

ONE Trusted
SOURCE
COMPONENTS • MANUFACTURING
• ASSEMBLY • TESTING



Process
Cooling Water



Valex



PCW
Ball Valves



Process Cooling Water (PCW) Ball Valves



PCW Applications

- Process Cooling Water (PCW), City Water, Potable Water

Product Description

- Size Range: NPS 1/2 to NPS 6
- Temperature Range: -20°F to 350°F (-29°C to 177°C)
- Pressure Rating:

NPS 1/2 – NPS 1-1/2:	1000 PSIG	(69 BARG)
NPS 2:	800 PSIG	(55 BARG)
NPS 3:	600 PSIG	(41 BARG)
NPS 4:	500 PSIG	(41 BARG)
NPS 5 – NPS 6:	400 PSIG	(34 BARG)
NPS 8:	280 PSIG	(21 BARG)

- Oil free stainless steel construction
- Available in various integrated tee valve assemblies

Features & Benefits

- High flow full-port design
- High cycle-life performance
- Floating ball for positive shut-off
- 3-Piece construction for ease of maintenance
- Locking handle for lock-out/tag-out applications
- 100% Leak tested and inspected
- Each valve includes a Certificate-of-Compliance to Valex specification SP-9236

Materials of Construction

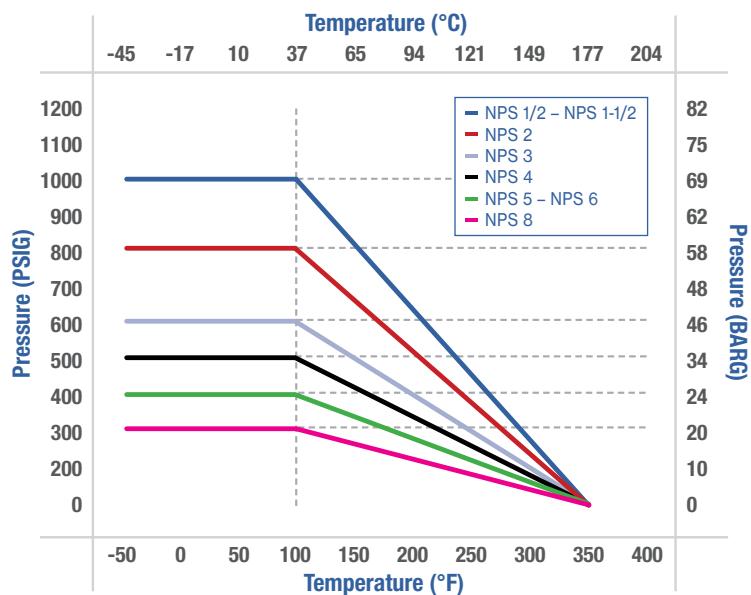
PCW
Ball Valve 

Item	Qty	Part	Material
A	1	BODY	CF8M SS
B	1	STEM PACKING	PTFE
C	1	STEM NUT	304/304L SS
D	1	HANDLE WASHER	300 SERIES SS
E	1	HANDLE NUT	300 SERIES SS
F	1	HANDLE	300 SERIES SS
G	1	HANDLE COVER	VINYL POLYMER
H	1	THRUST WASHER	PTFE
I	1	STEM	304/304L SS
J	2	SEAT	PTFE/RPTFE
K	2	BODY GASKET	PTFE
L	1	BALL	CF3M/CF8M/316/316L SS
M	2	END CAP FLANGE	CF3M/CF8M SS
N	4	END CAP FLANGE HARDWARE	300 SERIES SS

SS = Stainless Steel



Pressure Temperature Rating



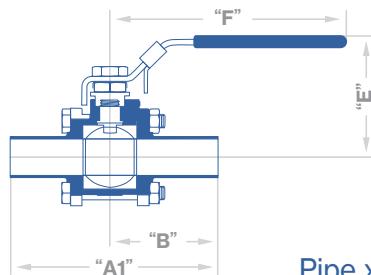
Flow Coefficient

Valve Size	Ball Orifice	Cv ¹
NPS 1/2	0.591"	37.0
NPS 3/4	0.787"	68.5
NPS 1	0.984"	110
NPS 1-1/4	1.260"	186
NPS 1-1/2	1.496"	269
NPS 2	1.969"	481
NPS 2-1/2	2.559"	839
NPS 3	3.150"	1,301
NPS 4	3.937"	2,085
NPS 5	4.921"	3,338
NPS 6	5.906"	4,902

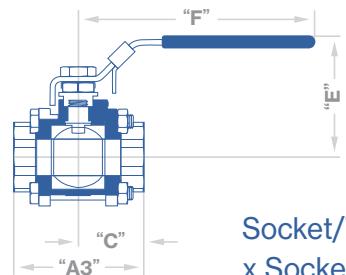
1. Flow coefficient data calculated using methods described in Crane Technical Paper TP-410.



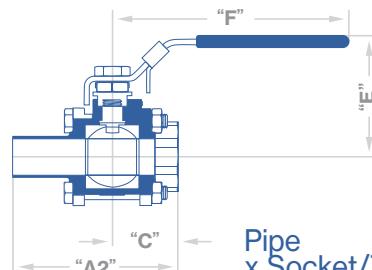
Dimensions



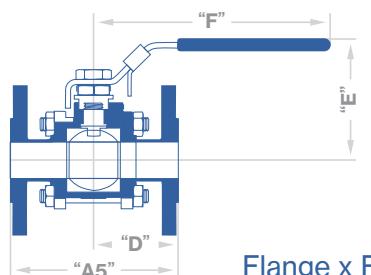
Pipe x Pipe



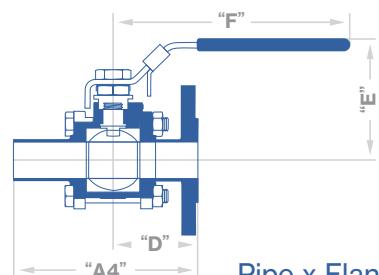
Socket/Thread
x Socket/Thread



Pipe
x Socket/Thread



Flange x Flange



Pipe x Flange

Dimensions in Millimeters*

Size	"A1"	"A2"	"A3"	"A4"	"A5"	"B"	"C"	"D"	"E"	"F"
NPS 1/2	135.4	105.2	75		67.7	37.5		59	105	
NPS 3/4	135	107.5	80	126	117	67.5	40	58.5	65	133
NPS 1	152	121	90	139.5	127	76	45	63.5	74	159
NPS 1-1/4	157	133.5	110		78.5	55		78	159	
NPS 1-1/2	190	155	120	194	198	95	60	99	91	198
NPS 2	208	172	140	218.5	229	104	70	114.5	99	198
NPS 2-1/2	254	219.5	185		127	92.5		137	260	
NPS 3	280	242.5	205	263.7	247.4	140	102.5	123.7	149	260
NPS 4	306	273	240		153	120		186	288	
NPS 5	320				160			198	325-650	
NPS 6	376.4				188.2			N/A Gear Operator		

* Dimensions are approximate, subject to change, and may vary from valve to valve. Please check the Valex website for latest dimensions.

Standard Configurations

Straight Valve



Single
Horizontal Cross



Double
Horizontal Cross



Double
Single Sided



Double
Vertical Tee



Double
Horizontal Tee



Custom Spools

Manifold & Assemblies

Valex can build specialty PCW valve assemblies that reduce field welds and installation time.

From integrated tee valve sub-assemblies, all the way to 24 foot long PCW manifolds, Valex is your one trusted source for all of your PCW needs.

Contact your local Valex representative for more details.





Ordering Information

P - **S | H | C 7 7 L | L 7 2 F | X - B**

P

Valve Series

P = Process Cooling Water (PCW)

S | H | C

Assembly Pattern

STR = Straight
DHC = Double Horizontal Cross
SHC = Single Horizontal Cross
DSS = Double Single Sided
DVT = Double Vertical Tee
DHT = Double Horizontal Tee

7 | 7

Main Line Size

NPS Pipe

70 = DN 15 Pipe (NPS 1/2)
71 = DN 20 Pipe (NPS 3/4)
72 = DN 25 Pipe (NPS 1)
73 = DN 32 Pipe (NPS 1-1/4)
74 = DN 40 Pipe (NPS 1-1/2)
75 = DN 50 Pipe (NPS 2)
76 = DN 65 Pipe (NPS 2-1/2)
77 = DN 80 Pipe (NPS 3)
78 = DN 90 Pipe (NPS 3-1/2)
79 = DN 100 Pipe (NPS 4)
80 = DN 125 Pipe (NPS 5)
81 = DN 150 Pipe (NPS 6)
82 = DN 200 Pipe (NPS 8)

ASTM Tube

08 = 1/2"
12 = 3/4"
16 = 1"
24 = 1-1/2"
32 = 2"
40 = 2-1/2"
48 = 3"
64 = 4"
96 = 6"

L | L

Main Line End Connection

LL = NPS Sch 10 Pipe
w/ Square Ends, Inlet & Outlet
BB = NPS Sch 10 Pipe
w/ Beveled Ends, Inlet & Outlet
MM = Tube Butt weld
Inlet & Outlet
CC = Compression Fitting
Inlet & Outlet
FF = Class 150 Flange
Inlet & Outlet
SS = NPS Pipe Socket Weld
Inlet & Outlet
TT = FNPT Female Pipe Thread
Inlet & Outlet
ST = NPS Pipe Socket Weld Inlet,
FNPT Female Pipe Thread Outlet
TS = FNPT Pipe Thread Inlet,
NPS Pipe Socket Weld Outlet
LF = NPS Sch 10 Pipe Inlet
w/ Square End,
Class 150 Flange Outlet
LT = NPS Sch 10 Pipe Inlet
w/ Square End,
FNPT Female Pipe Thread Outlet
LS = NPS Sch 10 Pipe
Inlet w/ Square End,
NPS Pipe Socket Weld Outlet
LC = NPS Sch 10 Pipe Inlet,
Compression Fitting Outlet
MF = Tube Butt weld Inlet,
Class 150 Flange Outlet
MT = Tube Butt weld Inlet,
NPT Female Pipe Thread Outlet
MS = Tube Butt weld Inlet,
NPS Pipe Socket Weld Outlet
MC = Tube Butt weld Inlet,
Compression Fitting Outlet

7 | 2

Branch Valve Size

NPS Pipe

XX = No Branch Valve(s)
70 = DN 15 Pipe (NPS 1/2)
71 = DN 20 Pipe (NPS 3/4)
72 = DN 25 Pipe (NPS 1)
73 = DN 32 Pipe (NPS 1-1/4)
74 = DN 40 Pipe (NPS 1-1/2)
75 = DN 50 Pipe (NPS 2)
76 = DN 65 Pipe (NPS 2-1/2)
77 = DN 80 Pipe (NPS 3)
78 = DN 90 Pipe (NPS 3-1/2)
79 = DN 100 Pipe (NPS 4)
80 = DN 125 Pipe (NPS 5)
81 = DN 150 Pipe (NPS 6)

ASTM Tube

08 = 1/2"
12 = 3/4"
16 = 1"
24 = 1-1/2"
32 = 2"
40 = 2-1/2"
48 = 3"
64 = 4"
96 = 6"

F | X

Connection On Branch Valve(s)

XX = No Branch Valve
LX = NPS Sch 10 Pipe, Square End
MX = Tube Butt weld
FX = Class 150 Flange
TX = NPT Female Pipe Thread
SX = NPT Pipe Socket Weld
PX = Capped Compression Fitting

B

Handle Sleeve Color

0 = N/A
B = Blue
1 = Oval Handle Blue

Not all possible part number combinations are available. Please contact Valex for availability.



Neither ozone-depleting nor mercury-bearing compounds
are used during Valex processing or testing of any product.



Benefit From World Leadership

We are your trusted source for high-purity ball valves, PCW ball valves, instrumentation ball valves, headers, manifolds, pipe, tube, fittings and more. For more information, please visit our website or contact your Valex representative. Benefit from world leadership, and benefit from Valex quality.



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