



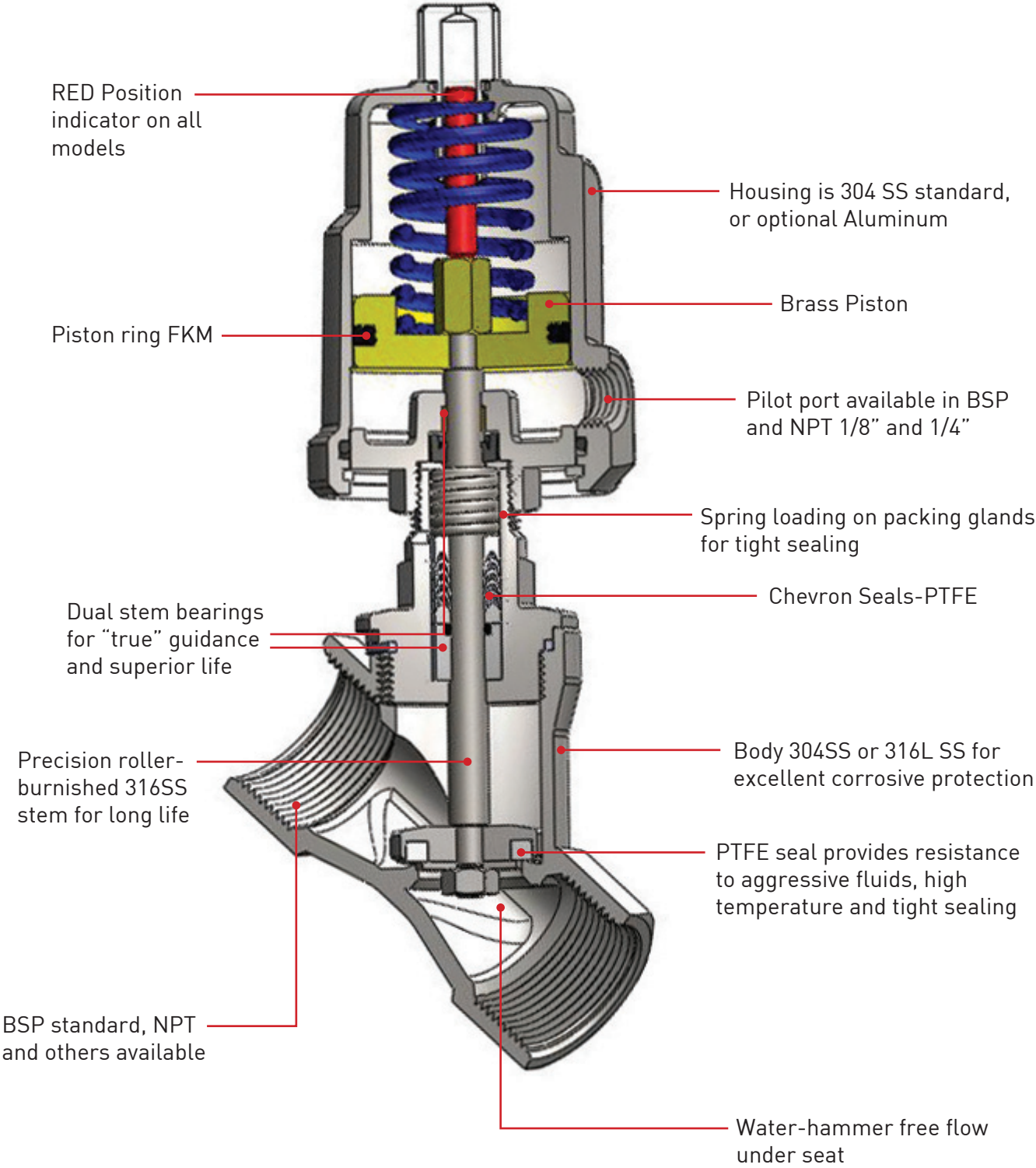
# Parker Fluid Control Angle Body Valves

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



ENGINEERING YOUR SUCCESS.

# Angle Body Valve Key Features



# Angle Body Valves

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### WARNING!

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or systems options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at anytime without notice.

## Introduction

The portfolio is endowed with numerous benefits including:

- A full-line of normally closed and normally open valves ranging in size from 3/8 inch to 2 1/2 inches.
- State of the art performance for long life.
- Operating pressures up to 16 Bar (232 psi).
- Suitable for temperatures ranging from -10°C to 180°C /14°F to 356°F.
- Handles millions of cycles for high temperature and aggressive media.
- Separate Pilot Valves for both AC & DC requirements.
- Complete line of high temperature watertight coil designs suitable for all pilot control valves.
- Spare Parts Kits are available for main seat replacement.

Angle body valves are suitable for many process & industrial application requirements. Valve applications include but are not limited to the following areas:

- Food and Beverage Processing:
  - Brewery
  - water, steam, pasteurization, glycol solutions for cooling, de-aeration processes, blending, carbonation, thermal processes
  - Bottling & bottle washing equipment
  - "Clean-in-Place" systems
  - Dairy product processing
- Water Technology & Treatment:
  - Filtration technology
  - Pollution control equipment
- Textile Industry:
  - Bleaching, dyeing & drying equipment
  - Steam, water & additives requirements
- Cooling systems on injection molding machines
- Pharmaceutical & cosmetic industry
- Chemical Process technology
- Refrigeration & Cooling heat exchangers
- Sterilizers - steam supply up to 180°C ( 356°F )
- Water applications: Mining, Cement / Concrete Systems, Pulp & Paper
- General industrial applications of aggressive fluids with stainless materials
- Industrial Laundry Equipment
- Industrial Air Dryers

# Series PA - 2/2 - Way Angle Body Valves

## 3/8" to 2 1/2" BSP 16 Bar, 232 psi



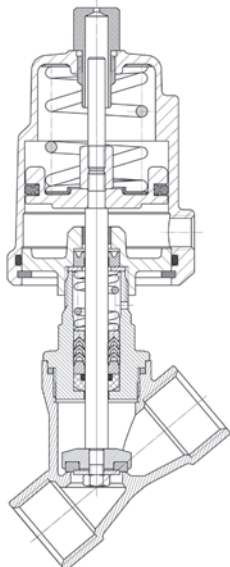
### VALVE FEATURES

- Compact design, high flow rates
- Visual position indicator standard
- For temperatures from 14°F to 356°F / -10°C to 180°C
- Working pressures up to 16 Bar, 232 psi
- Dampened closing anti-water hammer design (fluid under seat)
- Metal actuator housing for exceptional durability in steam & mildly aggressive applications
- Valves satisfy the Pressure Equipment Directive 97/23/EC
- Mountable in any position
- Tight shut-off and Long Service Life
- Valve seats and body gaskets fully repairable

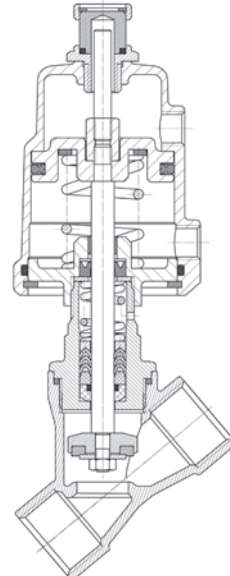
### Technical Specifications

Body Material	304 SS or 316 SS
Function	2/2 NC, NO, NC(antiwater hammer), double acting (with spring)
Nominal sizes	DN10-DN65, 3/8" to 2 1/2"
Connections	Threads- BSP,BSPT,NPT,NPTF Welded- ISO1127/4200, DIN 11850.1, DIN 11850.2, DIN 11850.3, SMS3008, ASME BPE
	Flanges
Max Working Pressure	16 BAR, 232 PSI
Differential Pressure	See Specification Charts
Pilot Pressure	3 Bar to 10 Bar. 43.5 PSI to 145 PSI
Actuator Material	304 SS, or Aluminum
Maximum Fluid Temp	-10°C to 180°C, 14°F to 356°F
<b>Optional</b>	
Ambient Temperature	-10°C to 60°C, 14°F to 140°F
Seat Seal material	PTFE/RTFE
Packing Gland	PTFE. PTFE and Carbon
Viscosity	Maximum 600mm <sup>2</sup> /s( 600cSt, 80° E, 2700 SSU
Vacuum	maximum 0.0295 mercury (Hg)
Leakage	ANSI Class VI shutoff
Installation	Any Position
Optical Position Indicator	Standard on all sizes
Pilot Control Media	Air, Neutral Gas, Water
Fluids handled	Inert gases, hot water, oils, steam, aggressive and corrosive fluids
Pilot Port Size	1/8" for 32,40,50, & 63 mm actuators, 1/4" for 80, 100 mm actuators

Normally Closed Valve



Normally Open Valve



# SERIES PA – NORMALLY CLOSED VALVES - FLOW DIRECTION OVER SEAT

Model Numbers Shown are BSP threads



## 304 Stainless Steel Actuators with 304 Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	40	4.7	0-16	0-232	4-10	58-145	PA10S1G3S040S	0.78
			50	4.7	0-16	0-232	3-10	44-145	PA10S1G3S050S	1.01
DN15	1/2"	13	40	4.7	0-16	0-232	4-10	58-145	PA15S1G4S040S	0.80
			50	4.7	0-16	0-232	3-10	44-145	PA15S1G4S050S	1.03
DN20	3/4"	18	50	9.5	0-16	0-232	3-4	44-58	PA20S1G5S050S	1.06
DN25	1"	24	50	18.1	0-16	0-232	3-5.5	44-80	PA25S1G6S050S	1.38
			63	18.1	0-16	0-232	3-3.5	44-51	PA25S1G6S063S	2.05
DN32	1-1/4"	31	63	23.1	0-16	0-232	3-5	44-73	PA32S1G7S063S	2.40
DN40	1-1/2"	35	63	32.9	0-16	0-232	3-6	44-87	PA40S1G8S063S	2.75
DN50	2"	45	63	52.8	0-10	0-145	3-6.5	44-95	PA50S1G9S063S	3.50
			80	52.8	0-16	0-232	3-6.6	44-96	PA50S1G9S080S	4.62
			100	52.8	0-16	0-232	3-5	44-73	PA50S1G9S100S	5.16
DN65	2-1/2"	65	100	82	0-10	0-145	3-6	44-87	PA65S1GTS100S	8.65

For NPT porting, change "G" to "N" in 7th position

To obtain Cv multiply Kv by 1.16

To obtain lbs., multiply kgs by 2.2

## 304 Stainless Steel Actuators with 316L Stainless Steel Bodies

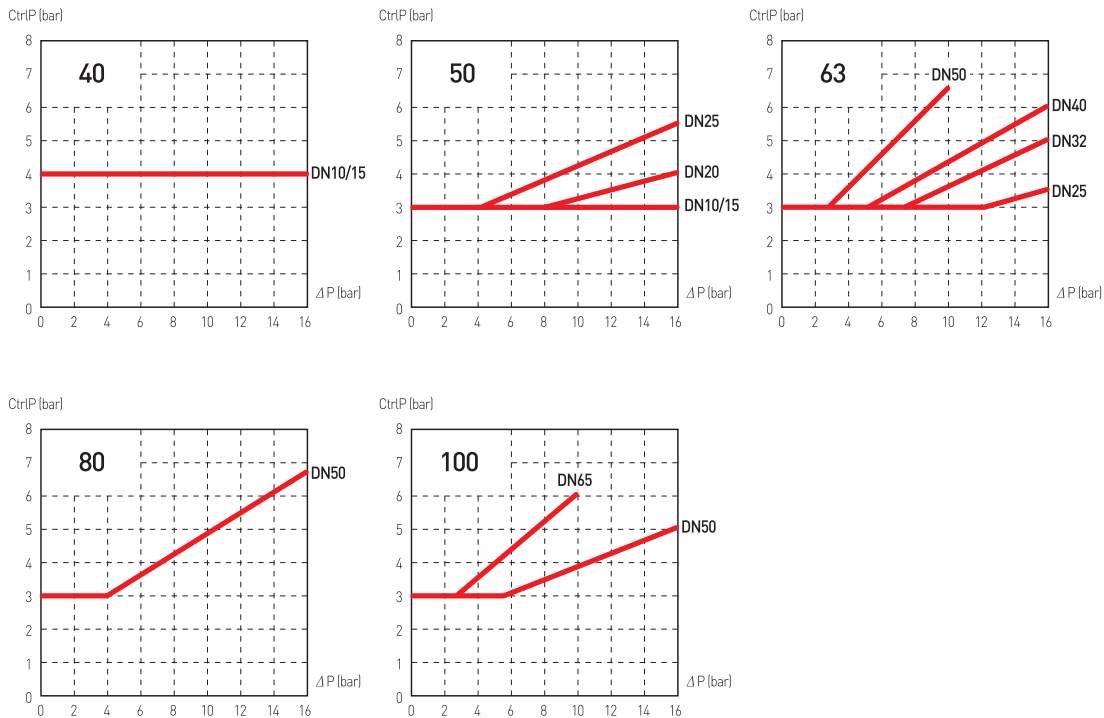
Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	40	4.7	0-16	0-232	4-10	58-145	PA10S1G3R040S	0.78
			50	4.7	0-16	0-232	3-10	44-145	PA10S1G3R050S	1.01
DN15	1/2"	13	40	4.7	0-16	0-232	4-10	58-145	PA15S1G4R040S	0.80
			50	4.7	0-16	0-232	3-10	44-145	PA15S1G4R050S	1.03
DN20	3/4"	18	50	9.5	0-16	0-232	3-4	44-58	PA20S1G5R050S	1.06
DN25	1"	24	50	18.1	0-16	0-232	3-5.5	44-80	PA25S1G6R050S	1.38
			63	18.1	0-16	0-232	3-3.5	44-51	PA25S1G6R063S	2.05
DN32	1-1/4"	31	63	23.1	0-16	0-232	3-5	44-73	PA32S1G7R063S	2.40
DN40	1-1/2"	35	63	32.9	0-16	0-232	3-6	44-87	PA40S1G8R063S	2.75
DN50	2"	45	63	52.8	0-10	0-145	3-6.5	44-95	PA50S1G9R063S	3.50
			80	52.8	0-16	0-232	3-6.6	44-96	PA50S1G9R080S	4.62
			100	52.8	0-16	0-232	3-5	44-73	PA50S1G9R100S	5.16
DN65	2-1/2"	65	100	82	0-10	0-145	3-6	44-87	PA65S1GTR100S	8.65

For NPT porting, change "G" to "N" in 7th position

To obtain Cv multiply Kv by 1.16

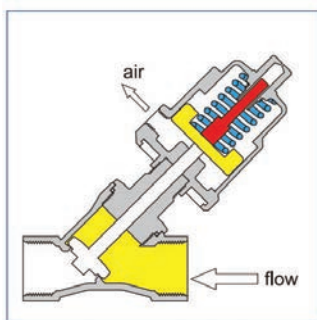
To obtain lbs., multiply kgs by 2.2

## Control Pressure & Operating Pressure Charts for the Normally Closed valves with 304 SS actuators

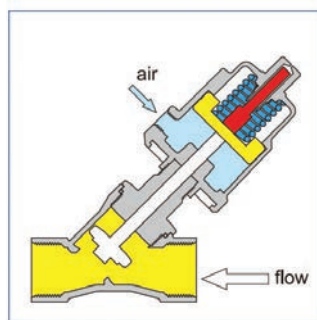


## Flow Charts

Valve Closed



Valve Open





# SERIES PA – NORMALLY CLOSED VALVES - FLOW DIRECTION OVER SEAT

Model Numbers Shown are BSP threads



## Aluminum Actuator with 304 Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m <sup>3</sup> /h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	50	4.7	0-16	0-232	3-10	44-145	PA10S1G3S050A	0.75
DN15	1/2"	13	50	4.7	0-16	0-232	3-10	44-145	PA15S1G4S050A	0.80
DN20	3/4"	18	50	9.5	0-16	0-232	3-4	44-58	PA20S1G5S050A	0.90
DN25	1"	24	50	18.1	0-16	0-232	3-5.5	44-80	PA25S1G6S050A	1.27
			63	18.1	0-16	0-232	3-4	44-58	PA25S1G6S063A	1.65
DN32	1-1/4"	31	63	23.1	0-16	0-232	3-5.5	44-80	PA32S1G7S063A	1.89
DN40	1-1/2"	35	63	32.9	0-16	0-232	3-6.5	44-95	PA40S1G8S063A	2.15
			63	52.8	0-10	0-145	3-6.5	44-95	PA50S1G9S063A	2.98
			80	52.8	0-16	0-232	3-6.6	44-96	PA50S1G9S080A	3.56
DN50	2"	45	100	52.8	0-16	0-232	3-5	44-73	PA50S1G9S100A	4.75
			100	82	0-10	0-145	3-6	44-87	PA65S1GTS100A	5.50

For NPT porting, change "G" to "N" in 7th position

To obtain Cv multiply Kv by 1.16

To obtain lbs., multiply kgs by 2.2

## Aluminum Actuator with 316L Stainless Steel Bodies

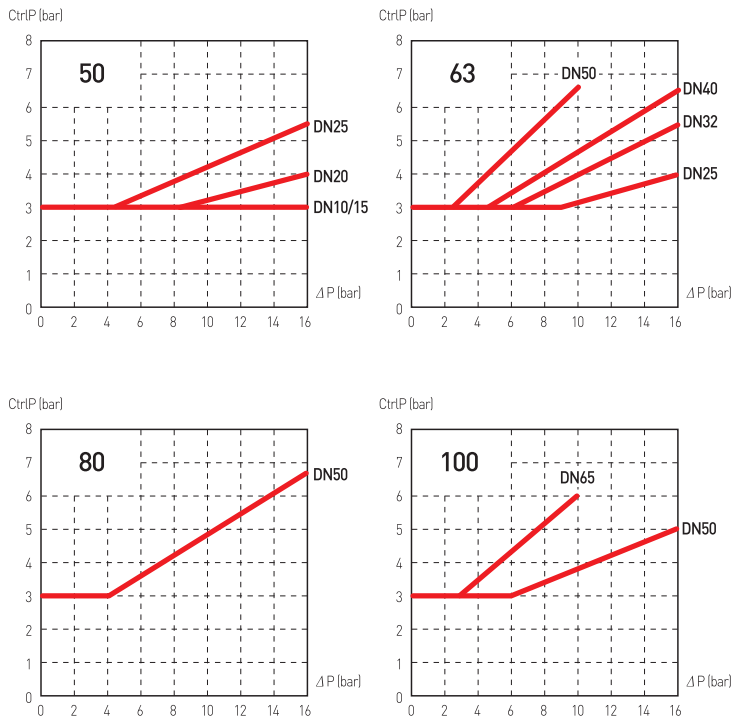
Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m <sup>3</sup> /h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	50	4.7	0-16	0-232	3-10	44-145	PA10S1G3R050A	0.75
DN15	1/2"	13	50	4.7	0-16	0-232	3-10	44-145	PA15S1G4R050A	0.80
DN20	3/4"	18	50	9.5	0-16	0-232	3-4	44-58	PA20S1G5R050A	0.90
DN25	1"	24	50	18.1	0-16	0-232	3-5.5	44-80	PA25S1G6R050A	1.27
			63	18.1	0-16	0-232	3-4	44-58	PA25S1G6R063A	1.65
DN32	1-1/4"	31	63	23.1	0-16	0-232	3-5.5	44-80	PA32S1G7R063A	1.89
DN40	1-1/2"	35	63	32.9	0-16	0-232	3-6.5	44-95	PA40S1G8R063A	2.15
			63	52.8	0-10	0-145	3-6.5	44-95	PA50S1G9R063A	2.98
			80	52.8	0-16	0-232	3-6.6	44-96	PA50S1G9R080A	3.56
DN50	2"	45	100	52.8	0-16	0-232	3-5	44-73	PA50S1G9R100A	4.75
			100	82	0-10	0-145	3-6	44-87	PA65S1GTR100A	5.50

For NPT porting, change "G" to "N" in 7th position

To obtain Cv multiply Kv by 1.16

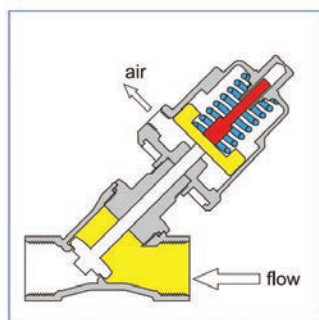
To obtain lbs., multiply kgs by 2.2

## Control Pressure & Operating Pressure Charts for the Normally Closed valves with 304 SS actuators

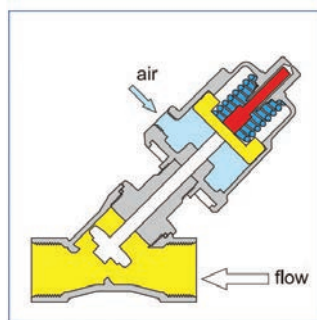


## Flow Charts

Valve Closed



Valve Open





# SERIES PA – NORMALLY OPEN VALVES - FLOW DIRECTION OVER SEAT

Model Numbers Shown are BSP threads



## 304 Stainless Steel Actuators with 304 Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	50	4.7	0-16	0-232	3.5-10	51-145	PA10S2G3S050S	1.0
DN15	1/2"	13	50	4.7	0-16	0-232	3.5-10	51-145	PA15S2G4S050S	1.03
DN20	3/4"	18	50	9.5	0-16	0-232	3.5-10	51-145	PA20S2G5S050S	1.06
DN25	1"	24	63	18.1	0-16	0-232	4.5-10	66-145	PA25S2G6S063S	2.05
DN32	1-1/4"	31	63	23.1	0-14	0-203	4.5-10	66-145	PA32S2G7S063S	2.40
DN40	1-1/2"	35	63	32.9	0-11	0-160	4.5-10	66-145	PA40S2G8S063S	2.75
DN50	2"	45	63	52.8	0-6	0-87	5-10	73-145	PA50S2G9S063S	3.50
			80	52.8	0-12	0-174	5-10	73-145	PA50S2G9S080S	4.62

For NPT porting, change "G" to "N" in 7th position  
 To obtain Cv multiply Kv by 1.16  
 To obtain lbs., multiply kgs by 2.2

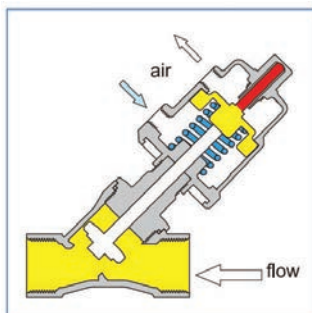
## 304 Stainless Steel Actuators with 316L Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	50	4.7	0-16	0-232	3.5-10	51-145	PA10S2G3R050S	1.0
DN15	1/2"	13	50	4.7	0-16	0-232	3.5-10	51-145	PA15S2G4R050S	1.03
DN20	3/4"	18	50	9.5	0-16	0-232	3.5-10	51-145	PA20S2G5R050S	1.06
DN25	1"	24	63	18.1	0-16	0-232	4.5-10	66-145	PA25S2G6R063S	2.05
DN32	1-1/4"	31	63	23.1	0-14	0-203	4.5-10	66-145	PA32S2G7R063S	2.40
DN40	1-1/2"	35	63	32.9	0-11	0-160	4.5-10	66-145	PA40S2G8R063S	2.75
DN50	2"	45	63	52.8	0-6	0-87	5-10	73-145	PA50S2G9R063S	3.50
			80	52.8	0-12	0-174	5-10	73-145	PA50S2G9R080S	4.62

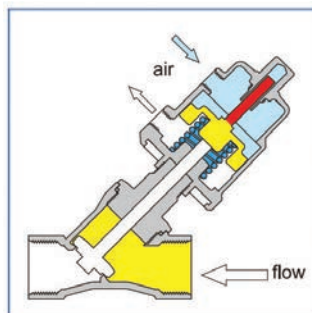
For NPT porting, change "G" to "N" in 7th position  
 To obtain Cv multiply Kv by 1.16  
 To obtain lbs., multiply kgs by 2.2

## Flow Charts

Valve Open



Valve Closed



**SERIES PA – NORMALLY CLOSED VALVES -  
FLOW DIRECTION UNDER SEAT  
ANTI WATER HAMMER CONSTRUCTION**  
Model Numbers Shown are BSP threads



**304 Stainless Steel Actuators with 304 Stainless Steel Bodies**

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	50	4.7	0-16	0-232	4.5-10	66-145	PA10SAG3S050S	1.01
DN15	1/2"	13	50	4.7	0-16	0-232	4.5-10	66-145	PA15SAG4S050S	1.03
DN20	3/4"	18	50	9.5	0-10	0-145	4.5-10	66-145	PA20SAG5S050S	1.06
DN25	1"	24	63	18.1	0-8	0-116	4.5-10	66-145	PA25SAG6S063S	2.05
DN32	1-1/4"	31	80	23.1	0-11	0-160	4-10	58-145	PA32SAG7S080S	3.82
DN40	1-1/2"	35	80	32.9	0-8	0-116	4-10	58-145	PA40SAG8S080S	4.07
			100	32.9	0-16	0-232	4-10	58-145	PA40SAG8S100S	4.61
DN50	2"	45	100	52.8	0-9	0-131	4-10	58-145	PA50SAG9S100S	5.16

For NPT porting, change "G" to "N" in 7th position  
To obtain Cv multiply Kv by 1.16  
To obtain lbs., multiply kgs by 2.2

**304 Stainless Steel Actuators with 316L Stainless Steel Bodies**

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	50	4.7	0-16	0-232	4.5-10	66-145	PA10SAG3R050S	1.01
DN15	1/2"	13	50	4.7	0-16	0-232	4.5-10	66-145	PA15SAG4R050S	1.03
DN20	3/4"	18	50	9.5	0-10	0-145	4.5-10	66-145	PA20SAG5R050S	1.06
DN25	1"	24	63	18.1	0-8	0-116	4.5-10	66-145	PA25SAG6R063S	2.05
DN32	1-1/4"	31	80	23.1	0-11	0-160	4-10	58-145	PA32SAG7R080S	3.82
DN40	1-1/2"	35	80	32.9	0-8	0-116	4-10	58-145	PA40SAG8R080S	4.07
			100	32.9	0-16	0-232	4-10	58-145	PA40SAG8R100S	4.61
DN50	2"	45	100	52.8	0-9	0-131	4-10	58-145	PA50SAG9R100S	5.16

For NPT porting, change "G" to "N" in 7th position  
To obtain Cv multiply Kv by 1.16  
To obtain lbs., multiply kgs by 2.2

**Aluminum Actuator with 304 Stainless Steel Bodies**

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	50	4.7	0-16	0-232	4.5-10	66-145	PA10SAG3S050A	0.75
DN15	1/2"	13	50	4.7	0-16	0-232	4.5-10	66-145	PA15SAG4S050A	0.80
DN20	3/4"	18	50	9.5	0-10	0-145	4.5-10	66-145	PA20SAG5S050A	0.90
DN25	1"	24	63	18.1	0-8	0-116	4.5-10	66-145	PA25SAG6S063A	1.65
DN32	1-1/4"	31	80	23.1	0-11	0-160	4-10	58-145	PA32SAG7S080A	2.80
DN40	1-1/2"	35	80	32.9	0-8	0-116	4-10	58-145	PA40SAG8S080A	3.10
			100	32.9	0-16	0-232	4-10	58-145	PA40SAG8S100A	4.15
DN50	2"	45	100	52.8	0-9	0-131	4-10	58-145	PA50SAG9S100A	4.75

For NPT porting, change "G" to "N" in 7th position  
To obtain Cv multiply Kv by 1.16  
To obtain lbs., multiply kgs by 2.2

# SERIES PA – NORMALLY CLOSED VALVES - FLOW DIRECTION UNDER SEAT ANTI WATER HAMMER CONSTRUCTION

Model Numbers Shown are BSP threads



## Aluminum Actuator with 316L Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m <sup>3</sup> /h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	50	4.7	0-16	0-232	4.5-10	66-145	PA10SAG3R050A	0.75
DN15	1/2"	13	50	4.7	0-16	0-232	4.5-10	66-145	PA15SAG4R050A	0.80
DN20	3/4"	18	50	9.5	0-10	0-145	4.5-10	66-145	PA20SAG5R050A	0.90
DN25	1"	24	63	18.1	0-8	0-116	4.5-10	66-145	PA25SAG6R063A	1.65
DN32	1-1/4"	31	80	23.1	0-11	0-160	4-10	58-145	PA32SAG7R080A	2.80
			100	32.9	0-16	0-232	4-10	58-145	PA40SAG8R100A	4.15
DN40	1-1/2"	35	100	52.8	0-9	0-131	4-10	58-145	PA50SAG9R100A	4.75

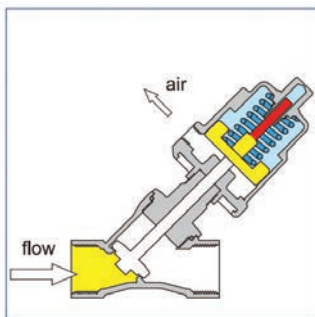
For NPT porting, change "G" to "N" in 7th position  
 To obtain Cv multiply Kv by 1.16  
 To obtain lbs., multiply kgs by 2.2

## Control Pressure & Operating Pressure

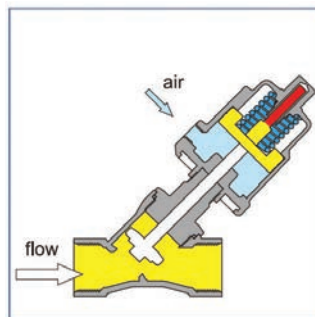
Charts do not apply for Anti Water Hammer valves. A minimum pressure as noted above is all that is required, up to the maximum listed.

## Flow Charts

Valve Closed



Valve Open



# SERIES PA – COMPACT DESIGN NORMALLY CLOSED VALVES FLOW DIRECTION OVER SEAT

Media Temperature -10-100°C  
Model Numbers Shown are BSP threads



## 304 Stainless Steel Actuators with 304 Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	32	4.7	0-16	0-232	4.5-6	66-87	PA10C3G3S032S	0.58
DN15	1/2"	13	32	4.7	0-16	0-232	4.5-6	66-87	PA15C3G4S032S	0.60
DN20	3/4"	15	32	5.4	0-14	0-203	4.5-6	66-87	PA20C3G5S032S	0.65

## 304 Stainless Steel Actuators with 316L Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	32	4.7	0-16	0-232	4.5-6	66-87	PA10C3G3R032S	0.58
DN15	1/2"	13	32	4.7	0-16	0-232	4.5-6	66-87	PA15C3G4R032S	0.60
DN20	3/4"	15	32	5.4	0-14	0-203	4.5-6	66-87	PA20C3G5R032S	0.65

# SERIES PA – COMPACT DESIGN NORMALLY CLOSED VALVES FLOW DIRECTION OVER SEAT

Media Temperature -10-180°C  
Model Numbers Shown are BSP threads

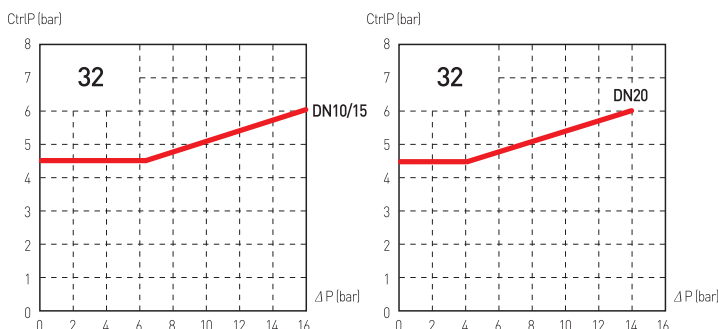
## 304 Stainless Steel Actuators with 304 Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	32	4.7	0-16	0-232	4.5-6	66-87	PA10C1G3S032S	0.63
DN15	1/2"	13	32	4.7	0-16	0-232	4.5-6	66-87	PA15C1G4S032S	0.65
DN20	3/4"	15	32	5.4	0-14	0-203	4.5-6	66-87	PA20C1G5S032S	0.71

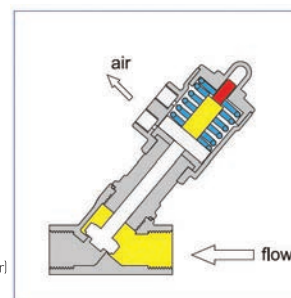
## 304 Stainless Steel Actuators with 316L Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	32	4.7	0-16	0-232	4.5-6	66-87	PA10C1G3R032S	0.63
DN15	1/2"	13	32	4.7	0-16	0-232	4.5-6	66-87	PA15C1G4R032S	0.65
DN20	3/4"	15	32	5.4	0-14	0-203	4.5-6	66-87	PA20C1G5R032S	0.71

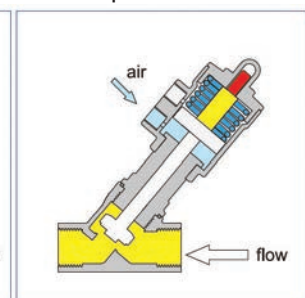
## Control Pressure & Operating Pressure Charts Flow Charts



Valve Closed



Valve Open



## SERIES PA – COMPACT DESIGN NORMALLY CLOSED VALVES FLOW DIRECTION UNDER SEAT

Media Temperature -10-100°C  
Model Numbers Shown are BSP threads



### 304 Stainless Steel Actuators with 304 Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	32	4.7	0-6	0-87	5-6	73-87	PA10C4G3S032S	0.58
DN15	1/2"	13	32	4.7	0-6	0-87	5-6	73-87	PA15C4G4S032S	0.60
DN20	3/4"	15	32	5.4	0-4	0-58	5-6	73-87	PA20C4G5S032S	0.65

### 304 Stainless Steel Actuators with 316L Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	32	4.7	0-6	0-87	5-6	73-87	PA10C4G3R032S	0.58
DN15	1/2"	13	32	4.7	0-6	0-87	5-6	73-87	PA15C4G4R032S	0.60
DN20	3/4"	15	32	5.4	0-4	0-58	5-6	73-87	PA20C4G5R032S	0.65

## SERIES PA – COMPACT DESIGN NORMALLY CLOSED VALVES FLOW DIRECTION UNDER SEAT Media Temperature -10-180°C

Model Numbers Shown are BSP threads

### 304 Stainless Steel Actuators with 304 Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	32	4.7	0-6	0-87	5-6	73-87	PA10C2G3S032S	0.63
DN15	1/2"	13	32	4.7	0-6	0-87	5-6	73-87	PA15C2G4S032S	0.65
DN20	3/4"	15	32	5.4	0-4	0-58	5-6	73-87	PA20C2G5S032S	0.71

### 304 Stainless Steel Actuators with 316L Stainless Steel Bodies

Size	Port size	Orifice (mm)	Actuator (mm)	Kv (m³/h)	Operating Pressure Differential		Pilot Control Pressure Range		Model Number	Net Weight kgs
					Bar	PSI	Bar	PSI		
DN10	3/8"	13	32	4.7	0-6	0-87	5-6	73-87	PA10C2G3R032S	0.63
DN15	1/2"	13	32	4.7	0-6	0-87	5-6	73-87	PA15C2G4R032S	0.65
DN20	3/4"	15	32	5.4	0-4	0-58	5-6	73-87	PA20C2G5R032S	0.71

For all Compact Design valves on pages 10-11 the following applies:

For NPT porting, change "G" to "N" in 7th position

To obtain Cv multiply Kv by 1.16

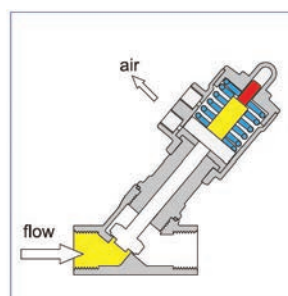
To obtain lbs., multiply kgs by 2.2

### Control Pressure & Operating Pressure Charts

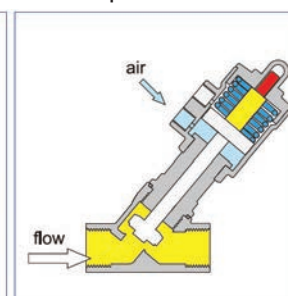
Charts do not apply for valves with flow direction under the seat. A minimum pressure as noted above is all that is required, up to the maximum listed.

### Flow Charts

Valve Closed



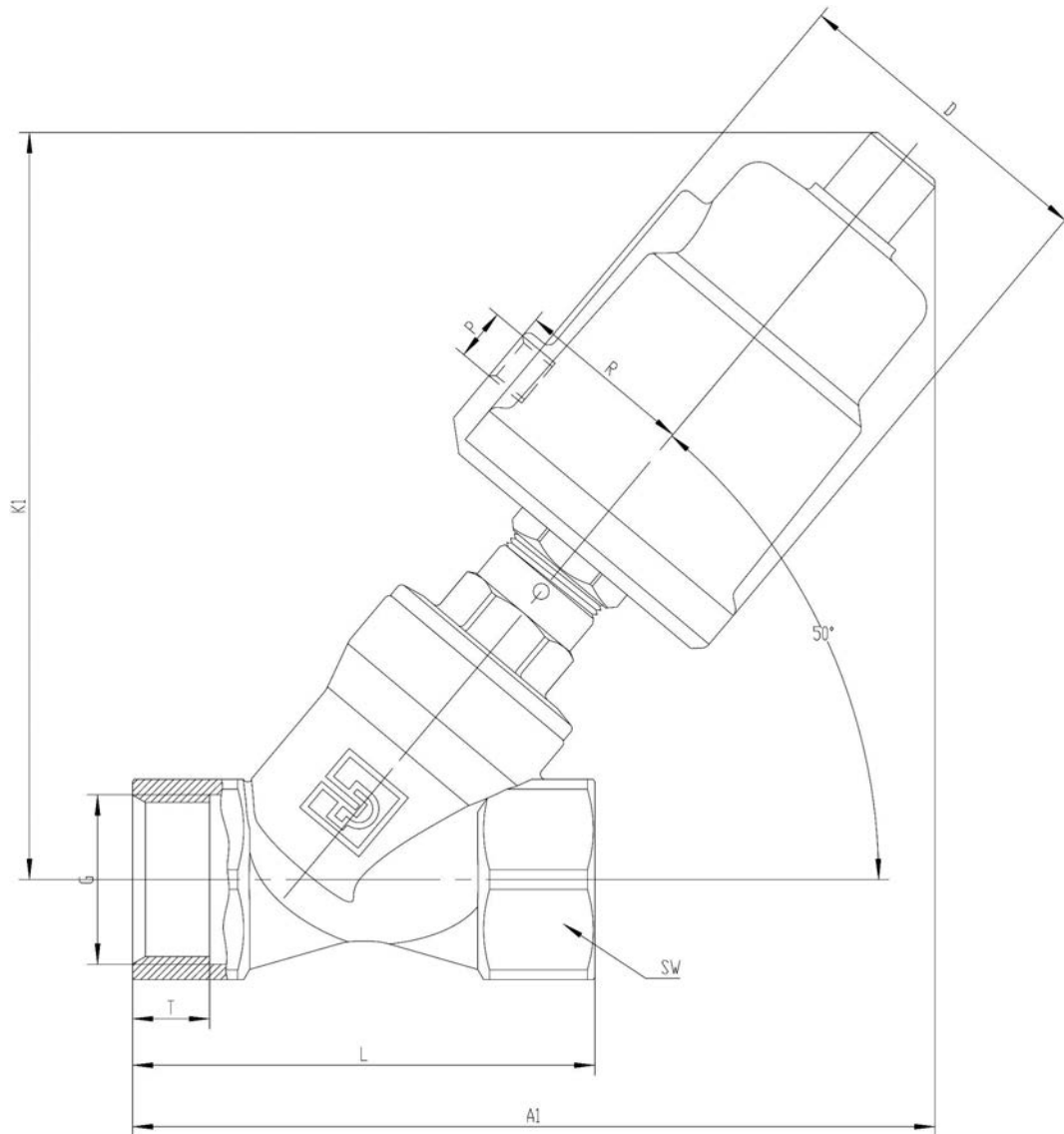
Valve Open



# SERIES PA Drawings and Dimensions

## Stainless Steel Actuators

Sizes 40, 50, 63, 80, 100 mm



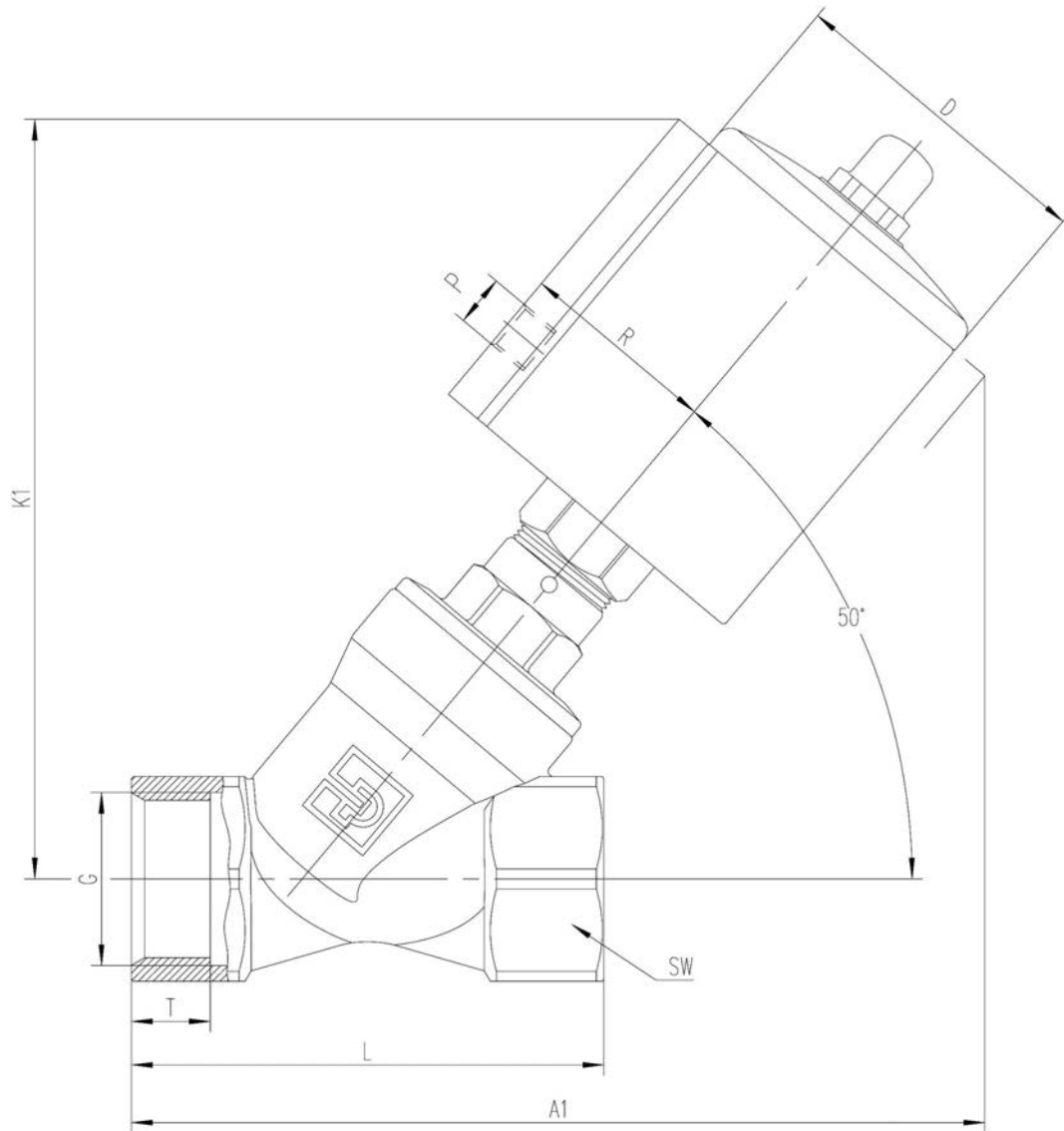
Type	Actuator	D	R	P	K1	A1	G	L	T	SW	
DN10	40	50.5	27	G1/8	116	121	G3/8	60	10	22	hexagon
	50	62	34	G1/8	130	133	G3/8	60	10	22	hexagon
DN15	40	50.5	27	G1/8	118	124	G1/2	65	11.5	25	hexagon
	50	62	34	G1/8	131	135	G1/2	65	11.5	25	hexagon
DN20	50	62	34	G1/8	134	141	G3/4	75	14	31	hexagon
DN25	50	62	34	G1/8	141	153	G1	90	15	39	hexagon
	63	77	41.5	G1/8	164	175	G1	90	15	39	hexagon
DN32	63	77	41.5	G1/8	170	188	G1-1/4	110	18	50	octagon
	80	98	52	G1/4	184	205	G1-1/4	110	18	50	octagon
	63	77	41.5	G1/8	181	201	G1-1/2	120	18	56	octagon
DN40	80	98	52	G1/4	195	217	G1-1/2	120	18	56	octagon
	100	121	63	G1/4	213	235	G1-1/2	120	18	56	octagon
DN50	63	77	41.5	G1/8	189	216	G2	150	22	68	octagon
	80	98	52	G1/4	203	233	G2	150	22	68	octagon
	100	121	63	G1/4	221	250	G2	150	22	68	octagon
DN65	100	121	63	G1/4	248	285	G2-1/2	180	25	85	octagon



# SERIES PA Drawings and Dimensions

## Aluminum Actuators

Sizes 50, 63, 80, 100 mm



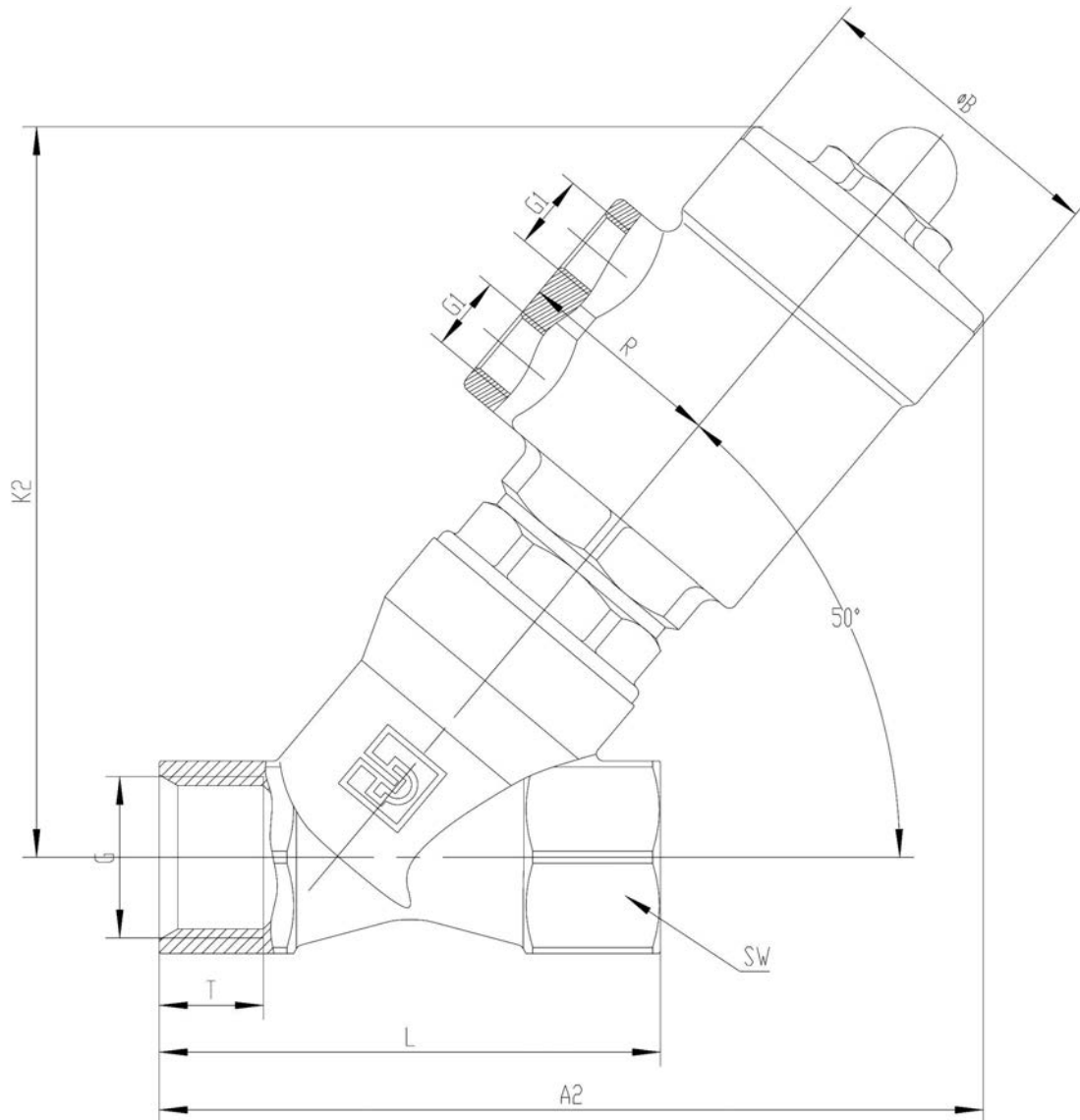
Type	Actuator	D	R	P	K1	A1	G	L	T	SW	
DN10	50	61	38	G1/8	132	141	G3/8	60	10	22	hexagon
DN15	50	61	38	G1/8	133	144	G1/2	65	11.5	25	hexagon
DN20	50	61	38	G1/8	136	150	G3/4	75	14	31	hexagon
DN25	50	61	38	G1/8	144	162	G1	90	15	39	hexagon
	63	75	45	G1/8	167	183	G1	90	15	39	hexagon
DN32	63	75	45	G1/8	173	196	G1-1/4	110	18	50	octagon
	80	94	54	G1/4	192	214	G1-1/4	110	18	50	octagon
DN40	63	75	45	G1/8	184	209	G1-1/2	120	18	56	octagon
	80	94	54	G1/4	203	226	G1-1/2	120	18	56	octagon
	100	115	64	G1/4	223	245	G1-1/2	120	18	56	octagon
DN50	63	75	45	G1/8	192	224	G2	150	22	68	octagon
	80	94	54	G1/4	211	242	G2	150	22	68	octagon
	100	115	64	G1/4	231	260	G2	150	22	68	octagon
DN65	100	115	64	G1/4	257	294	G2-1/2	180	25	85	octagon

# SERIES PA Drawings and Dimensions

## Stainless Steel Actuators



Sizes 32 mm



Type	Actuator	φB	R	G1	K2		A2		G	L	T	SW	
					F32-H	F32-L	F32-H	F32-L				hexagon	hexagon
DN10	32	39.6	27	G1/8	107	94	117	106	G3/8	60	10	22	hexagon
DN15	32	39.6	27	G1/8	109	96	119	108	G1/2	65	11.5	25	hexagon
DN20	32	39.6	27	G1/8	112	100	126	115	G3/4	75	14	31	hexagon

# SERIES PA Numbering System



## Angle Body Valve Numbering System



0: Parker Actuator(PA)

1: Valve size		2: Valve Type/series		3: Body Thread Standard			4: Body Material		5: Actuator Description		6: Special requirement (Reserved Digit)
10	DN10	S1	NC	G3	3/8	BSP	S	304SS	Stainless Steel 304		
15	DN15	S2	NO	G4	1/2	BSP	R	316L SS	032S	32mm actuator	
20	DN20	SA	Anti-Water hammer	G5	3/4	BSP			040S	40mm actuator	
25	DN25	D1	Double acting(without spring)	G6	1	BSP			050S	50mm actuator	
32	DN32	D2	Double acting(with spring)	G7	1 1/4	BSP			063S	63mm actuator	
40	DN40	D3	Double acting(special type)	G8	1 1/2	BSP			080S	80mm actuator	
50	DN50	C1	Compact type,with flow direction	G9	2	BSP			100S	100mm actuator	
65	DN65	C2	Compact type,against flow direction	GT	2 1/2	BSP					
		C3	Compact type,with flow direction(100°C)	N3	3/8	NPT			Aluminum		
		C4	Compact type,against flow direction(100°C)	N4	1/2	NPT			040A	40mm actuator	
				N5	3/4	NPT			050A	50mm actuator	
				N6	1	NPT			063A	63mm actuator	
				N7	1 1/4	NPT			080A	80mm actuator	
				N8	1 1/2	NPT			100A	100mm actuator	
				N9	2	NPT					
				NT	2 1/2	NPT					
				T1	1/8	BSPT					
				T2	1/4	BSPT					
				T3	3/8	BSPT					
				T4	1/2	BSPT					
				T5	3/4	BSPT					
				T6	1	BSPT					
				T7	1 1/4	BSPT					
				T8	1 1/2	BSPT					
				T9	2	BSPT					
				TT	2 1/2	BSPT					
				B3	3/8	NPT/BSP					
				B4	1/2	NPT/BSP					
				B5	3/4	NPT/BSP					
				B6	1	NPT/BSP					
				B7	1 1/4	NPT/BSP					
				B8	1 1/2	NPT/BSP					
				B9	2	NPT/BSP					
				BT	2 1/2	NPT/BSP					
				W	Weld type						
				F	Flange type						

Note: "With Flow" is the same as flow over the seat.  
"Against Flow" is the same as flow under the seat.

Note: B\* stands for NPT Body and BSP Pilot port.

## 3 Way Direct Acting Pilot Control Valves

Available as Separate Components



### Features

- Compact Designs
- Brass or Stainless Steel body valves
- NC (normally closed) and NO (normally open) versions
- Broad offering of coils to meet World Wide requirements
- Available in BSP and NPT connections in 1/8" and 1/4" sizes

### Representative Pictures



### Banjo Valve- For Direct Mounting to the ABV



Banjo Valve



Banjo Valve Mounted to ABV

# 3 Way Direct Acting Pilot Control Valves

## Banjo Valve



### Features

Direct Mount to ABV pilot port-(must be BSP thread port)  
 Standard Manual Operator  
 Din Coil Standard, others available

### Technical Specifications

#### Mechanical Characteristics

##### Valve Type

3/2 normally closed solenoid valve

##### Materials

Anodized aluminum body,  
 Stainless steel internals,  
 FKM sealing material

##### Coil Enclosures

DIN,NEMA4 with cable gland  
 connector,Class F Available hazardous  
 Class H coil that meets FM  
 /CSA approvals for Class 1,  
 Div.1 Groups A,B,C,D and Class II,  
 Div.2 Groups E,F,G.  
 Meets EEx m T4 Zone 1.

#### Coil Wattage

4.5 to 5.0 watt depending  
 on voltage

#### Porting

1/8" NPT or G1/8" pressure port.  
 (reference valve number) Banjo  
 bolt G1/8" or G1/4" male thread

#### Mounting

Any position

#### Operating Characteristics

$\Delta P$  minimum 0psid  
 $\Delta P$  maximum 150psi

#### Environmental Temp. Ranges:

**Fluid Temperature Range:**  
 \*0°F(-18°C) to185 F(85°C)

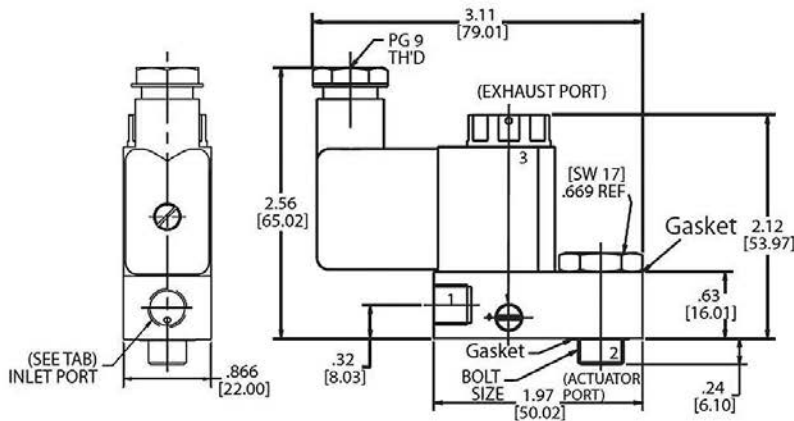
**Ambient Temperature Range**  
 14 F(-10°C) to122 F(50°C)

#### Compatible Fluids

Dry or lubricated air

#### Agency Approvals/Compliance

Din Coils: UL, CSA  
 Hazardous Coils: CSA, FM



Dimensions shown are in inches and millimeters.

### Ordering Information

Part Number w/ DIN Coil & Connector	Actuator Enclosure Port 2	Valve Pressure Port 1
U131B01NDAX	G 1/8"	1/8" NPT
U131B02NDAX	G 1/4"	1/8" NPT
131B03NDAX	G 1/8"	G 1/8"
131B04NDAX	G 1/4"	G 1/8"

#### Voltage Code for Din Coil

A=12VDC B=24VDC E=24/60 F=120/60, 110/50 G=240/60, 220/50

Replace "x" in the Part number with one of the above Voltage Din Coil Codes.

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