

FINE FLOW



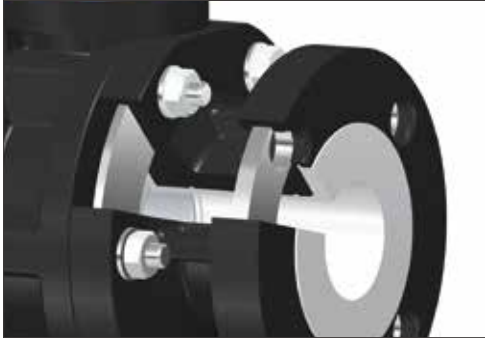
Lined Composite Plastic

Ball Valve



Lined Composite Plastic Ball Valve

Material Properties



● Materials

PP+GF
PA+GF

PPS+GF

PFA

PTFE

PVDF

Engineering Plastic

Engineering plastics have unique combinations of properties including heat resistance, mechanical strength, rigidity, chemical stability, self-lubrication and fire safety. They have numerous industrial applications particularly such as in manufacturing gears and skids, in chemical plants and in car industry.

Super Engineering Plastic

Super engineering plastics have higher resistance to heat, chemicals and wear than engineering plastics. They have advantageous applications particularly in aerospace structures, semiconductor manufacturing equipment, and food and beverage processing machinery.

Perfluoroalkoxy

PFA (Perfluoroalkoxy) has similar advantageous processing properties to FEP (Fluorinated ethylene propylene), but it has ten times greater capability to withstand repeated bending without fracture and has better resistance to heat (up to 260°C) than FEP.

Polytetrafluoroethylene

PTFE (Polytetrafluoroethylene) is a synthetic fluoropolymer of tetrafluoroethylene. Teflon by Chemours is a well-known brand name of PTFE-based formulas. PTFE has useful properties including slippery surface, high melting point, and high resistance to attacks by various chemicals.

Polyvinylidene Fluoride

PVDF (Polyvinylidene fluoride or polyvinylidene difluoride) has been used in special applications which require highest purity as well as high resistance to solvents, acids and hydrocarbons.

Series CBA1 / CBA2

Ball valve

● Features

- Lined ball valve for chemically corrosive media
- Plastic-metal hybrid structure
- Blow-out proof stem
- Maximum flow rates with lowest pressure drops
- PTFE Chevron packing provides stem seal integrity

● Applications

- Chemical process
- Desalination
- Water and waste water treatment
- Shipbuilding
- Semiconductor manufacturing
- Hazardous services (Acetic Acid, Sulfuric Acid etc.)



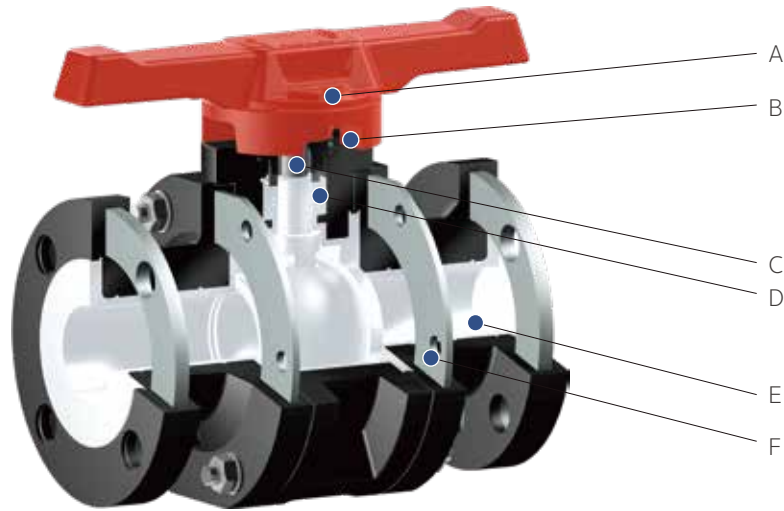
Series CBA1 / CBA2 ball valves have advanced structure (Plastic - Metal Hybrid Technology)

FINE FLOW's valves with innovative Plastic-metal hybrid structure have not only provided longer durability and service life, but also been suitable to more aggressive environment than ordinary plastic valves.

● Technical specifications

Construction	2-way floating type ball valve
Body type	Two-piece or three-piece
Available size	DN 20 - DN 100
Face to face	ASME B16.10_SHORT (DN 25~DN 40) DIN 3202 (DN 20~DN 100) FINEFLOW STANDARD
End connection	DIN 2501, PN16 ANSI B16.5, Class 150 JIS B 2220, 10K
Top flange	ISO 5211
Tightness check	API 598
Valve material	Body : PPG or PPSG with PFA Ball / Stem : PFA / CF8M with PFA
Seal material	Ball seat / Stem seal : PTFE

| Series CBA1



● Features & Benefits



A Lockable Hand Lever
Hand lever is locked by padlock either in a full open position or in a full closed position.



B Mounting Flange
Designed to mount an automation directly on the top flange (ISO 5211)



C Shaft Bearing
Two FKM O-rings protect stem and seal components from atmospheric or environmental corrosion.



D PTFE Chevron Packing
Stem is sealed with its self-adjusting function.

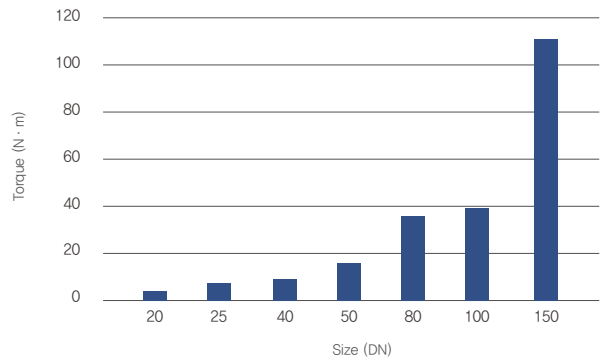


E PFA / PVDF Liner
- Liner thickness: minimum 3mm in compliance with ASTM F1545,
- Both PFA and PVDF liners available.

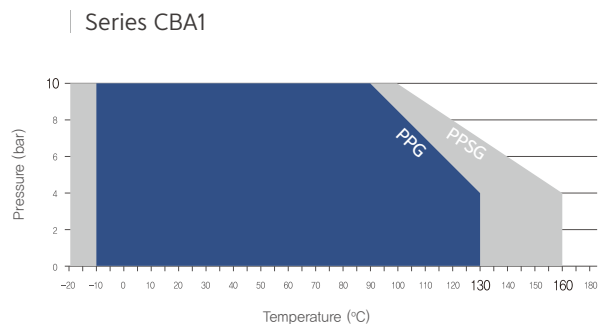


F Advanced Structure (Plastic-Metal Hybrid Technology)
The structure enhances durability and service life even in more aggressive environment.

● Operating Torque



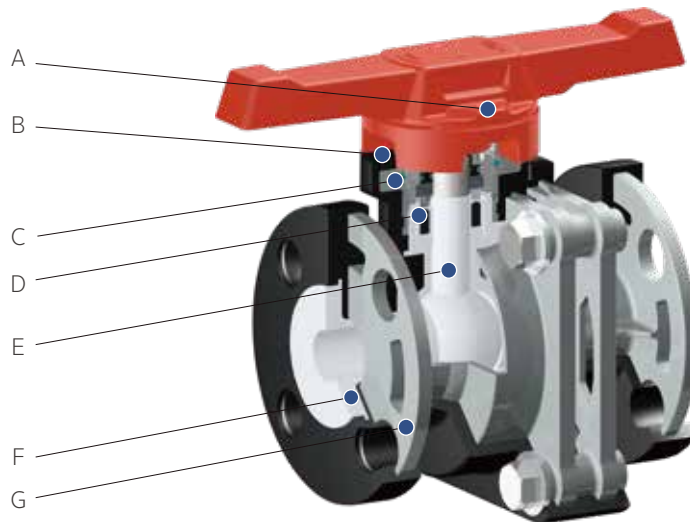
● Pressure-Temperature Chart



| Series CBA2

► **Heavy duty service**

Series CBA2 is suitable to severe service conditions



● Cv-Values

DN	Cv
20	37
25	60
40	213
50	300
80	670
100	1,505
150	3,510

● Flange Bolt Torques

Size (DN)	Max. Recommended Flange Torque(N·m)
20	25
25	30
40	35
50	35
80	45
100	45
150	70

● Features & Benefits



A Lockable Hand Lever

Hand lever is locked by padlock either in a full open position or in a full closed position.



B Mounting Flange

Designed to mount an automation directly on the top flange (ISO 5211)



C Shaft Bearing

- Two FKM O-rings protect stem and seal components from atmospheric or environmental corrosion.
- Technopolymer bearing reduces torque.



D Self-adjusting Sealing System

Belleville spring provides live loading to seal points and reliable stem sealing.



E One-piece Ball / Stem Unit

One-piece PFA lined ball and stem unit makes better resistance to higher temperature and pressure. The unit not only ensures better control of valve but also minimizes failures of stem.



F PFA / PVDF Liner

- Liner thickness: minimum 3mm in compliance with ASTM F1545.
- Both PFA and PVDF liners available.

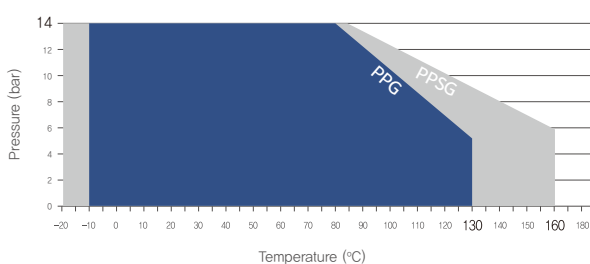


G Advanced Structure (Plastic – Metal Hybrid Technology)

The structure enhances durability and service life even in more aggressive environment.

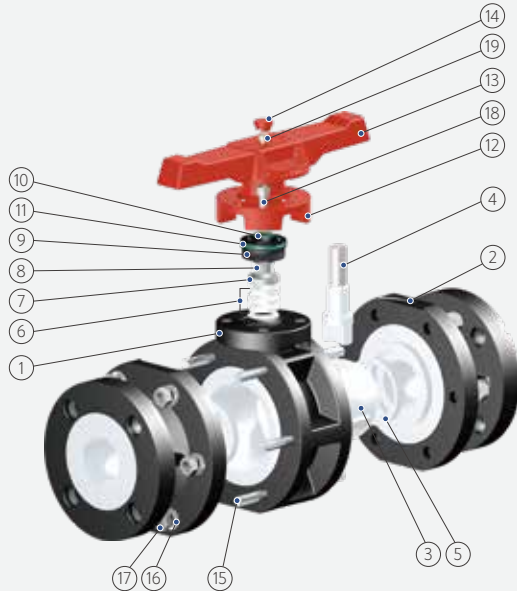
● Pressure – Temperature Chart

| Series CBA2

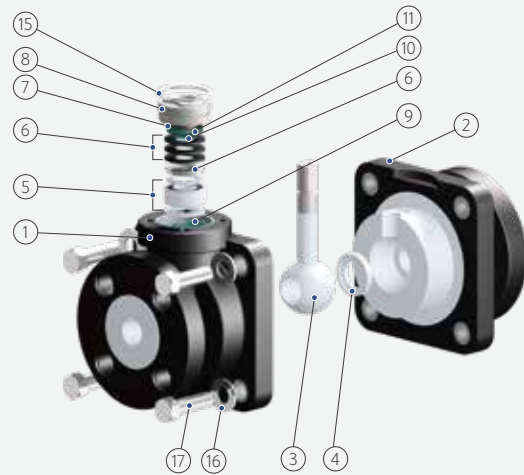


Structure & Specification

Series CBA1



Series CBA2



Lined Composite Plastic Ball Valve Series CBA1

No.	Description	Material
1	Body	PPG / PPSG with PFA
2	Tail	PPG / PPSG with PFA
3	Ball	PFA
4	Stem	Stainless Steel with PFA
5	Ball seat	PTFE
6	Stem seal	PTFE
7	Support ring	Stainless Steel
8	Bearing	Stainless Steel
9	Gland	PPSG
10	Inner O-ring	FKM
11	Outer O-ring	FKM
12*	Lever lock plate	PPG
13*	Lever	PPG
14*	Lever cap	PPG
15	Stud bolt	Stainless Steel
16	Flat washer	Stainless Steel
17	Nut	Stainless Steel
18*	Soc.head cap screw	Stainless Steel
19*	Soc.head cap screw	Stainless Steel

Lined Composite Plastic Ball Valve Series CBA2

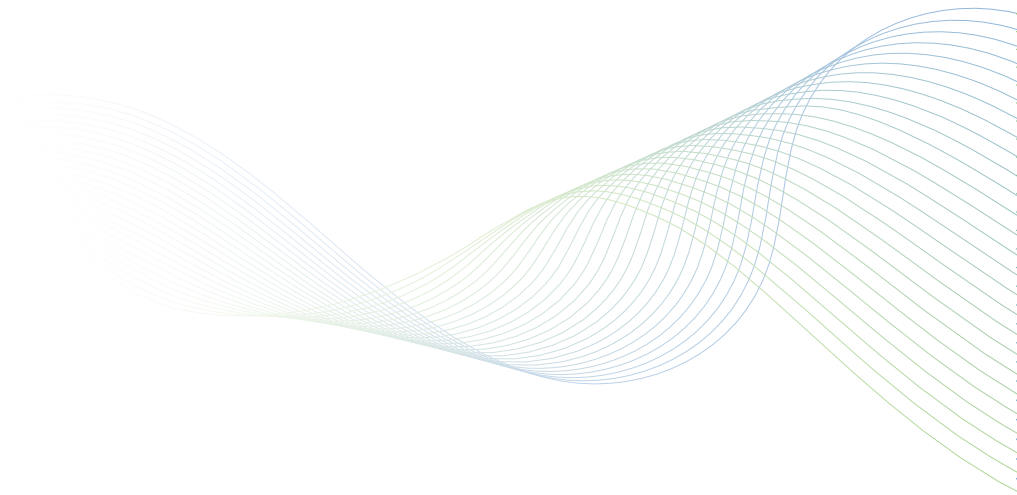
No.	Description	Material
1	Body	PPG / PPSG with PFA
2	Tail	PPG / PPSG with PFA
3	Ball/Stem unit	Stainless Steel with PFA
4	Ball seat	PTFE
5	Stem seal	PTFE
6	Belleville spring	Spring Steel
7	Bearing	Stainless Steel
8	Gland	Stainless Steel
9	Outer O-ring	FKM
10	Inner O-ring (a)	FKM
11	Inner O-ring (b)	FKM
12*	Lever lock plate	PPG
13*	Lever	PPG
14*	Lever cap	PPG
15	C-ring	Stainless Steel
16	Flat washer	Stainless Steel
17	Hex bolt	Stainless Steel
18*	Soc.head cap screw	Stainless Steel
19*	Soc.head cap screw	Stainless Steel

* Series CBA1 / CBA2 Common part



High Performance and Creative Technology Company

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