



Manufacturer of shut-off and control valves

## TECHNICAL DATA SHEET

**Check valve ELEPHANT VCD1414E-F  
DN100-300 10/16 bar with inclined disk and counterweight,  
cast iron, flanged**



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## 1. GENERAL PRODUCT INFORMATION

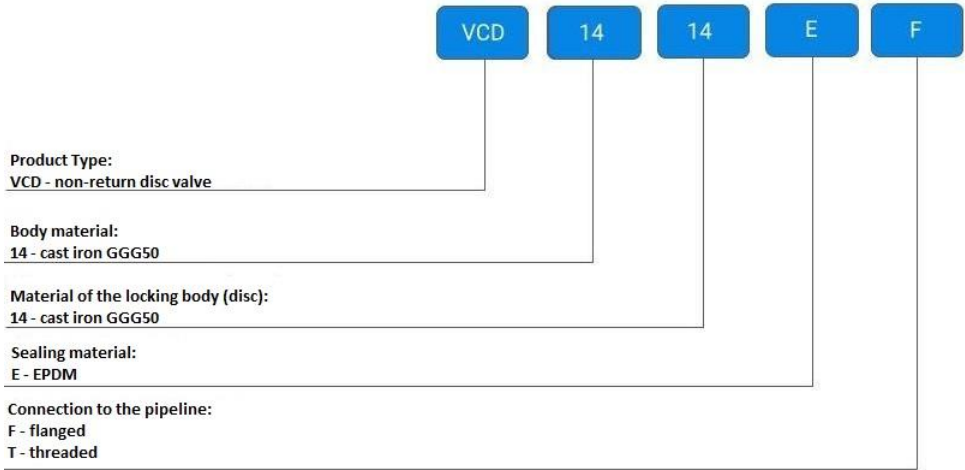
1.1. Product name: Check valve ELEPHANT VCD1414E-F DN100-300 10/16 bar with inclined disk and counterweight, cast iron, flanged.

1.2. Purpose. The check valve is designed to prevent reversal of the working medium flow direction in the pipeline.

1.3. Operating principle. The disk of the check valve is fixed on the axis located with eccentricity relative to the horizontal axis of symmetry. When the medium is supplied in the direction under the disk, the valve opens, while the disk is held in the position “open” due to the lifting force arising from the velocity head of the flow. When the medium supply is stopped, the disc closes smoothly under the action of its own weight, creating a closing torque due to the displacement of the center of gravity of the disc gate relative to the axis of rotation. A counterweight holds the disk fully open, reducing flow resistance, and also promotes better sealing in the closed state at low pressure. Fast closing helps to avoid pump damage due to backflow, slow closing helps to avoid water hammer effect, which protects the pipelines.



## 1.4. Deciphering of the designation:



## 2. BASIC TECHNICAL DATA AND CHARACTERISTICS

Table 1

Nominal diameter DN, mm	100 - 300
Working pressure PN, bar	10/16
Working medium temperature, °C	-15 to 120
Ambient temperature, °C	-15 to 60
Working medium	Hot and cold water, wastewater, non-aggressive liquids
Working medium supply direction	arrow on the valve body
Connection to pipeline	flanged
Tightness class	A
Areas of application	pumping systems, water supply and distribution systems, industrial processes
Service life, years	10



### 3. BASIC MATERIALS

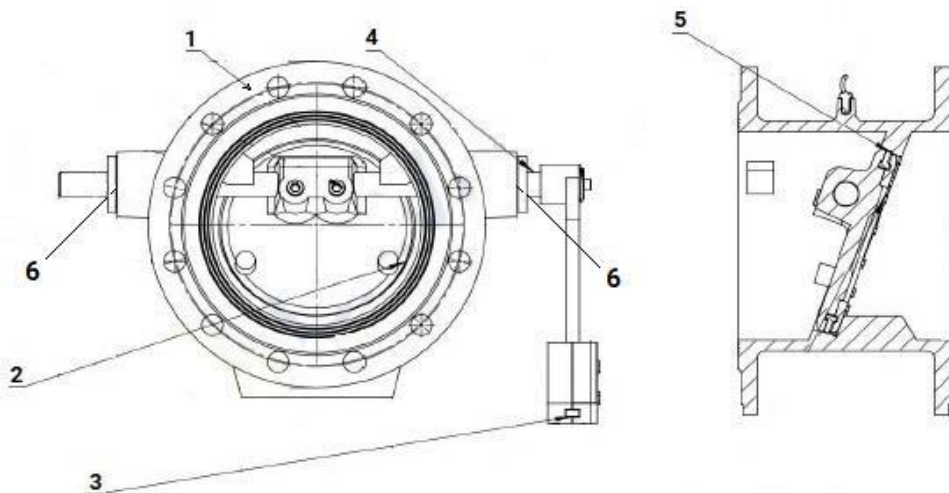


Table 2

No	Part name	Material
1	Case	cast iron GGG50
2	Disk	cast iron GGG50
3	Counterweight	carbon steel
4	Axle	2Cr13 steel
5	Disk seal	EPDM
6	Shaft sleeve	self-lubricating SF sliding bushing (steel + sintered bronze + PTFE)



#### 4. WEIGHT AND DIMENSIONAL PARAMETERS

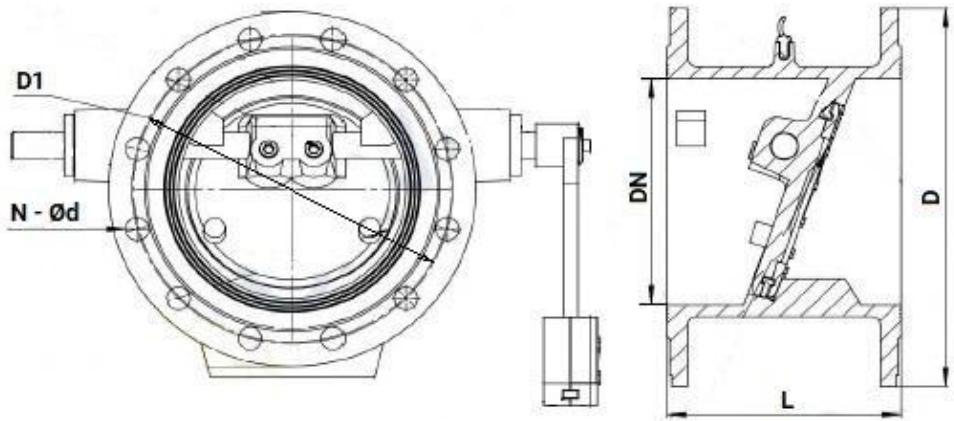


Table 3

DN	PN	L, mm	D, mm	D1, mm		N - Ød		Weight, kg
				10 bar	16 bar	10 bar	16 bar	
100	10/16	190	220	180		8 - 19		18
150		210	285	240		8 - 23		26
200		230	340	295		8 - 23	12 - 23	47
250		250	405	350	355	12 - 23	12 - 28	76
300		270	460	400	410	12 - 23	12 - 28	96



## 5. INSTALLATION AND OPERATING INSTRUCTIONS

5.1. Safety precautions during installation and operation of check valves must be observed in accordance with the procedure established by the company.

5.2 The installation, operation and maintenance of valves shall be allowed to personnel who have studied the design of valves, safety rules and requirements of the operation manual.

5.3 Before installation, valves are subjected to inspection and testing, it is necessary to pay attention to the condition of the internal cavities of valves, accessible for visual inspection, check the ease and smooth running of the counterweight.

5.4 The valve is installed on the pipeline so that the arrow on its body coincides with the direction of flow of the medium. Mounting position is horizontal.

5.5 The valves shall be installed in places accessible for inspection and maintenance, making sure that nothing obstructs the free movement of the counterweight of the valve.

5.6 Tightening of bolts should be carried out by methods excluding distortions and overtightening, if possible exclude the effect of the pipeline weight on the bolt connections.

5.7 After the system start-up it is necessary to make sure that there are no leaks at the connection points.

5.8 The following conditions should be observed during operation:

5.8.1. use the valve for its intended purpose and within the temperature and pressure limits specified in the technical data;

5.8.2. perform periodic inspections within the time limits established by the norms and rules of the organization operating the pipeline;

5.8.3. do not perform works on defect elimination in the presence of overpressure in the pipeline.



## 6. POSSIBLE MALFUNCTIONS AND REMEDIES

<b>Fault</b>	<b>Reason</b>	<b>Elimination</b>
The valve doesn't work	Foreign material entering the valve	Open the valve fully and clean out foreign matter
Leakage in the housing seat	Valve not fully closed	Check the operation of the counterbalance lever and close the valve completely
	Valve seal is worn or damaged	Replace the seal
Leaks in the mounting part	Damage to gaskets	Replace the gaskets
	Bolt connections are loose	Retighten bolted connections
Excessive noise during valve operation	Valve operation in violation of operating limits	Check the operating condition of the valve and whether the operating conditions correspond to the operating characteristics
	Incorrect mounting position	Change mounting position
Increased force during shaft rotation	Deposit accumulation in the housing seat	Open the valve and remove deposits
	Dry seal	Apply a lubricant suitable for the seal



## **7. TRANSPORTATION AND STORAGE CONDITIONS**

7.1. Transportation and storage conditions - in the manufacturer's packaging in accordance with the procedure established at the enterprise.

7.2 The valves may be transported without packaging provided that the manufacturer or supplier provides reliable installation and fastening of the valves on the vehicle and protection from environmental influences

7.3 Mechanical damage and contamination of internal surfaces of valves during transportation is not allowed.

7.4 Valves in long-term storage are subject to periodic inspection at least once a year. In case of violation of preservation make preservation again. Apply preservation lubricant on degreased clean and dry surface of parts. Degreasing should be performed with a clean rag soaked in gasoline.

## **8. UTILIZATION**

8.1. The product is utilized in accordance with the procedure established at the enterprise (remelting, burial, resale).

8.2 Before the valve is sent for utilization, the residues of the working medium shall be removed from the valve. Methods of removal of the working medium and decontamination of the valve shall be approved in accordance with the established procedure at the enterprise operating the valve.





## 8. WARRANTY OBLIGATIONS

8.1. Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.

8.2. The warranty applies to equipment installed and used in accordance with the installation instructions and product specifications described in this data sheet.

8.3. The manufacturer guarantees compliance of the product with safety requirements, provided that the consumer complies with the rules of transport, storage, installation and operation.

8.4. The warranty covers all defects caused by the fault of the manufacturer.

8.5. The warranty does not apply:

- parts and materials of the product subject to wear and tear;
- for cases of damage caused by:
  - modifications to the original design of the product;
  - violation of general installation recommendations;
  - faults caused by improper maintenance and storage; improper operation and use of the equipment.

## 9. WARRANTY TERMS

9.1. Claims to the quality of the goods may be made during the warranty period.

9.2. Defective products are repaired or exchanged for new ones free of charge during the warranty period. ELEPHANT decides whether to replace or repair the product. The replaced product or its parts resulting from the repair shall become the property of 'ELEPHANT'.

9.3. Costs related to dismantling, installation and transport of the defective product during the warranty period shall not be reimbursed to the Buyer.

9.4. If the claim is unfounded, the Buyer shall pay the costs of diagnostics and expertise of the product.

9.5. Products are accepted for warranty repair (as well as for return) fully assembled.



## WARRANTY CARD № \_\_\_\_\_

№	Product Name	Packs

Name and address of the trading organisation \_\_\_\_\_

Date of sale \_\_\_\_\_ Seller's signature \_\_\_\_\_

Stamp or seal of the trading organisation \_\_\_\_\_ Acceptance stamp \_\_\_\_\_

I agree with the terms and conditions of the warranty:

Buyer \_\_\_\_\_ (signature)

Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.

For warranty repairs, complaints and product quality claims, please contact ELEPHANT at: Carrer d'Aragó,264,3-1,08007 Barcelona, Spain. E-mail address: sales@valveelephant.com.

When making a complaint about the quality of goods, the buyer shall present the following documents:

1. A free-form application, which shall specify:
  - name of the organisation or full name of the buyer, actual address, contact telephone numbers;
  - name and address of the organisation that carried out the installation;
  - basic parameters of the system in which the product was used;
  - a brief description of the defect.
2. Document confirming the purchase of the product (delivery note, receipt)..
3. Act of hydraulic test of the system in which the product was installed.
4. This completed warranty card.

A note on the return or exchange of goods \_\_\_\_\_

Date: « \_\_\_ » \_\_\_\_\_ 202\_\_yr. Caption \_\_\_\_\_

