

# COMPACT BALL VALVE TYPE 27

## Features

- With a small number of components and light weight, compact design, suitable for installation in a narrow space and ideal for facility piping in plants.
- The spherical valve element allows for a straight flow path and extremely small fluid resistance. (Excellent water characteristics)
- No risk of difficult handle operation due to thermal expansion or contraction.
- Using PTFE, the seat is highly resistant to corrosion, chemicals and abrasion.



## Basic specifications

- Valve Type : Compact Ball Valve Type 27
- Size : 15 mm — 50 mm (3/8 inch — 2 inch)
- Body Material : U-PVC (Conforming to ASTM D1784 Cell Classification 12454A)  
C-PVC (Conforming to ASTM D1784 Cell Classification 23567-A)
- Seal Material / Seat : PTFE  
/ O-ring : EPDM, FKM etc
- Connection / Socket : JIS B2220, DIN/EN1092-1, ANSI B16.5  
Threaded : Rc, Rp, NPT

Body Material	FLUID TEMPERATURE °C {°F}	Maximum working pressure (Normal temperature) MPa {psi}	Connection method	
			Socket	Threaded
U-PVC	0 ~ 50 { 30~122 }	1.0 { 150 }	○	○
C-PVC	0 ~ 90 { 30~195 }	1.0 { 150 }	○	○

### Note::

- (1) The ball-type valves have dead spaces for structural reasons. Note that volatile liquids, such as hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) and sodium hypochlorite (NaClO), vaporize in those dead spaces, which may cause abnormal pressure increase in the valve. (When the internal pressure abnormally increases due to vaporization, the gas will be compressive fluid. If the valve breaks in this state, it will be very dangerous, causing explosion and scattering of fragments.)
  - (2) The maximum working pressure is the value including the water hammer pressure. Be careful that the maximum working pressure is not exceeded during use.
- \* Concerning the allowable pressure for each temperature and material, see the technical documents at the next page of this sheet.

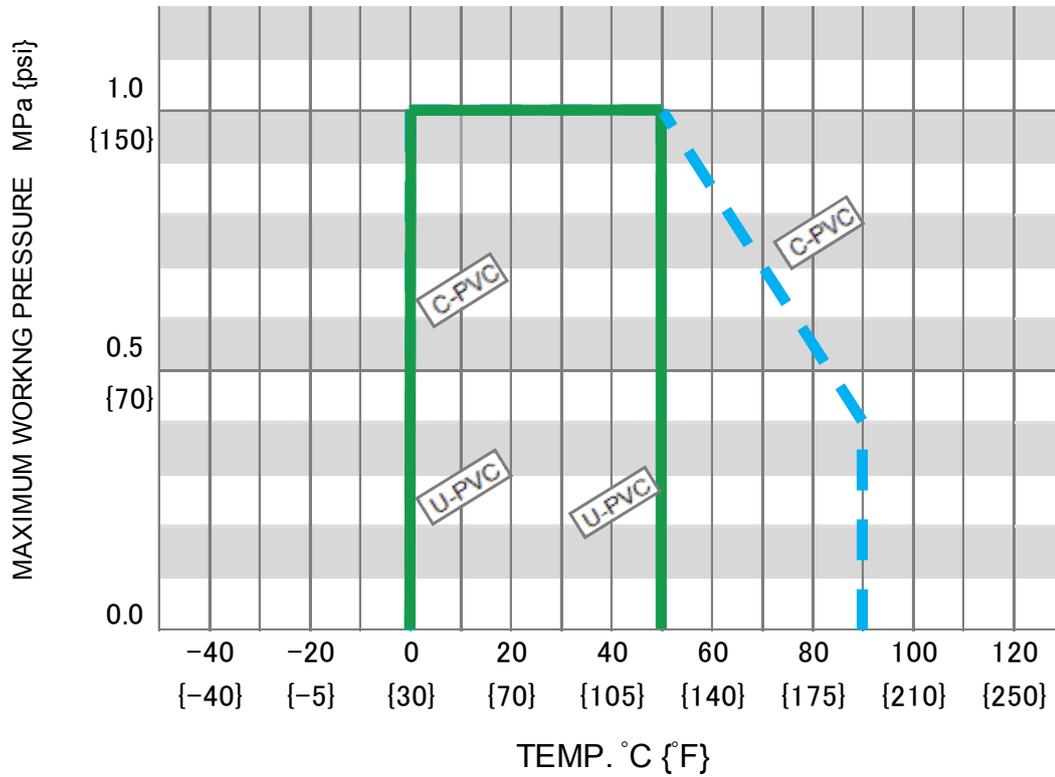
**Certificate / Approval / Directive**

**PED, ABS, NSF/ANSI61**

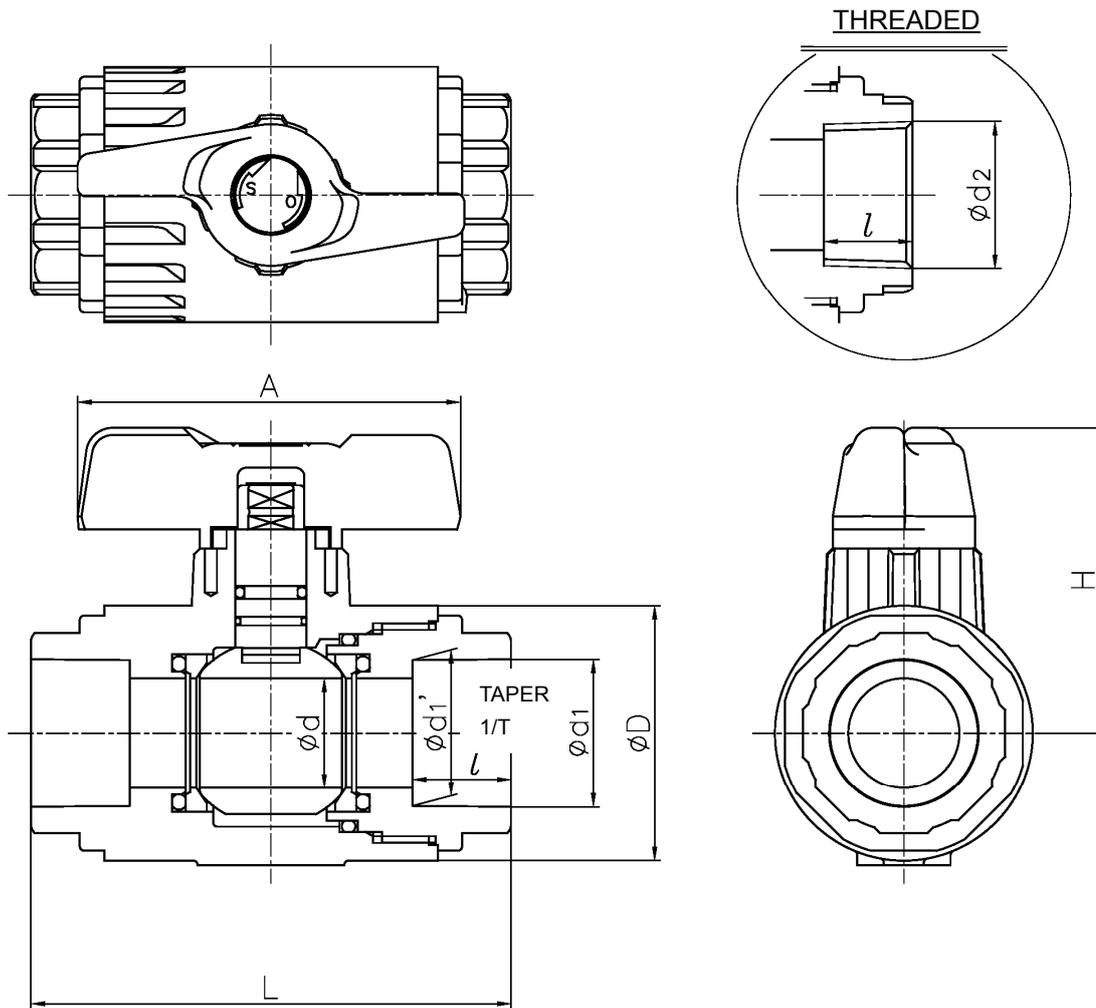
“For details of applicable products, please consult us.”

**Working pressure vs. Temperature**

MANUAL : 15mm - 50mm{3/8"-2"}



Product dimension



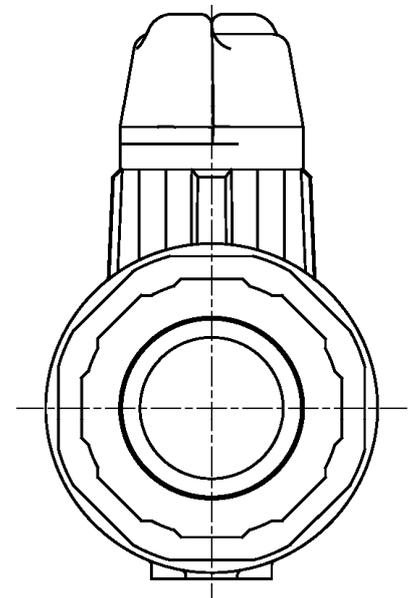
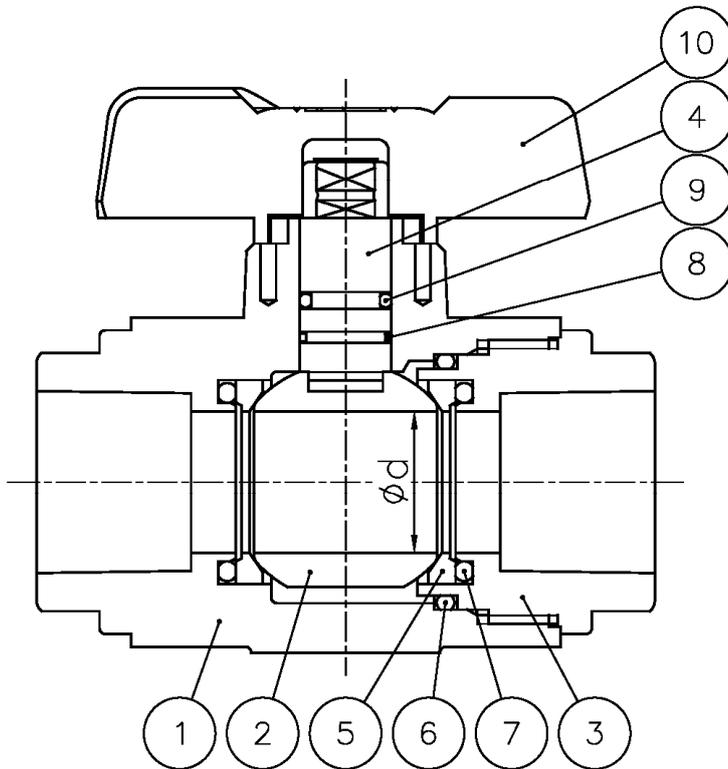
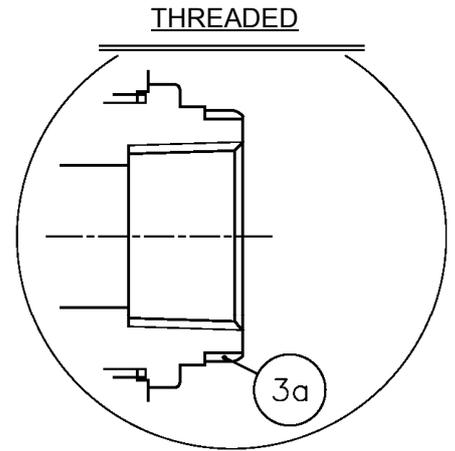
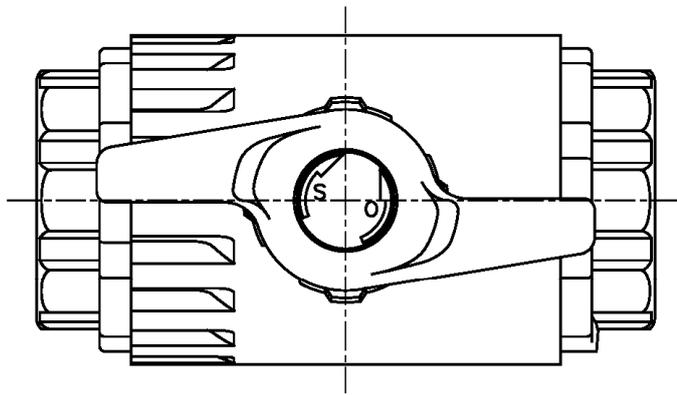
■ JIS, DIN (Unit: mm)

JIS, DIN (Unit: mm)						JIS							DIN			
						SOCKET				THREADED			SOCKET		THREADED	
mm	inch	d	A	D	H	d <sub>1</sub>	1/T	l	L	d <sub>2</sub>	l	L	d <sub>1</sub>	l	d <sub>2</sub>	l
13	3/8	15	75	40	52.5	18.20	1/30	17	69	-	-	-	16	14	Rp 3/8	15
15	1/2	15	75	40	52.5	22.11	1/34	20	79	Rc 1/2	15	69	20	16	Rp 1/2	15
20	3/4	20	87	49	62.5	26.13	1/34	24	94	Rc 3/4	17	94	25	19	Rp 3/4	17
25	1	25	87	58	69.5	32.16	1/34	27	108	Rc 1	20	108	32	22	Rp 1	20
30	1 1/4	31	105	68	81.5	38.19	1/34	30	121	Rc 1 1/4	22	121	40	26	Rp 1 1/4	22
40	1 1/2	40	135	82.5	96.0	48.21	1/37	37	146	Rc 1 1/2	25	146	50	31	Rp 1 1/2	25
50	2	51	135	104	107.5	60.25	1/37	42	175	Rc 2	28	175	63	38	Rp 2	28

■ ANSI (Unit: inch)

inch	mm	d	SOCKET			THREADED		L	d	A	D	H
			ASTM SCH40			d <sub>2</sub>	l					
			d <sub>1</sub>	d <sub>1</sub> '	l							
3/8	13	0.59	0.687	0.671	0.59	3/8 -18 NPT	0.59	2.72	0.59	2.95	1.57	2.07
1/2	15	0.59	0.848	0.836	0.69	1/2 -14 NPT	0.59	3.11	0.59	2.95	1.57	2.07
3/4	20	0.79	1.058	1.046	0.72	3/4 -14 NPT	0.67	3.70	0.79	3.43	1.93	2.46
1	25	0.98	1.325	1.310	0.87	1 -11 1/2 NPT	0.79	4.25	0.98	3.43	2.28	2.74
1 1/4	32	1.22	1.670	1.655	0.94	1 1/4 -11 1/2 NPT	0.87	4.76	1.22	4.13	2.68	3.21
1 1/2	40	1.57	1.912	1.894	1.09	1 1/2 -11 1/2 NPT	0.98	5.75	1.57	5.31	3.25	2.72
2	50	2.01	2.387	2.369	1.16	2 -11 1/2 NPT	1.10	6.86	2.01	5.31	4.09	4.23

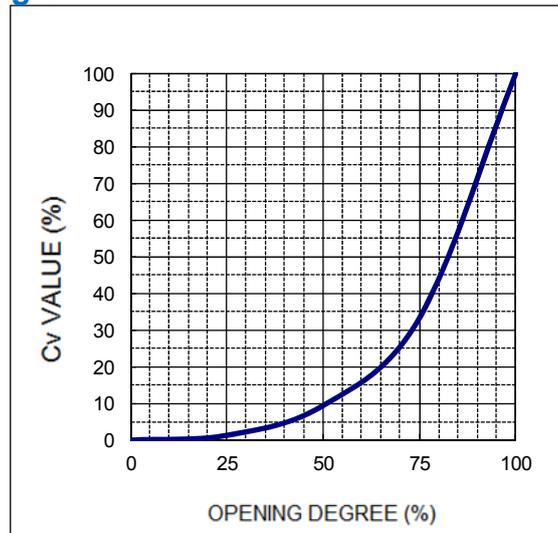
Parts list



PART NO./NAME	QTY	MATERIAL
1 BODY	1	PVC, C-PVC
2 BALL	1	
3 END CONNECTOR	1	
4 STEM	1	
5 SEAT	2	PTFE
6 O-RING ( B )	1	EPDM, FKM, Others
7 O-RING ( C )	2	EPDM, FKM, Others

PART NO./NAME	QTY	MATERIAL
8 O-RING ( D )	1	EPDM, FKM, Others
9 O-RING ( E )	1	EPDM, FKM, Others
10 HANDLE	1	ABS
3a RING	2	STAINLESS STEEL Used for C-PVC Body, Threaded: 13-25mm

## Cv value for each opening degree



### FULL-OPEN Cv VALUE

mm	13	15	20	25	32	40	50
inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
FULL-OPEN Cv VALUE	7.7	14	29	47	72	155	190

## Operating torque

Unit:N-m { ib-inch }

mm	13	15	20	25	32	40	50
inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Operating torque(O→S)	2.0 {18}	2.0 {18}	2.5 {22}	3.2 {28}	5.6 {50}	8.0 {71}	10.0 {88.5}

## Product weight

UNIT : kg

mm	inch	SOCKET, THREADED (JIS)	
		U-PVC	C-PVC
13	1/2	0.1	0.1
15	1/2	0.1	0.2
20	3/4	0.2	0.2
25	1	0.3	0.3
32	1 1/4	0.4	0.5
40	1 1/2	0.7	0.7
50	2	1.1	1.2

### Product model code list

ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE
V	7B	LV	*	*	*	***	***
:	:	:	:	:	:	:	:
V MANUAL VALVE	7B TYPE 27 COMPACT SIZE	LV LEVER TYPE	U U-PVC C C-PVC	E EPDM V FKM	S SOCKET N THREADED	J SOCKET D DIN A ANSI	015 15mm 5 050 50mm

### Installation, Operation and Maintenance Manual

"For details of Installation, Operation and Maintenance, please refer IOM at below link"

[http://www.asahi-yukizai.co.jp/en/product/mt\\_pdf/a\\_manual\\_valve\\_2\\_06.pdf](http://www.asahi-yukizai.co.jp/en/product/mt_pdf/a_manual_valve_2_06.pdf)