

TODO[®]
A Gardner Denver Product

TODO-GAS[®] Couplings



*Better by
Design*

Safe transfer of LPG

TODO-GAS® couplings are specifically designed for the safe transfer of LPG (typically Propane / Butane) 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.



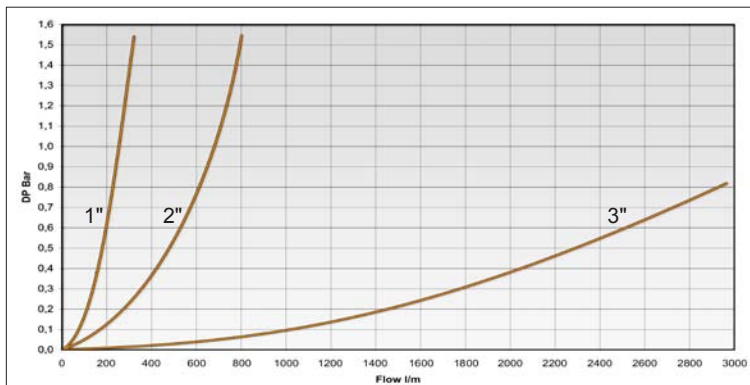
Features

- 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" (DN19 - DN32) to 3" (DN80).
Materials 1:	Gunmetal / brass and stainless steel 316L.
Materials 2:	Stainless steel AISI 316 L / special stainless steel.
Materials 3:	Stainless steel AISI 316 L.
Seals:	FKM (Viton [®]), NBR (Nitrile), other materials on request.
Working pressure:	PN 25.
Test pressure:	Working pressure +50%.
Safety factor:	5:1.
End connections:	BSP- and NPT-threads. DIN-, ASA-, TW- and TTMA-flanges (available for both tank and hose units). Other threads and flanges on request.

Viton[®] is registered trademarks of DuPont Performance Elastomers.



Flow capacity

Media: water.
Temperature: 20°C.

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 97/23/EC (PED) and 94/9/EC (ATEX) compliant.
- E4-67R-000021, European standard for equipment used in propane fuelled vehicles (1" adaptor, only).
- TDT approval, mark TDT-UW-30/09 towards ADR/RID in Poland.
- Manufactured under ISO 9001:2000.
- Certified towards ISO 14001:2004 and OHSAS 18001:2007.
- Manufactured towards EN 13480 and EN 13445.

Patent information

TODO-GAS[®] couplings carry world wide 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 costumers to check that alternative equipment carries all relevant certification and approvals necessary for their specific application.

Size range, TODO-GAS



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.



Flanged Hose Unit

All sizes of the hose unit are also available with flange.

Specials / Accessories



Pressure Tight Cap

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

Pressure indicator, depressurization, customs / tamper seal feature, automatic locking, certified closure.

Manually lockable (with padlock).

WP: PN 25.

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.

Specials / Accessories



Pressure relief valve, for tank unit

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



Parking device

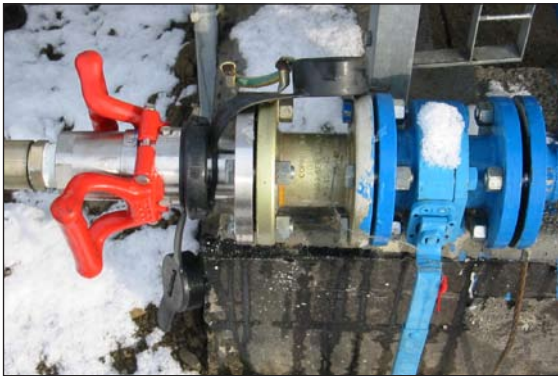
For safe and convenient storing of hose units.



Long double handle 2"

Applications

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



TODO®

A Gardner Denver Product

TODO AB

Box 33, Industrigatan 2-4 ·
S-545 21 Töreboda · Sweden
Phone +46 506 19940 · Fax : +46 506 19944

EMCO WHEATON UK Limited

Channel Road · Westwood Industrial Estate
Margate, Kent CT9 4JR · UK
Phone +44 1843 221521 · Fax +44 1843 295444

EMCO WHEATON GmbH

Emcostraße 2-4 · 35274 Kirchhain · Germany
Phone +49 6422 84-0 · Fax +49 6422 5100

EMCO WHEATON USA, INC.

9111 Jackrabbit Road · Houston, Texas 77095 · USA
Phone +1 281 856-1300 · Fax +1 281 856-1325

EMCO WHEATON Corp.

2480 Bristol Circle · Oakville, Ontario L6H 5S1 · Canada
Phone +1 905 8298619 · Fax +1 905 8298620

GARDNER DENVER Inc.

306 Middletown Park Place, Suite D
Louisville, KY 40243 · USA
Phone +1 502 489 3884 · Fax +1 502 489 3882

www.todo.se
www.emcowheaton.com

assist@todo.se
assist@emcowheaton.com

GARDNER DENVER FRANCE SA

Immeuble Le Miroir, 15-17, Boulevard du G^{al}. de Gaulle
92120 Montrouge · France
Phone +33 146 1241-41 · Fax +33 146 1241-59

EMCO WHEATON ASIA PACIFIC

21 - 5F · IOI Business Park · Bandar Puchong Jaya
47100 Puchong Selangor · Malaysia
Phone +603 8075-7500/7900 · Fax +603 8075-4100

GARDNER DENVER INTERNATIONAL LTD.

PO Box 30804 · Diraz, Manama · Bahrain
Phone +973 17813187 · Fax +973 17813186

EMCO WHEATON GmbH

Branch Office CEE
Blue Danube Park, Objekt 60 · 2100 Korneuburg Austria
Phone +43 2262 64281-0 · Fax +43 2262 6428120

EMCO WHEATON GmbH Sp.z.o.o.

Oddział w Polsce
ul. Królewska 57 · 30-081 Kraków · Poland
Phone +48 12 2934308 · Fax +48 12 2934309

EMCO WHEATON Regional Sales Office

PO Box 468 · Cross Lane, Tong, Bradford ·
West Yorkshire BD4 0SU · UK
Phone +44 1274 683131 · Fax +44 1274 651006