

# Angle Valve & Other Allied Products

for all Process / Pharma / Food Grade  
and Other Related Industries

1162  
1168  
1862  
9850 SERIES



YES. WE CARE...

**SUDE**

# Typical Constructional View of **Angle Valve**

- Easy to Install : Infinitely rotatable actuator allows pneumatic connection in any position
- 50% more economical than ball valves
- 600% longer service life than ball valves
- Compact Design
- Fast Response
- Water hammer free



Self adjusting double packing glands.

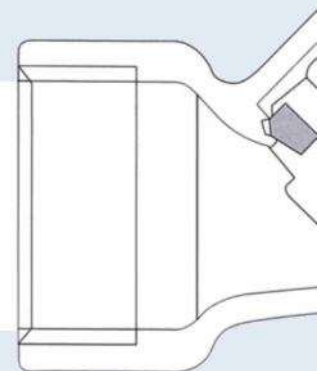
Extended spindle guide and wiper seal.

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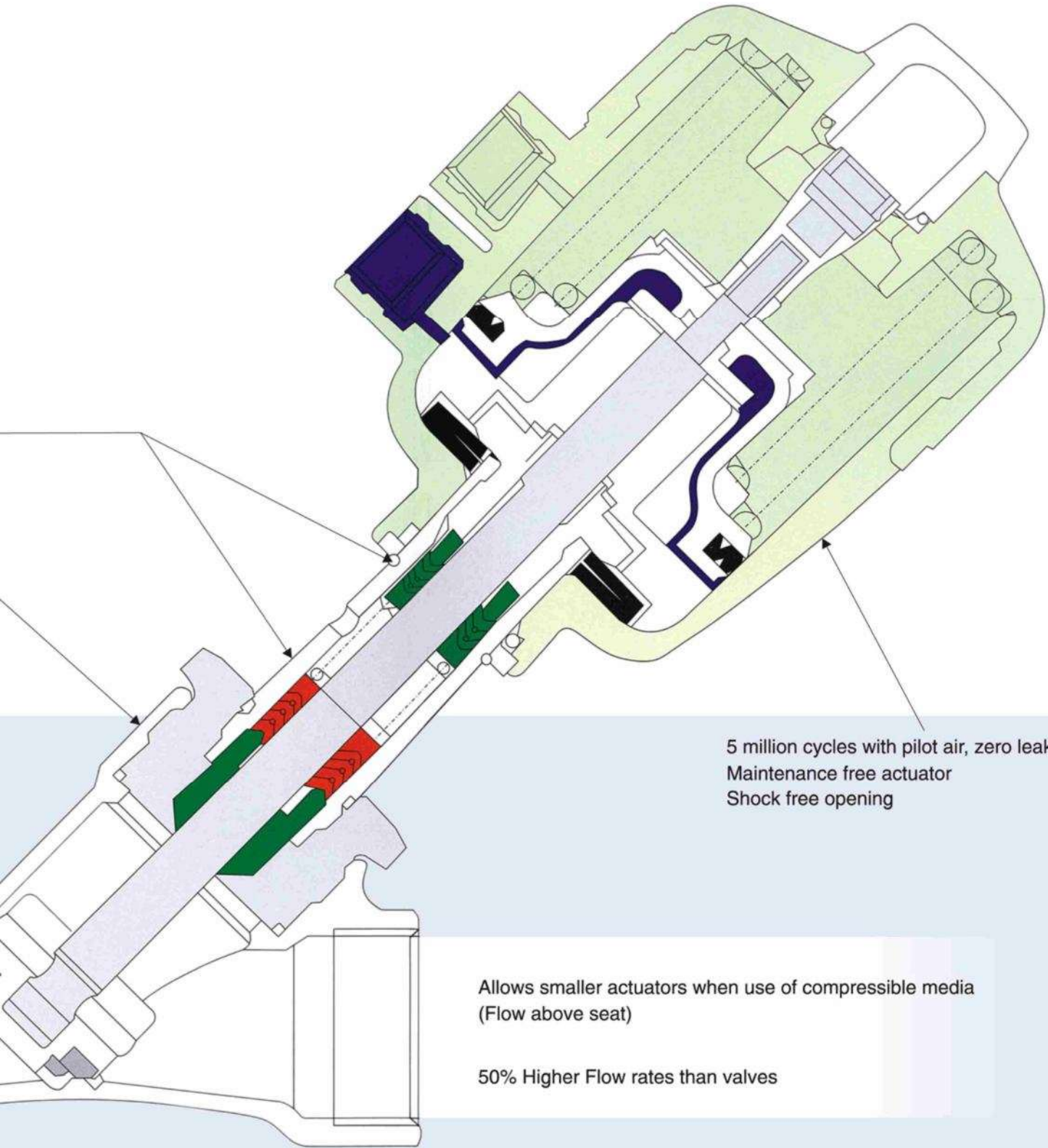
Water hammer free (Flow below seat)

Many Connection options  
Weld ends, threaded parts,  
Tri-Clamp and Flange connections



**Food and Beverage :**  
Processing industries control of mediums such as air, water, steam up to 180°C, dyes, vacuum

**Control of Solvents, Steam, Vacuum :** Industrial Washing equipment and solvent recovery systems



5 million cycles with pilot air, zero leakage.  
Maintenance free actuator  
Shock free opening

Allows smaller actuators when use of compressible media  
(Flow above seat)

50% Higher Flow rates than valves

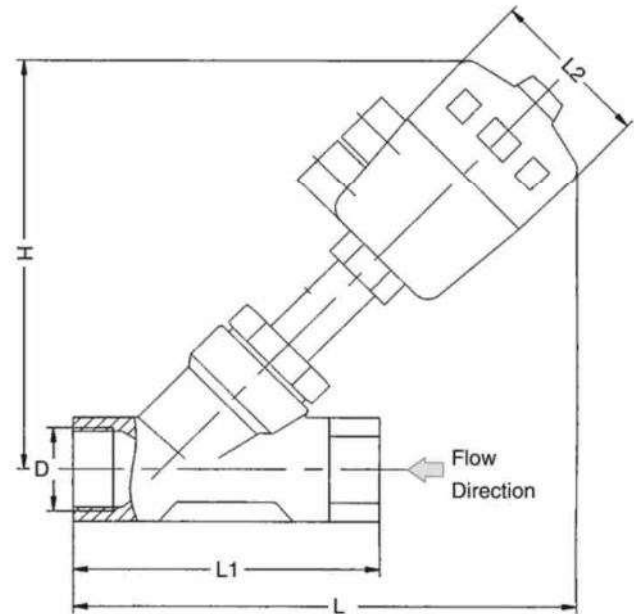
**Sterilizers and auto-claves for hospitals and Pharmaceutical Industry :** Control of Steam, Hot water upto 180°C

**Laundries :** Control of Water, Steam washing agents

**Machine Tools :** control of coolant agents

**Textile dyeing and bleaching :** Control of water, steam upto 180°C Codium hypochorite

External advanced Angle Valve, especially compared with the normal globe valves seat valve, there is adjustment Sealing gland between over flow drain and slider, body structure can enforce more flow rate, especially compare with the normal globe valves.



## Technical data:

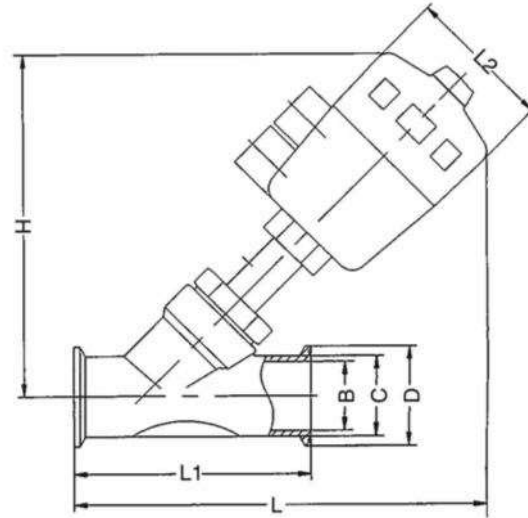
- Pressure range : 0-16 bar, can be designed to 25 bar
- Medium temperature : -10°C ~ +180°C
- Environmental temperature : -10°C ~ +60°C
- Body material : Stainless steel
- Sealing material: PTFE
- Actuator material : PA
- Medium : Neutral gas, air, water

## Option :

- Control functions : Normally open/ Normally closed
- PPS Actuator material suitable for environmental temperature : + 5°C ~ +130°C
- Double acting actuators
- Tri-clamp connection
- Electronic position feedback
- Independent adjustable stroke limit, suitable for high low flow schedule
- Manual emergency switch
- Namur Pilot valve suitable Namur adapter

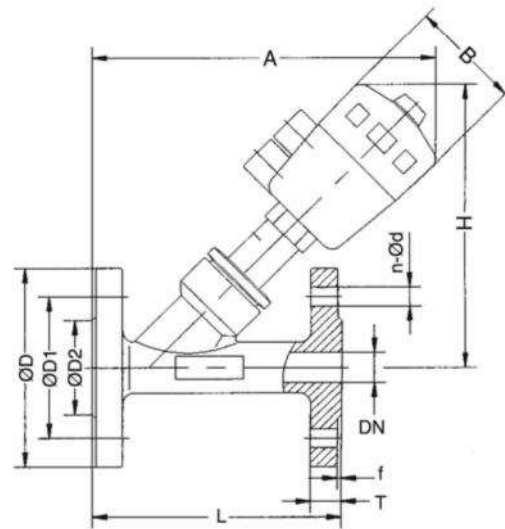
## Dimensional Details

Size	Model Number	Actuator (mm)	L	L1	L2	D	H
DN15	1162/2WNCANG/15/15/ONF/BSP	50	173	85	64	G1/2"	137
DN20	1162/2WNCANG/20/20/ONF/BSP	50	178	95	64	G3/4"	145
DN25	1162/2WNCANG/25/25/ONF/BSP	63	212	105	80	G1"	173
DN32	1162/2WNCANG/32/32/ONF/BSP	80	255	120	100	G1-1/4"	210
DN40	1162/2WNCANG/40/40/ONF/BSP	80	260	130	100	G1-1/2"	260
DN50	1162/2WNCANG/50/50/ONF/BSP	100	270	150	126	G2"	300
DN65	1162/2WNCANG/65/65/ONF/BSP	100	282	185	126	G2-1/2"	315
DN80	1162/2WNCANG/80/80/ONF/BSP	125	400	220	158	G3"	330
DN100	1162/2WNCANG/100/100/ONF/BSP	125	425	233	158	G4"	350



## Dimensional Details

Size	Model Number	Actuator(mm)	L	L1	L2	D	H	B	C	D
DN15	1162/2WNCANG/15/15/ONF/TC	50	180	120	64	G1/2"	137	15	21	50.4
DN20	1162/2WNCANG/20/20/ONF/TC	50	185	140	64	G3/4"	145	20	25	50.4
DN25	1162/2WNCANG/25/25/ONF/TC	63	210	160	80	G1"	173	25	33	50.4
DN32	1162/2WNCANG/32/32/ONF/TC	80	290	176	100	G1-1/4"	210	35	40	50.4
DN40	1162/2WNCANG/40/40/ONF/TC	80	340	190	100	G1-1/2"	260	38	44	50.4
DN50	1162/2WNCANG/50/50/ONF/TC	100	385	210	126	G2"	300	48	56	64
DN65	1162/2WNCANG/65/65/ONF/TC	100	410	225	126	G2-1/2"	315	68	77	77.5
DN80	1162/2WNCANG/80/80/ONF/TC	125	430	255	158	G3"	330	80	92	91
DN100	1162/2WNCANG/100/100/ONF/TC	125	460	278	158	G4"	350	-	-	-



## Dimensional Details

SIZE	Model Number	Actuator (mm)	L	T	f	D	D1	D2	H	A	B	n-Ød
DN15	1162/2WNCANG/15/15/ONF/FLG	50	120	14	2	95	65	40	137	180	64	4-Ø14
DN20	1162/2WNCANG/20/20/ONF/FLG	50	130	14	2	105	75	50	145	185	64	4-Ø14
DN25	1162/2WNCANG/25/25/ONF/FLG	63	140	14	2	115	85	60	173	210	80	4-Ø14
DN32	1162/2WNCANG/32/32/ONF/FLG	63	150	16	2	135	100	70	210	240	80	4-Ø18
DN40	1162/2WNCANG/40/40/ONF/FLG	63	180	16	2	145	110	80	260	245	80	4-Ø18
DN50	1162/2WNCANG/50/50/ONF/FLG	80	195	16	2	160	125	92	300	295	100	4-Ø18
DN65	1162/2WNCANG/65/65/ONF/FLG	100	230	18	2	185	145	115	315	320	126	4-Ø18
DN80	1162/2WNCANG/80/80/ONF/FLG	100	250	18	2	195	160	130	330	330	126	8-Ø18
DN100	1162/2WNCANG/100/100/ONF/FLG	125	280	18	2	215	180	150	350	360	156	8-Ø18

All above angle seat valves can be offered with electro Pneumatic Positioner for controlling duty application, may not be direct replacement for conventional globe valve but where ever accuracy is not important this type of valve can be used mainly in Paint Industries, HVAC Industries, Poultry Industries, Auto clay Industries etc., Input signal 4-20 mA, 60 PSI air pressure, Output signal 4-20 mA

Like in Globe valve the Plug construction is either V Port or Countered Trim, High friction trim etc, in this design standard balance plug is used where the pressure is balanced and it directly controls the flow as well as pressure. In Industries like Paint & Oil batching systems where accuracy is not important these type of valves are used due to its economical price & less space as compared to Globe valve which demands for higher price & huge space.



## Common Specifications

Table Remains same for BSP Threads, Sockets, Tri-clamp & Flanged

Connection Size	Port Size	KV [m <sup>3</sup> /hr]	Max working pressure (bar)	[Φ mm] Actuator	Flow direction
G3/8"	10	3.7	0-16	50	Above the seat
G1/2"	15	4.2	0-16	50	
G3/4"	20	8	0-16	50	
G1"	25	19	0-16	63	
G1 1/4"	32	27.5	0-16	63	
G1 1/2"	40	42	0-16	63	
G2"	50	52	0-16	80	
G2 1/2"	65	77	0-16	100	
G3"	80	95	0-16	125	
G4"	100	169	0-16	125	

Type 1168 Series Valves are External Air Pilot Operated Valves, which are used in Pharmaceutical and Food Industry. Operating diaphragm, isolate body and actuator from incoming fluid. The under mentioned valve and body configurations are available :

- Spigot to suit welding with ISO seamless pipe.
- Tri-clamp (TC) end connection

## Specifications

Pressure range	: Refer to specifications table.
Temperature	: (-) 10°C to 140°C (EPDM, PTFE/EPDM diaphragm)
Ambient. Temp.	: (-) 10°C to 50°C
Body Material	: ASTM A351CF3M (SS316L).
End Connections	: Available in Spigot (6) Tri-clamp (7).
Diaphragm	: EPDM Std, Optional : EPDM/PTFE, BN, Silicon.
Finish	: Body : Inside RA (µM) 0.4, Outside RA (µM) 0.8 Electro polished (Optional)

<b>ACTUATOR</b>	: 30% Glass Filled Polyamide
Pilot Pressure	: 4.5 to 8.0 bar Air or Non- Corrosive gas
Solenoid mounting	: Valve has built in Namur Mounting interface; Any Standard Namur Solenoid Valve can be fitted.

## Actuators are available In :

- Spring Return, Normally Closed.
- Spring Return, Normally Open.
- Double Acting without Spring.

## Optional Features & Accessories

Valves are supplied in normally 'Closed' condition, with Single Acting, Spring Return Actuator.

Optional : Normally 'Open' construction, Double Acting Actuator, Electro Pneumatic Valve Positioner,

Valve travel indicator with Limit switches and LED, Proximity Switch Sensors, Stroke Limiting Mechanism,

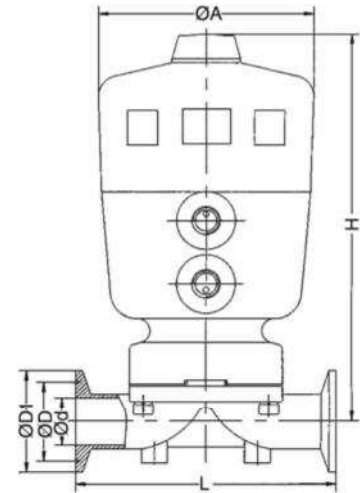
Manual Over ride (in lieu of some accessories), Namur 3-way and 4-way Solenoid Valves.



# Technical data for Tri-Clove End with Standard Actuator

SUDE 1168

Medium temp.	: -20°~ +150°
Environment temp.	: -20°~ +60°
Pressure	: 0 to 10 bar
Control	: air, Neutral gas
Air pressure	: 3 to 8 bar
Size	: DN15~DN50
Actuator material	: PA66
Body material	: CF8 CF8M 316L
Sealing	: EPDM,PTFE
Stem material	: 304
O-ring Material	: NBR

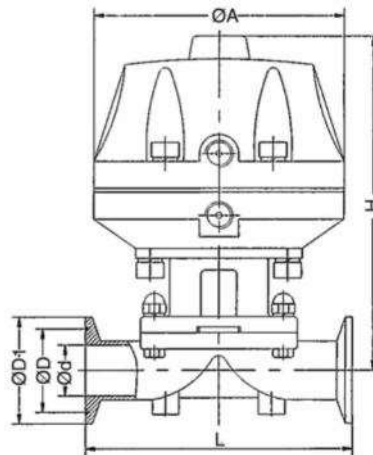


## Dimensional Details

Size	Model Number	Actuator (mm)	d	D	D1	L	A	H
DN08	1168/2WNCANG/08/08/ONF/TC	50	8	25.2	20.2	89	64	122
DN10	1168/2WNCANG/10/10/ONF/TC	50	10	25.2	20.2	89	64	122
DN15	1168/2WNCANG/15/15/ONF/TC	63	15	43.5	50.5	108	80	145
DN20	1168/2WNCANG/20/20/ONF/TC	80	19	43.5	50.5	118	100	167
DN25	1168/2WNCANG/25/25/ONF/TC	80	22.6	43.5	50.5	130	100	170
DN32	1168/2WNCANG/32/32/ONF/TC	80	28	43.5	50.5	150	100	175
DN40	1168/2WNCANG/40/40/ONF/TC	100	36	43.5	50.5	161	126	225
DN50	1168/2WNCANG/50/50/ONF/TC	100	50	56.5	64	172	126	238

# Technical data for Tri-Clove End with Dome type Cylinder Actuator

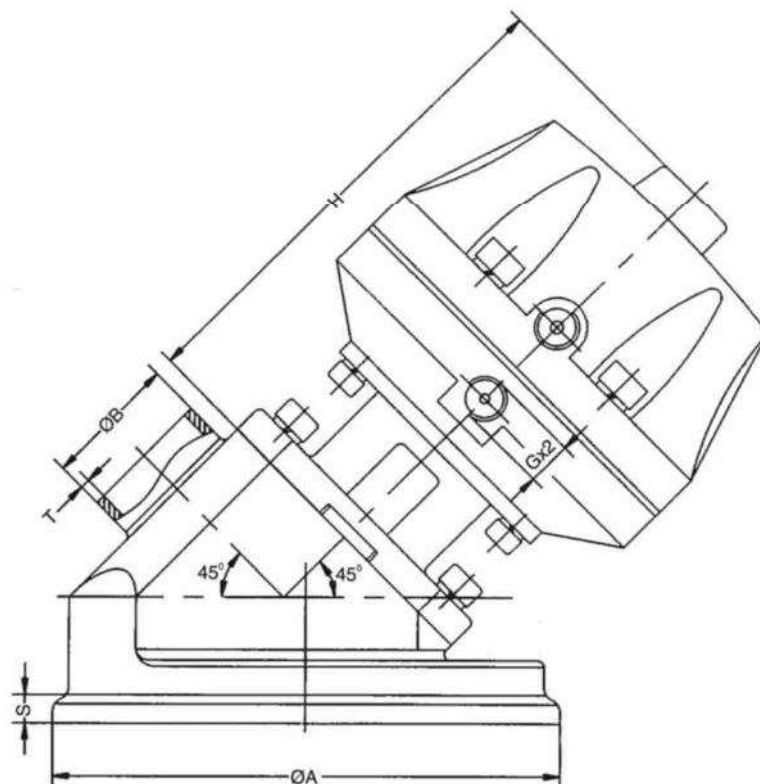
SUDE 1168



Medium temp.	: -20°~ +150°
Environment temp.	: -20°~ +60°
Pressure	: 0~1.0 Mpa s
Control	: air, Neutral gas
Air pressure	: 0. 3~0. 8 Mpa
Size	: DN15 ~ DN50
Actuator material	: PA66
Body material	: CF8 CF8M 316L
Sealing	: EPDM, PTFE
Stem material	: 304
O-ring Material	: NBR

## Dimensional Details

Size	Model Number	Actuator(mm)	d	D	D1	L	A	H
DN15	1168/2WNCANG/15/15/ONF/TC/DM	55	15	43.5	50.5	108	85	121
DN20	1168/2WNCANG/20/20/ONF/TC/DM	85	19	43.5	50.5	118	128	169
DN25	1168/2WNCANG/25/25/ONF/TC/DM	85	22.6	43.5	50.5	130	128	172
DN32	1168/2WNCANG/32/32/ONF/TC/DM	85	28	43.5	50.5	150	128	177
DN40	1168/2WNCANG/40/40/ONF/TC/DM	105	36	43.5	50.5	161	158	206
DN50	1168/2WNCANG/50/50/ONF/TC/DM	105	50	56.5	64	172	158	224

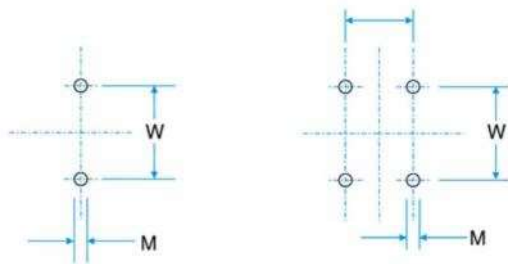
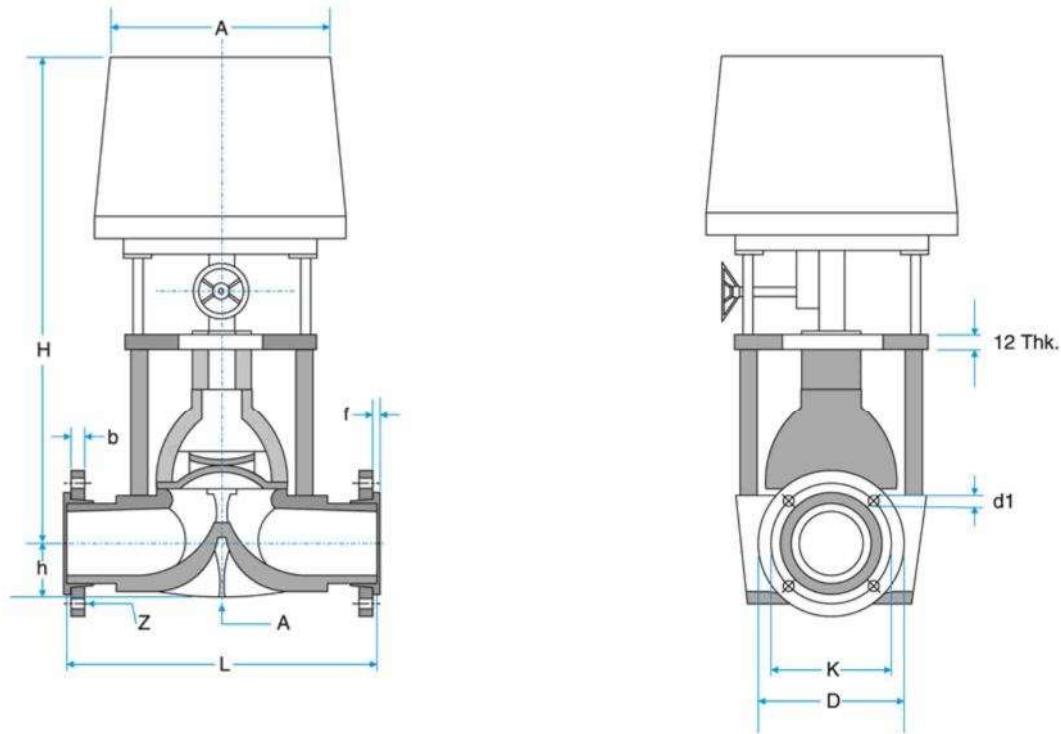


Medium temp. : -20°~+150°  
 Environment temp. : -20°~+60°  
 Pressure : 0~1.0 Mpa s  
 Control : air, Neutral gas  
 Air pressure : 0. 3~0.8 Mpa  
 Size : DN15~DN50

Actuator material : PA66  
 Body material : CF8 CF8M 316L  
 Sealing : EPDM,PTFE  
 Stem material : 304  
 O-ring Material : NBR

### Dimensional Details

Size	Model Number	Actuator(mm)	A	S	B	T	D	H	G
DN15	1168/2WNCANG/15/15/ONF/TBV/DM	55	90	6	19	1.5	85	108	¼"
DN20	1168/2WNCANG/20/20/ONF/TBV/DM	85	90	6	23	1.5	128	154	¼"
DN25	1168/2WNCANG/25/25/ONF/TBV/DM	85	120	6	29	1.5	128	154	¼"
DN32	1168/2WNCANG/32/32/ONF/TBV/DM	85	160	6	35	1.5	128	154	¼"
DN40	1168/2WNCANG/40/40/ONF/TBV/DM	105	160	6	41	1.5	158	180	¼"
DN50	1168/2WNCANG/50/50/ONF/TBV/DM	105	200	6	53	1.5	158	192	¼"



## Dimensional Details

VALVE SIZE				Model No	A	B	GFR Flange	PP/Steel Flange	D	PVC-U/PVC-C	PP	PVDF	d2	f	H	h	k	L	L1	L2	L3
d (mm)	DN (mm)	DN (inch)	PN (bar)																		
20	15	1/2"	10	9850/20/SD-2000-200-S/ON/OFF	90	72	12	13	95	41	46	47	14	6	270	26	65	130	124	90	96
25	20	3/4"	10	9850/25/SD-2000-200-S/ON/OFF	90	72	14	14.5	105	50	56	57	14	7	270	26	75	150	144	108	114
32	25	1"	10	9850/32/SD-2000-200-S/ON/OFF	100	92	15	15.5	115	58	66	64	14	7	270	26	85	160	154	116	122
40	32	1 1/4"	10	9850/40/SD-2000-200-S/ON/OFF	100	92	17	17.5	140	72	79	78	18	8	270	40	100	180	174	134	140
50	40	1 1/2"	10	9850/50/SD-2000-200-S/ON/OFF	130	119	17	17.5	150	79	87	89	18	8	270	40	110	200	194	154	160
63	50	2"	10	9850/63/SD-2000-600-S/ON/OFF	130	119	18	19	165	98	107	109	18	9	310	40	125	230	224	184	190
75	65	2 1/2"	10	9850/75/SD-2000-600-S/ON/OFF	190	177	18	19	185	—	—	—	18	10	310	54	145	290	284	—	—
90	80	3"	10	9850/90/SD-2000-600-S/ON/OFF	190	177	20	21	200	—	—	—	18	11	310	54	160	310	300	—	—
110	100	4"	10	9850/110/SD-2000-600-S/ON/OFF	190	217	20	22	220	—	—	—	18	12	310	64	180	350	340	—	—

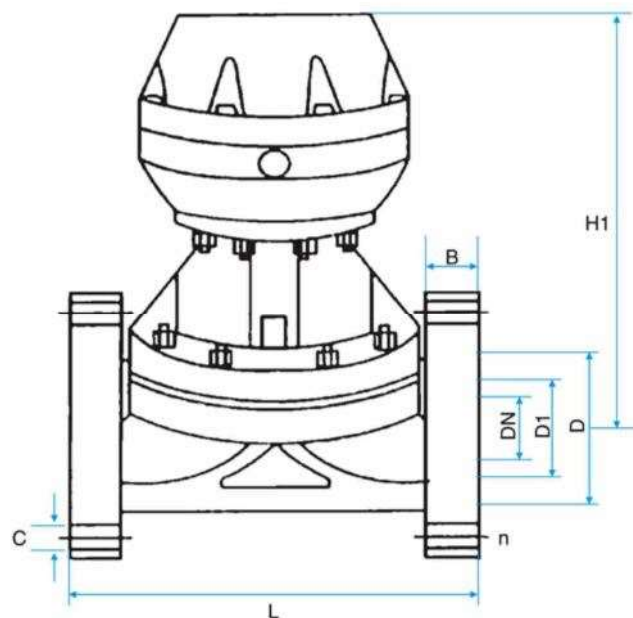
PVC-U/PVC-C	PP	PVDF	M	PVC-U/PVC-C	PP/PVDF	V	W	Z	WEIGHT (kg)								
									PVC Spigot	PVC Socket	PVC Flange	PP Spigot	PP Socket	PP Flange	PVDF Spigot	PVDF Socket	PVDF Flange
L4	L4	L4	M6	t	t	—	26	4	PVC	PVC	PVC	PP	PP	PP	PVDF	PVDF	PVDF
128	125	128	M6	16	16	—	26	4	5.38	5.5	5.82	5.32	5.4	5.76	5.44	5.55	5.88
152	146	150	M6	19	19	—	26	4	5.4	5.5	6.06	5.34	5.5	6	5.47	5.6	6.13
166	158	162	M6	22	21	—	26	4	5.83	6.1	6.63	5.7	5.9	6.5	5.97	6.25	6.77
192	181	184	M8	26	23	—	45	4	5.9	6.2	7.2	5.77	6	7.1	6.1	6.35	7.4
222	207	210	M8	31	26	—	45	4	6.8	7.1	8.2	6.5	6.8	7.9	7.2	7.4	8.6
266	244	248	M8	38	30	—	45	4	12.9	17.2	14.5	12.6	13.1	14.2	13.3	13.8	14.9
—	—	—	M12	44	33.5	—	100	4	17.1	—	19.6	16.2	—	18.7	17.9	—	20.4
—	—	—	M12	52	38	—	100	8	17.5	—	20.4	16.6	—	19.6	18.2	—	21.2
—	—	—	M1C	61	45	60	120	8	20.5	—	23.7	19.2	—	22.4	21.7	—	24.9

# Diaphragm Seated Metal Body Valves

with Heavy Duty Cylinder Piston Actuator

SUDE

1862



## Technical Parameters :

Air driven	:	Compressed Air 0.4 – 0.7 Mpa
Nominal Diameter	:	15 -200mm
Nominal Pressure	:	0.6, 1.0 Mpa
Applicable Temp.	:	-10°C to -60°C
Connection	:	Flange, Thread, Union, Clamp
Valve Body Material	:	PVDF, UPVC, RPP, PPH Cast Iron, Cast Steel, Stainless Steel
Diaphragm Material	:	PTFE, EPDM
Applicable Medium	:	Water Treatment, Chemical Industry, Medicine
Actuator Material	:	Aluminium Alloy
Installation Direction	:	Any Angle
Optional Accessories	:	Limit Switch, Positioner, Solenoid Valve, Pressure-reducing Valve.

## Dimensional Details

Nominal Dimension (DN)	Model Number	Hi (Height)	Overall Size					
			D1 (Outer Diameter of Flange)	D (Thread Pitch Diameter of Flange)	L (Length of Valve Body)	n (No. of Thread Hole of Flange)	C (Size of Thread Hole)	B (Flange Thickness)
15	1862W/15/ATO/CYL	125	65	95	125	4	14	14
20	1862W/20/ATO/CYL	130	75	105	135	4	14	16
25	1862W/25/ATO/CYL	145	85	115	145	4	14	16
32	1862W/32/ATO/CYL	180	100	135	160	4	18	16
40	1862W/40/ATO/CYL	220	110	145	180	4	18	16
50	1862W/50/ATO/CYL	250	125	160	210	4	18	18
65	1862W/65/ATO/CYL	280	145	180	250	4	18	22
80	1862W/80/ATO/CYL	340	160	195	300	4	18	25
100	1862W/100/ATO/CYL	370	180	215	350	8	18	25
125	1862W/125/ATO/CYL	420	210	245	400	8	18	30
150	1862W/150/ATO/CYL	480	240	280	460	8	23	30
200	1862W/200/ATO/CYL	625	295	335	570	8	23	35

For more details refer our catalogue 1850/1860 Series

# Valve Cv

SUDE

Body Size (Inches)	Travel	Cv			
		Unlined or Glass Lined		Rubber Lined	
		Teflon Diaphragm	Rubber Diaphragm	Teflon Diaphragm	Rubber Diaphragm
1/2"	5/16"	3	5	3	4
3/4"	9/16"	5	10	4	7
1"	9/16"	10	15	9	11
1 1/2"	3/4"	22	40	20	30
2"	15/16" 3/4"	32	55	30	50
2 1/2"	1 1/4" - 15/16"	55	85	50	75
3"	1 1/2" / 1 1/4"	75	120	70	95
4"	45 mm 1 1/2"	180	210	165	200
5"	55 mm / 45 mm	210	280	200	270
6"	70mm / 50 mm	280	370	270	350
8"	80 mm / 65 mm	480	650	450	620

## Common Accessory for Angle Seat Valve - Pharma / Food Products

SUDE



Manual Override For Stroke Actuator



Solenoid Valve



Proximity Switch



Electrical Position feedback switch with mechanical and automatic inductive switch system



Electrical feedback signal with a visual position indicator

### Position Indicator



Electropneumatic Positioner

Note : Technical specifications, details & dimensions are subject to change with prior notice. dimensions in the table are approximate subject to final confirmation by sude.

## Other Product

- Solenoid Valves.
- Pneumatically operated Control Valves.
- Motorised Valves.
- Pneumatic & Electric Operated Ball / Butterfly Valves.
- Pneumatic & Motorised Dampers.
- Pneumatic & Motorised VIV Dampers.
- Motorised Rising & Non-rising Sluice Valve.
- Heavy duty – Single phase & Three phase actuators for operating Gates & Chutes.
- Pneumatic & Motorised Pinch Valve.
- Pneumatic & Motorised Flush Bottom Valve.
- Entire range of Electrical Actuator.
- And Instrumentation Product likes Pressure Transmitter, PID Controller, Flow meter etc. for System Integration.

**SUDE**  
An ISO 9001:2008 Certified Company

### SUDE ENGINEERING CORPORATION

Registered Office / Works :

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