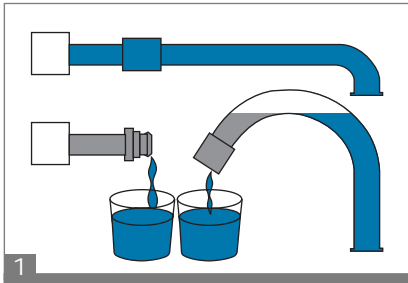
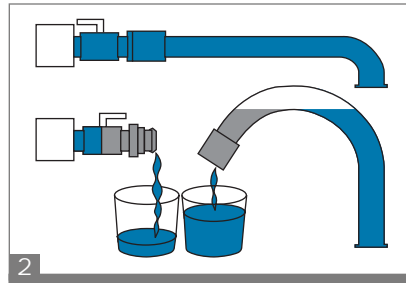


WHY USE KAMVALOKS®

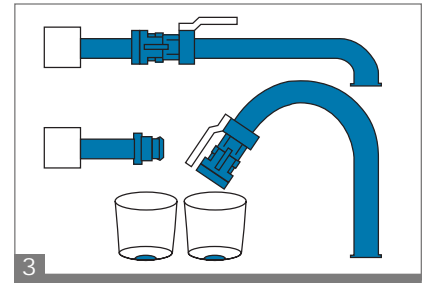
- If your product is corrosive, toxic, caustic or otherwise harmful Kamvaloks® will reduce the hazard associated with the transfer of these products.
- If your product is a VOC (Volatile Organic Compound) that has a high vapor pressure and tends to evaporate quickly, Kamvaloks® will keep the product in-line and out of the air.
- Kamvaloks® will contain fugitive emissions, transfer VOC's without vapor loss, help keep employees out of harm's way and help promote responsible environmental management.



Ordinary Quick Disconnect Couplings
Excessive amount of liquid spills out when coupling is disconnected.



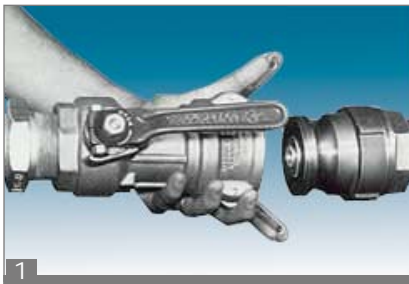
Ordinary Quick Disconnect Couplings Plus Ball Valve
Excessive amount of liquid spills out when coupling and ball valve are disconnected.



OPW Dry Disconnect Couplings
Virtually eliminates spillage of any residual liquid contained within the line after disconnection.

KAMVALOK® OPERATION

OPW Engineered Systems Kamvalok® Dry Disconnects are easy to operate. Connections and disconnects are accomplished by simply closing and opening two cam arms which lock into the machined groove around the circumference of the mating adaptor. The adaptor contains a spring-loaded poppet assembly that is actuated by the lever-action on the coupler.



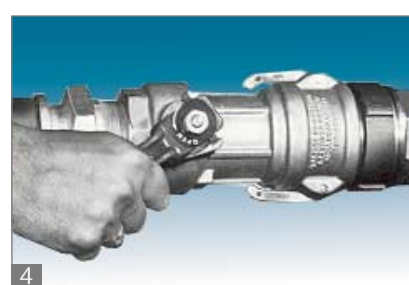
Couple In any Position



Cam Arms Lock Coupler and Adaptor Together



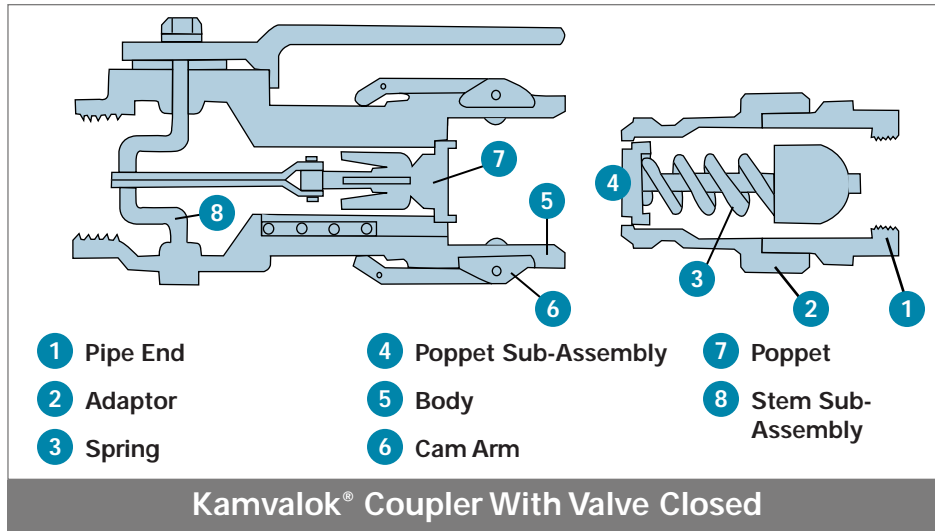
Lever Opens Valves



Full Flow Begins

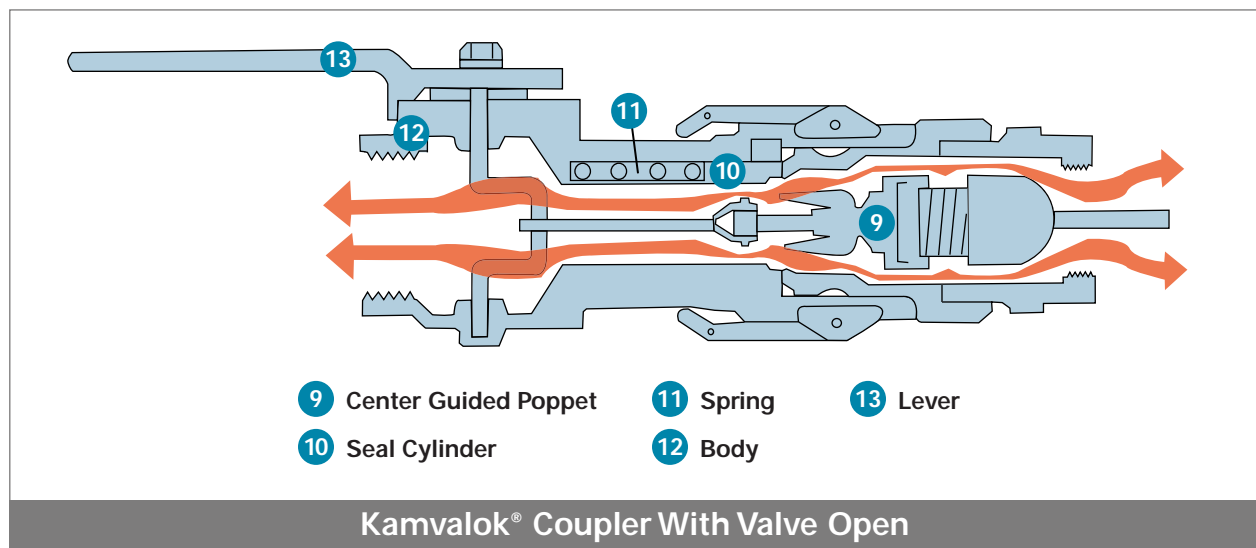
IMPORTANT: OPW products should be used in compliance with applicable federal, state, provincial, and local laws and regulations. Product selection should be based on physical specifications and limitations and compatibility with the environment and materials to be handled. OPW MAKES NO WARRANTY OF FITNESS FOR A PARTICULAR USE. All illustrations and specifications in this literature are based on the latest product information available at the time of publication. OPW reserves the right to make changes at any time in prices, materials, specifications and models and to discontinue models without notice or obligation.

The OPW Engineered Systems Kamvalok® Dry Disconnect is designed to automatically shut off in the event of an accidental disconnection of the coupler and adaptor. Should the Kamvalok® be accidentally disconnected due to operator error or accident while the lever is in the open position and product flow is in progress, the poppet in the adaptor will automatically close and the seal cylinder will immediately stop flow through the coupler. The first drawing below shows the Kamvalok® coupler and adaptor disengaged. The second drawing below shows the coupler and adaptor coupled and the lever opened. The coupler poppet mates with the adaptor poppet, pushing it open when the lever is actuated, allowing for the full flow of product.



This drawing demonstrates how, when the Kamvalok® adaptor is separated from the coupler its own spring-loaded poppet assembly holds the disc firmly in the closed position.

The drawing below shows the coupler and adaptor coupled and the lever opened. The coupler poppet mates with the adaptor poppet, pushing it open when the lever is actuated, allowing for the full flow of product.



After the Kamvalok® adaptor and coupler are firmly coupled together, the coupler lever is turned to the OPEN position. This action moves the coupler poppet toward the adaptor poppet disc until the two mating discs make contact. By completely turning the lever to the full open position the coupler poppet is extended beyond the end of the coupler, depressing the adaptor poppet back into the adaptor body. This creates clearance for the liquid flow around both the coupler and adaptor discs. Guiding fins in the coupler and deflectors in the adaptor ensure even flow characteristics. When the lever is returned to the CLOSED position the poppets are closed and the disconnection can be made. With the exception of the minimal amount of liquid captured between the two discs, spillage is prevented.