Double Shut-Off and Straight-Thru Couplings

Parker hydraulic couplings have a wide variety of designs, each tailored to a particular application or use. This catalog is arranged according to those categories. In each section the construction of a specific design will be detailed. However, based on the valving of the coupling, hydraulic couplings generally fall into one of two groups, either Double Shut-Off or Straight-Thru.

Double Shut-Off couplings are used extensively when it is important to minimize fluid loss upon disconnection. Both halves of the coupler, the body and the nipple, contain shut-off valves. These valves open automatically when the body and nipple are connected, and close automatically when the two halves are disconnected—keeping fluid loss to a minimum.

Parker Straight-Thru couplings have no valves in either half and are ideal for maximum flow application. Their smooth, open bore offers the lowest pressure drop of any quick disconnect coupling, and allows them to be thoroughly cleaned. Since there are no valves in either half, fluid flow should be shut off before the coupling is disconnected.

Rated Pressure

Rated pressure for the Parker hydraulic couplings range from 30 to 15,000 psi, depending on the coupling series, size and materials. Rated pressures as shown in this catalog are defined in the American National Standard Glossary of Terms for Fluid Power, ANSI/B93.2-1986, as “the qualified operating pressures which are recommended for a component or a system by the manufacturer.” Parker “Rated Pressures” have been established on the basis of laboratory tests which include, but are not limited to, static burst tests and multiple cycle impulse tests. System characteristics such as high cycling rates and high amplitude shocks either hydraulic or mechanical, can reduce the functioning life of a coupling, even if the system’s nominal pressure falls within the rated pressure range of the coupling.

For assistance in analyzing your application, contact your nearest Parker sales office or the Quick Coupling Division in Minneapolis.

Refer to the Safety Guide at the end of this catalog for considerations when selecting a Quick Coupling.

Refer to the Fluid Compatibility Chart (note Table of Contents) for seal selection assistance for both Double Shut-Off and Straight-Thru couplings.

Checklist for Selecting Quick Couplings

- ❑ What are the functional requirements of the coupling?
- ❑ What is the maximum working pressure of the application?
- ❑ Which seals and body material are compatible with the system’s fluid?
- ❑ Is the application static or dynamic?
- ❑ What size coupler is required?
- ❑ What is the maximum pressure drop suitable for the application?
- ❑ Does the application require the ability to connect and disconnect under pressure?
- ❑ What is the media temperature and ambient temperature?
- ❑ What end configurations are required?
- ❑ Is an industry interchange coupler required?
- ❑ Is air inclusion and fluid loss a concern in the application?