



## FB7904 Series Sanitary Butterfly Valves

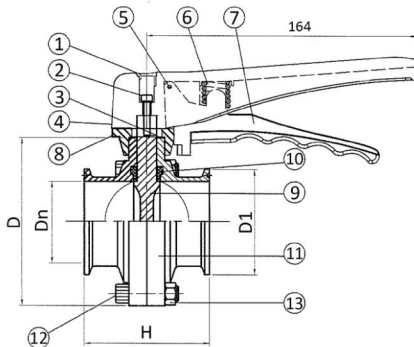
### FEATURES

- In sizes from 1/2" (DN15) through 4" (DN100)
- Pressure ratings up to 145 psi (10 bar)
- Internal finish 32 Ra
- Lockable handle prevents accidental opening or closing of valve
- Proportional control w/ 12 position SS handle
- Designed for simple maintenance
- Available with EPDM or Viton Seats
- Sanitary Clamp Connection
- Available as manual or actuated valve



Quick Spec	
Product Scope	
Size Range	1/2" - 4"
Body Type	Wafer
Pressure Rating	See Chart Below
Temperature Range / WSP	See Chart Below
Body and End Caps	Stainless Steel
Disk & Stem	Stainless Steel
Seats	3EPDM or Viton
Stem Packing & Seals	FDA Approved
End Connections	Sanitary Clamp Ends
Testing Standards	
Pressure Testing	Industry Standard

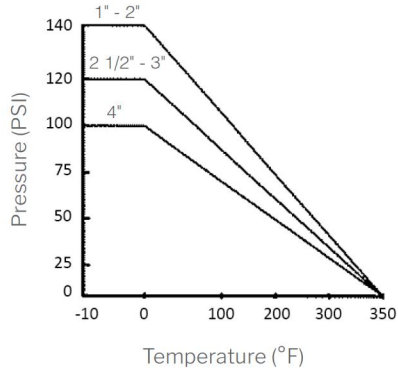
Standard Materials of Construction			
No	Part	Material	Qty
1	Cap	ABS	1
2	Screw Bolt	SS304	1
3	Spring Washer	SS304	1
4	Stainless Handle	SS304	1
5	Pin	SS304	1
6	Spring	SS304	1
7	Trigger	SS304	1
8	Multi - Positioner	SS304	1
9	Disc	SS304 / 316L	1
10	Seal	EPDM / VITON	1
11	Valve Body	SS304 / 316L	2
12	Screw Bolt	SS304	4
13	Nut	SS304	4



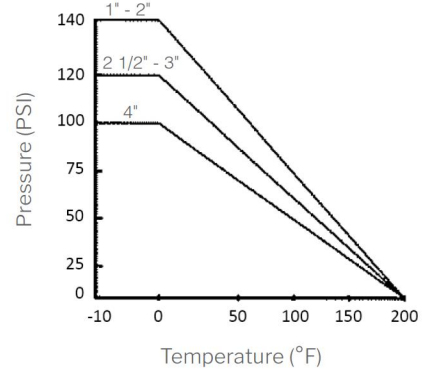
Dimensions (mm)				
Size	D	D1	Dn	H
1/2"	78	25.4	9.4	66.0
3/4"	78	25.4	15.8	66.0
1"	78	50.5	22.1	66.0
1-1/2"	86	50.5	34.8	70.0
2"	102	64.0	47.5	76.0
2-1/2"	115	77.5	60.2	80.0
3"	128	91.0	72.9	84.0
4"	154	119.0	97.4	104.0

Pressure-Temperature Ratings

Pressure Temperature Chart (Viton Seats)



Pressure Temperature Chart (EPDM Seats)



PNEUMATICALLY OPERATED ACTUATOR

- Air to open, spring to close is standard.
- Unique design provides higher torque at final closing of disc.
- One actuator fits 1/2" through 4" valves.
- Air pressure required 73-108 psi to operate actuator.
- No spare parts required.
- Maintenance free actuator.
- 304SS Stainless Steel Housing



### OPTIONAL ADD ON: SMART POSITIONER

This smart positioner is a pneumatic control head used to ensure optimal control of our valves. It is compatible with most PLC (programmable logic controller) automation systems, digital communications, or bus (as-wing).

It is mounted on the upper part of the pneumatic actuator or the process valve to start and provide remote electrical indication of the valve's working position. There is a type indication:

- Proximity sensing detector (no contact)

It can be fitted with any valve in the food, beverage and biopharmaceutical industries.

The working principle of this positioner is a signal and instruction device that contains signals and instructions for controlling all types of process valves (pistons) with the following functions:

- Pneumatic and electrical control of valves
- Feedback position indicator
- The possibility of bus communication

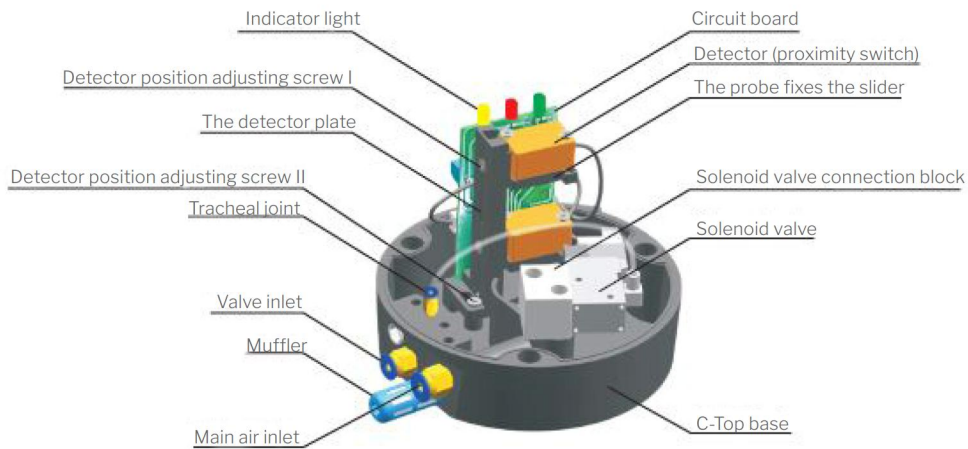
It is mounted on the valve's pneumatic actuator. It receives a signal from the control panel or PLC to control the valve and sends the signal to the PLC or control panel to indicate its status/position.



The positioner has three signal light-emitting diodes that can provide information about valve status at any time:

- A green light: Indicates that the valve is in an open position
- Red light: Indicates that the valve is in the closed position
- Yellow light: Said position 3 is already active (for example: the mixing valve)

POSITIONER FEATURES



POSITIONER SPECIFICATIONS

**The Material:**

- Base: reinforced PPO black
- Top cover: clear blue
- Seal: EPDM
- Weight: 0.5KG

**Pneumatic Joint**

- Connection: air inlet: G1/8" - equipped with plug connector for 1/4 pipe
  - Exhaust outlet: G1/8" - equipped with muffler
  - Air outlet: G1/8" - equipped with an insert connector or plug for 6/4 pipes
- Medium: compressed air
- Temperature: <50°C
- Pressure of work: 0.15 to 0.7Mpa (22-102PSI)
- Traffic: 200NI/min (0.6Mpa, 20°C, 0.1Mpa); (87PSI, 20°C, 87PSI)
- Operation: minimum stroke induction height: 30mm
  - Maximum stroke induction height: 92mm
  - Minimum operating height: 18mm

**Electrical Specifications:**

- Protection level: Ip66
- Power supply: DC 24V or through ASI field bus
- Connection: threaded terminal with M12 wire (standard)
  - Many connector
  - AS the -1 bus

**Solenoid Valve**

- Up to three solenoid valves are available
  - Type: One solenoid valve (normally open/normally closed)
    - Two solenoid valves (double acting)
    - Three solenoid valves (anti-mixing valve)
  - Air pressure: 0.15 to 0.7Mpa (22-10PSI)
  - Power: DC 0.55W
  - DC: 1.9VA
  - The reaction time: <25ms
- Optical index: red

**Detector (inductive)**

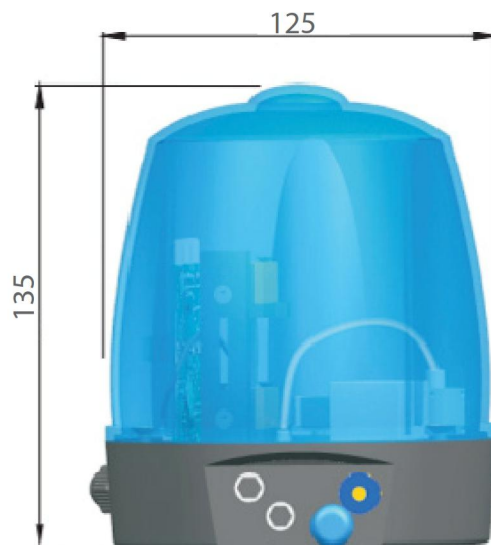
- The power supply: 24V DC
- Protection level: Ip66

Note: To ensure good valve performance, compressed air must be supplied in accordance with the conditions described in this article. Otherwise, the smart head may cause irreparable damage.

SMART POSITIONER CHARACTERISTICS

The Connection	Solenoid Valve	Detector number	Power Supply	Description
The Connector	0	2 The Probe	24V DC	Control head with PCB. The power supply is provided directly to the connector. M12 traverse.
	1			
	2			
	3			
	0	2 Proximity Switch	24V DC	
	1			
	2			
	3			
More Needles	0	2 The Probe	24V DC	Control head with PCB. Electrical connection of prewired factory. The Electrical connection is made through the eight terminals.
	1			
	2			
	3			
	0	2 Proximity Switch	24V DC	
	1			
	2			
	3			
As-I Bus Connection	0	2 The Probe	24V DC	Control head with PCB Connect the smart plug directly to the field bus signal cable.
	1			
	2			
	3			

SMART POSITIONER DIMENSIONS



FB7904 SANITARY BUTTERFLY VALVES

ORDERING SCHEMATIC

FB7904		1	2	3	4	5	6

Series	
FB7904	Sanitary Butterfly Valve

3	Material
A	316L

1	Size
1	1/2"
2	3/4"
3	1"
4	1-1/2"
5	2"
6	2-1/2"
7	3"
8	4"

4	Seat
1	EPDM
2	Viton

5	Option 1
0	No Selection
A	Actuator

2	End Connection
A	ASME Tri-Clamp

6	Option 2
0	No Selection
A	Positioner

DOCUMENTATION

A Certificate of Compliance is available at no charge when requested at time of order. The "Unicert" is a chargeable document. If needed, a "Unicert" must be requested at time of order.

Richards Industrials reserves the right to make revisions to its products, specifications, literature, and related information without notice.



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