

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

Butterfly Valve with gear box Grooved ends – UL/FM Certification



Ref. GENE BRE: 2114 – 2114D

Installation, operation and maintenance instructions

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1. Product description

Genebre, S.A. offers a wide range of valves designed and assembled to handle and drive fluids.

The compatibility of materials used to build the valves (see technical specifications) and the application of valves to the different industrial processes is at user's risk. Valves will have an optimal behaviour when working conditions do not exceed pressure and temperature limits (pressure curve) for which they have been designed. Please, refer to the product datasheet.

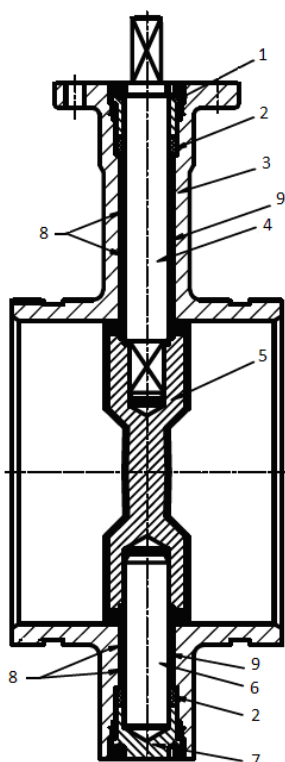
Art. 2114 / 2114D: Ductile Iron Butterfly Valve with EPDM seal. UL/FM certification for use in fire protection systems.

Art. 2114: Grooved ends for use in pipes according to ASTM / ASME standard.

Art. 2114D: Grooved ends for use in pipes according to DIN standard.

Note: Some pipe diameters are the same between both standards.

2. Assembly drawing and Parts List



Nº	Name	Material	Surface Treatment
1	Upper shaft nut	Carbon steel	-----
2	Shaft seal	EPDM	-----
3	Body	Ductile Iron EN-GJS-400	Epoxy
4	Upper shaft	Stainless Steel AISI 416	-----
5	Disc	Ductile Iron + EPDM	-----
6	Lower shaft	Stainless Steel AISI 416	-----
7	Lower shaft nut	Carbon steel	-----
8	Stem bushing	PTFE	-----
9	O'ring	EPDM	-----

3. Transport and Storage conditions



Transport and storage of this kind of products must be done keeping them in their original package!

VISUAL INSPECTION

Check whether during transport, unloading and placement the products have suffered damages.

During storage it is recommended to keep them into the included protective wrapping to avoid damages or dirt accumulation in the inside part of the valve. The wrap must not be removed until valve is to be installed.

Valves must be stored in a dry and clean environment.



If you notice any kind of anomaly during reception of the goods, contact immediately with GENEBRE in order to determine the possible responsibilities on the issue.

IMPORTANT NOTE:

Before installing and/or manipulating these elements, READ CAREFULLY these instructions for use and OBSERVE all contained information. If you fail to understand any of their content, please contact GENEBRE, S.A.



The responsibility for the safe use of these products lies with the user in accordance with the provisions of these instructions for use as well as the specific technical documentation of the device supplied!

4. Installation instructions

4.1) Preparation

Remove any material remains of the valve wrapping.
Serious problems may arise with the installation of a valve in a dirty pipe.

Make sure the pipe is not dirty and doesn't have welding particles, for example, before installing it. This may cause irreparable damages in the valve when the equipment is started
→ *prepare a clean working area.*

Plan beforehand enough space for future maintenance operations.

Control the correct performance of the valve by turning the handwheel both sides (close and open) and observing if the disc or needle slides correctly. If this is not the case, check if there are foreign particles inside the valve and repeat the whole operation.

4.2) Installation of valves with grooved ends

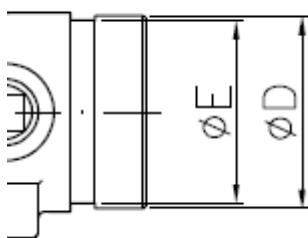
Do not disassemble these valves for installation.

Make sure the pipe's and edges of the valve are clean.

Use the corresponding accessories for install the valve to the pipe (grooved coupling)

Make sure the coupling joints are well placed.

Make sure the pipe ends and the valve ends are compatible according to the outside diameters (according to standard).



Pipe	Ref.	Size	Dimensions D E	
ASTM / ASME	2114 10	2 ½"	73	69.1
	2114 11	3"	88.9	84.9
	2114 12	4"	114.3	110.1
	2114 13	5"	141.3	137
	2114 14	6"	168.3	164
	2114 16	8"	219.1	214.4
	2114 18	10"	273	268.3
	2114 20	12"	323.9	318.3
DIN	2114D 10	DN 65	76.1	72.3
	2114D 13	DN 125	139.7	135.5
	2114D 14	DN 150	165.1	160.8
	2114D 16	DN 200	216.3	211.6

After assembling, check the tightness and performance of the valve.

REMARKS:

- ***Gate Valves, ref. 2114 / 2114D are designed according to API 609 to be assembled with grooved coupling according to AWWA C606 at a maximum working pressure of 300 PSI.***
- ***It is recommended the use of filters in the pipe to make the valves longer life.***
- ***Any damaged paint/coating during installation must be immediately repaired.***

5. Operation instructions

5.1) Usage

Butterfly valves art. 2114 / 2114D provide a leakproof seal when used adjusted to the pressure and temperature values for which they have been designed.

Seat material for the valve, joints, body, disk and axis have to be fully compatible with the fluid circulating through the valve. Otherwise, valve could be seriously damaged.

This valve is suitable for use in fire protection system.

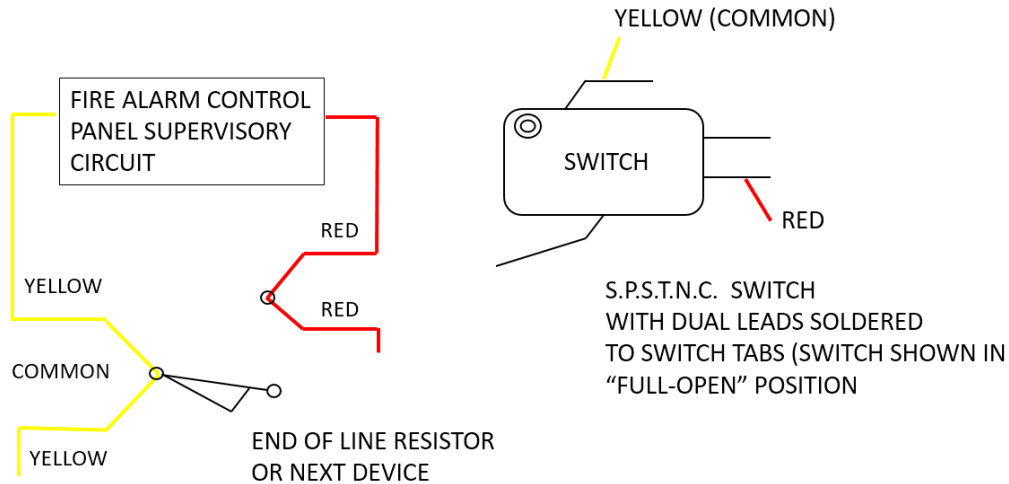
5.2) Handwheel operation

The valves are designed to be manually operated by handwheel. Turn clockwise for closing or turn counterclockwise for opening the valve.

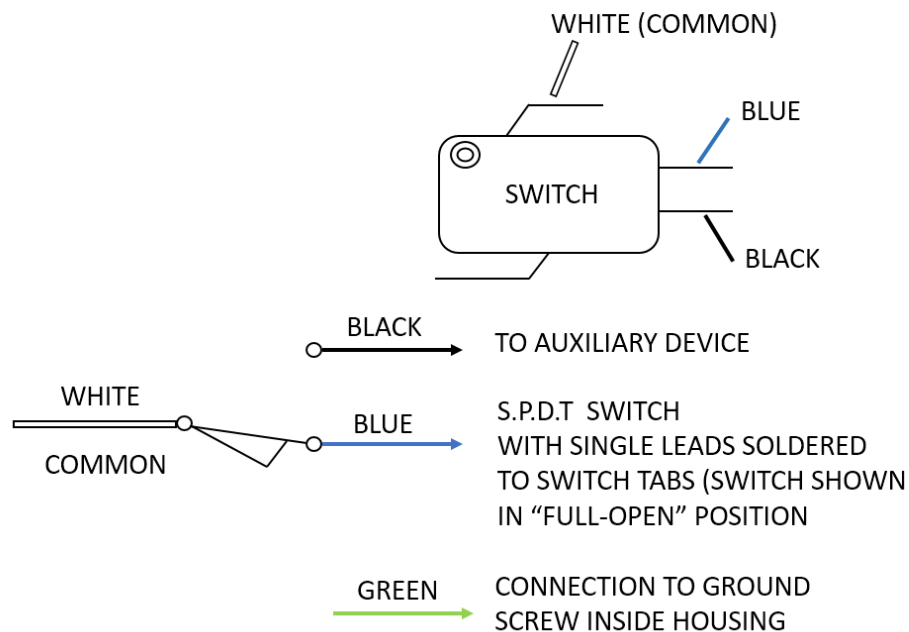
5.3) Gear Box with Limit Switches



SUPERVISORY SWITCH



AUXILIARY SWITCH



6. Maintenance operations

Butterfly valves are designed so that they do not need any lubrication and/or periodical maintenance during their life cycle.

However, periodical checks explained below will be useful to extend the service life of the valve and reduce installation problems:

- Close the valve –from position completely open to completely closed.
- Verify all locks and threaded ends to check if they are loose or with rust. Tighten them if necessary.
- Inspect the valve and surrounding areas to verify if there is any leakage in the stem or in the flange connections.

7. Repair instructions

These types of valves, due to their assembling specifications are not worth repairing, because most of the times are simply not cost-effective, so we recommend to directly replace them.



Before disassembling the pipe's valve to clean or replace it, make sure that line has been closed and depressurized because a bad operational procedure could cause a serious accident to staff and installation system



Before installing new valve, check if it meets the requirements of the valve being replaced

8. Hygiene and Safety Instructions:

8.1) When operating valves, you must follow the security instructions and it is recommended to use personal protection gadgets:

- 1) Protect your eyes.
- 2) Wear gloves and appropriate working clothes.
- 3) Wear safety footwear.
- 4) Wear a helmet.
- 5) Have running water at hand.
- 6) To operate flammable fluids, make sure you have an extinguisher at hand.

8.2) Before removing a valve from a pipe, check always if the line is completely drained and depressurized.

8.3) Any type of repair or maintenance should be performed in ventilated places.