

## 气控角座阀

## Pneumatic Angle Seat Valve

## TPS Series



## Technical Parameters(技术参数)

Fluid Pressure (管道压力)	Max 1.6MPa(232psi)
Control Pressure (控制压力)	0.3~0.8MPa(43.5~116psi)
Control Fluid (控制介质)	Neutral gas, Air (中性气体或空气)
Body Material (阀体材料)	CF8M/CF8
Seals Material (密封材料)	PTFE
Actuator Material (气缸材料)	CF8
Actuator Size (气缸尺寸)	40mm,50mm,63mm,90mm
Applicable Fluid(适用介质)	Water, Alcohol, Oil, Fuel, Steam, Neutral gas or Liquid, Organic solvent, Acid and Lye (水, 酒精, 油, 燃料, 蒸气, 中性气体或液体, 有机溶剂, 酸碱溶液)
Fluid Viscosity (介质粘度)	Max 600mm <sup>2</sup> /s
Fluid Temperature (介质温度)	-10°C~+200°C
Ambient Temperature (环境温度)	-10°C~+80°C
Control Type (控制形式)	Normally Closed (标准常闭), Normally open(常开), Double Acting (双作用)
Connection (连接形式)	Threaded(BSP,NPT) (螺纹式), Welded(焊接式), Flanged (法兰式)

## How To Order (型号表示方法)

TPS 63 - 1 - 40 Y G - S

Actuator Size 执行器	Valve Operating 阀门状态	Size 规格	Installation Direction 安装方向	Connection 连接形式	Switch 接近开关
40   40mm	0   Normally Open (常开)	10   DN10	Y   Above Seat (阀座上流)	G   BSP Thread (英制管螺纹)	Nil   None(无)
50   50mm	1   Normally Closed Single Acting (常闭单作用)	15   DN15	W   Below Seat (阀座下流)	N   NPT Thread (美制管螺纹)	S   Proximity Switch(带接近开关)
63   63mm	2   Normally Closed Double Acting (常闭双作用)	20   DN20		H   Welded(焊接式)	
90   90mm	3   Double Acting (双作用自由态)	25   DN25		F   Flange(法兰式)	
125   125mm		32   DN32		K   Clamp(快装式)	
*125为AL执行器		40   DN40			
		50   DN50			
		65   DN65			
		80   DN80			
		100   DN100			

Example: TPS 63-1-40 Y G Means: Angle seat valve. Actuator Ø50. Normally close single acting. DN25 enter above seat. BSP thread.

示例: TPS63-1-40 Y G 表示:角座阀, 执行器缸径63,常闭单作用, 规格DN40,安装方向阀座上流,连接形式为英制管螺纹。

## Applications (应用)

- Beer & drinks filling machinery (啤酒饮料灌装设备)
- Textile printing & dying (印染纺织)
- Gas industry (气体工业)
- Pharmacy & Medical equipment (制药及医疗设备)
- Rubber machinery(橡胶机械)
- Chemical industry (化工行业)
- Disinfection (高温灭菌)
- Frothing equipment (发泡机械)
- Water/sewage disposal (水/污水处理)

## Features(特征)

- **Large flux, Low resistance, No water-hammer** (流量大, 流阻小, 无水锤)  
Y-type shape enlarged the flowing section, which could raise the flux by 30% and make flow more smooth.  
(Y型设计, 扩大了阀腔流通截面, 使阀腔内流体更加平顺, 增加30%流量.)
- **Super long life** (超长使用寿命)  
The valve stem is AISI 316, with strong anti-corrosive ability. The PTFE seals are in wedge shape, which help the stem adjust and lubricate itself automatically.  
(阀杆采用不锈钢316, 耐腐蚀性能极佳, 密封采用楔型PTFE, 使阀杆自动校正, 自润滑, 免维护.)
- **Advanced pilot cylinder** (先进的先导气缸)  
The cylinder material is stainless steel. Lubricating automatically, 360° rolling freely.  
(气缸采用不锈钢材质, 在恶劣的环境中更加优秀, 可360°旋转.)

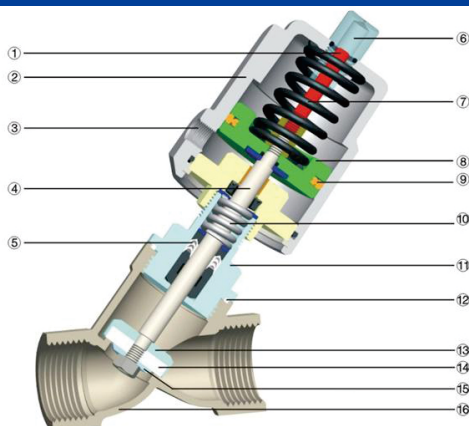
# 气控角座阀 Pneumatic Angle Seat Valve

## TPS Series

### Function Principle & Structure (工作原理与结构)

Vale is Close(open) with spring force, when the piston is actuated by compressed air. Vale is open(closed). For the double acting type, the vale is open and closed by compressed air. 在非工作状态时, 由于弹簧力作用, 阀门常闭(开)。当执行器活塞被压缩空气作用时, 阀门打开(关闭)。

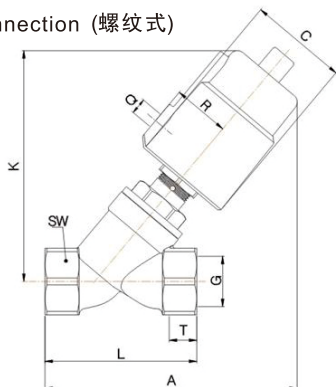
双作用形式靠压缩气体控制阀门开关。



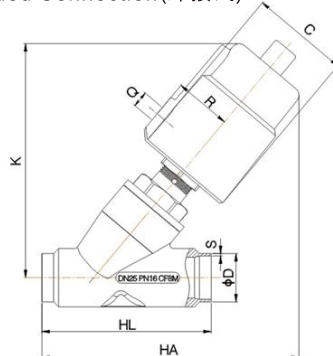
- ① 指示杆 Indication Rod (nylon)
- ② 气缸 Actuator (CF8)
- ③ 进气孔 Pilot Port (1/8")
- ④ 阀杆 Stem (AISI316/304)
- ⑤ 阀杆密封组件 Stem Seal (PTFE)
- ⑥ 视窗 Cap (PC)
- ⑦ 弹簧 Spring (Steel 65Mn)
- ⑧ 活塞 Piston (Alu.alloy)
- ⑨ 活塞环 Piston Seal (Viton)
- ⑩ 密封弹簧 Seal Spring (AISI304)
- ⑪ 连接 Connecting Piece (CF8M/CF8)
- ⑫ 阀体密封垫 Body Seal (PTFE)
- ⑬ 阀芯 Valve core (CF8M/CF8)
- ⑭ 阀芯密封垫 Seat (PTFE)
- ⑮ 垫片 Gasket (AISI316/304)
- ⑯ 阀体 Body (CF8M/CF8)

### Dimensions(mm)(外形尺寸图(毫米))

Threaded Connection (螺纹式)



Welded Connection(焊接式)



规格 Size	执行器 Actuator	Q	C	R	K	螺纹式 Threaded Connection					焊接式 Welded Connection					
						G	T	A	L	SW	HA	HL	DIN11850-2		DIN11850-3	
													D	S	D	S
DN10	40	1/8"	50.5	27	112	3/8"	12	124	68	27	-	-	-	-	-	-
	50	1/8"	60	33	125			135								
DN15	40	1/8"	50.5	27	112	1/2"	15	124	68	27	118	70	19	1.5	20	2
	50	1/8"	60	33	125			135			128					
DN20	50	1/8"	60	33	132	3/4"	16	140	75	32	135	82	23	1.5	24	2
DN25	50	1/8"	60	33	136	1"	17	150	90	40	150	100	29	1.5	30	2
	63	1/8"	75	41	162			172			175					
	90AL	1/8"	112	57	210			215			216					
	90	1/8"	106	55	211			216			218					
DN32	63	1/8"	75	41	174	1 1/4"	21	190	116	50	186	125	35	1.5	36	2
	90AL	1/8"	112	57	220			230			230					
	90	1/8"	106	55	223			235			232					
DN40	63	1/8"	75	41	175	1 1/2"	21	190	116	56	190	130	41	1.5	42	2
	90AL	1/8"	112	57	220			230			232					
	90	1/8"	106	55	223			235			235					
DN50	63	1/8"	75	41	183	2"	22	205	138	69	206	155	53	1.5	54	2
	90AL	1/8"	112	57	232			245			247					
	90	1/8"	106	55	232			250			250					
	125AL	1/8"	170	85	300			305			307					
DN65	90AL	1/8"	112	57	262	2 1/2"	26	282	178	85	320	-	-	-	-	-
	90	1/8"	106	55	265			285			325					
	125AL	1/4"	170	85	315			327			365					
DN80	125AL	1/4"	170	85	327	3"	27	380	210	100	370	284	85	2	-	-

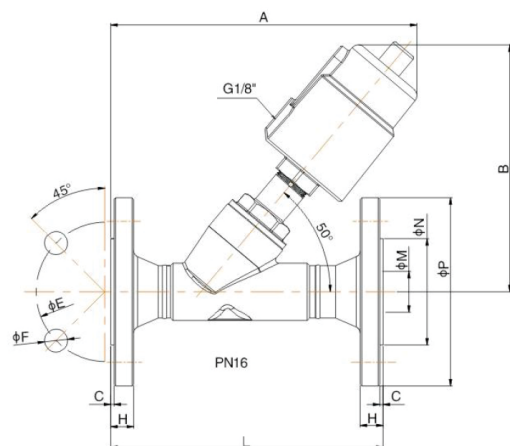
## 气控角座阀

## Pneumatic Angle Seat Valve

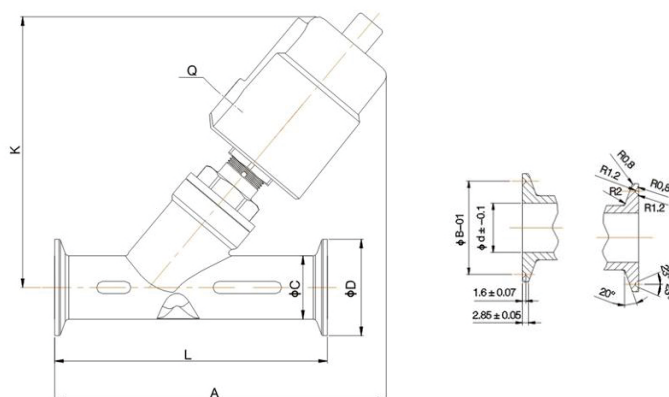
## TPS Series

## Dimensions(mm)(外形尺寸图(毫米))

Flange Ends Type(法兰型)



Tri-clamp Ends Type(快装型)



Flange Ends Type(法兰型)

Size 规格	Actuator 执行器	A	B	L	C	H	ØE	ØF	ØM	ØN	ØP
DN15	50	160	124	150	2	14	65	4-Ø14	16	45	95
DN20	50	165	128	160	2	14	75	4-Ø14	20	56	105
DN25	50	165	136	160	2	14	85	4-Ø14	25	65	115
	63	185	162								
DN32	63	200	175	195	2	16	100	4-Ø18	32	78	140
	90	245	220								
DN40	63	202	175	200	3	16	110	4-Ø18	36	84	150
	90	246	220								
DN50	63	222	182	230	3	16	125	4-Ø18	49	100	165
	90	266	232								
DN65	90	340	265	290	3	18	145	4-Ø18	66	120	185
DN80	125	457	313	380	3	20	160	8-Ø18	78	135	200

Tri-clamp Ends Type(快装型)

Size 规格	Actuator 执行器	Q	A	K	L	C	B	Ød	ØD
DN15	40	1/8"	130	115	80	19	27.5	15	34
	50	1/8"	140	126					
DN20	50	1/8"	148	126	102	25	43.5	21	50.5
	DN25	50	1/8"	165	140	130	32	43.5	27
63		1/8"	188	166					
DN32	63	1/8"	200	174	146	37	43.5	31	50.5
	90	1/8"	245	223					
DN40	63	1/8"	210	175	160	40	56.5	33	64
	90	1/8"	255	223					
DN50	63	1/8"	221	185	175	53	56.6	45	64
	90	1/8"	265	235					

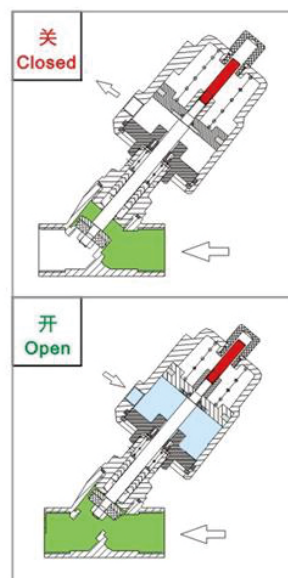
# 气控角座阀 Pneumatic Angle Seat Valve TPS Series

## Pressure Data Sheet(管道&控制压力参数表)

### Single Acting, Normally Closed(NC)-Enter Above Seat (单作用常闭阀 - 阀座上流)

Suitable for condensable media, such as air, steam; and low pressure liquid media.  
适用于可压缩性介质，例如气体，水蒸气等；以及压力较低的液体介质。

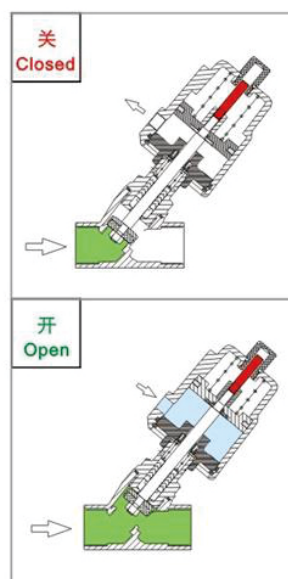
Size (规格)	Thread End (接口)	Orifice (内孔) (mm)	Kv(m <sup>3</sup> /h) (流量值)	Actuator (执行器) (mm)	ΔP(MPa) (压差范围)	Control Pressure (控制压力) (MPa)
DN10	3/8"	13	3.8	40	0-1.6	0.3-0.45
				50	0-1.6	0.3-0.35
DN15	1/2"	13	4.7	40	0-1.6	0.3-0.45
				50	0-1.6	0.3-0.35
DN20	3/4"	18	9.5	50	0-1.6	0.3-0.4
DN25	1"	24	18.1	50	0-1.6	0.3-0.45
				63	0-1.6	0.3-0.35
DN32	1 1/4"	31	23.1	63	0-1.6	0.3-0.55
				90	0-1.6	0.2-0.35
DN40	1 1/2"	35	32.9	63	0-1.6	0.3-0.65
				90	0-1.6	0.2-0.4
DN50	2"	45	52.8	63	0-0.9	0.3-0.7
				90	0-1.6	0.2-0.45
DN65	2 1/2"	61	82.6	90	0-1.0	0.2-0.6
DN80	3"	80	127	125	0-1.2	0.2-0.7



### Single Acting, Normally Closed(NC)-Enter Below Seat (单作用常闭阀 - 阀座下流(防水锤))

Flow come from below seat, avoid water hammer.  
适用于防水锤管道，可承受一定压差。

Size (规格)	Thread End (接口)	Orifice (内孔) (mm)	Kv(m <sup>3</sup> /h) (流量值)	Actuator (执行器) (mm)	ΔP(MPa) (压差范围)	Control Pressure (控制压力) (MPa)
DN10	3/8"	13	3.8	40	0-1.3	0.4
				50	0-1.4	0.45
DN15	1/2"	13	4.7	40	0-1.3	0.4
				50	0-1.4	0.45
DN20	3/4"	18	9.5	50	0-1.4	0.45
DN25	1"	24	18.1	50	0-0.8	0.45
				63	0-1.3	0.5
DN32	1 1/4"	31	23.1	63	0-0.6	0.5
				90	0-1.6	0.6
DN40	1 1/2"	35	32.9	63	0-0.5	0.5
				90	0-1.6	0.6
DN50	2"	45	52.8	63	0-0.3	0.5
				90	0-1.0	0.6
DN65	2 1/2"	61	82.6	90	0-0.6	0.6
DN80	3"	80	127	125	0-0.5	0.55
DN100	4"	90	143	125	0-0.25	0.55



## 气控角座阀

## Pneumatic Angle Seat Valve

## TPS Series

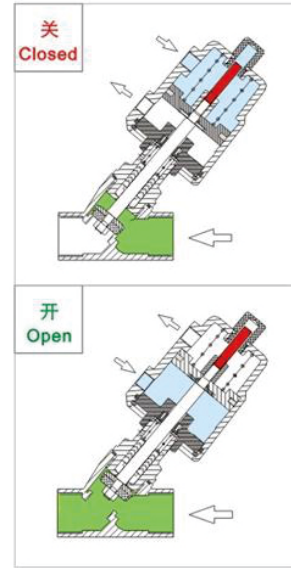
## Pressure Data Sheet(管道&amp;控制压力参数表)

**Double Acting, Normally Closed(NC)-Enter Above Seat (双作用常闭阀 - 阀座上流)**

Suitable for higher  $\Delta P$ , Valve could be closed if there is emergency.

性能可靠，可承受较大压差，如遇紧急情况，阀门可自动关闭。

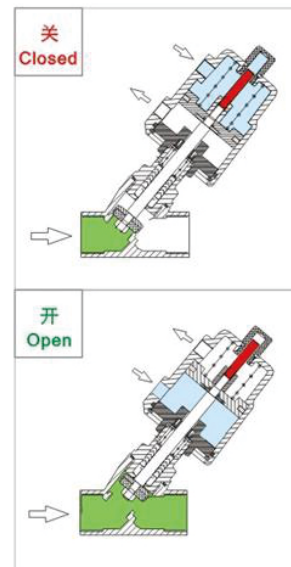
Size (规格)	Thread End (接口)	Orifice (内孔) (mm)	Kv(m <sup>3</sup> /h) (流量值)	Actuator (执行器) (mm)	$\Delta P$ (MPa) (压差范围)	Control Pressure (控制压力) (MPa)
DN10	3/8"	13	3.8	40	0-1.6	0.3-0.45
				50	0-1.6	0.3-0.35
DN15	1/2"	13	4.7	40	0-1.6	0.3-0.45
				50	0-1.6	0.3-0.35
DN20	3/4"	18	9.5	50	0-1.6	0.3-0.4
DN25	1"	24	18.1	50	0-1.6	0.3-0.45
				63	0-1.6	0.3-0.35
DN32	1 1/4"	31	23.1	63	0-1.6	0.3-0.55
				90	0-1.6	0.2-0.35
DN40	1 1/2"	35	32.9	63	0-1.6	0.3-0.7
				90	0-1.6	0.2-0.4
DN50	2"	45	52.8	63	0-0.9	0.3-0.7
				90	0-1.6	0.2-0.45
DN65	2 1/2"	61	82.6	90	0-1.6	0.2-0.6
DN80	3"	80	127	125	0-1.6	0.2-0.7

**Single Acting, Normally Closed(NC)-Enter Below Seat (双作用常闭阀 - 阀座下流(防水锤))**

Flow come from below seat, avoid water hammer, suitable for higher  $\Delta P$ .

适用于要求高的防水锤管道，可承受较大压差。

Size (规格)	Thread End (接口)	Orifice (内孔) (mm)	Kv(m <sup>3</sup> /h) (流量值)	Actuator (执行器) (mm)	$\Delta P$ (MPa) (压差范围)	Control Pressure (控制压力) (MPa)
DN10	3/8"	13	3.8	40	0-1.6	$\geq 0.3$
				50	0-1.6	$\geq 0.3$
DN15	1/2"	13	4.7	40	0-1.6	$\geq 0.3$
				50	0-1.6	$\geq 0.3$
DN20	3/4"	18	9.5	50	0-1.6	$\geq 0.3$
DN25	1"	24	18.1	50	0-1.3	0.3-0.6
				63	0-1.6	0.3-0.4
DN32	1 1/4"	31	23.1	63	0-1.6	0.3-0.6
				90	0-1.6	0.2-0.4
DN40	1 1/2"	35	32.9	63	0-1.6	0.3-0.7
				90	0-1.6	0.2-0.5
DN50	2"	45	52.8	63	0-0.8	0.3-0.75
				90	0-1.6	0.2-0.6
DN65	2 1/2"	61	82.6	90	0-1.1	0.2-0.7
DN80	3"	80	127	125	0-1.6	0.2-0.65
DN100	4"	90	143	125	0-1.2	0.4-0.5





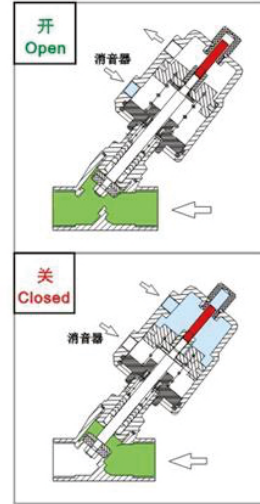
# 气控角座阀 Pneumatic Angle Seat Valve TPS Series

## Pressure Data Sheet(管道&控制压力参数表)

### Normally Open(NO) - Enter Above Seat (常开阀 - 阀座上流)

Suitable for long time valve open demand, Taking off the silencer, valve could be changed to double acting-NO type.  
适用于要求阀门长时间开启的管道，取取消音器即为双作用常开阀。

Size (规格)	Thread End (接口)	Orifice (内孔) (mm)	Kv(m <sup>3</sup> /h) (流量值)	Actuator (执行器) (mm)	ΔP(MPa) (压差范围)	Control Pressure (控制压力) (Mpa)
DN10	3/8"	13	3.8	40	0-1.6	≥0.3
				50	0-1.6	≥0.3
DN15	1/2"	13	4.7	40	0-1.6	≥0.3
				50	0-1.6	≥0.3
DN20	3/4"	18	9.5	50	0-1.2	≥0.3
DN25	1"	24	18.1	50	0-0.3	≥0.3
				63	0-1.6	≥0.45
DN32	1¼"	31	23.1	63	0-1.4	≥0.45
DN40	1½"	35	32.9	63	0-1.4	≥0.45
DN50	2"	45	52.8	63	0-0.6	≥0.45



### Normally Open(NO) - Enter Below Seat (常开阀 - 阀座下流(防水锤))

Suitable for long time valve open demand, avoid water hammer.  
Taking off the silencer, valve could be changed to double acting-NO type.  
适用于要求阀门长时间开启的管道，防水锤，取取消音器即为双作用常开阀。

Size (规格)	Thread End (接口)	Orifice (内孔) (mm)	Kv(m <sup>3</sup> /h) (流量值)	Actuator (执行器) (mm)	ΔP(MPa) (压差范围)	Control Pressure (控制压力) (Mpa)
DN10	3/8"	13	3.8	40	0-1.6	0.2-0.5
				50	0-1.6	0.2-0.4
DN15	1/2"	13	4.7	40	0-1.6	0.2-0.5
				50	0-1.6	0.2-0.4
DN20	3/4"	18	9.5	50	0-1.6	0.2-0.6
DN25	1"	24	18.1	50	0-1.3	0.2-0.6
				63	0-1.6	0.25-0.5
DN32	1¼"	31	23.1	63	0-1.3	0.25-0.6
DN40	1½"	35	32.9	63	0-0.7	0.25-0.6
				90	0-1.6	0.3-0.35
DN50	2"	45	52.8	63	0-0.5	0.25-0.6
				90	0-1.2	0.25-0.6
DN65	2½"	61	82.6	90	0-0.75	0.25-0.5
DN80	3"	80	127	125	0-1.2	0.25-0.7

