

## Piston actuated valves for on/off control

Spirax Sarco offers a high quality product that will meet the tough requirements of your application. Its simple rock-solid design combined with ISO9001 manufacturing processes will insure that these valves will meet your highest expectations. Also, our highly qualified staff is always ready to assist you with your application.

**BEST**  
Price/Performance  
in the market!



- Solid construction combined with stainless steel or bronze body and Teflon seals allow their use in most any industrial applications.
- Our special construction permits the use of these valves with a broad range of media including steam, corrosive liquids, gases and light slurry material.
- A line pressure range that is the broadest in the industry: 0-290 psig Vacuum to 29" hg.
- A highly polished valve stem having self-aligning glands combined with floating seals give maximum integrity and exceptionally long cycle life.

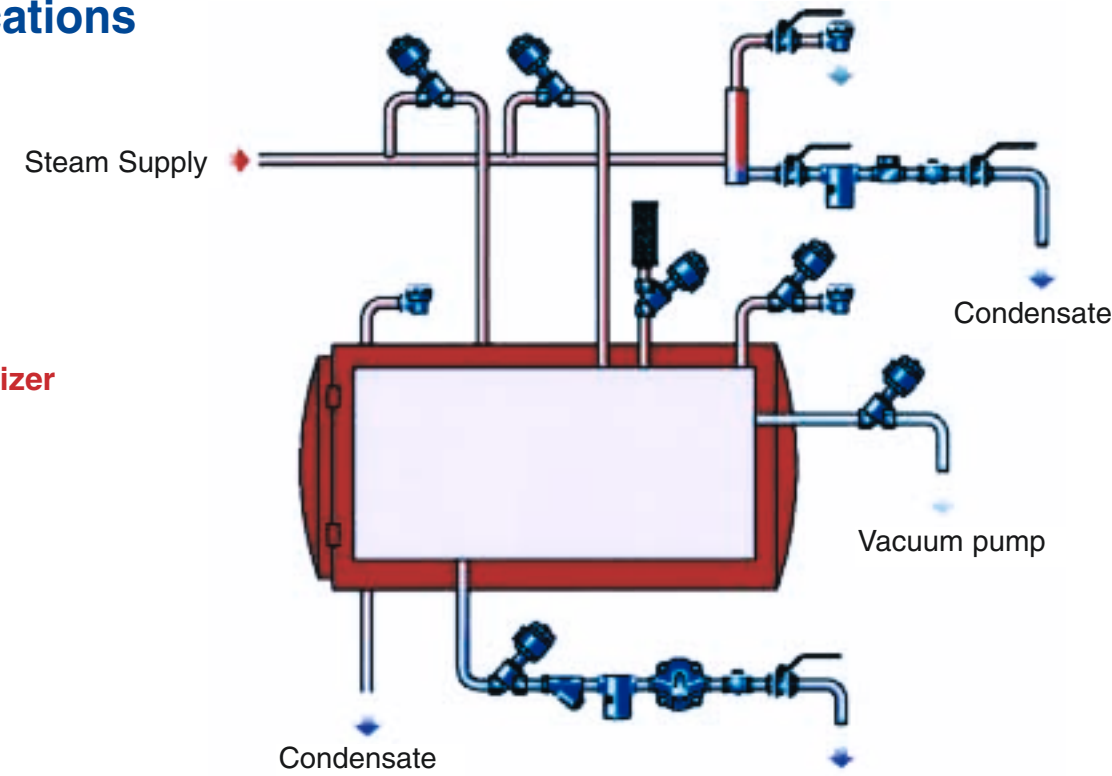
- Available with a low cost custom designed "solenoid operated" Pilot Valve.

- These valves serve the following industries:

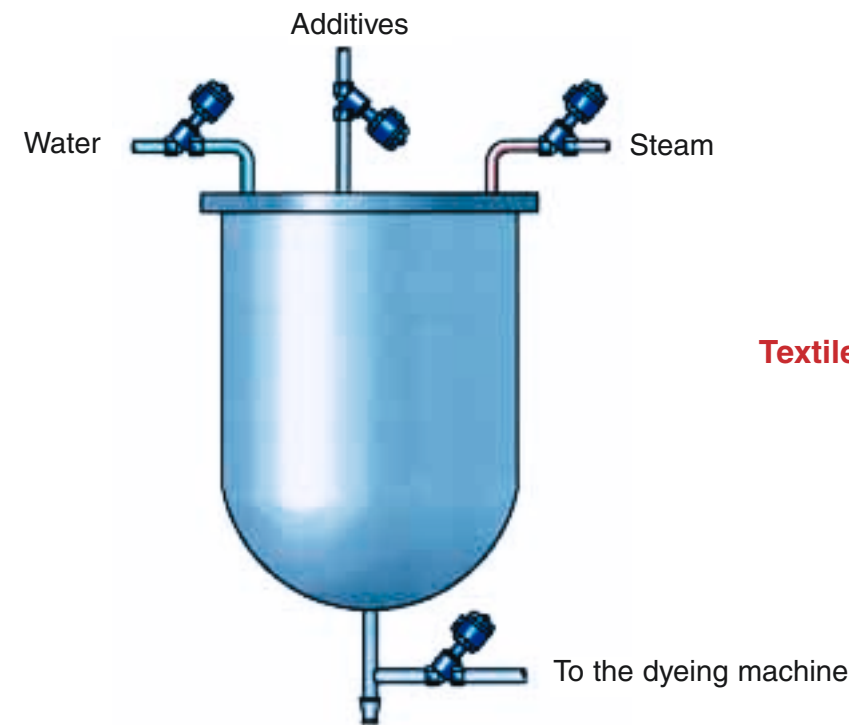
Brewing	Laundries	Hospital sterilizers
Textiles	Rubber	Food and beverage
Cosmetics	Dairy	General process
Pharmaceuticals	Catalog houses	Pulp and paper
Chemical processes	Autoclaves	and many more...

## Typical Applications

Hospital Sterilizer



Textile Additive Mixing



**spirax**  
**/sarco**

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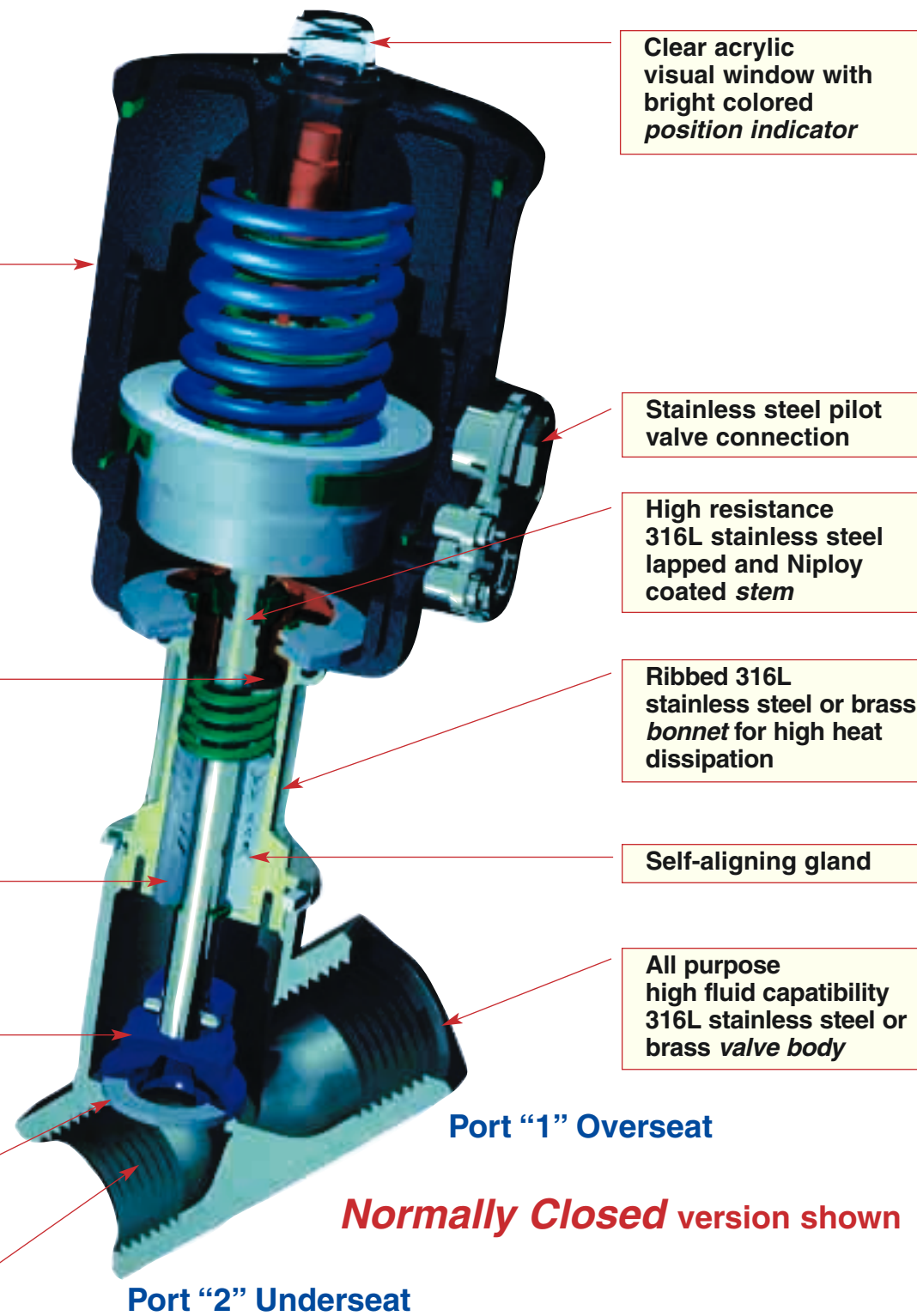
*World Class*

**Piston  
Actuated Valves**



**spirax**  
**/sarco**

The *Spirax Sarco* range of Piston Actuated Valves provide a competitive solution for on/off applications by combining many key benefits in each valve. These elements sustain a product that encompasses a wide range of industrial applications.



Leakage free and 360° rotatable actuator housing

Clear acrylic visual window with bright colored position indicator

Stainless steel pilot valve connection

High resistance 316L stainless steel lapped and Niploy coated stem

Ribbed 316L stainless steel or brass bonnet for high heat dissipation

Self-aligning gland

All purpose high fluid capability 316L stainless steel or brass valve body

PTFE stem guide for long cycle life

Pivoting obturator for total sealing and long life

Soft PTFE main seal for compatibility and positive sealing

Angle seat design for high flow rate

Normally Closed version shown

Port "1" Overseat

Port "2" Underseat

## Product Range

### Piston Actuated Valves

Type	Function	Flow Direction	Range NPT	Actuator Diameter mm (inches)	Pilot Ports	Body Material
PF51G-1NC	Normally Closed	Overseat	1/2" - 1"	45mm (1-3/4")	1/8"	Bronze
PF51G-2NC	Normally Closed	Overseat	1/2" - 2"	63mm (2-1/2")	1/4"	Bronze
PF51G-3NC	Normally Closed	Overseat	1" - 2"	90mm (3-9/16")	1/4"	Bronze
PF51G-1NO	Normally Open	Underseat	1/2" - 1"	45mm (1-3/4")	1/8"	Bronze
PF51G-2NO	Normally Open	Underseat	1/2" - 2"	63mm (2-1/2")	1/4"	Bronze
PF51G-3NO	Normally Open	Underseat	1" - 2"	90mm (3-9/16")	1/4"	Bronze
PF51G-1BD	Bi-directional/NC	Overseat/Underseat	1/2" - 1"	45mm (1-3/4")	1/8"	Bronze
PF51G-2BD	Bi-directional/NC	Overseat/Underseat	1/2" - 2"	63mm (2-1/2")	1/4"	Bronze
PF51G-3BD	Bi-directional/NC	Overseat/Underseat	1" - 2"	90mm (3-9/16")	1/4"	Bronze

PF61G-1NC	Normally Closed	Overseat	1/2" - 3/4"	45mm (1-3/4")	1/8"	Stainless Steel
PF61G-2NC	Normally Closed	Overseat	1/2" - 2"	63mm (2-1/2")	1/4"	Stainless Steel
PF61G-3NC	Normally Closed	Overseat	1" - 2"	90mm (3-9/16")	1/4"	Stainless Steel
PF61G-1NO	Normally Open	Underseat	1/2" - 3/4"	45mm (1-3/4")	1/8"	Stainless Steel
PF61G-2NO	Normally Open	Underseat	1/2" - 2"	64mm (2-1/2")	1/4"	Stainless Steel
PF61G-3NO	Normally Open	Underseat	1" - 2"	90mm (3-9/16")	1/4"	Stainless Steel
PF61G-1BD	Bi-directional/NC	Overseat/Underseat	1/2" - 3/4"	45mm (1-3/4")	1/8"	Stainless Steel
PF61G-2BD	Bi-directional/NC	Overseat/Underseat	1/2" - 2"	63mm (2-1/2")	1/4"	Stainless Steel
PF61G-3BD	Bi-directional/NC	Overseat/Underseat	1" - 2"	90mm (3-9/16")	1/4"	Stainless Steel

### Pilot Valves

Type	Actuator Diameter	Pilot Port	Voltage
DM11N	45mm (1-3/4")	1/8" NPT	240 VAC
DM12N			120 VAC
DM13N			24 VAC
DM14N			24 VDC

Type	Actuator Diameter	Pilot Port	Voltage
DM21N	63mm (2-1/2")	1/8" NPT	240 VAC
DM22N			120 VAC
DM23N			24 VAC
DM24N			24 VDC

Type	Actuator Diameter	Pilot Port	Voltage
DM31N	90mm (3-9/16")	1/8" NPT	240 VAC
DM32N			120 VAC
DM33N			24 VAC
DM34N			24 VDC

## How To Order . . .

**Piston Actuated Valve**  
**PF61G-2NC-R-1/2"NPT**

PF — Piston Actuated Valve  
Fast functioning

Body Material  
51 — Bronze body  
61 — 316L Stainless Steel

Main seal  
G — PTFE soft seal

Actuator Diameter  
1 — 45mm (1-3/4")  
2 — 63mm (2-1/2")  
3 — 90 mm (3-9/16")

Port Size  
1/2" through 2" NPT

Options  
Blank — no options  
R - Stroke regulator  
I - Travel switch

Function  
NC — Normally Closed  
NO — Normally Opened  
BD — Bi-directional (Normally Closed)

Examples: [PF61G-2NC- 1-1/2" NPT](#)  
[PF51G-2NO- 1-2" NPT](#)  
[PF61G-2BD- 1" NPT DM22N](#)

Stainless steel, 63mm actuator, normally closed, 1-1/2" NPT ports  
Bronze, 90mm actuator, normally open, travel switch, 2" NPT ports  
Note: When ordering the Piston Actuated Valve together with Pilot Valve, order both part numbers separately.  
Stainless steel, 63mm actuator, bi-directional, 1" NPT ports with a 120 VAC Pilot Valve

**Pilot Valve**  
**DM22N**

DM — Pilot Valve series

Actuator diameter  
1 — 45mm (1-3/4")  
2 — 63mm (2-1/2")  
3 — 90 mm (3-9/16")

N — NPT pipe size

Voltage  
1 — 240 VAC  
2 — 120 VAC  
3 — 24 VAC  
4 — 24 VDC

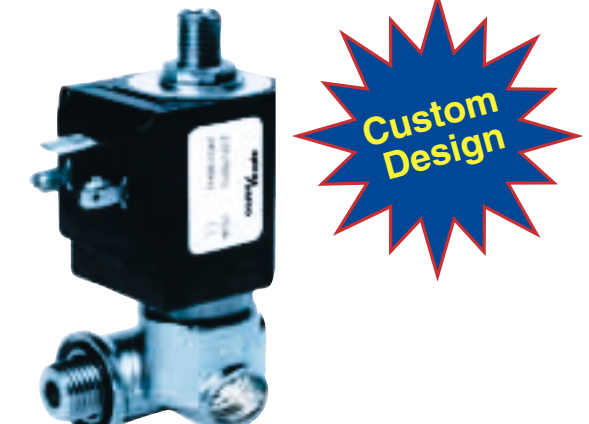
## General Information

### Standard

- **Functions:** Normally Closed, Normally Open and Bi-directional
- **Media:** Steam, corrosive liquids, inert gases & light slurry material
- **Media temperature:** 14°F to 356°F.
- **Media pressure:** 0 — 290 psi max / vacuum to 29" Hg.
- **Pilot media:** Air, inert gas & water
- **Pilot media pressure:** 150 psi max.
- **Seals:** PTFE & Viton
- **Wetted material:** Teflon, Niploy Coating (Nickel), Bronze/Brass or 316L Stainless Steel

### Options

- **Pilot Valve Solenoid operated** Model "DM"  
Pilot Valves mount directly to the actuator head and provides operating pressure to the Piston Actuated Valve. These valves are available in standard AC and DC voltages along with an IP65 strain relief connector. A manual override turn button is provided as standard.  
Ordered Separately



- **Stroke regulator\***  
Provides manual control of flow through the Piston Actuated Valve. It is adjustable throughout the flow range of the valve. Can also provide manual shutoff on normally open valves.  
Order with Designate "R"



- **Travel switch\***  
Provides indication of an open or closed valve through a magnetic reed switch with volt free contacts.  
Order with Designate "I"



\* Not available with 45mm diameter actuators