

DRY DISCONNECT COUPLINGS

Dry Disconnect Couplings are available in sizes from $\frac{3}{4}$ " up to 6" and in a wide range of materials and seals to be the given choice for almost any application.

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

Mann Tek has knowledge from design, production and marketing of DD Couplings® since 1977.

DD Couplings®, Dry Disconnect Couplings, are designed for quick and spill free connection and disconnection of hoses and pipelines. They are used by producers of ink, adhesives, fatty acids, pharmaceuticals, liquid soaps, petroleum, chemicals, agricultural and a wide variety of caustic products and speciality acids.

Dry Disconnect Couplings, also mentioned as dry break couplings and dry break coupler, can be found in a lot of various applications such as handling toxic chemicals, fuels etc. to transferring clean water, due to the wide range of materials, connections and sealing types Dry Disconnect Couplings are flexible enough to suit almost any application. The newest variant are LNG couplings (Cryogenic coupling).

DD Couplings® are especially needed in areas of zero tolerance spillage when your product:

- is of high value
- requires costly environmental methods of cleaning-up in case of spillage
- is expensive to reprocess or dispose of
- is hazardous to the environment
- can cause a health risk
- is prone to accidental spillage and product loss

DD Couplings® are in use in installations all over the world, especially where certification is a prerequisite and are certified by TÜV, Apragaz, Veritas, TDT, plus regionally required approvals.

**1" (Ø56 MM) DRY DISCONNECT COUPLING**

CONNECTION	3/4", 1" and 1 1/4" in BSP, NPT and Flanged inlet
APPLICATION	For industrial process plant, road and rail tankers, IBC containers, Pharmaceutical and Petrochemical industries etc. Recommended for all types of mini bulk liquid product transfer, including container and drum filling, or on any application where spillage needs to be minimized.
MEDIA	Petroleum products: Gasoline, diesel, oil etc. Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric, Acid, Phenol etc.
SEAL	Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.
HIGH FLOW RATE/ LOW PRESSURE DROP	Allows maximum product transfer with minimal losses.
RECOMMENDED MAXIMUM FLOW VELOCITY	15 m/s (fuel).
INTERCHANGEABILITY	Compatibility with other existing brands e.g. TODO-matic and Fulcrum couplings.
HOSE UNIT WITH INTEGRATED SWIVEL	All hose units are designed with Integrated Swivel
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.

COUPLING MATERIAL	MAXIMUM WORK PRESSURE		TEST PRESSURE		MINIMUM BURST PRESSURE	
	(BAR)	(PSI)	(BAR)	(PSI)	(BAR)	(PSI)
Aluminium	16	232	24	348	80	1160
Brass	16	232	24	358	80	1160
Stainless Steel	25	363	38	544	125	1813
Titan	25	363	38	544	125	1813
Hastelloy	25	363	38	544	125	1813
Peek	6	87	9	131	30	435

**2" (Ø70 MM) DRY DISCONNECT COUPLING**

CONNECTION	1½" and 2" in BSP, NPT and Flanged inlet.
APPLICATION	For industrial process plant, road and rail tankers, ISO containers, IBC containers, Pharmaceutical, Aviation fuel bunkering and Petrochemical industries or on any application where spillage needs to be minimized.
MEDIA	Petroleum products: Gasoline, diesel, oil etc. Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc. Gas. Other: AdBlue ®/ Diesel Exhaust Fluid (DEF) from Blue1 USA.
SEAL	Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.
HIGH FLOW RATE/ LOW PRESSURE DROP	Allows maximum product transfer with minimal losses.
RECOMMENDED MAXIMUM FLOW VELOCITY	15 m/s (fuel).
INTERCHANGEABILITY	Compatibility with other existing brands e.g. TODO-matic and Fulcrum couplings.
HOSE UNIT WITH INTEGRATED SWIVEL	All hose units are designed with Integrated Swivel
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.

COUPLING MATERIAL	MAXIMUM WORK PRESSURE		TEST PRESSURE		MINIMUM BURST PRESSURE	
	(BAR)	(PSI)	(BAR)	(PSI)	(BAR)	(PSI)
Aluminium	16	232	24	348	80	1160
Brass	16	232	24	358	80	1160
Stainless Steel	25	363	37,5	544	125	1813
Titan	25	363	37,5	544	125	1813
Hastelloy	25	363	37,5	544	125	1813
Peek	6	87	9	131	30	435

**2½" (Ø105 MM) DRY DISCONNECT COUPLING**

CONNECTION	2½" and 3" in BSP, NPT and Flanged inlet.
APPLICATION	The 2" (105 mm) DD Coupling is recommended for road tanker bottom loading for a variety of fluids, ISO containers, Aviation fuel bunkering or on any application where product contamination and spillage needs to be minimized.
MEDIA	Petroleum products: Gasoline, diesel, oil etc. Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc. Gas
SEAL	Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.
HIGH FLOW RATE/ LOW PRESSURE DROP	Allows maximum product transfer with minimal losses.
RECOMMENDED MAXIMUM FLOW VELOCITY	15 m/s (fuel).
INTERCHANGEABILITY	Compatibility with other existing brands e.g. TODO-matic and Fulcrum couplings.
HOSE UNIT WITH INTEGRATED SWIVEL	All hose units are designed with Integrated Swivel
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.

COUPLING MATERIAL	MAXIMUM WORK PRESSURE		TEST PRESSURE		MINIMUM BURST PRESSURE	
	(BAR)	(PSI)	(BAR)	(PSI)	(BAR)	(PSI)
Aluminium	16	145	15	218	50	726
Brass	16	232	24	348	80	1160
Stainless Steel	25	363	38	544	125	1813
Titan	25	363	38	544	125	1813
Hastelloy	25	363	38	544	125	1813
Peek	6	87	9	131	30	435



3" (Ø119 MM) DRY DISCONNECT COUPLING

CONNECTION 3" in BSP, NPT and Flanged inlet

APPLICATION The 3" (119 mm) DD Coupling is recommended for similar applications to the 2½" (105mm) range, but where higher loading rates are required. Especially in rail tankers, marine tankers, ISO containers, Aviation fuel bunkering and related activities or on any application where product contamination and spillage needs to be minimized.

MEDIA Petroleum products: Gasoline, diesel, oil etc. Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.
Other: AdBlue ®/ Diesel Exhaust Fluid (DEF) from Blue1 USA.

SEAL Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.

HIGH FLOW RATE/ LOW PRESSURE DROP Allows maximum product transfer with minimal losses.

RECOMMENDED MAXIMUM FLOW VELOCITY 15 m/s (fuel).

INTERCHANGEABILITY Compatibility with other existing brands e.g. TODO-matic and Fulcrum couplings.

HOSE UNIT WITH INTEGRATED SWIVEL All hose units are designed with Integrated Swivel

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.

COUPLING MATERIAL	MAXIMUM WORK PRESSURE		TEST PRESSURE		MINIMUM BURST PRESSURE	
	(BAR)	(PSI)	(BAR)	(PSI)	(BAR)	(PSI)
Aluminium	10	145	15	218	80	726
Brass	16	232	24	348	80	1160
Stainless Steel	25	363	38	544	125	1813
Titan	25	363	38	544	125	1813
Hastelloy	25	363	38	544	125	1813
Peek	6	87	9	131	30	435

**4" (Ø164 MM) DRY DISCONNECT COUPLING**

CONNECTION	4" in BSP, NPT and Flanged inlet.
APPLICATION	The 4" (Ø164 mm) is recommended loading/unloading of Road and Rail tanker, aviation refueller, ISO containers etc. Also recommended for Offshore Supply Vessels, ship to shore transfer, ship to ship transfer and ship to rig transfer or on any application where spillage needs to be minimized.
MEDIA	Petroleum products: Gasoline, diesel, oil etc. Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.
SEAL	Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.
HIGH FLOW RATE/ LOW PRESSURE DROP	Allows maximum product transfer with minimal losses.
RECOMMENDED MAXIMUM FLOW VELOCITY	15 m/s (fuel).
INTERCHANGEABILITY	Compatibility with other existing brands e.g. TODO-matic and Fulcrum couplings.
HOSE UNIT WITH INTEGRATED SWIVEL	All hose units are designed with Integrated Swivel
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.

COUPLING MATERIAL	MAXIMUM WORK PRESSURE		TEST PRESSURE		MINIMUM BURST PRESSURE	
	(BAR)	(PSI)	(BAR)	(PSI)	(BAR)	(PSI)
Aluminium	10	145	24	218	80	726
Brass	16	232	24	348	80	1160
Stainless Steel	25	363	38	544	125	1813

**6" (Ø238 MM) DRY DISCONNECT COUPLING**

CONNECTION	6" in BSP, NPT and Flanged inlet
APPLICATION	The 6" (Ø238 mm) is recommended for marine bunkering, ship to shore transfer, ship to ship transfer and ship to rig transfer or on any application where spillage needs to be minimized.
MEDIA	Petroleum products: Gasoline, diesel, oil etc. Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc. Other: Drilling mud, Barite, Methanol, Potable Water, Waste Water.
SEAL	Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.
HIGH FLOW RATE/ LOW PRESSURE DROP	Allows maximum product transfer with minimal losses.
RECOMMENDED MAXIMUM FLOW VELOCITY	15 m/s (fuel).
INTERCHANGEABILITY	Compatibility with other existing brands e.g. TODO-matic and Fulcrum couplings.
HOSE UNIT WITH INTEGRATED SWIVEL	All hose units are designed with Integrated Swivel
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.

COUPLING MATERIAL	MAXIMUM WORK PRESSURE		TEST PRESSURE		MINIMUM BURST PRESSURE	
	(BAR)	(PSI)	(BAR)	(PSI)	(BAR)	(PSI)
Aluminium	10	145	15	218	80	726
Stainless Steel	16	232	24	348	80	1160

**8" (Ø272 MM) DRY DISCONNECT COUPLING**

CONNECTION	8" in BSP, NPT and Flanged inlet.
APPLICATION	The 8" (Ø272 mm) is recommended for marine bunkering, ship to shore transfer, ship to ship transfer and ship to rig transfer or on any application where spillage needs to be minimized.
MEDIA	Petroleum products: Gasoline, diesel, oil etc. Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc. Other: Drilling mud, Barite, Methanol, Potable Water, Waste Water.
SEAL	Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.
HIGH FLOW RATE/ LOW PRESSURE DROP	Allows maximum product transfer with minimal losses.
RECOMMENDED MAXIMUM FLOW VELOCITY	15 m/s (fuel).
HOSE UNIT WITH INTEGRATED SWIVEL	All hose units are designed with Integrated Swivel
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.

COUPLING MATERIAL	MAXIMUM WORK PRESSURE		TEST PRESSURE		MINIMUM BURST PRESSURE	
	(BAR)	(PSI)	(BAR)	(PSI)	(BAR)	(PSI)
Aluminium	10	145	15	218	50	726
Stainless Steel	16	232	24	348	80	1160

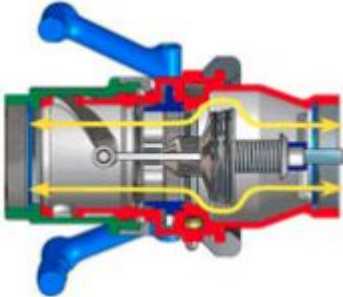
The Dry Disconnect Coupling function

When connecting the Dry Disconnect 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.

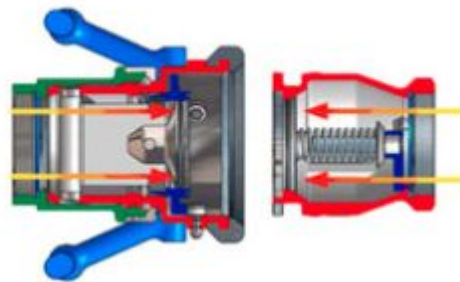
To stop the flow and unlock the units, reverse the procedure.

How it Works



To Connect

Push and turn
- It's coupled
- Full flow



To disconnect

Turn and pull
- It's realised
- No spillage

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.