

# ASAHI **AV** VALVE AND PIPING SYSTEMS

## ASAHI **AV** VALVES

**3-WAY BALL VALVE TYPE 23** 15mm - 100mm( $1/2$ inch - 4inch)



# 3-WAY BALL VALVE TYPE 23 15mm - 100mm(1/2inch - 4inch)

## FEATURES

### Compact and Economic

The 3-WAY BALL VALVES allows two flow patterns, using one valve. The valve is suitable for a pipeline which requires two ball valves and a tee. That is, the 3-WAY BALL VALVES is economic because it makes piping compact and saves space.

### Reversible Flow Direction

The 3-WAY BALL VALVE is based on the Asahi true union ball valve design which can be installed or removed just by tightening or loosening its union nut. The 3-WAY BALL VALVES has a L-shaped fluid channel and a handle which can be rotated 360°. The arrow on top of the handle indicates the flow direction.

### Equipped ISO Mounting Flange

The feature provides for easier mounting of actuators on valves.

### Interchangeable with Ball Valve Type21

The face to face dimensions, as well as the connecting parts, end connectors and union nuts, are the same as the ball valve Type21.

### Other Special Features

- Double O-ring seal on stem for an added protection.
- W-L port ball and \*Cross port ball are available upon request.
- \*Note: Cross port ball is available at the size of 15mm (1/2inch) up to 50mm (2inch).
- Built-in spanner wrench on the handle for valve disassembly and assembly.

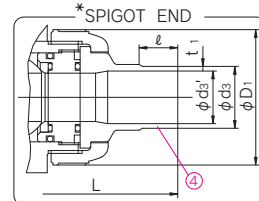
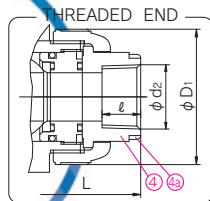
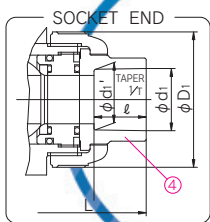
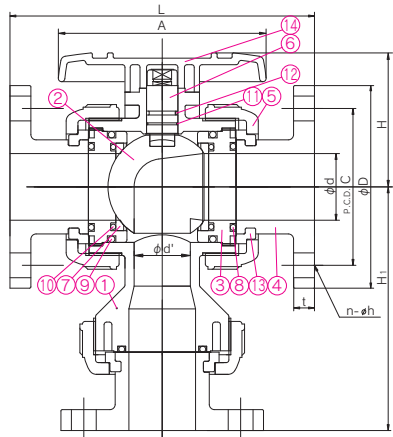
### NSF Product

NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

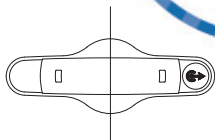
- :3-WAY BALL VALVE TYPE 23(Material:PVC+EPDM,FKM)
- \*Certified products bear an NSF Certification Mark.



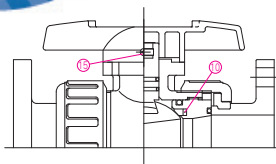
## DIMENSION



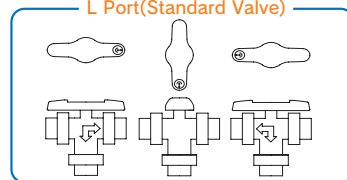
\* JIS and DIN Standard only.



(Top view of the handle.)  
NOTE: The shape and appearance of assembly differ a little with nominal size compared to this drawing.

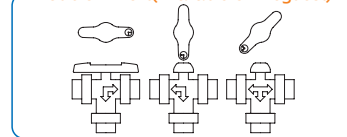


### L Port(Standard Valve)

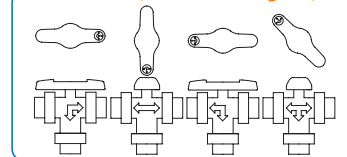


Changing the ball allows for standard valve to be converted.  
(only 15mm(1/2inch)~50mm(2inch))

### Double L Port(Available on Request)



### Cross Port(Available on Request)



\*Available at the size of 15mm up to 50mm.

## MATERIAL AND WORKING TEMPERATURE

Body Material	Working Temperature °C (°F)	Max.Working Pressure(at R.T.) MPa{kgf/cm²}[PSI]	End Connectors			
			Socket End	Threaded End	Flanged End	Spigot End
Unplasticized Polyvinyl Chloride(PVC)	0 - 50(30 - 120)	1.0 {10.2} [150]	○	○	○	○
Chlorinated Polyvinyl Chloride(C-PVC)	0 - 90(30 - 195)	1.0 {10.2} [150]	○	○	○	○
Polypropylene(PP)	-20 - 80(-5 - 175)	1.0 {10.2} [150]	○ ※	○	○	○
Polyvinylidene Fluoride(PVDF)	-20 - 100(-5 - 210)	1.0 {10.2} [150]	○ ※	○	○	○

\* PP and PVDF 3-WAY BALL VALVES of the Socket End are welded valves.

Note : 1. There is a dead space in a ball valve. Volatile liquids, such as a hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) and Sodium hypochlorite (NaClO) may vaporize in the dead space, thus causing an abnormal pressure increase in the valve. (Important: Gas is compressible. Thus if its pressure rises abnormally, the valve can burst ejecting dangerous fragments.

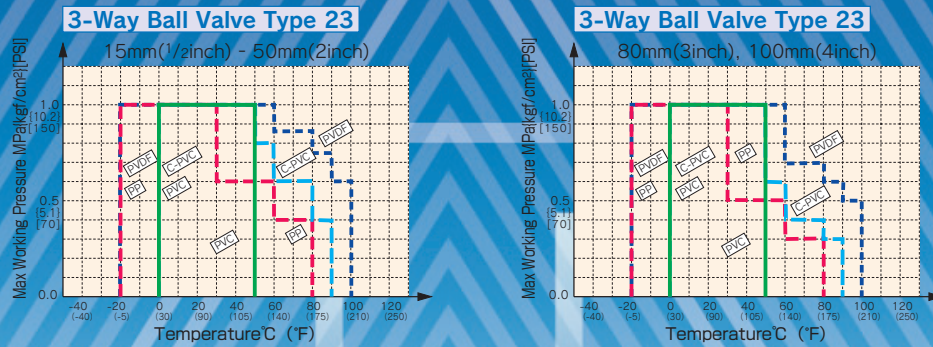
## PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC,PP,C-PVC,PVDF	⑨	O-RING(B)	2	EPDM,FKM,others
②	BALL	1	PVC,PP,C-PVC,PVDF	⑩	O-RING(C), CUSHION	2	EPDM,FKM,others
③	CARRIER	2	PVC,PP,C-PVC,PVDF	⑪	O-RING(D)	1	EPDM,FKM,others
④	END CONNECTOR	3	PVC,PP,C-PVC,PVDF	⑫	O-RING(E)	1	EPDM,FKM,others
⑤	UNION NUT	3	PVC,PP,C-PVC,PVDF	⑬	STOP RING	3	PVDF(Used for Flanged End)
⑥	STEM	1	PVC,PP,C-PVC,PVDF	⑭	HANDLE	1	ABS
⑦	SEAT	2	PTFE	⑮	TAPPING SCREW(A)	1	STAINLESS STEEL304
⑧	O-RING(A)	3	EPDM,FKM,others	⑯	RING	3	STAINLESS STEEL304

Note : The stop ring (⑫) is used for Flanged End valves only.  
The ring (⑯) is used for 15,20,and 25mm C-PVC valves.



## WORKING PRESSURE VS. TEMPERATURE

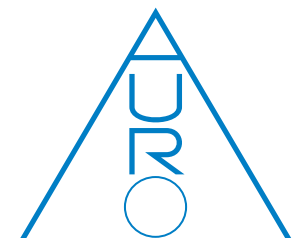


## DIMENSIONS TABLE

DIN		Unit:mm																			
Nominal Size	Flanged End								Socket End								Threaded End				
	DIN PN10				L	t	H <sub>1</sub>	PVC, C-PVC				PP, PVDF				d <sub>2</sub>	ℓ	L	H <sub>1</sub>		
mm	inch	D	C	n				h	d <sub>1</sub>	ℓ	L	H <sub>1</sub>	d <sub>1</sub>	d <sub>1</sub> '	ℓ					L	H <sub>1</sub>
15	1/2	95	65	4	14	130	12	88	20	16	102	72	19.50	19.30	14.5	99	71	Rp 1/2	15	102	74
20	3/4	105	75	4	14	150	14	104	25	19	120	85	24.50	24.30	16	114	83	Rp 3/4	17	120	89
25	1	115	85	4	14	160	14	120	32	22	131	104	31.50	31.30	18	123	100	Rp 1	20	131	105
40	1 1/2	150	110	4	18	200	16	159	50	31	163	142	49.45	49.20	23.5	148	131	Rp 1 1/2	25	163	141
50	2	165	125	4	18	230	16	185	63	38	197	170	62.50	62.10	27.5	176	154	Rp 2	28	197	168
80	3	200	160	8	18	310	21	259	90	51	282	245	89.20	88.85	35.5	251	224	Rp 3	35	264	235
100	4	220	180	8	18	350	18	305	110	61	349	305	109.05	108.65	41.5	310	279	Rp 4	45	338	299

Nominal Size	Spigot End										
	PVC				PP, PVDF						
	d <sub>3</sub>	d <sub>3</sub> '	ℓ	H <sub>1</sub>	d <sub>3</sub>	ℓ	t		L	H <sub>1</sub>	
mm	inch					PP	PVDF				
15	1/2	20	15	18.5	83	20	18.5	2.5	1.9	124	83
20	3/4	25	20	24	99	25	22	2.7	1.9	144	99
25	1	32	25	24.5	115	32	22.5	3.0	2.4	154	115
40	1 1/2	50	40	34	153	50	32	4.6	3.0	194	153
50	2	63	51	38	178	63	36	5.8	3.0	224	178
80	3	90	80	51	252	90	38	8.2	4.3	295	246
100	4	110	93.6	61	308	110	44.5	10.0	5.3	353	301

ANSI		Unit:inch																								
Nominal Size	Flanged End								Socket End								Threaded End									
	ASTM Class 150				L	t	H <sub>1</sub>	PVC, C-PVC				PP, PVDF				d <sub>2</sub>	ℓ	L	H <sub>1</sub>							
	D	C	n	h				ASTM SCH40			ASTM SCH80			d <sub>1</sub>	ℓ					L	H <sub>1</sub>					
inch	mm					d <sub>1</sub>	d <sub>1</sub> '	ℓ	L	d <sub>1</sub>	d <sub>1</sub> '	ℓ	L	H <sub>1</sub>	d <sub>1</sub>	ℓ	L	H <sub>1</sub>	d <sub>2</sub>	ℓ	L	H <sub>1</sub>				
1/2	15	3.50	2.38	4	0.62	5.63	0.47	3.70	—	—	—	—	0.848	0.836	0.875	4.45	3.08	0.830	0.870	4.45	3.09	1/2-14 NPT	0.59	4.02	2.89	
3/4	20	3.88	2.75	4	0.62	6.77	0.55	4.50	—	—	—	—	1.058	1.046	1.000	5.08	3.56	1.030	1.000	5.08	3.61	3/4-14 NPT	0.67	4.72	3.48	
1	25	4.25	3.12	4	0.62	7.36	0.55	5.24	—	—	—	—	1.325	1.310	1.125	5.75	4.32	1.300	1.130	5.75	4.37	1-11 1/2 NPT	0.79	5.16	4.13	
1 1/2	40	5.00	3.88	4	0.62	8.35	0.63	6.50	—	—	—	—	1.912	1.894	1.375	7.24	5.71	1.890	1.370	7.24	5.85	1 1/2-11 1/2 NPT	0.98	6.42	5.53	
2	50	6.00	4.75	4	0.75	9.21	0.63	7.34	—	—	—	—	2.387	2.369	1.500	8.23	6.66	2.360	1.500	8.23	6.76	2-11 1/2 NPT	1.10	7.76	6.61	
3	80	7.50	6.00	4	0.75	11.97	0.71	10.06	—	—	—	—	3.516	3.492	1.875	11.10	9.59	3.480	1.874	11.10	11.10	3-8 NPT	1.38	10.39	9.25	
4	100	9.00	7.50	8	0.75	14.65	0.71	12.01	4.518	4.491	2.000	13.90	—	—	—	11.58	4.480	2.252	14.37	14.37	4-8 NPT	1.77	14.17	11.77		
Nominal Size		d	d'	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	C <sub>1</sub>	H	Nominal Size	d	d'	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	C <sub>1</sub>	H	H <sub>2</sub>	H <sub>3</sub>	H <sub>4</sub>	H <sub>5</sub>	A	S	e	
inch	mm									mm	inch															
1/2	15	0.59	0.59	1.89	1.65	0.98	0.53	1.42	2.03	15	1/2	15	15	48	42	25	13.5	36	51.5	30	6	3	8	92	10.5	5.5
3/4	20	0.79	0.79	2.36	1.65	0.98	0.59	1.42	2.34	20	3/4	20	20	60	42	25	15	36	59.5	36.5	6	3	10	100	11	5.5
1	25	0.98	0.98	2.76	1.65	0.98	0.59	1.42	2.68	25	1	25	25	70	42	25	15	36	68	43.5	6	3	10	110	11	5.5
1 1/2	40	1.57	1.26	3.94	2.24	1.38	0.91	1.97	3.50	40	1 1/2	40	32	100	57	35	23	50	89	61	10	3	12	131	18	6.5
2	50	2.01	1.69	4.96	2.24	1.38	0.91	1.97	4.04	50	2	51	43	126	57	35	23	50	102.5	72.5	10	3	12	159	18	6.5
3	80	3.07	2.70	5.98	3.19	2.17	1.18	2.76	5.51	80	3	78	68.5	152	81	55	30	70	140	94	13	3	19	240	24	9
4	100	3.94	3.54	8.27	4.57	2.76	1.57	4.02	7.01	100	4	100	90	210	116	70	40	102	178	126	16	3	23	300	34	11



## **AURO LOCATIONS**

**AURO Armaturen- und RohrhandelsgesmbH**  
Lichtblaustraße 21  
A-1220 Wien  
Austria  
Tel: +43/1/2565555  
Fax: +43/1/25655555  
E-Mail: wien@auro.cc

**AURO Bulgaria EOOD**  
Illianci  
3, Azalia Str.  
BG-Sofia 1271  
Bulgaria  
Tel: +359/2/4894519  
Fax: +359/2/4894722  
E-Mail: bulgaria@auro.cc

**AURO spol s.r.o**  
Technická 2/539  
CZ-66448 Moravany u Brna  
Czech Republic  
Tel: +420/54/5233328  
Fax: +420/54/5234753  
E-Mail: auro@auro.cz

**SC AURO Romania SRL**  
25-27, Celofibrei Str.  
RO-077025 Bragadiru  
Judetul Ilfov  
Romania  
Tel: +40/21/4205217  
Fax: +40/21/4205218  
E-Mail: romania@auro.cc

**AURO Budapest Kft.**  
Gyár u. 2  
H-2040 Budaörs  
Hungaria  
Tel: +36/23/503920  
Fax: +36/23/503921  
E-Mail: aurobp@aurobp.hu