



TODO : dry-break coupling

The new and safe quick-release coupling system for the coupling and uncoupling of hose connections (also under pressure) where no medium is lost. Highly suitable for loading and unloading stations, bunker stations, coupling panels, aircraft fuelling, bottom-loading of road tankers and railway carriages and many other industrial applications. The standardised connection sizes mean the TODO coupling is interchangeable with e.g. Avery-Hardoll and Emco-Buckeye.

Operation and construction

The coupling consists of a hose unit with swivel part so it can be turned and a fixed tank unit both with self-closing valve. The coupling is closed and locked by joining both parts and turning the hose unit approx. 15°. Turning further means both valves are simultaneously opened and the liquid released.

With disconnection first close both valves before the connection can be broken.

The TODO coupling system in coupled and uncoupled state is suitable for a working pressure of 10 bar, while coupling or uncoupling to a pressure of 10 bar is possible (depending on the diameter).

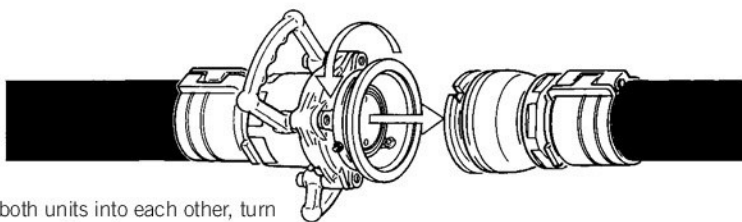
To prevent soiling when uncoupled there is a plug for the hose unit and a cap for the tank unit.

Material types

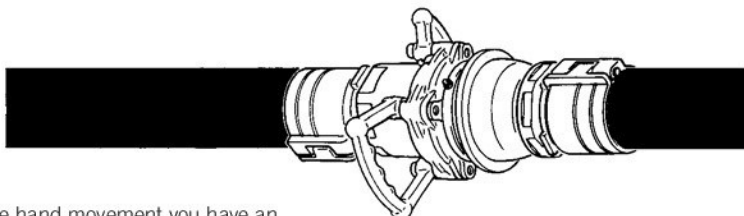
The availability of many material types for both coupling parts and the sealing rings means the TODO coupling is suitable for most chemical liquids and/or gases. As standard the TODO couplings are built with Viton seals. It is therefore not surprising that the TODO coupling is approved by TÜV for the transport of hazardous substances (Approval number TÜV AGG.052-86) and is already used by leading companies in chemistry and petrochemistry.



The principle of the TODO couplings



1. slide both units into each other, turn the hose unit and ...



2. in one hand movement you have an absolutely leakproof connection



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Advantages of the TODO couplings:

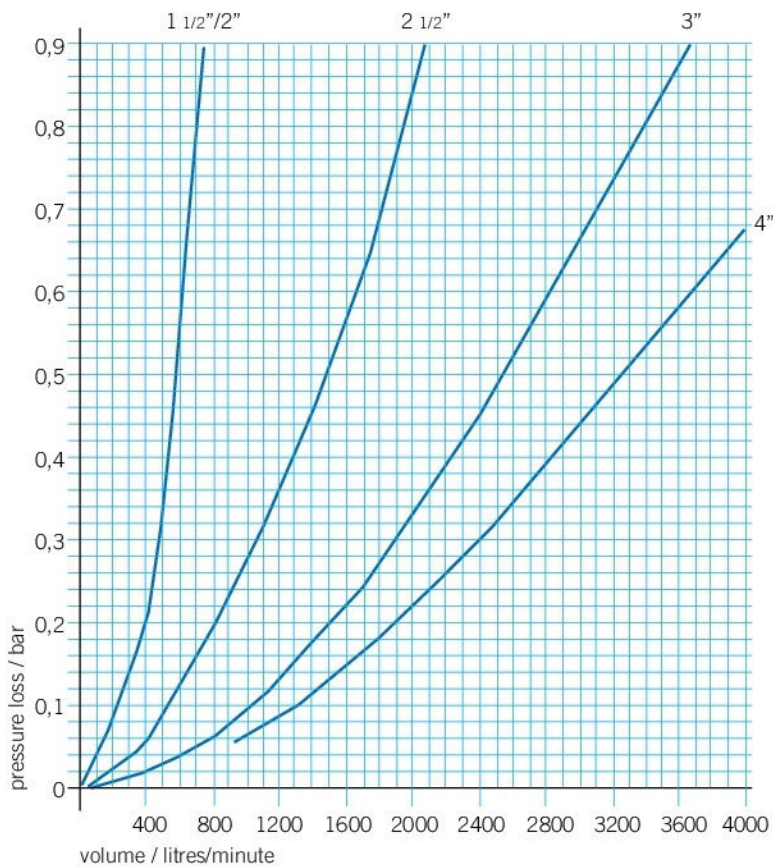
- fast and safe coupling and uncoupling, also under pressure
- practically no medium loss with self-closing valves in both coupling halves
- saves labour and the environment
- simple to use with compact and robust construction
- large capacity with little pressure loss
- possibility of use with anti-mix selection system and position indication
- interchangeable with other makes with international connection sizes
- TÜV approved for hazardous substances

Pressure loss diagram

Test medium: gas oil

Density at 16°C: 0.795

Viscosity at 16°C: 1°E

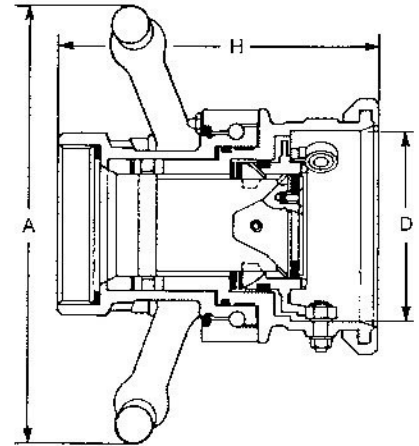




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Main sizes hose unit

Nom Ø	A mm	H mm	Weight approx. kg			D (coupling size) mm
			AL	MS	SS	
1"	70	125	0,6	1,5	1,4	56
2"	175	164	1,2	2,8	2,5	70
2 1/2"	240	190	4,3	8,8	7,4	105
3"	260	190	4,9	10,2	8,8	119
4"	420	220	9,5	20,6	17,6	164



Material codes:

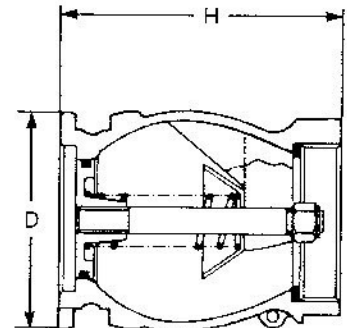
MS = Bronze

AL = Aluminium

SS = Stainless steel 316

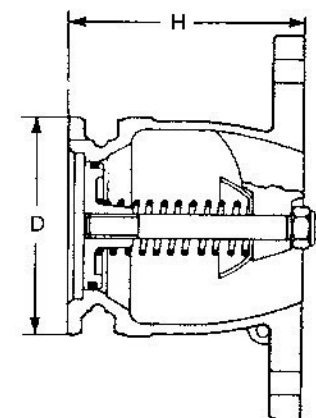
Main sizes tank unit

Nom Ø	D (coupling size) mm	H mm with thread	H mm with flange
		1"	56
2"	70	100	81
2 1/2"	105	134	112
3"	119	134	112
4"	164	162	140



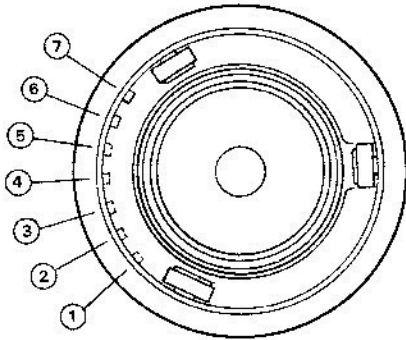
Sizes and materials

The TODO dry-break couplings are available in the sizes 1", 2", 2 1/2", 3" and 4". Also available in all sizes in material types aluminium, bronze and stainless steel. As standard the couplings are supplied with Viton sealing rings. Other qualities such as for example Nitrile, EPDM or Kalrez are also available. A catalogue with all TODO references is available.





TODO : dry-break coupling



Connection possibilities

The hose unit is supplied with an internal thread. As standard with BSP or NPT thread, but other thread types available upon request.

The tank unit can be supplied with an internal thread or flange connection as required. BSP or NPT thread and DIN or ANSI flange as standard.

Upon request other thread types (also male thread) or flange connections are available.

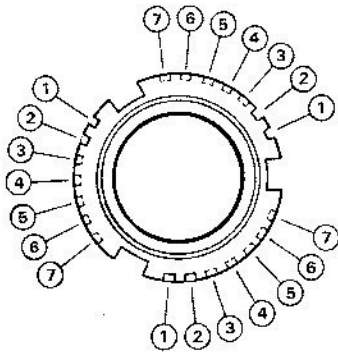
Selection system

To prevent the mixing or soiling of different media the TODO coupling can be provided with a selection system. Then the use of pins in the hose unit and corresponding slots in the coupling flange of the tank unit provide coding per coupling. Twenty-one different variations per coupling possible.

Position indication

It is also possible to provide the TODO couplings with an electronic position indication system. It is then possible to see from a central point (e.g. control room) which hoses are in use and to which loading points they are connected.

An extra connection can be supplied on the tank unit for sampling, air venting or drainage.





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Chemical design

This coupling was specially designed for non-self-lubricating products. The housing in stainless steel 316 and all other parts are manufactured using high quality materials. The piston rod guide is coated in PTFE to guarantee the lowest possible friction resistance.

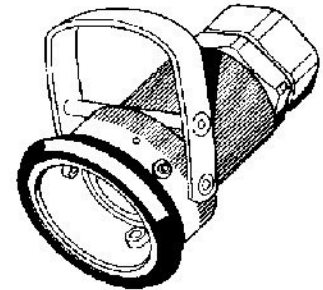
Available in DN 25 (1") - DN 50 (2") and DN 80 (3")
 With Viton® or Kalrez® seals (different compounds possible)



Hose unit chemical 56 mm

Chemical design

Coupling DN	Connection	Material	Seal	Weight	Code Hose unit
1" - 56 mm	1" BSP	SS	Viton	1.4	9102X-4407
1" - 56 mm	1" BSP	SS	Kalrez 4079	1.4	9102X-4414
1" - 56 mm	1" BSP	SS	Kalrez 2035	1.4	9102X-4434
1" - 56 mm	1" BSP	SS	Kalrez 1050 LF	1.4	9102X-4454
2" - 70 mm	2" BSP	SS	Viton	2.9	9200F-4407
2" - 70 mm	2" BSP	SS	Kalrez 4079	2.9	9200F-4414
2" - 70 mm	2" BSP	SS	Kalrez 2035	2.9	9200F-4434
2" - 70 mm	2" BSP	SS	Kalrez 1050 LF	2.9	9200F-4454
3" - 119 mm	3" BSP	SS	Viton	8.8	9300F-4407
3" - 119 mm	3" BSP	SS	Kalrez 4079	8.8	9300F-4414
3" - 119 mm	3" BSP	SS	Kalrez 2035	8.8	9300F-4434
3" - 119 mm	3" BSP	SS	Kalrez 1050 LF	8.8	9300F-4454



Hose unit chemical 70 mm



Hose unit chemical 119 mm

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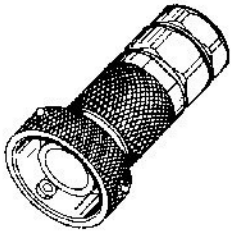
Material codes:

SS = Stainless steel 316

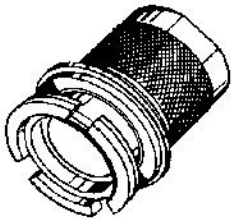
Thread seal = PTFE



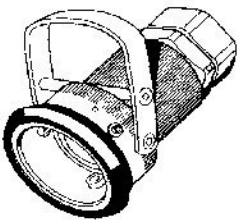
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Hose unit 56 mm



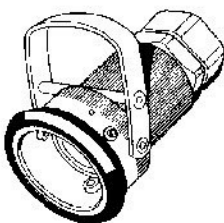
Tank unit 56 mm



Hose unit 70 mm



Tank unit 70 mm



Hose unit 70 mm

TODO-DRY BREAK couplings 1" - 56 mm

Coupling DN	Connection	Material	Seal	Weight	Weight	Code	Code
				Hose Unit	Tank Unit		
1" - 56 mm	1" BSP	AL	Viton	0.6	0.2	7100-1407	4942-1107
1" - 56 mm	1" BSP	GM	Viton	1.5	0.7	7100-2407	4942-2207
1" - 56 mm	1" BSP	SS	Viton	1.4	0.6	7100-4407	4942-4407
1" - 56 mm	1" BSP	SS	Kalrez 4079	1.4	0.6	7100-4414	4942-4414
1" - 56 mm	1" NPT	AL	Viton	0.7	0.3	7455-1407	7451-1107
1" - 56 mm	1" NPT	GM	Viton	1.6	0.8	7455-2407	7451-2207
1" - 56 mm	1" NPT	SS	Viton	1.5	0.7	7455-4407	7451-4407
1" - 56 mm	1" NPT	SS	Kalrez 4079	1.5	0.7	7455-4414	7451-4414
1" - 56 mm	1-1/4" BSP	AL	Viton	0.6	0.2	7125-1407	4992-1107
1" - 56 mm	1-1/4" BSP	GM	Viton	1.6	0.6	7125-2407	4992-2207
1" - 56 mm	1-1/4" BSP	SS	Viton	1.5	0.5	7125-4404	4992-4407
1" - 56 mm	1-1/4" BSP	SS	Kalrez 4079	1.5	0.5	7125-4414	4992-4414
1" - 56 mm	1-1/4" NPT	AL	Viton	0.7	0.3	7456-1407	7452-1107
1" - 56 mm	1-1/4" NPT	GM	Viton	1.7	0.7	7456-2407	7452-2207
1" - 56 mm	1-1/4" NPT	SS	Viton	1.6	0.6	7456-4407	7452-4407
1" - 56 mm	1-1/4" NPT	SS	Kalrez 4079	1.6	0.6	7456-4414	7452-4414
1" - 56 mm	1-1/2" BSP	AL	Viton	0.7	0.3	7150-1407	4991-1107
1" - 56 mm	1-1/2" BSP	GM	Viton	1.8	0.7	7150-2407	4991-2207
1" - 56 mm	1-1/2" BSP	SS	Viton	1.7	0.6	7150-4407	4991-4407
1" - 56 mm	1-1/2" BSP	SS	Kalrez 4079	1.7	0.6	7150-4414	4991-4414
1" - 56 mm	1-1/2" NPT	AL	Viton	0.8	0.4	7457-1407	7453-1107
1" - 56 mm	1-1/2" NPT	GM	Viton	1.9	0.8	7457-2407	7453-2207
1" - 56 mm	1-1/2" NPT	SS	Viton	1.8	0.7	7457-4407	7453-4407
1" - 56 mm	1-1/2" NPT	SS	Kalrez 4079	1.8	0.7	7457-4414	7453-4414

TODO-DRY BREAK couplings 2" - 70 mm

Coupling DN	Connection	Material	Seal	Weight	Weight	Code	Code
				Hose Unit	Tank Unit		
2" - 70 mm	1-1/2" BSP	AL	Viton	1.1	0.4	5005-1407	5001-1107
2" - 70 mm	1-1/2" BSP	GM	Viton	2.6	1.2	5005-2407	5001-2207
2" - 70 mm	1-1/2" BSP	SS	Viton	2.4	1	5005F-4407	5001-4407
2" - 70 mm	1-1/2" BSP	SS	Kalrez 4079	2.4	1	5005F-4414	5001-4414
2" - 70 mm	1-1/2" NPT	AL	Viton	1.2	0.5	7468-1407	7466-1107
2" - 70 mm	1-1/2" NPT	GM	Viton	2.7	1.3	7468-2407	7466-2207
2" - 70 mm	1-1/2" NPT	SS	Viton	2.5	1.1	7468F-4407	7466-4407
2" - 70 mm	1-1/2" NPT	SS	Kalrez 4079	2.5	1.1	7468F-4414	7466-4414
2" - 70 mm	2" BSP	AL	Viton	1.2	0.5	5006-1407	5002-1107
2" - 70 mm	2" BSP	GM	Viton	2.8	1.3	5006-2407	5002-2207
2" - 70 mm	2" BSP	SS	Viton	2.5	1.1	5006F-4407	5002-4407
2" - 70 mm	2" BSP	SS	Kalrez 4079	2.5	1.1	5006F-4414	5002-4414
2" - 70 mm	2" NPT	AL	Viton	1.3	0.6	7469-1407	7467-1107
2" - 70 mm	2" NPT	GM	Viton	2.9	1.4	7469-2407	7467-2207
2" - 70 mm	2" NPT	SS	Viton	2.6	1.2	7469F-4407	7467-4407
2" - 70 mm	2" NPT	SS	Kalrez 4079	2.6	1.2	7469F-4414	7467-4414

Material codes:
AL = Aluminium
GM = Gunmetal

SS = Stainless steel 316
Thread seal = AL + GM = VULKOLLAN;
SS = PTFE