

fittings  
couplings  
quick couplings  
valves  
swivels  
breakaways  
clamps  
nipples, sockets



# FITTINGS

product catalog



**Hose fittings ferrule type** (VG 95951/EN 14424)

Female/male hose fittings (ferrule type) with union nut, DN 13-25. Of brass, chrome plated brass or stainless steel. Also available as non-reusable NR-Type.

Type M

Type V

Accessories:  
 anti-kinking sleeve KS 16  
 colour sleeve CS 16

anti-kinking sleeve KS 21  
 colour sleeve CS 21

**Special types** (DIN 405, EN 14422-7)

Hose fittings of stainless steel with special thread according DIN 405 for foodstuffs up to 16 bar.  
 Hose fittings of brass / steel with ACME thread for LPG up to 25 bar SPANFIX or SPANNLOC clamps.

Type RMX

Type ACM

**"TW" hose couplings** (DIN 28450/EN 14420-6)

TW hose couplings DIN 28450, with SP ANNFIX or SPANNLOC clamps. Working pressure up to 16 bar.

Type VKX - brass - Type MKC

Type VKC...SS - stainless steel - Type MKX...SS

**"Storz" hose couplings**

STORZ hose couplings of aluminium. SPANFIX or SPANNLOC clamps. Working pressure up to 10 bar.

Storz

**SPANNFIX hose fittings** (DIN ISO 228, NPT)

Female/male hose fittings with re-usable SPANFIX pinned safety clamps of hot stamped aluminium. DN 19-100. Working pressure up to 25 bar.

Type MX

- brass -

Type VX

Type MX...SS

- stainless steel -

Type VX...SS

**Steel hose fittings** (EN 14420, 14422)

Female / male hose fittings of steel, zinc plated and chromated. For LPG, ammonia, mechanical engineering applications. - Working pressure up to 25 bar. SPANFIX or SPANNLOC clamps.

Type SMX

Type SVC

**"Camlock" hose couplings** (EN 14420-7)

Camlock hose couplings, of brass or stainless steel. With SPANFIX or SPANNLOC clamps. Working pressure up to 10 bar.

Type AVKC

Type AMKX

**"Guillemin" hose couplings** (EN 14420-8)

GUILLEMIN hose couplings of aluminium. SPANFIX or SPANNLOC clamps. Working pressure up to 10 bar.

Guillemin

**SPANNLOC hose fittings** (DIN ISO 228, NPT)

Female/male hose fittings with re-usable SPANNLOC bolted clamps of hot stamped aluminium. DN 13-100. Working pressure up to 25 bar.

Type MC

- brass -

Type VC

Type MC...SS

- stainless steel -

Type VC...SS

**Hose fittings for steam** (EN 14423)

Male / female hose fittings with bolted clamps of hot stamped brass. Hose tail and union nut of steel zinc plated + chromated, or brass. Suitable for saturated steam up to +220 °C, compressed air, oxygen and oils up to 25 bar.

Type SMS

**Flanged hose fittings** (DIN 1092, EN 14420-4, DIN 2826)

Swivelling or fixed flange, SP ANNFIX or SPANNLOC clamps

- steel zinc pl + chromated -

Type SFX

- stainless st. -

Type SFC-SS

- "TW" flange, aluminium -

Type SFC-TW

heavy type for saturated steam of steel zinc plated and chromated. Clamps of hot stamped brass.

Type SFS

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## I. THREADED HOSE FITTINGS

### 1.1. VRS/MRS – MALE/FEMALE HOSE COUPLINGS

VRS - Male thread EN ISO 228-1, BSP; VRS – Female thread EN ISO 228-1, BSP

Assembly: worm drive clamps

SS = Stainless steel AISI 316 - EN 1.4401.

suitable for 10 bar working pressure (wp 10).

VRS	DN	Резба	-MS	-SS	-AL
VRS-013050-	13	R 1/2"2999			
VRS-013075-		R 3/4"2999			
VRS-019075-	19	R 3/4"2999			
VRS-019100-		G 1"			
VRS-025075-	25	G 3/4"			
VRS-025100-		G 1"			
VRS-050125-		G 1 1/4"			
VRS-032125-	32	G 1 1/4"			
VRS-032150-		G 1 1/2"			
VRS-040150-	38	G 1 1/2"			
VRS-040200-		G 2"			
VRS-050200-	50	G 2"			
VRS-065250-	65	G 2 1/2"			
VRS-065300-		G 3"			
VRS-075300-	75	G 3"			
VRS-075400-		G 4"			
VRS-080300-	80	G 3"			
VRS-100400-	100	G 4"			
MRS	DN	Резба	-MS	-SS	
MRS-013050-	13	G 1/2"			
MRS-013075-		G 3/4"			
MRS-019075-	19	G 3/4"			
MRS-019100-		G 1"			
MRS-025100-	25	G 1"			
MRS-025125-		G 1 1/4"			
MRS-032125-		G 1 1/4"			
MRS-032150-	32	G 1 1/2"			
MRS-040150-		G 1 1/2"			
MRS-040200-	38	G 2"			
MRS-050150-		G 1 1/2"			
MRS-050200-	50	G 2"			
MRS-050250-		G 2 1/2"			
MRS-065250-	65	G 2 1/2"			
MRS-065300-		G 3"			
MRS-075300-	75	G 3"			
MRS-080300-	80	G 3"			
MRS-100400-	100	G 4"			

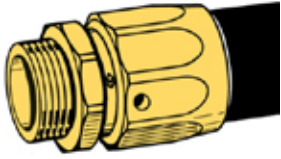


#### PRODUCT SELECT: VRS-019100-MS-G

1	2	3	4	5
VRS-	019	100-	MS	

1. VRS – Male treaded coupling; MRS – Felame threaded coupling
2. For hose /DN/ in mm: 13, 19, 25, 32, 38, 50, 65, 75, 80, 100.
3. Thread: 050 – 1/2", 075 – 3/4", 100 – 1", 125 – 1 1/4", 150 – 1 1/2", 200 – 2", 250 – 2 1/2", 300 – 3", 400 – 4"
4. Material: MS – brass; SS – stainless steel; AL – Aliminium
5. Резба : G or blanc – BSP; NPT - NPT

## 1.2. VHV – Male hose couplings with threaded ferrule



Hose couplings (ferrule type) with male thread, suitable for self-assembly. Working pressure up to 25 bar. Meet EN 14424.

Hose tail and ferrule of brass, stainless steel, chromate brass.

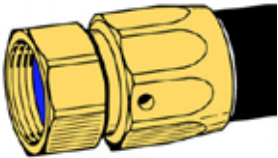
### SELECTION: VHV-194100-MS-NPT

1	2	3	4	5	6
VHV-	19	4	100-	MS-	NPT

- VHV – produc
- ID of hose: 13, 15, 19, 25, 32, 38.
- Wall thickness in mm: 4, 5, 6, 6.5.
- thread: 050 – ½", 075 – ¾", 100 – 1", 125 – 1 ¼", 150 – 1 ½".
- Material: MS – brass; SS – stainless steel; CR – chrom. brass.
- Thread type: black – BSP (by default), BSPT, NPT – NPT.

VHV	DN		-MS			-SS			-CR
			BSP	BSPT	NPT	BSP	BSPT	NPT	BSP
			-MS	-MS-BSPT	-MS-NPT	-SS	-SS-BSPT	-SS-NPT	-CR
VHV-135050-	13x5	½"							
VHV-155075-	15x5	¾"							
VHV-165075-	16x5	¾"							
VHV-165100-		1"							
VHV-194075-	19x4	¾"							
VHV-194100-		1"							
VHV-195075-	19x5	¾"							
VHV-195100-		1"							
VHV-196075-	19x6	¾"							
VHV-196100-		1"							
VHV-255100-	25x5	1"							
VHV-256100-	25x6	1"							
		1 ¼"							

## 1.3. MHV – Female hose couplings with threaded ferrule



Hose couplings (ferrule type) with union nut (female thread), suitable for self-assembly. Working pressure up to 25 bar. Meet EN 14424.

Hose tail, union nut and ferrule of brass, stainless steel or chromate brass. Captive seal polyurethane.

### SELECTION: MHV-194100-MS

1	2	3	4	5
MHV-	19	4	100-	MS-

- MHV – Product.
- ID: 13, 15, 19, 25, 32, 38
- Wall thickness in mm: 4, 5, 6, 6.5.
- Thread: 050 – ½", 075 – ¾", 100 – 1", 125 – 1 ¼", 150 – 1 ½".
- Material: MS – brass, SS – stain.steel, CR – chrom. brass.
- Thread type: black – BSP (by default), NPT – NPT.

MHV	DN		-MS		-SS		-CR
			BSP	NPT	BSP	NPT	BSP
			-MS	-MS-NPT	-SS	-SS-NPT	-CR
VHV-135050-	13x5	½"					
VHV-155075-	15x5	¾"					
VHV-165075-	16x5	¾"					
VHV-165100-		1"					
VHV-194075-	19x4	¾"					
VHV-194100-		1"					
VHV-195075-	19x5	¾"					
VHV-195100-		1"					
VHV-196075-	19x6	¾"					
VHV-196100-		1"					
VHV-255100-	25x5	1"					
VHV-256100-	25x6	1"					
		1 ¼"					

## 1.4. Special hose couplings

### 1.4.1. FOOD COUPLINGS 11851.

Food couplings complying with DIN 11851 are used in the food, chemical and pharmaceutical industries to connect rubber food hoses and stainless steel pipes (in compliance with DIN 11850).

On request food couplings complying with DIN 11864 available.


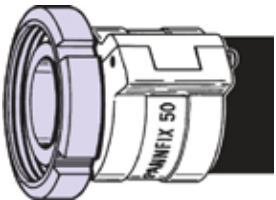


1. Electro-polished external surface for improved hygiene
2. Wrench surface to prevent twisting of the hose when fitting one half of the coupling to the other half.
3. Extra-long head for easy assembly and disassembly
4. Low Ra-value up to  $\leq 1.6 \mu\text{m}$
5. Hose shank for assembly with SC safety clamps, or FLEXOLINE® safety clamps or swage ferrules
6. Easy assembly of protection ring
7. Standard NBR seal conforming FDA directive and ADI-free



DN	Thread		Part #	Price		Part #	Price
13	Rd.34 x 1/8"		DKM013			DKMR013	
19	Rd.44 x 1/6"		DKM019			DKMR019	
25	Rd.52 x 1/6"		DKM025			DKMR025	
32	Rd.58 x 1/6"		DKM032			DKMR032	
38	Rd.65 x 1/6"		DKM038			DKMR038	
40	Rd.65 x 1/6"		DKM040			DKMR040	
50	Rd.78 x 1/6"		DKM050			DKMR050	
63	Rd.95 x 1/6"		DKM063			DKMR063	
65	Rd.95 x 1/6"		DKM065			DKMR065	
75	Rd.110 x 1/4"		DKM075			DKMR075	
80	Rd.110 x 1/4"	DKM080		DKMR080			
100	Rd.130 x 1/4"	DKM100		DKMR100			
13	Rd.34 x 1/8"		DKV013			DKVR013	
19	Rd.44 x 1/6"		DKV019			DKVR019	
25	Rd.52 x 1/6"		DKV025			DKVR025	
32	Rd.58 x 1/6"		DKV032			DKVR032	
38	Rd.65 x 1/6"		DKV038			DKVR038	
40	Rd.65 x 1/6"		DKV040			DKVR040	
50	Rd.78 x 1/6"		DKV050			DKVR050	
63	Rd.95 x 1/6"		DKV063			DKVR063	
65	Rd.95 x 1/6"		DKV065			DKVR065	
75	Rd.110 x 1/4"		DKV075			DKVR075	
80	Rd.110 x 1/4"	DKV080		DKVR080			
100	Rd.130 x 1/4"	DKV100		DKVR100			

Thread		Part #	Price		Part #	Price
Rd.34 x 1/8"		BK-348-RD			BK-348-RDL	
Rd.44 x 1/6"		BK-446-RD			BK-446-RDL	
Rd.52 x 1/6"		BK-526-RD			BK-526-RDL	
Rd.58 x 1/6"		BK-586-RD			BK-586-RDL	
Rd.65 x 1/6"		BK-656-RD			BK-656-RDL	
Rd.78 x 1/6"		BK-786-RD			BK-786-RDL	
Rd.95 x 1/6"		BK-956-RD			BK-956-RDL	
Rd.100 x 1/4"		BK-104-RD			BK-104-RDL	
Rd.110 x 1/4"		BK-114-RD			BK-114-RDL	
Rd.130 x 1/4"		BK-134-RD			BK-134-RDL	


	Hose	Thread	With SS safety clamps		With AL safety clamps	
			Part #	Price	Part #	Price
	13	Rd.34 x 1/8"	VMS-136348		VMS-136348-AL	
	19	Rd.44 x 1/6"	VMS-196446		VMS-196446-AL	
	25	Rd.52 x 1/6"	VMS-256526		VMS-256526-AL	
	32	Rd.58 x 1/6"	VMS-326586		VMS-326586-AL	
	38	Rd.65 x 1/6"	VMS-387656		VMS-387656-AL	
	40	Rd.65 x 1/6"	VMS-407656		VMS-407656-AL	
	50	Rd.78 x 1/6"	VMS-508786		VMS-508786-AL	
	63	Rd.95 x 1/6"	VMS-638956		VMS-638956-AL	
	65	Rd.95 x 1/6"	VMS-657956		VMS-657956-AL	
	75	Rd.110 x 1/4"	VMS-758114		VMS-758114-AL	
	80	Rd.110 x 1/4"	VMS-808114		VMS-808114-AL	
100	Rd.130 x 1/4"	VMS-108134		VMS-108134-AL		
	13	Rd.34 x 1/8"	MMS-136348		MMS-136348-AL	
	19	Rd.44 x 1/6"	MMS-196446		MMS-196446-AL	
	25	Rd.52 x 1/6"	MMS-256526		MMS-256526-AL	
	32	Rd.58 x 1/6"	MMS-326586		MMS-326586-AL	
	38	Rd.65 x 1/6"	MMS-387656		MMS-387656-AL	
	40	Rd.65 x 1/6"	MMS-407656		MMS-407656-AL	
	50	Rd.78 x 1/6"	MMS-508786		MMS-508786-AL	
	63	Rd.95 x 1/6"	MMS-638956		MMS-638956-AL	
	65	Rd.95 x 1/6"	MMS-657956		MMS-657956-AL	
	75	Rd.110 x 1/4"	MMS-758114		MMS-758114-AL	
	80	Rd.110 x 1/4"	MMS-808114		MMS-808114-AL	
100	Rd.130 x 1/4"	MMS-108134		MMS-108134-AL		

**MALE THREADED WELDING COUPLING.**



Part #	DN	Thread 405/1	Welding part	Price w/o VAT	Stainless steel AISI 304 - EN 1.4301; Stainless steel AISI 316L - EN 1.4404 on request. <b>Seal not included</b>
ANM-348000	15	Rd 34 x 1/8"	16 x 21		
ANM-446000	20	Rd 44 x 1/6"	20 x 25		
ANM-526000	25	Rd 52 x 1/6"	26 x 31		
ANM-586000	32	Rd 58 x 1/6"	32 x 37		
ANM-656000	40	Rd 65 x 1/6"	38 x 43		
ANM-786000	50	Rd 78 x 1/6"	50 x 55		
ANM-956000	65	Rd 95 x 1/6"	66 x 72		
ANM-106000	75	Rd 104 x 1/6"	72.1 x 86		
ANM-114000	80	Rd 110 x 1/4"	81 x 87		
ANM-134000	100	Rd 130 x 1/4"	100 x 106		





Thread		Part #	Price		Part #	Price	
Rd.34 x 1/8"		AMM-348					
Rd.44 x 1/6"		AMM-446					
Rd.52 x 1/6"		AMM-526				BS-526-RD	
Rd.58 x 1/6"		AMM-586				BS-586-RD	
Rd.65 x 1/6"		AMM-656				BS-656-RD	
Rd.78 x 1/6"		AMM-786				BS-786-RD	
Rd.95 x 1/6"		AMM-956				BS-956-RD	
Rd.110 x 1/4"		AMM-106				BS-114-RD	
Rd.130 x 1/4"		AMM-114				BS-134-RD	

Part #	Price	
BKK-100		

### Seals for VMS, DKM, DKMR & ANM

Part #	Thread	D x d x s	-NBR		Part #	-NBR	
RD-15-	Rd 34 x 1/8"	26x18x4,5			CS-15-		
RD-20-	Rd 44 x 1/6"	33x23x4,5			CS-20-		
RD-25-	Rd 52 x 1/6"	40x30x5			CS-25-		
RD-32-	Rd 58 x 1/6"	46x36x5			CS-32-		
RD-40-	Rd 65 x 1/6"	52x42x5			CS-40-		
RD-50-	Rd 78 x 1/6"	64x54x5			CS-50-		
RD-65-	Rd 95 x 1/6"	81x71x5			CS-65-		
RD-75-	Rd 104 x 1/6"	88x78x5			CS-75-		
RD-80-	Rd 110 x 1/4"	95x85x5			CS-80-		
RD-100-	Rd 130 x 1/4"	114x104x6			CS-100-		

Part #	Female thread	Male thread	Price	
RS-114300-RD	3" BSP	Rd.110 x 1/4"		
RS-786200-RD	2" BSP	Rd.78 x 1/6"		
RS-300114-RD	Rd.110 x 1/4"	3" BSP		
RS-200786-RD	Rd.78 x 1/6"	2" BSP		


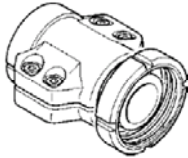
### 1.4.2. For chemical industry.

HOSE COUPLINGS FOR CHEMICAL AND PHARMACEUTICAL INDUSTRIES made of stainless steel with dropforged aluminium clamps. Teflon (PTFE) thread seals (GD).

Part #	Hose	Thread	Price	Photo
VCS-135348	13 x 5	Rd.34 x 1/8"		
VCS-196446	19 x 6	Rd.44 x 1/6"		
VCS-256526	25 x 6	Rd.52 x 1/6"		
VCS-326586	32 x 6	Rd.58 x 1/6"		
VCS-387656	38 x 6,5	Rd.65 x 1/6"		
VCS-508786	50 x 8	Rd.78 x 1/6"		
MCS-135348	13 x 5	Rd.34 x 1/8"		
MCS-196446	19 x 6	Rd.44 x 1/6"		
MCS-256526	25 x 6	Rd.52 x 1/6"		
MCS-326586	32 x 6	Rd.58 x 1/6"		
MCS-387656	38 x 6,5	Rd.65 x 1/6"		
MCS-508786	50 x 8	Rd.78 x 1/6"		

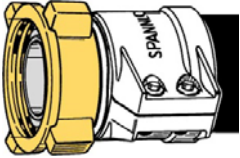
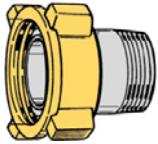

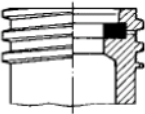
### 1.4.3. For steam.

STEAM HOSE COUPLINGS made of stainless steel with dropforget brass clamps Viton (FPM) thread GD seals.

Part #	Hose	Thread	Price	
<b>VMD-136348</b>	13 x 6	Rd.34 x 1/8"		
<b>VMD-197446</b>	19 x 7	Rd.44 x 1/6"		
<b>VMD-258526</b>	25 x 7,5	Rd.52 x 1/6"		
<b>VMD-328586</b>	32 x 8	Rd.58 x 1/6"		
<b>VMD-388656</b>	38 x 8	Rd.65 x 1/6"		
<b>VMD-509786</b>	50 x 9	Rd.78 x 1/6"		
<b>MMD-136348</b>	13 x 6	Rd.34 x 1/8"		
<b>MMD-197446</b>	19 x 7	Rd.44 x 1/6"		
<b>MMD-258526</b>	25 x 7,5	Rd.52 x 1/6"		
<b>MMD-328586</b>	32 x 8	Rd.58 x 1/6"		
<b>MMD-388656</b>	38 x 8	Rd.65 x 1/6"		
<b>MMD-509786</b>	50 x 9	Rd.78 x 1/6"		

### 1.4.4. For LPG. ACME thread

Couplings for **LPG** of St/MS. More couplings you can find out in catalogs STATION and TankTruckEquipment

Hose couplings acc.EN 14422 with ACME thread for LP-gas for work. pressure up to 25 bar. Tail of carbon steel. Union nut of hot stamped brass, without seal.				
<b>MSL-196175</b>	19x6	ACME 1 3/4"		
<b>MSL-256175</b>	25x6	ACME 1 3/4"		
<b>MSL-326175</b>	32x6	ACME 1 3/4"		
<b>MSL-387225</b>	50x8	ACME 2 1/4"		
<b>MSL-508325</b>	50x8	ACME 3 1/4"		
<b>MSL-758325</b>	75x8	ACME 3 1/4"		
Threaded tail of carbon steel. Union nut of hot stamped brass, without seal				
<b>3175B</b>	ACME 1 3/4"	1/2" NPT		
<b>3175</b>		3/4" NPT		
<b>3175A</b>		1" NPT		
<b>3185</b>	ACME 2 1/4"	1 1/4" NPT		
<b>3195</b>	ACME 3 1/4"	2" NPT		
Double nipple of ACME x ACME thread w/ seals.				
<b>5765M</b>	ACME 1 3/4"	ACME 1 3/4"		
<b>5767M</b>	ACME 2 1/4"	ACME 2 1/4"		
<b>5769M</b>	ACME 3 1/4"	ACME 3 1/4"		
<b>A2797-20R</b>	Seals for male fittings ACME	ACME 1 3/4"		
<b>A2697-20R</b>		ACME 2 1/4"		
<b>A3184-8R</b>		ACME 3 1/4"		
<b>A3194-8R</b>		ACME 4 1/4"		

## 1.5. VCT – Male threaded with smooth hose shank

Coupling standard: EN 14420-5 / DIN 2817

Hose shank standard: EN 14420-2 / DIN 2817

Male thread: EN ISO 228-1, BSP; ANSI B1.20.1, NPT

Assembly: SC safety clamps EN 14420-3 / DIN 2817

Materials: MS – brass, SS = Stainless steel AISI 316 - EN 1.4401, PP - polypropylene

Type of hexagon or octagon nut is subject to change without prior notice

	DN	G	-MS	-SS	-PP
<b>VCT-013050-</b>	13	½"			
<b>VCT-013075-</b>		¾"			
<b>VCT-019075-</b>	19	¾"			
<b>VCT-019100-</b>		1"			
<b>VCT-025075-</b>	25	¾"			
<b>VCT-025100-</b>		1"			
<b>VCT-025125-</b>		1 ¼"			
<b>VCT-032125-</b>	32	1 ¼"			
<b>VCT-032150-</b>		1 ½"			
<b>VCT-038150-</b>	38	1 ½"			
<b>VCT-038200-</b>		2"			
<b>VCT-050200-</b>	50	2"			
<b>VCT-050250-</b>		2 ½"			
<b>VCT-065250-</b>	65	2 ½"			
<b>VCT-063300-</b>		3"			
<b>VCT-075300-</b>	75	3"			
<b>VCT-075400-</b>		4"			
<b>VCT-080300-</b>	80	3"			
<b>VCT-100400-</b>	100	4"			



### Selection: VCT-019075-MS

1	2	3	4
<b>VCT-</b>	<b>019</b>	<b>075</b>	<b>-MS</b>

1. VCT – Product name.
2. ID of hose in mm: 13, 19, 25, 32, 35, 38, 40, 45, 50, 63, 75, 80, 100.
3. Thread: 050 – ½", 075 – ¾", 100 – 1", 125 – 1 ¼", 150 – 1 ½", 200 – 2", 250 – 2 ½", 300 – 3", 400 – 4".
4. Material: MS, SS, PP

## 1.6. MCT – Female threaded with smooth hose shank

Coupling standard: EN 14420-5 / DIN 2817

Hose shank standard: EN 14420-2 / DIN 2817

Female thread: EN ISO 228-1, BSP

Assembly: SC safety clamps EN 14420-3 / DIN 2817

SS = Stainless steel AISI 316 - EN 1.4401

Part #	DN	G	-MS	-SS
<b>MCT-013050-</b>	13	½"		
<b>MCT-013075-</b>		¾"		
<b>MCT-019075-</b>	19	¾"		
<b>MCT-019100-</b>		1"		
<b>MCT-025100-</b>	25	1"		
<b>MCT-025125-</b>		1 ¼"		
<b>MCT-032125-</b>		1 ¼"		
<b>MCT-032150-</b>	32	1 ½"		
<b>MCT-038150-</b>		1 ½"		
<b>MCT-038200-</b>	38	2"		
<b>MCT-050200-</b>		2"		
<b>MCT-050250-</b>	50	2 ½"		
<b>MCT-065250-</b>		2 ½"		
<b>MCT-063300-</b>	65	3"		
<b>MCT-075300-</b>		3"		
<b>MCT-075400-</b>	75	4"		
<b>MCT-080300-</b>		3"		
<b>MCT-100400-</b>	100	4"		



### Selection: MCT-019075-MS

1	2	3	4
<b>MCT-</b>	<b>019</b>	<b>075</b>	<b>-MS</b>

1. MCT – Product name.
2. Hose ID in mm: 13, 19, 25, 32, 35, 38, 40, 45, 50, 63, 75, 80, 100.
3. Thread: 050 – ½", 075 – ¾", 100 – 1", 125 – 1 ¼", 150 – 1 ½", 200 – 2", 250 – 2 ½", 300 – 3", 400 – 4".
4. Material: MS – brass, SS – stainless steel.

## 1.7. Steam hose coupling

Steam couplings complying with EN 14423/ DIN 2826 are available in female and male threaded screw couplings and in flange couplings. The screw couplings are available in galvanized steel, stainless steel or brass. The flanged couplings are available in galvanized steel or stainless steel.

Steam couplings complying with EN 14423 / DIN 2826 are used to assemble steam hoses complying with EN ISO 6134. The serrated hose shank with collar is designed to be assembled with SCS steam clamps complying with EN 14423 / DIN 2826. Under no circumstances SC safety clamps complying with EN 1442-3 / DIN 2817 shall be used.

Compared with EN 14420-2 / DIN 2817-compliant smooth hose shanks, steam hose shanks complying with EN 14423 / DIN 2826 are serrated and are physically longer and larger. Due to the high temperature applications in which steam couplings are used, PTFE or thread seals are used for the female threaded couplings.

### 1.7.1. RMS – Male steam hose coupling

	Hose ID	Thread	-ST	-SS	-MS	-ST-NPT	-SS-NPT
<b>RMS-013-</b>	13	R 1/2"					
<b>RMS-019-</b>	19	R 3/4"					
<b>RMS-025-</b>	25	R 1"					
<b>RMS-032-</b>	32	R 1 1/4"					
<b>RMS-038-</b>	38	R 1 1/2"					
<b>RMS-050-</b>	50	R 2"					



### 1.7.2. RVS – Female steam hose coupling

	Hose ID	Thread	-ST	-SS	-MS
<b>RVS-013-</b>	13	R 1/2"			
<b>RVS-019-</b>	19	R 3/4"			
<b>RVS-025-</b>	25	R 1"			
<b>RVS-032-</b>	32	R 1 1/4"			
<b>RVS-038-</b>	38	R 1 1/2"			
<b>RVS-050-</b>	50	R 2"			



### 1.7.3. VSS – Male steam hose coupling with safety clamps

	Hose	Thread	-ST	-SS	-MS	-ST-NPT	-SS-NPT
<b>VSS-013006-</b>	13x6	R 1/2"					
<b>VSS-019007-</b>	19x7	R 3/4"					
<b>VSS-025008-</b>	25x7.5	R 1"					
<b>VSS-032008-</b>	32x8	R 1 1/4"					
<b>VSS-038008-</b>	38x8	R 1 1/2"					
<b>VSS-050009-</b>	50x9	R 2"					



### 1.7.4. MSS – Female steam hose coupling with safety clamps

	Hose	Thread	-ST	-SS	-MS
<b>MSS-013006-</b>	13x6	R 1/2"			
<b>MSS-019007-</b>	19x7	R 3/4"			
<b>MSS-025008-</b>	25x7.5	R 1"			
<b>MSS-032008-</b>	32x8	R 1 1/4"			
<b>MSS-038008-</b>	38x8	R 1 1/2"			
<b>MSS-050009-</b>	50x9	R 2"			



## II. FLANGED HOSE FITTINGS

### 2.1. FLP – Swivel flange coupling with serrated hose shank and collar

Suitable for 10 bar working pressure (wp 10), DN 125 to DN 250 wp 6.

Part #	DN	-ST	-SS	-ST/SS	-ST-150	-SS-150
FLP-013-	13					
FLP-019-	19					
FLP-025-	25					
FLP-032-	32					
FLP-038-	38					
FLP-040-	40					
FLP-050-	50					
FLP-063-	63					
FLP-065-	65					
FLP-075-	75					
FLP-080-	80					
FLP-100-	100					
FLP-125-	125					
FLP-150-	150					
FLP-200-	200					



### 2.2. FVP – Fixed flange coupling with serrated hose shank and collar

Suitable for 10 bar working pressure (wp 10), DN 125 to DN 250 wp 6.

	DN	-ST	-SS	-ST-150	-SS-150
FVP-013-	13				
FVP-019-	19				
FVP-025-	25				
FVP-032-	32				
FVP-038-	38				
FVP-040-	40				
FVP-050-	50				
FVP-063-	63				
FVP-065-	65				
FVP-075-	75				
FVP-080-	80				
FVP-100-	100				
FVP-125-	125				
FVP-150-	150				
FVP-200-	200				



## 2.3. FLG – Swivel flange with smooth hose shank

A flange coupling is fitted to a rubber or pvc hose using a hose shank coupling, which is inserted into the hose. The hose shank may be smooth in compliance with EN 14420-2 / DIN 2817, or serrated with collar.

1. Flange couplings with smooth hose shanks complying with EN 14420-2 / DIN 2817 are developed to comply with EN 14420-4, which makes them suitable for assembly using SC safety clamps complying with EN 14220-3 / DIN 2817 or FLEXOLINE® safety clamps for thin wall hoses.

2. Serrated hose shanks with collars are recommended for assembly using HRRK swage ferrules, worm drive, band or bolted clamps.

The hose shank may have a fixed or swivel flange. A flange-to-hose connection should preferably be fitted with at least one swivel flange. During assembly, the connection with the fixed flange is fitted to the piping system first, followed by the swivel flange. The swivel flange prevents twisting of the hose during assembly.



	DN	-ST	-SS	-ST/PP	-ST/SS	-ST-40	-SS-40	-ST-150	-SS-150
<b>FLG-013-</b>	13								
<b>FLG-019-</b>	19								
<b>FLG-025-</b>	25								
<b>FLG-032-</b>	32								
<b>FLG-038-</b>	38								
<b>FLG-040-</b>	40								
<b>FLG-050-</b>	50								
<b>FLG-063-</b>	63								
<b>FLG-065-</b>	65								
<b>FLG-075-</b>	75								
<b>FLG-080-</b>	80								
<b>FLG-100-</b>	100								
<b>FLG-125-</b>	125								
<b>FLG-150-</b>	150								
<b>FLG-200-</b>	200								

## 2.4. FGV – Fixed flange with smooth hose shank

	DN	-ST	-SS	-ST-40	-SS-40	-ST-150	-SS-150
<b>FGV-013-</b>	13						
<b>FGV-019-</b>	19						
<b>FGV-025-</b>	25						
<b>FGV-032-</b>	32						
<b>FGV-038-</b>	38						
<b>FGV-040-</b>	40						
<b>FGV-050-</b>	50						
<b>FGV-063-</b>	63						
<b>FGV-065-</b>	65						
<b>FGV-075-</b>	75						
<b>FGV-080-</b>	80						
<b>FGV-100-</b>	100						
<b>FGV-125-</b>	125						
<b>FGV-150-</b>	150						
<b>FGV-200-</b>	200						



## 2.5. Flanged steam hose couplings

### 2.5.1. FLMG – Swivel flanged steam hose coupling

	Hose ID	DIN PN 10/16			DIN PN 25/40			150lbs
		-ST	-SS	-ST/SS	-ST-40	-SS-40	-ST/SS-40	-ST-150
FLMG-013-	13							
FLMG-019-	19							
FLMG-025-	25							
FLMG-032-	32							
FLMG-038-	38							
FLMG-050-	50							
FLMG-075-	75							



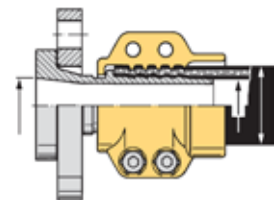
### 2.5.2. FVMG – Fixed flanged steam hose coupling

	Hose ID	DIN PN 10/16		DIN PN 25/40		150lbs	300lbs
		-ST	-SS	-ST-40	-SS-40	-ST-150	-ST-300
FVMG-013-	13						
FVMG-019-	19						
FVMG-025-	25						
FVMG-032-	32						
FVMG-038-	38						
FVMG-050-	50						
FVMG-075-	75						



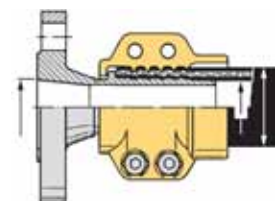
### 2.5.3. FSSH – Swivel flanged steam hose coupling with safety clamps

	Hose ID	DIN PN 10/16			DIN PN 25/40			150lbs
		-ST	-SS	-ST/SS	-ST-40	-SS-40	-ST/SS-40	-ST-150
SFSH-013-	13							
SFSH-019-	19							
SFSH-025-	25							
SFSH-032-	32							
SFSH-038-	38							
SFSH-050-	50							
SFSH-075-	75							



### 2.5.4. FFSH – Fixed flanged steam hose coupling with safety clamps

	Hose ID	DIN PN 10/16		DIN PN 25/40		150lbs	300lbs
		-ST	-SS	-ST-40	-SS-40	-ST-150	-ST-300
FFSH -013-	13						
FFSH -019-	19						
FFSH -025-	25						
FFSH -032-	32						
FFSH -038-	38						
FFSH -050-	50						
FFSH -075-	75						



### III. NIPPLES, REDUCERS, SOCKETS, CAPS, PLUGS

#### 3.1. DN – MALE/MALE Double nipple

The nipples are used to make threaded connections between couplings. The nipple consist of a standard BSP thread complying with EN ISO 228-1. NPT threaded nipples complying with ANSI B 1.20.1 are also available on request.

Nipples connect all types of low pressure coupling up to 16 bar / 232 psi.

Thread	Part #	-MS	-SS	-AL
G ½"	<b>DN-050-</b>			
G ¾"	<b>DN-075-</b>			
G 1"	<b>DN-100-</b>			
G 1¼"	<b>DN-125-</b>			
G 1½"	<b>DN-150-</b>			
G 2"	<b>DN-200-</b>			
G 2½"	<b>DN-250-</b>			
G 3"	<b>DN-300-</b>			
G 4"	<b>DN-400-</b>			
G 5"	<b>DN-500-</b>			
5½"DIN 11	<b>DN-550-</b>			
G 6"	<b>DN-600-</b>			



#### 3.2. RN – MALE/MALE Reducing nipple

Smaller	Bigger	Part #	-MS	-SS	-AL
G ½"	G ¾"	<b>RN-050075-</b>			
G ¾"	G 1"	<b>RN-075100-</b>			
G 1"	1 ¼"	<b>RN-100125-</b>			
	1 ½"	<b>RN-100150-</b>			
	G 2"	<b>RN-100200-</b>			
1 ¼"	1 ½"	<b>RN-125150-</b>			
	G 2"	<b>RN-125200-</b>			
1 ½"	G 2"	<b>RN-150200-</b>			
G 2"	G 2 ½"	<b>RN-200250-</b>			
	G 3"	<b>RN-200300-</b>			
G 2 ½"	G 3"	<b>RN-250300-</b>			
G 3"	G 4"	<b>RN-300400-</b>			



#### 3.3. DM – FEMALE/FEMALE DOUBLE SOCKETS

Thread EN ISO 228-1, BSP.

PUR thread seal for brass version, NBR for aluminium version.

Stainless steel available on request

Thread	Part #	-MS	-AL
G 1"	<b>DM-100-</b>		
G 1¼"	<b>DM-125-</b>		
G 1½"	<b>DM-150-</b>		
G 2"	<b>DM-200-</b>		
G 2½"	<b>DM-250-</b>		
G 3"	<b>DM-300-</b>		
G 4"	<b>DM-400-</b>		
G 5"	<b>DM-500-</b>		



### 3.4. RM – FEMALE/FEMALE REDUCING SOCKETS

Smaller	Bigger	Homep	-MS	-AL
G ¾"	G 1"	DM-075100-		
G 1"	1 ¼"	DM-100125-		
	1 ½"	DM-100150-		
	G 2"	DM-100200-		
1 ¼"	1 ½"	DM-125150-		
	G 2"	DM-125200-		
1 ½"	G 2"	DM-150200-		
G 2"	G 2 ½"	DM-200250-		
	G 3"	DM-200300-		
	G 4"	DM-200400-		
G 2 ½"	G 3"	DM-250300-		
	G 4"	DM-250400-		
G 3"	G 4"	DM-300400-		
G 4"	G 5"	DM-300400-		
G 5"	G 6"	DM-300400-		



### 3.5. RS – Female/Male reducers

Female	Male	Part #	-MS	-SS	-AL
G ½"	G ½"	RS-050050-			
G ¾"	G ½"	RS-075050-			
	G ¾"	RS-075075-			
	G 1"	RS-075100-			
G 1"	G ¾"	RS-100075-			
	G 1"	RS-100100-			
	G 1 ¼"	RS-100125-			
	G 1 ½"	RS-100150-			
G 1 ¼"	G 2"	RS-100200-			
	G 1"	RS-125100-			
	G 1 ¼"	RS-125125-			
	G 1 ½"	RS-125150-			
G 1 ½"	G 2"	RS-125200-			
	G 1"	RS-150100-			
	G 1 ¼"	RS-150125-			
	G 1 ½"	RS-150150-			
G 2"	G 2"	RS-150200-			
	G 1"	RS-200100-			
	G 1 ¼"	RS-200125-			
	G 1 ½"	RS-200150-			
G 2 ½"	G 2"	RS-200200-			
	G 2"	RS-200250-			
	G 3"	RS-200300-			
	G 2"	RS-250200-			
G 3"	G 3"	RS-250300-			
	G 4"	RS-250400-			
	G 2"	RS-300200-			
G 4"	G 2 ½"	RS-300250-			
	G 3"	RS-300300-			
	G 4"	RS-300400-			
5 ½" DIN 11	G 3"	RS-400300-			
	G 4"	RS-400500-			
	G 2"	RS-550200-			
DIN 11	G 3"	RS-550300-			
	G 4"	RS-550400-			

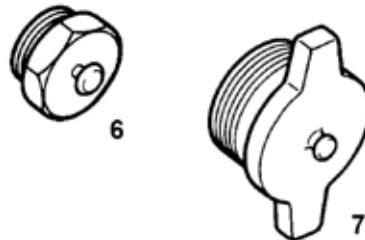


### 3.6. BK – Dust cap

Size	Part #	-SS	-MS	-AL
G ½"	<b>BK-050-</b>			
G ¾"	<b>BK-075-</b>			
G 1"	<b>BK-100-</b>			
G 1 ¼"	<b>BK-125-</b>			
G 1 ½"	<b>BK-150-</b>			
G 2"	<b>BK-200-</b>			
G 2 ½"	<b>BK-250-</b>			
G 3"	<b>BK-300-</b>			
G 4"	<b>BK-400-</b>			
5 ½"DIN11	<b>BK-550-</b>			

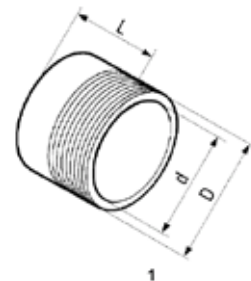
### 3.7. BS – Dust plug

Size	Mat.	Fig.	Part #	Price
G 1"	MS	6	<b>BS-100</b>	
G 1 ¼"	MS	6	<b>BS-125</b>	
G 1 ½"	MS	6	<b>BS-150</b>	
G 2"	MS	7	<b>BS-200</b>	
G 2 ½"	MS	7	<b>BS-250</b>	
G 3"	MS	7	<b>BS-300</b>	
5 ½"DIN11	AL	7	<b>BS-550</b>	



### 3.8. AN – welding nipple

Size	D x d x L	Fig	Part #	-ST	-SS	-AL
R 1/8" 2999		1	<b>AN-0131-</b>			
R 1/8" 2999		2	<b>AN-0133-</b>			
R 1/4" 2999		1	<b>AN-2501-</b>			
R 1/4" 2999		2	<b>AN-0252-</b>			
R 3/8" 2999		1	<b>AN-0381-</b>			
R 3/8" 2999		2	<b>AN-0381-</b>			
R ½"2999	21 x 13 x 35	1	<b>AN-0501-</b>			
½"NPT	21 x 13 x 35	1	<b>AN-0502-ST</b>			
R ¾"2999	27 x 18 x 35	1	<b>AN-0751-</b>			
¾"NPT	27 x 18 x 35	1	<b>AN-0752-ST</b>			
G 1"	33 x 23 x 35	1	<b>AN-1001-</b>			
1" NPT	33 x 23 x 35	1	<b>AN-1002-ST</b>			
G 1¼"	42 x 32 x 35	1	<b>AN-1251-</b>			
1¼"NPT	42 x 32 x 45	1	<b>AN-1252-ST</b>			
G 1½"	48 x 38 x 35	1	<b>AN-1501-</b>			
1½"NPT	48 x 38 x 45	1	<b>AN-1502-ST</b>			
G 2"	60 x 48 x 45	1	<b>AN-2001-</b>			
2"NPT	60 x 48 x 45	1	<b>AN-2002-ST</b>			
G 2½"	75 x 63 x 45	1	<b>AN-2501-</b>			
2½"NPT	75 x 63 x 60	1	<b>AN-2502-ST</b>			
G 3"	89 x 75 x 45	1	<b>AN-3001-</b>			
3"NPT	89 x 75 x 60	1	<b>AN-3002-ST</b>			
G 4"	114 x 100 x 45	1	<b>AN-4001-</b>			
4"NPT	114 x 100 x 60	1	<b>AN-4002-ST</b>			
5½"DIN 11	140 x 108 x 45	2	<b>AN-5503.ST</b>			
5½"DIN 11	140 x 100 x 45	2	<b>AN-5503.SS</b>			
G 5"	140 x 122 x 60	1	<b>AN-5001.ST</b>			
5"NPT	142 x 127 x 60	1	<b>AN-5002.ST</b>			



### 3.9. FGN – flange nipple

Male threaded flange coupling

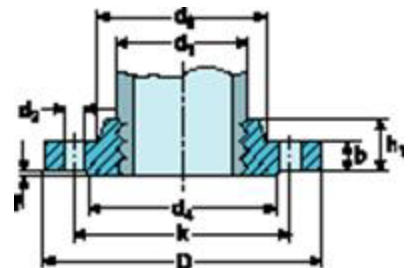
Flange	Thread	Mat.	Len.	Fig.	Part #	Price
DN25 PN 10/16	G 1"	St	73	2	FGN-025100-ST	
		SS	73	2	FGN-025100-SS	
	R 1"2999	Pp	41	1	FGN-025100-PP	
DN 32 PN 10/16	G 1 1/4"	St	75	2	FGN-032125-ST	
		SS	75	2	FGN-032125-SS	
DN 40 PN 10/16	G 1 1/2"	St	77	2	FGN-040150-ST	
		SS	77	2	FGN-040150-SS	
	R 1 1/2"2999	Pp	60	1	FGN-040150-PP	
	G 2"	St	87	2	FGN-040200-ST	
		SS	87	2	FGN-040200-SS	
	TW 1	G 3"	St	58	1	FGN-001300-ST
SS			58	1	FGN-001300-SS	
Ms			37	1	FGN-001300-MS	
Al			40	1	FGN-001300-AL	
DN 50 PN 10/16	G 2"	St	90	2	FGN-050200-ST	
		SS	90	2	FGN-050200-SS	
		Ms	37	1	FGN-050200-MS	
		Al	37	1	FGN-050200-AL	
	R 2" 2999	Pp	60	1	FGN-050200-PP	
DN 65 PN 10/16	G 2 1/2"	St	90	2	FGN-065250-ST	
		SS	90	2	FGN-065250-SS	
	G 3"	St	90	2	FGN-065300-ST	
		SS	90	2	FGN-065300-SS	
DN 80 PN 10/16	G 3"	St	95	2	FGN-080300-ST	
		SS	95	2	FGN-080300-SS	
		Ms	46	1	FGN-080300-MS	
		Al	46	1	FGN-080300-AL	
	R 3"2999	Pp	68	1	FGN-080300-PP	
TW 3	G 4"	St	58	1	FGN-003400-ST	
		SS	58	1	FGN-003400-SS	
		Al	50	1	FGN-003400-AL	
DN 100 PN 10/16	G 4"	St	97	2	FGN-100400-ST	
		SS	97	2	FGN-100400-SS	
		Ms	55	1	FGN-100400-MS	
		Al	55	1	FGN-100400-AL	
	5 1/2"DIN11	St	97	2	FGN-100550-ST	
		SS	97	2	FGN-100550-SS	
		Al	83	1	FGN-100550-AL	



### 3.10. FGM – flange with female thread









Flange with IG thread .

Flange	Thread	Mat.	Len. – h1	Part #	Price
DN6 PN 10/16	G 1/8"	ST	18	FGM-006013-ST	
DN 8 PN 10/16	G 1/4"	ST	18	FGM-008025-ST	
DN 10 PN 10/16	G 3/8"	ST	20	FGM-010038-ST	
DN 15 PN 10/16	G 1/2"	ST	20	FGM-015050-ST	
DN 20 PN 10/16	G 3/4"	ST	24	FGM-020075-ST	
DN 25 PN 10/16	G 1"	ST	24	FGM-025100-ST	
DN 32 PN 10/16	G 1 1/4"	ST	26	FGM-032125-ST	
DN 40 PN 10/16	G 1 1/2"	ST	26	FGM-040150-ST	
DN 50 PN 10/16	G 2"	ST	28	FGM-050200-ST	
DN 65 PN 10/16	G 2 1/2"	ST	32	FGM-065250-ST	
DN 80 PN 10/16	G 3"	ST	34	FGM-080300-ST	
DN 100 PN 10/16	G 4"	ST	38	FGM-100400-ST	
DN 150 PN 10/16	G 6"	ST	44	FGM-150600-ST	



## IV. QUICK COUPLINGS

### 4.1. KAMLOK

		SS	MS	BR	AL	PP			SS	MS	BR	AL	PP
<b>633A</b> 	½"						<b>633B</b> 	½"					
	¾"							¾"					
	1"							1"					
	1¼"							1¼"					
	1½"							1½"					
	2"							2"					
	2½"							2½"					
	3"							3"					
	4"							4"					
<b>633C</b> 	½"						<b>633D</b> 	½"					
	¾"							¾"					
	1"							1"					
	1¼"							1¼"					
	1½"							1½"					
	2"							2"					
	2½"							2½"					
	3"							3"					
	4"							4"					
<b>633E</b> 	½"						<b>633F</b> 	½"					
	¾"							¾"					
	1"							1"					
	1¼"							1¼"					
	1½"							1½"					
	2"							2"					
	2½"							2½"					
	3"							3"					
	4"							4"					
<b>634A</b> 	½"						<b>634B</b> 	½"					
	¾"							¾"					
	1"							1"					
	1¼"							1¼"					
	1½"							1½"					
	2"							2"					
	2½"							2½"					
	3"							3"					
	4"							4"					

#### Selection: 633A-AL40

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>633</b>	<b>A-</b>	<b>AL</b>	<b>40</b>

- Number: 633, 634
- Model: A, B, C, D, E, F, B
- Material: AL – Aluminium, MS – Brass, SS – Stainless steel AISI 316 - EN 1.4401, PP - Polypropylen, BR - Bronze
- Size: 05 – ½", 07 – ¾", 10 – 1", 12 – 1¼", 15 – 1½", 20 – 2", 25 – 2½", 30 – 3", 40 – 4", 50 – 5", 60 – 6", 80 – 8"

## ACCESSOIRES

				<b>KOM- ПЛЕКТ</b>	
1/2" - 3/4"	<b>C10187M</b>	<b>HN19167M</b>		<b>H20550M</b> 0.26 €	
1"	<b>C10188M</b>	<b>HN19162M</b>			
1 1/4 - 2 1/2"	<b>C10189M</b>	<b>HN19163M</b>			
3" - 5"	<b>D10190M</b>	<b>HN19165M</b>			
6"		<b>H01968RE</b>			

## FLANGED








				
	DIN	ANSI	DIN	ANSI
DN13	<b>FLA-050</b>	<b>FLAA-050</b>	<b>FLC-050</b>	<b>FLCA-050</b>
DN19	<b>FLA-075</b>	<b>FLAA-075</b>	<b>FLC-075</b>	<b>FLCA-075</b>
DN25	<b>FLA-100</b>	<b>FLAA-100</b>	<b>FLC-100</b>	<b>FLCA-100</b>
DN32	<b>FLA-125</b>	<b>FLAA-125</b>	<b>FLC-125</b>	<b>FLCA-125</b>
DN38	<b>FLA-150</b>	<b>FLAA-150</b>	<b>FLC-150</b>	<b>FLCA-150</b>
DN59	<b>FLA-200</b>	<b>FLAA-200</b>	<b>FLC-200</b>	<b>FLCA-200</b>
DN63	<b>FLA-250</b>	<b>FLAA-250</b>	<b>FLC-250</b>	<b>FLCA-250</b>
DN75	<b>FLA-300</b>	<b>FLAA-300</b>	<b>FLC-300</b>	<b>FLCA-300</b>
DN100	<b>FLA-400</b>	<b>FLAA-400</b>	<b>FLC-400</b>	<b>FLCA-400</b>
DN125	<b>FLA-500</b>	<b>FLAA-500</b>	<b>FLC-500</b>	<b>FLCA-500</b>
DN150	<b>FLA-600</b>	<b>FLAA-600</b>	<b>FLC-600</b>	<b>FLCA-600</b>
DN200	<b>FLA-800</b>	<b>FLAA-800</b>	<b>FLC-800</b>	<b>FLCA-800</b>

## SEALS







	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
NBR (BUNA) -40 +110°C	VLXB013	VLXB019	H06480M	H06477M	H06430M	H20544M	H20545M	H20546M	H20546M
VITON -20 +204°C	VLXV013	VLXV019	H00967M	H00968M	H00972M	H00973M	H00974M	H00975M	H00976M
FEP/Silicone	VLXPSG013	VLXPSG019	VLXPSG025	VLXPSG032	VLXPSG038	VLXPSG050	VLXPSG063	VLXPSG075	
CSM/hypalon -30 +140°C	VLXH013	VLXH019	VLXH025	VLXH032	VLXH038	VLXH050	VLXH063	VLXH075	VLXH100
EPDM -55 +150°C	VLXE013	VLXE019	VLXE025	VLXE032	VLXE038	VLXE050	VLXE063	VLXE075	VLXE100
TEF+NBR -40 +107°C	H03304	H03304	H03307	H03310	H03317	H03325	H03330	H03333	H03336
TEF+VIT -40 +107°C	VLXP013V	VLXP019V	VLXP025V	VLXP032V	VLXP038V	VLXP050V	VLXP063V	VLXP075V	VLXP100V
NEOPRENE -40 +100°C	H01881M	H01881M	H01884M	H01887M	H01890M	H01893M	H01896M	H01899M	H01902M
TEFLON -30 +230°C	H01979M	H01979M	H01980M	H01981M	H01982M	H01983M	H02172M	H02173M	H02174M
TEF+EPDM	VLXP013	VLXP019	VLXP025	VLXP032	VLXP038	VLXP050	VLXP063	VLXP075	VLXP100

For other sizes please consult DAIS office.

## 4.2. TW – DIN 28450

	<b>Coupler</b>			<b>Adaptor</b>	
	MK-50-MS			VK-5040-MS	
	MK-80-MS			VK-50-MS	
	MK-100-MS			VK-80-MS	
				VK-100-MS	
	MK-50-SS			VK-5040-SS	
	MK-80-SS			VK-50-SS	
MK-100-SS		VK-80-SS			
		VK-100-SS			
	<b>Locking chain</b>				
	K200				
		K300			
	<b>Crown</b>			<b>Locking ring</b>	
	TWK-50-MS			TWM-50-MS	
	TWK-80-MS			TWM-80-MS	
	TWK-50-SS			TWM-50-SS	
TWK-80-SS		TWM-80-SS			
	<b>Dust cap for VK</b>			<b>Dust cap for MK</b>	
	MB-50-MS			VB-50-MS	
	MB-80-MS			VB-80-MS	
	MB-100-MS			VB-100-MS	
	MB-50-AL			VB-50-AL	
	MB-80-AL			VB-80-AL	
	MB-100-AL			VB-100-AL	
	MB-50-SS			VB-50-SS	
	MB-80-SS			VB-80-SS	
	MB-100-SS			VB-100-SS	
				VB-50-PP	
		VB-80-PP			
		VB-100-PP			

	Nytril -NBR	White nytril -W	CSM -CS	Poly- uretane -PE	Viton -VI	EPDM -EP	PTFE -TS	Viton/ PTFE -TG	Size /mm/
<b>TWD-50-</b>									50
<b>TWD-80-</b>									80
<b>TWO-100-</b>									100
<b>GSD-50-</b>									50
<b>GSD-80-</b>									80

	TWD-...-... Flat seals for MK from different materials.
	TWO- ...- ...O-ring DN100 for MK100 and MB-100. from different materials
	GSD-...-... "TW" coupling seals for tank truck couplings according to DIN 28450 Profilated special type for pressure and high suction service
	TWD- ... - TS - Flat seals for MK from PTFE
	TWD- -TG. Flat seals for MK from PTFE encapsulated
	TWO- ... -TG. O- ring for MK100 and MB100 from PTFE encapsulated

## 4.3. STORZ

STORZ couplers from aluminium.


-FAxxxxxx - forged aluminium

-xxxxxx. – cast aluminium


### STZH – for hose

DN, tail	Lug mm	Cast aluminium		Forged aluminium		
		Part #	Price	Part #	Price	
DN25D, 55 mm	31	<b>STZH-031025</b>				
DN38, 85 mm	52	<b>STZH-052038</b>				
DN52, 92 mm	66	<b>STZH-066050</b>				
DN65, 2"x95 mm	81	<b>STZH-089060</b>				
DN65, 115 mm	81	<b>STZH-089060</b>				
DN75, 2 1/2"x125 mm	89			<b>STZH-FA089075x65</b>		
DN75, 122 mm	89	<b>STZH-089075</b>		<b>STZH-FA089075</b>		
DN100, 202 mm	133	<b>STZH-133100</b>		<b>STZH-FA133100</b>		
DN110A, 203 mm	133	<b>STZH-133110</b>				
DN125, 204mm	148	<b>STZH-148125</b>				


### STZF – Female thread

Thread	Lug	Part #	Price	Part #	Price	
3/4"	31	<b>STZF-031020</b>				
1"	31	<b>STZF-031025</b>				
1 1/2"	52	<b>STZF-052038</b>				
1 1/2"	66	<b>STZF-066038</b>				
2"	66	<b>STZF-066050</b>				
2"	81	<b>STZF-081050</b>				
2 1/2"	81	<b>STZF-081065</b>				
2 1/2"	89	<b>STZF-089065</b>				
3"	89	<b>STZF-089080</b>		<b>STZF-FA089080</b>		
4"	133	<b>STZF-133100</b>		<b>STZF-FA133100</b>		
5"	148	<b>STZF-160125</b>				


### STZM – Male thread

Thread	Lug	Part #	Price	Part #	Price	
2"	66	<b>STZM-066050</b>				
2"	81	<b>STZM-081050</b>				
2 1/2"	81	<b>STZM-081065</b>				
2 1/2"	89	<b>STZM-089065</b>				
3"	89	<b>STZM-089075</b>				
4"	133	<b>STZM-133100</b>				
5"	148	<b>STZM-148125</b>				


### Caps

Size	Lug	Part #	Price	Part #	Price	
DN25D	31	<b>STZC-D</b>				
DN52C	66	<b>STZC-C</b>		<b>STZC-C-FA</b>		
DN65	81	<b>STZC-81</b>				
DN75B	89	<b>STZC-B</b>		<b>STZC-B-FA</b>		
DN110A	133	<b>STZC-A</b>		<b>STZC-A-FA</b>		
DN125	148	<b>STZC-148</b>				

### Reducers

	Lug	Part #	Price	Part #	Price	
DN 52 x 25	66x31	<b>STZR-66/31</b>				
DN 75 x 50	89x66	<b>STZR-89/66</b>		<b>STZR-FA89/66</b>		
DN 75 x 65	89x81	<b>STZR-89/81</b>				
DN 100 x 75	133x89	<b>STZR-133/89</b>		<b>STZR-FA133/89</b>		

## Seals

Part #	Size		D	d	s	Rubber -NBR	White rubber -W	Viton -VI	
	mm	in							
STKD-25-	D	1"	29	28	9				
STKD-38-		1 1/2"							
STKD-50-	C	2"	64	47	10				
STKD-65-		2 1/2"							
STKD-75-	B	3"	87	67	10,5				
STKD-100-	A	4"	130	102	12				

## 4.4. GUILLEMIN



GUH - GUILLEMIN WITH HOSETAIL					
Size	For hose	Part #	Material		
			-AL	-SS	-MS
DN20	F/H 25 mm	<b>GUH-020025-</b>			
DN25	F/H 30 mm	<b>GUH-025030-</b>			
DN32	F/H 35 mm	<b>GUH-032035-</b>			
DN40	F/H 40 mm	<b>GUH-040040-</b>			
	F/H 45 mm	<b>GUH-040045-</b>			
DN50	F/H 50 mm	<b>GUH-050050-</b>			
	F/H 55 mm	<b>GUH-050055-</b>			
DN65	F/H 65 mm	<b>GUH-065065-</b>			
	F/H 70 mm	<b>GUH-065070-</b>			
DN80	F/H 76 mm	<b>GUH-080076-</b>			
	F/H 80 mm	<b>GUH-080080-</b>			
	F/H 90 mm	<b>GUH-080090-</b>			
DN100	F/H 100 mm	<b>GUH-100100-</b>			
	F/H 105 mm	<b>GUH-100105-</b>			
	F/H 110 mm	<b>GUH-100110-</b>			
DN150	F/H 152 mm	<b>GUH-150152-</b>			



		FEMALE WITH LATCH GUFL				MALE WITH LATCH GUML		
Size	Part #	-AL	-SS	-PP	Part #	-AL	-SS	-PP
DN20	<b>GUFL-020-</b>				<b>GUML-020-</b>			
DN25	<b>GUFL-025-</b>				<b>GUML-025-</b>			
DN32	<b>GUFL-032-</b>				<b>GUML-032-</b>			
DN40	<b>GUFL-040-</b>				<b>GUML-040-</b>			
DN50	<b>GUFL-050-</b>				<b>GUML-050-</b>			
DN65	<b>GUFL-065-</b>				<b>GUML-065-</b>			
DN80	<b>GUFL-080-</b>				<b>GUML-080-</b>			
DN100	<b>GUFL-100-</b>				<b>GUML-100-</b>			
DN150	<b>GUFL-150-</b>				<b>GUML-150-</b>			

		FEMALE WITHOUT LATCH GUF				MALE WITHOUT LATCH GUM		
Size	Part #	-AL	-SS	-PP	Part #	-AL	-SS	-PP
DN20	<b>GUF-020-</b>				<b>GUM-020-</b>			
DN25	<b>GUF-025-</b>				<b>GUM-025-</b>			
DN32	<b>GUF-032-</b>				<b>GUM-032-</b>			
DN40	<b>GUF-040-</b>				<b>GUM-040-</b>			
DN50	<b>GUF-050-</b>				<b>GUM-050-</b>			
DN65	<b>GUF-065-</b>				<b>GUM-065-</b>			
DN80	<b>GUF-080-</b>				<b>GUM-080-</b>			
DN100	<b>GUF-100-</b>				<b>GUM-100-</b>			
DN150	<b>GUF-150-</b>				<b>GUM-150-</b>			

Size	 DUSTCAP WITH LATCH GUC		 DUSTCAP WITHOUT LATCH GUC				
	Part #	-AL	-SS	Part #	-AL	-SS	-PP
DN20	GUCL-020-			GUC-020-			
DN25	GUCL-025-			GUC-025-			
DN32	GUCL-032-			GUC-032-			
DN40	GUCL-040-			GUC-040-			
DN50	GUCL-050-			GUC-050-			
DN65	GUCL-065-			GUC-065-			
DN80	GUCL-080-			GUC-080-			
DN100	GUCL-100-			GUC-100-			

### SEALS FOR GULLEMIN

Flat

Part #	Ruber -NBR
GSKD-50-	
GSKD-80-	
GSKD-100-	

Square seals for couplers

Part #	Ruber -NBR	EPDM -EP	Viton -VI	PTFE -TS
GSQ-020-				
GSQ-025-				
GSQ-032-				
GSQ-040-				
GSQ-050-				
GSQ-065-				
GSQ-080-				
GSQ-100-				

## 4.5. BAUER

Size										
	Part #	Price	Part #	Price	Part #	Price	Part #	Price	Part #	Price
2"	BAC-050		BAM-050		BAF-050		BAL-050		BAS-050	
3"	BAC-080		BAM-080		BAF-080		BAL-080		BAS-080	
3 1/2"	BAC-090		BAM-090		BAF-090		BAL-090		BAS-090	
4"	BAC-100		BAM-100		BAF-100		BAL-100		BAS-100	
6"	BAC-150		BAM-150		BAF-150		BAL-150		BAS-150	
8"	BAC-200		BAM-200		BAF-200		BAL-200		BAS-200	
10"	BAC-250		BAM-250		BAF-250		BAL-250		BAS-250	
12"	BAC-300		BAM-300		BAF-300		BAL-300		BAS-300	

## 4.6. EU AIR COUPLINGS by DIN3489

### STANDARD

European air couplings are heavy-duty claw couplings manufactured in compliance with DIN 3489.

### OPERATION

The claw distance is standardised to 42 mm. The couplings are pushed together and rotated to form a seal. Due to the lateral and angular shape of the seal an instant force is set, which prevent pressure loss due to vibration. The head of a European air coupling is identical and exchangeable with other European air-versions.

### APPLICATION

For air and water applications.

N.B.: European air couplings should never be used for steam applications

### WORKING PRESSURE

10 bar / 145 psi

### TEMPERATURE

-30°C / -22°F up to 120°C / 248°F

Hose, coupling, assembly method and seal must be chosen in relation with the desired application and temperature range.

### MATERIAL

Coupling: Galvanized steel

Seal : NBR

### ASSEMBLY

Two-bolt saddle clamps

Worm drive clamps

### THREADS

Male thread: DIN 2999, BSPT (not complying w/ DIN 3489)



Female thread: DIN ISO 228-1, BSP



### FEATURES

1. Claw distance: 42mm
2. LMC's EA couplings include a specially designed profiled NBR seal, the lateral and angular shape of which offers excellent compression properties. Pressure is applied as soon as the coupling is connected.
3. The serrated shank ensures perfect rigidity when assembled with saddle and worm drive clamps.
4. The LMC-Couplings brand name is marked on the top of the coupling.

Size		Part #	-SS	-ST		Part #	-SS	-ST
	EA coupling with serrated hose shank, DIN 3489				EA coupling with serrated hose shank and collar			
3/8"		<b>EUH-038-</b>				<b>EUHS-038-</b>		
1/2"		<b>EUH-050-</b>				<b>EUHS-050-</b>		
3/4"		<b>EUH-075-</b>				<b>EUHS-075-</b>		
1"		<b>EUH-100-</b>				<b>EUHS-100-</b>		
1 1/4"		<b>EUH-125-</b>						
	EA coupling male threaded BSPT, DIN 3489				EA coupling female threaded BSP, DIN 3489 - VBI			
1/4"		<b>EUM-025-</b>				<b>EUF-025-</b>		
3/8"		<b>EUM-038-</b>				<b>EUF-038-</b>		
1/2"		<b>EUM-050-</b>				<b>EUF-050-</b>		
3/4"		<b>EUM-075-</b>				<b>EUF-075-</b>		
1"		<b>EUM-100-</b>				<b>EUF-100-</b>		
1 1/4"	<b>EUM-125-</b>			<b>EUF-125-</b>				

	EA coupling cap, DIN 3489 - VB		
	Material	Part #	Price
	SS	<b>EUC-SS</b>	
	ST/PL	<b>EUC-ST</b>	
	Profiled seal, DIN 3489-D		
	Material	Part #	Price
	NBR	<b>EUS-NBR</b>	
	VI	<b>EUS-VI</b>	

EA coupling DIN3489 with serrated hose shank and collar are suitable for RKC safety hose clamps.

## 4.7. GeKa COUPLINGS

### STANDARD

'GK' couplings are symmetric quick couplings designed for agricultural, gardening, construction and public service applications.

### OPERATION

'GK' couplings are connected by pushing and rotating the two couplings together. The claw distance is a 40 mm and therefore interchangeable between all dimensions from DN 10 to DN 38. 'GK' couplings are not interchangeable with Express couplings complying with NF E 29.573 and European air couplings complying with DIN 3489. N.B.: Due to the wide range of 'GK'-type seals, 'GK' couplings can not always be connected with those of other manufacturers.

### APPLICATION

For agricultural, gardening, construction and public service applications.

### WORKING PRESSURE

20 bar / 290 psi

### TEMPERATURE

-30°C / -22°F up to 120°C / 248°F

Hose, coupling, assembly method and seal must be chosen in relation with the desired application and temperature range.

### MATERIAL

#### Coupling

Brass 2.0401 - Ms 58 hot drop forged (CuZn39Pb3)

#### Seal

NBR standard

FPM on request

### ASSEMBLY

Worm drive clamps

Low pressure ferrules

Claw clamps

### THREADS




Male thread: EN ISO 228-1, BSP

Female thread: EN ISO 228-1, BSP



### FEATURES

1. Claw distance 40 mm
2. Easily connected and disconnected coupling
3. The serrated shank ensures perfect rigidity when assembled with worm drive clamps or low pressure ferrules
4. The high mechanical strength of 'GK' claws ensures longer working life
5. Hot drop forged chrome-treated brass Ms58

Size	GKH – with serrated hose shank		GKF – female threaded BSP		GKM – male threaded BSP	
	Image	Номер / Цена	Image	Номер / Цена	Image	Номер / Цена
1/4"		GKH-007		GKF-007		GKM-007
3/8"		GKH-009		GKF-009		GKM-009
1/2"		GKH-013		GKF-013		GKM-013
5/8"		GKH-016		GKF-016		GKM-016
3/4"		GKH-019		GKF-019		GKM-019
1"		GKH-025		GKF-025		GKM-025
1 1/4"		GKH-032		GKF-032		GKM-032
1 1/2"		GKH-038		GKF-038		GKM-038

	GEKA cap	GKC		GEKA seal	GKS-NRR	
					GKS-VI	

GeKa couplings with serrated hose shank and collar are suitable for RKC safety hose clamps.

## 4.8. TRICLAMP COUPLINGS

### STANDARD

Triclamp couplings are quick couplings used in working environments demanding high levels of hygiene; e.g. the food, pharmaceutical, chemical and life science industries. The Triclamp couplings are available in DIN 32676, INCH, IMPERIAL or ISO 1127 standards.



### OPERATION

Triclamp couplings are easily identified by their flange design. The transition from the flange side to the hose side is made by a conical profile. The flange side is used to connect to another flange of the same dimension and standard. Users should ensure that only Triclamp's complying with the same standard are connected together. The Triclamp seal (profiled or non-profiled) is fitted to one of the flanges. The second Triclamp is then brought together with the flange containing the seal. The heavy-duty clamp is applied to the flanges and closed. The coupling can easily be connected, disconnected and reused.

N.B.: Closing the heavy-duty clamp too tightly will alter the mechanical structure of the flange seal. Always use the recommended torque setting of 5 NM.

### APPLICATION

For food, beverage, chemical, pharmaceutical and life science industry applications, as well as bio-engineering, filter and water treatment technology.

### WORKING PRESSURE

ND 10 to ND 50: maximum 16 bar / 230 psi  
 ND 65 to ND 100: maximum 10 bar / 145 psi

### TEMPERATURE

-30°C / -22°F up to +300°C / 572°F

### MATERIAL

Triclamp coupling with hose shank  
 Stainless steel AISI 316Ti - EN 1.4571  
 Polypropylene or reinforced PTFE (on request)  
 HASTELLOY® C-276 alloy on request

Triclamp coupling with butt weld  
 Stainless steel AISI 316L - EN 1.4404

### Seals

DIN 32676: NBR, EPDM, FPM, PTFE  
 INCH: NBR, EPDM, FPM, PTFE  
 ISO1127: Silicone, EPDM, FPM, GYLON BIO-PRO®  
 IMPERIAL: NBR, EPDM, FPM, PTFE

### ASSEMBLY

Stainless steel safety clamps EN 14420-3 / DIN 2817 or ferrules for rubber hoses or swage ferrules



### FEATURES

1. Lightly-grooved hose shank for assembly with EN 14420-3 safety clamps, swage ferrules
2. Bacterial growth is prevented due to the sanitary transition of the inside of the hose shank
3. The rounded end of the hose shank prevents hose damage
4. Low internal Ra value of < 0.3 µm (Ra test report available)
5. Outer diameter in relation with inner flange dimension. No disconnection necessary to define the type of tube system.
6. All sizes are fully vacuum-resistant up to 130°C / 265°F
7. Transition is possible between Triclamp couplings with same flange size/standard, same ID flange side and different hose dimension
8. EN 10204-type 3.1 certificate available on request

### Seals



ND	OD flange	ID	ID tube	-NBR	-EP	-VI	-TS	-SIL
mm	mm	mm	mm	EUR	EUR	EUR	EUR	EUR
10	34	10.2	<b>TRIX-10-</b>					
15	34	16.2	<b>RTIX-16-</b>					
20	34	20.2	<b>RTIX-20-</b>					
25	50.5	26.2	<b>RTIX-26-</b>					
32	50.5	32.2	<b>RTIX-32-</b>					
40	50.5	38.2	<b>RTIX-38-</b>					
50	64	50.2	<b>RTIX-50-</b>					
65	91	66.2	<b>RTIX-66-</b>					
80	106	81.2	<b>RTIX-81-</b>					
100	119	100.2	<b>RTIX-100-</b>					

### For hose

Part #	ND	For hose	OD Ø flange	ID pipe connection flange side	ID hose shank	Price
	mm	mm	mm	mm	mm	EUR
RTRI-0634-10	10	6.0	34.0	10.0	4.0	
RTRI-0834-10	10	8.0	34.0	10.0	5.5	
RTRI-1034-10	10	10.0	34.0	10.0	7.0	
RTRI-1234-10	10	12.0	34.0	10.0	9.0	
RTRI-2034-10	10	20.0	34.0	10.0	15.0	
RTRI-2534-10	10	25.0	34.0	10.0	21.0	
RTRI-0834-16	15	8.0	34.0	16.0	5.5	
RTRI-1034-16	15	10.0	34.0	16.0	7.0	
RTRI-1234-16	15	12.0	34.0	16.0	9.0	
RTRI-2034-16	15	20.0	34.0	16.0	15.0	
RTRI-2534-16	15	25.0	34.0	16.0	21.0	
RTRI-0834-20	20	8.0	34.0	20.0	5.5	
RTRI-1034-20	20	10.0	34.0	20.0	7.0	
RTRI-1234-20	20	12.0	34.0	20.0	9.0	
RTRI-2034-20	20	20.0	34.0	20.0	15.0	
RTRI-2534-20	20	25.0	34.0	20.0	21.0	
RTRI-1250-26	25	12.0	50.5	26.0	9.0	
RTRI-2050-26	25	20.0	50.5	26.0	15.0	
RTRI-2550-26	25	25.0	50.5	26.0	21.0	
RTRI-3250-26	25	32.0	50.5	26.0	28.0	
RTRI-3850-26	25	38.0	50.5	26.0	33.5	
RTRI-1250-32	32	12.0	50.5	32.0	9.0	
RTRI-2050-32	32	20.0	50.5	32.0	15.0	
RTRI-2550-32	32	25.0	50.5	32.0	21.0	
RTRI-3250-32	32	32.0	50.5	32.0	28.0	
RTRI-3850-32	32	38.0	50.5	32.0	33.5	
RTRI-1250-38	40	12.0	50.5	38.0	9.0	
RTRI-2050-38	40	20.0	50.5	38.0	15.0	
RTRI-2550-38	40	25.0	50.5	38.0	21.0	
RTRI-3250-38	40	32.0	50.5	38.0	28.0	
RTRI-3850-38	40	38.0	50.5	38.0	33.5	
RTRI-3850-38	40	38.0	50.5	38.0	33.5	
RTRI-3864-50	50	38.0	64.0	50.0	33.5	
RTRI-5064-50	50	50.0	64.0	50.0	43.5	
RTRI-6391-66	65	63.0	91.0	66.0	58.5	
RTRI-7591-66	65	75.0	91.0	66.0	70.5	
RTRI-7510-81	80	75.0	106.0	81.0	70.5	
RTRI-100106-81	80	100.0	106.0	81.0	94.0	
RTRI-100119-100	100	100.0	119.0	100.0	94.0	



### For welding

Part #	ND	OD tube	ID tube	OD flange	Цена
	mm	mm	mm	mm	EUR
RTRL-10	10	13	10	34	
RTRL-15	15	19	16	34	
RTRL-20	20	23	20	34	
RTRL-25	25	29	26	50.5	
RTRL-32	32	35	32	50.5	
RTRL-40	40	41	38	50.5	
RTRL-50	50	53	50	64	



### Accessoires

For flange	Part #	Price
25.0	TRIK-025	
34.0	TRIK-034	
50.5	TRIK-050	
64.0	TRIK-064	
77.5	TRIK-077	
91.0	TRIK-091	
106.0	TRIK-106	
119.0	TRIK-119	
130.0	TRIK-130	



Part #	Price
TRIP-025	
TRIP-034	
TRIP-050	
TRIP-064	
TRIP-077	
TRIP-091	
TRIP-106	
TRIP-119	
TRIP-130	



## V. CLAMPS and ACCESOIRES

### 5.1. SK - single bolt clamps



**SK-E.** Heavy duty clamps of steel with extra high tensional force. Bolts M6 of steel, zinc plated and chromated. Manufacturer ELAFLEX, Germany.



Размер	Номер	-ST	-SS	Размер	Номер	-ST	-SS
32 - 38	<b>SK-E36-</b>			17-19	<b>SK-019-</b>		
36 - 42	<b>SK-E42-</b>			20-22	<b>SK-022-</b>		
41 - 47	<b>SK-E45-</b>			23-25	<b>SK-025-</b>		
45 - 51	<b>SK-E49-</b>			26-28	<b>SK-028-</b>		
48 - 54	<b>SK-E52-</b>			29-31	<b>SK-031-</b>		
50 - 56	<b>SK-E54-</b>			32-35	<b>SK-035-</b>		
53 - 59	<b>SK-E57-</b>			36-39	<b>SK-039-</b>		
56 - 62	<b>SK-E60-</b>			40-43	<b>SK-043-</b>		
58 - 64	<b>SK-E62-</b>			44-47	<b>SK-047-</b>		
60 - 66	<b>SK-E64-</b>			48-54	<b>SK-052-</b>		
62 - 68	<b>SK-E66-</b>			52-55	<b>SK-055-</b>		
64 - 70	<b>SK-E68-</b>			56-59	<b>SK-059-</b>		
68 - 74	<b>SK-E72-</b>			60-63	<b>SK-063-</b>		
72 - 78	<b>SK-E76-</b>			64-67	<b>SK-066-</b>		
74 - 80	<b>SK-E78-</b>			68-73	<b>SK-073-</b>		
76 - 82	<b>SK-E80-</b>			74-79	<b>SK-079-</b>		
79 - 85	<b>SK-E83-</b>			80-85	<b>SK-088-</b>		
82 - 88	<b>SK-E86-</b>			86-91	<b>SK-091-</b>		
84 - 90	<b>SK-E88-</b>			92-97	<b>SK-097-</b>		
86 - 92	<b>SK-E90-</b>			98-103	<b>SK-100-</b>		
88 - 94	<b>SK-E92-</b>			104-112	<b>SK-112-</b>		
91 - 97	<b>SK-E95-</b>			113-121	<b>SK-126-</b>		
96 - 102	<b>SK-E100-</b>			122-130	<b>SK-130-</b>		
100 - 106	<b>SK-E104-</b>			131-139	<b>SK-139-</b>		
102 - 108	<b>SK-E106-</b>			140-148	<b>SK-148-</b>		
106 - 112	<b>SK-E110-</b>			149-161	<b>SK-161-</b>		
113 - 119	<b>SK-E117-</b>			162-174	<b>SK-174-</b>		
118 - 124	<b>SK-E122-</b>			175-187	<b>SK-187-</b>		
122 - 128	<b>SK-E126-</b>			188-200	<b>SK-200-</b>		
131 - 137	<b>SK-E135-</b>			201-213	<b>SK-213-</b>		
137 - 143	<b>SK-E141-</b>			214-226	<b>SK-226-</b>		
176 - 182	<b>SK-E182-</b>			227-239	<b>SK-239-</b>		
				240-252	<b>SK-252-</b>		

## 5.2. SZ - double bolt clamps

Size min-max	Thickness b x s	Bolts d	Part #	-ST	-SS
47 - 52	20 x 1	M 6 x 45	SZ-050-		
52 - 57			SZ-055-		
57 - 62			SZ-060-		
<b>60 - 66</b>			<b>SZ-066-</b>		
<b>64 - 70</b>			<b>SZ-070-</b>		
69 - 75			SZ-075-		
<b>74 - 80</b>			<b>SZ-080-</b>		
<b>86 - 92</b>			<b>SZ-092-</b>		
87 - 92			SZ-090-		
92 - 97			SZ-095-		
97 - 102			SZ-100-		
102 - 107			SZ-105-		
107 - 112			SZ-110-		
112 - 117			SZ-115-		
116 - 122			SZ-120-		
121 - 127	25 x 1,5	M 8 x 60	SZ-125-		
126 - 132			SZ-130-		
131 - 137			SZ-135-		
136 - 142			SZ-140-		
141 - 147			SZ-145-		
146 - 152			SZ-150-		
150 - 157			SZ-155-		
155 - 162			SZ-160-		
160 - 167			SZ-165-		
165 - 172			SZ-170-		
170 - 177			SZ-175-		
175 - 182			SZ-180-		
180 - 187	30 x 2	M 10 x 65	SZ-185-		
185 - 192			SZ-190-		
190 - 197			SZ-195-		
195 - 202			SZ-200-		
200 - 207			SZ-205-		
205 - 212			SZ-210-		
210 - 217			SZ-215-		
215 - 222			SZ-220-		
220 - 227			SZ-225-		
225 - 232			SZ-230-		
230 - 237			SZ-235-		
235 - 242			SZ-240-		
240 - 247			SZ-245-		
245 - 252			SZ-250-		
250 - 257			SZ-255-		
255 - 262			SZ-260-		
260 - 267			SZ-265-		
265 - 272			SZ-270-		
270 - 277			SZ-275-		
275 - 282			SZ-280-		
280 - 287			SZ-285-		
285 - 292	SZ-290-				
290 - 297	SZ-295-				
295 - 302	SZ-300-				

## 5.3. SC – Safety clamps by DIN 2817/2826

### STANDARD

SC safety clamps are manufactured in compliance with EN 14420-3 / DIN 2817, and are used to assemble EN/DIN standardized hoses. Threaded-, quick- and flange couplings with a smooth hose shank complying with EN 14420-2 / DIN 2817 are assembled with SC safety clamps.

### OPERATION

For safety reasons SC safety clamps should be used for larger hose diameters. SC safety clamps have a rim on the inside, which fits over the hose shank collar when the bolts are tightened. When SC safety clamps are assembled correctly, the coupling cannot be pulled out of the hose. SC safety clamps can be tightened during assembly when needed. When a hose is withdrawn from service for any reason, the Dais couplings shells and couplings can be easily dismantled for reuse.



DN	D	Mat.	H	B	L	Bolts	Part #	Price
13 x 5	22-24	SS	56	59	50	4xM6x20	SC-013005-SS	
		Ms*					SC-013005-MS	
		AL					SC-013005.AL	
13 x 6	24-26	SS	56	59	50	4xM6x20	SC-013006-SS	
		Ms*					SC-013006-MS	
13 x 7	26-28	Ms*					SC-013007-MS	
19 x 6	30-33	SS	65	68	50	4xM6x20	SC-019006-SS	
		Ms*					SC-019006-MS	
		AL					SC-019006-AL	
19 x 7	32-34	SS	70	73	50	4xM6x20	SC-019007-SS	
		Ms*					SC-019007-MS	
19 x 8	34-36	Ms*					SC-019008-MS	
25 x 6	36-39	SS	73	75	50	4xM6x20	SC-025006-SS	
		Ms*					SC-025006-MS	
		Al*					SC-025006-AL	
25 x 6,5	37-39	Ms*	76	79	65	4xM8x25	SC-025007-MS	
25 x 7,5	39-41	SS	80	83			SC-025008-SS	
		Ms*					SC-025008-MS	
		Al*			SC-025008-AL			
25 x 8,5	41-43	Ms*	80	83	65	4xM8x25	SC-025009-MS	
32 x 6	43-46	SS	75	77	50	4xM6x20	SC-032006-SS	
		Ms*					SC-032006-MS	
		Al*					SC-032006-AL	
32 x 8	47-50	Ms	83	85	50	4xM6x20	SC-032008-MS	
		Al*					SC-032008-AL	
		SS*					88	90
32 x 10	50-53	Ms	84	86	50	4xM6x20	SC-032010-MS	
		Al					SC-032010-AL	
35 x 6	47-50	Al*	83	85	50	4xM6x20	SC-035006-AL	
38 x 5	47-49	Al	81	83	50	4xM6x20	SC-038005-AL	
38 x 6,5	50-52	SS	83	85			SC-038007-SS	
		Ms*					SC-038007-MS	
		Al*			SC-038007-AL			
38 x 8	53-56	Ms	85	87	50	4xM6x20	SC-038008-MS	
		Al*					SC-038008-AL	
		SS					102	107
38 x 10	57-60	SS	90	92	50	4xM6x20	SC-038010-SS	
		Ms					SC-038010-MS	
		Al*					SC-038010-AL	
40 x 7	53-56	Ms	85	87	50	4xM6x20	SC-040007-MS	
		Al*					SC-040007-AL	
40 x 10	58-6	Ms	92	94	50	4xM6x20	SC-040010-MS	
		Al*					SC-040010-AL	
45 x 7	58-61	Al*	98	101	57	4xM8x25	SC-045007-AL	



50 x 5,5	60-62	Al				4xM8x25	SC-050005-AL	
50 x 6	62-63	Al*					SC-050006-AL	
50 x 8	64-67	SS	103	106	57	4xM8x25	SC-050008-SS	
		Ms*					SC-050008-MS	
		Al*					SC-050008-AL	
50 x 9	67-69	SS	113	117	100	4xM10x40	SC-050009-SS	
		Ms*				SC-050009-MS		
50 x 10	69-71	Ms*	107	110	57	4xM8x25	SC-050010-MS	
		Al*					SC-050010-AL	
		SS					SC-050010-SS	
50 x 12	73-76	Ms	128	132	100	4xM10x40	SC-050012-MS	
63 x 8	78-82	MS				4xM8x25	SC-063008-MS	
63 x 7,5	76-80	SS					SC-063008-SS	
63 x 8	78-82	AL					SC-063008-AL	
63 x 10	84-87	MS					SC-063010-MS	
63 x 10	84-87	AL					SC-063010-AL	
65 x 7	78-82	SS	118	121	75	4xM8x25	SC-065007-SS	
		Ms*					SC-065007-MS	
		Al*					SC-065007-AL	
65 x 10	84-87	Ms*	124	126	75	4xM8x25	SC-065010-MS	
		Al*					SC-065010-AL	
65 x 12	88-91						SC-065012-MS	
75 x 8	89-93	SS	131	133	77	4xM8x25	SC-075008-SS	
		Ms*					SC-075008-MS	
		Al*					SC-075008-AL	
75 x 10	94-97	Ms	138	140	77	4xM8x25	SC-075010-MS	
		Al*					SC-075010-AL	
75 x 12	98-101	Ms	148	150	77	4xM8x25	SC-075012-MS	
		Al*	141	142			SC-075012-AL	
75 x 14	102-105		155	157			SC-075014-MS	
80 x 8	94-97	SS	138	140	77	4xM8x25	SC-080008-SS	
		Ms					SC-080008-MS	
		Al*					SC-080008-AL	
80 x 10	99-102	Ms	148	150	77	4xM8x25	SC-080010-MS	
		Al*	141	142			SC-080010-AL	
80 x 12	102-105	Al*	141	142	108	6xM8x25	SC-080012-AL	
100 x 8	114-119	SS	164	167	120	4xM10x40	SC-100008-SS	
		Ms*					SC-100008-MS	
		Al*					SC-100008-AL	
100 x 10	118-122	Ms	185	187	120	4xM10x40	SC-100010-MS	
		Al*	167	169			SC-100010-AL	
100 x 12	122-126	Ms	185	187	120	4xM10x40	SC-100012-MS	
		Al*	174	176			SC-100012-AL	
100 x 14	126-130	Ms	185	187	120	4xM10x40	SC-100014-MS	
		Al*	180	182			SC-100014-AL	
100 x 16	130-134	Ms	185	187	120	4xM10x40	SC-100016-MS	
		Al*					SC-100016-AL	
125 x 10	143-148	Ms	211	214	145	6xM12x50	SC-125010-MS	
		Al*	190	192		6xM10x40	SC-125010-AL	
125 x 13	149-154	Ms	211	214	145	6xM12x50	SC-125013-MS	
		Al					SC-125013-AL	
125 x 15	153-158	Ms	218	224	145	6xM12x50	SC-125015-MS	
		Al					SC-125015-AL	
150 x 10	168-174	Al*	231	235	182	6xM12x50	SC-150010-AL	
150 x 13	174-180	Al*	233	237		SC-150013-AL		
150 x 15	178-184		244	248		SC-150015-AL		
200 x 12	222-229	Al*	288	291	243	8xM12x60	SC-200012-AL	
200 x 16	230-239		294	298		SC-200016-AL		



## 5.4. SCS – Safety clamps for steam

### OPERATION

SCS steam clamps are used in saturated steam and hot water applications. There are a number of physical differences between SCS steam clamps complying with EN 14423 / DIN 2826 and RK safety clamps complying with EN 14420-3 / DIN 2817:

- SCS steam clamps are physically larger and longer
  - SCS steam clamps have deeper inner groove
  - SCS steam clamps consist of a thicker wall
- SCS steam clamps complying with EN 14423 / DIN 2826 are assembled using specially-designed steam couplings complying with EN 14423 / DIN 2826.

N.B.: Steam is dangerous. EN ISO 6134 forbids the use of quick release couplings in steam applications. Extra care and attention should be taken when choosing the correct hose, fitting and clamping solution. Under no circumstances may SCS steam clamps complying with EN 14423 be replaced by RK safety clamps complying with EN 14420-3 / DIN 2817. Such substitution will result in a dangerous hose assembly.

**APPLICATION:** Assembly of steam and hot water hoses

**WORKING PRESSURE:** 100 bar / 1450 psi

### TEMPERATURE

+210°C/410°F Hose, coupling, assembly method and seal must be chosen in relation with the desired application and temperature



### MATERIAL

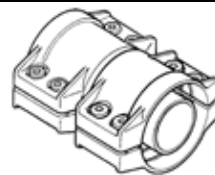
- SCS steam clamp shells
    - Drop forged brass
      - USA ASTM B16, grade C36000
      - Germany DIN 17660 grade CuZn36Pb3
      - UK BS 2847 grade CZ124
    - Cast stainless steel
      - USA ASTM A666 grade 316 stainless steel
      - Germany DIN 17440 grade 1.4401 X5CrNiMo1810
      - UK BS 970/4 grade 316S16
      - France NF A35-579 grade Z6CND17.11
  - Nuts and bolts
    - Brass SCS steam clamps:
      - bolts compl. with EN ISO 4762 / DIN 912, zinc plated 8.8
      - nuts compl. with EN ISO 4032 / DIN 934, zinc plated 8.8
    - Stainless steel SCS steamclamps:
      - bolts complying with EN ISO 4762 / DIN 912, SS A.2
      - nuts complying with EN ISO 4032 / DIN 934, SS A.2
- SCS steam clamps are supplied complete with nuts and bolts.

### ASSEMBLY

See assembly instructions

	Hose	For hose OD	-MS	-SS
<b>SCS-013006-</b>	13x6	24 - 26		
<b>SCS-019007-</b>	19x7	32 - 34		
<b>SCS-025008-</b>	25x7.5	39 - 41		
<b>SCS-032008-</b>	32x8	47 - 50		
<b>SCS-038008-</b>	38x8	53 - 56		
<b>SCS-050009-</b>	50x9	67 - 69		

## 5.5. SVR – Hose mender, SVL – Hose joiner for safety clamps



DN	Lenght	Part #	-ST	-SS	Size	Length	Part #	-SS	-MS	-ST
13	100	<b>SVR-013-</b>			13 x 5	105	<b>SVL-013005-</b>			---
19	100	<b>SVR-019-</b>			19 x 6	105	<b>SVL-019006-</b>			---
25	100	<b>SVR-025-</b>			25 x 6	105	<b>SVL-025006-</b>			---
32	100	<b>SVR-032-</b>			32 x 6	105	<b>SVL-032006-</b>			---
38	125	<b>SVR-040-</b>			38 x 6,5	105	<b>SVL-038007-</b>			---
40					40 x 7	105	<b>SVL-040007-</b>	---		---
					45 x 7	115	<b>SVL-045007-</b>			
50	125	<b>SVR-050-</b>			50 x 8	115	<b>SVL-050008-</b>			
63/65	125	<b>SVR-065-</b>			63x8/65x7	155	<b>SVL-065007-</b>			
75	150	<b>SVR-075-</b>			75 x 8	160	<b>SVL-075008-</b>			
80	150	<b>SVR-080-</b>			80 x 8	160	<b>SVL-080008-</b>		---	
100	180	<b>SVR-100-</b>			100 x 8	245	<b>SVL-100008-</b>		---	
125	220	<b>SVR-125-</b>			125 x 10	300	<b>SVL-125010-</b>		---	
150	260	<b>SVR-150-</b>			150 x 10	375	<b>SVL-150010-</b>		---	
200	300	<b>SVR-200-</b>			200 x 12	500	<b>SVL-200012-</b>		---	

## 5.6. WRM - Warm clamps, CLW clamps


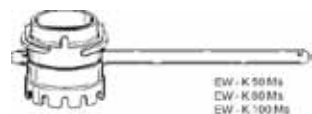
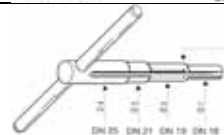
Part #	Size	Price	Part #	Size	Price
WRM-012	9,5-12 MM		WRM-120	90-120 MM	
WRM-015	10-15 MM		WRM-140	110-140 MM	
WRM-020	13-20 MM		WRM-160	130-160 MM	
WRM-022	14-22 MM		WRM-180	150-180 MM	
WRM-025	17-25 MM		WRM-200	170-200 MM	
WRM-030	22-30 MM		WRM-220	190-220 MM	
WRM-035	25-35 MM		WRM-240	210-240 MM	
WRM-040	30-40 MM		WRM-260	230-260 MM	
WRM-045	35-45 MM		WRM-280	250-280 MM	
WRM-050	35-50 MM		WRM-300	270-300 MM	
WRM-055	40-55 MM		WRM-320	290-320 MM	
WRM-060	45-60 MM		WRM-340	310-340 MM	
WRM-070	55-70 MM		WRM-360	330-360 MM	
WRM-080	60-80 MM		WRM-380	350-380 MM	
WRM-090	70-90 MM		WRM-400	370-400 MM	
WRM-100	80-100 MM		WRM-400	370-400 MM	






From zinc plated steel. Suitable for GeKa, EA air couplings.

Part #	Size	Price
CLW-17	17 mm	
CLW-20	20 mm	
CLW-23	23 mm	
CLW-26	26 mm	
CLW-29	29 mm	
CLW-32	32 mm	
CLW-36	36 mm	
CLW-38	38 mm	

## 5.7. Tools

Tools	Price	Image	Tool for MK	
			Part #	Price
	EWH-40/50		EWK-50-MS	
	EWH-65/80		EWK-80-MS	
	EWH-68/75		Tool for VHV and MHV	
	EWH-80/100		EW-15/25	
	EWH-95/100			

## 5.8. Pipe thread sealants

	<p>Soft-setting, non-toxic, PTFE paste. • Provides a positive seal on pipe threads, joints, fittings, hoses, nozzles, LPG cylinders, pump assemblies, oil burners, hydraulics, compressors, engines, motors, housings, plugs, fuel lines, couplings and more. • Use on brass, copper, stainless steel, aluminum, black pipe, tin, galvanized, ABS, CPVC, PVC plastics, nylon, polyethylene, polypropylene, polybutylene and more. • Excellent resistance to gasoline (up to 20% alcohol and petroleum blends), petroleum solvents, kerosene, diesel oil, propane, butane LPG, cutting oils, ammonia, aliphatic solvents, acids, steam, potable water, compressed air and more. • NOT for use on oxygen. • Remains pliable in cold temperatures. • Temperature Range: -74°C to 318°C • Pressure Range: To 10,000 psi sealing liquids; to 3,000 psi sealing gases. • One year shelf life when stored at 5°C to 27°C. • For alcohol blended gasoline (ethanol), see Gasoila's E-Seal Soft Set Thread Sealant.</p>	<table border="1"> <thead> <tr> <th>Part #</th> <th>Name</th> <th>Price</th> </tr> </thead> <tbody> <tr><td>FPSS02</td><td>57ml tube</td><td></td></tr> <tr><td>FPSS04</td><td>120 ml can with brush</td><td></td></tr> <tr><td>FPSS16</td><td>457 ml can with brush</td><td></td></tr> <tr><td>FPSB32</td><td>900 ml can with brush</td><td></td></tr> </tbody> </table>	Part #	Name	Price	FPSS02	57ml tube		FPSS04	120 ml can with brush		FPSS16	457 ml can with brush		FPSB32	900 ml can with brush	
		Part #	Name	Price													
FPSS02	57ml tube																
FPSS04	120 ml can with brush																
FPSS16	457 ml can with brush																
FPSB32	900 ml can with brush																
	<p>Lead-free, non-hardening, non-toxic, opaque gray paste. • Adheres readily to iron, stainless steel, aluminum, monel, plastics and synthetic rubber compounds • For use with dilute acids, aliphatic solvents, ammonia, dilute caustic alkali, chlorine, diesel fuel, gasoline, kerosene, jet fuel, LPG, natural gas, petroleum solvents, heating oils, butane, hydraulic oils, mineral oils, refrigerants and steam • NOT for oxygen • Brush on to seal pipe joints, plugs, screwed fittings and gasketed connections in steam systems, refineries, gas service, refrigeration systems and chemical plants • Temperature Range: --74°C to 318°C • Pressure Range: to 600bar sealing liquids; to 200bar sealing gases. One year shelf life when stored at 5°C to 27°C.</p>	<table border="1"> <thead> <tr> <th>Part #</th> <th>Name</th> <th>Price</th> </tr> </thead> <tbody> <tr><td>FPSS02</td><td>57ml tube</td><td></td></tr> <tr><td>FPSS04</td><td>120 ml can with brush</td><td></td></tr> <tr><td>FPSS16</td><td>457 ml can with brush</td><td></td></tr> </tbody> </table>	Part #	Name	Price	FPSS02	57ml tube		FPSS04	120 ml can with brush		FPSS16	457 ml can with brush				
		Part #	Name	Price													
FPSS02	57ml tube																
FPSS04	120 ml can with brush																
FPSS16	457 ml can with brush																
	<p>This zip tape is made from 100% teflon and can be used on all types of pipe.</p>																
	<table border="1"> <thead> <tr> <th>Part #</th> <th>Name</th> <th>Price</th> </tr> </thead> <tbody> <tr> <td>DXTTA50</td> <td>White Teflon Zip Tape 1,3 x 660mm</td> <td></td> </tr> </tbody> </table>	Part #	Name	Price	DXTTA50	White Teflon Zip Tape 1,3 x 660mm											
Part #	Name	Price															
DXTTA50	White Teflon Zip Tape 1,3 x 660mm																

## 5.9. Flat seals

Dais offers high quality gaskets for all products offered.

In this chapter we will present our range of flat / threaded seals of different materials and gaskets of Teflon and ELAPAC.

Seals as a replacement part for an item can be found in the section for the item. For example KAMLOK, TW, Storz, Gullemin, GeKA ETC

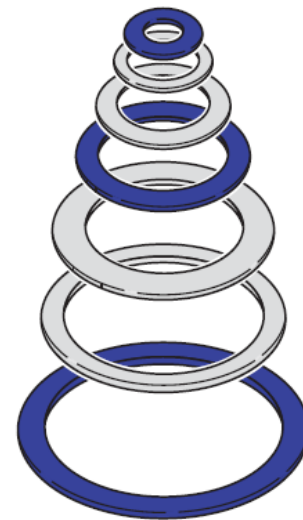
We accept orders for seals, which are not cited in the catalog.

### 5.9.1. VD - Flat seals type of polyurethane

Highly resistant to abrasion, non-toxic. Shore hardness  $\approx 90$ o. — For all petroleum based products and many solvents as per resistance chart on Chemical Resistance Chart.

Standard sizes (vertical strokes) of polyurethane elastomer, injection molded. Colour: blue. Other sizes of cast polyurethane, amber coloured.






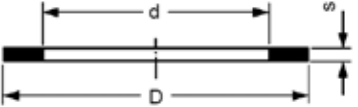
Part #	Application	D	d	s	Price
VD-20/7-PE	ZV 35	20	7	2	
VD-20/10-PE	ZVG	20	9,5	2	
VD-20/13-PE	(G 1/2")	20	13	2	
VD-21/6-PE	ZVF 25, ZV 25	21	6	3	
VD-22/12-PE	M 10 - W 21,8 x 1/14"	22	12	2	
VD-23/16-PE	G 5/8"	23	16	2	
VD-24/11-PE	ZVF 40, ZV 400, ZV 500	24	11	2	
VD-25/7-PE	ZVU, ZV 25 alt	25	7	3	
VD-26/19-PE	G 3/4"	26	19	2	
VD-27/13-PE	ZV 50	27	13	1,5	
VD-30/20-PE	ZVA 32	30	20	3	
VD-30/21-PE	ZV 203, M 30 x 1,5 L	30	21	2	
VD-33/24-PE	G 1"	33	24	2	
VD-36/28-PE	ZVA - Mix - Anschluss	36	28	2	
VD-39/20-PE	ZV 35	39	20	4	
VD-42/29-PE	G 1 1/4" (DN 25)	42	29	2	
VD-42/34-PE	G 1 1/4" (DN 25 + DN 32)	42	34	2	
VD-47/34-PE	ZVF 40, ZV 400, ZV 500	47	34	4	
VD-48/34-PE	G 1 1/2" (DN 32)	48	34	2	
VD-48/37-PE	ZH 50	48	37	2	
VD-48/39-PE	G 1 1/2" (DN 32 + DN 38)	48	39	2	
VD-52/39-PE		52	39	2	
VD-52/46-PE		52	46	2	
VD-54/44-PE	G 1 3/4"	54	44	2,5	
VD-56/46-PE	ZH 35, ZH 50	56	46	2,5	
VD-60/45/3-PE		60	45	2,5	
VD-60/45-PE	ZV 50	60	45	4	
VD-60/49-PE	G 2"	60	49	2	
VD-67/53-PE		67	53	2	
VD-69/60-PE		69	60	3	
VD-72/58-PE	ZV 50, Haltermann	72	58	3	
VD-76/63-PE	G 2 1/2"	76	63	2,5	
VD-80/60-PE		80	60	3	
VD-82/65-PE	M 80 x 3, W 82 x 1/6 (Marine)	82	65	3	
VD-88/77-PE	G 3"	88	77	3	
VD-100/80-PE	G 3 1/2"	100	80	3	
VD-113/80-PE	4 1/2" DIN 11	113	80	3	
VD-114/100-PE	G 4"	114	100	3	
VD-140/124-PE	G 5"	140	124	3	
VD-140/102-PE	5 1/2" DIN 11	140	102	3	



Flat seals for hatches and manholes of tank trucks can be found in catalog "TANK TRUCKS".

## 5.9.2. FLAT SEALS FROM OTHER MATERIALS

Dais offers flat seals of materials resistant to various chemicals. as:

<p><b>THERMOPAC</b></p>  <p>Light colored solid. Especially for hot oil and bitumen to 250° C and hot water and steam up to 25 bar Ending in the formation of the code: <b>-HB</b></p>	<p><b>VITON</b></p>  <p>mild to hot aromatic hydrocarbons and oils. Ending in the formation of the code: <b>-VI</b></p>	<p><b>HYPOLAN(CSM)</b></p>  <p>soft, suitable for acids and bases. Ending in the formation of the code: <b>-CS</b></p>
<p><b>EPDM</b></p>  <p>black, soft, suitable for esters and ketones, ethers, acetates, alcohols, aldehydes Ending in the formation of the code: <b>-EP</b></p>	<p><b>PTFE</b></p>  <p>white, massive, hard, chemically resistant universal Ending in the formation of the code: <b>-TS</b></p>	

Part #	Thread	D	d	s	-HB	-VI	-CS	-EP	-TS
VD-20/13-	G 1/2"	20	13	2					
VD-26/19-	G 3/4"	26	19	2					
VD-33/24-	G 1"	33	24	2					
VD-42/28-	G 1 1/4"	42	28	2					
VD-42/34-	G 1 1/4"	42	34	2					
VD-48/39-	G 1 1/2"	48	39	2					
VD-60/49-	G 2"	60	49	2					
VD-76/63-	G 2 1/2"	76	63	3					
VD-88/77-	G 3"	88	77	3					
VD-114/100-	G 4"	114	100	3					
VD-140/102-	5 1/2"	140	102	3					

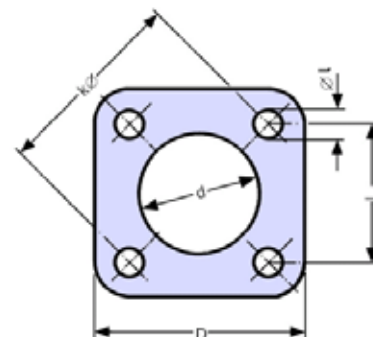
Part #	Name	Price
PD-500	Seal for 5 1/2" DIN11 coupler KWZ(RS-550xxx), dim: 140/102/6	

## 5.10. Flange gaskets

### 5.10.1.QFD - Square flange gaskets ELAPAC

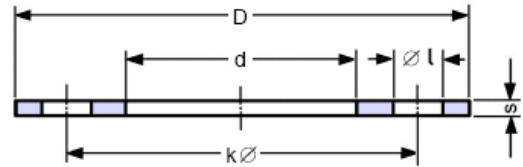
thickness: approx. 2 mm

Part #	D	d	Ø k	Ø l	L	Price
QFD-90/44	90	44	92	4 x 11	65	
QFD-90/70	90	70	99	4 x 9,5	70	
QFD-98/9	98	60	110	4 x 9	78	
QFD-98/12	98	60	110	4 x 12	78	
QFD-100/55	100	55	106	4 x 12	75	
QFD-100/65	100	65	106	4 x 12	75	
QFD-105/80	105	80	118	4 x 10	84	
QFD-115/90	115	90	130	4 x 11,5	92	
QFD-117/80	117	80	121	4 x 15	86	
QFD-125/80	125	80	135	4 x 11	96	
QFD-130/90	130	90	144	4 x 14	102	
QFD-130/100	130	100	150	4 x 14	106	
QFD-155/100	155	100	175	4 x 15	124	
QFD-160/95	160	95	175	4 x 11,5	124	
QFD-160/120	160	120	175	4 x 11,5	124	

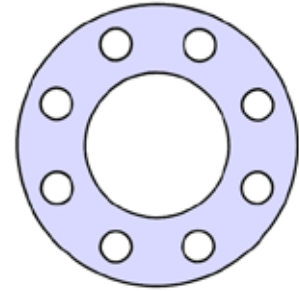


### 5.10.2.FD - Flange gaskets ELAPAC

Round flange seals **ELAPAC-FD** for all kinds of mineral oil products and many solvents acc. to resistance chart. Details of materials and technical data, service range and temperatures range ask from DAIS office.

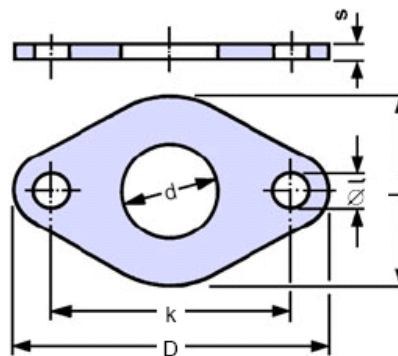


Part #	Flange	D	d	Øk	Øl	s	Price
FD-108	Gaspindelventil Tankwagen	108	78,5	91	4 x 6,5	2	
FD-115/35	DN 25 PN 10/16	115	35	85	4 x 14	2	
FD-115/45	Gasrücklaufleitungsflansch	115	45	90	4 x 13,5	2	
FD-140/43	DN 32 PN 10/16	140	43	100	4 x 18	2	
FD-140/61	DN 50 PN 6 (FD 140)	140	61	110	4 x 15	2	
FD-150	DN 40 PN 10/16	150	49	110	4 x 18	2	
FD-154/50	DN 50 TW 1 (FD 2/50)	154	50	130	8 x 12	2	
FD-154	DN 80 TW 1 (FD 2/80)	154	90	130	8 x 12	2	
FD-154/105	Kippsicherung	154	105	130	8 x 12	2	
FD-165	DN 50 PN 10/16	165	61	125	4 x 18	2	
FD-174	DN 100 TW 3 (FD 4)	174	110	150	8 x 14	2	
FD-185	DN 65 PN 10/16	185	76	145	4 x 18	2	
FD-200	DN 80 PN 10/16	200	90	160	8 x 18	2	
FD-204	DN 125 TW 5 (FD 6)	204	135	176	8 x 14	2	
FD-220/115	DN 100 PN 10/16	220	115	180	8 x 18	2	
FD-220/140	Bodenventil DN 80	220	140	190	8 x 15	2	
FD-220/162	Bodenventil innenliegend	220	162	190	8 x 14	2	
FD-225	Sonderflansch	225	160	190	8 x 12	2	
FD-229	Seitenfüllanschluss	229	110	170	8 x 19	3	
FD-232	API-Kupplung	232	185	212,5	12 x 10	2	
FD-233	Pumpenflansch	233	158	210	8 x 14	3	
FD-235	Sonderflansch	235	155	210	8 x 18	2	
FD-240	DN 150 TW 7 (FD 8)	240	160	210	12 x 14	2	
FD-250	DN 125 PN 10/16	250	141	210	8 x 18	2	
FD-270	Bodenventil	270	210	240	12 x 14	3	
FD-280	DN 150 PN 10/16	280	169	240	8 x 22	2	
FD-336	Inhaltsanzeiger	336	260	311	12 x 12	3	
FD-340/8	DN 200 PN 10	340	220	295	8 x 22	2	
FD-340/12	DN 200 PN 16	340	220	295	12 x 22	2	
FD-620	Domdeckel	620	550	585	20 x 14	2	



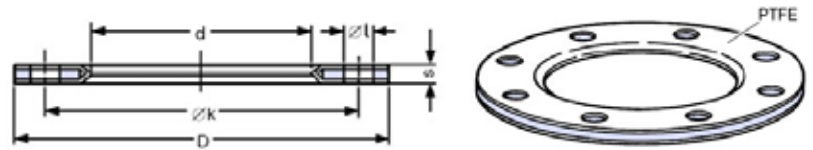
### 5.10.3.Ovalflange gaskets of ELAPAC - FD

Part #	D	d	Øk	Øl	L	s	Price
FD-20	76	23	58	10	46	2	
FD-20-3	76	23	58	10	46	3	
FD-25	90	27	68	12	55	2	
FD-25-3	90	27	68	12	55	3	
FD-32	100	35	78	12	64	2	
FD-32-3	100	35	78	12	64	3	
FD-40	104	43	82	12	68	2	
FD-40-3	104	43	82	12	68	3	
FD-50	126	52	100	12	80	2	
FD-50-3	126	52	100	12	80	3	
FD-118	118	50	90	12	80	2	
FD-118-3	118	50	90	12	80	3	
FD-650	138	52	100	12	70	2	
FD-650-3	138	52	100	12	70	3	



### 5.10.4. Flange gaskets PTFE covered

Round flange seals of ELAPAC-FD, additionally with 0.4 mm thick PTFE cover, open to the outside, as shown. - Suitable for allmedia as per resistance chart, column TM.



Part #		D	d	Øk	Øl	s	Price
FD-108-TM	Gaspendelventil Tankwagen	108	73	91	4 x 6,5	3	
FD-115/45-TM	Gasrücklaufleitungs flansch	115	45	90	4 x 13,5	3	
FD-154/52-TM	DN 50 TW 1	154	52	130	8 x 12	3	
FD-154-TM	DN 80 TW 1	154	82	130	8 x 12	3	
FD-154/104-TM	Kippsicherung	154	104	130	8 x 12	3	
FD-174-TM	DN 100 TW 3	174	102	150	8 x 14	3	
FD-185-TM	DN 65 PN 10 / 16	185	68	145	4 x 18	3	
FD-200-TM	DN 80 PN 10 / 16	200	82	160	8 x 18	3	
FD-204-TM	DN 125 TW 5	204	127	176	8 x 14	3	
FD-220-TM	DN 100 PN 10 / 16	220	100	180	8 x 18	3	
FD-220/140-TM	Bodenventil DN 80	220	140	190	8 x 15	3	
FD-220/160-TM	Bodenventil innenliegend	220	160	190	8 x 14	3	
FD-225-TM	Sonderflansch	225	152	190	8 x 12	3	
FD-229-TM	Seitenfüllanschluss	229	102	170	8 x 19	3	
FD-232-TM	API Kupplung	232	177	212,5	12 x 10	3	
FD-233-TM	Pumpenflansch	233	150	210	8 x 14	3	
FD-235-TM	Sonderflansch	235	155	210	8 x 18	3	
FD-240-TM	DN 150 TW 7	240	152	210	12 x 14	3	
FD-270-TM	Bodenventil	270	202	240	12 x 14	3	
FD-336-TM	Inhaltsanzeiger	336	260	311	12 x 12	3	

Other measurements on request.

## VI. DOCUMENTS

### 6.1. Chemical resistance chart for seals

MEDIEN, MEDIENGRUPPEN Wenn nicht anders angegeben, bei Raumtemperatur. Bei Gemischen alle Komponenten beachten!	Perbunan NBR	Perbunan weiß NBR white	EPDM / Butyl EPT	ELAPAC blau NBR / cork / textile	THERMOPAC hell hart - hard	Hypalon CSM	Polyamid Nylon	PTFE PTFE	Polyurethan polyurethane	Viton FKM
FLUIDS, FLUID GROUPS If not otherwise stated, at ambient temperature. All components of mixtures must be considered!	NBR	NBR-W	EPD	FD	HBD	HYD	NYD	TD/TM	VD	ViD
Aliphatische Kohlenwasserstoffe wie Benzin, Diesel, Ole, Petroleum Aliphatic hydrocarbons as gasoline, diesel, fuel oil, crude oil, petroleum	A	A	C	A	A	C	A	A	A	A
Otto - Kraftstoffe mit Aromaten-, Ether-, Methanolzusätzen nach DIN Gasoline with aromatic-, ether- and methanol additives	A-B	B	C	A	A	C	A	A	A	A
Aromatische Kohlenwasserstoffe wie Benzol, Toluol, Xylol Aromatic hydrocarbons as benzene, toluol, xylol	B-C	C	C	(B)	A	C	A	A	A-B	A
Chlorierte Kohlenwasserst. wie Methylenchlorid, Per- und Trichlorethylen Chlorinated hydrocarbons as methylene-chloride, per- and tri-chloroethylene	C	C	C	(B)	A	C	A	A	B	A
Alkohole wie Ethanol, Butanol, Methanol, Isopropylalkohol Alcohols as ethanol, butanol, methanol, isopropyl alcohol	A	A	A	A	A	A	A	A	A-B	A
Amine wie Anilin, Butylamin, Pyridin, Diethylamin, Triethylamin Amines as aniline, buthyl amine, pyridine, diethyl amine, triethyl amine	C	C	A	(B)	A	C	A	A	B	C
Acetate, Aldehyde, Ester, Ether Acetates, aldehydes, ester, ether	B	C	A	(B)	A	B	A	A	B	C
Ketone wie Aceton, Methylglyketon (MEK), Cyclohexanon Ketones as acetone, methyl ethyl ketone, cyclohexanon	C	C	A	(B)	A	C	A	A	B	C
Glykole, Enteisungsflüssigkeiten, Frostschutzmittel, Glysantin Glycol, defrosting fluids, anti-freezing fluids	A	A	A	A	A	A	A	A	B	B
Trinkwasser, Lebensmittel - auch ölig, helle Granulate, Milch, Fette Drinking water, ecibles - also oily, light granulates, milk, fats	-	A	-	-	A	-	A	A	A	-
Wasser, Abwasser, Seewasser, Kühlwasser, auch ölig Water, sewage, seawater, cooling water also containing oil	A	A	A	A	A	A	A	A	B	A
Asphalt, Heißbitumen, Teer bis 200° C Asphalt, hot bitumen, tar up to 200° C	B	C	B	B	A	C	C	C	C	A
Teeröle wie Braun- und Steinkohlenteeröl, Kresol, Phenol Tar oils as lignite-tar oil, coal-tar oil, cresol, phenol	C	C	A	(B)	A	C	C	A	C	A
Sattdampf, gesättigter Nassdampf bis 220° C High pressure wet saturated steam up to 220° C	C	C	C	C	A	C	C	C	C	A
Ammoniak wässrig, Flüssigdünger Ammonia hydrons, liquid fertilizer	A	A	A	A	A	A	A	A	C	B
Salzlösungen, schwach saure Medien, Carbonate, Chloride, Nitrate, Phosphate Salt solutions, fluids with low acid contents, carbonates, chlorides, nitrates, phosphates	A	A	A	A	A	A	A	A	C	A
Laugen wie Kalilauge, Natronlauge, Reinigungslaugen 100° C Alkalis as potassium hydroxide, sodium hydroxide, cleaning alkalis up to 100° C	C	C	A	C	B	A	B	A	C	B
Ameisensäure Formic acid	C	C	A	C	A	A	C	A	C	A
Chlorsulfonsäure Chlorosulfonic acid	C	C	C	C	A	C	C	A	C	C
Chromsäure Chromic acid	C	C	B	C	A	A	C	A	C	A
Essigsäure Acetic acid	C	C	A	C	A	A	C	A	C	A
Flußsäure, Fluorwasserstoffsäure Hydrofluoric acid	C	C	A	C	C	A	C	A	C	A
Oxalsäure Oxalic acid	C	C	A	C	A	A	B	A	C	A
Phosphorsäure Phosphoric acid	B	C	A	C	A	A	C	A	C	A
Salpetersäure Nitric acid	→ 30 %	C	C	C	C	C	B	C	A	C
	30 - 70 %	C	C	C	C	C	C	C	A	C
	70 - 90 %	C	C	C	C	C	C	C	A	C
Salzsaure Hydrochloric acid	C	C	A	C	A	A	C	A	C	A
Schwefelsäure Sulfuric acid	→ 65 %	C	C	A	C	B	A	C	A	C
	65 - 95 %	C	C	B	C	B	A	C	A	C
	96 %	C	C	C	C	B	B	C	A	C

- A** = gut geeignet  
good, fluid has little or no effect
- (B)** = geeignet. Nur Dichtungs-Innenrand wird angequollen (siehe Seite 384)  
suitable. Only interior rim of flange seals swells (see page 384)
- B** = bedingt geeignet (z.B. Quellung, Festigkeitsverlust, Schrumpf)  
fair, fluid has minor effect (swelling, loss of tensile strength, shrinking)
- C** = nicht geeignet wegen schneller Zerstörung oder Erweichung (z.B. Dampf)  
not suitable because of quick destruction or softening (e.g. steam)

Vorbehalt: Eine Garantie für diese allgemeinen Informationsangaben wird nicht übernommen. Sie wurden den Druckschriften der Rohstoffhersteller entnommen. Zu beachten ist, dass sich die Angaben nur auf reine Werkstoffe beziehen. - Spezielle Beständigkeitsversuche können nach Vereinbarung durchgeführt werden.

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## 6.2. Chemical resistance chart for metal

MEDIEN MEDIENGRUPPEN Wenn nicht anders angegeben, bei Raumtemperatur. Bei Gemischen alle Komponenten beachten!	Messing brass, bronze	Aluminium aluminium	Stahl St. 37 carbon steel	EcoSteel 1.4571 stainl. steel 316 Ti	mit Beschichtung Teflon/PFA Cover	Polyamid polyamide	Polypropylen polypropylene
FLUIDS, FLUID GROUPS If not otherwise stated, at ambient temperature. All components of mixtures must be considered!	Ms	Alu	St	SS	SSE	P (PA)	PP
Aliphatische Kohlenwasserstoffe wie Benzin, Diesel, Öle, Petroleum Aliphatic hydrocarbons as gasoline, diesel, fuel oil, crude oil, petroleum	A	A	A	A	A	A	C
Otto - Kraftstoffe mit Aromaten-, Ether-, Methanolzusätzen nach DIN Gasoline with aromatic-, ether- and methanol additives	A	A	A	A	A	A	C
Aromatische Kohlenwasserstoffe wie Benzol, Toluol, Xylol Aromatic hydrocarbons as benzene, toluol, xylol	A	A	A	A	A	A	C
Chlorierte Kohlenwasserst wie Methylenchlorid, Per- und Trichlorethylen Chlorinated hydrocarbons as methylene-chloride, per- and tri-chloroethylene	A	(A)	A	A	A	A	C
Alkohole wie Ethanol, Butanol, Methanol, Isopropylalkohol Alcohols as ethanol, butanol, methanol, isopropyl alcohol	A	A	A	A	A	A	B
Amine wie Anilin, Butylamin, Pyridin, Diethylamin, Triethylamin Amines as aniline, buthyl amine, pyridine, diethyl amine, triethyl amine	A	A	A	A	A		B
Acetate, Aldehyde, Ester, Ether Acetates, aldehydes, ester, ether	A	A	A	A	A	A-B	B
Ketone wie Aceton, Methyl ethyl keton (MEK), Cyclohexanon Ketones as acetone, methyl ethyl ketone, cyclohexanon	A	A	A	A	A	A	B
Glykole, Enteisungsflüssigkeiten, Frostschutzmittel, Glysantin Glycol, defrosting fluids, anti-freezing fluids	A	B	A	A	A	A	A
Wasser, Abwasser, Seewasser, Kühlwasser, auch ölhaltig Water, sewage, seawater, cooling water also containing oil	A	B	B	A	A	A	A
Asphalt, Heibitumen, Teer bis 200° C Asphalt, hot bitumen, tar up to 200° C	A	C	C	A	-	-	C
Teeröle wie Braun- und Steinkohlenteeröl, Kresol, Phenol Tar oils as lignite-tar oil, coal-tar oil, cresol, phenol	A	B	A	A	A	C	C
Sattdampf, gesättigter Wasserdampf bis 220° C High pressure wet saturated steam up to 220° C	A	B	B	A	-	-	C
Eisen-III- chlorid, Eisensalze Ferric-III-chloride, ferric salts	C	C	C	C	A	C	A
Ammoniak wässrig, Flüssigdünger Ammonia hydrons, liquid fertilizer	C	B	A	A	A	A	A
Salzlösungen wie Carbonate, Chloride, Nitrate, Phosphate Salt solutions as carbonates, chlorides, nitrates, phosphates	A-B	B-C	B	A	A	A	A
Laugen wie Kalilauge, Natronlauge, Reinigungsleugen 100° C Alkalies as potassium hydroxide, sodium hydroxide, cleaning alkalies up to 100° C	B	C	B	A	A	B	A
Ameisensäure Formic acid	A-B	B	B	A	A	C	A
Chlorsulfonsäure Chlorosulfonic acid	C	C	B	B	A	C	C
Chromsäure Chromic acid	C	C	B	A	A	C	A
Essigsäure Acetic acid	C	C	B	A	A	C	A
Flusäure, Fluorwasserstoffsäure Hydrofluoric acid	C	C	C	C	A	C	A
Oxalsäure Oxalic acid	C	B	C	A	A	B	A
Phosphorsäure Phosphoric acid	C	C	C	A	A	C	A
Salpetersäure Nitric acid	→ 30 %	C	C	A	A	C	A
	30 - 70 %	C	C	A	A	C	C
	70 - 90 %	C	B	A	A	C	C
Salzsäure Hydrochloric acid	C	C	C	C	A	C	A
Schwefelsäure Sulfuric acid	→ 65 %	C	C	C	B-C	A	A
	65 - 95 %	C	C	C	B	A	A
	96 %	C	B	A	A	C	A

- A** = gut geeignet  
good, fluid has little or no effect
- B** = bedingt geeignet (z.B. Korrosion, Rost, Abtrag, Quellung)  
fair, fluid has minor effect (corrosion, rust, erosion, swelling)
- C** = nicht geeignet  
not suitable

**VORBEHALT:** Eine Garantie für diese allgemeinen Informations-Angaben wird nicht übernommen. Sie wurden den Druckschriften der Rohstoffhersteller entnommen. Zu beachten ist, dass sich die Angaben nur auf reine Werkstoffe beziehen. Spezielle Beständigkeitsversuche können nach Vereinbarung durchgeführt werden.

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## 6.3. Materials

<b>STEEL</b>	<b>STAINLESS STEEL</b>	<p><b>AISI 304 / 1.4301</b>  This is the most common Cr-Ni 18/8 quality and is used widely in the food processing and pharmaceutical industries for piping and storage units. AISI 304 is also used to manufacture all kinds of equipment for the brewing industry, margarine factories and abattoirs, as well as in the chemical industry to manufacture equipment for processes involved in the production of materials such as nitric acid, nitrates, nitrate fertilizers and explosives.</p>
		<p><b>AISI 304L / 1.4306</b>  Stainless steel 1.4306 is more highly-resistant to nitric acid at high concentrations and temperatures than 1.4301. This alloy is used primarily in the chemical, food processing, pharmaceutical and other industries for reactor vessels, storage tanks and other equipment. Stainless steel AISI 304L / 1.4306 is used chiefly in applications where the metal is deformed or subjected to thermal loads over extended periods. Use of this material is particularly recommended where temperatures of between 500°C / 932°F and 900°C/ 1652°F are likely to be encountered.</p>
		<p><b>AISI 316 / 1.4401</b>  Grade AISI 316 is the standard molybdenum-bearing grade, second only in importance to AISI 304 amongst the austenitic stainless steels. The molybdenum gives AISI 316 better overall corrosion-resistance properties than Grade AISI 304, and particularly higher resistance to pitting and crevice corrosion in chloride environments. It is readily brake-formed or roll-formed into a variety of components for industrial, construction and transport applications. AISI 316 offers excellent corrosion resistance in a range of atmospheric environments and many corrosive media (generally more resistant than AISI 304). This material is subject to pitting and crevice corrosion in warm chloride environments, and to stress corrosion cracking above approximately 60°C/140°F. It can be considered as resistant to potable water containing a maximum chloride content of approximately 1000mg/L at ambient temperature, reducing to around 500mg/L at 60°C.  Grade AISI 316 is usually regarded as the standard “marine grade stainless steel”, but it is not resistant to warm sea water. In many marine environments, AISI 316 does exhibit surface corrosion, usually in the form of brown staining, particularly in association with crevices and rough surface finishes.</p>
		<p><b>AISI 316L / 1.4404</b>  Grade AISI 316L is the low-carbon version of AISI 316 and is immune from sensitisation (grain boundary carbide precipitation). AISI 316L is used extensively in heavy gauge welded components (over about 6mm). Use of this material is particularly recommended where temperatures of between 500°C/932°F and 900°C/1652°F are likely to be encountered.</p>
		<p><b>AISI 316Ti / 1.4571</b>  Compared to AISI 304, AISI 316Ti is characterised by its properties in nitric acid and in organic cooled acid solutions. Optimal processing properties are achieved by means of heat treatment in the temperature range of +/- 1100°C followed by rapid cooling in air or water.</p>
		<p><b>STEEL</b>  The wide range of grades available allows steel to be used in a wide range of applications, including the automotive, construction and packaging industries. The excellent shape retention and strength characteristics of steel have made it one of the most important products created by man. Steel has a huge range of properties, including: Weldability; Fatigue resistance; . Electrical conductivity / thermal conductivity; Corrosion resistance when galvanized; Mouldability; Reusability; Mechanical strength</p>
<b>NON FERROUS ALLOYS</b>	<b>UNALLOYED STEEL</b>	<p><b>GALVANIZED STEEL</b>  For example, steel flange couplings are galvanized to improve their corrosion resistance. The galvanizing process involves the adding of a zinc layer to the coupling surface. Zinc coatings prevent oxidation of the protected metal by forming a barrier and acting as a sacrificial anode if this barrier becomes damaged. Galvanized steel can be welded, but this is not recommended. Galvanized steel is suitable for high-temperature applications of up to 200°C / 392°F. Use at temperatures above this level will result in the zinc layer peeling off at the intermetallic layer.</p>
		<p><b>BRASS</b>  Brass is an alloy of copper and zinc, which becomes mutually soluble when melted and therefore lose their individual identities. On cooling, the combination becomes brass. Small amounts of other elements can be added to brass to deliver specific effects and thereby add useful properties and desirable characteristics to the parent alloy.  <b>1) Tin.</b> Additions of around 1% are usual, giving a small increase in tensile strength and improved corrosion resistance under marine conditions.  <b>2) Lead.</b> Virtually insoluble in brass, it can be introduced to form discrete particles finely distributed throughout the alloy. These particles act as "chip breakers" in machining operations and enable higher-speed machining, finer swarf and reduced tool wear. The actual amount of lead added depend on end-user requirements, but normally range from 1.5% to 4.5%.  <b>3) Iron.</b> The addition of small amounts of iron (around 0.5%) increases tensile strength, but higher amounts can result in excessive tool wear and machining problems</p>

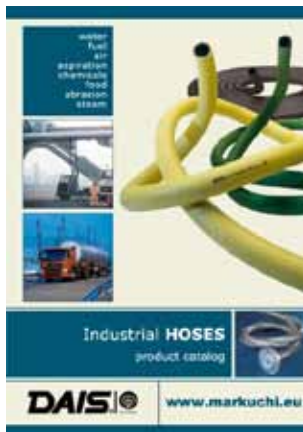
<b>THERMOPLASTICS</b>	<p><b>BRONZE</b></p> <p>Bronze is a copper alloy made from natural ores alloyed with tin or other elements to create a metal which does not exist in nature. When such ore is refined, the metal looks like copper, but is harder and more useful for making tools, weapons and sculptures. Bronze is now widely used in tool and machinery manufacture, as well as in the minting of coins. The bronze solidification process is quite unique. When molten bronze is poured into a mould, it expands as it cools and fills every detail of the mould. As it cools further and solidifies, it shrinks slightly, so that the final result does not stick to the mould. Over time, bronze takes on a range of colours caused by surface oxidation. This effect is referred to as patina. Traditionally, bronze was defined as a copper alloy containing tin (not exceeding 10%). Tin increases hardness, making bronze more wear-resistant than copper. Bronzes with a tin content of 10% or more are harder, stronger and more corrosion-resistant than brass.</p> <p>Today's bronzes may vary quite significantly, and are typically copper alloys which may contain silicon (Si), manganese (Mn), aluminium (Al), zinc (Zn), lead (Pb), iron (Fe) and other elements, either with or without tin (Sn). The variations in bronze (both in proportion and elemental composition) can significantly affect its characteristics, whether by improving wear-resistance and/or machine-ability, or reducing corrosion in water, etc.</p>
	<p><b>ALUMINIUM</b></p> <p>Aluminium is easily formed, machined and cast. Alloys containing small amounts of copper, magnesium, silicon, manganese, and other elements have very useful properties. One of the key properties of aluminium is its low density, being only one-third as heavy as steel. Aluminium and most of its alloys are highly resistant to most forms of corrosion. The metal's natural coating of aluminium oxide provides a highly-effective barrier to the ravages of air, temperature, moisture and chemical attack. Aluminium is also a very good conductor of electricity, which, in combination with its other intrinsic qualities, has ensured its use as a replacement for copper in many applications. Aluminium is non-magnetic and non-combustible; properties invaluable in advanced industries like electronics and offshore engineering. Aluminium is non-toxic and impervious; qualities that quickly established it as a preferred material in the food and packaging industries. Other valuable properties include high reflectivity, heat barrier properties and heat conduction. The metal is malleable and easily worked using all the usual manufacturing and shaping processes.</p>
	<p><b>POLYPROPYLENE</b></p> <p>Polypropylene is an economical material that offers a combination of outstanding physical, chemical, mechanical, thermal and electrical properties not found in any other thermoplastic. Compared with low- and high-density polyethylene, it has lower impact strength, but superior working temperature and tensile strength. Polypropylene offers excellent resistance to organic solvents, degreasing agents and electrolytic attack. It is light in weight, stain-resistant and has a low moisture absorption rate. Polypropylene is a tough, heat-resistant, semi-rigid material, ideal for the transfer of hot liquids or gases. It is recommended for vacuum systems and wherever high temperatures and pressures are likely to be encountered. It offers excellent resistance to acids and alkalies, but performs poorly with aromatic, aliphatic and chlorinated solvents.</p>
<b>THERMOPLASTICS</b>	<p><b>HIGH DENSITY POLYETHYLENE (HDPE)</b></p> <p>A linear polymer, High Density Polyethylene (HDPE) is prepared from ethylene by a catalytic process. The absence of branching results in a more closely packed structure with a higher density and somewhat higher chemical resistance than LDPE. HDPE is also somewhat harder and more opaque and it can withstand rather higher temperatures 120°C / 248°F for short periods and 110° C / 230°F continuously. High density polyethylene lends itself particularly well to blow molding, e.g. for bottles, cutting boards, dipping baskets, dippers, trays and containers. Dynalab Corp's plastic fabrication shop fabricates thousands of catalog and custom acrylic products. HDPE is excellent resistance (no attack) to dilute and concentrated acids, alcohols and bases. It shows good resistance (minor attack) to aldehydes, esters, aliphatic and aromatic hydrocarbons, ketones and mineral and vegetable oils.</p>
	<p><b>NYLON (POLYAMIDE)</b></p> <p>Nylon (Polyamide), is considered to be the first engineering thermoplastic. It is one of many heterochain thermoplastics which has atoms other than C in the chain. Nylon is created when a condensation reaction occurs between amino acids, dibasic acids and diamines. Commercially Nylon is commonly used in the production of tire cords, rope, belts, filter cloths, sports equipment and bristles. It is particularly useful when machined into bearings, gears, rollers and thread guides. Polyamide is excellent resistance (no attack) to oils and bases. It has a good resistance (no attack) to solvents, formaldehyde and alcohols. It's resistance is limited (moderate attack and suitable for short term use only) to dilute acids. Polyamide has poor resistance (not recommended for use with) to phenols</p>

### International material comparison - Stainless steel

Germany	USA	SWEDEN		FRANCE	UK	ITALY	SPAIN	JAPAN	RUSSIA
W.-Nr.	AISI	UNS	SS	AFNOR	BS	UNI	UNE	JIS	GOST
1.4301	304	S 30400	2332	Z 6 CN 18.09	304 S 15	X 5 CrNi 18.10	F.3504-X 5 CrNi 18.10	SUS 304	08Ch18N10
1.4305	303	S 30300	2346	Z 10 CNF 18.09	303 S 21	-	-	-	-
1.4306	304L	S 30403	2352	Z 2 CN 18.10	304 S 12	X 3 CrNi18.11	F.3503-X 2 CrNi 18.10	SUS 304L	03Ch18N11
1.4301	301	S 30100	-	Z12Cn17-07	301 S 21	-	-	SUS 301	-
1.4401	316	S 31600	2347	Z 6 CND 17.11	316 S 16	X 5 CrNiMo 17.12	F.3534-X 5 CrNiMo 17.12.2	SUS 316	-
1.4404	316L	S 31603	2348	Z 2 CND 17.12	316 S 14	X 2 CrNiMo 17.12	F.3533-X 2 CrNiMo 17.13.2	SUS 316L	-
1.4541	321	S 32100	2337	Z 6 CNT 18.10	321 S 31	X 6 CrNiTi 18.11	F.3523-X 6 CrNiTi 18.10	SUS 321	06Ch18N10T
1.4571	316Ti	S 31635	2350	Z 6 CNDT 17.12	320 S 31	X 6 CrNiMoTi 17.12	F.3535-X 6 CrNiMoTi 17.12 .2	SUS 316Ti	10Ch17N13M2T

## VII. Other equipment from DAIS

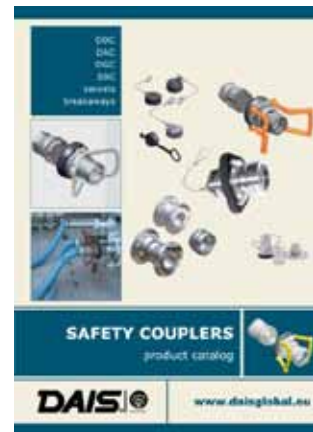
### Industrial hoses



### Ductins hoses



### Safety couplings



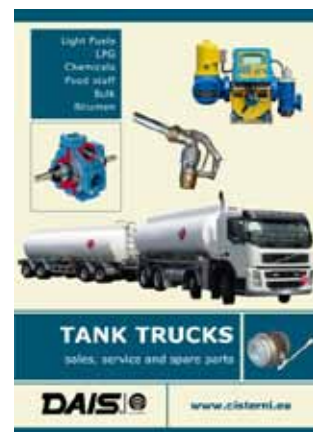
### Fuel, LPG and CNG service stations



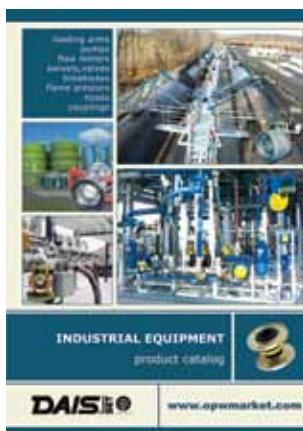
### Domestic diesel and AdBlue stations



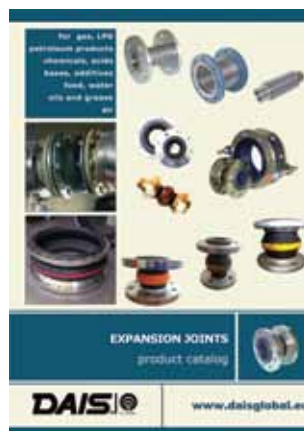
### Tank Trucks

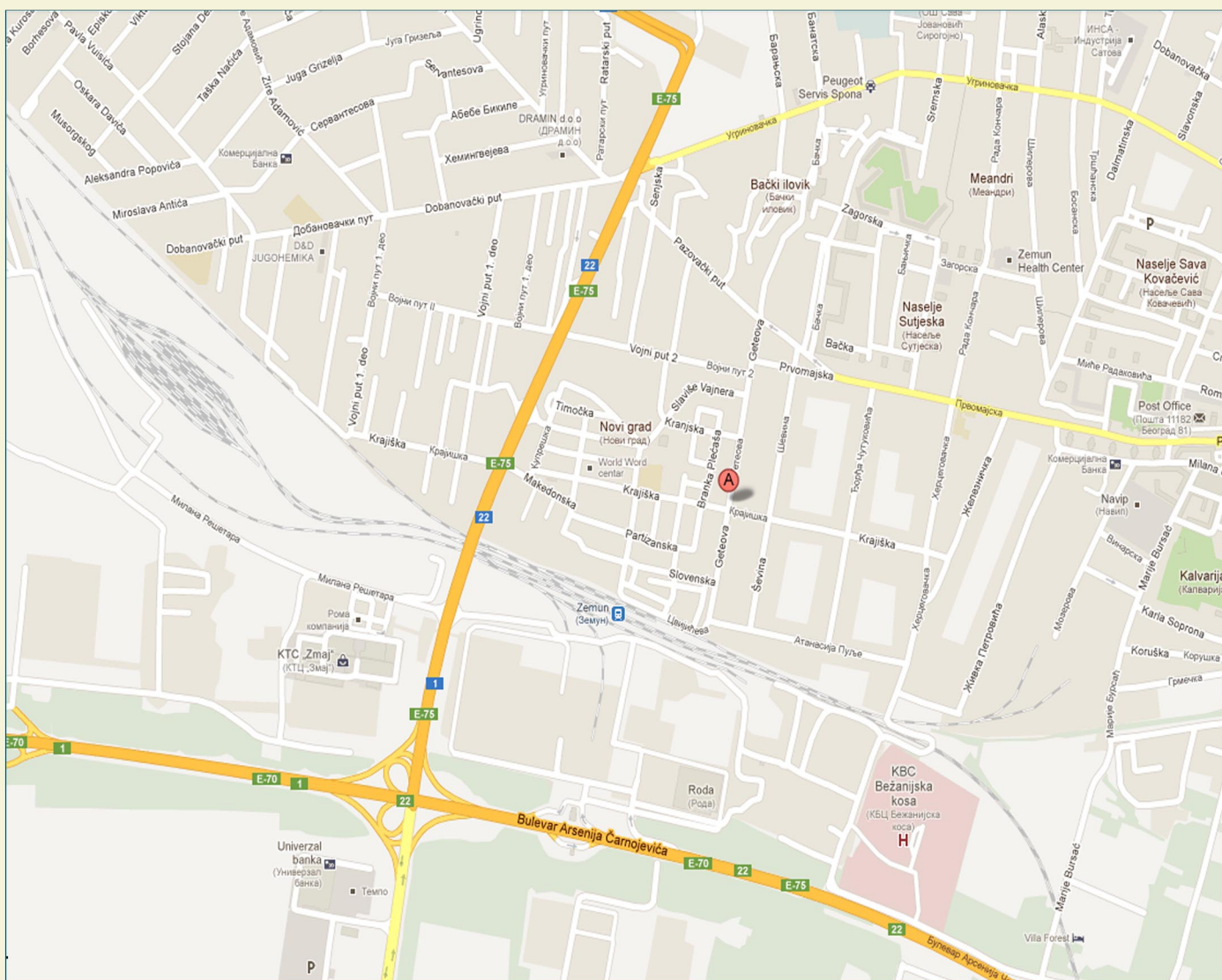


### Industrial equipment



### Compensators





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