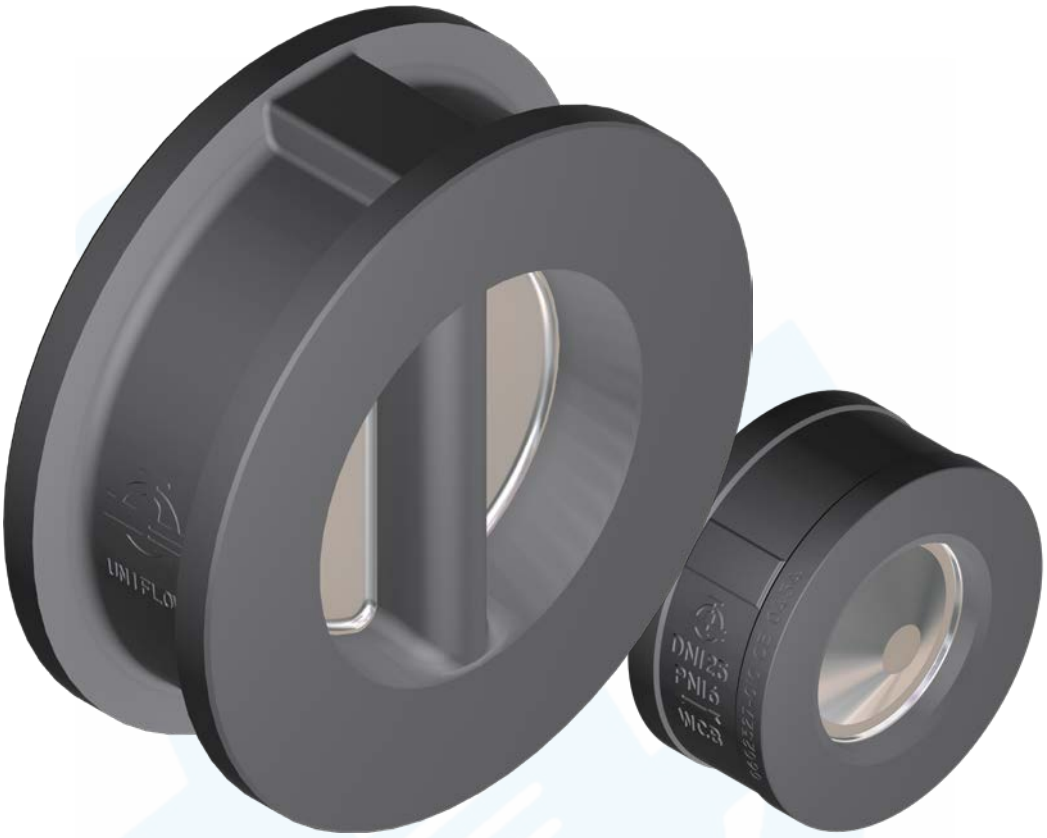
INSTALLATION, OPERATING AND MAINTENANCE MANUAL



Series UNIFLOW DP **Series UNIFLOW DC**

DUAL PLATE CHECK VALVES

Contents

1. GENERAL INFORMATION ON THE MANUAL....2
2. NOTES ON POSSIBLE DANGERS....2
2.1 Significance of symbols....2
2.2 Explanatory notes on safety information....2
3. PRESERVATION, STORAGE AND TRANSPORT....2
4. DESCRIPTION....2
4.1 General Description / Operating principles....2
4.2 Area of Application....2
4.3 Technical data – remarks....2
4.4 Marking/nameplate....3
4.5 CE marking....3
5. INSTALLATION....3
5.1 General remarks on installation....3
5.2 Requirements at the place of installation....4
6. COMMISSIONING....4
7. CARE AND MAINTENANCE....4
8. DISMANTLING THE VALVE....5
9. GOODS RETURN & DISPOSAL....5
10. WARRANTY / GUARANTEE....5
11. PARTS LIST....6
12. ANNEX....6
12.1 Declaration of Conformity....6
12.2 Data Sheet....6

©COMEVAL VALVE SYSTEMS Technical Dept. Ref. IOM - DUAL PLATE CHECK VALVES, UNIFLOW DC/DP - Ed.20/07
Comeval Valve Systems reserves the right to alter any technical data contained in this manual without prior notice. Regularly updated data on www.comeval.es

1. GENERAL INFORMATION ON THE MANUAL

- This Manual provides information on safely using the product, being binding for preservation, storage, handling, transport, installation, commissioning, operation, maintenance, repair and disposal, and must be thoroughly observed at any step.
- Please contact the supplier or the manufacturer in case of issues which cannot be solved by reference to this Manual.
- Any deviation from this Manual and sound engineering practice or modification on the product shall be notified to manufacturer for advice or approval.
- In addition, regional safety requirements must be always applied and observed at any step.
- All the work related to the product must be carried out, supervised and inspected by specialist personnel. It is the owner's responsibility to define areas of responsibility and competence and to ensure the proper monitoring.
- This Manual is in accordance with Directive 2014/68/EU on Pressure Equipment (PED).
- For ATEX applications, please refer to ATEX Specific instructions.
- The manufacturer reserves the right to make technical modifications at any time.

2. NOTES ON POSSIBLE DANGERS

2.1 Significance of symbols



ATTENTION!
...

Warning of general danger

2.2 Explanatory notes on safety information

In this Manual dangers, risks and items of safety information are highlighted to attract special attention.
Information marked with the symbol above describes practices, which if fail to comply with, can result in serious injury or danger of death for users or third parties or in material damage to the system or the environment. It is vital to comply with these practices and to monitor compliance.
The rest of information not specifically emphasized in this Manual, along with Data Sheet and product marking, must also be observed and complied with for safely using the product.

3. PRESERVATION, STORAGE AND TRANSPORT



ATTENTION!

- Protect against external force (impacts, vibrations, etc.).
- Allow only skilled personnel; suitable handling and lifting equipment must be used. See Data Sheet for weights or consult manufacturer.
- Always use suitable protection equipment, and minimize the use of human body force at any step to avoid injuries.
- There is a risk of body member (hand, finger, arm…) crushed against any other solid element (wall, pipe, floor, etc.) during handling. Take this into account and handle with care.
- There is a crushing hazard between the plates (or discs) and the seat. Ensure the plates are in rest position in case a hand is introduced inside the valve.
- Check correct position of nameplate and handle with care to avoid personnel cuttings.

- Use proper packing for transportation.
- Keep storage protection before installation.
- Keep exposed machined surfaces cleaned and greased when necessary. In order to prevent damage, corrosion or rust on the surface, avoid extreme temperatures (keep at 5ºC to 50ºC), avoid high environmental humidity or corrosive environment. Keep the valves away from direct sunlight, dust, flames or rain. Protect rubbers also against UV light. Do not pile up excessive weight. In case of severe bumping inspect the material for any damage and replace if necessary.

4. DESCRIPTION

4.1 General Description / Operating principles

Dual Plate Check Valves use two half-sphere discs or plates and a connecting hinge to create a closure element that collapses when positive flow exists, and folds back to a full circular disc and close against a pressure reversal. Discs are preloaded with springs that favor the closing of the valve when no positive flow.
Valve diagram with parts can be seen at the last page of the Manual.

4.2 Area of Application

Dual Plate Check Valves are featured as a light, compact and economic anti-return device to be used on industrial and waste treatment plants. Its wafer or lug design suitable to installation between flanges makes these valves quite a prime option especially on large sizes.

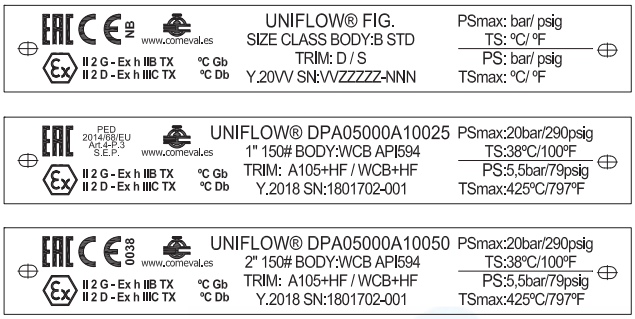
4.3 Technical data – remarks

For data such as main features, duties/limits of use, dimensions, weights, etc. refer also to Data Sheet.

©COMEVAL VALVE SYSTEMS Technical Dept. Ref. IOM - DUAL PLATE CHECK VALVES, UNIFLOW DC/DP - Ed.20/07
Comeval Valve Systems reserves the right to alter any technical data contained in this manual without prior notice. Regularly updated data on www.comeval.es

4.4 Marking/nameplate

Nameplate description of the valve:



Mark	Description
CE	CE-Marking
NB	Number of notify body
EAC	EAC marking (compliance with TR/CU 032/2013 & TR CU 010/2011)
	Manufacturer logo
Ex	Explosion protected mark for EU free circulation (see separate instructions for code)
www.comeval.es	Website of manufacturer
UNIFLOW®	Brand
PED 2014/68/EU	Directive 2014/68/EU
FIG.	Valve code*
SEP	Sound Engineering Practice
Y.20VV	Manufacturing year
SN: VVZZZZZ-N	Batch / Serial no.
SIZE	Valve size
CLASS	Valve class
B	Body material
STD	Main manufacturing standard
D	Disc material
S	Seat material
PSmax	Max. pressure
TS	Max. temperature at max. pressure
PS	Max. pressure at max. temperature
TSmax	Max. temperature

** See coding system on Data Sheet.*

4.5 CE marking.

DN≤25	DN>25
CE	CE

5. INSTALLATION

5.1 General remarks on installation

The following points should be taken into account in addition to the general principles governing installation work:

ATTENTION!

- Remove remaining packing/storage protection if present.
- The interior of the valve and the pipeline must be free of foreign particles.
- Follow the arrow in the body for normal flow direction for installation. If the valve is in horizontal pipeline, the shaft must be in the vertical position for correct operation.
- Lay pipelines such that damaging transverse, bending and torsional forces are avoided.
- Protect valves from dirt during construction work.
- Protect the valve soft parts, if any, from heating caused by welding works at the plant during commissioning.
- Suitable materials handling and lifting equipment should be used for assembly work. During assembly work, ensure that the valve is fixed adequately. See data sheet for weights.
- The valves can be assembled vertically on horizontal pipeline or horizontally on vertical pipeline with normal flow upwards.
- You must only operate the unmounted valve while observing all the safety measures.
- Avoid mechanical damage to the seat during handling, storage and installation.
- There is a crushing hazard between the discs or plates and the seat. Ensure the discs are in rest position in case a hand is introduced inside the valve.
- Install the valves always between flanges, using suitable gaskets provided with the valve. Be sure that the contact faces are free of impurities or fluid residues that may compromise the tightness.
- In order to fit a wafer type valve between flanges, centre the valve between flanges, insert one or two stud bolts depending on the size and tighten them with nuts without forcing. Once the valve preliminary fitted, insert the rest of stud bolts. Tighten nuts diagonally and gradually. Tighten again during start-up if necessary. For lug type, procedure is similar but all holes of the valve are threaded, so that threaded bolts are used instead of stud bolts and nuts.Valve should fit smoothly between flanges without building any tension.

©COMEVAL VALVE SYSTEMS Technical Dept. Ref. IOM - DUAL PLATE CHECK VALVES, UNIFLOW DC/DP - Ed.20/07
Comeval Valve Systems reserves the right to alter any technical data contained in this manual without prior notice. Regularly updated data on www.comeval.es

5.2 Requirements at the place of installation

- Downstream from a disruptive element (pump, valve, elbow, pipe reduction) leave as much distance as possible; minimum distance recommended: 6 times the valve diameter (6xDN).
- Upstream from a disruptive element leave at least a distance of 2xDN.
- Aggressive environmental conditions may reduce the life span of the product. Consider special construction/protective measures in such a case.
- Consider the interaction between the system and the equipment. Foresee elements to absorb vibrations, pipe dilatations, guides, anchoring and proper support according to the weight of the components.
- The system and operation protocol should be conceived in such a way to avoid high velocities. Prevent pulsing flow or water hammers, which are very harmful for valves and the rest of the components.
- Flooding of the product is not recommended.
- Allow enough space for valve installation, operation and maintenance.
- It is recommended to install a proper sized mesh strainer upstream the valve in order to protect seating surfaces from abrasion or erosion that could lead to seat leakage.
- Planners / construction companies or the owner are responsible for positioning and installing products.

6. COMMISSIONING

ATTENTION!

- Before commissioning the valve, check the material, pressure, temperature, flow direction and other essential parameters. Always use the product within the scope of intended service and operating duties.
- Before commissioning, make sure above chapters have been throughly followed.
- It is essential to flush the pipe system thoroughly to eliminate all the particles and impurities which could remain in the pipes and particularly welding residue, chips, tool remains, etc. that could damage the equipment during start-up. Ensure that during cleaning of the pipe system, any chemicals used and temperature are compatible with the valve construction.
- Regional safety instructions should be adhered to.
- Temperatures above 50ºC or below 0ºC may cause personnel injuries if valves are touched. Ensure that the corresponding warning signs are displayed on the valve or surrounding area, or isolate the equipment in case of danger.

- Before commissioning a new plant or restarting it after repairs or modification, always ensure that:
- All work has been completed correctly!
- The valve is in the correct position for its function.
- Safety devices have been attached!

- Ensure valve surface is in good condition and retouch coating protection when needed.
- The filling, warming-up and starting-up of the system shall be gradual so as to avoid any inadmissible stress. Check for tightness in valve connections and retighten crosswise and gradually if necessary until leakage elimination.

7. CARE AND MAINTENANCE

The operator must define maintenance and maintenance-intervals to meet requirements.
- Check for body and seat tightness and valve correct operation.

ATTENTION!

- Before disassembling the valve, note chapters 8 & 9.
- There is a crushing hazard between the plates and the seat. Ensure the plates are in rest position in case a hand is introduced inside the valve.

After any maintenance work please refer to chapters 5 and 6 for installation / commissioning.

Recommended Spare parts:

Use only original spare parts.
Type and number of each spare part to be stored according to many factors: service level, valves quantity, etc. In many cases a good choice is to keep complete valves as spare part.

©COMEVAL VALVE SYSTEMS Technical Dept. Ref. IOM - DUAL PLATE CHECK VALVES, UNIFLOW DC/DP - Ed.20/07
Comeval Valve Systems reserves the right to alter any technical data contained in this manual without prior notice. Regularly updated data on www.comeval.es

8. DISMANTLING THE VALVE



ATTENTION!

The following points must be observed:
- Pressureless pipe system.
- Medium must be cool.
- Plant must be drained.
- Purge pipe systems in case of toxic, corrosive, flammable or caustic media.

9. GOODS RETURN & DISPOSAL

- For any returned goods, the issuing company must provide information in written on any hazards and the precaution in case of potentially polluting or harmful residues, or any mechanical damage that could present a health, safety or environmental risk, as enforced by EU Health, Safety and Environment Law, including the Safety Data Sheet of the substances identified as potentially hazardous.
- Valves are recyclable and not expected hazard to the environment, with the exception of soft parts (PTFE and rubber compounds) that should be disposed separately only by approved procedure, and no incineration is permitted.

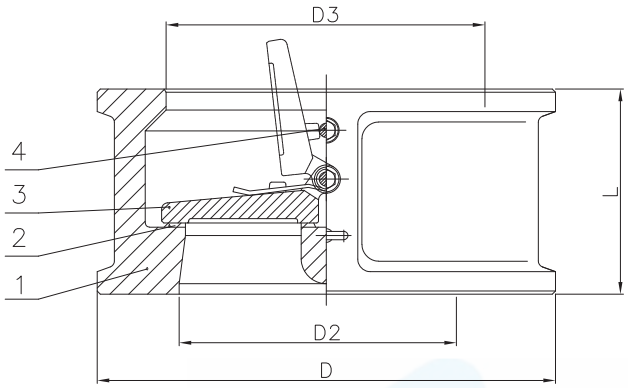
10. WARRANTY / GUARANTEE

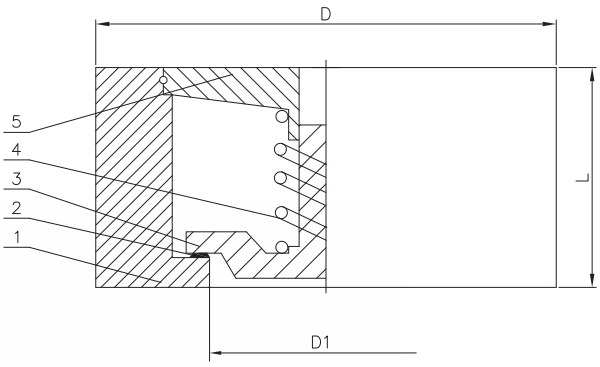
- The extent and period of warranty cover are specified in the “General Sales Terms” of COMEVAL VALVE SYSTEMS valid at the time of delivery or, by way of departure, in the contract of sale itself.
- We guarantee freedom of faults in compliance with state-of-the-art technology and the confirmed application.
- No warranty claims are accepted for any damage caused as the result of incorrect handling or disregard of operating and installation instructions, datasheets and relevant regulations.
- This warranty also does not cover any damage which occurs during operation under conditions deviating from those laid down by specifications or other agreements.
- Justified complaints will be eliminated by repair carried out by us or by a specialist appointed by us.
- No claims will be accepted beyond the scope of this warranty. The right to replacement delivery is excluded.
- The warranty shall not cover maintenance work.
- Our guarantee coverage does not cover for any commissioning, maintenance or installation of the product or external parts.
- Our guarantee does not cover products proved to have been tampered with or faulted by material wear and tear.
- The Purchaser is responsible for checking that the incoming product is received in good condition and conforms to the ordered specifications. In case of damage caused during transit it is necessary to immediately complain to the carrier within 24 hours. After this time carriers could not assume the derived costs. In case of any deviation in relation to order specifications, please contact us.

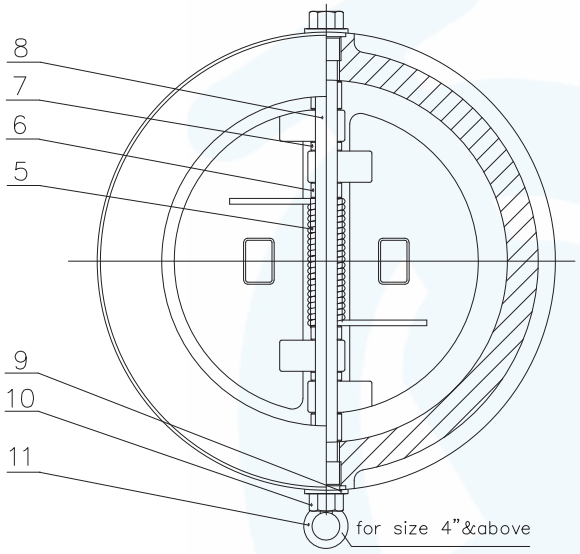
COMEVAL VALVE SYSTEMS, S.L. y CIA., Soc. Comanditaria
Les Rotes, 15 46540 El Puig (Valencia) España
Phone +34 961 479 011 · **Fax** +34 961 472 799
E-mail comeval@comeval.es **-** www.comeval.es

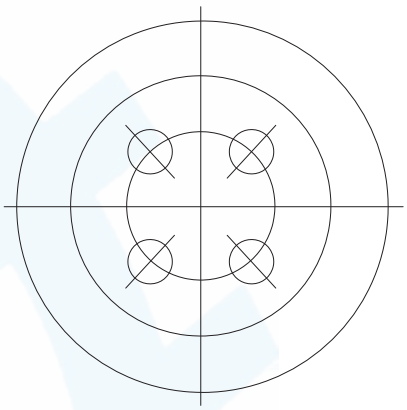
©COMEVAL VALVE SYSTEMS Technical Dept. Ref. IOM - DUAL PLATE CHECK VALVES, UNIFLOW DC/DP - Ed.20/07
Comeval Valve Systems reserves the right to alter any technical data contained in this manual without prior notice. Regularly updated data on www.comeval.es

11. PARTS LIST









Nº	PART
1	Body
2	Seat
3	Disc
4	Stop Pin
5	Spring
6	Bearing Washer
7	Bearing Washer
8	Hinge Pin
9	Gasket
10	Position Plug
11	Eyebolt

Nº	PART
1	Body
2	Seat
3	Disc
4	Spring
5	Retainer

12. ANNEX

12.1 Declaration of Conformity

12.2 Data Sheet

©COMEVAL VALVE SYSTEMS Technical Dept. Ref. IOM - DUAL PLATE CHECK VALVES, UNIFLOW DC/DP - Ed.20/07
Comeval Valve Systems reserves the right to alter any technical data contained in this manual without prior notice. Regularly updated data on www.comeval.es