

## Description

The 51Y type is a range of three-way cast iron single seat globe valves with proportional pneumatic actuator in sizes DN25 to DN80 available with flanged connections, suitable for steam, water and oil.

The pneumatic actuators are a range of single spring linear actuators having a diaphragm for 3-15 psi (0.2-1 bar) air pressure.

Each actuator is fitted with a combined mechanical stroke indicator. For control with pneumatic actuators an I/P transducer is required.

It can be assembled with Motor actuator with various specification.



## Limiting Conditions

Body Design Condition	PN16
Maximum Design Temperature	300 °C
Maximum Cold Hydraulic Test Pressure	20 kgf/cm <sup>2</sup>
Maximum Operating Pressure	10 kgf/cm <sup>2</sup>

## Technical Data

Applicable Fluid	Steam, Water and Oil
Operating	Linear
Type of Valve	Three-way Mixing / Diverting Type
Characteristics	Proportional
Air Operating Range	3 - 15 psi ( 0.2 - 1 bar )
Air Supply Actuator Connection	1/4" PT
Actuating	Pneumatic
Stem Seal	Graphite Packing
Plug Design	Parabolic

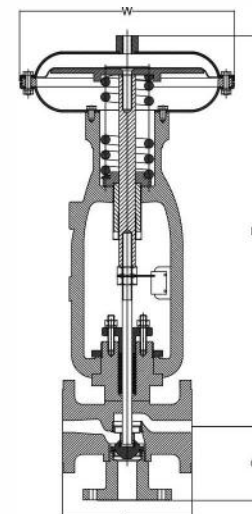
## Sizes and Pipe Connections

DN 25, 32, 40, 50, 65, 80 Flanged (DIN 2502)

## Dimensions / Weights (Approximate) mm and Kg

Size	W	L	H	G	Weight
DN 25	265	120	455	90	20.5
DN 32	265	120	455	100	21.5
DN 40	265	205	455	120	25
DN 50	265	205	495	125	29
DN 65	265	325	550	155	41
DN 80	265	325	550	155	43

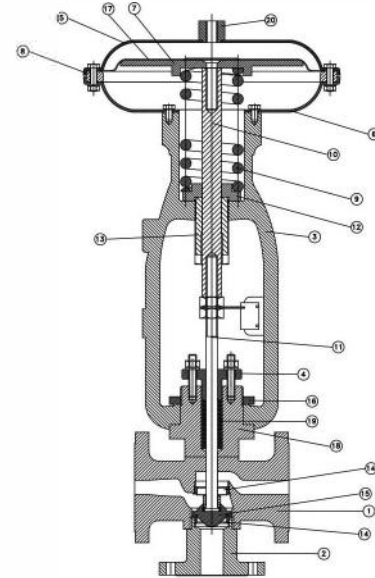
Constructions are a bit different according the sizes.



## Pneumatic Diaphragm Control Valves (Proportional)-51Y

## Materials

No.	Part	Material
1	Body	GG 25
2	Bottom Flange	Gray Cast
3	Yoke	GG 25
4	Packing Flange	Gray Cast
5	Upper Diaphragm Casing	C.S.
6	Lower Diaphragm Casing	C.S.
7	Diaphragm Plate	Gray Cast
8	Casing Ring	Gray Cast
9	Spring *	Cadmium Plate
10	Actuator Stem	C.S.
11	Valve Stem	AISI 304
12	Lower Spring Bottom	Gray Cast
13	Spring Adjuster	Brass
14	Seat Ring	AISI 304
15	Valve Plug	AISI 304
16	Yoke Luck Nut	Brass
17	Diaphragm *	Nylon Insert
18	Bonnet	AISI 304
19	Packing	Graphite or Teflon
20	Actuator Stem Screw	C.S.



Note: (\*) Spare Part

## Cv Values

Size	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80
Cv	8	10	18	28	42	51

Note: The capacity of E.S.E valves is expressed as the flow co-efficient Cv. The flow co-efficient value Kvs is extensively used in Europe. Its relationship to the Cv unit is given by  $Cv=1.167 Kvs$ .

## Installation

The valve should be installed in a horizontal pipeline with the direction of flow as indicated by the arrow on the valve body. The air supply should be installed in the 1/4"PT air supply connection on top of the actuator.

## How to Order

Example: 51Y - DN25, Diaphragm Control Valve for hot oil with air actuator.