

Quick Couplings Fast, Positive, Leak Proof Connections

- For Hoses and Pipes when handling Petroleum, Chemicals, other Liquids & Dry Products.
- For Pneumatics, Hydraulics & General purpose applications.
- Without Threading, Lugs, or Twisting...without tools... without strain...

Just in seconds !!

& Pressures upto $800\text{kg}/\text{cm}^2$

Introduction to Quick Disconnct Coupling :

When you find it necessary to uncouple a line atleast once a week, chances are you can save money by using a quick coupling. Quick Couplings are used to quickly and easily connect a flexible hose to another hose or to rigid. They are designed to be connected and disconnected by hand. Operation of Quick Coupling is simple and easy lines can be connected or disconnected in seconds, without tools.

Many quick couplings have internal valving to seal the lines when disconnected A valved quick coupling is especially advantageous in a hydraulic line where it speeds connection and disconnection, eliminates draining or priming and prevents entry of foreign matter into the system.

There is no loss of line contents and no other shut off valves or flow interrupting devices are required.

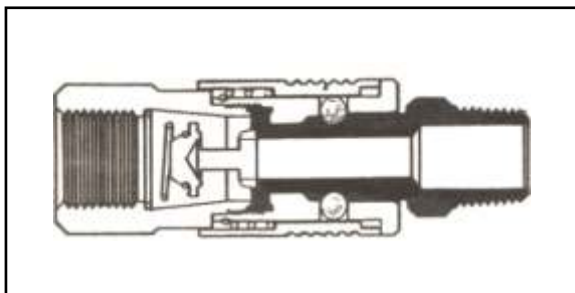
Advantages over permanent connections :

Quick couplings are widely used in Farm, Industrial process, Military, and Aerospace applications. Quick couplings give the following advantages over permanent connections :

- Reduces time for connection changes in the storage, transfer, blending, or packaging of fluids.....permirts switch board type plug in operation to eliminate error and speed multiple connections
- Saves piping cost where temporary connections will suffice... reduces number of valves and fitting required.
- Permits rapid changeover of different pieces of equipments used with a single source...Portable equipment can be used in different areas and easily plugged in.
- Speeds line changeover and minimizes downtime... facilities repair services, insepction or change out of equipment.
- Greater safety provided by automatic shut off... Prevents exposure to hazardous fluids and saves material wasted through spillage.

General Types of Quick Couplings

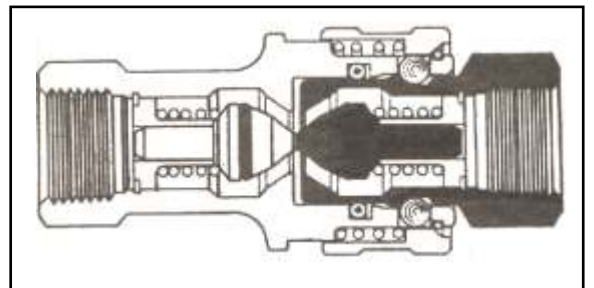
A)SINGLE SHUT OFF COUPLINGS : They were originally used for connecting portable air tools and equipments to compressed air lines. For that reason they are often referred to as pneumatic couplings. Originally they were available from 1/8" to 1/2" sizes, upto a pressure of 300 psi (21kg/cm²). However, now they are used on many other applications as well. Hence special series have been developed to meet new applications and are available up tp 3" size.



The Coupler body should be installed on the upstream (supply) end of the line to shut off the fluid supply when coupling is disconnected. The plug has no valving and upon disconnected exhausts the down stream media. Even in liquid line this would not be mechanically

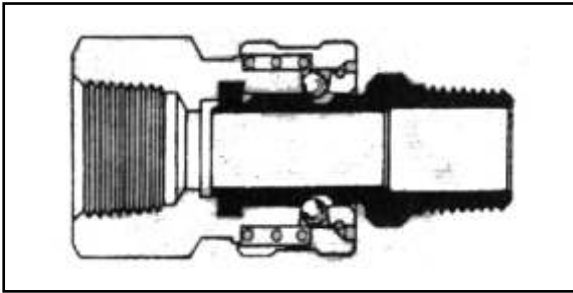
detrimental unless fluid loss would interface with a holding circuit or contaminates the area around it.

B)DOUBLE SHUT OFF COUPLINGS : (Poppet / Ball / Flat Faced option available) They were designed for connecting hydraulic lines. For that reason are frequently called as Hydraulic Couplings. Although that is still the main application, they are also used extensively where varities of other fluids are involved. They are made to withstand pressure upto 10,000 psig (700 kg/cm²) depending on size and material. (Manufacturers specification must be checked for correct application) They contain valves in both female and male valves to prevent loss of fluid when disconnected it is recommended that when the coupling is disconnected dust cap be placed over the plug and a dust plug inside coupler to prevent



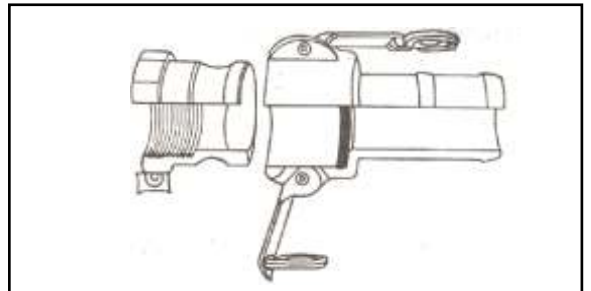
contamination of the media when lines are reconnected and also be increase the life of coupling by preventing damage. Double shut of couplings are available in brass, steel, stainless with a range of body sizes from 1/4" to 3".

C) STRAIGHT THROUGH COUPLINGS : They were designed without any valves to provide least resistance to fluid flow. Therefore they require manual shut off valve in both lines f fluid loss is to be prevented when the coupling is disconnected. Coupler bodies of this design are manufactured in brass, steel, stainless steel. The wide range of sizes from 1/8" to 3" allows the employment in fields ranging from instrumentation to steel mills.

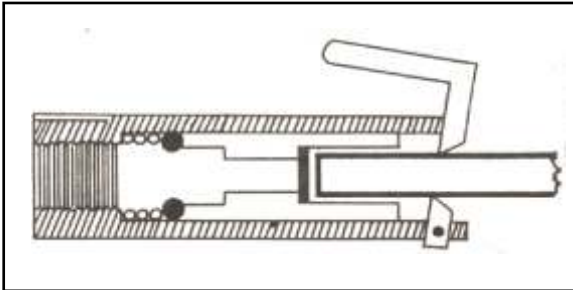


D) THE CAM & GROOVE COUPLINGS : Now accepted as international standard all over the industrial area. There are precision cast for excellent metallurgy and physical material

property. This couplings gives fasted and simplest tight connection. Cam & groove coupling and the seal will remain tight because wear is reduced to a minimum. This is because the gasket which is compressed is stationary, receives no friction and will not become worn or buckled. It is recessed and will never fall out.



D) TUBE COUPLINGS : To connect pressure of vaccum lines to plain tubes and pipes. The coupling is simply pushed over the end of the



tube and pressed firmly to the stop position. This provides an effective leak-proof sealing. The tube can be disconnected merely by pressuring down the lever and pulling off the coupling. No welding, threading or flaring of tubes. No damage : Sizes available : 1/4" to 3/4". Working pressure 40 kg/cm2 Material : CS, SS304.

SIZING QUICK COUPLINGS

In sizing the quick for your application, you must consider size factors when making your decision.

- 1) **Valving :** Determine the type of valving you need, considering the acceptability of the fluid and safety.
- 2) **Pressure :** Determine the working pressure of the system and whether surge or shock condition are present. Select those couplings with working pressure of the system.
- 3) **Flow :** Determine the volume of fluid to be delivered through the coupling at the working pressure of the system.
- 4) **Pressure Drop :** Using charts, available from us, for each coupling series, pressure drop for each size can be determined. Simply compare Flow rates vs. Pressure drop in each size to find the Coupling which meets your requirement.
- 5) **Materials :** Using media chart, determine the seal material which is compatable with the fluid and temperature in the system. The type of fluid will also influence the type of metal you select.
- 6) **Ambient Conditions :** External conditions such as temperature, corrossive vapours and other factors should be considered in the selection since they may effect the operation of the coupling.

Please let us have your specific application. Our technical cell shall develop suitable couplings to meet your requirements. We have a coupling for every application.

Offered by :

ATLAS Engineering Company

519, S.V.P. Road, Opera House, Mumbai - 400 004.

Phone : 022-2382 5043, 2387 7179, Fax : 022-2386 5537

Email : sales@pneumaticsindia.com,

Website : www.pneumaticsindia.com