

# STC 2KS / 2KD Series Stainless Angle Seat Valves

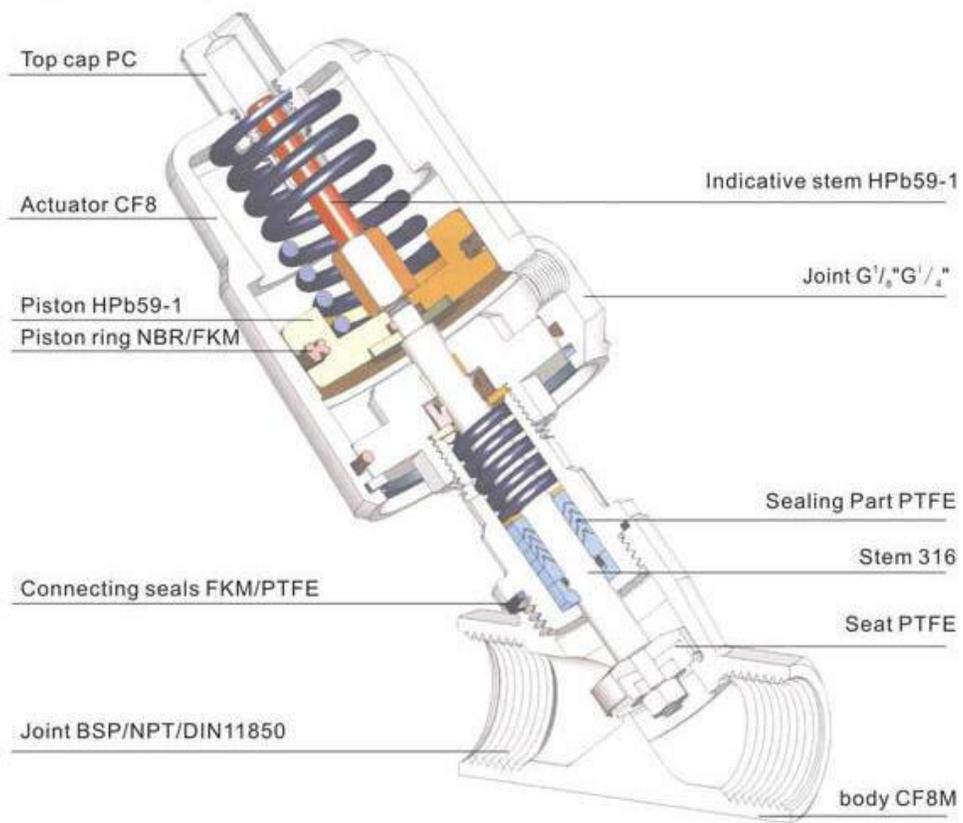
## Two-Way, Direct Piston Actuation, NC or NO



### 2KS / 2KD Stainless Steel Series Specifications

Single Acting	2KS-3/8	2KS-1/2	2KS-3/4	2KS-1	2KS-1 1/4	2KS-1 1/2	2KS-2	2KS-2 1/2
Double Acting	2KD-3/8	2KD-1/2	2KD-3/4	2KD-1	2KD-1 1/4	2KD-1 1/2	2KD-2	2KD-2 1/2
Valve Type	2 Way, Normally Closed (NC) or Normally Open (NO)							
Action	Direct Piston Actuation, Spring Loaded Stem Seal for Long Service Life							
Orifice (Cv)	13 (4.7)	13 (4.7)	18 (9.5)	24 (18.1)	31 (23.1)	35 (32.9)	45 (52.8)	65 (76)
Operating Pressure	0 to 240 PSI; Option: 0 to 473 PSI @75°F with Above Seat Inlet							
Operating Temperature	-5 to 356°F (-20 to 180C); Option: -40 to 356°F (-40 to 180C) with Low Temperature Seal							
Ambient Temperature	-5 to 140°F (-20 to 60C); Option: -40 to 140°F (-40 to 60C) with Low Temperature Seal							
Port Size (NPT)	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Wetted Surfaces	Valve Body: Cast 316 Stainless Steel (CF8M) Seals (Seat, Stem, and Piston): Teflon (PTFE)							
Pilot Controlling Medium	Air or Inert Gas							
Service Medium	Air, Gas, Liquid, Oil, Steam, Water Note: Service medium must be compatible with wetted surface materials							
Maximum Viscosity	600mm <sup>2</sup> /s (600 Centistrokes)							
Installation Orientation	Any							
Controlling Pressure Range	65 to 120 PSI							

# 2KS / 2KD Stainless Steel Series Components



# Material Test Reports

This document certifies that STC products have been subjected to quality assurance procedures and meet the material and performance specifications published by Sizto Tech Corporation (STC). The products have been manufactured, processed, inspected, and tested according to STC internal requirements and ISO 9001 standards.

ISO 9001:2008 Certificate Number: **Q17150329**  
 Date of Issue: **10, March, 2015**  
 Valid Until: **09, March, 2018**

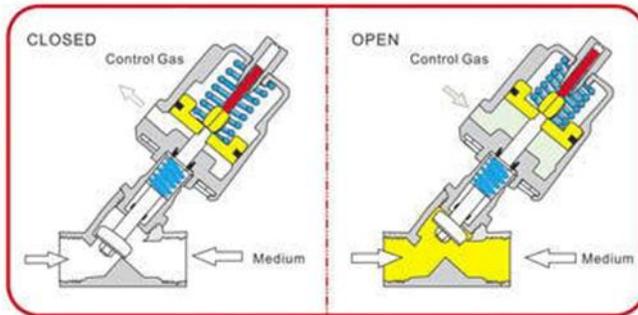
Individual materials and components used in this product have been tested and conform to applicable published standards according to chart below. Please be advised that STC does not conduct its own material analysis of all raw materials, rather, STC relies on the statements of its material suppliers & reserves the rights to independently test raw materials if necessary. Material Test Reports may be available for specific products upon request.

Material	Use Location	Material Standard
316 Stainless Steel	Metal Fittings, Valves, Air Cylinders	ASTM A240/A2666
304 Stainless Steel	Valves, Air Cylinders	ASTM A240/A666
CF8M Stainless Steel	Valves	ASTM A351/A743
Brass	Valves	ASTM B36/B62
Nickel-Plated Brass	Composite Fittings	ASTM B456/B927
Acetal Homopolymer (Delrin)	Valves	ASTM D4181/D6778—14
Acetal Copolymer (POM)	Composite Fittings	ASTM D4181/D6778—14
FKM (Viton)	Seals	ASTM D1418
PTFE (Teflon)	Valves, Seals	ASTM D3294—15
NBR (Buna N)	Seals	ASTM D1387—06
EPDM	Seals	ASTM D3568—03
Polybutylene Terephthalate (PBT)	Composite Fittings	ASTM D4000



# Technical Data—Single Acting

Single acting(NC)/double acting(NC)



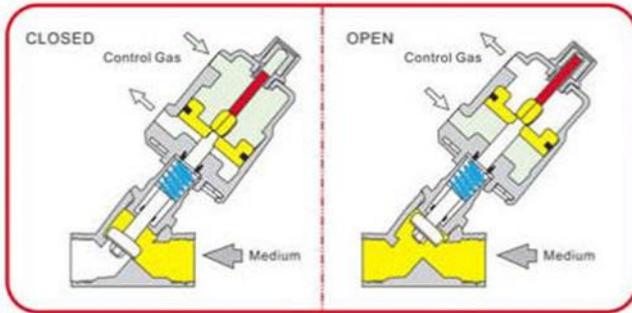
Part No.	Port (NPT)	Standard	Orifice (mm)	Actuator (mm)	Cv	Bi-Directional Flow*		Media Temperature**	Pilot Control Pressure
						Inlet Above Seat Pressure @ 180C	Inlet Below Seat Pressure @ 180C		
2KS-3/8	3/8"	DN10	13	50	4.7	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KS-1/2	1/2"	DN15	13	50	4.7	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KS-3/4	3/4"	DN20	18	50	9.5	0-240 PSI (0-1.6MPa)	0-180 PSI (0-1.2MPa)	-5 to 356°F	65-120 PSI
2KS-1	1"	DN25	24	63	18.1	0-240 PSI (0-1.6MPa)	0-150 PSI (0-1.0MPa)	-5 to 356°F	65-120 PSI
2KS-1 1/4	1 1/4"	DN32	31	63	23.1	0-240 PSI (0-1.6MPa)	0-90 PSI (0-0.6MPa)	-5 to 356°F	65-120 PSI
2KS-1 1/2	1 1/2"	DN40	35	80	32.9	0-240 PSI (0-1.6MPa)	0-90 PSI (0-0.6MPa)	-5 to 356°F	65-120 PSI
2KS-2	2"	DN50	45	100	52.8	0-240 PSI (0-1.6MPa)	0-90 PSI (0-0.6MPa)	-5 to 356°F	65-120 PSI
2KS-2 1/2	2 1/2"	DN65	65	100	76	0-240 PSI (0-1.6MPa)	0-90 PSI (0-0.6MPa)	-5 to 356°F	65-120 PSI

\*Use *under-seat flow* to minimize hammering effects; Use *above-seat flow* to maximize valve response time

\*\*Temperature -5 to 356°F (-20 to 180C); Low Temperature Option: -40 to 356°F (-40 to 180C) with low temperature seal

# Technical Data—Double Acting

Close with flow direction (double acting)

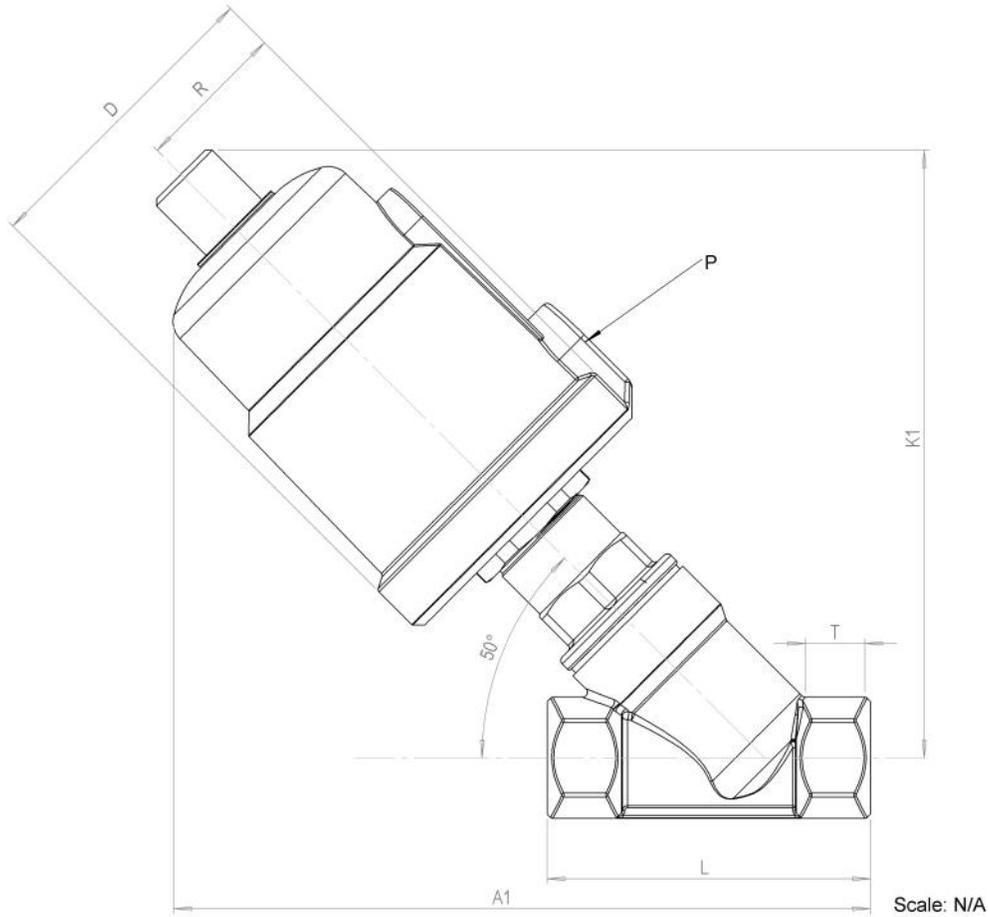


Part No.	Port (NPT)	Standard	Orifice (mm)	Actuator (mm)	Cv	Bi-Directional Flow*		Media Temperature**	Pilot Control Pressure
						Inlet Above Seat Pressure @ 180C	Inlet Below Seat Pressure @ 180C		
2KD-3/8	3/8"	DN10	13	50	4.7	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KD-1/2	1/2"	DN15	13	50	4.7	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KD-3/4	3/4"	DN20	18	50	9.5	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KD-1	1"	DN25	24	63	18.1	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KD-1 1/4	1 1/4"	DN32	31	63	23.1	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KD-1 1/2	1 1/2"	DN40	35	80	32.9	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KD-2	2"	DN50	45	100	52.8	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI
2KD-2 1/2	2 1/2"	DN65	65	100	76	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F	65-120 PSI

\*Use *under-seat flow* to minimize hammering effects; Use *above-seat flow* to maximize valve response time

\*\*Temperature -5 to 356°F (-20 to 180C); Low Temperature Option: -40 to 356°F (-40 to 180C) with low temperature seal

# 2KS / 2KD Series Dimensions



2KS / 2KD Series Stainless Steel Air Actuated Plunger Valve Dimensions (mm)									
Part No. (Single Acting)	Part No. (Double Acting)	Port Size (NPT)	A1	D	K1	L	P	R	T
2KS-3/8	2KD-3/8	3/8"	133	60	126	68	1/8"	35	12
2KS-1/2	2KD-1/2	1/2"	133	60	126	68	1/8"	35	15
2KS-3/4	2KD-3/4	3/4"	137	60	131	75	1/8"	35	16
2KS-1	2KD-1	1"	174	77	165	90	1/8"	43	17
2KS-1 1/4	2KD-1 1/4	1 1/4"	188	77	175	116	1/8"	43	21
2KS-1 1/2	2KD-1 1/2	1 1/2"	204	98	187	116	1/4"	52	21
2KS-2	2KD-2	2"	218	98	195	138	1/4"	52	22
2KS-2 1/2	2KD-2 1/2	2 1/2"	350	114	325	185	1/4"	52	30

**Note:** Dimensions are for reference only. Field verify prior to installation for critical dimensions.



# Air Actuated Angle Seat Valve

## Maintenance & Troubleshooting Guide

**Warning:** When tightening any connections to the valve, DO NOT use the actuator as leverage. Doing so may damage the joint between the actuator & valve.

### Connection to Fluid Supply:

1. Connect the fluid supply & outlet to the lower ports
2. Connect the controlling air supply to the ports on the actuator body. For double acting valves, air supplied to the *lower port* will open the valve, and air supplied to the *upper port* will close the valve.

### General Notes:

- This valve is designed to be controlled by *air flow only*. Any kind of *compatible* fluid may flow through the main valve body.
- Fluid can flow either way through the main valve body. However, it is optimal to have the flow enter from the *higher port* (above seat). To reduce water hammering, the flow orientation may be switched to have the flow enter from the *lower port* (below seat). Please review the specification charts on pages 4 & 5 for the working pressure limits for each orientation.
- The pin on top of the valve inside of the top cap (see page 2) acts as a position indicator for the valve. The pin will pop up into the top cap when the valve is open.

### Reference Figures:



**Figure 1:** 2KS-1/2. Single Actuator port, with two valve Body ports.



**Figure 2:** 2KD-1/2. Double Actuator port, with two valve Body ports.

For tips, maintenance guides, & procedural videos, visit us at [www.youtube.com/users/STCValves](http://www.youtube.com/users/STCValves)

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No merchandise is accepted for return 30 days after delivery date. No credit allowed on merchandise shipped as ordered and returned without obtaining an authorization number IN ADVANCE. A 20% restocking charge applies to all returns, and transportation charges must be fully prepaid. We will pay **ground** transportation charges on re-sent or returned merchandise due to STC's error.

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## Remittances should be sent to:

Sizto Tech Corporation, 892 Commercial Street, Palo Alto, CA 94303, USA

Credit Card Payments: Visa, MasterCard, Discover, or American Express accepted

**International Customers:** Advance Payment Required via Bank Wire, Cashier's Check or Approved Credit Card.

**Credit Application:** To establish a net 30 day account, please mail or fax three trade references with complete mailing addresses and account numbers, or request an STC Credit Application.

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