

# TODO

By Gardner Denver



## TODO-GAS<sup>®</sup> COUPLINGS



# SAFE TRANSFER OF LPG

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TODO-GAS® COUPLINGS ARE SPECIFICALLY DESIGNED FOR THE SAFE TRANSFER OF LPG IN BOTH LIQUID AND VAPOUR PHASES. THE MATERIALS OF CONSTRUCTION AND COMPONENT DESIGN ARE SPECIFIED TO RECOGNISE THE UNIQUE PROPERTIES OF LPG AND TERMINAL HANDLING CHARACTERISTICS.

Ultra low release on disconnection not only improves safety but also satisfies even the most stringent of environmental standards. Typical emission reduction is greater than 99%

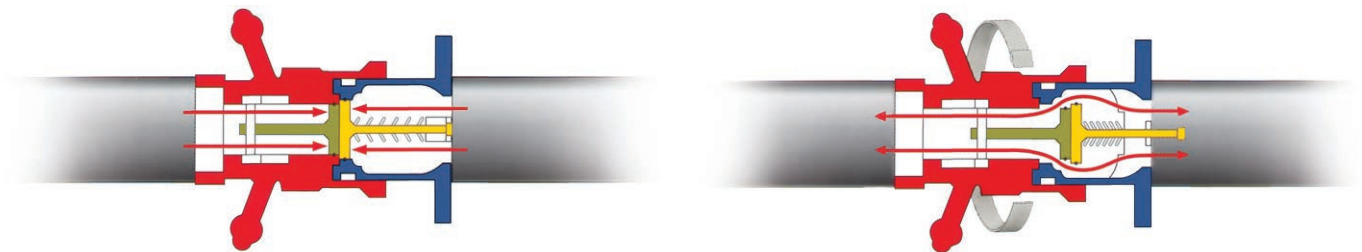
compared to existing thread based couplings.

Just like their TODO-MATIC® stable mates, TODO-GAS® couplings remove

the human error element from LPG transfer operations by ensuring that the valves are closed before disconnection is possible.

## HOW IT WORKS

Turning the hose unit 15° clockwise locks the units together. The valves are still closed and are not opened until a further rotation of 90° has been performed and then the product flow is guaranteed. To close the valve and to unlock the units, reverse the procedure.



## FEATURES

- **Lowest emission volumes on disconnection.**  
Ensures current and future environmental standards compliance.
- **No liquid release on disconnection.**  
Removes the possibility of operator cold burns and reduces product loss to virtually zero.
- **Valves are closed and sealed before disconnection is permitted.**  
Increased safety by removing the possibility of human error.
- **Valves open and close automatically.**  
No levers or handles to operate.
- **Rapid connection and disconnection.**  
Saves time and simplifies operating procedures.
- **Highest quality design and construction.**  
Conforms to all relevant standards including P.E.D. class II where applicable.
- **Integral swivel.**  
Allows free coupling movement without imparting torque strain to the hose.

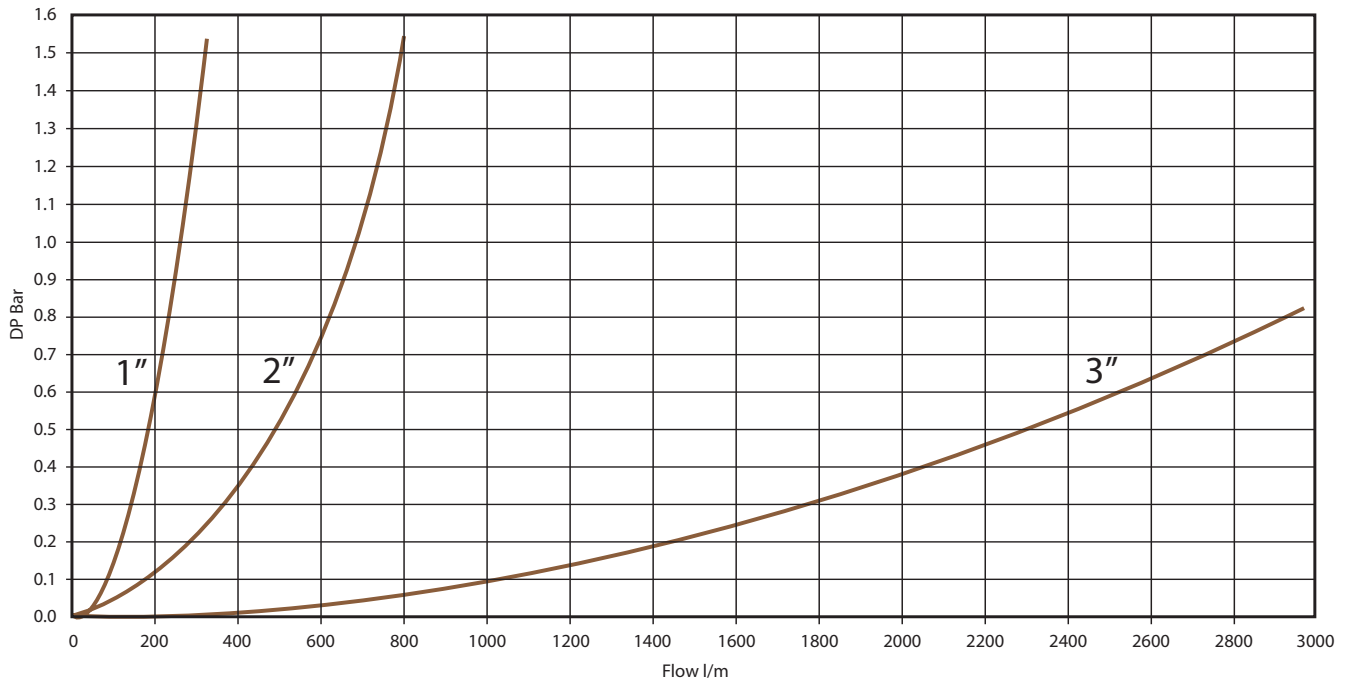
## TECHNICAL DETAILS

Sizes:	1" (DN25) to 3" (DN80).
Materials 1:	Gunmetal / brass and stainless steel 316L.
Materials 2:	Stainless steel AISI 316 L / Duplex stainless steel.
Materials 3:	Stainless steel AISI 316 L.
Seals:	FKM (Viton®), other materials on request.
Working pressure:	25 bar.
Test pressure:	Working pressure +50%.
Safety factor:	5:1.
End connections:	BSP- and NPT-threads. DIN-, ANSI- flanges (available for both tank and hose units). Other threads and flanges on request.

Viton® is a registered trademark of DuPont Performance Elastomers.



## FLOW CAPACITY



## CERTIFICATES / APPROVALS

- Vd-TÜV type approval, mark TÜ.AGG.162-93 towards ADR, RID, IMDG and VDI-rules 2440, part 3.3.1.3.
- CE-marked, European directives 2014/68/EU (PED) and 2014/34/EU (ATEX) compliant.
- Manufactured under ISO 9001:2015.
- Certified towards ISO 14001:2015.
- Manufactured towards EN 13480 and EN 13445.

The above certification applies only to the Margate, England manufacturing plant.

## PATENT INFORMATION

TODO-GAS® couplings carry worldwide patent protection on certain internal design techniques and constructions. This patent protection in no way affects other manufacturers' ability to produce equipment that is fully interchangeable with TODO-GAS® couplings, although we strongly advise customers to check that alternative equipment carries all relevant certification and approvals necessary for their specific application.

# SIZE RANGE, TODO-GAS®

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## 1" TODO-GAS®

(DN19 - DN32, Ø56 mm)

TODO-GAS® couplings are used in a variety of LPG applications from heavy duty Autogas vehicle refuelling to advanced vapour recovery systems. Easy to connect and disconnect, the TODO-GAS® 1" coupling offers single handed operation and ultra low release on disconnection.

These features make TODO-GAS® couplings ideal for unsupervised fuelling of vehicles, in fact, with a release of 0.15 cc per disconnection, fuelling indoors is possible.

The 1" TODO-GAS® coupling can easily handle flows up to 200 litres / minute (52 USG / min.) with minimal pressure drop.



## 2" TODO-GAS®

(DN40 - DN50, Ø71 mm)

TODO-GAS® 2" couplings are designed primarily for loading and discharge of bobtails or intermediate bulk delivery trucks.

Rugged construction plus the same safety features as the rest of the TODO® coupling family equip TODO-GAS® couplings for frequent use.

With one or two handle options and an integral swivel, TODO-GAS® 2" couplings can cope with almost any loading equipment configuration.

A release on disconnection volume of only 0.35 cc means goodbye to operator cold burns.



## 3" TODO-GAS®

(DN80, Ø119 mm)

For larger or high flow rate applications, TODO-GAS® 3" couplings have no equal. Typically used for rail tank loading and discharge (2" in USA), TODO-GAS® 3" couplings can easily handle flows up to 2,500 litres / minute (658 USG / min.).

Two handle operation plus a robust integral swivel make sure the couplings are able to take the strains of terminal life.

# ACCESSORIES AND SPECIALS



## DUST PLUGS AND DUST CAPS

Designed to enhance operator safety and containment security in chemical and gas transport.

Pressure indicator, depressurisation, customs / tamper seal feature, automatic locking, certified closure. Manually lockable (with padlock).

WP: 25 bar.

Sizes: 2" - 3"



## DUST PLUGS AND DUST CAPS

Dust plugs / caps should be used to prevent ingress of dirt or water.

Materials:

1" and 2": plugs and caps in rubber.

3": plugs and caps in stainless steel, brass / gunmetal and aluminium.



## PRESSURE RELIEF VALVE, FOR TANK UNIT

Dissipates trapped fluid pressure into hose unit without spillage, to allow easy connection.



## PARKING DEVICE

For safe and convenient storing of hose units.

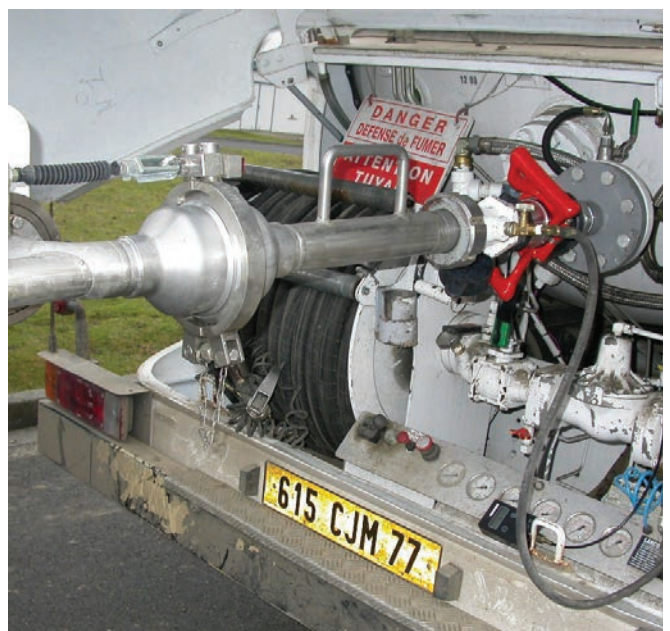
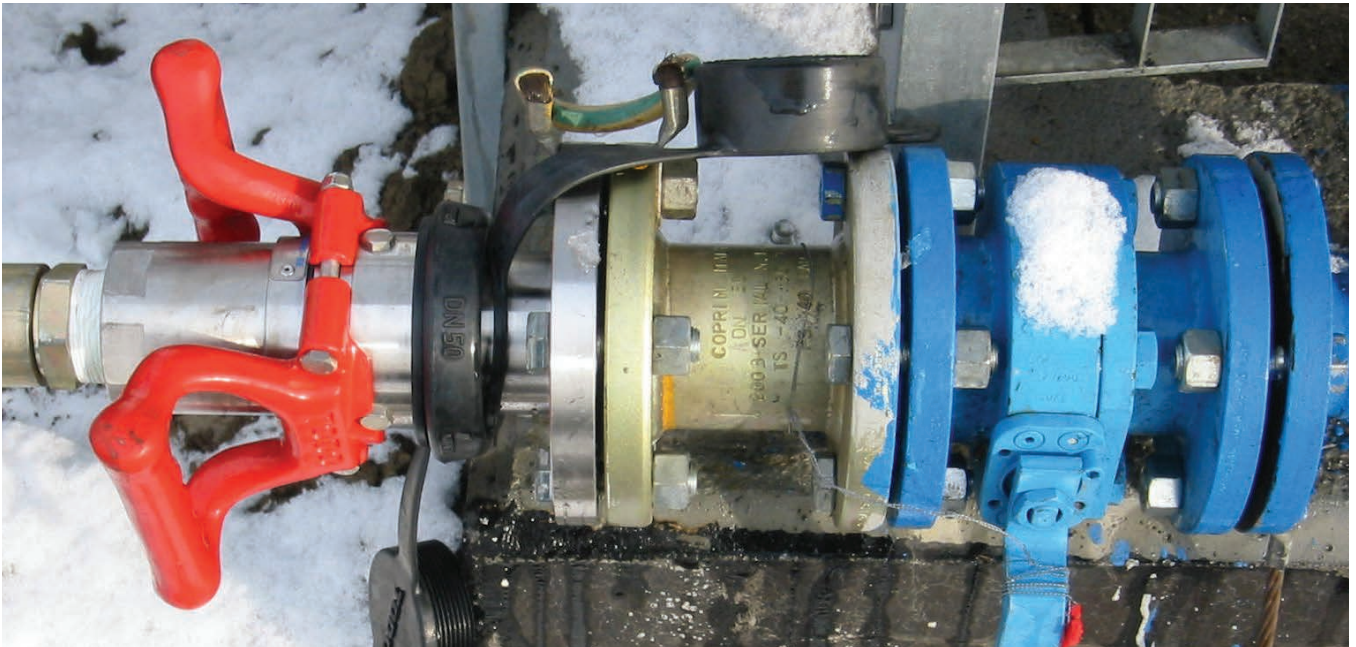


## LONG DOUBLE HANDLE 2"

In applications where extra leverage is required, or available space is an issue at the connection point, the long double handle can be installed.

# APPLICATIONS

- Road tanker loading / discharge
- Rail tanker loading / discharge
- Bobtail loading
- Auto-gas filling station



# TODDO

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