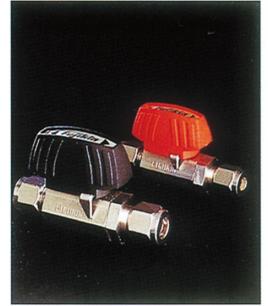




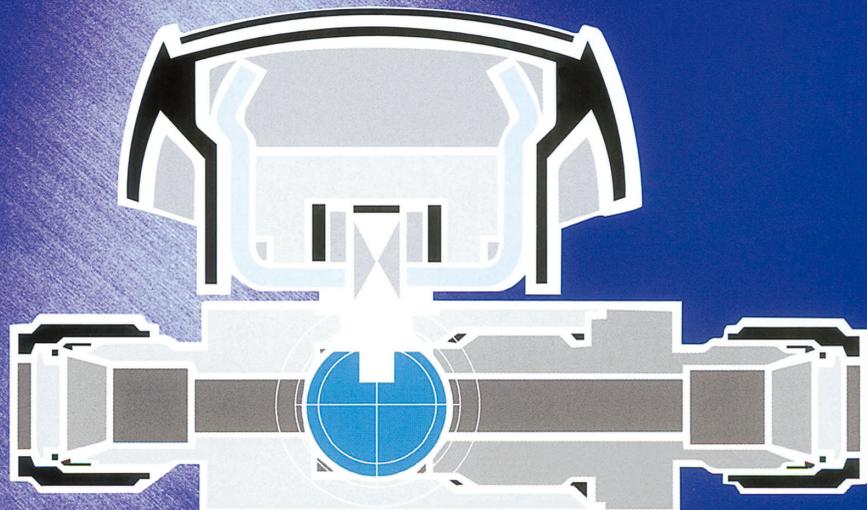
# 3.92 MPa Mini Ball Valves

Handles in 4 Colors



## Ball Valves

- Compact & Lightweight
- 3.92 MPa



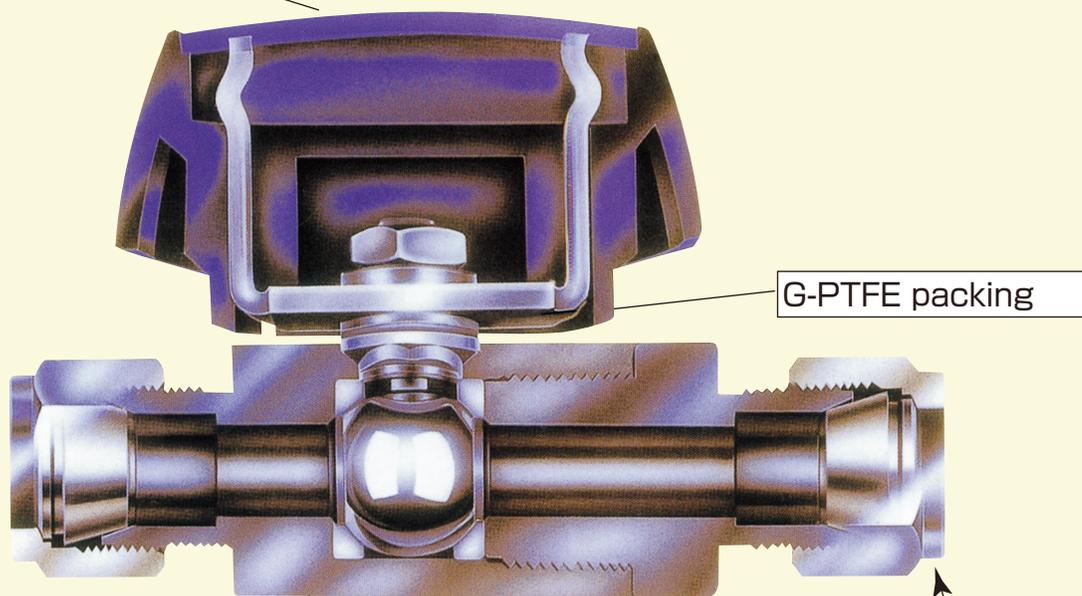
**Fujikin** Incorporated

We welcome customer feedback for all of our products and services

# POWERFULL SERIES Mini Ball Valves

*3.92 MPa SUS316 Mini Ball Valves with Color-coded Handles*

Handle is easy to install and operate



G-PTFE packing

Compact design with integrated end connection

Size stamped on end connection

Size stamped on body

The valve can be opened and closed even if the outer plastic handle is lost or removed.

## Handle Color Options

Standard color: black

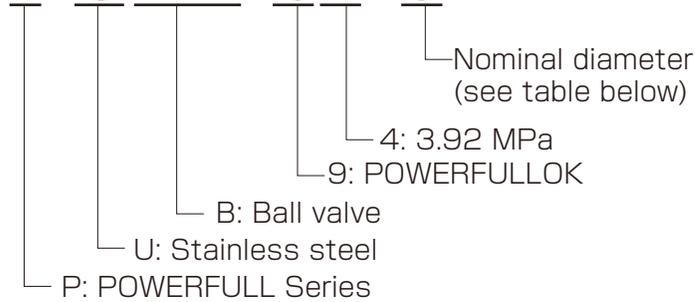


Color-code valve handles to facilitate the identification of fluids or lines.

# Part Number Designation

Please use the part number designations below when placing an order or making an inquiry.

## PUBV-94-6



Nominal Diameter (tube diameter)

	Port size in mm	Port size in fractional inches
Nominal diameter (tube diameter)	6 = 6mm	6.35 = 6.35mm (1/4")
	8 = 8mm	9.52 = 9.52mm (3/8")
	10 = 10mm	12.7 = 12.7mm (1/2")
	12 = 12mm	

1



2



3



4



5



6



7



8



9



13

11

12

11

10



## Materials

No.	Part	Material	
1	Handle	PBT	
2	Nut	SUS 304	
3	Spring washer	SUS 304	
4	Handle stay	SUS 430	
5	Conical spring	SUS 304	
*	6	Gland washer	SUS 304
*	7	Packing	G-PTFE
*	8	Stem	SUS 316
*	9	Packing	G-PTFE
*	10	End screw	SUS 316
*	11	Seat	G-PTFE
*	12	Ball	SUS 316
*	13	Body	SUS 316

\* Wetted part

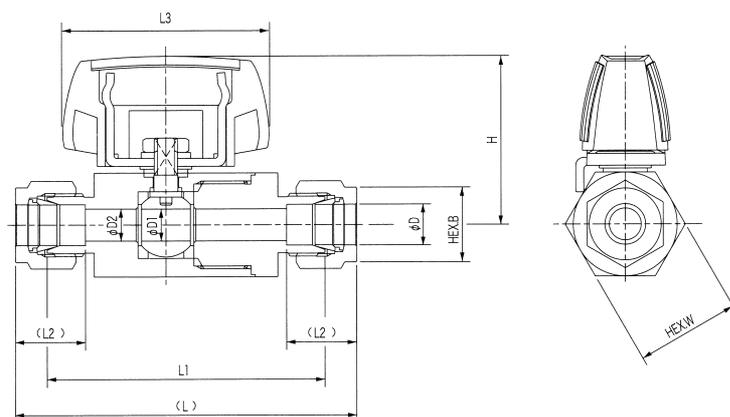
You can download the latest catalogue from <http://www.fujikin.co.jp/go/c70400e>



Oil-free product lines for ultra-pure processes are available. Contact Fujikin for more information.

# Stainless Steel 3.92 MPa POWERFULL SERIES Ball Valves

## POWERFULLOK



### ●Dimensions (mm)

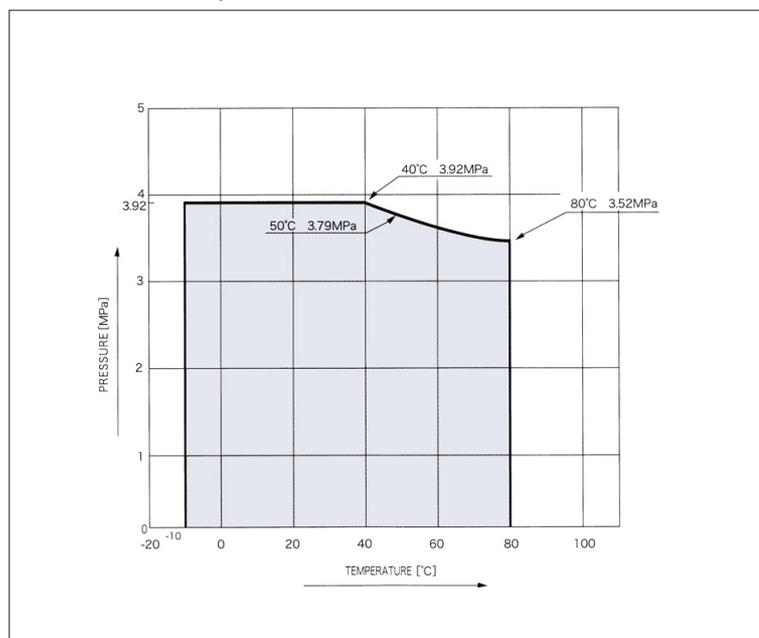
Nominal dia D	Orifice dia D 1	Hole dia D 2	Face-to-face dimension		Connecting thread L 2	Height H	Handle length L 3	Width across flats, nut B	Width across flats, body W	Cv value	Part number
			L	L 1							
6	5	4.8	72.8	58	15.2	33	41	14	17	1.4	PUBV-94-6
8	7.5	6.4	77	62	16.2	40	50	16	21	3.5	PUBV-94-8
10	9	7.9	84.8	69.6	17.2	42	50	19	26	5	PUBV-94-10
12	9	9.5	90.2	70	22.8	42	50	22	26	5	PUBV-94-12

### ●Dimensions (fractional inches expressed as mm)

Nominal dia D	Orifice dia D 1	Hole dia D 2	Face-to-face dimension		Connecting thread L 2	Height H	Handle length L 3	Width across flats, nut B	Width across flats, body W	Cv value	Part number
			L	L 1							
6.35	5	4.8	72.8	58	15.2	33	41	14	17	1.4	PUBV-94-6.35
9.52	7.5	7.1	77.8	63	16.8	40	50	17	21	3.5	PUBV-94-9.52
12.7	9	10.4	90.2	70	22.8	42	50	22	26	5	PUBV-94-12.7

Individual drawings may be downloaded from the CAD Data Service section of the Fujikin website. [https://www.fujikin.co.jp/cad\\_se/](https://www.fujikin.co.jp/cad_se/)

### ●Pressure-Temperature Curve



### ●Materials

Part	Material
Body	SUS 316
Stem	SUS 316
Packing	G-PTFE
Handle	PBT

### ●Specifications

Max. Operating Pressure (MPa)	Fluid Temperature Range (°C)
3.92	-10~80

Note: If you require a higher maximum operating pressure, please refer to the Powerful Series Panel Mounting Ball Valves (part number: PUBV-95) brochure. These valves can withstand up to 4.90 MPa of pressure.

# Stainless Steel 3.92 MPa POWERFULL SERIES Ball Valves Installation Guide

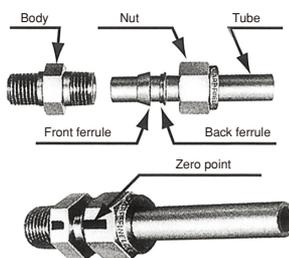
## 1-1 Before Installation

1. Use an austenitic stainless steel tube with a seamless bright anneal finish, a hardness of Hv200 or less, and a tolerance within  $\pm 0.1\text{mm}$  of the tube OD.
2. Please refer to the Tube Selection Guide from the POWERFULLOK brochure for recommended tube thicknesses.
3. There should be no visible scratches 30mm from either end of the

tube. Remove any foreign matter.

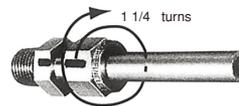
4. Before assembling the fittings, cut the tubes to the required length.
5. Use a tube cutter to cut the tube. If it is necessary to use a different method, be sure to cut the tube at a right angle, and then remove burrs carefully from the outer circumference by filing at a  $45^\circ$  angle to the centerline.

## 1-2 Assembly



Ensure that the parts are installed in the order shown in the picture (left).

Insert the tube completely until it makes contact with the body. Hand-tighten the nut until it cannot be tightened further. After manually tightening the nut, mark both the body and the nut. This point is the zero point.



With a wrench, tighten the nut  $1/4$  turns from the zero point. Assembly is then complete.

### Smaller Fittings and Plugs

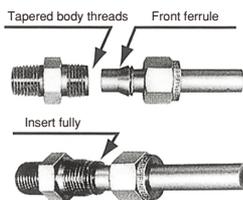
1. Fittings with nominal diameters of 4mm, 3.2mm ( $1/8''$  OD) or smaller: First tighten the nuts manually, and then use a wrench to tighten them a further  $3/4$  turn only.
2. Plug unions (product number: PUWJP): First tighten the nuts manually, and then use a wrench to tighten them a further  $1/4$  turn only, regardless of size.

## 1-3 Preparations: Before Operation

1. For tightening, use the appropriate wrench.
2. Before tightening the fitting, ensure that its body has been secured using a wrench. Never hold the nut in place while attempting to tighten the body.
3. Before adjusting the orientation (installation angle) of a fitting that has already been tightened into place, be sure to loosen the nut sufficiently.
4. Before tightening the fitting, ensure that the tube and the fitting are properly aligned.

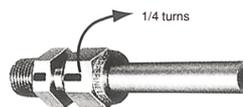
5. If the fitting (or any of its components) are dropped accidentally, ensure that the parts have no scratches or foreign matter on them before use.
6. For tightening tee or elbow fittings, use a tee wrench whenever possible.
7. If tightening the fitting is difficult, first attach the front and back ferrules to the tube. Then, insert the front ferrule into the body until it reaches the body threads, and manually tighten the nut.

## 1-4 Reassembly



Before reassembling the parts, ensure that there is no foreign matter on the body threads or the front ferrules

Insert the front ferrule until it reaches the body threads, and then manually tighten the nut.



With a wrench, tighten the nut approximately  $1/4$  turn. Assembly is then complete.

Note: After reassembly, the body and the nut should return to their original position, or be tightened slightly further.

## 1-5 Specialized Tools

1. Tee Wrench (pat. pending)



This tool is used to adjust tees and elbows when a conventional wrench would not provide adequate support. This tool can also be used to hold the fitting securely, making installation easier.

2. Special Wrench



This special fitting wrench has a slimmer head, is easier to apply force with, and reduces user fatigue.

3. Preswaging Tool



The Fujikin-designed preswaging tool allows ferrules to be tightened properly in situations in which tightening is difficult, such as the installation of piping in ceilings, under floors, or in complicated assemblies.

4. Tube Cutter (pat. pending)



This tube cutter assures a clean cut, and the special rollers leave virtually no marks on the tube. Fujikin recommends this tool for flareless fittings.

5. Adjustable Wrench



Fujikin recommends this wrench from Lobtex Co. Ltd., which has a slim head and a comfortable grip for easier installation.

## 1-6 Oil-free Ultra-pure Compression Fittings

If you require oil-free ultra-pure compression fittings, use Fujikin's FINELOK fittings. For more information on these fittings, please refer to the FINELOK brochure.



Note: Materials and dimensions are subject to change without notice.

You can download the latest catalogue from <http://www.fujikin.co.jp/go/c70400e>

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**Fujikin® Carp® Group**



The Year 2005  
The 1st Monozukuri (manufacturing)  
Nippon Grand Awards  
: Excellence Prize

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