

# Angle Seat Valve(Piston Valve) Series PV500 (Tri-Clamp Ends)

## 2/2-way Angle-Seat Valve Pneumatically Operated, for medium up to +180° C, with Tri-Clamp Ends port connection DN 15 - 65

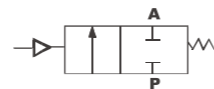
- High flow rate;
- Long life cycle;
- NC and NO universal actuators with modular universal accessory program up to control heads;
- Deliverable with flow direction below or above seat
- Simple conversion of the circuit function.

### How to Order

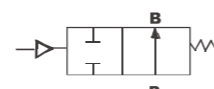


PV500 P 015 NC S x 63mm

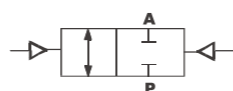
**Symbol Control function A**  
(closed by spring force in rest position)



**Control function B**  
(open in rest position)



**Control function I**  
(double-acting actuator)



#### Acting type

<b>S</b>	Single acting	<b>D</b>	Double acting
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#### Body Material

<b>Blank</b>	S.S 304	(standard)
<b>4</b>	S.S 316	
<b>5</b>	S.S 316L	

#### Type of actuation

<b>NO</b>	Normally Open
<b>NC</b>	Normally Closed (standard)

#### Port code

		<b>15</b>	<b>G1/2</b>
<b>20</b>	<b>G3/4</b>	<b>25</b>	<b>G1</b>
<b>32</b>	<b>G1 1/4</b>	<b>40</b>	<b>G1 1/2</b>
<b>50</b>	<b>G2</b>	<b>65</b>	<b>G2 1/2</b>

#### Actuator Material code

<b>P</b>	Plastic Actuator
<b>S</b>	S.S. Actuator
<b>A</b>	Aluminium Actuator

#### Model

<b>PV500</b>	500 series Angle Seat Valve
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### Actuator Size

Port Size	Standard Actuator Size mm		
	PA	S.S.	AL
DN15	40,50	40,50	40,50
DN20	50,63,80	50,63,90	50,63,80
DN25	50,63,80	50,63,90	50,63,80
DN32	63,80	63,90	63,80
DN40	63,80	63,90	63,80
DN50	63,80	63,90	63,80
DN65	80,100	90,125	80,100

### Clamp specification :ISO 2852-1993

ISO/JIS is also available

- PV500 Series Plunger Pilot angle seat valve is propelled by a piston actuator, either single acting or double acting. Actuators are made of three different materials, applicable to different working temperature:

2/2 Way stainless steel valve with big flow capacity

V type seals ensure reliable and effective sealing

Maintenance free, compatible with various accessories, Direction indicating, stroke limiting or manual switching can be achieved conveniently.

# Angle Seat Valve(Piston Valve) Series PV500 (Tri-Clamp Ends)

### Pressure Data Sheet

Control Function	Acting type	Flow Direction	Water Hammer	Application
Normally Closed	Single Acting	Upstream	Yes	For compressible medium ( such as gas and steam) and liquid of comparatively low pressure
		Downstream	No	For anti water hammer pipeline, bears certain pressure difference
	Double Acting	Upstream	Yes	Reliable performance, bears pressure difference; valve closes automatically in case of an emergency.
		Downstream	No	For pipeline required of better anti water hammer, bears big pressure difference
Normally Open		Upstream	Yes	For pipeline where valve keeps open. double acting & normally open when silencer comes off.
		Downstream	No	For pipeline where valve keeps open, anti water hammer, double acting & normally open when silencer comes off

Water hammer (or, more generally, fluid hammer) is a pressure surge or wave caused when a fluid (usually a liquid but sometimes also a gas) in motion is forced to stop or change direction suddenly (momentum change). A water hammer commonly occurs when a valve closes suddenly at an end of a pipeline system, and a pressure wave propagates in the pipe. It is also called hydraulic shock.

This pressure wave can cause major problems, from noise and vibration to pipe collapse. It is possible to reduce the effects of the water hammer pulses with accumulators, expansion tanks, surge tanks, and other features.

Designed to close against the flow. Will not chatter or produce water hammer. Operates smoothly and quietly.

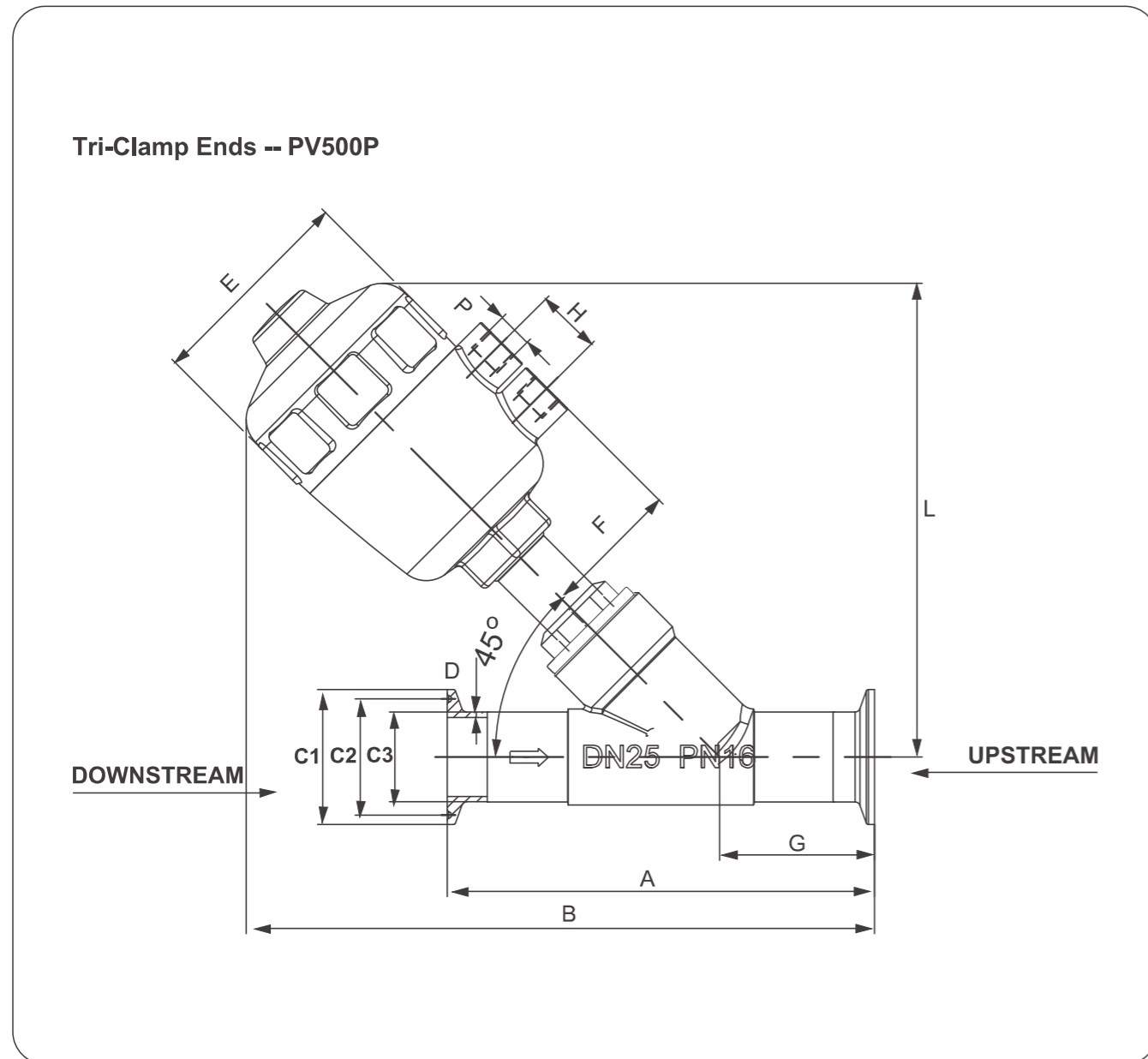
Port Size	DN (mm)	Actuator (mm)	Normally Closed				Normally Closed				Normally Open				Double Acting Assistant Pressure Mpa	Rest Position Pressure Mpa
			Flow above seat		Flow below seat		Flow above seat		Flow below seat		Flow above seat		Flow below seat			
			Press. Range Mpa	Control Press. Mpa	Press. Range Mpa	Control Press. Mpa	Press. Range Mpa	Control Press. Mpa	Press. Range Mpa	Control Press. Mpa	Press. Range Mpa	Control Press. Mpa	Press. Range Mpa	Control Press. Mpa		
1/2"	DN15	40	0~1.6	0.3~0.45	0~1.1	0.45	0~1.6	0.3~0.35	0~1.6	≥ 0.3	0~1.6	0~1.6	0~1.6	0.2~0.4	≥ 0.4	0~0.2
		50	0~1.6	0.3~0.35	0~1.4	0.45	0~1.6	0.3~0.4	0~1.6	≥ 0.3	0~1.6	0~1.2	0~1.6	0.3~0.65	0.3~0.4	0~0.1
3/4"	DN20	50	0~1.6	0.3~0.38	0~1.4	0.45	0~1.6	0.3~0.38	0~1.6	≥ 0.3	0~1.6	0~1.4	0~1.6	0.35~0.7	0.3~0.4	0~0.2
		63	0~1.6	0.2~0.35	0~1.4	0.4	0~1.6	0.2~0.35	0~1.6	0.3~0.4	0~1.6	0~1.4	0~1.6	0.35~0.7	0.3~0.4	0~0.5
		80	0~1.6	0.2~0.3	0~1.4	0.35	0~1.6	0.2~0.3	0~1.6	0.3~0.4	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.4	0~0.4
		90 SS	0~1.6	0.2~0.25	0~1.4	0.4	0~1.6	0.2~0.25	0~1.6	0.2~0.3	0~1.6	0~1.6	0~1.6	0.35~0.6	0.35~0.55	0~0.4
1"	DN25	50	0~1.6	0.3~0.45	0~0.75	0.45	0~1.6	0.3~0.45	0~1.3	0.3~0.6	0~1.6	0~0.3	0~1.3	0.3~0.6	0.3~0.4	0~0.35
		63	0~1.6	0.3~0.35	0~1.4	0.5	0~1.6	0.3~0.35	0~1.6	0.3~0.4	0~1.6	0~1.6	0~1.6	0.35~0.6	0.3~0.55	0~0.35
		80	0~1.6	0.2~0.3	0~1.4	0.45	0~1.6	0.2~0.3	0~1.6	0.3~0.4	0~1.6	0~1.6	0~1.6	0.35~0.6	0.35~0.55	0~0.5
		90 SS	0~1.6	0.2~0.25	0~1.4	0.4	0~1.6	0.2~0.25	0~1.6	0.2~0.3	0~1.6	0~1.6	0~1.6	0.35~0.6	0.35~0.55	0~0.4
1-1/4"	DN32	63	0~1.6	0.3~0.5	0~0.06	0.5	0~1.4	0.3~0.5	0~1.4	0.3~0.6	0~1.6	0~1.4	0~1.3	0.35~0.7	0.3~0.5	0~0.4
		80	0~1.6	0.2~0.45	0~1.4	0.6	0~1.6	0.2~0.45	0~1.6	0.3~0.5	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.55	0~0.5
		90 SS	0~1.6	0.2~0.35	0~1.6	0.65	0~1.6	0.2~0.35	0~1.6	0.2~0.4	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.55	0~0.4
		63	0~1.6	0.3~0.6	0~0.05	0.5	0~1.1	0.3~0.6	0~1.3	0.3~0.7	0~1.6	0~1.4	0~0.65	0.35~0.7	0.3~0.6	0~0.4
1-1/2"	DN40	80	0~1.6	0.3~0.55	0~1.4	0.6	0~1.6	0.3~0.55	0~1.6	0.3~0.6	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.7	0~0.5
		90 SS	0~1.6	0.2~0.35	0~1.6	0.65	0~1.6	0.2~0.35	0~1.6	0.2~0.6	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.7	0~0.5
		63	0~1.0	0.3~0.65	0~0.35	0.5	0~0.9	0.3~0.65	0~0.8	0.35~0.8	0~1.0	0~0.6	0~0.5	0.35~0.7	0.35~0.7	0~0.8
		80	0~1.6	0.3~0.55	0~0.9	0.65	0~1.6	0.3~0.55	0~1.6	0.3~0.7	0~1.6	0~1.0	0~0.6	0.35~0.7	0.35~0.7	0~0.5
2"	DN50	90 SS	0~1.6	0.3~0.5	0~1.1	0.65	0~1.6	0.3~0.5	0~1.6	0.3~0.6	0~1.6	0~1.0	0~1.2	0.35~0.7	0.35~0.7	0~0.4
		100	0~1.6	0.25~0.4	0~1.4	0.65	0~1.6	0.25~0.4	0~1.6	0.3~0.6	0~1.6	0~1.4	0~1.4	0.35~0.7	0.35~0.7	0~0.4
		125 SS	0~1.6	0.2~0.3	0~1.6	0.65	0~1.6	0.2~0.3	0~1.6	0.3~0.4	0~1.6	0~1.4	0~1.4	0.35~0.7	0.35~0.7	0~0.5
		80	0~1.6	0.3~0.65	0~0.5	0.65	0~1.6	0.3~0.65	0~1.1	0.3~0.7	0~1.6	0~0.5	0~0.75	0.3~0.65	0.35~0.7	0~0.5
2-1/2"	DN65	90 SS	0~1.6	0.2~0.6	0~0.7	0.65	0~1.6	0.2~0.6	0~1.6	0.3~0.7	0~1.6	0~1.0	0~1.4	0.3~0.6	0.35~0.7	0~0.4
		100	0~1.6	0.3~0.45	0~0.8	0.65	0~1.6	0.3~0.45	0~1.6	0.3~0.55	0~1.6	0~1.0	0~0.8	0.35~0.7	0.35~0.7	0~0.4
		125 SS	0~1.6	0.2~0.7	0~0.9	0.65	0~1.6	0.2~0.7	0~1.6	0.2~0.55	0~1.6	0~1.4	0~1.4	0.3~0.7	0.35~0.7	0~0.5

### Specifications

Model Specification	Normally Closed	P015NC	P020NC	P025NC	P032NC	P040NC	P050NC	P065NC
	Normally Open	P015NO	P020NO	P025NO	P032NO	P040NO	P050NO	P065NO
Material of Body/ Actuator	S.S304 316 /PA							
Operating Method	Plunger Pilot							
Ambient and fluid	Air,Water,Oil,Steam (50CTS Bellow)							
Port size	<b>G1/2</b>	<b>G3/4</b>	<b>G1</b>	<b>G1 1/4</b>	<b>G1 1/2</b>	<b>G2</b>	<b>G2 1/2</b>	
Nominal Diameter mm	13	18	24	31	35	45	61	
Kv (m <sup>3</sup> /h)	4.2	9	19	33	42	59	90	
Model Specification	Normally Closed	S015NC	S020NC	S025NC	S032NC	S040NC	S050NC	S065NC
	Normally Open	S015NO	S020NO	S025NO	S032NO	S040NO	S050NO	S065NO
Material of Body / Actuator	S.S304 316 /PA							
Seat seal	PTFE/FPM							
Stem seal	PTFE/FPM							
Piston Seal	PTFE/FPM/NBR							
Temperature of Medium	PTFE	- 10 ~200°C						
	FPM	- 10 ~150°C						
Installing	Downstream/Upstream							

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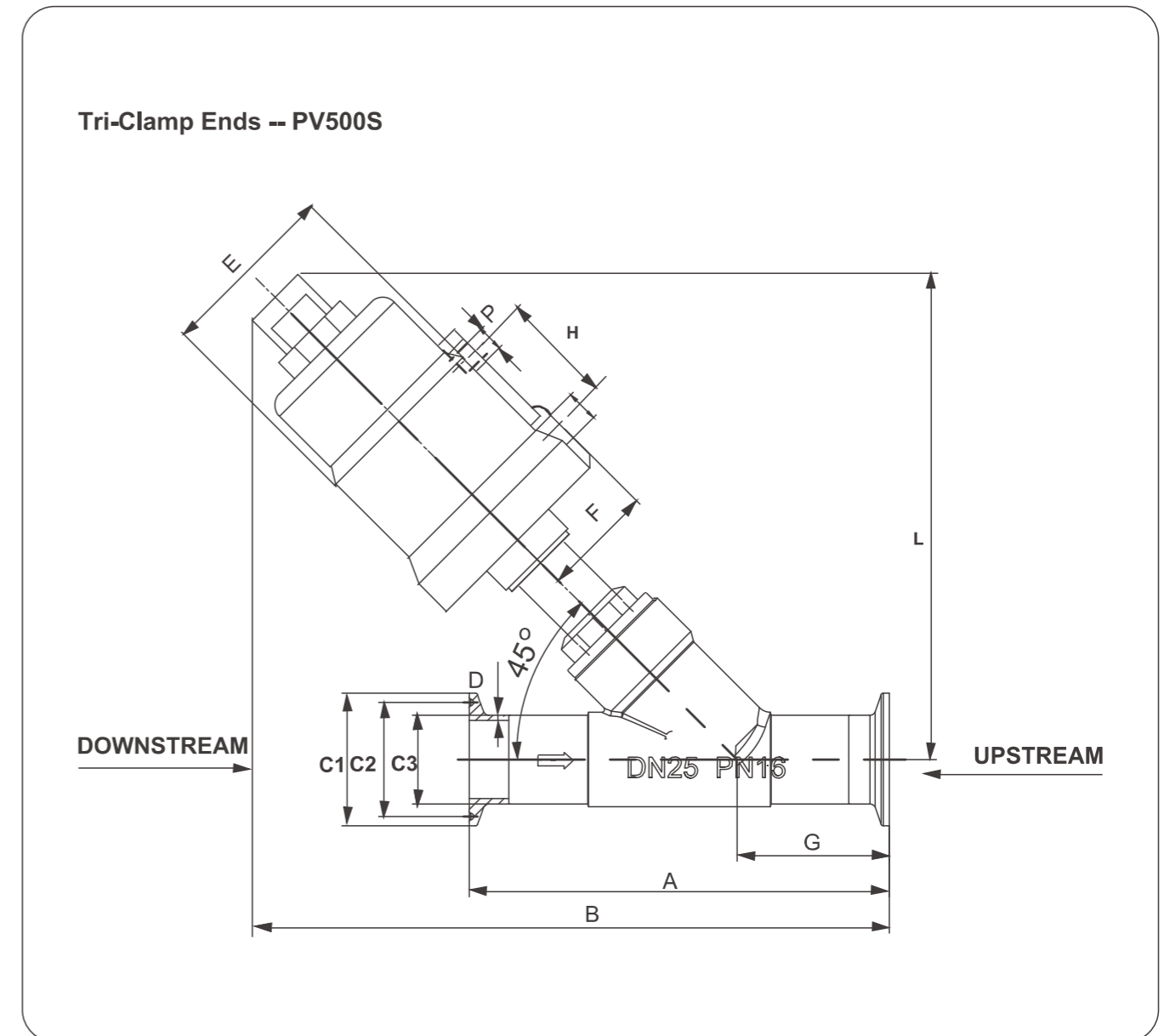
◆ Dimensions [mm]



Port Size	DN (mm)	Actuator (mm)	A	B	C1	C2	C3	D	E	F	G	L	H	P
1/2"	DN15	50	133	188	50.5	43.5	20.5	2	64	44	49	115	24	G1/4
3/4"	DN20	50	143	195	50.5	43.5	25.5	2.4	64	44	56.5	131	24	G1/4
1"	DN25	50	143	206	50.5	43.5	31.3	2.4	64	44	58	138	24	G1/4
		63	143	238	50.5	43.5	31.3	2.4	79.5	54	58	166	24	G1/4
1-1/4"	DN32	63	153	248	50.5	43.5	38.3	2.4	79.5	54	57.5	172	24	G1/4
1-1/2"	DN40	63	182	252	64	56.5	47.2	2.6	79.5	54	69	174	24	G1/4
2"	DN50	63	200	272	64	56.5	55.5	2.6	79.5	54	77.5	193	24	G1/4
		80	200	283	64	56.5	55.5	2.6	101	62	77.5	202	24	G1/4
2-1/2"	DN65	80	232	310	91	83.5	68	2.6	101	62	90	209	24	G1/4

# Angle Seat Valve(Piston Valve) Series PV500 (Tri-Clamp Ends)

◆ Dimension [mm]



Port Size	DN (mm)	Actuator (mm)	A	B	C1	C2	C3	D	E	F	G	L	H	P
1/2"	DN15	50	133	202	50.5	43.5	20.5	2	56	35	49	142	38	G1/8
3/4"	DN20	50	143	209	50.5	43.5	25.5	2.4	56	35	56.5	152	38	G1/8
1"	DN25	50	143	227	50.5	43.5	31.3	2.4	56	35	58	155	38	G1/8
		63	143	237	50.5	43.5	31.3	2.4	70	43	58	176	44	G1/8
1-1/4"	DN32	63	153	242	50.5	43.5	38.3	2.4	70	43	57.5	177	44	G1/8
1-1/2"	DN40	63	182	245	64	56.5	47.2	2.6	70	43	69	182	44	G1/8
2"	DN50	63	200	269	64	56.5	55.5	2.6	70	43	77.5	196	44	G1/8
		80/90	200	289	64	56.5	55.5	2.6	94	56	77.5	206	67	G1/4
2-1/2"	DN65	8090	232	320	91	83.5	68	2.6	94	56	90	215	67	G1/4