



# INSTALLATION AND MAINTENANCE INSTRUCTIONS NON-RETURN VALVES RT25 - RD40

## GENERAL

- These instructions must be carefully read before any work involving products supplied by VALSTEAM ADCA ENGINEERING S.A. is undertaken.
- The installation procedure is a critical stage in a life of a valve and care should be taken to avoid damage to the valve or equipment.
- Non return valves are designed to avoid the reverse flow of the fluids and allow a correct operation of other equipments. They give their maximum performance only when the equipment associated with them is correctly sized and installed in accordance with our recommendations.

### Note:

- Current regional safety regulations should be take in to account and followed, while doing the installation and maintenance work.
- Handling, installation and maintenance work must be carried out by trained personnel. A supervisor must follow and check all activities.
- For the problems that cannot be solve with the help of this instructions, please contact the supplier or the manufacturer.
- The manufacturer reserves the right to change the design and material of this product without notice.

### RT25

CE MARKING (PED - European Directive)	
PN 25	Category
DN3/8" to DN 1 1/2"	SEP
DN 2"	Category 1 (CE marked)

### RD40

CE MARKING (PED - European Directive)	
PN 40	Category
DN15 to DN32	SEP
DN40 to DN100	Category 1 (CE marked)
DN125 to DN200	Category 2 (CE marked)

**CE Marking:** This product has been designed for use on water, steam, air and other gases which are in Group 2 of the European PED-Pressure Equipment Directive in use and it complies with those requirements. The product carries the CE mark when falling in category 1 and above.



## ATTENTION

- If malfunction of any other equipment or system operation failure may result in a dangerous overpressure, over temperature or even vacuum condition, a safety device must be included in the system to prevent such situations.
- At start up, the presence of small particles in the fluid (dirt, scale, weld splatters, etc) may cause an imperfect closure of the seat. If this occurs, proceed to an accurate cleaning.
- Do not touch the equipment without appropriate protection during working operation because it may conduct heat if the used fluid is at high temperature.
- Sharp-edged interior parts can cause cuts on hands, appropriate protection gloves should be used when handling the valve.
- Before starting maintenance be sure that the equipment is not pressurized or hot.
- The equipments must be used within the working temperature and pressure limits laid down for them, otherwise they may fail (refer to nameplate and/or IS- Information Sheet).
- Manual handling of products may present a risk of injury. You are advised to assess the risks taking into account the task, the individual, the load and the working environment.
- Before starting work ensure that you have suitable tools and/or consumables available. Use only genuine ADCA replacement parts.
- Do not remove the nameplate attached to the equipment. Serial number and other useful information is stamped on it.
- During the assembly work, apply protective measures against dirt.
- When connecting the valve it must exist a perfect match between the connection flanges and the valve.
- Tighten flange connection bolts uniformly in a diagonal sequence.
- The RD non-return valves are compatible with EN1092 and ANSI flanges from DN15 till DN100 (included).
- Correct installation of the equipment is full responsibility of the contractor

**TRANSPORT AND STORAGE**

## ATTENTION

- Handling and lifting of materials should be made with adequate equipments.
- The valves and equipments should be protected from impacts and forces during transportation and storage.
- The manufacturer doesn't assume the responsibility of damaged equipments due to inappropriate handling during the transportation and storage.

**INSTALLATION**

## ATTENTION

- Account for over pressure conditions, according with the local laws or standards.
- Non-return valves must not be used with other purpose than the one they were built for (e.g. climbing aids or as connecting points for lifting gear).
- For the problems that cannot be solve with the help of this instructions, please contact the supplier or the manufacturer.

Installation area requirements:

**VALSTEAM** 

- The installation area should have easy access and provide enough space for maintenance and removing operations.

**Procedure:**

- Prior to install check that the product is suitable for the intended application: materials and pressure/temperature ratings.
- Before installing remove plastic covers placed on connection ends (only on RT25). The equipment has an arrow or Inlet/Outlet designations. Be sure that it will be installed on the appropriate direction.
- Take care with jointing material to ensure that none may be permitted to block or enter the valve.
- In case of using Teflon tape (for screwed connections), avoid rolling it till the edge, because it can get cut and migrate to the valve interior, blocking or causing a defective sealing.
- RT and RD valves can be installed in any position according to the conditions stated in the catalogue.
- Wafer type valves are installed between flanges. The centering is executed at the body integrated center ring by means of the flange connecting screws.
- Disc check valves are not suitable for use where heavily oscillatory flow exists such as near compressors, diaphragm pumps, etc.
- External stresses that may be induced by the system due to pipe expansion, etc, can affect this product. The necessary precautions are recommended during the systems design and equipment assembly.
- The valve pipework should be properly supported and free from strain and it should not be subjected to undue surges of pressure. The start-up condition should be considered.

Recommended limit of operation with soft seats ( °C)			
EPDM (E)	NBR (N)	VITON (V)	PTFE (T)
130°	95°	180°	180°

**START UP**



ATTENTION

- Current regional safety regulations should be take in to account and followed.
- Protective insulation and warning notice may be required.
- Until the start up of an existing or a new plant, the following must be checked:
  - All works are completed.
  - The valve is correctly installed.
  - All the necessary safety devices have been installed.
- **At start up, the presence of small particles in the fluid (dirt, scale, weld splatters, joint particles, remains of Teflon tape, etc) may cause an imperfect closure of the seat. If this occurs, proceed to an accurate cleaning.**
- **Protection varnishes from pipes and flanges, fats, leftover paint, graphite, etc, should also be carefully clean, because they can be dissolved in the fluids (like steam) blocking the regulation elements after the first service stop.**

**Periodical checking:**

- 24 hours after the start up, it is recommended to check pipe connections for leaks and retighten the connections if necessary.

**MAINTENANCE**

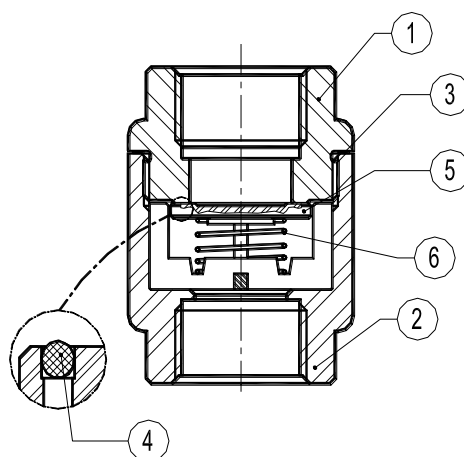
- Only qualified skilled workers are permitted to do maintenance to check valves. Since these valves have integral seat, maintenance costs must be evaluated by professional people in order to decide if it's acceptable or if a non-maintainable situation has to be considered.
- When reassembling make sure that all gasket faces are clean and always use a new gasket. Tighten cover bolts uniformly in a diagonal sequence (if applicable).

**SPARE PARTS**
**RT25**

CODE	DESIGNATION	VALVE SIZE DN	POS.NR.	QTY.
A.961.1100.015	Spring	1/4" - 1/2"	6	1 set
A.961.1100.020	Spring	3/4"	6	1 set
A.961.1100.025	Spring	1"	6	1 set
A.961.1100.032	Spring	1 1/4"	6	1 set
A.961.1100.040	Spring	1 1/2"	6	1 set
A.961.1100.050	Spring	2"	6	1 set
A.961.1100.115	Metal valve disc *	1/4" - 1/2"	5	1 set
A.961.1100.120	Metal valve disc *	3/4"	5	1 set
A.961.1100.125	Metal valve disc *	1"	5	1 set
A.961.1100.132	Metal valve disc *	1 1/4"	5	1 set
A.961.1100.140	Metal valve disc *	1 1/2"	5	1 set
A.961.1100.150	Metal valve disc *	2"	5	1 set

\* In case of soft seating please add the suffix letter to the actual code (see catalogue).

Example : A.961.1100.115E, valve disc with EPDM seal.

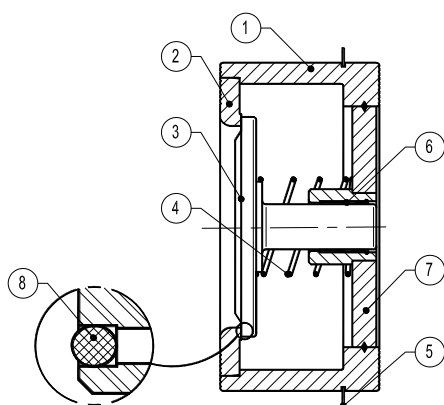

**RT25**

**RD40**

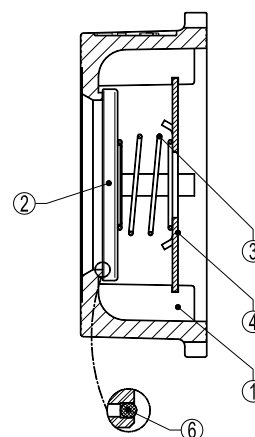
CODE	DESIGNATION	VALVE SIZE DN	POS.NR.	QTY.
A.961.1140.015	Spring	15	3	1 set
A.961.1140.020	Spring	20	3	1 set
A.961.1140.025	Spring	25	3	1 set
A.961.1140.032	Spring	32	3	1 set
A.961.1140.040	Spring	40	3	1 set
A.961.1140.050	Spring	50	3	1 set
A.961.1140.065	Spring	65	3	1 set
A.961.1140.080	Spring	80	3	1 set
A.961.1140.100	Spring	100	3	1 set
A.961.1150.125	Spring	125	3	1 set
A.961.1150.150	Spring	150	3	1 set
A.961.1150.200	Spring	200	3	1 set

\* In case of soft seating please add the suffix letter to the actual code (see catalogue).

Example : A.961.1140.115E, valve disc with EPDM seal.



**RD40 DN125-DN200**



**RD40 DN15-DN100**

**PRODUCTS RETURNING**



**ATTENTION**

- Information regarding any hazards and precautions to be considered because of contaminating fluids and residues or mechanical damage that may represent a health, safety or environmental risk, must be provided in writing by the distributors and costumers when returning products to Valsteam ADCA engineering.
- Health and safety data sheets regarding substances identified as hazardous or potentially hazardous must be provided with the information mention above.



**ATTENTION**

- **LOSS OF WARRANTY:** Total or partial disregard of above instructions involves loss of any right to warranty.