

Transport and storage should be carried out at a temperature from -20º to 65ºC, and air release valves should be protected against external forces influence and destruction of painting layer as well. The aim of painting layer is to protect the valves against rust during transport and storage. Valves should be kept at unpolluted rooms and they should be also protected against influence of atmospheric conditions. There should be drying agent or heating at damp rooms in order to prevent condensate formation.

4. FUNCTION

Air release valves are designed to air release water systems, after previous emptying of installation.

5. APPLICATION

Scope of application is given in the data sheet. Working medium requires or prohibits the use of certain materials. he valves are designed for normal conditions of use. In the case that working conditions exceed these requirements, a user should make an inquiry to the manufacturer before ordering.

Working pressure should be adjusted to the maximum temperature of the medium, as shown below.

As for EN 1092-2		Temperature [º C]
Material	PN	-10 to 100
EN-GJL250	16	16 bar

Plant designer is responsible for air release valve selection suitable for working conditions.

6. ASSEMBLY

During the assembly of air release valves following rules should be observed:

- to evaluate before an assembly if the air release valves were not damaged during transport or storage,
- to make sure that applied air release valves are suitable for working conditions and medium in the plant,
- to take off the caps if the air release valves are provided with them,
- check if the air release valve body is free of solid particles,
- during e.g. welding, protect valves against splinters and used plastics against excessive temperature,
- vent valves Fig. 917 and 918 should be assembled with at the highest place of the plant, vertically so the flange or threaded connection is directed downward
- space around the valve should allow easy access for the purpose of inspection and service
- before starting the installation, especially after repairs, the system should be flushed
- it is necessary to place shut-off valve before air release valve

7. MAINTENANCE

During operation the following rules should be observed:

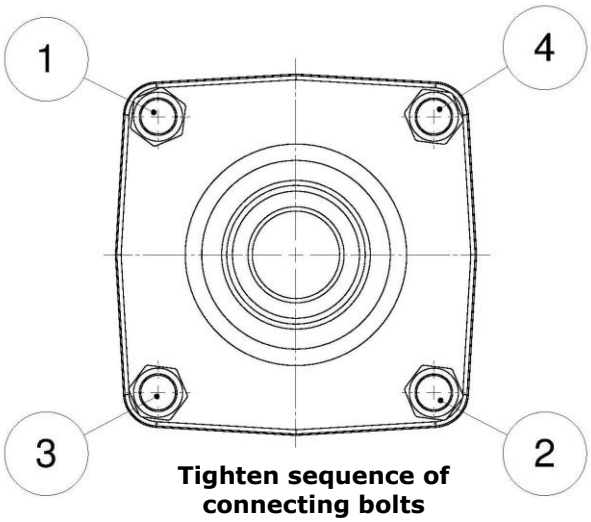
- process of starting up – commissioning should be conducted in a manner that eliminates the occurrence of sudden changes in temperature and pressure,
- valves work automatically and require no maintenance during operation

In order to assure safety performance, each valve (especially rarely used) should be surveyed on a regular basis.

8. SERVICE AND REPAIR

Before taking up any service jobs make sure that the flow of medium in the pipeline was cut off, the pressure was reduced to ambient pressure, medium was removed and the plant was cooled down..

- all service and repair jobs should be carried out by authorised staff using suitable tools and original spare parts.
- Before disassembly of a complete valve from the pipeline or before service jobs, the particular part of the pipeline should be excluded from the operation.
- during service and repair work personal health protectives in pursuance of existing threat should be used,
- after valve disassembly it is necessary to replace flange connection gaskets between the valve and the pipeline,
- every time when vent valve cover was removed, sealing surface should be cleaned and applied new O-ring of the same type as previously used,
- bolts should be tighten and crosswise by torque wrench.



Tighten sequence of connecting bolts

- M12 bolt tightening torque - 65-70 Nm
- Before valve re-assembly in the pipeline it is necessary to check valve operation and tightness of all connections. Tightness test should be carried out with water pressure of 1,5 x nominal pressure of the valve.

9. REASONS OF OPERATING DISTURBANCES AND REMEDY

- When seeking of valve malfunction reasons safety rules should be strictly obeyed

Fault	Possible cause	Remedy
No venting	Polluted valve or nozzle	Clean the valve or nozzle
Leakage	Damaged sealing or O-ring	Replace the sealings
	Damaged nozzle	Replace the venting nozzle
	Cracked float of the valve	Replace the float
	Medium polluted with solid particles	Clean the valve
Broken connecting flange or threaded connection	Bolts fastening flanges tighten unevenly Excessive torque used for the threaded connection.	Replace the valve with new one

10. VALVE SERVICE DISCONTINUITY

All obsolete and dismantled valves must not be disposed of with household waste. The valves are made of materials which can be re-used and should be delivered to designated recycling centres.

11. WARRANTY TERMS

ZETKAMA grants quality warranty with assurance for proper operation of its products, providing that assembly of them is done according to the user manual and they are operated according to technical conditions and parameters described in ZETKAMA's catalogue cards. The warranty period is 18 months from assembly date, however not longer than 24 months from sales date.

Warranty claim does not cover assembly of foreign parts and design changes done by user as well as natural wear.

Immediately after detection, the user should inform ZETKAMA about hidden defects of the product.

A claim should be prepared in written form.

Address for correspondence:

ZETKAMA Sp. z o.o.
ul. 3 Maja 12
57-410 Ścinawka Średnia

Phone +48 74 86 52 111
Fax +48 74 86 52 101
Website: www.zetkama.com