UNIFIED U61 SERIES ADAPTERS AND FLANGE PORTS

The next generation of Hydraulic Flange Ports™

Adaconn® and Inserta® have introduced a unique four- and two-bolt flange system based on the Unified Code 61 Flange Port.

Patented one-piece four-bolt flange adapters made to this system utilize the same bolt pattern as SAE J518 Code 61. However, their one-piece construction allows them to be significantly narrower than standard four-bolt SAE Code 61 split flanges. Furthermore, given their one-piece design, Unified Code U61 flange adapters may be qualified in applications at pressures that exceed the Code 61 specification.

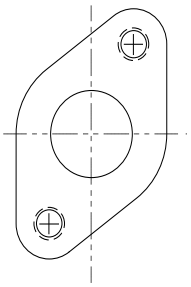
The relative narrowness of the Unified Code U61 flange adapters gives the component and manifold designer the ability to place adjacent four-bolt ports closely together. The potential for higher pressures also can result in an increased “power density” on a component or manifold surface.

The U61 series expands upon the SAE Code 61 series to include the 1/8”, 1/4”, and 3/8” flange port sizes, for a total range of 1/8” to 2”, inclusive.

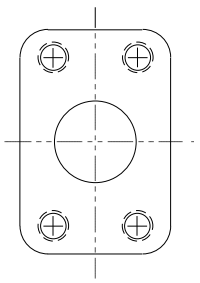
Unified Code 61 2-bolt adapters are also available. The distance between bolt centers of the U61 2-bolt pattern are similar to the diagonal bolt patterns of the SAE Code 61 4-bolt patterns.

The following diagram is a comparison of the relative footprints of comparably sized flange patterns:

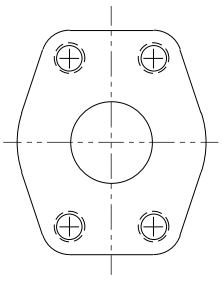
UNIFIED CODE U61 2-BOLT



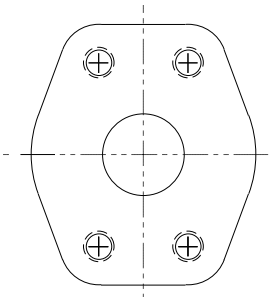
UNIFIED CODE U61 4-BOLT



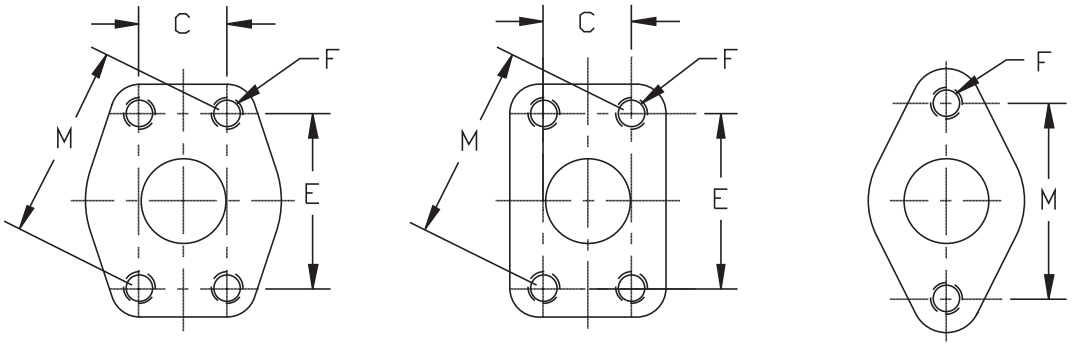
SAE J518 CODE 61 4-BOLT



SAE J518 CODE 62 4-BOLT



The diagram below shows a comparison of the bolt center dimensions of the SAE Code 61 4-bolt pattern with the Unified U61 4-bolt and 2-bolt patterns:



SAE
CODE 61 4-BOLT

UNIFIED
CODE U61 4-BOLT

UNIFIED
CODE U61 2-BOLT

Unified Code U61 2-bolt flange ports may be nested together even more closely than their 4-bolt U61 counterparts. When the U61 2-bolt ports are utilized with Adaconn® Unified Code U61 one-piece, two-bolt flange adapters, they may be qualified at working pressures similar to the maximum working pressures of comparably sized SAE Code 61 split flange applications. This gives the designer a means to minimize the size and weight of hydraulic components.

An advantage that Unified Code U61 flange ports offer over comparably sized O-ring threaded ports is that they can generally be used at higher pressures. Unified Code 61 flange ports can be manufactured using simple drill and tap operations with standard tooling, and do not require the use of costly port form tools and large thread taps or thread mills.

Modular fittings by Inserta® are also offered and are to be used with Adaconn® four- and two-bolt Unified Code U61 one-piece flange adapters. These unique modular fittings (Elbows, T-runs, Branch Tee's, Crosses, and Port Spacers) are more compact and lighter weight than the standard line of modular fittings made for use with SAE Code 61 split flanges.

Adaconn® four- and two-bolt Unified Code U61 flange adapters are backward compatible with any existing SAE Code 61 flange port.

