

Mann Tek produces and markets products for safe and environmentally friendly handling of aggressive fluids for the chemical and petrochemical industries. The main product is the Dry Disconnect Couplings, DDCouplings®, for spill free liquid handling.

Our years of experience in this area have given us the opportunity to increase our knowledge about applications in different kind of industries in which our couplings have been used and can be used.

We constantly work hard to develop and improve the design and performance of our products in order to be always able to respond to the constant changes in the environments in which our products can be used.

Our products are used in installations around the world, especially where certification is a prerequisite, and are approved by TÜV, Apragaz, Veritas, TDT, in addition to the relevant regional certifications

The DDCouplings® are certified to ISO9001:2000 and are CE-labeled. The main products are certified to PED, the European Pressure Equipment Directive and ATEX, the European directive for Equipment intended for use in Potentially Explosive Atmospheres.

They are produced in accordance with several important standards, e.g. the NATO STANAG 3756 and ATOFINA SGM 2049, TUY, C.

This brochure provides an overview of our capabilities as a manufacturer and supplier of dry disconnect coupling DDCouplings ® and related products.

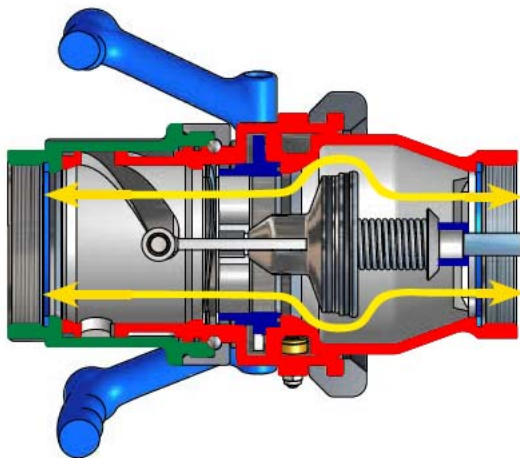
- Kill the spill!



How it works – The coupling function

To connect

- Push and turn
- it's coupled
- full flow



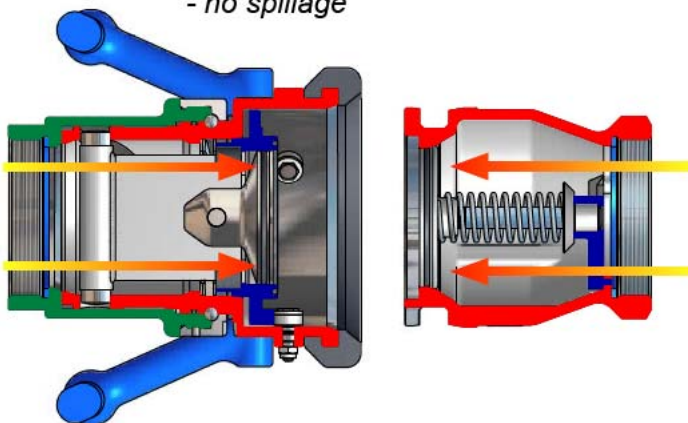
When connecting the DD-Coupling the hose unit will slide easily over the tank unit. The three rollers engage in the three slots.

To allow the hose unit to lock, rotate the hose unit clockwise approximately 100° whilst gently pushing towards the tank unit.

To stop the flow and unlock the units, reverse the procedure.

To disconnect

- Turn and pull
- it's released
- no spillage



Reliable combinations of materials

Couplings are designed and built to have resistance to the media transferred through them. Therefore, all DDCouplings® are tailored to the requirements of each application, ensuring that all materials of the body and internal working parts are fully resistant.



Aluminium

All wetted parts in Aluminium and stainless steel.

Typical applications:

- Military use
- Petrol handling
- Aviation fuel



Brass / Gun Metal

All wetted parts in Brass / Gunmetal and stainless steel. Typical applications:

- Marine refueling
- Petrol handling
- Tanker loading



Stainless Steel

All wetted parts in stainless steel and Hastelloy.

Typical applications:

- Chemical industry
- Pharmaceutical industry
- Waste transfer

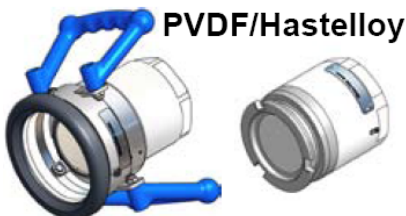


PEEK

All wetted parts in PEEK and Hastelloy.

Typical applications:

- Hydrochloric acid



PVDF/Hastelloy

All wetted parts in PVDF/Hastelloy.

Typical applications:

- Hydrochloric acid



Hastelloy

All wetted parts in Hastelloy. Typical applications:

- Hydrochloric acid



Titan

All wetted parts in Titan. Used in special applications



Duplex

All wetted parts in Duplex. Used in special applications.

Unique design gives several advantages

- **Easy to handle**

Push and turn – free flow

Turn and pull - closed

- **Time saving**

No need to drain hoses or pipe systems.

- **Economical**

No loss or spillage of liquids at connection or disconnection.

- **Safe**

The valve cannot be opened until the unit is coupled.

- **Environmentally friendly**

Accidental spillage eliminated.

- **Reliability**

No loss or spillage of liquids at connection or disconnection.

Kill the spill!

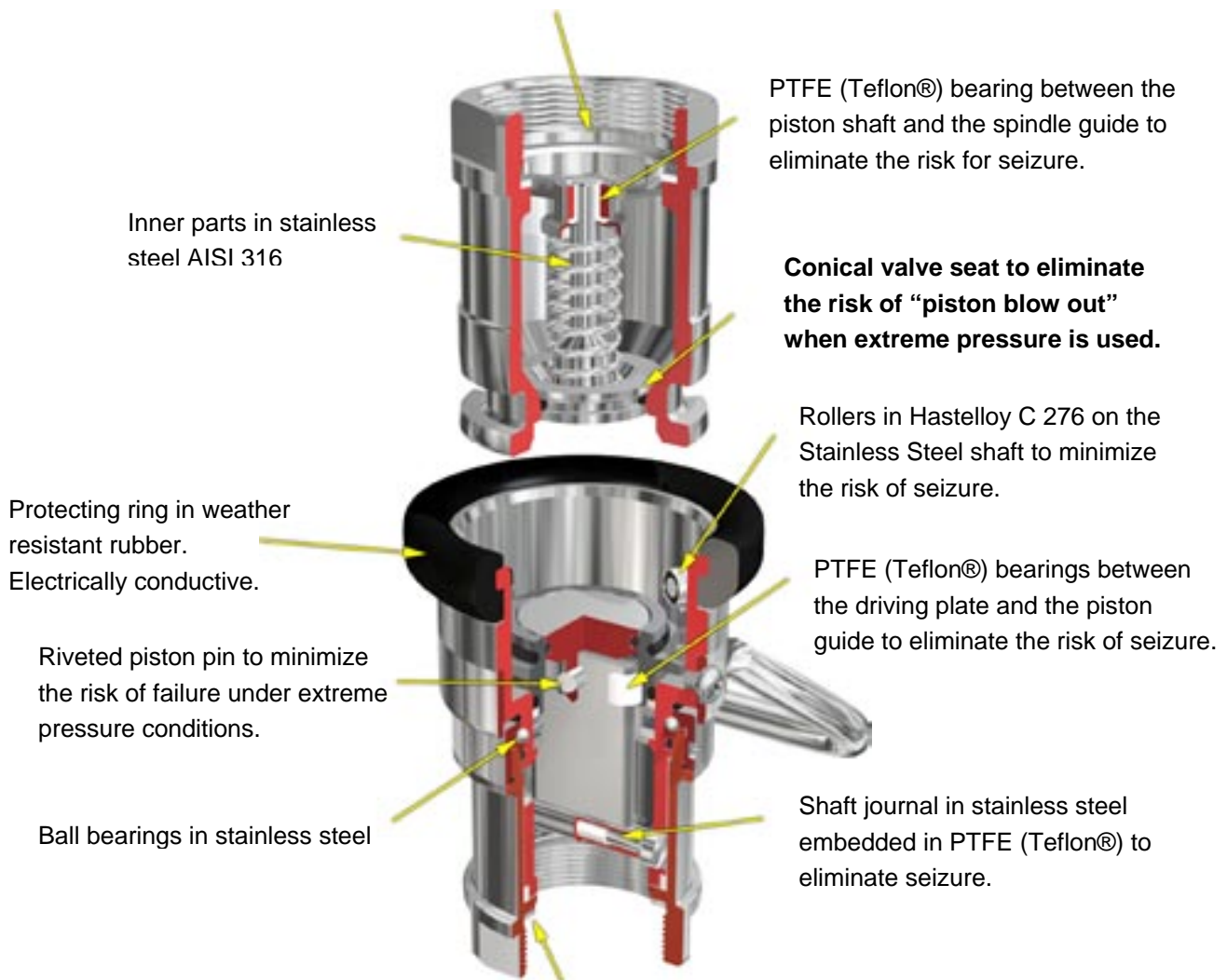
Mann-Tek couplings should be used for transfer fluids, gases or dusts, where the spills of product could be dangerous or expensive. They are needed especially in areas of zero tolerance when your product spill:

- Has a great value
- The environmental methods required for cleanup the spill are expensive
- Is expensive recycling or distribute
- Is dangerous for the environment
- Can be a health risk
- Is prone to accidental spills and losses

The dry disconnect couplings DDCouplings® are designed for quick connection and disconnection without spillage in hoses and pipes. They are used by manufacturers of inks, adhesives, fatty acids, pharmaceuticals, liquid soaps, chemicals, agricultural and a wide variety of special acids and caustics.

Cut-away drawing, Stainless Steel version

The Tank unit is supplied with parallel BSP threads and flat sealing surface.
This allows the use of the full thread length for screwed-on parts.
Also available with tapered internal NPT threads and parallel S60X6 threads.



The Hose unit is supplied with parallel BSP threads and flat sealing surface.
This allows the use of the full thread length for screwed on-parts.
Also available with tapered internal NPT threads and parallel S60X6 threads.

Applications

DDCouplings® are used in a wide range of applications from tanker loading to aviation bunkering.

Oil & Chemical

- Bulk loading / discharge
- Tanker top / bottom loading
- Loading arms
- Exchange manifolds
- Blending pits
- Bunkering
- Rail car outlets
- Paints & inks
- In-process products transfer
- Rail locomotive refuelling



Marine

- Ship to shore transfer
- Ship to ship transfer
- Ship to rig transfer
- Well head material supply
- Rig gas exchange
- Rig temporary vent lines
- Ship manifold exchange
- Marine refuelling



Specialized

- Bulk powder transfer (fine non-abrasive only)
- Nuclear coolant and gas
- Aviation bunkering
- Natural gas
- Brewery finished products
- Food feedstock
- Pharmaceutical feedstock
- Hazardous waste transfer
- IBC container outlets
- Bitumen transfer
- ISO retrofit & new build
- Refuelling race cars



Available range of dry disconnect couplings, DDCouplings

Size: The couplings are available in sizes $\frac{3}{4}$ " (DN 20) to 4" (DN00), with BSP and NPT threads. Other threads are available on request (S60X6, Acme, etc.).

The tank units and Hose units are also available in flanged connections (DIN, ANSI, TW, TTMA, EN 1092-1:2001).

Materials: Aluminium, brass/gunmetal, stainless steel, Hastelloy C and PEEK. Other materials on request.

Seals: FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (nitrile). Other materials on request.

Working pressure: PN 10 - PN 25

Selectivity in order to avoid mixing products: To avoid product contamination caused by connecting a hose unit to the wrong tank unit, selective versions of the hose and tank units are available. Each unit has a number of selective positions, designated by a coded part number according to the coupling size - specify when placing order.

Electrical conductivity: All DDCouplings® except couplings in PEEK and PVDF have electrical conductivity (<10 ohms).

Interchangeability: DDCouplings have Compatibility with other existing brands. DDCouplings in sizes 2" (Ø70 mm) and 3" (119 mm) are according to ATOFINA SGM 2049.TUY.C. DDCouplings in sizes 2"(Ø70 mm), 2½" (Ø105 mm), 3" (Ø119 mm) and 4" (Ø164 mm) are according to NATO STANAG 3756.

Special models: With integrated break-away, pressure relief valve, etc. on request.



Dry aviation couplings of 2 1/2", ISO 45/MS 24484

The Dry Aviation Couplings are designed for use in aviation and military refuelling systems with a maximum working pressure of 10 bar (150 psi).

All units can also be used as bottom loading or primary points refuelling vehicles. They are manufactured to accept the international standard: 2 1/2" the point bayonet, hose end refuelling nozzles, according to: ISO 45/MS24484 / NATO STANAG 3105 /British Aerospace Specification 2C14.

Available in military RAL colours.

Materials: All the wet parts are in aluminium and stainless steel.

Flanges: ASA, DIN, TTMA, TW. Other on request.

Threads: BSP and NPT.

Seals material: FPM (Viton®).

Other materials on request.

Full-Flow – ball valves

Made for oil tankers.

Material: aluminium.

Size: from 2" to 4", PN 10.

Connections: Different types of flange connections.



SBCouplings, breaking bolt

Safety Break-away couplings are used to prevent pull away accidents, protect terminal and loading/unloading equipment and eliminated unwanted product release.

Materials: aluminium, brass/gun metal, stainless steel.

Size: from 1 1/2" to 4", PN 16.

Connections: female threads.

SBCouplings, cable release

Safety Break-away couplings are used to prevent pull away accidents, protect terminal and loading/unloading equipment and eliminated unwanted product release.

Materials: stainless steel.

Size: from 1 1/2" to 4" / 6" to 8", PN 25.

Connections: female threads (from 1 1/2" to 4"), flanged connections (from 6" to 8").



Swivel joints

Materials: aluminium, brass/gun metal, stainless steel.

Size: From 3/4" to 4", PN 10 - PN 25.

Connections: BSP and NPT.

