



Military

DDCouplings[®]
Dry Disconnect Couplings



DACouplings[®]
Dry Aviation Couplings



FFBall Valves
Full Flow Ball Valves



DDCouplings®

Dry Disconnect Couplings

Mann Tek Dry Disconnect Couplings are used for handling and transfer of liquids, gases and bulk powder in an economical, safe and environmental friendly way.

Dry Disconnect Couplings are available in sizes from 1" up to 8" and in a wide range of materials and seals to be the given choice for almost any application.

The self sealing design of the couplings guarantees both the highest level of safety and also the quickest way of connecting and disconnecting.

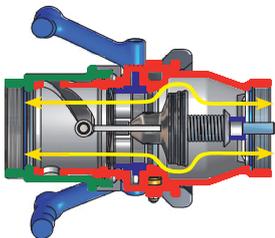


According to NATO STANAG 3756

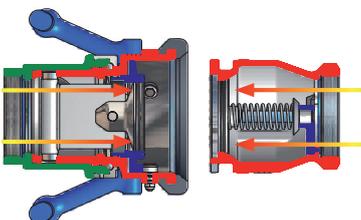
How it works

The coupling function

The principle of operation is similar for all types of Mann Tek Couplings



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



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

Size:

The couplings are available with BSP- and NPT-threads in sizes 1" (DN 25) to 8" (DN 200). 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.

Maximum Working pressure:

MWP PN 10 / 16 / 25.

MAWP 150 / 300 psi

Test Pressure:

15 / 24 / 38 bar

225 / 450 psi

Selectivity - 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.

Electrical conductivity

All DDCouplings® have electrical conductivity (<10 ohms).

Interchangeability:

Compatibility with other existing brands according to NATO STANAG 3756 and ATOFINA SGM 2049.TUY.C.

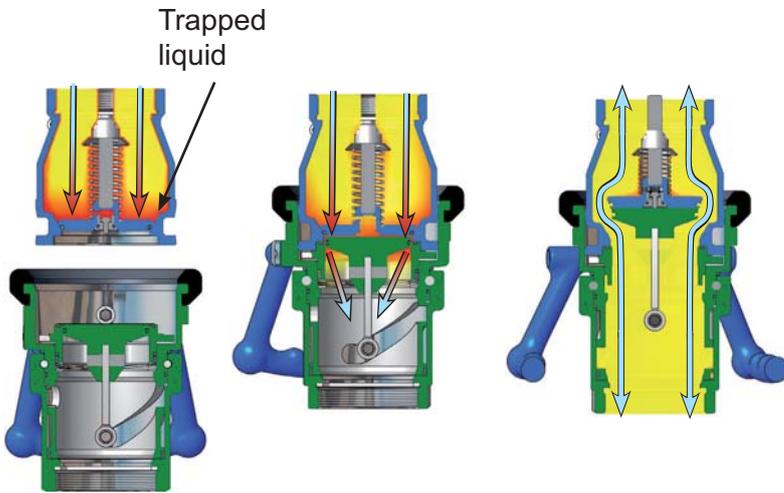
Special models:

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



Pressure relief valve in STANAG 3756 Tank unit

This system dissipates trapped fluid pressure into hose coupler without spillage, to allow easy connection.



Trapped liquid in Tank Unit

Open pressure relief valve

Pressure expands into Hose Unit

Open without pressure

Full flow

Advantages DDCouplings

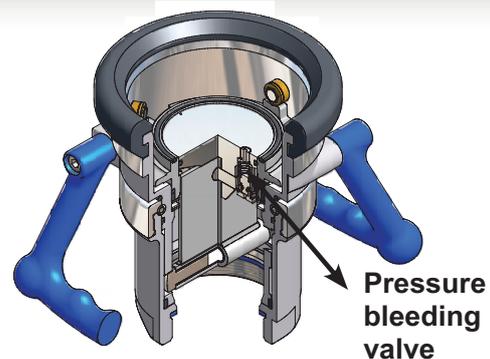
- **Easy to handle**
Push and turn - free flow.
Turn and pull - closed.
- **Time saving**
No need to drain hoses or pipe systems.
- **Economical**
No loss or spillage of liquids at connection or disconnection.
- **Safe**
The valve cannot be opened until the unit is coupled.
- **Environmentally friendly**
Accidental spillage eliminated.
- **Reliability**
No loss or spillage of liquids at connection or disconnection.

Pressure bleeding valve in Hose unit

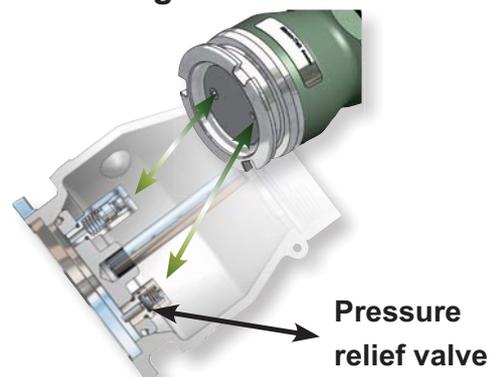
Under thermal influence the liquid will be warmed up and the pressure increases extremely.

To protect the equipment against excessive pressure the PBV opens at a predetermined pressure at an acceptable and riskless limit.

Other applications with the same effect are adapter pieces between different DDCouplings, hose lines with DDCouplings/DACouplings on both sides e.g. for military applications (logistic supply lines).



Pressure relief and bleeding valve in Tank unit



Pressure relief valve

DACouplings[®]

Dry Aviation Couplings

Compability

ISO 45, MS24484, NATO STANAG 3105, British Aerospace Specification 2C14

Operation

The DACouplings include a bayonet-type connector and are flanged or threaded to suit installation requirements. Each Tank unit contains a "fail safe" springloaded valve seating on a tapered seat. The valve is controlled by the action of coupling and uncoupling the Hose unit.

The Dry Aviation Couplings are designed for use in aviation and military refueling systems with a maximum working pressure of 10 bar (150 psi). Working temperature range lies within -38°C (-36°F) to +60°C (+140°F), observe that special low temperature seals are used in cold environments. This coupling is not configured for under wing refuelling.

All units can also be used as bottom loading or primary points refuelling vehicles.

All units are manufactured to accept the international standard: 2½" the point bayonet, hose end refuelling nozzles, according to: ISO 45 / MS24484 / NATO STANAG 3105 / British Aerospace Specification 2C14.

The couplings consist of high strength Aluminium Body, Coupling ring in Gunmetal and Bayonet flange and inner parts in Stainless Steel and Aluminium.

All wetted parts in Aluminium and Stainless Steel.



2½" ISO45 Hose Unit to Tank Unit
3" (119 mm)¹⁾ STANAG 3756



3" (119 mm)¹⁾ Tank Unit STANAG
3756 to 2½" (105 mm)¹⁾ Hose unit

The ISO45 Tank Unit are also available with **pressure equalizing valve** and **pressure relief valve**.

Fluids / Military fuel:

F34 (JP8) AVTUR/FSII fuel
(UN No 1223 (Inst Pet Class 2))

F35 (Jet A1) AVTUR fuel
(UN No 1223 (Inst Pet Class 2))

F44 (JP5) AVCAT/FSII fuel
(UN No 1223) Inst Pet Class 3))

F54 DIESO fuel
(UN No 1202 (Inst Pet Class 3))

F65 DIESO fuel

F67 Benzin



The ISO45 coupling, in green colour, are also used for Military purposes with different adaptor systems.

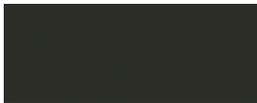
Connection adaptor:

- 2½" ISO45 to 3" (119 mm)¹⁾ Tank Unit STANAG 3756.
- 2½" ISO45 to 3" (119 mm)¹⁾ TW EN14420-5
- 3" (119 mm)¹⁾ Hose Unit / Tank Unit STANAG 3756 to 3" (119 mm)¹⁾ TW EN14420- 5 Hose Unit / Tank Unit
- 3" (119 mm)¹⁾ Tank Unit STANAG 3756 to 2½" (105 mm)¹⁾ Hose Unit

The ISO45 Tank Unit are also available with pressure equalizing valve and pressure relief valve.

¹⁾ Connection 119 mm = 4.68 inch and 105 mm = 4.13 inch

Examples of Military RAL colours



RAL 6014
Yellow Olive
- Dutch Army

Other colours on request



RAL 6031
Bronze Green
-Dutch, Germany, Denmark, Spain, Italy and Sweden.



RAL 8027
Leather Brown
- Germany



RAL 9021
Tar Black
- Germany

We can not guarantee that the colours above are correctly illustrated because print quality

Size of ISO45 DACoupling: 2½" (DN 65)

Materials: Aluminium
Seals: FPM (Viton*) or NBR (Nitrile) , Low temperature NBR, FQM (Flourosilicon)

*) Viton is a registered trademark of DuPoint

Lowest Operation Temperature :

With Seals Material:	Lowest Temperature:
FPM (Standard Viton)	-20° C / -4° F
NBR	-25° C / -13° F
Low temperature NBR	-40° C / -40° F
FQM (Flourosilicon)	-55° C / -67° F

These materials must be tried individually and are subject to no obligation. Always check with chemical compability chart before use.

Max Working Pressure: 10 bar (150 psi)
Test Pressure: 15 bar (225 psi)
Min. Burst Pressure: 50 bar (750 psi)
Safety Factor: 5:1
End Connections: BSP- and NPT-threads, DIN- and ASA-flanges. Other connections on request.

FFBall Valves

Full Flow Ball Valves



Sizes

2" (DN 50) to 4" (DN 100)

Connections:

Full Flow ball Valves and 2-way Ball Valves are available with BSP- and NPT-threads and with flanges (DIN, ANSI, TW, TTMA, EN 1092-1:2001).

Maximum Working Pressure:

MWP PN 10
MAWP 150 psi

Material:

Body: Aluminium
Ball: Aluminium
Spindle: Stainless Steel

Seals:

Teflon® (PTFE), Viton® (FPM).
Other Seals on request.

Advantages

- Unflattened flanges do not affect the balls torque.
- All wetted parts in: Aluminium, Stainless Steel, FPM (Viton®), PTFE (Teflon®). No Yellow parts.
- The sealing stays in its position also when you are regulating high flowrates.
- Low pressure drop.
- Easy to serve: The spindle can easily be dismantled, even if the ball valve is installed.
- The valve is assembled as one unit - not kept together by the flanges.
- Inbuilt measurements as common standard.

Applications

- Petroleum Tank trucks
- Tank trucks for solvents
- Dispenser and Tank trucks for aircraft refueling
- Stationary and mobil equipment for aircraft refuelling
- Loading Aviation refueller





Air Landed Aircraft Refuelling Point



Tactical refuellers



Oshkosh Wheeled Tanker



312 Unit Support Tankers supplied since 2007.

About Mann Tek

Mann Teknik AB is a Swedish company located in Mariestad, Sweden.

Mann Teknik AB designs, manufactures 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. The products are marketed through independent representatives in more than 30 countries.



Company Approvals

Mann Teknik AB are certified to ISO9001:2008. The products 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.

The products are produced in accordance with several important standards, e.g. the NATO STANAG 3756



KilltheSpill

Product and company information



Approvals



ISO 9001, PED 97/23/EC, TDT, TÜV, Apragaz, FMV, Gost, ATEX e.t.c

Contact Mann Tek

Phone: +46 501 39 32 00
Fax: +46 501 39 32 09
Email: sales@mann-tek.com
Web site: www.mann-tek.com
Address: Mann Teknik AB
Strandvägen 16
S-542 31 Mariestad
Sweden



Mann-Tek is a certified ISO9001-company.
Phone: +371 67352561, +371 29214098 Fax +371 67352386

SMAILE-PLUS SIA Technical centr DANTEC Email: office@sptech.lv, info@dantec.lv Web site: www.smaile-plus.lv Address: Tvaika 52, Riga, LV1005, Latvia