

# Inserta Products, Inc.

## MODULAR CONNECTORS UNIFIED CODE U61 4-BOLT FLANGE TYPE

The **INSERTA® UNIFIED CODE U61 4-Bolt Modular Connectors**, are used in integrated hydraulic systems in place of welded and threaded pipe fittings. The **UNIFIED CODE U61 4-Bolt** pattern is the same as the CODE 61 but their ports and connecting flange footprints are significantly smaller. Socket Head Cap Screw Fasteners are used with the **INSERTA® UNIFIED CODE U61 4-Bolt Modular Connectors** and the **ADAFLANGE™ UNIFIED CODE U61 4-Bolt Adapters**. The **INSERTA® UNIFIED CODE U61 4-Bolt Modular Connector**, should be considered whenever the features of the larger CODE 61 and CODE 62 Modular Connectors are not required.

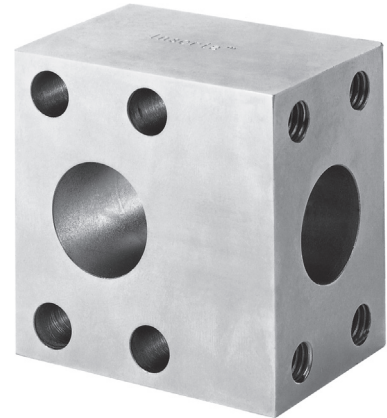
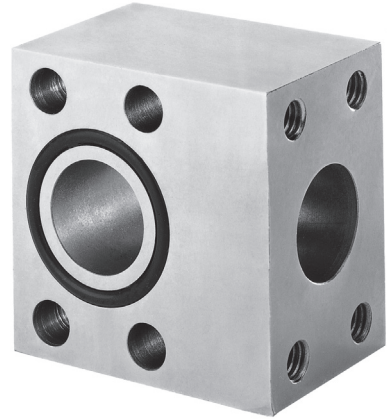
Design-A and Design-B Modular Connector elbows, run tees, branch tees, crosses, and port spacers are held in place by bolts (Socket Head Cap Screws) that extend from Face 1 to Face Ø in the 4-Bolt flange pattern.

Design-A incorporates the 4-Bolt clamp face groove and sealing O-ring on Face Ø and a plain face on Face 1. This design permits the stacking of various **INSERTA®** flange type modules together with a minimum of O-ring seals to virtually eliminate leaks associated with pipe threads. The task is further enhanced because using large wrenches with high torque normally needed to install pipe fittings is no longer required since the **INSERTA® Modular Connectors** bolt together.

Design-B eliminates the 4-Bolt clamp face groove and O-ring on Face Ø for those applications that require this geometry.

Design-C has port faces on all designated faces, and therefore are not held together by thru bolts (as in Designs A & B), but are port faces that other flange type components are fastened.

Standard **INSERTA® UNIFIED CODE U61 4-Bolt Modular Connectors**, have all flange ports of the same size, and are made of steel.



### ORDERING INFORMATION

**ICX - A - U461 24\* - N - G\* - T\* - ZN**

**INSERTA®**

**PRODUCT TYPE**

- CX = CROSS
- EL = ELBOW
- TR = TEE, RUN
- TB = TEE, BRANCH
- PS = PORT SPACER (A & B DESIGN)
- PN = PORT CONNECTOR (C DESIGN)

**MOUNTING DESIGN CODE**

- A = SEAL GROOVE & O-RING ON FACE Ø WITH 4-BOLT PATTERN THRU HOLES FROM FACE 1 TO FACE Ø
- B = PLAIN FACE Ø WITH 4-BOLT PATTERN THRU HOLES FROM FACE 1 TO FACE Ø
- C = 4-BOLT FLANGE PORTS ON ALL DESIGNATED FACES

**MOUNTING PATTERN**

U461 = UNIFIED CODE U61 4-BOLT

**NOMINAL SIZE**

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

**SURFACE FINISH**

- ZN = ZINC NICKEL
- OMIT = UNPLATED

**TEST PORT**

- T = #4 SAE (7/16-20) or P = 1/4 NPTF
- \* = 1, 3, 4 and 5 PORT FACE POSITIONS (See Page 20 for Selection Availability)

**GAUGE PORT**

- G = #6 SAE (9/16-18)
- \* = 1, 3, 4 and 5 PORT FACE POSITIONS (See Page 20 for Selection Availability)

**SEAL COMPOUND**

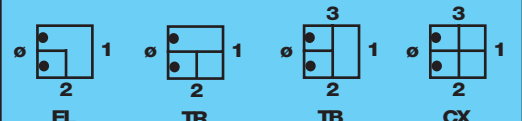
- (OMIT FOR B & C DESIGNS)
- N = BUNA N (STANDARD)
- V = VITON

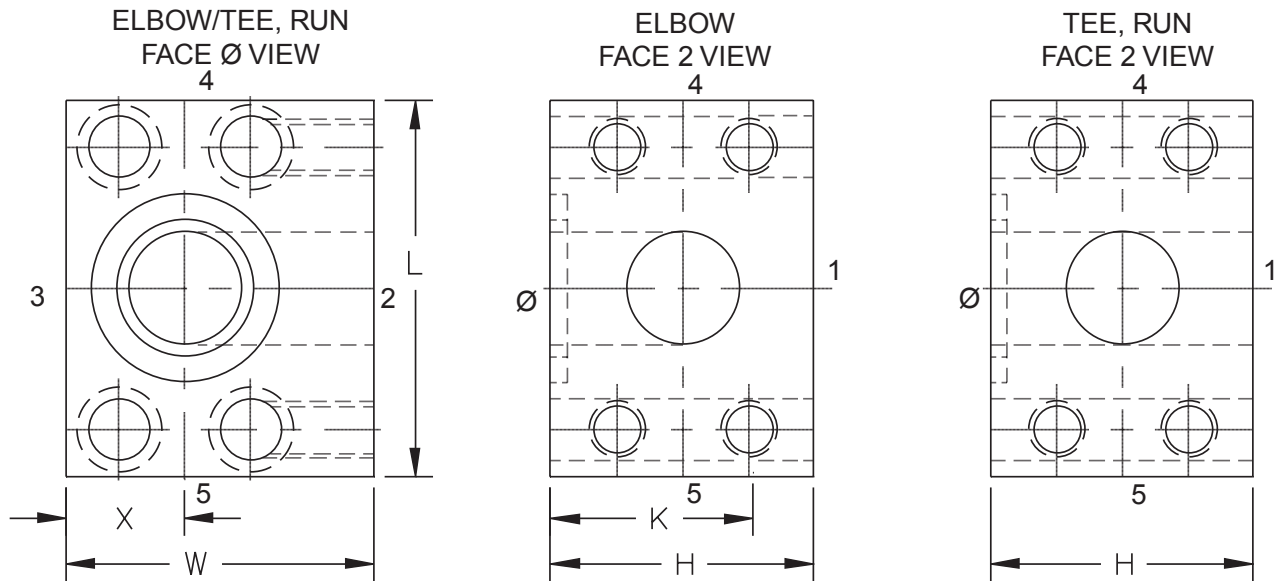
**PORT SPACER/CONNECTOR**

- 'h1' DIMENSION (1/4 INCREMENTS)
- 1 = 1/4 THICK
- 2 = 1/2 THICK
- OMIT = FOR NON 1/4 INCREMENT h1 SIZES, THAT IS THE PS = .12 AND THE PN = .62

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Blue Bell, Pa. 19422

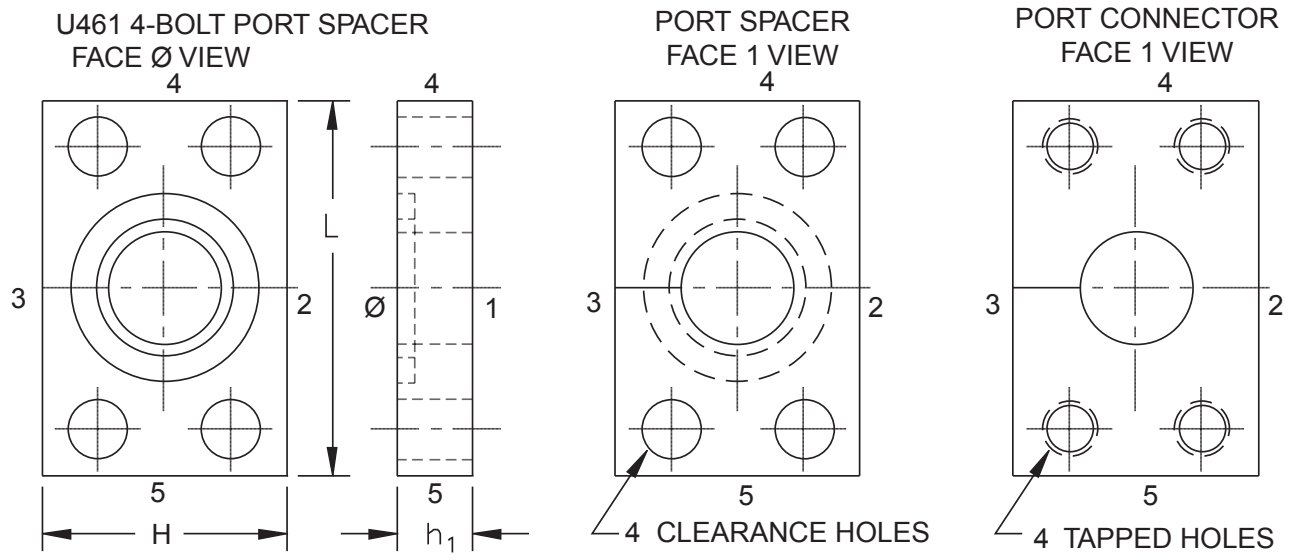
**MODULAR CONNECTORS  
CODE U61 4-BOLT  
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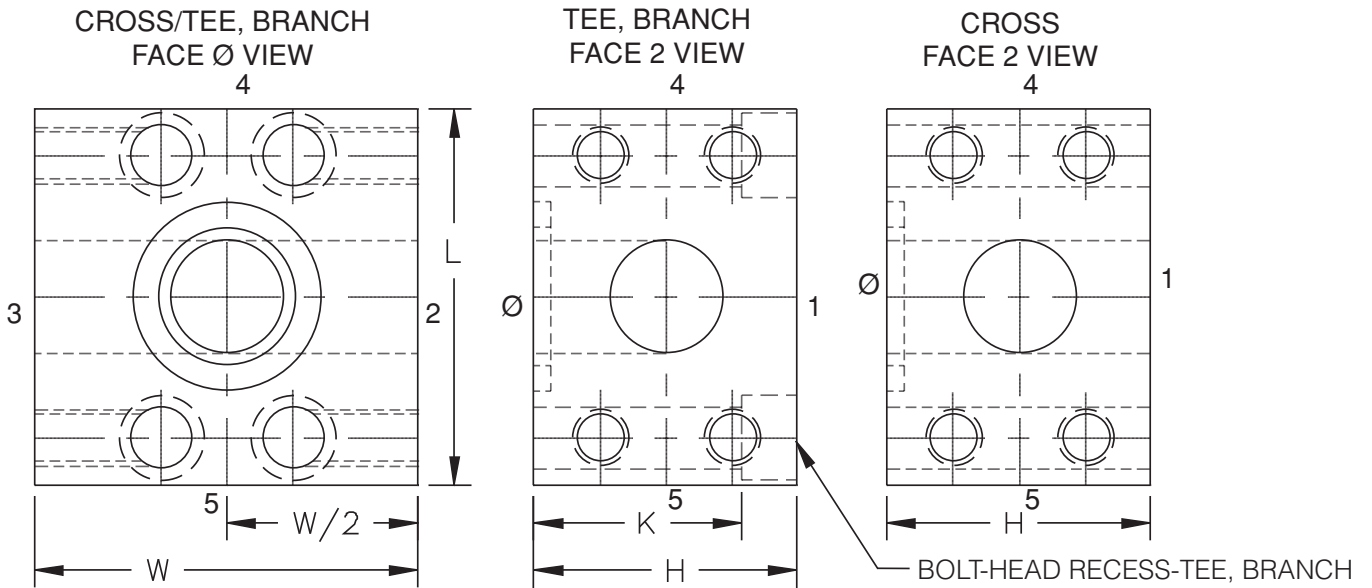


DESIGN A = AS SHOWN on drawings above and the title block schematics below.  
 DESIGN B = Eliminates seal groove and O-Ring from Face-Ø.  
 DESIGN C = UNIFIED CODE U61 4-Bolt Pattern on all designated faces. Tapped holes without O-Ring groove.  
 NOTE: Port Spacers have clearance holes thru. Port Connector has tapped holes thru.

NOMINAL PATTERN SIZE	H	L	W	X	K	h <sub>1</sub>		O-RING SIZE NO.
						PS	PN	
U46102	.62	1.00	1.00	.31	.37	.12/.25	.62	010
U46104	.75	1.25	1.12	.38	.50	.12/.25	.75	011
U46106	.87	1.50	1.38	.44	.62	.12/.25	1.00	014
U46108	1.31	2.12	2.00	.66	1.00	1.00	1.25	210
U46112	1.62	2.56	2.38	.81	1.12	1.00	1.50	214
U46116	1.87	2.75	2.50	.94	1.38	1.00	1.50	219
U46120	2.12	3.12	2.88	1.06	1.66	1.00	1.75	222
U46124	2.50	3.69	3.38	1.25	1.94	1.00	2.00	225
U46132	3.00	4.00	3.75	1.50	2.44	1.00	2.00	228



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DESIGN A = AS SHOWN on drawings above and the title block schematics below.  
 DESIGN B = Eliminates seal groove and O-Ring from Face-Ø.  
 DESIGN C = UNIFIED CODE U61 4-Bolt Pattern on all designated faces. Tapped holes without O-Ring groove.  
 NOTE: Tee Branch has Bolt-Head recesses on Face 1.

NOMINAL PATTERN SIZE	H	L	W	W/2	K	O-RING SIZE NO.	TEE, BRANCH CLAMP FACE BOLT KITS (4 BOLTS)
U46102	.62	1.00	1.25	.62	.37	010	IBK-SH4008-32x0.62
U46104	.75	1.25	1.50	.75	.50	011	IBK-SH4010-24x0.87
U46106	.87	1.50	2.00	1.00	.62	014	IBK-SH4025-20x1.00
U46108	1.31	2.12	2.50	1.25	1.00	210	IBK-SH4031-18x1.50
U46112	1.62	2.56	3.00	1.50	1.12	214	IBK-SH4038-16x1.75
U46116	1.87	2.75	3.12	1.56	1.38	219	IBK-SH4038-16x2.00
U46120	2.12	3.12	3.50	1.75	1.66	222	IBK-SH4044-14x2.50
U46124	2.50	3.69	4.00	2.00	1.94	225	IBK-SH4050-13x2.75
U46132	3.00	4.00	4.37	2.18	2.44	228	IBK-SH4050-13x3.25

### GAUGE and TEST PORT AVAILABILITY

The following optional Gauge and Test Ports can be included in the standard Code U61-4 Bolt Modular Connectors.

Gauge Ports, #6 SAE (9/16-18) are available on elbows and branch tees at position 1, on elbows and run tees at position 3, and on all modular connectors size 24 and larger at port face positions 4 and 5.

Test Ports, #4 SAE (7/16-20) and 1/4 NPTF are available on elbows and branch tees at position 1, on elbows and run tees at position 3 and on all modular connectors size 20 and larger at port face positions 4 and 5.

Note: Each port face is limited to one port, i.e. either a Test or Gauge Port.

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		 EL	 TR	 TB	 CX