

INDUSTRIAL FITTINGS - couplings

TW couplings (EN ISO 14420-6, DIN 28450)

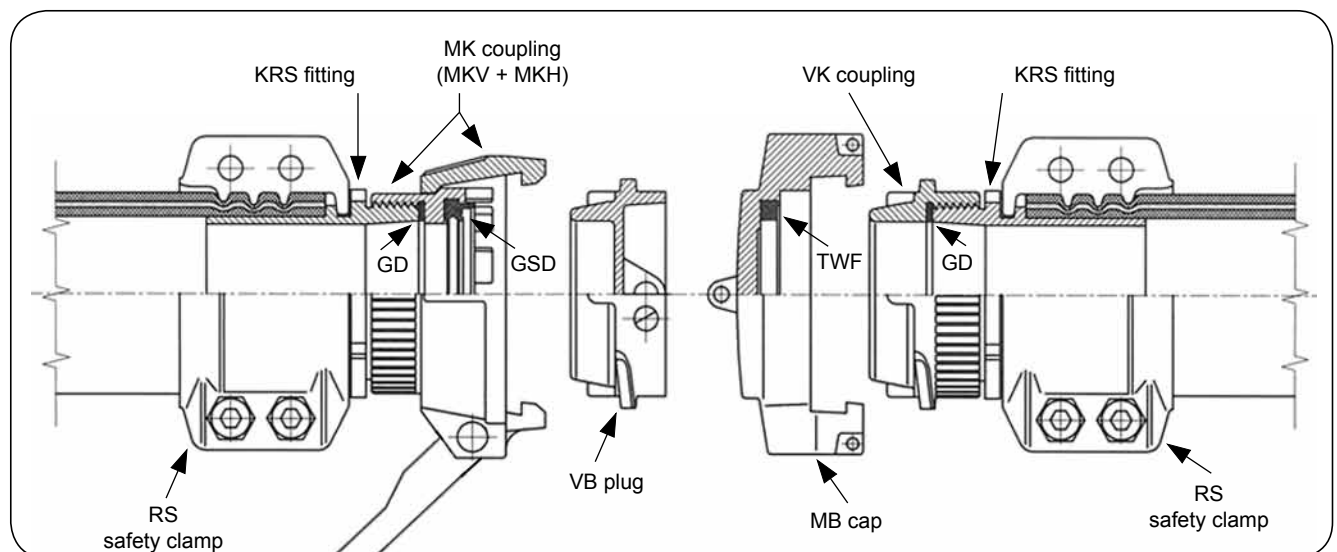


Material:	AISI 316 steel, AISI 316 steel with ECTFE lining, brass, aluminium
Coupling seal (GSD /TWF/TWO):	Hypalon - for AISI 316 steel NBR - for other materials
Thread seal (GD):	Teflon - for AISI 316 steel Poliuretan - for other materials
Working press.:	From - 0.8 bar do 16 bar
Working temp.:	Depends on the seal material (table below)

TW (Tankwagen) couplings made according to EN ISO 14420-6 (previous DIN 28450) are also called tanker couplings or eurocouplings. Designed to transfer liquid, solid and gaseous products (except liquid gas and steam). Used in reloading applications in petrochemical, chemical and food industry. TW coupling consists of MK part and VK part. Both parts are locked together by a turn of the couplings and then secured by a locking handle. The handle prevents turning and uncoupling of the parts.

A plug VB (for MK part) and a cap MB (for VK part) are resistant to pressure. If the installation operates constantly under pressure, it is required to use safety locks. The main seal for this type of coupling is GSD moulded seal as a standard (TWO O-ring for 4"). There is TWF flat seal (TWO for 4") used in MB caps. TWF seal can be used instead of GSD. The thread is sealed with GD flat seal. Standard seals are supplied with couplings. Seals made of other materials are also available (see the table). When selecting a proper coupling for the medium it is required to check the corrosion resistance of its material, sealing and temperature impact. It is recommended to use TW couplings lined with ECTFE for highly aggressive media.

seal material	symbol	colour	gasket type	temperature range (approximate)
polyurethane (PUR, vulkollan)	VU	blue	GSD, TWF, GD	from -20°C up to +70°C
nitrile (NBR, herbunan)	PE	black	GSD, TWO, TWF	from -20°C up to +70°C
Hypalon (CSM)	HY	green	GSD, TWO, TWF	from -20°C up to +130°C
Viton (FPM)	VI	black with red dot	GSD, TWO, TWF, GD	from -20°C up to +120°C
PTFE (PTFE)	TE	white	TWO, TWF, GD	from -20°C up to +220°C
PTFE / Viton	TEVI	white (encapsulated)	TWO, TWF	from -20°C up to +220°C
EPDM	EP	black	TWF, GD	from -20°C up to +100°C
Vamac	BIT	two red dots	GSD	up to +200°C




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picture	code	size	material	weight [kg]
	TW-VK-050-SS	VK 50 (TW 1501) 2" BSP	AISI 316	0.31
	TW-VK-050-SSE		AISI 316 / ECTFE	-
	TW-VK-050-MS		brass	0.36
	TW-VK-080-SS	VK 80 (TW 501) 3" BSP	AISI 316	0.73
	TW-VK-080-SSE		AISI 316 / ECTFE	-
	TW-VK-080-MS		brass	0.75
	TW-VK-100-SS	VK 100 4" BSP	AISI 316	1.15
	TW-VK-100-SSE		AISI 316 / ECTFE	-
	TW-VK-100-MS		brass	1.10
	TW-MKV-050-SS	MKV 50 (TW 1502)	AISI 316	0.22
	TW-MKV-050-MS		brass	0.24
	TW-MKV-080-SS	MKV 80 (TW 502)	AISI 316	0.51
	TW-MKV-080-MS		brass	0.55
	TW-MKH-050-SS	MKH 50	AISI 316	0.47
	TW-MKH-050-MS		brass	0.49
	TW-MKH-080-SS	MKH 80	AISI 316	0.94
	TW-MKH-080-MS		brass	1.00
	TW-MK-050-SS	MK 50 2" BSP	AISI 316	0.69
	TW-MK-050-SSE		AISI 316 / ECTFE	-
	TW-MK-050-MS		brass	0.73
	TW-MK-080-SS	MK 80 3" BSP	AISI 316	1.45
	TW-MK-080-SSE		AISI 316 / ECTFE	-
	TW-MK-080-MS		brass	1.55
	TW-MK-100-SS	MK 100 4" BSP	AISI 316	2.75
	TW-MK-100-SSE		AISI 316 / ECTFE	-
TW-MK-100-MS	brass		2.75	
	TW-MB-050-SS	MB 50	AISI 316	0.30
	TW-MB-050-SSE		AISI 316 / ECTFE	-
	TW-MB-050-MS		brass	0.35
	TW-MB-050-AL		aluminium	0.14
	TW-MB-080-SS	MB 80	AISI 316	0.66
	TW-MB-080-SSE		AISI 316 / ECTFE	-
	TW-MB-080-MS		brass	0.87
	TW-MB-080-AL		aluminium	0.30
	TW-MB-100-SS	MB 100	AISI 316	1.20
	TW-MB-100-SSE		AISI 316 / ECTFE	-
	TW-MB-100-MS		brass	1.25
	TW-MB-100-AL		aluminium	0.45

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VB plug (supplied without chain) 	TW-VB-050-SS	VB 50	AISI 316	0.31
	TW-VB-050-SSE		AISI 316 / ECTFE	-
	TW-VB-050-MS		brass	0.32
	TW-VB-050-AL		aluminium	0.13
	TW-VB-080-SS	VB 80	AISI 316	0.76
	TW-VB-080-SSE		AISI 316 / ECTFE	-
	TW-VB-080-MS		brass	0.85
	TW-VB-080-AL		aluminium	0.25
	TW-VB-100-SS	VB 100	AISI 316	1.15
	TW-VB-100-SSE		AISI 316 / ECTFE	-
	TW-VB-100-AL		brass	0.44

picture	code	size	material	weight [kg]	
TWF cap seal 	TW-TWF-050-VU	TWF 2" DN 50	polyurethane	0.007	
	TW-TWF-050-PE		NBR		
	TW-TWF-050-VI		Viton	0.010	
	TW-TWF-050-HY		Hypalon	0.007	
	TW-TWF-050-TE		PTFE	0.011	
	TW-TWF-050-EP		EPDM	0.007	
	TW-TWF-080-VU	TWF 3" DN 80	polyurethane	0.016	
	TW-TWF-080-PE		NBR		
	TW-TWF-080-VI		Viton	0.022	
	TW-TWF-080-HY		Hypalon	0.018	
	TW-TWF-080-TE		PTFE	0.025	
	TW-TWF-080-EP		EPDM	0.016	
	TWO coupling seal 	TW-TWO-100-PE	TWF 4" DN 100	NBR	0.0016
		TW-TWO-100-VI		Viton	0.027
TW-TWO-100-HY		Hypalon		0.020	
TW-TWO-100-TE		PTFE		0.026	
GSD coupling seal 	TW-GSD-050-VU	GSD 2" DN 50	polyurethane	0.008	
	TW-GSD-050-PE		NBR	0.009	
	TW-GSD-050-VI		Viton	0.012	
	TW-GSD-050-HY		Hypalon	0.011	
	TW-GSD-080-VU	GSD 3" DN 80	polyurethane	0.015	
	TW-GSD-080-PE		NBR	0.018	
	TW-GSD-080-VI		Viton	0.026	
	TW-GSD-080-HY		Hypalon	0.022	
	TW-GSD-080-BIT		vamac	0.015	
GD thread seal 	TW-GD-050-VU	GD 2" DN 50	polyurethane	0.004	
	TW-GD-050-VI		Viton	0.003	
	TW-GD-050-TE		PTFE	0.004	
	TW-GD-050-EP		EPDM		
	TW-GD-080-VU	GD 3" DN 80	polyurethane	0.006	
	TW-GD-080-VI		Viton		
	TW-GD-080-TE		PTFE		
	TW-GD-080-EP		EPDM		
	TW-GD-100-VU	GD 4" DN 100	polyurethane	0.009	
	TW-GD-100-VI		Viton	0.014	
	TW-GD-100-TE		PTFE	0.009	
	TW-GD-100-EP		EPDM		

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picture	code	length [mm]	material	weight [kg]
	TW-KN-200-SS	200	AISI 316	0.02
	TW-KN-200-MS		brass	
	TW-KN-300-SS	300	AISI 316	0.03
	TW-KN-300-MS		brass	
	TW-KN-350-SS	350	AISI 316	0.03
	TW-KN-350-MS		brass	

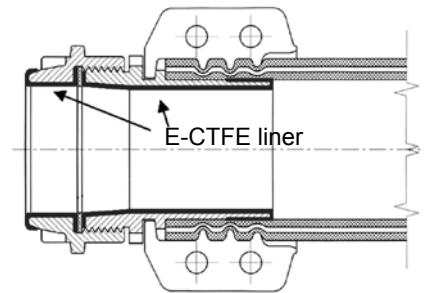
picture	code	size	material	weight [kg]
	TW-TS-050	TS 50	cast iron aluminium handle	0.93
	TW-TS-080	TS 80		1.35
	TW-TS-100	TS 100		2.35

Note!

To connect couplings to hoses use BSP male thread fittings type KKW, KRS (see „INDUSTRIAL FITTINGS - threaded couplings“).

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E-CTFE lined couplings






E-CTFE coated couplings resist the most aggressive chemicals, even so corrosive that the couplings made of AISI 316 acid resistant steel fail. When corrosion is the case, it is recommended to use either expensive couplings made of special nickel-based alloys (e.g. Hastelloy) or (not so expensive) AISI 316 steel couplings with powder coated E-CTFE liner.

E-CTFE is a copolymer of ethylene and chlorotrifluoroethylene, known under the brand name Halar®. It is highly resistant to chemicals over a wide temperature range (approximately from -40°C up to +130°C). Resistant to all acids, lye and other aggressive media (pH range 1 ÷ 14). Very good mechanical properties, especially hardness and abrasion resistance. E-CTFE coatings have exceptional surface smoothness. The coating made of E-CTFE is about 0.5 ÷ 0.6 mm thick. There are two special versions also available: a conductive version ($R < 10^6 \Omega$) and the one compliant with FDA requirements for food transfer.

Several types of industrial couplings can be coated with E-CTFE e.g.:

- TW couplings,
- CAMLOCK couplings,
- flanges,
- threaded couplings and adapters,
- composite hose fittings,
- breakaway couplings.

picture	code	size	material [mm]	weight [kg]
 MK	TW-MK-050-SSE	MK 50 - 2" (TW 1502)	AISI 316 E-CTFE	0.69
	TW-MK-080-SSE	MK 80 - 3" (TW 502)	AISI 316 E-CTFE	1.45
	TW-MK-100-SSE	MK 100 - 4"	AISI 316 E-CTFE	2.75
 VK	TW-VK-050-SSE	VK 50 G 2" (TW 1501)	AISI 316 E-CTFE	0.31
	TW-VK-080-SSE	VK 080 G 3" (TW 501)	AISI 316 E-CTFE	0.73
	TW-VK-100-SSE	VK 100 G 4"	AISI 316 E-CTFE	1.15
 KRS	TW-KRS-050-SSE	DN 50 - 2"	AISI 316 E-CTFE	-
	TW-KRS-075-SSE	DN 75 - 3"	AISI 316 E-CTFE	-
	TW-KRS-100-SSE	DN 100 - 4"	AISI 316 E-CTFE	-

VB plug and MB caps are also available with E-CTFE liner.