

# Inserta Products, Inc.

## BALL VALVES FLANGE TYPE 2 PORT

**INSERTA® Flange type, 2 port, Ball Valves**, provide a simple means to install a ball valve in a circuit that uses any of the offered 4-Bolt flange mounting patterns. These ball valves and other **INSERTA®** products can be installed on or between other components such as pumps, motors, actuators, filters, valves and manifolds by simply and effectively bolting them together. These assemblies eliminate threaded pipe connections, and the adjoining components are face sealed with the preferred leak resistant O-ring.

**INSERTA® Flange type, 2 port, Ball Valves**, have two ball seals, one for each port, i.e. ports 0 and 1. The top of the stem has a slot that indicates the direction of the hole that goes through the two port ball valve element. When the slot is in line with ports 0 and 1 the valve is open and permits flow between these two ports. When the stem is turned 90° the slot indicates that these two ports do not communicate and the valve is closed. When the valve is in the closed position the port that sees the higher pressure pushes the ball against the ball seal of the opposing port side. In each case it is the seal on the side of the lower pressure port that creates the ball's directional control valve seal.

An offset steel handle is standard, while offset aluminum and straight aluminum handles are available as options. An offset handle is required for use with a lockable stop plate. A universal lockable stop plate is indicated if a flange or rotational adapter is to be mounted directly to Face 1 of the ball valve. Valve handles are packaged separately for mounting by customer. Standard ball valve handle mounting is with port 0 open to port 1 when the handle is turned counterclockwise and the ports are closed when the handle is turned clockwise.

The **CODE 61 4-Bolt** Valves can be mounted and retained in systems that employ **UNIFIED CODE U61 4** or **2-Bolt** Flange Ports and/or Flange Retainers. When used with 2-Bolt systems either of the 2 diagonal bolt holes can be used for mounting and retaining the valve.

These ball valves are of steel construction with a hard chrome plated ball.



Patent No. 5,139,041

### ORDERING INFORMATION

**IBF - B - 6116 - N - D - \* - \***

**INSERTA®**  
**BALL VALVE**  
**FLANGE TYPE 2-PORT**

**DESIGN CODE**

**MOUNTING PATTERN**

U461 = UNIFIED CODE U61 4-BOLT  
61 = CODE 61  
62 = CODE 62

**NOMINAL SIZE**

02 = 1/8	12 = 3/4	32 = 2
04 = 1/4	16 = 1	40 = 2 1/2
06 = 3/8	20 = 1 1/4	48 = 3
08 = 1/2	24 = 1 1/2	

**HANDLE OPTION**

OS = OFFSET STEEL HANDLE (STANDARD)  
SS = STRAIGHT STEEL HANDLE  
SA = STRAIGHT ALUMINUM HANDLE  
OA = OFFSET ALUMINUM HANDLE

**STOP PLATE OPTION**

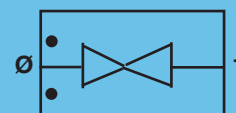
\* = STANDARD STOP PLATE  
L = LOCKABLE STOP PLATE  
U = UNIVERSAL LOCKABLE STOP PLATE

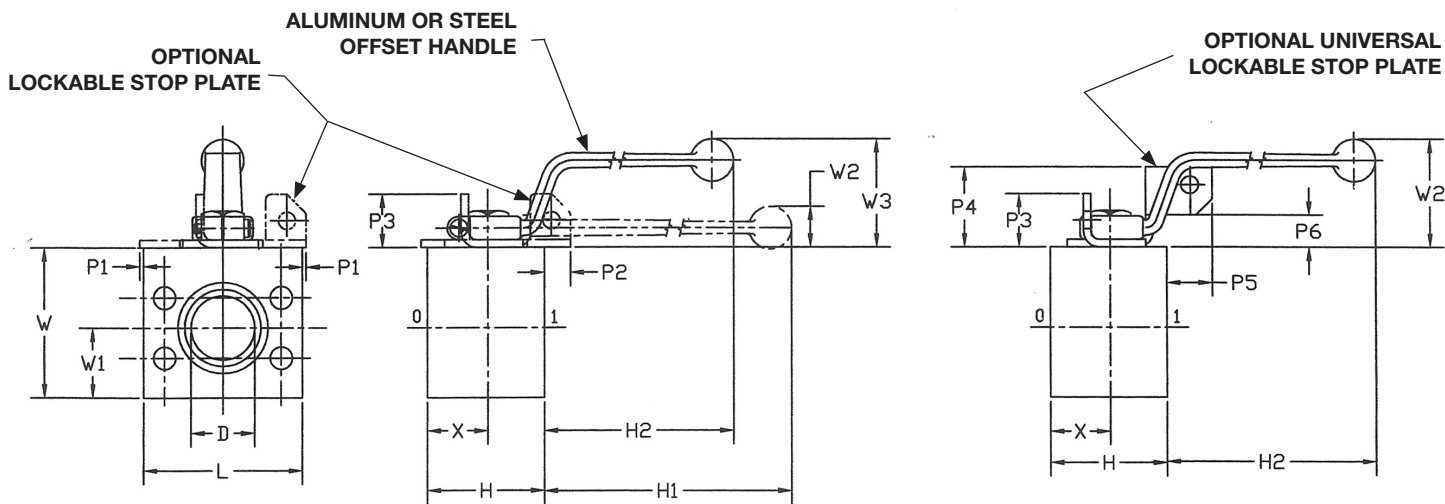
**SEAL COMPOUND (BALL)**  
D = DELRIN (STANDARD)

**SEAL COMPOUND (STEM & FACE SEAL)**  
N = BUNA N (STANDARD)  
V = VITON

**Inserta Products, Inc.**  
**Blue Bell, Pa. 19422**

**BALL VALVE**  
**FLANGE TYPE**  
**2 PORT**





## CODE 61 AND UNIFIED CODE U61 4 BOLT—2-PORT

PATTERN SIZE	NOMINAL SIZE	D	L	W	H	X	W1	H1	H2	W2	W3	P1	P2	P3	P4	P5	P6
U46102	1/8	.13	1.00	.86	.88	.50	.34	*.88	--	*.63	--	--	--	--	--	--	--
U46104	1/4	.25	1.25	1.10	1.13	.62	.50	*.75	--	*.69	--	--	--	--	--	--	--
U46106	3/8	.38	1.50	1.22	1.25	.70	.50	*.70	--	*.69	--	--	--	--	--	--	--
6108	1/2	.50	2.12	2.00	1.50	.80	1.00	5.22	4.43	.73	1.97	.69	1.05	1.12	--	--	--
6112	3/4	.75	2.50	2.25	2.00	.94	1.00	6.83	5.77	.92	2.50	.75	.94	1.25	1.82	0.97	0.75
6116	1	1.00	2.75	2.50	2.00	1.01	1.10	6.90	5.84	.92	2.50	.63	1.01	1.25	1.82	1.04	0.75
6120	1 1/4	1.00	3.00	2.75	2.25	1.13	1.35	6.77	5.71	.92	2.50	.50	.88	1.25	1.82	0.91	0.75
6124	1 1/2	1.25	3.75	3.50	2.75	1.42	1.63	8.17	7.31	.98	2.52	.13	.67	1.25	1.88	1.06	0.75
6132	2	1.50	4.00	4.00	3.50	1.75	1.88	7.76	6.90	.98	2.52	--	.25	1.25	1.88	0.64	0.75
6140	2 1/2	2.00	4.50	4.50	4.00	2.06	2.12	7.56	6.71	.98	2.52	--	.06	1.25	1.88	0.45	0.75
6148	3	2.25	5.25	5.00	4.50	2.17	2.44	7.18	6.32	.98	2.52	--	--	1.25	1.88	0.06	0.75

\*Handle is phenolic and without ball end (see photo on Page 4). Lockable stop plate option not available in these sizes.

## CODE 62—2-PORT

PATTERN SIZE	NOMINAL SIZE	D	L	W	H	X	W1	H1	H2	W2	W3	P1	P2	P3	P4	P5	P6
6208	1/2	.50	2.25	2.00	1.50	.80	1.00	5.22	4.43	.73	1.97	.63	1.05	1.12	--	--	--
6212	3/4	.75	2.75	2.50	2.00	.94	1.24	6.83	5.77	.92	2.50	.63	.94	1.25	1.82	0.97	0.75
6216	1	1.00	3.00	2.75	2.00	1.03	1.35	6.90	5.84	.92	2.50	.50	1.03	1.25	1.82	1.06	0.75
6220	1 1/4	1.00	3.50	2.75	2.25	1.13	1.35	6.77	5.71	.92	2.50	.25	.88	1.25	1.82	0.91	0.75
6224	1 1/2	1.25	4.25	3.75	2.75	1.42	1.88	8.17	7.31	.98	2.52	--	.67	1.25	1.88	1.06	0.75
6232	2	1.50	5.00	4.38	3.50	1.75	2.25	7.76	6.90	.98	2.52	--	.25	1.25	1.88	0.64	0.75
6240	2 1/2	2.00	6.00	4.75	4.00	2.06	2.38	7.56	6.71	.98	2.52	--	.06	1.25	1.88	0.45	0.75
6248	3	2.25	8.00	5.25	4.50	2.17	2.68	7.18	6.32	.98	2.52	--	--	1.25	1.88	0.06	0.75

Bolt Mounting Patterns conform to the **UNIFIED CODE U61 4-Bolt** standard and/or the **SAE Code 61 and Code 62 4-Bolt** standard J518 JUN93.

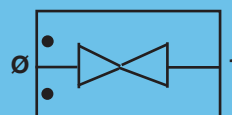
Temperature range is -22°F (-30°C) to 175°F (80°C).  
Operating medium is hydraulic fluid.

FACE Ø O-RING SIZES are:

02 = 206-006	08 = 018	20 = 125	40 = 232
04 = 011	12 = 022	24 = 131	48 = 237
06 = 014	16 = 026	32 = 228	

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**BALL VALVE  
FLANGE TYPE  
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**BALL VALVES**