

Mann Tek®



CRYOGENIC

FOR A BETTER ENVIRONMENT

MADE IN SWEDEN

About us



Mann Tek® is a Swedish manufacturer and supplier of Dry Cryogenic Couplings and has during the past years made a significant market leading breakthrough in LNG. We offer a dry cryogenic coupling which operates by our system "push and turn-free flow" and "turn and pull- closed". We have supplied couplings for several passenger ferries and OSV's, which runs on LNG, and the worlds first LNG-bunker ship.

In 2015 a new ISO-standard, in regards to LNG as fuel to ship was published. Mann Tek Dry Cryogenic Coupling is the first manufacturer world wide, to offer a fully compatible series of products in this new standard, ISO/ TS 18683:2015

With more than twenty years of knowledge and experience in the industry it has accumulated extensive expertise about applications in many types of variations in which our couplings have been, and can be used, with excellent results.

We constantly strive to develop and improve the performance and design of our products, to meet changes, new market demands and standards. Which, today, is what made us market leading. Our couplings are the obvious choice when certifications and product approvals are required, anywhere in the world.

Mann Tek® is certified to ISO9001:2008.

Sales office

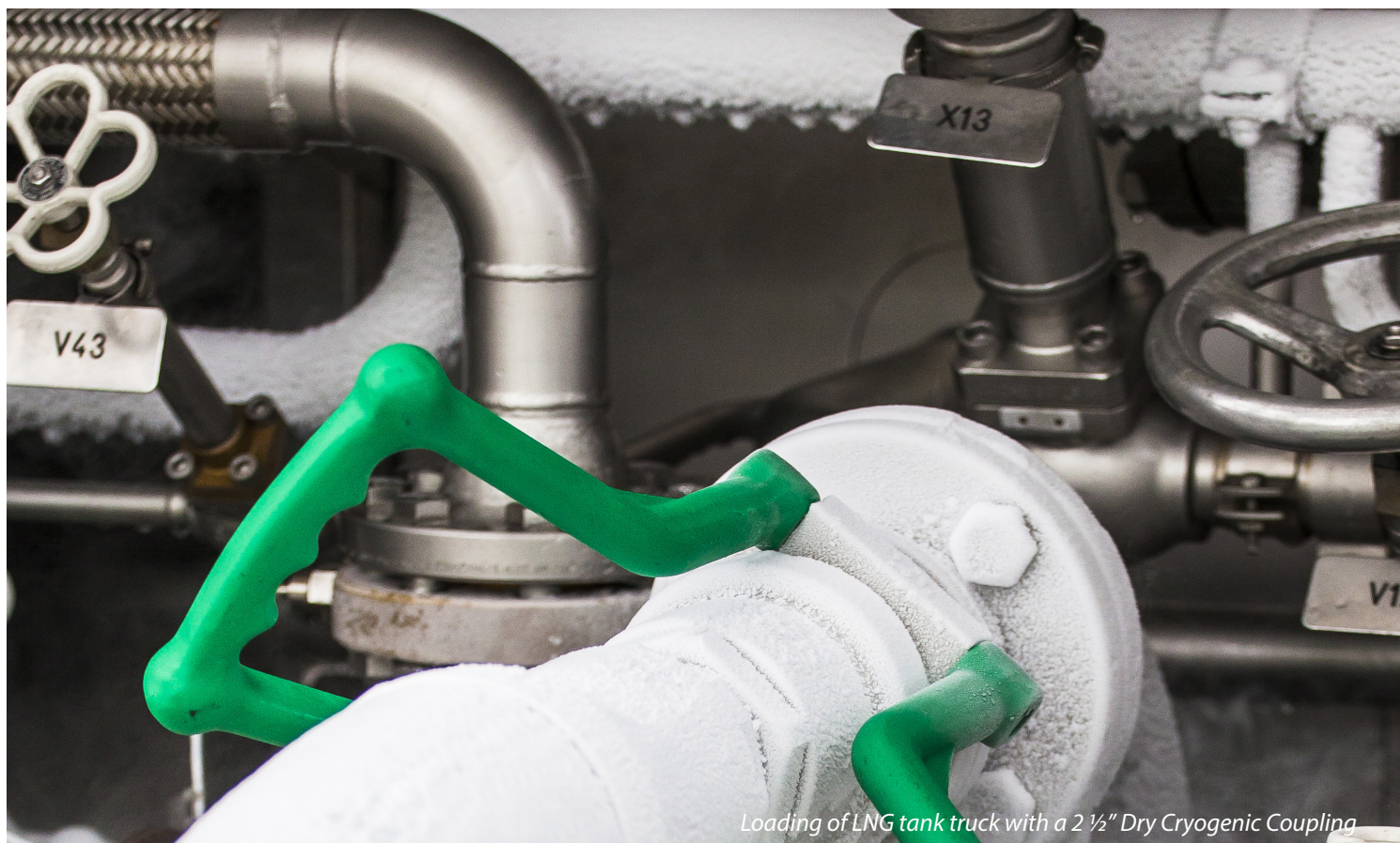
Sweden | Netherlands | Lebanon
Argentina | Great Britain

DC COUPLINGS®

Mann Tek® Dry Cryogenic couplings are a breakthrough within the LNG industry. With one single action, a straight forward push and a turning motion, to connect the couplings for a full flow motion. A quick and easy "turn and pull"- action will disconnect, close the valve with no spillage.

Mann Tek® couplings are used to prevent any excess spillage and protect people and environment from dangerous liquids and vapours.





Loading of LNG tank truck with a 2 ½" Dry Cryogenic Coupling

SIZE

1" (DN 25) to 6" (DN 150)

MATERIALS

Stainless steel

SEALS

PTFE

MAXIMUM WORKING PRESSURE

MWP 25 bar- 1"-4" couplings

MWP 16 bar- 6" coupling

TEST PRESSURE

1,5 x maximum working pressure

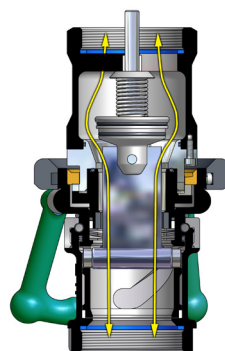
WORKING TEMPERATURE

Minimum -200°

CONNECTIONS

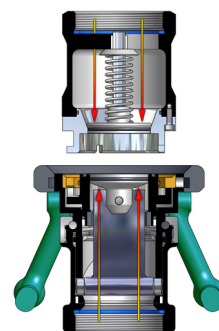
Female NPT thread, EN1092 (DIN) and ANSI flanges.
Other on request.

HOW IT WORKS



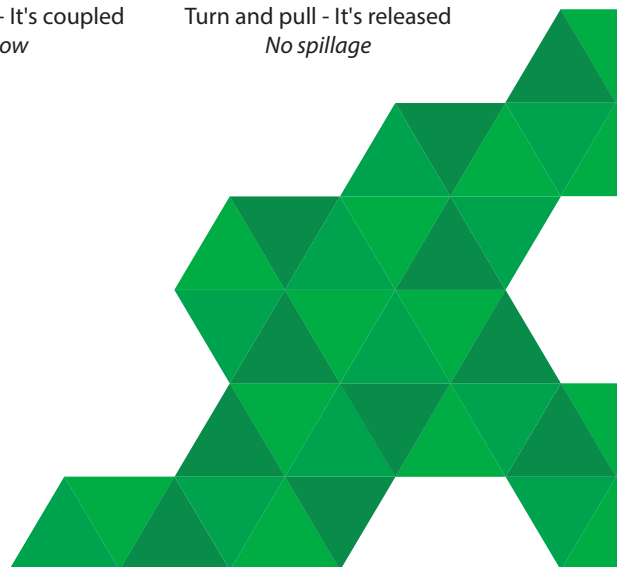
To connect

Push and turn - It's coupled
Full flow



To disconnect

Turn and pull - It's released
No spillage





CB COUPLINGS®

Mann Tek® Cryogenic Breakaway Coupling is a development of our Safety Breakaway Coupling® which has been successfully used for many years.

The internal valves will immediately close the flow in both halves of the coupling and therefor prevent accidents and unwanted spillage of product. Installed at fixed points like manifolds, pipelines and depots or on to a hose.



Ferry bunkering operation using a 6" Dry Cryogenic Coupling and a 6" marine Cryogenic Breakaway Coupling.



SIZE

1" (DN 25) to 6" (DN 150)

MATERIALS

Stainless steel

SEALS

PTFE

MAXIMUM WORKING PRESSURE

MWP 25 bar- 1"-4" couplings

MWP 16 bar- 6" coupling

TEST PRESSURE

1,5 x maximum working pressure

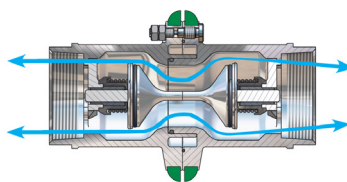
WORKING TEMPERATURE

Minimum -200°

CONNECTIONS

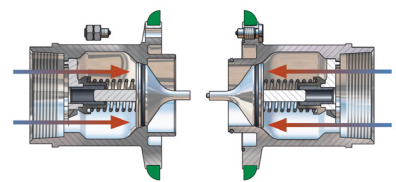
Female NPT thread, EN1092 (DIN) and ANSI flanges. Other on request.

HOW IT WORKS



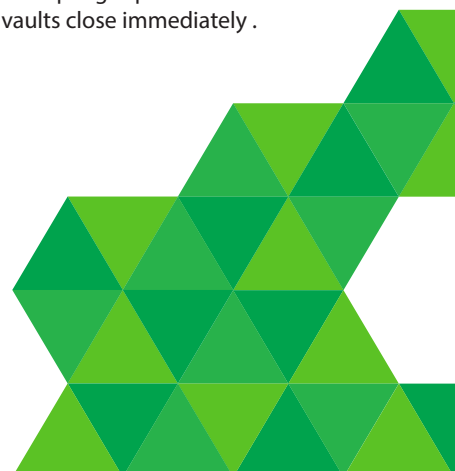
In service

The SBCoupling consists of two halves, each with a valve.



Released

After an emergency disconnection the SBCoupling separates and both vaults close immediately.





PRACTIAL USE

Noticing a rapidly growing need for a safe and spillage free handling of LNG a new product range at Mann Tek® was born. With a full range of 1" to 6" self sealing, quick connecting and disconnecting coupling our focus of a safe and spill free handling was applied in this new but growing industry.

Pioneering development

The first marine application for Mann Tek® cryogenic coupling was to establish a LNG fuelling connection between the world first and largest LNG cruise ferry, M/S Viking Grace and the worlds first LNG fuel bunkering vessel, AGA/ Lindes LNGF Seagas, in Stockholm Sweden.

This was the very first ship-to-ship LNG fuelling operation ever undertaken world wide. Mann Tek® supplied all couplings for this project and where therefor enable to offer both connection and disconnection within one minute, safely with no leaking of gas.

With the fact that the coupling enabled the fuelling lines and hose to be gas free without emitting any natural gas molecules to the atmosphere or exposed to operators – the entire operation were considered highly safe and environmentally friendly.

New ISO-standards

In 2015 a new ISO-standard, in regards for supply of LNG as fuel to ship was published. Mann Tek Dry Cryogenic Coupling is the first manufacturer world wide, to offer a fully compatible series of products in this new standard, ISO/ TS 18683:2015.

Besides the marine applications, the couplings are also used in many other areas such as filling LNG-tank trucks both at the depot side and on the customer side, filling vehicles and LNG containers etc.



Aga's bunker ship Seagas is loaded with 67 tons or 53 cubic meters of natural gas in liquid form and with the large hose Seagas is connected to the passenger ferry Viking Grace for refuelling. The couplings used in this world wide break through in the LNG-industry, are exclusively Mann Teks Dry Cryogenic Coupling and Cryogenic Breakaway Coupling.



Refuelling M/S Viking Grace with LNG from AGA/ Lindes LNGF Seagas. Mann Tek Dry Cryogenic Coupling and Cryogenic Breakaway Coupling in use.



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