



Manufacturer of shut-off and control valves

## TECHNICAL DATA SHEET

**Gate valve ELEPHANT GVKR3431M-1W-Fb-2P DN50-400  
10 bar carbon steel, interflanged with pneumatic actuator**



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## 1. GENERAL PRODUCT INFORMATION

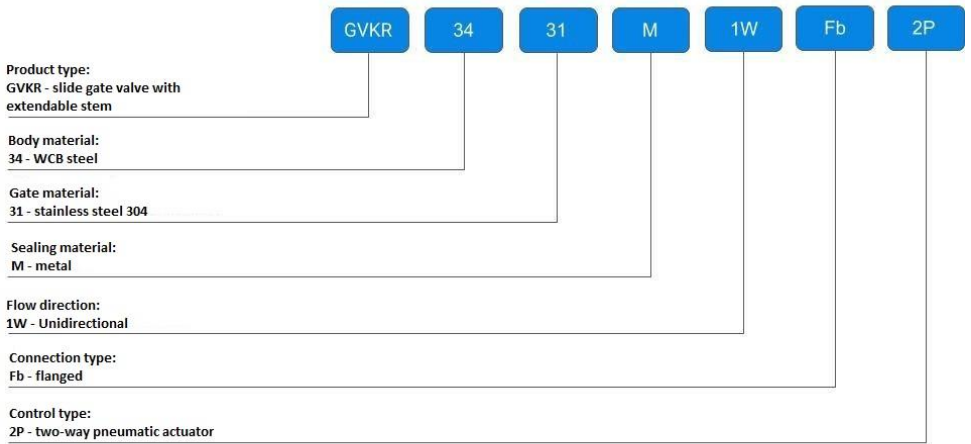
1.1. Product name: Gate valve ELEPHANT GVKR3431M-1W-Fb-2P DN50-400 10 bar carbon steel, interflanged with pneumatic actuator.

1.2. Purpose. Gate valve is designed for installation on the pipeline as a shut-off device and regulation of the working medium flow in water supply systems and chemical industry.

1.3. The principle of operation of the gate valve is to move the gate (knife) perpendicular to the flow of medium. At full closing of the pipeline nominal bore diameter the flow is stopped, at partial closing the flow is regulated. Tightness of the gate valve in the closed state is ensured by pressing the gate against the seal under the influence of the working medium pressure. The principle of operation of pneumatic actuator is based on the movement of the built-in piston due to compressed air, which is supplied to the system from a compressor or from a reservoir.



## 1.4. Deciphering of the designation:



## 2. BASIC TECHNICAL DATA AND CHARACTERISTICS

Table 1

Nominal diameter DN, mm	50 - 400
Working pressure, bar	10
Working medium temperature t, °C	-30 to +400
Working medium	water, lightly contaminated liquids with suspended solids content up to 5%
Medium flow direction	bilateral
Leaktightness class	B
Control type	pneumatic cylinder
Pipeline connection	interflange
Body material	WCB steel
Gate material	stainless steel AISI 304
Application areas	heating and water supply systems, industrial pipelines.
Service life, years	15



Table 2

Pneumatic cylinder model	DN50-65		DN80-100		DN125		DN150	
	SC 63x75		SC 80x90		SC 100x110		SC 125x135	
	DN200		DN250		DN300		DN400	
	SC 125x160		SC 160x210		SC 160x260		SC 200x360	
Main characteristics of pneumatic cylinders								
	SC 63x75	SC 80x90	SC 100x110	SC 125x135	SC 125x160	SC 160x210	SC 160x260	SC 200x360
Type of action	double action							
Operating medium	compressed air: <ul style="list-style-type: none"> <li>• contamination class 6;</li> <li>• at ambient temperatures between +5° C and +50° C, the dew point is 10° C lower than the ambient temperature;</li> <li>• at temperatures below +5° C, the dew point is 5° C lower than the ambient temperature..</li> </ul>							
Type of attachment	FA FB CA CB LB YB							
Damping	adjustable							
Operating pressure range, bar	1 - 9							
Maximum allowable pressure, bar	13,5							
Operating temperature range, ° C	-5 ÷ 70							
Speed range, mm/s	50 - 800							
Standard	ISO 15552 (ISO 6431)							
Piston diameter, mm	63	80	100	125	125	160	160	200
Stroke, mm	75	90	110	135	160	210	260	360
Connection diameters	G3/8	G3/8	G1/2	G1/2	G1/2	G1/2	G1/2	G3/4



### 3. BASIC MATERIALS

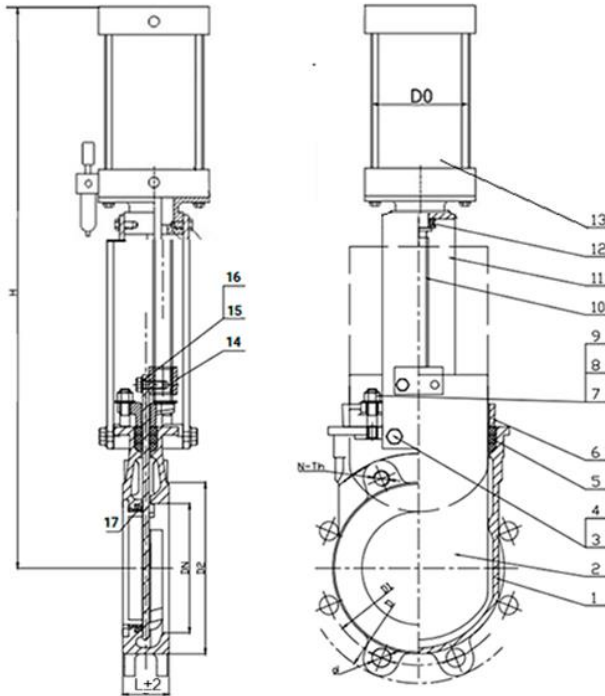


Table 3

Nº	Product Name	Material	Nº	Product Name	Material
1	Housing	WCB steel	11	Support plates	A3 Steel
2	Disc	304 steel	12	Bearing	ZChSnSb10-6
3 - 4	Bolt / Nut	A3 steel	13	Pneumatic actuator	-
5	Seal	METAL	14	Stem nut	A3 Steel
6	Gland	WCB steel	15-16	Bolt / Nut	A3 Steel
7 - 9	Bolt / Nut	A3 steel	17	Support	Steel 304
10	Stem	2Cr13 steel	-	-	-



#### 4. WEIGHT AND DIMENSIONAL PARAMETERS

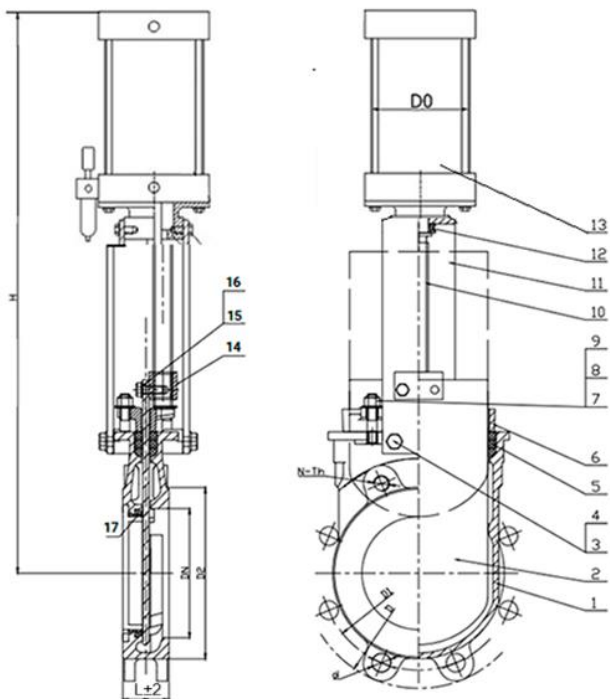


Table 4

DN	PN	L	D	D1	D2	D0	N-Th	d	H	Вес
		mm								
50	10	48	160	125	99	80	4-M16	Ø18	455	9
65	10	48	185	145	118	100	4-M16	Ø18	500	11
80	10	51	195	160	132	100	8-M16	Ø18	530	14
100	10	51	215	180	156	125	8-M16	Ø18	635	17.5
125	10	57	250	210	184	125	8-M16	Ø18	715	21
150	10	57	280	240	212	160	8-M20	Ø23	810	29
200	10	70	335	295	266	160	8-M20	Ø23	955	41
250	10	70	390	350	319	200	12-M20	Ø23	1090	62
300	6	76	440	400	370	200	12-M20	Ø23	1225	75
400	10	89	565	515	480	250	16-M22	Ø25	1565	125



## 5. INSTALLATION AND OPERATING INSTRUCTIONS

5.1. To installation, operation and maintenance of gate valves are allowed personnel who have studied the device of the gate valve, safety rules, requirements of the manual for installation, adjustment, operation and maintenance, certified for the relevant type of work.

5.2. Gate valves should be installed on pipelines for media and parameters specified in the product passport.

5.3 Before installation it is necessary to remove the plugs and make the gate valve preservation with a clean rag moistened with white spirit, gasoline or other, blow out the inner surface with clean air (in accordance with the order established at the enterprise). The pipeline should be thoroughly cleaned from dirt, sand, scale, etc..

5.4. The flanges on the pipeline shall be installed without misalignment. The pipeline shall be secured and fully unloaded by the time of installation of the gate valve.

5.5. Before installing the gate valve in the pipeline it is necessary to set the actuator and the gate valve to work together.

5.6. When installing the gate valve with actuator in any position other than vertical, the actuator must have its own supports.

5.7. The limit switches and travel limiters should be set for the “open” and “closed” positions and the disk and seat should be coated with silicone grease to prevent dry running.

5.8. Perform several cycles of test opening-closing of the gate valve manually. If the gate valve opens-closes normally during manual opening, connect to power and control networks and perform several cycles of test opening-closing with the actuator.

5.9. Only after performing the above operations, if the gate valve and actuator function normally, it is allowed to proceed to the installation of the gate valve on the pipeline.

5.10. Before starting up the system with installed gate valves immediately after installation, all gate valves shall be opened and the pipelines shall be flushed.

5.11. Tightness tests should be carried out in accordance with the procedure established at the enterprise.

5.12. During operation it is necessary to carry out periodic inspections (routine work) within the terms established by the operating organization, depending on the operating modes of the system.

5.13. During inspection check: the general condition of the gate valve and actuator, the threaded part of the spindle, which should be lubricated, the condition of bolted connections, tightness of the gasket joint and gland seal.

5.14. To ensure labor safety it is strictly forbidden to carry out works on defects elimination in the presence of excessive pressure of working medium in the pipeline.

5.15. It is not allowed to use wrenches larger in size than it is required for fasteners.





## **6. TRANSPORTATION AND STORAGE CONDITIONS**

- 6.1. Transportation and storage conditions - in accordance with the procedure established at the enterprise.
- 6.2. Gate valves are transported in containers in accordance with the procedure established at the enterprise and secured against possible movements with the wedge lowered to the stop.
- 6.3. Transportation without packing is allowed, provided that there are no shock loads.
- 6.4. Mechanical damage and contamination of internal surfaces of gate valves during transportation is not allowed.
- 6.5. Gate valves should be stored in dry warehouses, protected from direct sunlight and removed at least 1 m. from heat-emitting devices, as well as not exposed to oil, gasoline.
- 6.5. Passage openings should be closed with plugs.
- 6.7. Gate 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.

## **7. UTILIZATION**

- 7.1. The product is disposed of in accordance with the procedure established at the enterprise (remelting, burial, resale).
- 7.2. Before sending the valve 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 must 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 \_\_\_\_\_

