True Union "Z-Ball" Valves for Sodium Hypochlorite Applications

1/2″ to 6″ - PVC, Corzan® CPVC, PPL

Specially drilled "Z-Ball" design for Sodium Hypochlorite service keeps inner valve surfaces constantly vented to eliminate gas accumulation, and wetted to prevent crystallization of salts which can "freeze" the valve and make it inoperable.

Ball Valves and Sodium Hypochlorite

Sodium hypochlorite is inherently an unstable compound. As it decomposes, the resulting crystalline salts and oxygen gas can cause operational and safety issues with conventional ball valves.

Hayward addresses the issues of sodium hypochlorite applications with the "Z-Ball" design true union ball valve. The "Z-Ball" Valve effectively vents the gases while keeping inner valve surfaces constantly wetted, ensuring problem free use. This effectively eliminates the conditions required for gas accumulation and salt crystallization.

The new "Z-Ball" valves are readily identifiable by the black handle and special label identifying the direction of liquid flow. The hole is always positioned on the upstream side of the ball.

Rugged, Heavy Wall Plastic Construction

Stands up to the most aggressive sodium hypochlorite applications. Hayward True Union "Z-Ball" Valves can take the day-to-day abuse of industrial service and continue to function.

True Union Design

This makes these valves very easy to maintain by allowing for easy removal from a piping system without breaking down piping connections. Just unscrew the two assembly nuts and lift the valve body from the line.

Advanced Design Features

Hayward True Union "Z-Ball" Valves are superior performers. A fine-pitch seal retainer thread allows accurate compensation for seat wear. Reversible seats make it easy to get a damaged valve back in service. Should the seats become damaged they need only to be removed, turned over, and reinstalled to put the valve back on line. These valves feature a double O-ring stem seal for twice the leakage protection of valves with only a single stem seal.

Solid Actuator Mounting Design

For rock-solid actuator mounting, the valve incorporates a unique design that allows the actuator mounting bracket to mount directly to the valve without the need for glued or clamped-on mounting pads. This assures proper alignment of the actuator to the valve without creating any damaging side loads to cause premature stem seal failure. With this design, the valve can easily be adapted to manual operation – should the need ever arise.

Never a Problem with Corrosion

Because of the valves' all plastic construction, they will never rust or corrode – and they can survive corrosive environments without the need for painting or expensive epoxy coating.

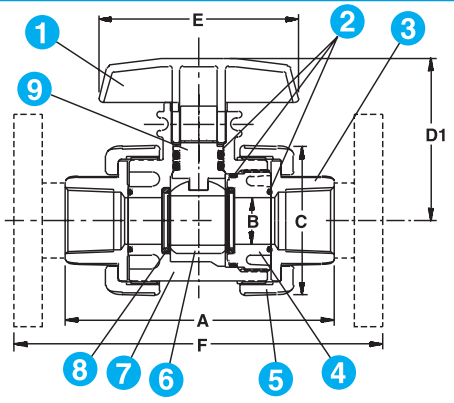
Features

- Full Port Design
- Reversible PTFE Seats
- Easy Maintenance
- FPM Seals
- Easily Automated
- Double O-Ring Stem Seals
- Adjustable Seat Retainer

Options

- Stem Extensions
- Lockouts
- Spring Return Handle
- Pneumatic Actuators
- Electric Actuators
- 2″ Square Operating Nuts

Technical Information

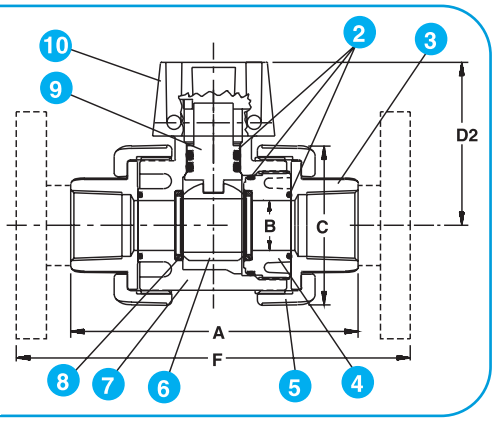


Parts List

True Union ″Z-Ball″ Valve

1. Handle
2. O-ring seals
3. End connector
4. Seal retainer
5. Union nut
6. Drilled ″Z-Ball″
7. Body
8. Teflon® seat*
9. Stem
10. Actuator

* O-Ring Backed Seats on 3″ & 4″ Sizes



Dimensions - Inches / Millimeters

Size	A	B	C	D1	D2	F	Weight (lb / kg) Soc / Thd	Weight (lb / kg) Flanged
1/4	4.63 / 117	0.37 / 13	2.25 / 57	3.00 / 76	2.63 / 67	N/A	0.75 / 0.34	N/A
3/8	4.63 / 117	0.50 / 13	2.25 / 57	3.00 / 76	2.63 / 67	N/A	0.75 / 0.34	N/A
1/2 / 20*	4.63 / 117	0.50 / 13	2.25 / 57	3.00 / 76	2.63 / 67	6.75 / 171	0.75 / 0.34	1.00 / 0.45
3/4 / 25*	4.75 / 120	0.75 / 19	2.63 / 67	3.02 / 77	2.81 / 72	7.13 / 181	0.75 / 0.34	1.00 / 0.45
1 / 32*	5.25 / 133	1.00 / 25	3.00 / 76	3.32 / 84	3.05 / 77	8.00 / 203	1.15 / 0.52	2.15 / 0.98
1-1/4 / 40*	6.30 / 160	1.25 / 32	4.00 / 102	3.92/ 100	3.48 / 88	9.19 / 233	2.15 / 0.98	3.50 / 1.6
1-1/2 / 50*	6.75 / 171	1.50 / 38	4.00 / 102	3.92/ 100	3.48 / 88	9.88 / 249	2.15 / 0.98	3.75 / 1.7
2 / 63*	8.00 / 203	2.00 / 51	4.75 / 121	4.43/ 113	4.00 / 101	11.4 / 289	3.80 / 1.7	6.30 / 2.9
2-1/2	10.68 / 271	3.00 / 76	6.40 / 163	5.50 / 140	5.50 / 140	14.38 / 365	10.50 / 4.8	14.50 / 6.6
3 / 90*	10.56 / 268	3.00 / 76	6.40 / 163	5.50 / 140	5.50 / 140	14.44 / 367	10.50 / 4.8	14.50 / 6.6
4 / 110*	12.30 / 329	3.81 / 97	8.56 / 217	6.50 / 165	6.50 / 165	17.13 / 435	17.60 / 8.0	24.80 / 11.3
6	N/A	3.81 / 97	8.56 / 217	6.50 / 165	6.50 / 165	19.19 / 487	N/A	30.75 / 14.0

* **Metric End Connections Available in:** BSP – Straight Thread, BSP TR – Tapered Thread and Metric Socket

Selection Chart

Size	Material	End. Conn	Seals	Pressure Rating
1/4″ - 3/8″	PVC	Socket or Threaded	FPM ONLY	250 PSI @70°F Non-Shock
1/2″- 4″	PVC, CPVC, or PPL	Socket, Threaded, or Flanged		
6″*	PVC or CPVC	Flanged		

* 4″ valve venturied to 6″ 4″ and 6″ valves 150 PSI @70°F Non-Shock

Cv Factors

Size	Factor	Size	Factor
1/4″	1.0	1-1/2″	90
3/8″	2.8	2″	150
1/2″	8.0	2-1/2″	340
3/4″	16.0	3″	490
1″	29.0	4″	600
1-1/4″	75.0	6″	550

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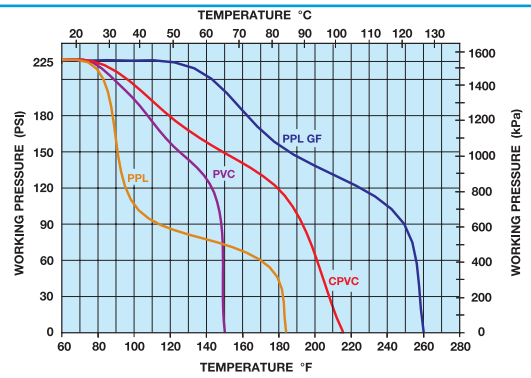
Operating Temperature/Pressure



Pressure Loss Calculation Formula

$$\Delta P = \left[\frac{Q}{Cv}\right]^2$$

ΔP = Pressure Drop
Q = Flow in GPM
Cv = Flow Coefficient