

## INDUSTRIAL HOSE & FITTINGS

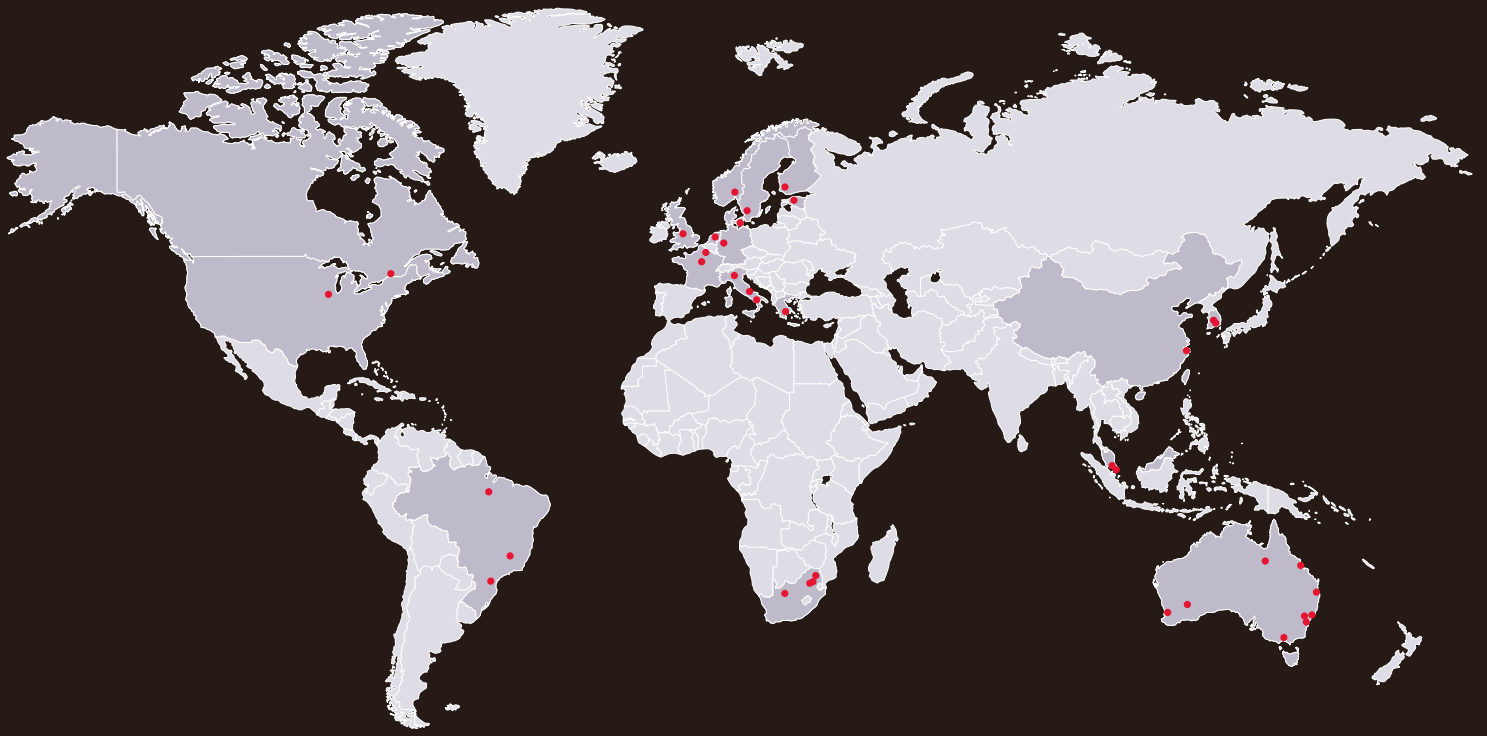


 **ALFAGOMMA**



A 60-year long-lasting success made up of innovation, high-quality products and services, worldwide coverage and daily commitment to customer value.

This is what Alfagomma is celebrating in 2016, thanks to all the stakeholders who greatly contributed to building up strategic partnerships, closing successful deals and fostering trust in our future.



## Providing excellence and reliability

Developing cutting-edge technology and innovative solutions. Supplying top quality products worldwide. These are the pillars on which ALFAGOMMA's success has been built since 1956. Today, ALFAGOMMA plays a leading role in the industrial and hydraulic rubber hoses segment, with 12 plants and a worldwide presence spread across 20 countries.

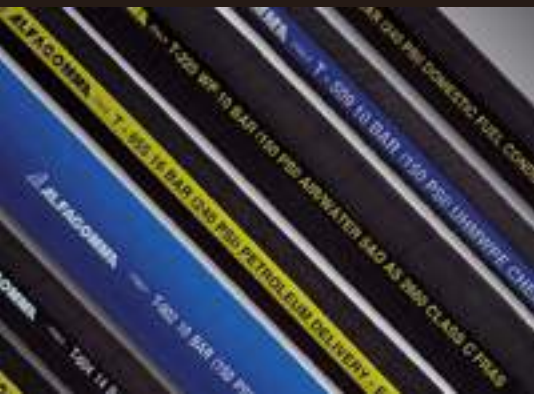
The Group has been providing top quality products for 60 years and it has always been known for its excellent technical department: a strong commitment to quality and control design that is reflected in the Group's state-of-the-art product portfolio, which also includes fittings, adapters and quick release.



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## Note

Since ALFAGOMMA continually examines ways to improve products, we reserve the right to alter specifications without prior notice.

Weights and dimensions are nominal.

Working pressures and vacuum ratings for hose are based at ambient temperature of 20 °C (68 °F)







Pictures shown are for illustration purpose only. Actual hose construction might be different.

Refer to local price list for items available in the different sales area, included available lengths and stock lengths.

# SYMBOL

	Internal Diameter		Minimum Bend Radius= 2 x Internal Diameter		High performance product
	Outside Diameter		Minimum Bend Radius= 3 x Internal Diameter		Extruded tube
	Maximum Working Pressure		Premium tube abrasion resistance		2004/1935 EC 2006/2023 EC
	Minimum Bend Radius		High tube abrasion resistance		Phthalate Free
	Vacuum		Low temperature resistance		ABS approved
	Weight		High temperature resistance		IANESCO approved
			Oil resistance		LLOYD'S approved
			Electrical resistance along the conductive layers $\leq 10^6 \Omega/\text{length}$		MSHA approved
			Electrical resistance through the hose wall $\leq 10^9 \Omega$		

# SALES AREA

	North America		South Africa
	Latin America		Asia Pacific
	North Europe		Australia
	Center Europe, Middle East, North Africa		



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# DUCTING & VENTILATION

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## FITTINGS

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hose

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
20	13/16					20	0,75	50	0,130	0,087
25	1					25	1,00	50	0,170	0,115
32	1 1/4					32	1,25	50	0,230	0,155
35	1 3/8					35	1,50	50	0,250	0,170
40	1 9/16					40	1,50	40	0,300	0,200
45	1 3/4					45	1,75	40	0,350	0,235
51	2					51	2,00	40	0,440	0,300
63	2 1/2					63	2,50	40	0,560	0,380
70	2 3/4					70	2,75	40	0,630	0,425
76	3					76	3,00	40	0,700	0,475
80	3 1/8					80	3,00	40	0,760	0,515
90	3 1/2					90	3,50	40	0,850	0,575
102	4					102	4,00	40	0,990	0,670
110	4 5/16					110	4,25	40	1,100	0,740
120	4 3/4					120	4,75	40	1,200	0,810
127	5					127	5,00	40	1,270	0,855
140	5 1/2					140	5,50	35	1,450	0,975
152	6					152	6,00	35	1,700	1,145
160	6 5/16					160	6,25	35	1,850	1,245
180	7 1/16					180	7,00	30	2,200	1,480
203	8					203	8,00	30	2,450	1,650
254	10					254	10,00	10	3,600	2,420
305	12					305	12,00	10	4,500	3,025

NA	LA	NEU	EMEA	SA	AP	AU
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## 161BL Air ducting UL 94 V2

**Construction:** Grey PVC - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** Air, gas, fumes extraction. Air conditioning-ventilation  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

fittings

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
20	13/16					20	0,75	50	0,180	0,120
25	1					25	1,00	50	0,230	0,155
28	1 1/8					28	1,25	50	0,250	0,170
32	1 1/4					32	1,25	50	0,300	0,200
38	1 1/2					38	1,50	50	0,380	0,255
51	2					102	4,00	50	0,700	0,475

NA	LA	NEU	EMEA	SA	AP	AU
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## 163AL General purpose

**Construction:** Black PVC - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** General purpose designed for gas vent, air seeder and marine bilge pump applications - ID 51 mm according to AS 1425/2.22  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

appendix

↔		↔		⌚		⌒		⌘		♁	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
40	1 9/16					20	0,75		0,110	0,075	
51	2					25	1,00		0,135	0,095	
63	2 1/2					32	1,25		0,170	0,115	
70	2 3/4					35	1,50		0,185	0,125	
76	3					40	1,50		0,200	0,135	
80	3 1/8					40	1,50		0,210	0,145	
90	3 1/2					45	1,75		0,240	0,165	
102	4					50	2,00		0,280	0,190	
120	4 3/4					60	2,50		0,325	0,220	
127	5					63	2,50		0,345	0,235	
140	5 1/2					70	2,75		0,380	0,260	
152	6					75	3,00		0,410	0,280	
160	6 5/16					80	3,00		0,425	0,290	
180	7 1/16					90	3,50		0,475	0,320	
203	8					100	4,00		0,535	0,360	
254	10					125	5,00		0,845	0,570	
305	12					150	6,00		1,010	0,680	

NA	LA	NEU	EMEA	SA	AP	AU
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**174BB**  
**Air ducting - high temperature +100 °C (+212 °F)**  
**UL 94 V0**

**Construction:** Textile fabric coated with flame resistant PVC  
**Reinforcement:** Steel helix wire  
**Use:** Hot air, gas, fumes extraction. Air conditioning-ventilation  
**Temperature:** -20 °C +100 °C (-4 °F +212 °F)

↔		↔		⌚		⌒		⌘		♁	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
40	1 9/16					34	1,50	20	0,175	0,120	
51	2					43	1,75	20	0,225	0,150	
63	2 1/2					54	2,25	20	0,275	0,185	
70	2 3/4					60	2,50	20	0,425	0,285	
76	3					65	2,50	20	0,460	0,310	
80	3 1/8					68	2,75	20	0,485	0,330	
90	3 1/2					77	3,00	20	0,550	0,370	
102	4					85	3,25	15	0,580	0,390	
110	4 5/16					94	3,75	15	0,615	0,415	
120	4 3/4					102	4,00	10	0,680	0,460	
127	5					108	4,25	10	0,765	0,515	
140	5 1/2					119	4,75	10	0,860	0,580	
152	6					129	5,00	10	0,930	0,625	
160	6 5/16					136	5,25	10	1,025	0,690	
180	7 1/16					153	6,00	5	1,310	0,885	
203	8					173	6,75	5	1,485	1,000	
254	10					216	8,50	5	1,940	1,305	
305	12					259	10,25	5	2,390	1,610	
355	14					303	12,00	5	2,790	1,875	
406	16					345	14,00	5	3,195	2,150	

NA	LA	NEU	EMEA	SA	AP	AU
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**178AA**  
**Air ducting - high temperature +120 °C (+248 °F)**

**Construction:** Black EPDM/PP fully recyclable and halogens/phthalates free  
**Reinforcement:** Steel helix wire  
**Use:** Hot air, gas, fumes extraction-ventilation where high temperature resistance is required  
**Temperature:** -40 °C +120 °C (-40 °F +248 °F)

hose

fittings

appendix

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 9/16					44	1,75	35	0,170	0,115
45	1 3/4					49	2,00	35	0,190	0,130
51	2					55	2,25	25	0,220	0,150
63	2 1/2					67	2,75	25	0,270	0,180
70	2 3/4					74	3,00	25	0,330	0,225
76	3					80	3,00	25	0,350	0,235
80	3 1/8					84	3,25	20	0,370	0,250
90	3 1/2					94	3,75	20	0,420	0,285
102	4					106	4,25	10	0,470	0,320
110	4 5/16					114	4,50	10	0,510	0,345
120	4 3/4					124	5,00	10	0,550	0,370
127	5					132	5,25	10	0,780	0,525
140	5 1/2					145	5,75	10	0,860	0,580
152	6					157	6,25	10	0,930	0,625
160	6 5/16					165	6,50	6	0,980	0,660
180	7 1/16					185	7,25	6	1,100	0,740
203	8					209	8,25	6	1,240	0,835
254	10					260	10,25	2	1,740	1,170
305	12					311	12,25	2	2,090	1,405
355	14					362	14,25	2	2,440	1,640
406	16					412	16,25	2	2,780	1,870

NA LA **NEU** EMEA SA AP AU



## 17100

### Air ducting - polyurethane - gauge 0,4 mm

**Construction:** Transparent polyurethane - abrasion and ozone resistant  
**Reinforcement:** Copper plated steel helix wire  
**Use:** Air, gas, fumes extraction - ventilation. Also suitable for abrasive material suction - good oil mist resistance  
**Temperature:** -40 °C +85 °C (-40 °F +185 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 9/16					46	1,75	55	0,310	0,210
51	2					57	2,25	40	0,390	0,265
63	2 1/2					69	2,75	40	0,480	0,325
76	3					82	3,25	40	0,560	0,380
80	3 1/8					88	3,50	35	0,610	0,410
102	4					109	4,25	30	0,910	0,615
120	4 3/4					127	5,00	30	1,070	0,720
127	5					134	5,25	30	1,130	0,760
140	5 1/2					147	5,75	30	1,240	0,835
152	6					160	6,25	30	1,440	0,970
160	6 5/16					168	6,75	25	1,520	1,025
180	7 1/16					188	7,50	25	1,710	1,150
203	8					210	8,25	25	1,920	1,295
254	10					262	10,25	15	2,400	1,615
305	12					313	12,25	15	2,870	1,930
315	12 3/8					323	12,75	15	2,970	2,000

NA LA **NEU** EMEA SA AP AU



## 17200

### Air ducting - polyurethane - gauge 0,8 mm

**Construction:** Transparent polyurethane - abrasion and ozone resistant  
**Reinforcement:** Copper plated steel helix wire  
**Use:** Air, gas, fumes extraction - ventilation. Also suitable for abrasive material suction - good oil mist resistance  
**Temperature:** -40 °C +85 °C (-40 °F +185 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2					59	2,25	60	0,630	0,425	
63	2 1/2					71	2,75	60	0,770	0,520	
76	3					86	3,50	60	0,930	0,625	
80	3 1/8					90	3,50	50	0,980	0,660	
102	4					112	4,50	40	1,240	0,835	
152	6					162	6,50	40	1,840	1,240	
203	8					213	8,50	30	2,440	1,640	
254	10					265	10,50	25	3,940	2,650	
305	12					316	12,50	25	4,720	3,175	
355	14					373	14,75	25	5,500	3,700	

NA LA **NEU** EMEA SA AP AU



**17300**

**Air ducting - polyurethane - gauge 1,2 mm**

**Construction:** Transparent polyurethane - abrasion and ozone resistant

**Reinforcement:** Copper plated steel helix wire

**Use:** Air, gas, fumes extraction - ventilation. Also suitable for abrasive material suction - good oil mist resistance

**Temperature:** -40 °C +85 °C (-40 °F +185 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
40	1 9/16					52	2,00	75	0,580	0,390	
51	2					63	2,50	65	0,730	0,495	
63	2 1/2					75	3,00	65	0,890	0,600	
76	3					88	3,50	65	1,190	0,800	
102	4					114	4,50	45	1,580	1,065	
127	5					139	5,50	45	1,950	1,315	
152	6					164	6,50	45	2,330	1,570	

NA LA **NEU** EMEA SA AP AU



**17700**

**Air ducting - polyurethane - gauge 1,7 mm**

**Construction:** Transparent polyurethane - abrasion and ozone resistant

**Reinforcement:** Copper plated steel helix wire

**Use:** Air, gas, fumes extraction - ventilation. Also suitable for abrasive material suction - good oil mist resistance

**Temperature:** -40 °C +85 °C (-40 °F +185 °F)





# GAS & WELDING

## HOSE

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071EI	Oxygen/LPG twin welding 12 bar (180 psi) AS 1335 .....	H.12



↔		↔		⏴		⤴		⌘		⏴	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	48	2,00		0,145	0,097	
8	5/16	15	0,59	20	300	64	2,50		0,175	0,120	
10	3/8	17	0,67	20	300	80	3,00		0,210	0,140	
NA		LA		NEU		EMEA		SA		AP	
AU											



## 081AE Oxygen 20 bar (300 psi)

**Tube:** Black synthetic elastomer  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue synthetic elastomer - abrasion and ozone resistant  
**Use:** Oxygen  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⏴		⤴		⌘		⏴	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	48	2,00		0,145	0,097	
8	5/16	15	0,59	20	300	64	2,50		0,175	0,120	
10	3/8	17	0,67	20	300	80	3,00		0,210	0,140	
NA		LA		NEU		EMEA		SA		AP	
AU											



## 081AH Acetylene 20 bar (300 psi)

**Tube:** Black synthetic elastomer  
**Reinforcement:** High tensile textile cords  
**Cover:** Red synthetic elastomer - abrasion and ozone resistant  
**Use:** Acetylene  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⏴		⤴		⌘		⏴	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
8	5/16	15	0,59	25	375	64	2,50		0,170	0,115	
10	3/8	17	0,67	25	375	80	3,00		0,200	0,135	
NA		LA		NEU		EMEA		SA		AP	
AU											



## 088AI LPG-natural gas 25 bar (375 psi)

**Tube:** Black synthetic elastomer  
**Reinforcement:** High tensile textile cords  
**Cover:** Orange synthetic elastomer - abrasion and ozone resistant  
**Use:** LPG-natural gas  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⏱		⤴		⌘		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	60	2,50		0,150	0,100	
8	5/16	15	0,59	20	300	80	3,00		0,180	0,120	
10	3/8	17	0,67	20	300	100	4,00		0,210	0,140	
NA		LA		NEU		EMEA		SA	AP		AU



**076AE**  
**Oxygen welding 20 bar (300 psi)**  
**EN ISO 3821**

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue SBR/EPDM - abrasion and ozone resistant  
**Use:** Oxygen welding  
**Safety factor:** 3:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⏱		⤴		⌘		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	60	2,50		0,150	0,100	
8	5/16	15	0,59	20	300	80	3,00		0,180	0,120	
10	3/8	17	0,67	20	300	100	4,00		0,210	0,140	
NA		LA		NEU		EMEA		SA	AP		AU



**076AH**  
**Acetylene welding 20 bar (300 psi)**  
**EN ISO 3821**

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Red SBR/EPDM - abrasion and ozone resistant  
**Use:** Acetylene welding  
**Safety factor:** 3:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⏱		⤴		⌘		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	60	2,50		0,150	0,100	
8	5/16	15	0,59	20	300	80	3,00		0,180	0,120	
10	3/8	17	0,67	20	300	100	4,00		0,210	0,140	
NA		LA		NEU		EMEA		SA	AP		AU



**076AI**  
**LPG welding 20 bar (300 psi)**  
**EN ISO 3821**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Orange SBR/EPDM - abrasion and ozone resistant  
**Use:** LPG welding  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏱		⤴		⌘		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	60	2,50		0,300	0,200	
6+9	1/4+23/64	16	0,63	20	300	100	3,50		0,420	0,285	
8	5/16	15	0,59	20	300	80	3,00		0,360	0,245	
10	3/8	17	0,67	20	300	100	4,00		0,420	0,285	
NA		LA		NEU		EMEA		SA	AP		AU



**076EH**  
**Oxygen/acetylene twin welding 20 bar (300 psi)**  
**EN ISO 3821**

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue, red SBR/EPDM - abrasion and ozone resistant  
**Use:** Oxygen/Acetylene twin welding  
**Safety factor:** 3:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⏱		⤴		⌘		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
8	5/16	15	0,59	20	300	80	3,00		0,360	0,245	
NA		LA		NEU		EMEA		SA	AP		AU



**076EI**  
**Oxygen/LPG twin welding 20 bar (300 psi)**  
**EN ISO 3821**

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue, orange SBR/EPDM - abrasion and ozone resistant  
**Use:** Oxygen/LPG twin welding  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



↔		↔		⌚		⤴		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	12	180	50	2,00		0,140	0,095	
NA	LA	NEU	EMEA	SA	AP	AU					



**071AI**  
**LPG welding 12 bar (180 psi)**  
**AS 1335**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Orange SBR/EPDM - abrasion and ozone resistant  
**Use:** LPG welding  
**Safety factor:** 4:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⌚		⤴		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	12	180	50	2,00		0,280	0,190	
NA	LA	NEU	EMEA	SA	AP	AU					



**071EH**  
**Oxygen/acetylene twin welding 12 bar (180 psi)**  
**AS 1335**

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue, red SBR/EPDM - abrasion and ozone resistant  
**Use:** Oxygen/Acetylene twin welding  
**Safety factor:** 3:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⌚		⤴		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	12	180	50	2,00		0,280	0,190	
NA	LA	NEU	EMEA	SA	AP	AU					



**071EI**  
**Oxygen/LPG twin welding 12 bar (180 psi)**  
**AS 1335**

**Tube:** Black SBR-NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue, orange SBR/EPDM - abrasion and ozone resistant  
**Use:** Oxygen/LPG twin welding  
**Safety factor:** 4:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

hose

fittings

appendix



# COMPRESSED AIR

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HYDRAULIC FITTINGS - AG Hydraulic catalogue

↔		↔		⊕	↷		⌋		⬛		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	10	0,39	20	300	24	1,00		0,065	0,044	
8	5/16	12	0,47	20	300	32	1,25		0,080	0,055	
10	3/8	15	0,59	20	300	40	1,50		0,110	0,075	
13	1/2	19	0,75	20	300	52	2,00		0,180	0,120	
16	5/8	23	0,91	20	300	64	2,50		0,260	0,175	
19	3/4	26	1,02	20	300	76	3,00		0,300	0,200	
25	1	33	1,30	20	300	100	4,00		0,440	0,300	
NA	LA	NEU	EMEA	SA	AP	AU					



## 195AT

### Compressed air 20 bar (300 psi) - polyurethane pneumatic tools

**Tube:** Black polyurethane/PVC - oil mist resistant

**Reinforcement:** High tensile textile cords

**Cover:** Light blue synthetic elastomer - abrasion and ozone resistant

**Use:** Compressed air. Specially designed for pneumatic tools and paint spray

**Safety factor:** 3:1

**Temperature:** -20 °C +60 °C (-4 °F +140 °F)

↔		↔		⊕	↷		⌋		⬛		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
10	3/8	16	0,63	20	300	80	3,00		0,170	0,115	
13	1/2	19	0,75	20	300	104	4,00		0,205	0,140	
19	3/4	27	1,06	20	300	152	6,00		0,370	0,250	
25	1	34	1,34	20	300	200	8,00		0,530	0,360	
NA	LA	NEU	EMEA	SA	AP	AU					



## 191AK

### Compressed air 20 bar (300 psi) - PVC exceeds AS/NZS 2554/B

**Tube:** Black PVC - oil mist resistant

**Reinforcement:** High tensile textile cords

**Cover:** Yellow ribbed PVC with longitudinal blue stripes - abrasion and ozone resistant

**Use:** Compressed air and general industrial applications.

Also suitable for crop spraying of fertilizers, pesticides and weed killers

**Safety factor:** 3,2:1

**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	19	0,75	20	300	104	4,00		0,210	0,140	
19	3/4	27	1,06	20	300	152	6,00		0,410	0,275	
25	1	34	1,34	20	300	200	8,00		0,580	0,390	
NA		LA		NEU		EMEA		SA		AP AU	



**180AA**

**Compressed air 20 bar (300 psi)**

**Tube:** Black synthetic elastomer - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black synthetic elastomer - abrasion and ozone resistant  
**Use:** Compressed air and general industrial applications.  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	12	0,51	20	300	48	2,00		0,120	0,085	
8	5/16	14	0,59	20	300	64	2,50		0,140	0,095	
10	3/8	17	0,67	20	300	80	3,00		0,205	0,140	
13	1/2	21	0,83	20	300	104	4,00		0,280	0,190	
16	5/8	24	0,98	20	300	128	5,00		0,355	0,240	
19	3/4	28	1,10	20	300	152	6,00		0,460	0,310	
25	1	35	1,38	20	300	200	8,00		0,640	0,435	
NA		LA		NEU		EMEA		SA		AP AU	



**185AA**

**Compressed air 20 bar (300 psi) - standard duty exceeds DIN 20018/1**

**Tube:** Black synthetic elastomer - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black synthetic elastomer with longitudinal yellow stripes - abrasion and ozone resistant  
**Use:** Compressed air and general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	12	0,51	20	300	48	2,00		0,120	0,085	
8	5/16	14	0,59	20	300	64	2,50		0,140	0,095	
10	3/8	17	0,67	20	300	80	3,00		0,210	0,140	
13	1/2	21	0,83	20	300	104	4,00		0,285	0,190	
16	5/8	24	0,98	20	300	128	5,00		0,355	0,240	
19	3/4	28	1,10	20	300	152	6,00		0,465	0,315	
25	1	35	1,38	20	300	200	8,00		0,640	0,435	
NA		LA		NEU		EMEA		SA		AP AU	



**185AH**

**Compressed air 20 bar (300 psi) - standard duty**

**Tube:** Black synthetic elastomer - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Red synthetic elastomer - abrasion and ozone resistant  
**Use:** Compressed air and general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	21	0,83	20	300	104	4,00		0,285	0,190	
19	3/4	28	1,10	20	300	152	6,00		0,465	0,315	
25	1	35	1,38	20	300	200	8,00		0,640	0,435	
NA		LA		NEU		EMEA		SA		AP AU	



**185AK**

**Compressed air 20 bar (300 psi) - standard duty**

**Tube:** Black synthetic elastomer - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Yellow synthetic elastomer - abrasion and ozone resistant  
**Use:** Compressed air and general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	14	0,55	20	300	48	2,00		0,185	0,125	
8	5/16	17	0,67	20	300	64	2,50		0,260	0,175	
10	3/8	19	0,75	20	300	80	3,00		0,300	0,200	
13	1/2	23	0,91	20	300	104	4,00		0,415	0,280	
19	3/4	30	1,18	20	300	152	6,00		0,575	0,390	
25	1	37	1,46	20	300	200	8,00		0,775	0,525	
NA		LA		NEU		EMEA		SA		AP AU	



**186AA**

**Compressed air 20 bar (300 psi) - heavy duty**

**Tube:** Black synthetic elastomer - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black synthetic elastomer - abrasion and ozone resistant  
**Use:** Compressed air and general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
6	1/4	12	0,51	20	300	48	2,00		0,160	0,110			
8	5/16	14	0,59	20	300	64	2,50		0,190	0,130			
10	3/8	17	0,67	20	300	80	3,00		0,220	0,150			
13	1/2	21	0,83	20	300	104	4,00		0,310	0,210			
16	5/8	24	0,98	20	300	128	5,00		0,430	0,290			
19	3/4	28	1,14	20	300	152	6,00		0,550	0,370			
25	1	35	1,38	20	300	200	8,00		0,690	0,465			
NA		LA		NEU		EMEA		SA		AP		AU	



## 175AA

### Compressed air 20 bar (300 psi) - standard duty

**Tube:** Black SBR/NBR - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black SBR - abrasion and ozone resistant  
**Use:** Compressed air and general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
6	1/4	16	0,63	20	300	48	2,00		0,240	0,160			
8	5/16	16	0,63	20	300	64	2,50		0,210	0,140			
10	3/8	18	0,71	20	300	80	3,00		0,270	0,180			
13	1/2	22	0,87	20	300	104	4,00		0,370	0,250			
16	5/8	25	0,98	17	250	128	5,00		0,450	0,305			
19	3/4	29	1,14	17	250	152	6,00		0,570	0,385			
25	1	36	1,42	14	200	200	8,00		0,760	0,515			
NA		LA		NEU		EMEA		SA		AP		AU	



## 175AH

### Compressed air 20 bar (300 psi) - standard duty

**Tube:** Black EPDM - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Red EPDM - abrasion and ozone resistant  
**Use:** Compressed air and general industrial applications  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
10	3/8	17	0,67	20	300	80	3,00		0,220	0,150			
13	1/2	21	0,83	20	300	104	4,00		0,260	0,175			
19	3/4	29	1,14	20	300	152	6,00		0,510	0,345			
25	1	35	1,38	20	300	200	8,00		0,610	0,410			
NA		LA		NEU		EMEA		SA		AP		AU	



## 175AK

### Compressed air 20 bar (300 psi) - standard duty

**Tube:** Black SBR/NBR - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Yellow SBR - abrasion and ozone resistant  
**Use:** Compressed air and general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⊥		⌒		⌘		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	20	300				0,550	0,370	
22	7/8	32	1,26	20	300				0,620	0,420	
25	1	35	1,38	20	300				0,690	0,465	
28	1 1/8	38	1,50	20	300				0,790	0,535	
30	1 3/16	42	1,65	20	300				0,840	0,565	
32	1 1/4	44	1,73	20	300				0,880	0,595	
35	1 3/8	47	1,85	20	300				0,940	0,635	
38	1 1/2	50	1,97	20	300				1,020	0,690	
40	1 9/16	52	2,05	20	300				1,070	0,720	
45	1 3/4	57	2,24	20	300				1,190	0,800	
48	1 7/8	60	2,36	20	300				1,260	0,850	
51	2	63	2,48	20	300				1,320	0,890	
51	2	65	2,56	20	300				1,650	1,110	
55	2 1/6	69	2,72	20	300				1,750	1,180	
60	2 3/8	76	2,99	20	300				2,180	1,470	
63	2 1/2	79	3,11	20	300				2,280	1,535	
76	3	92	3,62	20	300				2,780	1,870	
90	3 1/2	106	4,17	20	300				3,210	2,160	
102	4	118	4,65	20	300				3,630	2,440	
152	6	170	6,69	20	300				6,160	4,140	

NA	LA	NEU	EMEA	SA	AP	AU
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**155AA**

**Compressed air 20 bar (300 psi) - heavy duty**

**Tube:** Black SBR/NBR - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black SBR - abrasion and ozone resistant  
**Use:** Compressed air designed for heavy duty applications  
**Safety factor:** ≤ 51 mm 3:1 ≥ 55 mm 2,5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



**155AK**

**Compressed air 20 bar (300 psi) - heavy duty**

**Tube:** Black SBR/NBR - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Yellow SBR - abrasion and ozone resistant  
**Use:** Compressed air designed for heavy duty applications  
**Safety factor:** ≤ 51 mm 3:1 ≥ 63 mm 2,5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊥		⌒		⌘		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	21	0,83	20	300				0,320	0,215	
19	3/4	29	1,14	20	300				0,560	0,380	
25	1	35	1,38	20	300				0,700	0,475	
32	1 1/4	44	1,73	20	300				0,890	0,600	
38	1 1/2	50	1,97	20	300				1,040	0,700	
51	2	65	2,56	20	300				1,660	1,120	
63	2 1/2	79	3,11	20	300				2,300	1,550	
76	3	92	3,62	20	300				2,810	1,890	
102	4	118	4,65	20	300				3,670	2,470	

NA	LA	NEU	EMEA	SA	AP	AU
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hose

fittings

appendix

↔		↔		⌚	⌚	↷		⌚	⌚		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	22	0,87	40	600	65	2,50		0,410	0,280	
19	3/4	28	1,10	40	600	95	4,00		0,540	0,365	
25	1	34	1,34	40	600	125	5,00		0,690	0,465	
32	1 1/4	42	1,65	40	600	160	6,50		1,070	0,720	
38	1 1/2	48	1,89	40	600	190	7,50		1,270	0,855	
51	2	64	2,52	40	600	255	10,00		1,990	1,340	
63	2 1/2	77	3,03	30	450	315	12,50		2,430	1,635	
76	3	90	3,54	30	450	380	15,00		2,900	1,950	
102	4	118	4,65	30	450	510	20,00		4,100	2,751	
NA	LA	NEU	EMEA	SA	AP	AU					



## 140AK Compressed air 40 bar (600 psi) steel braided

**Tube:** Black SBR - oil mist resistant  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Yellow SBR - abrasion, ozone, hydrocarbon resistant - pin pricked  
**Use:** High pressure compressed air designed for heavy duty mine and quarry applications where long service life and maximum safety is required  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚	⌚	↷		⌚	⌚		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	64	2,52	40	600	255	10,00		1,720	1,160	
76	3	90	3,54	30	450	380	15,00		2,840	1,910	
NA	LA	NEU	EMEA	SA	AP	AU					



## 142AK Compressed air 40 bar (600 psi) high temperature - oil resistant steel braided

**Tube:** Black NBR (RMA Class A) - oil mist resistant  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Yellow SBR/NBR - abrasion, ozone, hydrocarbon and flame resistant - pin pricked  
**Use:** High pressure compressed air designed for heavy duty mine and quarry applications where long service life and maximum safety is required  
**Safety factor:** 4:1  
**Temperature:** -40 °C +120 °C (-40 °F +248 °F)

↔		↔		⌚	⌚	↷		⌚	⌚		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	54	2,13	90	1350	190	7,50		2,090	1,405	
51	2	67	2,64	80	1200	255	10,00		2,860	1,925	
NA	LA	NEU	EMEA	SA	AP	AU					



## 132AE Compressed air 80 bar (1200 psi) high temperature - steel braided

**Tube:** Black chlorobutyl - oil mist \* and high temperature resistant  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Blue EPDM - abrasion and ozone resistant - pin pricked  
**Use:** High pressure compressed air designed for heavy duty mine and quarry applications where long service life and maximum safety is required. Designed for use of EN 853 2ST fittings  
**Safety factor:** 4:1  
**Temperature:** -40 °C +150 °C (-40 °F +300 °F)  
 with peaks of 232 °C (450 °F)

\* maximum oil mist: six parts per million

↔		↔		Ⓜ		⌒		⌒		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	12	0,47	20	300	36	1,50		0,140	0,095	
10	3/8	16	0,63	20	300	60	2,50		0,185	0,125	
13	1/2	19	0,75	20	300	78	3,00		0,235	0,160	
16	5/8	23	0,91	20	300	96	3,75		0,325	0,220	
19	3/4	26	1,02	20	300	114	4,50		0,370	0,250	
NA		LA		NEU		EMEA		SA		AP AU	



**179AA**  
**Push-loc/push-on**

**Tube:** Black NBR/SBR - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black SBR/CR - oil, abrasion and ozone resistant  
**Use:** "Push-on" compressed air in automotive assembly lines and general industrial applications  
**Safety factor:** 4:1  
**Temperature:** -20 °C +70 °C (-4 °F +158 °F)

↔		↔		Ⓜ		⌒		⌒		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	12	0,47	20	300	36	1,50		0,140	0,095	
10	3/8	16	0,63	20	300	60	2,50		0,185	0,125	
13	1/2	19	0,75	20	300	78	3,00		0,235	0,160	
16	5/8	23	0,91	20	300	96	4,00		0,325	0,220	
NA		LA		NEU		EMEA		SA		AP AU	



**179AB**  
**Push-loc/push-on**

**Tube:** Black NBR/SBR - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Grey SBR/CR - oil, abrasion and ozone resistant  
**Use:** "Push-on" compressed air in automotive assembly lines and general industrial applications  
**Safety factor:** 4:1  
**Temperature:** -20 °C +70 °C (-4 °F +158 °F)

↔		↔		Ⓜ		⌒		⌒		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
11	7/16	18	0,71	10	150	70	2,75		0,210	0,140	
13	1/2	25	0,98	10	150	100	4,00		0,470	0,320	
NA		LA		NEU		EMEA		SA		AP AU	



**165AA**  
**Air brake 10 bar (150 psi)**  
**DIN 74310**

**Tube:** Black EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Black EPDM - abrasion and ozone resistant  
**Use:** Air brake hose  
**Safety factor:** 2,5:1  
**Temperature:** -40 °C +70 °C (-40 °F +158 °F)

↔		↔		Ⓜ		⌒		⌒		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
10	3/8	19	0,75	20	300	90	3,50		0,280	0,190	
14,5	37/64	25,5	1,00	20	300	115	4,50		0,450	0,305	
NA		LA		NEU		EMEA		SA		AP AU	



**166AA**  
**Air brake 20 bar (300 psi)**  
**SAE J1402**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black NBR - abrasion and ozone resistant  
**Use:** Air brake hose  
**Safety factor:** 3:1  
**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

↔		↔		Ⓜ		⌒		⌒		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	25	0,98	20	300				0,460	0,310	
20	13/16	34	1,34	20	300				0,810	0,545	
22	7/8	36	1,42	20	300				0,880	0,595	
28	1 1/8	44	1,73	20	300				1,040	0,700	
30	1 3/16	46	1,81	20	300				1,100	0,740	
35	1 3/8	53	2,09	20	300				1,440	0,970	
NA		LA		NEU		EMEA		SA		AP AU	



**160AA**  
**Railway air brake 20 bar (300 psi)**  
**BS 3682/1 AS 2435 UIC 830-1/V**

**Tube:** Black SBR/NBR - oil mist resistant  
**Reinforcement:** High tensile textile braids  
**Cover:** Black SBR/NBR - abrasion and ozone resistant  
**Use:** Railway air brake  
**Safety factor:** 4:1  
**Temperature:** -25 °C +65 °C (-13 °F +150 °F)







# HOT AIR

## HOSE

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962LA	Hot air blower 10 bar (150 psi) - soft wall.....	H.22
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↔		↔		⌚	⌚	⌒		⌒	⌚		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	10	150	255	10,00		1,510	1,015	
76	3	92	3,62	10	150	380	15,00		2,340	1,575	
NA	LA	NEU	EMEA	SA	AP	AU					



## 952AA

### Hot air blower 10 bar (150 psi) - soft wall external textile braid

**Tube:** Black EPDM - heat resistant

**Reinforcement:** High tensile textile braids

**Use:** Hot air connection from volumetric compressor to bulk food/material road tanker

**Safety factor:** 3:1

**Temperature:** -40 °C +180 °C (-40 °F +356 °F)

↔		↔		⌚	⌚	⌒		⌒	⌚		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	69	2,72	10	150	255	10,00		2,640	1,775	
76	3	94	3,70	10	150	380	15,00		3,500	2,355	
NA	LA	NEU	EMEA	SA	AP	AU					



## 962LA

### Hot air blower 10 bar (150 psi) - soft wall

**Tube:** White EPDM - heat resistant

**Reinforcement:** High tensile textile cords

**Cover:** Black EPDM - heat, abrasion and ozone resistant

**Use:** Hot air connection from volumetric compressor to bulk food/material road tanker

**Safety factor:** 3:1

**Temperature:** -40 °C +180 °C (-40 °F +356 °F)

↔		↔		⏱		⤴		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	63	2,48	10	150	153	6,00	100	1,500	1,010	
63	2 1/2	77	3,03	10	150	189	7,50	100	1,990	1,340	
76	3	90	3,54	10	150	228	9,00	90	2,380	1,600	
102	4	116	4,57	10	150	306	12,00	90	3,310	2,225	
NA		LA		NEU		EMEA		SA		AP	
											AU



**902AA**

**Hot air blower 10 bar (150 psi) - hard wall**

**Tube:** Black EPDM - heat resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black EPDM - heat, abrasion and ozone resistant  
**Use:** Hot air connection from volumetric compressor to bulk food/material road tanker. Special light weight and flexible construction  
**Safety factor:** 3:1  
**Temperature:** -40 °C +180 °C (-40 °F +356 °F)

↔		↔		⏱		⤴		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	90	3,54	10	150	228	9,00	90	2,310	1,555	
NA		LA		NEU		EMEA		SA		AP	
											AU



**902AE**

**Hot air blower 10 bar (150 psi) - hard wall**

**Tube:** Black EPDM - heat resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Blue EPDM - heat, abrasion and ozone resistant  
**Use:** Hot air connection from volumetric compressor to bulk food/material road tanker. Special light weight and flexible construction  
**Safety factor:** 3:1  
**Temperature:** -40 °C +180 °C (-40 °F +356 °F)

↔		↔		⏱		⤴		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	63	2,48	10	150	153	6,00	100	1,540	1,035	
53	2 1/16	65	2,56	10	150	159	6,25	100	1,590	1,070	
63	2 1/2	77	3,03	10	150	189	7,50	90	2,340	1,575	
76	3	90	3,54	10	150	228	9,00	90	2,800	1,885	
90	3 1/2	104	4,09	10	150	270	10,50	90	3,470	2,335	
NA		LA		NEU		EMEA		SA		AP	
											AU



**902LE**

**Hot air blower 10 bar (150 psi) - hard wall**

**Tube:** White EPDM - heat resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Blue EPDM - heat, abrasion and ozone resistant  
**Use:** Hot air connection from volumetric compressor to bulk food/material road tanker. Special light weight and flexible construction  
**Safety factor:** 3:1  
**Temperature:** -40 °C +180 °C (-40 °F +356 °F)

↔		↔		⏱		⤴		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	50	2,00	10	150	114	4,50	100	1,060	0,715	
51	2	63	2,48	10	150	153	6,00	100	1,360	0,915	
76	3	90	3,54	10	150	228	9,00	90	2,450	1,650	
102	4	116	4,57	10	150	306	12,00	90	3,350	2,255	
127	5	145	5,71	10	150	408	16,50	80	5,700	3,835	
NA		LA		NEU		EMEA		SA		AP	
											AU



**903LE**

**Hot air blower 10 bar (150 psi) - hard wall FDA**

**Tube:** White EPDM - heat resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Blue EPDM - heat, abrasion and ozone resistant  
**Use:** Hot air connection from volumetric compressor to bulk food/material road tanker. Special light weight and flexible construction. Also suitable for liquid food  
**Safety factor:** 3:1  
**Temperature:** -40 °C +180 °C (-40 °F +356 °F)





# WATER & LIQUIDS

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HYDRAULIC FITTINGS - AG Hydraulic catalogue

hose

↔		↔		⌚	⌚	⌒		⌒	⌚	⌚
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
3	1/8	5	0,20						0,020	0,013
4	5/32	6	0,24						0,020	0,013
5	3/16	8	0,31						0,040	0,027
6	1/4	9	0,35						0,045	0,030
7	9/32	11	0,43						0,060	0,040
8	5/16	12	0,47						0,070	0,047
10	3/8	14	0,55						0,080	0,055
12	15/32	16	0,63						0,110	0,075
14	9/16	19	0,75						0,140	0,095
16	5/8	22	0,87						0,200	0,135
18	23/32	24	0,94						0,245	0,165
20	13/16	26	1,02						0,265	0,180
22	7/8	28	1,10						0,290	0,195
25	1	32	1,26						0,415	0,280

NA LA NEU EMEA SA AP AU



**49000**  
**General purpose tubing - PVC**  
**FDA**  
**Tube:** Transparent PVC  
**Use:** General purpose.  
 Sterilize with 5% soda solution  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

fittings

↔		↔		⌚	⌚	⌒		⌒	⌚	⌚
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	11	0,43	20	300				0,080	0,055
8	5/16	13	0,51	15	225				0,095	0,065
10	3/8	15	0,59	15	225				0,110	0,075
13	1/2	19	0,75	10	150				0,165	0,110
16	5/8	22	0,87	10	150				0,215	0,145
19	3/4	25	1,00	10	150				0,255	0,175
25	1	32	1,25	10	150				0,385	0,260
30	1 3/16	38	1,50	7	100				0,515	0,350
32	1 1/4	42	1,65	7	100				0,685	0,465
38	1 1/2	48	1,89	7	100				0,810	0,545
51	2	63	2,48	6	90				1,315	0,885

NA LA NEU EMEA SA AP AU



**49200**  
**General purpose food quality - PVC**  
**FDA - EU 10/2011 A+B+C - AS 2070**  
**Tube:** Transparent PVC  
**Reinforcement:** High tensile textile cords  
**Cover:** Transparent PVC with longitudinal red stripes - abrasion and ozone resistant  
**Use:** General purpose food quality. Sterilize with 5% soda solution  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⌚	⌚	⌒		⌒	⌚	⌚
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	19	0,75	10	150	104	4,00		0,205	0,140
16	5/8	22	0,87	10	150	128	5,00		0,245	0,165
19	3/4	26	1,02	10	150	152	6,00		0,345	0,235
25	1	33	1,30	10	150	200	8,00		0,510	0,345
32	1 1/4	44	1,73	7	100	256	10,00		0,960	0,650

NA LA NEU EMEA SA AP AU



**284AA**  
**Water delivery 10 bar (150 psi)**  
**Tube:** Black synthetic elastomer - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black synthetic elastomer with longitudinal green stripes - abrasion and ozone resistant  
**Use:** Air and water delivery  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⌚	⌚	⌒		⌒	⌚	⌚
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	19	0,75	10	150	104	4,00		0,205	0,140
19	3/4	26	1,02	10	150	152	6,00		0,345	0,235
25	1	33	1,30	10	150	200	8,00		0,510	0,345

NA LA NEU EMEA SA AP AU



**284AH**  
**Water delivery 10 bar (150 psi)**  
**Tube:** Black synthetic elastomer - oil mist resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Red synthetic elastomer - abrasion and ozone resistant  
**Use:** Air and water delivery  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

appendix

↔		↔		⌚		⌒		⌘	⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
38	1 1/2			5	75				0,210	0,140
51	2			5	75				0,270	0,180
63	2 1/2			4	60				0,380	0,255
76	3			4	60				0,530	0,360
102	4			4	60				0,710	0,480
152	6			3	45				1,180	0,795
203	8			3	45				1,800	1,210
NA		LA		NEU		EMEA		SA	AP	AU



**286EE**  
**Water discharge - PVC - lay flat - standard duty**

**Tube:** Blue PVC  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue PVC - abrasion and ozone resistant  
**Use:** Lay flat water discharge  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⌚		⌒		⌘	⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1			10	150				0,190	0,130
32	1 1/4			9	135				0,240	0,160
38	1 1/2			8	120				0,300	0,200
45	1 3/4			8	120				0,350	0,235
51	2			8	120				0,410	0,275
63	2 1/2			8	120				0,560	0,380
76	3			8	120				0,680	0,460
102	4			7	100				1,000	0,675
152	6			4	60				1,600	1,080
NA		LA		NEU		EMEA		SA	AP	AU



**288HH**  
**Water discharge - PVC - lay flat - heavy duty**

**Tube:** Red PVC  
**Reinforcement:** High tensile textile cords  
**Cover:** Red PVC - abrasion and ozone resistant  
**Use:** Lay flat water discharge  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⌚		⌒		⌘	⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
102	4	110	4,33	5	75				1,660	1,120
152	6	160	6,30	5	75				2,410	1,620
203	8	213	8,39	5	75				3,230	2,175
254	10	264	10,39	5	75				3,980	2,675
NA		LA		NEU		EMEA		SA	AP	AU



**250AA**  
**Water discharge 5 bar (75 psi) - lay flat**

**Tube:** Black EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Black EPDM - abrasion and ozone resistant  
**Use:** Lay flat water discharge  
**Safety factor:** ≤ 102 mm 3:1 ≥ 152 mm 2:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⌒		⌘	⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
32	1 1/4	40	1,57	10	150				0,460	0,310
38	1 1/2	46	1,81	10	150				0,540	0,365
40	1 9/16	48	1,89	10	150				0,570	0,385
45	1 3/4	53	2,09	10	150				0,660	0,445
51	2	59	2,32	10	150				0,730	0,495
60	2 3/8	68	2,68	10	150				0,860	0,580
63	2 1/2	71	2,80	10	150				0,890	0,600
70	2 3/4	78	3,07	10	150				1,190	0,800
76	3	84	3,31	10	150				1,280	0,865
90	3 1/2	98	3,86	10	150				1,480	0,995
102	4	110	4,33	10	150				1,770	1,190
127	5	137	5,39	10	150				2,400	1,615
152	6	162	6,38	10	150				2,970	2,000
168	6 5/8	178	7,01	10	150				3,220	2,165
203	8	215	8,46	10	150				4,190	2,820
254	10	270	10,63	10	150				7,600	5,110
305	12	319	12,56	10	150				8,810	5,925
NA		LA		NEU		EMEA		SA	AP	AU



**253AA**  
**Water discharge 10 bar (150 psi) - lay flat**

**Tube:** Black EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Black EPDM - abrasion and ozone resistant  
**Use:** Lay flat water discharge  
**Safety factor:** 3:1 ≥ 203 mm 2:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



hose

↔		↔		⌚	⌚	↷		⌚	⌚		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	21	0,83	10	150				0,320	0,215	
19	3/4	27	1,06	10	150				0,430	0,290	
25	1	33	1,30	10	150				0,540	0,365	
32	1 1/4	42	1,65	10	150				0,830	0,560	
38	1 1/2	48	1,89	10	150				0,970	0,655	
51	2	61	2,40	10	150				1,290	0,870	
63	2 1/2	75	2,95	10	150				1,910	1,285	
76	3	88	3,46	10	150				2,290	1,540	
102	4	114	4,49	10	150				3,090	2,080	
152	6	166	6,54	10	150				4,650	3,125	
203	8	219	8,62	10	150				6,890	4,635	
NA	LA	NEU	EMEA	SA	AP	AU					



## 254AA

### Air-water delivery 10 bar (150 psi)

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black SBR - abrasion and ozone resistant  
**Use:** Air and water delivery  
**Safety factor:** 3:1 203 mm 2:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚	⌚	↷		⌚	⌚		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
32	1 1/4	42	1,65	10	150				0,840	0,565	
38	1 1/2	48	1,89	10	150				0,980	0,660	
45	1 3/4	55	2,17	10	150				1,140	0,770	
51	2	61	2,40	10	150				1,300	0,875	
63	2 1/2	75	2,95	10	150				1,920	1,295	
76	3	88	3,46	10	150				2,310	1,555	
102	4	114	4,49	10	150				3,110	2,095	
NA	LA	NEU	EMEA	SA	AP	AU					



## 254AH

### Air-water delivery 10 bar (150 psi)

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Red SBR - abrasion and ozone resistant  
**Use:** Air and water delivery  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

fittings

↔		↔		⌚	⌚	↷		⌚	⌚		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	61	2,40	18	270				1,060	0,715	
60	2 3/8	72	2,83	18	270				1,380	0,930	
70	2 3/4	82	3,23	18	270				1,600	1,080	
76	3	88	3,46	18	270				1,720	1,160	
80	3 1/8	92	3,62	18	270				1,870	1,260	
90	3 1/2	102	4,02	18	270				2,060	1,385	
102	4	114	4,49	18	270				2,350	1,580	
120	4 3/4	132	5,20	18	270				2,850	1,920	
152	6	168	6,61	18	270				4,750	3,195	
NA	LA	NEU	EMEA	SA	AP	AU					



## 256AA

### Water-irrigation 18 bar (270 psi) - heavy duty

**Tube:** Black EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Black EPDM - abrasion and ozone resistant  
**Use:** Heavy duty water discharge.  
 Specially designed for high pressure irrigation systems  
**Safety factor:** 2,5:1 152 mm 2:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

appendix

↔		↔		⌚		⤵		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
20	13/16			7	100	110	4,25	60	0,200	0,135	
25	1			7	100	138	5,50	60	0,250	0,170	
32	1 1/4			6	90	176	7,00	60	0,340	0,230	
38	1 1/2			5	75	209	8,25	60	0,440	0,300	
51	2			5	75	281	11,00	60	0,650	0,440	

NA LA **NEU** **EMEA** SA AP **AU**



**264GL**  
**Water S&D - PVC - light duty**

**Construction:** Green transparent PVC - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** Water suction and delivery  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⌚		⤵		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			7	100	113	4,50	70	0,290	0,195	
32	1 1/4			6	90	144	5,75	70	0,390	0,265	
38	1 1/2			5	75	171	6,75	70	0,510	0,345	
45	1 3/4			5	75	203	8,00	70	0,670	0,455	
51	2			5	75	230	9,00	70	0,760	0,515	
63	2 1/2			5	75	284	11,25	70	0,970	0,655	
76	3			5	75	342	13,50	70	1,330	0,895	
90	3 1/2			4	60	405	16,00	70	1,800	1,210	
102	4			4	60	459	18,00	70	2,190	1,475	
127	5			3	45	597	23,50	50	2,900	1,950	
152	6			3	45	714	28,25	50	4,000	2,690	
203	8			2	30	954	37,50	40	6,200	4,170	

NA LA **NEU** **EMEA** SA AP **AU**



**266GL**  
**Water S&D - PVC - standard duty**

**Construction:** Green transparent PVC - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** Water suction and delivery  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⌚		⤵		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
20	13/16			7	100	90	3,50	70	0,230	0,155	
25	1			7	100	113	4,50	70	0,290	0,195	
30	1 3/16			6	90	135	5,25	70	0,360	0,245	
32	1 1/4			6	90	144	5,75	70	0,390	0,265	
35	1 3/8			6	90	158	6,25	70	0,440	0,300	
38	1 1/2			5	75	171	6,75	70	0,510	0,345	
40	1 9/16			5	75	180	7,00	70	0,540	0,365	
45	1 3/4			5	75	203	8,00	70	0,670	0,455	
51	2			5	75	230	9,00	70	0,760	0,515	
60	2 3/8			5	75	270	10,50	70	0,920	0,620	
63	2 1/2			5	75	284	11,25	70	0,970	0,655	
76	3			5	75	342	13,50	70	1,330	0,895	
80	3 1/8			4	60	360	14,00	70	1,450	0,975	
102	4			4	60	459	18,00	70	2,190	1,475	

NA **LA** **NEU** **EMEA** SA AP AU



**266KL**  
**Water S&D - PVC - standard duty**

**Construction:** Yellow transparent PVC - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** Water suction and delivery.  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⌚		⤵		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2			5	75	152	6,00	60	0,510	0,345	
45	1 3/4			5	75	180	7,00	60	0,670	0,455	
51	2			5	75	204	8,00	60	0,760	0,515	

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**266OL**  
**Water S&D - PVC - standard duty - super elastic**

**Construction:** Transparent PVC - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** Water suction and delivery. Good flexibility at low temperature  
**Safety factor:** 3:1  
**Temperature:** -20 °C +60 °C (-4 °F +140 °F)

↔		↔		⌚		⤴		⌘		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2			5	75	204	8,0	90	0,850	0,575	
63	2 1/2			4	60	252	10,0	90	1,250	0,845	
76	3			4	60	304	12,0	90	1,500	1,010	
102	4			3	45	408	16,0	90	2,200	1,480	
127	5			3	45	508	20,0	90	3,200	2,155	
152	6			2	30	608	24,0	90	4,100	2,760	

NA	LA	NEU	EMEA	SA	AP	AU
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## 265TH Water-slurry S&D - PVC - standard duty super elastic

**Construction:** Light blue PVC with helical red stripe - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** Water suction and delivery.  
 Special light weight construction for slurry tankers.  
 Good flexibility at low temperature  
**Safety factor:** 3:1  
**Temperature:** -20 °C +60 °C (-4 °F +140 °F)

↔		↔		⌚		⤴		⌘		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			7	100	100	4,00	90	0,410	0,275	
32	1 1/4			7	100	128	5,00	90	0,600	0,405	
38	1 1/2			7	100	152	6,00	90	0,700	0,475	
51	2			5	75	204	8,00	90	1,000	0,675	
60	2 3/8			5	75	240	9,50	90	1,280	0,865	
63	2 1/2			5	75	252	10,00	90	1,340	0,905	
76	3			5	75	304	12,00	90	1,750	1,180	
80	3 1/8			5	75	320	12,50	90	1,840	1,240	
90	3 1/2			4	60	360	14,00	90	2,260	1,520	
102	4			4	60	408	16,00	90	2,700	1,815	
110	4 5/16			4	60	440	17,50	90	3,100	2,085	
120	4 3/4			4	60	480	19,00	90	3,600	2,420	
127	5			4	60	508	20,00	90	3,800	2,555	
152	6			3	45	608	24,00	90	4,850	3,260	
203	8			3	45	812	32,00	90	9,100	6,120	

NA	LA	NEU	EMEA	SA	AP	AU
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## 267BE Water-slurry S&D - PVC - medium duty super elastic

**Construction:** Grey PVC with helical blue stripe - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** Water suction and delivery.  
 Special construction for slurry tankers.  
 Good flexibility at low temperature  
**Safety factor:** 3:1  
**Temperature:** -20 °C +60 °C (-4 °F +140 °F)

↔		↔		⌚		⤴		⌘		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2			5	75	178	7,00	90	1,000	0,675	
63	2 1/2			5	75	220	8,75	90	1,350	0,910	
76	3			5	75	266	10,50	90	1,750	1,180	
90	3 1/2			4	60	315	12,50	90	2,250	1,515	
102	4			4	60	357	14,00	90	2,700	1,815	
127	5			3	45	444	17,50	90	3,800	2,555	
152	6			3	45	532	21,00	90	4,900	3,295	

NA	LA	NEU	EMEA	SA	AP	AU
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## 269BA Water-slurry S&D - PVC/NBR - medium duty superior flexibility

**Construction:** Grey PVC/NBR - abrasion and ozone resistant  
**Reinforcement:** Black shock resistant rigid PVC  
**Use:** Water suction and delivery.  
 Special construction for slurry tankers and general applications.  
 Superior flexibility at low temperature  
**Safety factor:** 3:1  
**Temperature:** -30 °C +60 °C (-22 °F +140 °F)

↔		↔		⌚		⤴		⌘		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			7	100	150	6,00	90	0,520	0,350	
32	1 1/4			6	90	192	7,50	90	0,650	0,440	
38	1 1/2			6	90	228	9,00	90	0,760	0,515	
51	2			5	75	306	12,00	90	1,100	0,740	
63	2 1/2			4	60	378	15,00	90	1,550	1,045	
76	3			4	60	456	18,00	90	1,900	1,280	
80	3 1/8			4	60	480	19,00	90	2,100	1,415	
90	3 1/2			4	60	540	21,00	90	2,500	1,685	
102	4			3	45	612	24,00	90	3,200	2,155	
127	5			3	45	762	30,00	90	4,200	2,825	
152	6			2	30	912	36,00	90	6,000	4,035	
203	8			2	30	1218	48,00	60	10,000	6,725	

NA	LA	NEU	EMEA	SA	AP	AU
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## 268BL Water-abrasive slurry S&D - PVC - heavy duty

**Construction:** Grey PVC - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** Heavy duty water suction and delivery.  
 Also suitable for abrasive slurries transfer  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
10	3/8	16	0,63	15	225	40	1,50	90	0,170	0,115	
13	1/2	19	0,75	7	100	52	2,00	85	0,205	0,138	
14	9/16	20	0,79	6	90	56	2,25	85	0,220	0,150	
16	5/8	22	0,87	6	90	64	2,50	85	0,250	0,170	
18	23/32	26	1,02	6	90	72	2,75	85	0,320	0,215	
20	13/16	28	1,10	5	75	80	3,00	85	0,340	0,230	
22	7/8	30	1,18	5	75	88	3,50	85	0,380	0,255	
25	1	33	1,30	5	75	100	4,00	85	0,530	0,360	
30	1 3/16	38	1,50	4	60	120	4,75	85	0,620	0,420	
32	1 1/4	40	1,57	4	60	128	5,00	85	0,655	0,440	
35	1 3/8	45	1,77	4	60	140	5,50	85	0,800	0,540	
38	1 1/2	48	1,89	4	60	152	6,00	85	0,855	0,570	
40	1 9/16	50	1,97	3	45	160	6,25	85	0,895	0,605	
45	1 3/4	55	2,17	3	45	180	7,00	80	1,100	0,740	
51	2	61	2,40	3	45	204	8,00	80	1,230	0,830	
60	2 3/8	72	2,83	2	30	240	9,50	80	1,700	1,140	
63	2 1/2	75	2,95	2	30	252	10,00	80	1,775	1,190	
70	2 3/4	84	3,31	2	30	280	11,00	80	2,030	1,365	
76	3	90	3,54	2	30	304	12,00	70	2,450	1,650	
80	3 1/8	94	3,70	2	30	320	12,50	70	2,565	1,720	
90	3 1/2	104	4,09	2	30	360	14,00	70	3,000	2,020	
102	4	116	4,57	2	30	408	16,00	70	3,480	2,340	
105	4 1/8	121	4,76	3	45	420	16,50	90	4,250	2,860	
152	6	172	6,77	2	30	608	24,00	70	7,300	4,910	

NA	LA	NEU	EMEA	SA	AP	AU
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**47200**

**General purpose food quality S&D - PVC  
FDA - EU 10/2011 A+B+C - AS 2070**

**Construction:** Transparent PVC - abrasion and ozone resistant  
**Reinforcement:** Steel helix wire  
**Use:** General purpose liquid food and alcoholic beverages suction and delivery - max 20% - Sterilize with 5% soda solution  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

hose

fittings

appendix

↔		↔		⌚	⌚	⌒		⌒	⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
152	6	166	6,54	5	75	760	30,00	80	6,140	4,130
203	8	221	8,70	5	75	1015	40,00	70	10,500	7,060

NA	LA	NEU	EMEA	SA	AP	AU
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## 204AA Water S&D 5 bar (75 psi)

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black SBR - abrasion and ozone resistant  
**Use:** Water suction and delivery  
**Safety factor:** 3:1 254 mm 2:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚	⌚	⌒		⌒	⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	35	1,38	10	150	100	4,00	100	0,690	0,465
30	1 3/16	40	1,57	10	150	120	4,75	100	0,780	0,525
32	1 1/4	42	1,65	10	150	128	5,00	100	0,820	0,555
38	1 1/2	48	1,89	10	150	152	6,00	100	0,950	0,640
40	1 9/16	50	1,97	10	150	160	6,25	100	1,000	0,675
45	1 3/4	55	2,17	10	150	180	7,00	100	1,110	0,750
51	2	61	2,40	10	150	204	8,00	100	1,240	0,835
60	2 3/8	72	2,83	10	150	240	9,50	100	1,710	1,150
63	2 1/2	75	2,95	10	150	252	10,00	90	1,780	1,200
70	2 3/4	82	3,23	10	150	280	11,00	90	1,990	1,340
76	3	88	3,46	10	150	304	12,00	90	2,140	1,440
80	3 1/8	92	3,62	10	150	320	12,50	90	2,300	1,550
90	3 1/2	102	4,02	10	150	360	14,00	90	2,700	1,815
102	4	114	4,49	10	150	408	16,00	90	3,010	2,025
110	4 5/16	122	4,80	10	150	440	7,25	80	3,210	2,160
115	4 1/2	127	5,00	10	150	460	18,00	80	3,340	2,245
120	4 3/4	134	5,28	10	150	600	24,00	80	4,500	3,025
127	5	141	5,55	10	150	635	25,00	80	4,730	3,180
152	6	166	6,54	10	150	760	30,00	80	5,960	4,010
203	8	221	8,70	10	150	1015	40,00	70	9,810	6,595
254	10	272	10,71	10	150	1270	50,00	60	13,430	9,030

NA	LA	NEU	EMEA	SA	AP	AU
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## 202AA General purpose S&D 10 bar (150 psi) - EPDM

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black conductive EPDM - abrasion and ozone resistant  
**Use:** Water suction and delivery. Also suitable for mild chemicals and fertilizers in general industrial and agricultural applications  
**Safety factor:** ≤ 127 mm 3:1 ≥ 152 mm 2,5:1  
**Temperature:** -40 °C +100 °C (-40 °F +212 °F)  
 depending on conveyed chemical

↔		↔		⌚	⌚	⌒		⌒	⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	63	2,48	20	300	204	8,00	100	1,420	0,955
63	2 1/2	77	3,03	20	300	252	10,00	90	2,070	1,395
76	3	90	3,54	20	300	304	12,00	90	2,550	1,715
102	4	116	4,57	20	300	408	16,00	90	3,490	2,350
152	6	168	6,61	20	300	608	24,00	80	6,810	4,580
203	8	225	8,86	20	300	812	32,00	70	10,910	7,335

NA	LA	NEU	EMEA	SA	AP	AU
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## 223AA Water S&D 20 bar (300 psi) - heavy duty

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black conductive EPDM - abrasion and ozone resistant  
**Use:** Water suction and delivery. Designed for long service life in heavy duty applications  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⌒		⌘		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3			5	75	190	7,48	90	2,230	1,500	
102	4			5	75	255	10,04	90	2,940	1,980	
120	4 3/4			5	75	300	11,81	80	3,540	2,380	
152	6			3	45	380	14,96	80	4,650	3,130	
203	8			3	45	508	20,00	80	6,370	4,290	
NA	LA	NEU	EMEA	SA	AP	AU					



**221AA**  
**Water-slurry S&D**  
**corrugated - soft ends**

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black SBR - abrasion and ozone resistant  
**Use:** Water suction and delivery.  
 Special light weight and flexible construction for slurry tankers  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⌒		⌘		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
152	6			10	150	608	24,00	100	6,650	4,470	
203	8			10	150	812	32,00	100	8,850	5,950	
254	10			10	150	1016	40,00	100	12,530	8,425	
300	12			10	150	1200	48,00	100	17,380	11,685	
NA	LA	NEU	EMEA	SA	AP	AU					



**222AA**  
**Heavy duty dewatering - EPDM**  
**corrugated - soft ends**

**Tube:** Black EPDM  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black EPDM - abrasion and ozone resistant  
**Use:** Heavy duty suction. Specially designed for full vacuum dewatering applications. Also suitable for mild chemicals.  
**Safety factor:** 3:1  
**Temperature:** -50 °C +80 °C (-58 °F +176 °F)

↔		↔		⊕	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
28	1 1/8	32	1,26	6	90	168	6,75	90	0,250	0,170
32	1 1/4	40	1,57	6	90	192	7,50	90	0,540	0,365
42	1 5/8	50	1,97	6	90	252	10,00	90	0,780	0,525
55	2 1/6	63	2,48	5	75	330	13,00	90	0,840	0,565

NA	LA	NEU	EMEA	SA	AP	AU
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## 268LL

### Pools-SPA water circulation

**Construction:** White PVC - abrasion and ozone resistant

**Reinforcement:** White shock resistant rigid PVC

**Use:** Water circulation systems for pools and SPA.

Hose outside diameters made to fit rigid PVC pipe fittings

**Safety factor:** 3:1

**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⊕	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	36	1,42	100	1500				0,930	0,625
38	1 1/2	50	1,97	100	1500				1,650	1,110

NA	LA	NEU	EMEA	SA	AP	AU
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## 248AE

### High pressure water delivery 100 bar (1500 psi) snow maker - steel braided

**Tube:** Black SBR

**Reinforcement:** High tensile steel wire braids

**Cover:** Blue CSM - abrasion and ozone resistant

**Use:** High pressure water delivery.

Specially designed for artificial snow makers.

Designed for use of EN 853 1SN fittings

**Safety factor:** 2:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



# AGRICULTURE

## HOSE

591AE	Crop spraying 40 bar (600 psi) - PVC .....	H.36
593AK	Crop spraying 80 bar (1200 psi) - PVC .....	H.36
266OA	Air seeder - PVC .....	H.36
702AA	Air seeder.....	H.36





↔		↔		⊥		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
8	5/16	14	0,55	50	730	64	2,50		0,135	0,090	
10	3/8	16	0,63	50	730	80	3,00		0,160	0,110	
13	1/2	20	0,79	40	600	104	4,00		0,225	0,150	
16	5/8	24	0,94	40	600	128	5,00		0,320	0,215	
19	3/4	27	1,06	40	600	152	6,00		0,370	0,250	
25	1	34	1,34	40	600	200	8,00		0,525	0,355	
NA		LA		NEU		EMEA		SA		AP AU	



### 591AE Crop spraying 40 bar (600 psi) - PVC

**Tube:** Black PVC  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue PVC - abrasion and ozone resistant.  
**Use:** Crop spraying of fertilizers, pesticides and weed-killers  
**Safety factor:** ≤10 mm and 25 mm 2,5:1 >10 mm 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⊥		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
8	5/16	15	0,59	80	1200	64	2,50		0,160	0,110	
10	3/8	18	0,71	80	1200	80	3,00		0,230	0,155	
13	1/2	22	0,87	80	1200	104	4,00		0,320	0,215	
NA		LA		NEU		EMEA		SA		AP AU	



### 593AK Crop spraying 80 bar (1200 psi) - PVC

**Tube:** Black PVC  
**Reinforcement:** High tensile textile cords  
**Cover:** Yellow ribbed PVC with longitudinal black stripe - abrasion and ozone resistant.  
**Use:** Crop spraying of fertilizers, pesticides and weed-killers  
**Safety factor:** 2,5:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⊥		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			8	120	113	4,50	70	0,290	0,195	
32	1 1/4			7	100	144	5,75	70	0,390	0,265	
38	1 1/2			6	90	171	6,75	70	0,510	0,345	
45	1 3/4			6	90	203	8,00	70	0,670	0,455	
51	2			5	75	230	9,00	70	0,760	0,515	
63	2 1/2			5	75	284	11,25	70	1,180	0,795	
76	3			5	75	342	13,50	70	1,510	1,015	
NA		LA		NEU		EMEA		SA		AP AU	



### 2660A Air seeder - PVC

**Construction:** Transparent PVC - abrasion and ozone resistant  
**Reinforcement:** Black shock resistant rigid PVC  
**Use:** Agricultural seed transfer in "Air-Flo" seeding equipments  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⊥		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
32	1 1/4	42	1,65	10	150	128	5,00	100	0,870	0,585	
38	1 1/2	48	1,89	10	150	152	6,00	100	1,020	0,690	
45	1 3/4	55	2,17	10	150	180	7,00	100	1,190	0,800	
51	2	61	2,40	10	150	204	8,00	100	1,320	0,890	
63	2 1/2	75	2,95	10	150	252	10,00	90	2,050	1,380	
76	3	88	3,46	10	150	304	12,00	90	2,460	1,655	
NA		LA		NEU		EMEA		SA		AP AU	



### 702AA Air seeder

**Tube:** Black conductive NR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black NBR/PVC - oil, heat, abrasion and ozone resistant  
**Use:** Agricultural seed transfer in "Air-Flo" seeding equipments  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



# FIRE FIGHTING

## HOSE

283AA	Fire reel 12 bar (180 psi) - EN 694/A2 .....	H.38
251AA	Fire reel 40 bar (600 psi) - textile braided NF EN 1947/C/1/II .....	H.38
212AA	Fire engine water S&D 5 bar (75 psi) NF EN ISO 14557/A .....	H.39
210AA	Fire engine water S&D 5 bar (75 psi) - corrugated soft ends - EN ISO 14557/A .....	H.39

**HOSE & RECOMMENDED FITTING TABLE .....A.43**

## FITTINGS

Chapter SYMMETRIC GUILLEMIN .....F.33-40

Chapter SYMMETRIC DSP & AR ..... F.42

Chapter GFR - ROUND THREAD COUPLING  
NF E 29.579..... F.42  
*For hose 251AA*

Chapter STORZ .....F.43-45



↔		↔		⏰	⤴	⤴		⏸	⏶	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	34	1,34	12	180	200	8,00		0,575	0,390
NA	LA	NEU	EMEA		SA	AP	AU			



## 283AA

**Fire reel 12 bar (180 psi)**

**EN 694/A2**

**Tube:** Black synthetic elastomer

**Reinforcement:** High tensile textile cords

**Cover:** Black synthetic elastomer - abrasion and ozone resistant

**Use:** Fire reels

**Safety factor:** 4:1

**Temperature:** -20 °C +60 °C (-4 °F +140 °F)

↔		↔		⏰	⤴	⤴		⏸	⏶	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	36	1,42	40	600	100	4,00		0,680	0,460
NA	LA	NEU	EMEA		SA	AP	AU			



## 251AA

**Fire reel 40 bar (600 psi) - textile braided**

**NF EN 1947/C/1/II**

**Tube:** Black SBR

**Reinforcement:** High tensile textile braids

**Cover:** Black SBR - abrasion and ozone resistant

**Use:** Hose reels on fire fighting vehicles

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊕		⌒		) (		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
45	1 3/4	55	2,17	5	75	180	7,00	100	1,270	0,855	
70	2 3/4	82	3,23	5	75	280	11,00	90	2,640	1,775	
110	4 5/16	122	4,80	5	75	440	17,25	80	4,020	2,705	

NA	LA	NEU	<b>EMEA</b>	SA	AP	AU
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**212AA**  
**Fire engine water S&D 5 bar (75 psi)**  
**NF EN ISO 14557/A**

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black SBR - abrasion and ozone resistant  
**Use:** Water suction and delivery on fire fighting vehicles  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊕		⌒		) (		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
50	2			5	75	125	5,00	100	1,230	0,830	
75	3			5	75	190	7,50	90	1,910	1,285	
100	4			5	75	250	10,00	90	2,500	1,685	
110	4 5/16			5	75	275	11,00	80	2,740	1,845	
125	5			5	75	315	12,50	70	3,390	2,280	

NA	LA	NEU	<b>EMEA</b>	SA	AP	AU
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**210AA**  
**Fire engine water S&D 5 bar (75 psi)**  
**corrugated - soft ends**  
**EN ISO 14557/A**

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black SBR - abrasion and ozone resistant  
**Use:** Water suction and delivery on fire fighting vehicles. Special light weight and flexible construction  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)





# FURNACE & CABLE COOLING

## HOSE

- 254AL Furnace cooling 10 bar (150 psi) - soft wall .....H.42
- 203AL Furnace cooling 10 bar (150 psi) - hard wall .....H.42
- 957LL Cable cooling 20 bar (300 psi) - non conductive .....H.42



↔		↔		⏱	⤴	⤵	⏱	⏱	⏱	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	10	150				0,600	0,405
25	1	37	1,46	10	150				0,750	0,505
32	1 1/4	46	1,81	10	150				1,120	0,755
38	1 1/2	52	2,05	10	150				1,300	0,875
51	2	65	2,56	10	150				1,710	1,150
NA		LA		NEU		EMEA		SA	AP	AU



## 254AL

### Furnace cooling 10 bar (150 psi) - soft wall

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black SBR - resin coated dust free fibreglass cover  
**Use:** General purpose water delivery in furnace cooling applications. Specially designed to withstand heat, splashes of molten metal and open flame  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
 Cover resistant up to 540 °C (1000 °F)

↔		↔		⏱	⤴	⤵	⏱	⏱	⏱	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	63	2,48	10	150	255	10,00	100	1,840	1,240
60	2 3/8	72	2,83	10	150	300	12,00	100	2,270	1,530
63	2 1/2	75	2,95	10	150	300	12,00	90	2,370	1,595
76	3	88	3,46	10	150	330	13,00	90	2,820	1,900
80	3 1/8	92	3,62	10	150	400	16,00	90	2,950	1,985
90	3 1/2	102	4,02	10	150	450	17,50	90	3,380	2,275
102	4	114	4,49	10	150	510	20,00	90	3,800	2,555
NA		LA		NEU		EMEA		SA	AP	AU



## 203AL

### Furnace cooling 10 bar (150 psi) - hard wall

**Tube:** Black SBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black SBR - resin coated dust free fibreglass cover  
**Use:** General purpose water suction and delivery in furnace cooling applications. Specially designed to withstand heat, splashes of molten metal and open flame  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
 Cover resistant up to 540 °C (1000 °F)

↔		↔		⏱	⤴	⤵	⏱	⏱	⏱	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	25	0,98	20	300				0,440	0,300
19	3/4	31	1,22	20	300				0,670	0,455
25	1	37	1,46	20	300				0,820	0,555
32	1 1/4	46	1,81	20	300				1,220	0,820
38	1 1/2	54	2,13	20	300				1,460	0,985
51	2	67	2,64	20	300				1,870	1,260
63	2 1/2	81	3,19	20	300				2,300	1,550
76	3	96	3,78	20	300				3,190	2,145
NA		LA		NEU		EMEA		SA	AP	AU



## 957LL

### Cable cooling 20 bar (300 psi) non conductive

**Tube:** White EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** White non conductive EPDM, heat resistant - fibreglass cover  
**Use:** Non conductive cable cooling in electric furnaces. Specially designed to withstand heat, splashes of molten metal and open flame  
**Safety factor:** 3:1  
**Temperature:** -40 °C +120 °C (-40 °F +248 °F)  
 Cover resistant up to 540 °C (1000 °F)



# HOT WATER & STEAM

## HOSE

375AA	Hot water-car heater 10 bar (150 psi) .....	H.44
352AA	Radiator 5 bar (75 psi) exceeds DIN 73411 SAE 20R1 D-2.....	H.44
395BT	Hot water wash down 50 bar (750 psi) .....	H.45
351LL	Hot water wash down 10 bar (150 psi) built in nozzle.....	H.45
351LG	Hot water wash down 10 bar (150 psi) built in nozzle.....	H.45
350AA	Steam 6 bar (90 psi) - hot water 15 bar (225 psi) .....	H.46
354AA	Steam 6 bar (90 psi) - EN ISO 6134/1A .....	H.46
350LL	Steam 6 bar (90 psi) - hot water 15 bar (225 psi) FDA .....	H.46
350LE	Steam 6 bar (90 psi) - hot water 15 bar (225 psi) FDA .....	H.46
340AA	Steam 18 bar (270 psi) - steel braided .....	H.47
340AH	Steam 18 bar (270 psi) - steel braided .....	H.47
344AH	Steam 18 bar (270 psi) - steel braided EN ISO 6134/2A.....	H.47
343AH	Steam 18 bar (270 psi) - oil resistant steel braided.....	H.47
341AA	Steam 18 bar (270 psi) - CIIR -steel braided .....	H.48
341AH	Steam 18 bar (270 psi) - CIIR - steel braided .....	H.48
345AA	Steam 18 bar (270 psi) - CIIR - steel braided EN ISO 6134/2A.....	H.48



HOSE & RECOMMENDED FITTING TABLE .....A.43

## FITTINGS

Chapter STEAM.....F.27-31

Chapter COMBINATION NIPPLE .....F.68-69

HYDRAULIC FITTINGS - AG Hydraulic catalogue



↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	19	0,75	10	150	130	5,00		0,240	0,160	
16	5/8	22	0,87	10	150	160	6,25		0,280	0,190	
19	3/4	27	1,06	10	150	190	7,50		0,450	0,305	
25	1	33	1,30	10	150	250	10,00		0,570	0,385	

NA	LA	NEU	EMEA	SA	AP	AU
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## 375AA

### Hot water-car heater 10 bar (150 psi)

**Tube:** Black EPDM

**Reinforcement:** High tensile textile cords

**Cover:** Black EPDM - heat, abrasion and ozone resistant

**Use:** General purpose-hot water.

Specially designed for automotive heating systems

**Safety factor:** 3:1

**Temperature:** -35 °C +100 °C (-31 °F +212 °F)

↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	21	0,83	5	75				0,280	0,190	
16	5/8	24	0,94	5	75				0,330	0,225	
18	23/32	26	1,02	5	75				0,360	0,245	
20	13/16	28	1,10	5	75				0,390	0,265	
22	7/8	30	1,18	5	75				0,420	0,285	
25	1	33	1,30	5	75				0,470	0,320	
28	1 1/8	36	1,42	5	75				0,510	0,345	
30	1 3/16	38	1,50	5	75				0,540	0,365	
32	1 1/4	40	1,57	5	75				0,570	0,385	
35	1 3/8	43	1,69	5	75				0,620	0,420	
38	1 1/2	48	1,89	5	75				0,850	0,575	
40	1 9/16	50	1,97	5	75				0,890	0,600	
42	1 5/8	52	2,05	5	75				0,930	0,625	
45	1 3/4	55	2,17	5	75				0,980	0,660	
48	1 7/8	58	2,28	5	75				1,040	0,700	
51	2	61	2,40	5	75				1,110	0,750	
55	2 1/6	65	2,56	5	75				1,180	0,795	
57	2 1/4	67	2,64	5	75				1,220	0,820	
60	2 3/8	70	2,76	5	75				1,280	0,865	
63	2 1/2	73	2,87	5	75				1,340	0,905	
70	2 3/4	80	3,15	5	75				1,440	0,970	
76	3	86	3,39	5	75				1,550	1,045	
80	3 1/8	90	3,54	5	75				1,630	1,100	
90	3 1/2	102	4,02	5	75				2,010	1,355	
102	4	114	4,49	5	75				2,250	1,515	
110	4 5/16	122	4,80	5	75				2,410	1,620	
115	4 1/2	127	5,00	5	75				2,510	1,690	
127	5	141	5,55	5	75				3,200	2,155	

NA	LA	NEU	EMEA	SA	AP	AU
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## 352AA

### Radiator 5 bar (75 psi)

#### exceeds DIN 73411 SAE 20R1 D-2

**Tube:** Black EPDM

**Reinforcement:** High tensile textile cords

**Cover:** Black EPDM - heat, abrasion and ozone resistant

**Use:** Radiator

**Safety factor:** 3:1

**Temperature:** -40 °C +120 °C (-40 °F +248 °F)

↔		↔		⌚		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
12	15/32	22	0,87	50	750	84	3,25		0,325	0,220	
NA	LA	NEU		EMEA	SA	AP	AU				



**395BT**  
**Hot water wash down 50 bar (750 psi)**  
**EU 10/2011 A+B+C**

**Tube:** Grey non-toxic PVC  
**Reinforcement:** High tensile textile cords  
**Cover:** Light blue synthetic elastomer - abrasion, ozone and oil resistant  
**Use:** Hot water wash down.  
 Specially designed for the food and dairy industry.  
 Designed for 50 bar at 70° C continuous use. Food grade  
**Safety factor:** 3:1  
**Temperature:** -10 °C +70 °C (+14 °F +158 °F)

↔		↔		⌚		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	10	150				0,640	0,435	
25	1	37	1,46	10	150				0,790	0,535	
32	1 1/4	46	1,81	10	150				1,150	0,775	
38	1 1/2	52	2,05	10	150				1,350	0,910	
NA	LA	NEU	EMEA	SA	AP	AU					



**351LL**  
**Hot water wash down 10 bar (150 psi)**  
**built in nozzle**

**Tube:** White EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** White EPDM - heat, abrasion and ozone resistant  
**Use:** Hot and cold water wash down in paper mills and the food industry where a built in rubber nozzle is required to avoid floor and equipment damage  
**Safety factor:** 4:1  
**Temperature:** -40 °C +120 °C (-40 °F +248 °F)

↔		↔		⌚		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	10	150				0,610	0,410	
25	1	37	1,46	10	150				0,750	0,505	
32	1 1/4	46	1,81	10	150				1,110	0,750	
38	1 1/2	52	2,05	10	150				1,300	0,875	
NA	LA	NEU	EMEA	SA	AP	AU					



**351LG**  
**Hot water wash down 10 bar (150 psi)**  
**built in nozzle**

**Tube:** White EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Green EPDM - heat, abrasion and ozone resistant  
**Use:** Hot and cold water wash down in paper mills and the food industry where a built in rubber nozzle is required to avoid floor and equipment damage  
**Safety factor:** 4:1  
**Temperature:** -40 °C +120 °C (-40 °F +248 °F)

hose

↔		↔		⏱	⤴	⤵	⚖			
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	6	90				0,370	0,250
16	5/8	26	1,02	6	90				0,420	0,285
19	3/4	29	1,14	6	90				0,470	0,320
25	1	35	1,38	6	90				0,580	0,390
30	1 3/16	44	1,73	6	90				0,900	0,605
32	1 1/4	46	1,81	6	90				0,950	0,640
38	1 1/2	52	2,05	6	90				1,100	0,740
40	1 9/16	54	2,13	6	90				1,150	0,775
51	2	67	2,64	6	90				1,700	1,145

NA	LA	NEU	EMEA	SA	AP	AU
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**350AA**  
**Steam 6 bar (90 psi)**  
**hot water 15 bar (225 psi)**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Black conductive EPDM - heat, abrasion and ozone resistant  
**Use:** Saturated steam and hot water delivery in general industrial applications  
**Safety factor:** Water 4:1 - Steam 10:1  
**Temperature:** Water -40 °C +120 °C (-40 °F +248 °F)  
 Steam +165 °C (+330 °F)

↔		↔		⏱	⤴	⤵	⚖			
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	25	0,98	6	90				0,430	0,290
16	5/8	30	1,18	6	90				0,600	0,405
19	3/4	33	1,30	6	90				0,680	0,460
25	1	40	1,57	6	90				0,900	0,605

NA	LA	NEU	EMEA	SA	AP	AU
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**354AA**  
**Steam 6 bar (90 psi)**  
**EN ISO 6134/1A**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Black conductive EPDM - heat, abrasion and ozone resistant  
**Use:** Saturated steam  
**Safety factor:** 10:1  
**Temperature:** -40 °C +165 °C (-40 °F +330 °F)

fittings

↔		↔		⏱	⤴	⤵	⚖			
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	6	90				0,390	0,265
16	5/8	26	1,02	6	90				0,450	0,305
19	3/4	31	1,22	6	90				0,640	0,435
25	1	37	1,46	6	90				0,800	0,540

NA	LA	NEU	EMEA	SA	AP	AU
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**350LL**  
**Steam 6 bar (90 psi)**  
**hot water 15 bar (225 psi)**  
**FDA**

**Tube:** White food grade EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** White EPDM - heat, abrasion and ozone resistant  
**Use:** Saturated steam and hot water delivery in general industrial applications.  
 Specially designed for wash down use in the food and dairy industry  
**Safety factor:** Water 4:1 - Steam 10:1  
**Temperature:** Water -40 °C +120 °C (-40 °F +248 °F)  
 Steam +165 °C (+330 °F)

↔		↔		⏱	⤴	⤵	⚖			
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	6	90				0,370	0,250
16	5/8	26	1,02	6	90				0,430	0,290
19	3/4	31	1,22	6	90				0,600	0,405
25	1	37	1,46	6	90				0,740	0,500
32	1 1/4	46	1,81	6	90				0,930	0,625
38	1 1/2	52	2,05	6	90				1,090	0,735
51	2	67	2,64	6	90				1,660	1,120

NA	LA	NEU	EMEA	SA	AP	AU
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**350LE**  
**Steam 6 bar (90 psi)**  
**hot water 15 bar (225 psi)**  
**FDA**

**Tube:** White food grade EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Blue EPDM - heat, abrasion and ozone resistant  
**Use:** Saturated steam and hot water delivery in general industrial applications.  
 Specially designed for wash down use in the food and dairy industry  
**Safety factor:** Water 4:1 - Steam 10:1  
**Temperature:** Water -40 °C +120 °C (-40 °F +248 °F)  
 Steam +165 °C (+330 °F)

appendix

↔		↔		⌚		⤴		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	18	270	130	5,00		0,410	0,280	
19	3/4	31	1,22	18	270	190	7,50		0,760	0,515	
25	1	38	1,50	18	270	250	10,00		0,890	0,600	
NA		LA		NEU		EMEA		SA		AP AU	



**Ω**  
R≤10°Ω

**Ω/T**  
R≤10°Ω

EXTRUDED TUBE

**340AA**  
**Steam 18 bar (270 psi)**  
**steel braided**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Black conductive EPDM - heat, abrasion and ozone resistant - pin pricked  
**Use:** Saturated and superheated steam  
**Safety factor:** 10:1  
**Temperature:** -40 °C +210 °C (-40 °F +410 °F) intermittent to 232 °C (450 °F)

↔		↔		⌚		⤴		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,98	18	270	130	5,00		0,420	0,285	
16	5/8	26	1,02	18	270	160	6,50		0,460	0,309	
19	3/4	31	1,26	18	270	190	7,50		0,770	0,520	
25	1	38	1,50	18	270	250	10,00		0,900	0,605	
32	1 1/4	46	1,81	18	270	320	12,50		1,270	0,855	
38	1 1/2	52	2,05	18	270	380	15,00		1,370	0,925	
51	2	67	2,64	18	270	510	20,00		2,050	1,380	
63	2 1/2	81	3,19	18	270	630	25,00		2,960	1,986	
76	3	94	3,70	18	270	760	30,00		3,720	2,496	
NA		LA		NEU		EMEA		SA		AP AU	



EXTRUDED TUBE

**340AH**  
**Steam 18 bar (270 psi)**  
**steel braided**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Red EPDM - heat, abrasion and ozone resistant - pin pricked  
**Use:** Saturated and superheated steam  
**Safety factor:** 10:1  
**Temperature:** -40 °C +210 °C (-40 °F +410 °F) intermittent to 232 °C (450 °F)

↔		↔		⌚		⤴		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	25	0,98	18	270	130	5,00		0,470	0,320	
19	3/4	33	1,30	18	270	190	7,50		0,870	0,585	
25	1	40	1,57	18	270	250	10,00		0,990	0,670	
NA		LA		NEU		EMEA		SA		AP AU	



EXTRUDED TUBE

**344AH**  
**Steam 18 bar (270 psi)**  
**steel braided**  
**EN ISO 6134/2A**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Red EPDM - heat, abrasion and ozone resistant - pin pricked  
**Use:** Saturated and superheated steam  
**Safety factor:** 10:1  
**Temperature:** -40 °C +210 °C (-40 °F +410 °F) intermittent to 232 °C (450 °F)

↔		↔		⌚		⤴		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,98	18	270	130	5,00		0,450	0,305	
19	3/4	31	1,26	18	270	190	7,50		0,800	0,535	
25	1	38	1,50	18	270	250	10,00		0,970	0,655	
NA		LA		NEU		EMEA		SA		AP AU	



EXTRUDED TUBE

**343AH**  
**Steam 18 bar (270 psi)**  
**oil resistant - steel braided**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Red special rubber compound - heat, abrasion, ozone and hydrocarbon resistant - pin pricked  
**Use:** Saturated and superheated steam in applications where an oil resistant cover is required  
**Safety factor:** 10:1  
**Temperature:** -40 °C +210 °C (-40 °F +410 °F) intermittent to 232 °C (450 °F)

**Black version according to ISO 6134/2B available upon request with minimum order quantities**

↔		↔		⏱	⤴	⤴		⌘	⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	18	270	130	5,00		0,430	0,290
19	3/4	31	1,22	18	270	190	7,50		0,780	0,525
25	1	38	1,50	18	270	250	10,00		0,920	0,620
32	1 1/4	46	1,81	18	270	320	12,50		1,320	0,890
38	1 1/2	52	2,05	18	270	380	15,00		1,430	0,965
51	2	67	2,64	18	270	510	20,00		2,150	1,445
NA		LA		NEU		EMEA		SA	AP AU	



**Ω**  
R ≤ 10°Ω

**Ω/T**  
R ≤ 10°Ω

EXTRUDED TUBE

### 341AA Steam 18 bar (270 psi) - CIIR steel braided

**Tube:** Black conductive chlorobutyl  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Black conductive EPDM - heat, abrasion and ozone resistant - pin pricked  
**Use:** Saturated and superheated steam  
**Safety factor:** 10:1  
**Temperature:** -40 °C +210 °C (-40 °F +410 °F)  
 intermittent to 232 °C (450 °F)

↔		↔		⏱	⤴	⤴		⌘	⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	18	270	130	5,00		0,430	0,290
19	3/4	31	1,22	18	270	190	7,50		0,790	0,535
25	1	38	1,50	18	270	250	10,00		0,930	0,625
32	1 1/4	46	1,81	18	270	320	12,50		1,340	0,905
38	1 1/2	52	2,05	18	270	380	15,00		1,460	0,985
51	2	67	2,64	18	270	510	20,00		2,130	1,435
NA		LA		NEU		EMEA		SA	AP AU	



EXTRUDED TUBE

### 341AH Steam 18 bar (270 psi) - CIIR steel braided

**Tube:** Black conductive chlorobutyl  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Red EPDM - heat, abrasion and ozone resistant - pin pricked  
**Use:** Saturated and superheated steam  
**Safety factor:** 10:1  
**Temperature:** -40 °C +210 °C (-40 °F +410 °F)  
 intermittent to 232 °C (450 °F)

↔		↔		⏱	⤴	⤴		⌘	⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	33	1,30	18	270	190	7,50		0,800	0,540
25	1	40	1,57	18	270	250	10,00		1,020	0,690
51	2	69	2,72	18	270	510	20,00		2,190	1,475
NA		LA		NEU		EMEA		SA	AP AU	



**Ω**  
R ≤ 10°Ω

**Ω/T**  
R ≤ 10°Ω

EXTRUDED TUBE

### 345AA Steam 18 bar (270 psi) - CIIR steel braided EN ISO 6134/2A

**Tube:** Black conductive chlorobutyl  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Black EPDM - heat, abrasion and ozone resistant - pin pricked  
**Use:** Saturated and superheated steam  
**Safety factor:** 10:1  
**Temperature:** -40 °C +210 °C (-40 °F +410 °F)  
 intermittent to 232 °C (450 °F)

**STEAM HOSE SAFETY GUIDE**

*(Reprinted from RMA IP-11-1 Steam Hose)*

Handling steam is a very hazardous situation. Using care and some safety precaution can minimise or eliminate personal or property damage.

**SELECTING AND USING STEAM HOSE**

1. Make sure steam hose is identified as a steam hose. It should be branded as such, stating working pressure and temperature rating
2. Make sure working pressure and temperature is not exceeded.
3. Do not allow hose to remain under pressure when not in use.
4. Avoid excess bending or flexing of hose near the coupling. Straight line operation is preferred. If bends are necessary as part of operation, spring guards may help.
5. Be sure and use recommended steam hose couplings and clamps on hose.

**MAINTENANCE OF STEAM HOSE**

1. Periodic inspection of hose should include looking for cover blisters and lumps.
2. Check for kinked areas that could damage hose.
3. Drain hose after each use to avoid tube damage before hose is put back in operation, to avoid "popcorning" of the tube.
4. Check tightness of clamps bolts after each use.
5. Check to see if clamps halves are touching. If they are, recouple hose with smaller clamps to insure proper tightness or grip around hose.
6. Do not store hose over hooks.
7. Steam hose lying on metal racks or installed around steel piping will dry out the hose, causing tube and cover cracking.

**CORROSIVE STEAM**

When the water used to generate steam contains dissolved air, oxygen or carbon dioxide, then these gases end up as contaminants in the steam. At high temperatures of steam both oxygen and carbon dioxide are extremely corrosive.

Carbon dioxide is acidic and therefore attacks metals whereas the oxygen corrodes metals and oxidises rubbers. Corrosion of metals in the presence of both oxygen and acids is forty times faster than with either alone. Boiler water is therefore normally treated not only to remove the "hardness" which would cause "furring" of the boiler but also to remove dissolved oxygen and carbon dioxide and to ensure that the steam is not only not acidic but even slightly alkaline. Boiler water treatment is a specialised subject beyond the scope of this technical sheet but correct steam generation is important.

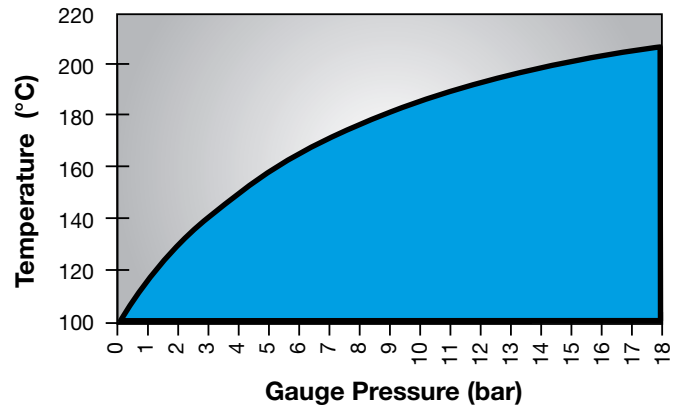
**DETERIORATION OF STEAM HOSE**


Like all rubber products steam hoses have a finite life and are subject to gradual deterioration with use. However, it sometimes happens that hoses which have been giving a good life suddenly start failing without apparent reason. In such cases it is often a change in the steam conditions causing a rapid acceleration of a normal failure mode. It is therefore useful to consider how steam hoses normally last and thus how the condition of the steam affects hose life.

**TEMPERATURE OF SATURATED STEAM**


Gauge Pressure		Temperature	
psi	bar	°C	°F
25	1.73	130	267
30	2.07	134	274
35	2.42	138	281
40	2.76	141	287
45	3.11	144	292
50	3.45	148	298
60	4.14	153	307
70	4.83	158	316
80	5.52	162	324
90	6.21	166	330
100	6.90	170	338
120	8.28	177	350
140	9.66	182	361
160	11.04	188	371
180	12.42	193	379
200	13.80	198	388
225	15.53	203	397
250	17.25	208	406
275	18.98	212	414
300	20.70	216	422
325	22.43	221	429
350	24.15	225	437

The chart represents the three forms of water when subjected to heat and pressure. Use only hoses specifically designed for the application.






Hot water



Superheated steam



Saturated steam





# LIQUID FOOD

## HOSE

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4660L	Liquid food S&D - PVC - standard duty FDA EU 10/2011 A+B+C AS 2070.....	H.52
4680H	Liquid food S&D - PVC - heavy duty FDA EU 10/2011 A+B+C AS 2070.....	H.52
47200	General purpose food quality S&D - PVC FDA EU 10/2011 A+B+C AS 2070.....	H.53
452LH	Liquid food delivery 10 bar (150 psi) FDA arrêté du 09/11/94 D .....	H.54
402LH	Liquid food S&D 10 bar (150 psi) FDA arrêté du 09/11/94 D .....	H.54
410LL	Alcoholic beverages S&D 16 bar (240 psi) crush resistant - FDA arrêté du 09/11/94 D .....	H.54
412LE	Milk tanker 10 bar (150 psi) - hard wall FDA arrêté du 09/11/94 D .....	H.55
418LE	Milk tanker 10 bar (150 psi) - hard wall - crush resistant FDA arrêté du 09/11/94 D.....	H.55
455LE	Fat food delivery 10 bar (150 psi) FDA D.M. 21/03/73.....	H.56
455LL	Fat food delivery 10 bar (150 psi) FDA D.M. 21/03/73 .....	H.56
405LE	Fat food S&D 10 bar (150 psi) FDA D.M. 21/03/73.....	H.57
405LL	Fat food S&D 10 bar (150 psi) FDA D.M. 21/03/73.....	H.57
405LH	Fat food S&D 10 bar (150 psi) FDA D.M. 21/03/73 .....	H.57
417LE	Fat food S&D 16 bar (240 psi) - crush resistant FDA - D.M. 21/03/73.....	H.58
	Food hose identification table .....	H.59-61

**HOSE & RECOMMENDED FITTING TABLE**      **A.44**

## FITTINGS

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Chapter TANKWAGEN	F.48-49
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Chapter EN 14 420-5 / DIN 2817	F.71-72



hose

↔		↔		⌚		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	11	0,43	20	300				0,080	0,055	
8	5/16	13	0,51	15	225				0,095	0,065	
10	3/8	15	0,59	15	225				0,110	0,075	
13	1/2	19	0,75	10	150				0,165	0,110	
16	5/8	22	0,87	10	150				0,215	0,145	
19	3/4	25	1,00	10	150				0,255	0,175	
25	1	32	1,25	10	150				0,385	0,260	
30	1 3/16	38	1,50	7	100				0,515	0,350	
32	1 1/4	42	1,65	7	100				0,685	0,465	
38	1 1/2	48	1,89	7	100				0,810	0,545	
51	2	63	2,48	6	90				1,315	0,885	
6	1/4	12	0,47	20	300				0,100	0,070	
8	5/16	14	0,55	15	225				0,115	0,080	
10	3/8	16	0,63	15	225				0,135	0,090	
19	3/4	26	1,06	10	150				0,305	0,205	
25	1	33	1,34	10	150				0,445	0,300	

NA	LA	NEU	EMEA	SA	AP	AU
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## 49200

**General purpose food quality - PVC**  
**FDA EU 10/2011 A+B+C AS 2070**

**Tube:** Transparent PVC  
**Reinforcement:** High tensile textile cords  
**Cover:** Transparent PVC with longitudinal red stripes - abrasion and ozone resistant  
**Use:** General purpose food quality. Sterilize with 5% soda solution  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

fittings

↔		↔		⌚		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
20	13/16			8	120	90	3,50	70	0,230	0,155	
25	1			8	120	113	4,50	70	0,290	0,195	
30	1 3/16			7	100	135	5,25	70	0,360	0,245	
32	1 1/4			7	100	144	5,75	70	0,390	0,265	
35	1 3/8			7	100	158	6,25	70	0,440	0,300	
38	1 1/2			6	90	171	6,75	70	0,510	0,345	
40	1 9/16			6	90	180	7,00	70	0,540	0,365	
45	1 3/4			6	90	203	8,00	70	0,670	0,455	
51	2			5	75	230	9,00	70	0,760	0,515	
55	2 1/6			5	75	247	9,75	70	0,810	0,545	
60	2 3/8			5	75	270	10,50	70	0,920	0,620	
63	2 1/2			5	75	284	11,25	70	0,970	0,655	
70	2 3/4			5	75	315	12,50	70	1,160	0,780	
76	3			5	75	342	13,50	70	1,330	0,895	
80	3 1/8			4	60	360	14,00	70	1,450	0,975	
90	3 1/2			4	60	405	16,00	70	1,800	1,210	
102	4			4	60	459	18,00	70	2,190	1,475	
120	4 3/4			3	45	540	21,00	50	2,700	1,815	

NA	LA	NEU	EMEA	SA	AP	AU
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## 4660L

**General purpose S&D - PVC - standard duty**  
**FDA EU 10/2011 A+B+C AS 2070**

**Construction:** Transparent PVC - abrasion and ozone resistant  
**Reinforcement:** White shock resistant rigid PVC  
**Use:** General purpose liquid food and alcoholic beverages suction and delivery - max 20% - Sterilize with 5% soda solution  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

appendix

↔		↔		⌚		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			7	100	125	5,00	90	0,400	0,270	
32	1 1/4			7	100	160	6,25	90	0,520	0,350	
38	1 1/2			7	100	190	7,50	90	0,730	0,495	
40	1 9/16			7	100	200	8,00	90	0,750	0,505	
51	2			7	100	255	10,00	90	1,000	0,675	
60	2 3/8			7	100	300	12,00	90	1,450	0,975	
63	2 1/2			6	90	315	12,50	90	1,500	1,010	
76	3			5	75	380	15,00	90	1,900	1,280	
80	3 1/8			5	75	400	16,00	90	2,100	1,415	
102	4			4	60	510	20,00	90	3,300	2,220	
120	4 3/4			3	45	600	24,00	80	3,600	2,420	

NA	LA	NEU	EMEA	SA	AP	AU
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## 4680H

**Liquid food S&D - PVC - heavy duty**  
**FDA EU 10/2011 A+B+C AS 2070**

**Construction:** Transparent PVC - abrasion and ozone resistant  
**Reinforcement:** Red shock resistant rigid PVC  
**Use:** Liquid food and alcoholic beverages suction and delivery - max 20%  
 Sterilize with 5% soda solution  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
10	3/8	16	0,63	15	225	40	1,50	90	0,170	0,115
13	1/2	19	0,75	7	100	52	2,00	85	0,205	0,138
14	9/16	20	0,79	6	90	56	2,25	85	0,220	0,150
16	5/8	22	0,87	6	90	64	2,50	85	0,250	0,170
18	23/32	26	1,02	6	90	72	2,75	85	0,320	0,215
20	13/16	28	1,10	5	75	80	3,00	85	0,340	0,230
22	7/8	30	1,18	5	75	88	3,50	85	0,380	0,255
25	1	33	1,30	5	75	100	4,00	85	0,530	0,360
30	1 3/16	38	1,50	4	60	120	4,75	85	0,620	0,420
32	1 1/4	40	1,57	4	60	128	5,00	85	0,655	0,440
35	1 3/8	45	1,77	4	60	140	5,50	85	0,800	0,540
38	1 1/2	48	1,89	4	60	152	6,00	85	0,855	0,570
40	1 9/16	50	1,97	3	45	160	6,25	85	0,895	0,605
45	1 3/4	55	2,17	3	45	180	7,00	80	1,100	0,740
51	2	61	2,40	3	45	204	8,00	80	1,230	0,830
60	2 3/8	72	2,83	2	30	240	9,50	80	1,700	1,140
63	2 1/2	75	2,95	2	30	252	10,00	80	1,775	1,190
70	2 3/4	84	3,31	2	30	280	11,00	80	2,030	1,365
76	3	90	3,54	2	30	304	12,00	70	2,450	1,650
80	3 1/8	94	3,70	2	30	320	12,50	70	2,565	1,720
90	3 1/2	104	4,09	2	30	360	14,00	70	3,000	2,020
102	4	116	4,57	2	30	408	16,00	70	3,480	2,340
105	4 1/8	121	4,76	3	45	420	16,50	90	4,250	2,860
152	6	172	6,77	2	30	608	24,00	70	7,300	4,910

NA	LA	NEU	EMEA	SA	AP	AU
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**47200**

**General purpose food quality S&D - PVC  
FDA EU 10/2011 A+B+C AS 2070**

**Construction:** Transparent PVC - abrasion and ozone resistant  
**Reinforcement:** Steel helix wire  
**Use:** General purpose liquid food and alcoholic beverages suction and delivery - max 20% - Sterilize with 5% soda solution  
**Safety factor:** 3:1  
**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↻		↻		⏰	↵		⏸		⚖		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	10	150				0,380	0,255	
19	3/4	31	1,22	10	150				0,610	0,410	
25	1	37	1,46	10	150				0,760	0,515	
32	1 1/4	44	1,73	10	150				0,930	0,625	
38	1 1/2	50	1,97	10	150				1,080	0,730	
51	2	65	2,56	10	150				1,680	1,130	
63	2 1/2	77	3,03	10	150				2,020	1,360	
76	3	92	3,62	10	150				2,800	1,885	
NA	LA	NEU	EMEA	SA	AP	AU					



IANESCO

## 452LH

**Liquid food delivery 10 bar (150 psi)  
FDA arrêté du 09/11/94 D**

**Tube:** White NR

**Reinforcement:** High tensile textile cords

**Cover:** Red SBR/EPDM - abrasion and ozone resistant

**Use:** Liquid food and alcoholic beverages delivery - max 50%. Sterilize with 110 °C (230 °F) steam for 10 minutes or with 5% soda solution

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↻		↻		⏰	↵		⏸		⚖		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	10	150	75	3,00	100	0,910	0,615	
38	1 1/2	50	1,97	10	150	114	4,50	100	1,250	0,845	
51	2	63	2,48	10	150	153	6,00	100	1,610	1,085	
76	3	88	3,46	10	150	228	9,00	90	2,530	1,705	
102	4	116	4,57	10	150	306	12,00	90	3,510	2,360	
NA	LA	NEU	EMEA	SA	AP	AU					



IANESCO

## 402LH

**Liquid food S&D 10 bar (150 psi)  
FDA arrêté du 09/11/94 D**

**Tube:** White NR

**Reinforcement:** High tensile textile cords with embedded steel helix wire

**Cover:** Red SBR/EPDM - abrasion and ozone resistant

**Use:** Liquid food and alcoholic beverages suction and delivery - max 50%. Special construction for maximum flexibility. Sterilize with 110 °C (230 °F) steam for 10 minutes or with 5% soda solution

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↻		↻		⏰	↵		⏸		⚖		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	16	240	100	4	100	0,881	0,595	
38	1 1/2	52	2,05	16	240	152	6	100	1,485	1,000	
51	2	65	2,56	16	240	204	8	100	1,912	1,285	
76	3	92	3,62	16	240	304	12	100	3,315	2,230	
NA	LA	NEU	EMEA	SA	AP	AU					



IANESCO

## 410LL

**Alcoholic beverages S&D 16 bar (240 psi)  
crush resistant  
FDA arrêté du 09/11/94 D**

**Tube:** White chlorobutyl

**Reinforcement:** High tensile textile cords with embedded PET helix

**Cover:** White EPDM - abrasion and ozone resistant

**Use:** Liquid food and alcoholic beverages suction and delivery - max 95%. Special crush resistant construction. Sterilize with 130 °C (226 °F) steam for 30 minutes or with 5% soda solution

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌚		⬛			
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
25	1	35	1,38	10	150	50	2,00	100	0,730	0,495			
32	1 1/4	42	1,65	10	150	64	2,50	100	0,900	0,605			
38	1 1/2	48	1,89	10	150	76	3,00	100	1,040	0,700			
40	1 9/16	50	1,97	10	150	80	3,00	100	1,090	0,735			
42	1 5/8	52	2,05	10	150	88	3,50	100	1,130	0,760			
51	2	61	2,40	10	150	100	4,00	100	1,420	0,955			
63	2 1/2	75	2,95	10	150	126	5,00	100	2,010	1,355			
76	3	88	3,46	10	150	228	9,00	90	2,590	1,745			
102	4	116	4,57	10	150	306	12,00	90	3,850	2,590			
NA		LA		NEU		EMEA		SA		AP		AU	



IANESCO



**412LE**  
**Milk tanker 10 bar (150 psi) - hard wall**  
**FDA arrêté du 09/11/94 D**

**Tube:** White NR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Blue NR/EPDM - abrasion and ozone resistant  
**Use:** Liquid food suction and delivery.  
 Special construction for maximum flexibility in milk tanker applications.  
 Sterilize with 110 °C (230 °F) steam for 10 minutes or with 5% soda solution  
**Safety factor:** 3:1  
**Temperature:** -40 °C +80 °C (-40 °F +176 °F)

↔		↔		⌚		⤴		⌚		⬛			
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
40	1 9/16	53	2,09	10	150	120	5,00	70	1,040	0,700			
45	1 3/4	58	2,28	10	150	135	5,50	70	1,150	0,770			
51	2	64	2,52	10	150	153	6,00	70	1,290	0,870			
63	2 1/2	76	3,00	10	150	189	7,50	70	1,750	1,180			
76	3	92	3,62	10	150	228	9,00	70	2,400	1,615			
NA		LA		NEU		EMEA		SA		AP		AU	



IANESCO



**418LE**  
**Milk tanker 10 bar (150 psi) - hard wall**  
**crush resistant**  
**FDA arrêté du 09/11/94 D**

**Tube:** White NR  
**Reinforcement:** High tensile textile cords with embedded PET helix  
**Cover:** Blue NR/EPDM - abrasion and ozone resistant  
**Use:** Liquid food suction and delivery.  
 Special lightweight construction for maximum flexibility and crush resistance in milk tanker applications.  
 Sterilize with 110 °C (230 °F) steam for 10 minutes or with 5% soda solution  
**Safety factor:** 3:1  
**Temperature:** -40 °C +80 °C (-40 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	10	150				0,380	0,255	
19	3/4	31	1,22	10	150				0,620	0,420	
25	1	37	1,46	10	150				0,770	0,520	
32	1 1/4	44	1,73	10	150				0,940	0,635	
38	1 1/2	50	1,97	10	150				1,100	0,740	
51	2	65	2,56	10	150				1,700	1,145	

NA	LA	NEU	EMEA	SA	AP	AU
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## 455LE

**Fat food delivery 10 bar (150 psi)  
FDA D.M. 21/03/73**

**Tube:** White NBR

**Reinforcement:** High tensile textile cords

**Cover:** Blue NBR/PVC - abrasion, ozone and oil resistant

**Use:** Liquid and fat food-alcoholic beverages delivery - max 75%.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	48	1,89	10	150				0,880	0,595	
51	2	63	2,48	10	150				1,410	0,950	
76	3	88	3,46	10	150				2,050	1,380	

NA	LA	NEU	EMEA	SA	AP	AU
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## 455LL

**Fat food delivery 10 bar (150 psi)  
FDA D.M. 21/03/73**

**Tube:** White NBR

**Reinforcement:** High tensile textile cords

**Cover:** White NBR/PVC - abrasion, ozone and oil resistant

**Use:** Liquid and fat food-alcoholic beverages delivery - max 75%.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏱	⤴	⤵	%	⚖	⚖	
mm	inch	mm	inch							bar
19	3/4	31	1,22	10	150	57	2,25	100	0,740	0,500
25	1	37	1,46	10	150	75	3,00	100	0,920	0,620
32	1 1/4	44	1,73	10	150	96	3,75	100	1,090	0,735
38	1 1/2	50	1,97	10	150	114	4,50	100	1,270	0,855
51	2	63	2,48	10	150	153	6,00	100	1,640	1,105
63	2 1/2	75	2,95	10	150	189	7,50	90	2,150	1,445
76	3	88	3,46	10	150	228	9,00	90	2,580	1,735
102	4	116	4,57	10	150	306	12,00	90	3,580	2,410
NA	LA	NEU	EMEA	SA	AP	AU				



**405LE**

**Fat food S&D 10 bar (150 psi)  
FDA D.M. 21/03/73**

**Tube:** White NBR

**Reinforcement:** High tensile textile cords with embedded steel helix wire

**Cover:** Blue NBR/PVC - abrasion, ozone and oil resistant

**Use:** Liquid and fat food-alcoholic beverages suction and delivery - max 75%.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏱	⤴	⤵	%	⚖	⚖	
mm	inch	mm	inch							bar
25	1	37	1,46	10	150	75	3,00	100	0,900	0,605
38	1 1/2	50	1,97	10	150	114	4,50	100	1,240	0,835
51	2	63	2,48	10	150	153	6,00	100	1,600	1,080
76	3	88	3,46	10	150	228	9,00	90	2,530	1,705
102	4	116	4,57	10	150	306	12,00	90	3,510	2,360
NA	LA	NEU	EMEA	SA	AP	AU				



**405LL**

**Fat food S&D 10 bar (150 psi)  
FDA D.M. 21/03/73**

**Tube:** White NBR

**Reinforcement:** High tensile textile cords with embedded steel helix wire

**Cover:** White NBR/PVC - abrasion, ozone and oil resistant

**Use:** Liquid and fat food-alcoholic beverages suction and delivery - max 75%.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏱	⤴	⤵	%	⚖	⚖	
mm	inch	mm	inch							bar
38	1 1/2	50	1,97	10	150	114	4,50	100	1,270	0,855
51	2	63	2,48	10	150	153	6,00	100	1,640	1,105
63	2 1/2	75	2,95	10	150	189	7,50	90	2,160	1,455
76	3	88	3,46	10	150	228	9,00	90	2,580	1,735
NA	LA	NEU	EMEA	SA	AP	AU				



**405LH**

**Fat food S&D 10 bar (150 psi)  
FDA D.M. 21/03/73**

**Tube:** White NBR

**Reinforcement:** High tensile textile cords with embedded steel helix wire

**Cover:** Red NBR/PVC - abrasion, ozone and oil resistant

**Use:** Liquid and fat food-alcoholic beverages suction and delivery - max 75%.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊥	⌒		⌒	⌒	⌒		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	52	2,05	16	240	152	6	100	1,438	0,970	
51	2	65	2,56	16	240	204	8	100	1,866	1,255	
63	2 1/2	77	3,03	16	240	252	10	100	2,401	1,615	
76	3	92	3,62	16	240	304	12	100	3,228	2,170	
NA		LA		NEU		EMEA		SA		AP AU	

**417LE****Fat food S&D 16 bar (240 psi)****crush resistant****FDA D.M. 21/03/73****Tube:** White NBR**Reinforcement:** High tensile textile cords with embedded PET helix  
**Cover:** Blue NBR/PVC - abrasion, ozone and oil resistant**Use:** Liquid and fat food-alcoholic beverages suction and delivery - max 75%. Special crush resistant construction.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

**Safety factor:** 3:1**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

**FULL COMPLIANCE WITH EUROPEAN REGULATIONS**

Alfagomma offers a wide range of rubber and PVC hoses for food transfer fully complying with the existing regulations for materials in contact with food:

 **EC 1935/2004**

General requirements for materials that come into contact with food. Alfagomma food hoses are specifically developed to meet the migration limits so as not to endanger human health, change the food composition or deteriorate the taste and odour of food.

 **EC 2023/2006**

Good manufacturing practice for materials and articles intended to come into contact with food. Alfagomma has thorough quality assurance and control systems.

 **EU 10/2011**

Requirements for plastic materials, restrictions on the use of phthalates, use of specific simulants depending on food types:

	<b>SIMULANT</b>	<b>FOOD</b>
A	ethanol 10%	aqueous foods
B	acetic acid 3%	acidic foods
C	ethanol 20%	alcoholic foods up to an alcoholic content of 20%
D1	ethanol 50%	alcoholic foods with an alcoholic content of above 20% and milk products
D2	vegetable oil	fat foods
E	MPPO (Tenax)	dry foods

Alfagomma PVC food hoses are totally phthalate free.

 **NATIONAL LEGISLATIONS OF EU MEMBER STATES**

Alfagomma rubber food hoses are tested by approved external laboratory according to the most important European national provisions.







**ACCORDING TO EC 1935/2004, THE FULL RANGE OF AG FOOD HOSES BEAR THE “GLASS AND FORK”  SYMBOL ON THE BRAND.**



## HOSE IDENTIFICATION TABLE

HOSE	TUBE	MAX TEMP. (°C)	WP (bar)	STERILIZATION	TECHNICAL FEATURES AND NORMS					
					PHTHALATE FREE	FDA TITLE 21	2004/1935 EC	10/2011 EC	2006/2023 EC	FRANCE 1994/11/09 CAT. D

## PVC HOSE

	<b>49000</b>	PVC	+60		5% Soda	◆	◆				
	<b>49200</b>	PVC	+60	Max 20	5% Soda	◆	◆	◆	A+B+C	◆	
	<b>4660L</b>	PVC	+60	Max 8	5% Soda	◆	◆	◆	A+B+C	◆	
	<b>4680H</b>	PVC	+60	Max 7	5% Soda	◆	◆	◆	A+B+C	◆	
	<b>47200</b>	PVC	+60	Max 15	5% Soda	◆	◆	◆	A+B+C	◆	
	<b>395BT</b>	PVC	+70	50		◆		◆	A+B+C	◆	

## RUBBER HOSE

	<b>350LE</b>	EPDM	+165	15 Water 6 Steam		◆	◆				
	<b>452LH</b>	NR	+80	10	Steam 110°C / 10' 5% Soda	◆	◆	◆		◆	IANESCO
	<b>402LH</b>	NR	+80	10	Steam 110°C / 10' 5% Soda	◆	◆	◆		◆	IANESCO
	<b>410LL</b>	CIIR	+80	16	Steam 130°C / 30' 5% Soda	◆	◆	◆		◆	IANESCO
	<b>412LE</b>	NR	+80	10	Steam 110°C / 10' 5% Soda	◆	◆	◆		◆	IANESCO
	<b>418LE</b>	NR	+80	10	Steam 110°C / 10' 5% Soda	◆	◆	◆		◆	IANESCO
	<b>455LE</b>	NBR	+80	10	Steam 130°C / 30' 5% Soda	◆	◆	◆		◆	
	<b>405LE</b>	NBR	+80	10	Steam 130°C / 30' 5% Soda	◆	◆	◆		◆	
	<b>417LE</b>	NBR	+80	16	Steam 130°C / 30' 5% Soda	◆	◆	◆		◆	
	<b>5090E</b>	UPE	+100	16	Steam 110°C / 10' 5% Soda	◆	◆	◆	A+B+C+D2	◆	
	<b>903LE</b>	EPDM	+180	10	Steam 130°C / 30' 5% Soda	◆	◆				
	<b>720LA</b>	NR	+80	10	5% Soda	◆	◆				
	<b>760LA</b>	NR	+80	5	5% Soda	◆	◆				

ITALY D.M. 21/03/73	ALCOHOLIC BEVERAGES				DAIRY INDUSTRY		FOOD INDUSTRY				CLEANING
	≤20%	≤50%	≤75%	≤95%	MILK COLLECTING	MILK TRANSPORT	JUICES, SODAS, SAUCES, SOUPS WITH ACIDITY CONTENT	LIQUID FOOD	FAT FOOD	BULK FOOD	FOOD ENVIRONMENT
								◆			
	◆							◆			
	◆							◆			
	◆							◆			
	◆							◆			
								◆			◆
											◆
		◆						◆			
		◆						◆			
				◆			◆	◆			
					◆	◆		◆			
					◆	◆		◆			
CERISIE			◆				◆	◆	◆		
CERISIE			◆				◆	◆	◆		
CERISIE			◆				◆	◆	◆		
				◆			◆	◆	◆	◆	
	◆						◆	◆			
										◆	
										◆	

hose

fittings

appendix

**GUIDELINES FOR CLEANING OF ALFAGOMMA RUBBER FOOD HOSE**

ALFAGOMMA cleaning instructions are guidelines only.

Possible national government regulations supersede the following suggestions regarding food hose cleaning.

The frequency and time of the cleaning operations could affect the life of the hose.

Users should regularly check the physical and mechanical conditions of the hose.

**CLEANING BEFORE FIRST USE**

Hose	Prewash	Cleaning				Final Wash
		Media	Max Concentration	Max Temperature	Max Exposure Time	
452LH 402LH 412LE 418LE 509OE 720LA 760LA 455LE 405LE 417LE 410LL	Drinking Water 80 °C 10 min	Steam	—	110 °C	30 min	Drinking Water 80 °C 10 min
Sodium Hydroxide		2%	40 °C	—		
		5%	20 °C			

**STANDARD CLEANING**

Hose	Cleaning				Final Wash
	Media	Max Concentration	Max Temperature	Max Exposure Time	
452LH 402LH 412LE 418LE	Steam	—	110 °C	10 min	Drinking Water 80 °C 10 min
509OE 720LA 760LA	Sodium Hydroxide	2%	40 °C	—	
		5%	20 °C		
455LE 405LE 417LE 410LL	Steam	—	130 °C	30 min	
	Sodium Hydroxide	2%	40 °C	—	
		5%	20 °C		

**BEFORE USING ALTERNATIVE MEDIA, PLEASE CONTACT ALFAGOMMA.**

**AVOID HIGH PRESSURE CLEANING OF THE HOSE TUBE.**



# BULK FOOD

## HOSE

760LA	Bulk food delivery 5 bar (75 psi) - FDA.....	H.64
760LB	Bulk food delivery 5 bar (75 psi) - FDA.....	H.64
720LA	Bulk food S&D 10 bar (150 psi) - FDA .....	H.65
720LG	Bulk food S&D 10 bar (150 psi) - FDA .....	H.65
967OL	Fish handling - PVC - super elastic .....	H.66
949AA	Fish pump 3 bar (45 psi).....	H.66

**HOSE & RECOMMENDED FITTING TABLE .....A.45**

## FITTINGS

Chapter HYGIENIC-FOOD.....F.23-26

Chapter SYMMETRIC GUILLEMIN .....

Chapter CAM & GROOVE.....F.51-65



↔		↔		⏏		⤴		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
90	3 1/2	102	4,02	5	75				2,130	1,435	
110	4 5/16	122	4,80	5	75				2,550	1,715	

102	4	120	4,72	5	75				3,180	2,140
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75	3	93	3,66	5	75				2,380	1,600
100	4	120	4,72	5	75				3,550	2,390

NA	LA	NEU	EMEA	SA	AP	AU
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## 760LA

**Bulk food delivery 5 bar (75 psi)**  
**FDA**

**Tube:** White NR - abrasion resistant  
**Reinforcement:** High tensile textile cords - antistatic wire  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Bulk food and material delivery.  
 Specially designed for grain, flour and plastic pellets transfer  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏏		⤴		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
102	4	118	4,65	5	75				3,140	2,115	

NA	LA	NEU	EMEA	SA	AP	AU
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## 760LB

**Bulk food delivery 5 bar (75 psi)**  
**FDA**

**Tube:** White NR - abrasion resistant  
**Reinforcement:** High tensile textile cords - antistatic wire  
**Cover:** Grey SBR/EPDM - abrasion and ozone resistant  
**Use:** Bulk food and material delivery.  
 Specially designed for grain, flour and plastic pellets transfer  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊕		⤴		⌋		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	92	3,62	10	150	228	9,00	90	2,680	1,805	
90	3 1/2	106	4,17	10	150	270	10,50	90	3,320	2,235	
102	4	118	4,65	10	150	306	12,00	90	3,700	2,490	
NA	LA	NEU	EMEA	SA	AP	AU					



**720LA**

**Bulk food S&D 10 bar (150 psi)  
FDA**

**Tube:** White NR - abrasion resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Bulk food and material suction and delivery. Specially designed for grain, flour and plastic pellets transfer  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊕		⤴		⌋		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	10	150	153	6,00	100	1,830	1,230	
76	3	92	3,62	10	150	228	9,00	90	2,840	1,910	
102	4	118	4,65	10	150	306	12,00	90	3,900	2,625	
127	5	145	5,71	5	75	508	20,00	80	5,660	3,805	
152	6	170	6,69	5	75	608	24,00	80	7,020	4,720	
203	8	223	8,78	5	75	812	32,00	70	10,430	7,010	
NA	LA	NEU	EMEA	SA	AP	AU					



**720LG**

**Bulk food S&D 10 bar (150 psi)  
FDA**

**Tube:** White NR - abrasion resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire  
**Cover:** Green SBR/EPDM - abrasion and ozone resistant  
**Use:** Bulk food and material suction and delivery. Specially designed for grain, flour and plastic pellets transfer  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚	⌚	↷		⌚	⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
152	6			2	30	380	15,00	95	5,600	3,765
160	6 5/16			2	30	400	16,00	95	6,450	4,335
203	8			2	30	609	24,00	95	9,200	6,185
254	10			2	30	1016	40,00	95	14,500	9,745
305	12			1	15	1525	60,00	95	19,000	12,770

NA	LA	NEU	EMEA	SA	AP	AU
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## 9670L

### Fish handling - PVC - super elastic

**Construction:** Transparent PVC - abrasion and ozone resistant

**Reinforcement:** White shock resistant rigid PVC

**Use:** Fish transfer on fish farms

**Safety factor:** 3:1

**Temperature:** -20 °C +60 °C (-4 °F +140 °F)

↔		↔		⌚	⌚	↷		⌚	⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
254	10	262	10,31	3	45				5,100	3,430
305	12	313	12,32	3	45				6,100	4,100
355	14	367	14,45	3	45				8,910	5,990
406	16	418	16,46	3	45				11,020	7,410
457	18	469	18,46	3	45				12,380	8,320

NA	LA	NEU	EMEA	SA	AP	AU
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## 949AA

### Fish pump 3 bar (45 psi)

**Tube:** Black NBR - oil, abrasion and sea water resistant

**Reinforcement:** High tensile textile cords

**Cover:** Black conductive NBR/PVC - oil, abrasion, ozone and sea water resistant

**Use:** Fish transfer from fishing net to ship deck

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



# BULK MATERIAL

## HOSE

760AA	Bulk material delivery 5 bar (75 psi) .....	H.68
766AA	Bulk material delivery 10 bar (150 psi) .....	H.68
720AA	Bulk material S&D 10 bar (150 psi) .....	H.68
767AL	Bulk material S&D - PVC - polyurethane lined .....	H.69
780AA	Bulk material S&D - PVC .....	H.69

HOSE & RECOMMENDED FITTING TABLE .....A.45

## FITTINGS

Chapter WATER .....	F.3-21
Chapter SYMMETRIC GUILLEMIN .....	F.33-40
Chapter STORZ .....	F.43-45
Chapter CAM & GROOVE.....	F.51-65
Chapter COMBINATION NIPPLE .....	F.67-69





↔		↔		⏱		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
90	3 1/2	102	4,02	5	75				2,100	1,415	
110	4 5/16	122	4,80	5	75				2,510	1,690	
102	4	114	4,49	5	75				2,350	1,580	
102	4	118	4,65	5	75				2,760	1,855	
102	4	120	4,72	5	75				3,180	2,140	
127	5	145	5,71	5	75				3,860	2,595	
75	3	93	3,66	5	75				2,350	1,580	
90	3 1/2	110	4,33	5	75				3,200	2,155	
100	4	120	4,72	5	75				3,510	2,360	
NA	LA	NEU	EMEA	SA	AP	AU					



## 760AA Bulk material delivery 5 bar (75 psi)

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Bulk material delivery.  
 Specially designed for dry cement, grain and animal feed transfer  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏱		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	92	3,62	10	150				2,160	1,455	
102	4	118	4,65	10	150				2,910	1,960	
127	5	143	5,63	10	150				3,580	2,410	
NA	LA	NEU	EMEA	SA	AP	AU					



## 766AA Bulk material delivery 10 bar (150 psi)

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Bulk material delivery in heavy duty applications.  
 Specially designed for dry cement, grain and animal feed transfer  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏱		⤴		⚡		♻️	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	65	2,56	10	150	153	6,00	100	1,430	0,965	
63	2 1/2	77	3,03	10	150	189	7,50	90	1,900	1,280	
76	3	90	3,54	10	150	228	9,00	90	2,280	1,535	
102	4	116	4,57	10	150	306	12,00	90	3,190	2,145	
127	5	143	5,63	5	75	508	20,00	80	4,750	3,195	
152	6	168	6,61	5	75	608	24,00	80	5,960	4,010	
203	8	221	8,70	5	75	812	32,00	70	8,990	6,045	
76	3	92	3,62	10	150	228	9,00	90	2,600	1,750	
90	3 1/2	106	4,17	10	150	270	10,50	90	3,230	2,175	
102	4	118	4,65	10	150	306	12,00	90	3,600	2,420	
127	5	145	5,71	5	75	508	20,00	80	5,270	3,545	
NA	LA	NEU	EMEA	SA	AP	AU					



## 720AA Bulk material S&D 10 bar (150 psi)

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Bulk material suction and delivery in heavy duty applications.  
 Specially designed for dry cement, grain and animal feed transfer  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2			3	45	102	4	90	0,900	0,605	
63	2 1/2			3	45	126	5	90	1,469	0,990	
76	3			3	45	152	6	90	1,830	1,230	
102	4			2	30	204	8	90	2,980	2,005	
127	5			2	30	254	10	90	4,199	2,825	
152	6			2	30	304	12	90	5,149	3,465	

NA	LA	NEU	EMEA	SA	AP	AU
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**767AL**

**Bulk material S&D - PVC - polyurethane lined**

**Construction:** Black antistatic polyurethane coextruded with black PVC - abrasion and ozone resistant

**Reinforcement:** White shock resistant rigid PVC

**Use:** Bulk material suction and low pressure delivery-gravity feed. Specially designed for gravel, cement and iron ore transfer

**Safety factor:** 3:1

**Temperature:** -20 °C +60 °C (-4 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	47	1,85	2	30	80	3,00	100	0,570	0,380	
51	2	61	2,40	2	30	120	4,75	100	0,860	0,580	
63	2 1/2	75	2,95	2	30	200	8,00	100	1,090	0,730	
76	3	90	3,54	1	15	240	9,50	100	1,390	0,930	
102	4	119	4,69	1	15	320	12,50	100	2,560	1,720	
127	5	146	5,75	1	15	480	19,00	100	3,320	2,230	
152	6	175	6,89	1	15	720	28,50	100	4,890	3,290	

NA	LA	NEU	EMEA	SA	AP	AU
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**780AA**

**Bulk material S&D - PVC**

**Construction:** Black antistatic synthetic elastomer

**Reinforcement:** Black shock resistant thermoplastic elastomer

**Use:** Bulk material suction and low pressure delivery-gravity feed. Specially designed for gravel, cement and iron ore transfer

**Safety factor:** 4:1

**Temperature:** -15 °C +60 °C (+5 °F +140 °F)





# SANDBLAST

## HOSE

750AA	Sandblast 10 bar (150 psi) .....	H.72
750AH	Sandblast 10 bar (150 psi) .....	H.72
750AG	Sandblast 10 bar (150 psi) .....	H.72
753AA	Sandblast 10 bar (150 psi) - premium quality ...	H.72



## FITTINGS

Chapter SANDBLAST .....	F.77-78
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↔		↔		⌚		⤴		⚖		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	33	1,30	10	150				0,710	0,480
19	3/4	35	1,38	10	150				0,830	0,560
25	1	39	1,54	10	150				0,870	0,585
32	1 1/4	48	1,89	10	150				1,240	0,835
38	1 1/2	55	2,17	10	150				1,650	1,110
40	1 9/16	60	2,36	10	150				1,930	1,300
51	2	71	2,80	10	150				2,400	1,615
19	3/4	38	1,50	10	150				1,000	0,675
25	1	48	1,89	10	150				1,540	1,035
32	1 1/4	55	2,17	10	150				1,830	1,230
38	1 1/2	60	2,36	10	150				2,080	1,400
51	2	73	2,87	10	150				2,630	1,770
NA	LA	NEU	EMEA	SA	AP	AU				



65 mm<sup>3</sup>

## 750AA Sandblast 10 bar (150 psi)

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black SBR/NR - abrasion and ozone resistant - pin pricked  
**Use:** Abrasive material blasting  
**Safety factor:** 3:1  
**Temperature:** -40 °C +80 °C (-40 °F +176 °F)

↔		↔		⌚		⤴		⚖		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	27	1,06	10	150				0,560	0,380
19	3/4	33	1,30	10	150				0,710	0,480
25	1	39	1,54	10	150				0,880	0,595
32	1 1/4	48	1,89	10	150				1,240	0,835
38	1 1/2	55	2,17	10	150				1,660	1,120
51	2	71	2,80	10	150				2,420	1,630
NA	LA	NEU	EMEA	SA	AP	AU				



65 mm<sup>3</sup>

## 750AH Sandblast 10 bar (150 psi)

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Red SBR/EPDM - abrasion and ozone resistant - pin pricked  
**Use:** Abrasive material blasting  
**Safety factor:** 3:1  
**Temperature:** -40 °C +80 °C (-40 °F +176 °F)

↔		↔		⌚		⤴		⚖		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	38	1,50	10	150				1,010	0,680
25	1	48	1,89	10	150				1,540	1,035
32	1 1/4	55	2,17	10	150				1,840	1,240
38	1 1/2	60	2,36	10	150				2,090	1,405
NA	LA	NEU	EMEA	SA	AP	AU				



65 mm<sup>3</sup>

## 750AG Sandblast 10 bar (150 psi)

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Green SBR/EPDM - abrasion and ozone resistant - pin pricked  
**Use:** Abrasive material blasting  
**Safety factor:** 3:1  
**Temperature:** -40 °C +80 °C (-40 °F +176 °F)

↔		↔		⌚		⤴		⚖		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	27	1,06	10	150				0,500	0,340
19	3/4	33	1,30	10	150				0,640	0,435
25	1	39	1,54	10	150				0,790	0,535
32	1 1/4	48	1,89	10	150				1,140	0,770
38	1 1/2	55	2,17	10	150				1,490	1,005
51	2	71	2,80	10	150				2,140	1,440
25	1	48	1,89	10	150				1,400	0,945
32	1 1/4	55	2,17	10	150				1,670	1,125
38	1 1/2	60	2,36	10	150				1,900	1,280
51	2	73	2,87	10	150				2,410	1,620
19	3/4	40	1,57	10	150				1,030	0,695
51	2	76	2,99	10	150				2,650	1,785
NA	LA	NEU	EMEA	SA	AP	AU				



★  
TOP  
65 mm<sup>3</sup>

## 753AA Sandblast 10 bar (150 psi) premium quality

**Tube:** Premium black conductive NR - abrasion resistance 50 mm<sup>3</sup> (ISO 4649/A)  
**Reinforcement:** High tensile textile cords  
**Cover:** Black SBR/NR - abrasion and ozone resistant - pin pricked  
**Use:** Abrasive material blasting. Designed for long service life in heavy duty applications  
**Safety factor:** 3:1  
**Temperature:** -40 °C +80 °C (-40 °F +176 °F)



# PLASTER

## HOSE

764OL	Plaster conveyance - polyurethane .....	H.74
752AA	Plaster 10 bar (150 psi).....	H.74
757AA	Plaster 40 bar (600 psi).....	H.74
758AA	Plaster 55 bar (800 psi).....	H.74
758AE	Plaster 55 bar (800 psi).....	H.74

**HOSE & RECOMMENDED FITTING TABLE .....A.46**

## **FITTINGS**

Chapter WATER / Cardan.....	F.19
Chapter STORZ .....	F.43-45
Chapter MORTAR .....	F.79-80



↔		↔		⌚		⌒		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
45	1 3/4					203	8,00	60	0,680	0,460	
NA	LA	NEU	EMEA	SA	AP	AU					



## 7640L

### Plaster conveyance - polyurethane

**Construction:** Transparent polyurethane - abrasion and ozone resistant

**Reinforcement:** White shock resistant rigid PVC

**Use:** Pneumatic conveyance of pre-mixed synthetic plaster from silo to plaster pumping machine.

Assembly complete with fittings also available

**Safety factor:** 3:1

**Temperature:** -20 °C + 60 °C (-4 °F +140 °F)

↔		↔		⌚		⌒		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
60	2 3/8	80	3,15	10	150				2,350	1,580	
65	2 9/16	85	3,35	10	150				2,560	1,725	
90	3 1/2	113	4,45	10	150				4,180	2,810	
102	4	127	5,00	10	150				4,750	3,195	
NA	LA	NEU	EMEA	SA	AP	AU					



## 752AA

### Plaster 10 bar (150 psi)

**Tube:** Black conductive NR - abrasion resistant

**Reinforcement:** High tensile textile cords

**Cover:** Black conductive SBR/NR - abrasion and ozone resistant - pin pricked

**Use:** Plaster and sand/cement mix pumping.

Also suitable for heavy duty sandblast

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⌒		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	38	1,50	40	600				0,710	0,480	
32	1 1/4	46	1,81	40	600				0,890	0,600	
35	1 3/8	49	1,93	40	600				0,980	0,660	
38	1 1/2	54	2,13	40	600				1,210	0,815	
51	2	67	2,64	40	600				1,620	1,090	
NA	LA	NEU	EMEA	SA	AP	AU					



## 757AA

### Plaster 40 bar (600 psi)

**Tube:** Black conductive NR - abrasion resistant

**Reinforcement:** High tensile textile cords

**Cover:** Black conductive SBR/NR - abrasion and ozone resistant

**Use:** Plaster pumping

**Safety factor:** 2,5:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⌒		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	40	1,57	55	825				0,890	0,600	
32	1 1/4	49	1,93	55	800				1,250	0,845	
38	1 1/2	58	2,28	55	800				1,700	1,145	
51	2	71	2,80	55	800				2,210	1,490	
NA	LA	NEU	EMEA	SA	AP	AU					



## 758AA

### Plaster 55 bar (800 psi)

**Tube:** Black conductive NR - abrasion resistant

**Reinforcement:** High tensile textile cords

**Cover:** Black conductive SBR/NR - abrasion and ozone resistant

**Use:** Plaster pumping

**Safety factor:** ≤ 38 mm 2,5:1 51 mm 2:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⌒		⌚		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	40	1,57	55	825				0,950	0,640	
32	1 1/4	49	1,93	55	800				1,430	0,965	
38	1 1/2	58	2,28	55	800				1,960	1,320	
51	2	71	2,80	55	800				2,550	1,715	
NA	LA	NEU	EMEA	SA	AP	AU					



## 758AE

### Plaster 55 bar (800 psi)

**Tube:** Black conductive NR - abrasion resistant

**Reinforcement:** High tensile textile cords

**Cover:** Blue SBR/EPDM - abrasion and ozone resistant

**Use:** Plaster pumping

**Safety factor:** ≤ 38 mm 2,5:1 51 mm 2:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



# CONCRETE

## HOSE

754AA	Concrete vibrator 10 bar (150 psi) .....	H.76
737AA	Concrete pumping 40 bar (600 psi) .....	H.77
740AA	Concrete pumping 85 bar (1275 psi) - heavy duty steel reinforced.....	H.77
741AA	Concrete pumping 85 bar (1275 psi) - extra service steel reinforced.....	H.77

HOSE & RECOMMENDED FITTING TABLE .....A.46

## FITTINGS

Chapter CONCRETE .....F.81-83





mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	10	150				0,690	0,465	
25	1	39	1,54	10	150				1,020	0,690	
NA		LA		NEU		EMEA		SA		AP AU	



## 754AA

### Concrete vibrator 10 bar (150 psi)

**Tube:** Black SBR

**Reinforcement:** High tensile textile cords

**Cover:** Black SBR - abrasion and ozone resistant

**Use:** Pneumatic concrete vibrators

**Safety factor:** 4:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	69	2,72	40	600				1,840	1,240	
76	3	104	4,09	40	600				4,390	2,955	
90	3 1/2	118	4,65	40	600				5,150	3,465	
102	4	130	5,12	40	600				5,830	3,920	

NA	LA	NEU	EMEA	SA	AP	AU
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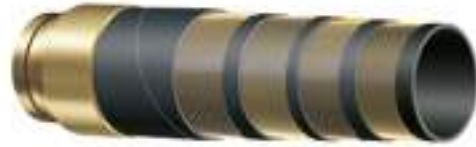


**737AA**  
Concrete pumping 40 bar (600 psi)

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Concrete pumping  
**Safety factor:** 2,5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	69	2,72	85	1275	255	10,00		2,130	1,435	
63	2 1/2	85	3,35	85	1275	265	10,50		3,340	2,245	
76	3	100	3,94	85	1275	380	15,00		4,540	3,055	
90	3 1/2	116	4,57	85	1275	450	17,50		5,490	3,690	
102	4	126	4,96	85	1275	510	20,00		6,530	4,390	
127	5	153	6,02	85	1275	635	25,00		9,740	6,550	
127	5	155	6,10	85	1275	635	25,00		10,340	6,950	
152	6	184	7,24	85	1275	760	30,00		13,780	9,265	

NA	LA	NEU	EMEA	SA	AP	AU
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**740AA**  
Concrete pumping 85 bar (1275 psi)  
heavy duty - steel reinforced

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile steel cords  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** High pressure concrete pumping  
**Safety factor:** 2:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	69	2,72	85	1275	255	10,00		2,590	1,745	
63	2 1/2	85	3,35	85	1275	325	13,00		3,770	2,535	
76	3	100	3,94	85	1275	380	15,00		4,970	3,345	
90	3 1/2	116	4,57	85	1275	450	17,50		7,220	4,855	
102	4	128	5,04	85	1275	510	20,00		7,660	5,150	
127	5	155	6,10	85	1275	635	25,00		10,250	6,890	

NA	LA	NEU	EMEA	SA	AP	AU
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**741AA**  
Concrete pumping 85 bar (1275 psi)  
extra service - steel reinforced

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile steel cords  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** High pressure concrete pumping.  
 Designed for long service life in heavy duty applications  
**Safety factor:** 2,5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)





# ACID, CHEMICAL & MULTIPURPOSE

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↔		↔		⊕	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	13	0,51	20	300	48	2,00		0,140	0,095
8	5/16	15	0,59	20	300	64	2,50		0,170	0,115
10	3/8	17	0,67	20	300	80	3,00		0,205	0,140
13	1/2	21	0,83	20	300	104	4,00		0,275	0,185
16	5/8	25	0,98	20	300	128	5,00		0,375	0,255
19	3/4	29	1,14	20	300	152	6,00		0,505	0,340
25	1	35	1,38	20	300	200	8,00		0,627	0,421

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## 984AH Multipurpose 20 bar (300 psi)

**Tube:** Black synthetic elastomer  
**Reinforcement:** High tensile textile cords  
**Cover:** Red synthetic elastomer with longitudinal blue stripes - abrasion, ozone and hydrocarbon resistant  
**Use:** Compressed air, water, fuel and oil delivery in general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⊕	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	13	0,51	17	255	48	2,00		0,120	0,080
10	3/8	17	0,67	17	255	64	2,50		0,250	0,170
13	1/2	21	0,83	17	255	104	4,00		0,360	0,245
16	5/8	25	0,98	17	255	128	5,00		0,420	0,285
19	3/4	29	1,14	17	255	152	6,00		0,540	0,365
25	1	35	1,38	17	255	200	8,00		0,730	0,495

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## 974AH Multipurpose 17 bar (250 psi) - non conductive

**Tube:** Black non conductive NBR (RMA Class A)  
**Reinforcement:** High tensile textile cords  
**Cover:** Red NBR/PVC (RMA Class B) - abrasion, ozone and hydrocarbon resistant  
**Use:** Premium quality compressed air, water, fuel and oil delivery in general industrial applications  
**Safety factor:** 4:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⊕	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	16	0,63	20	300	48	2,00		0,240	0,160
10	3/8	18	0,71	20	300	80	3,00		0,270	0,180
13	1/2	21	0,83	20	300	104	4,00		0,370	0,250
19	3/4	29	1,14	20	300	152	6,00		0,620	0,420
25	1	36	1,42	20	300	200	8,00		0,940	0,635

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## 975AH Multipurpose 20 bar (300 psi) - non conductive

**Tube:** Black non conductive NBR (RMA Class A)  
**Reinforcement:** High tensile textile cords  
**Cover:** Red NBR/PVC (RMA Class A) - abrasion, ozone and hydrocarbon resistant  
**Use:** Premium quality compressed air, water, fuel and oil delivery in general industrial applications  
**Safety factor:** 4:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⊕	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
32	1 1/4	44	1,73	20	300				0,990	0,670
38	1 1/2	50	1,97	20	300				1,150	0,775
51	2	65	2,56	20	300				1,510	1,015

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## 954AH Multipurpose 20 bar (300 psi) - non conductive

**Tube:** Black non conductive NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Red NBR/PVC - abrasion, ozone and hydrocarbon resistant  
**Use:** Premium quality compressed air, water, fuel and oil delivery in general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊕		⌒		⌒		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300				0,130	0,087	
8	5/16	15	0,59	20	300				0,160	0,110	
10	3/8	17	0,67	20	300				0,190	0,130	
13	1/2	21	0,83	20	300				0,270	0,180	
16	5/8	25	0,98	20	300				0,360	0,245	
19	3/4	29	1,14	20	300				0,460	0,310	
25	1	35	1,38	20	300				0,580	0,390	
NA		LA		NEU		EMEA		SA		AP AU	



**976AB**

**General purpose 20 bar (300 psi) - EPDM**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Grey EPDM - abrasion and ozone resistant  
**Use:** Air, water and mild chemicals delivery in general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

↔		↔		⊕		⌒		⌒		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
32	1 1/4	44	1,73	20	300				0,930	0,625	
38	1 1/2	52	2,05	20	300				1,080	0,730	
51	2	66	2,60	20	300				1,650	1,110	
NA		LA		NEU		EMEA		SA		AP AU	



**956AB**

**General purpose 20 bar (300 psi) - EPDM**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile textile cords  
**Cover:** Grey EPDM - abrasion and ozone resistant  
**Use:** Air, water and mild chemicals delivery in general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

↔		↔		⊕	↷		⊘			
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	16	240	125	5,00	90	0,690	0,465
25	1	37	1,46	16	240	150	6,00	90	0,840	0,565
32	1 1/4	44	1,73	16	240	175	7,00	90	1,030	0,695
38	1 1/2	51	2,01	16	240	225	9,00	90	1,180	0,795
50	2	66	2,60	16	240	275	11,00	90	1,730	1,165
51	2	67	2,64	16	240	275	11,00	90	1,760	1,850
63	2 1/2	79	3,11	16	240	300	12,00	90	2,330	1,570
75	3	91	3,58	16	240	350	14,00	80	2,760	1,855
76	3	92	3,62	16	240	350	14,00	80	2,790	1,875
100	4	116	4,57	16	240	450	17,50	80	3,720	2,500
102	4	118	4,65	16	240	450	17,50	80	3,780	2,545
NA		LA		NEU		EMEA		SA	AP	AU



## 503AA

### Acid-chemical S&D 16 bar (240 psi) - EPDM EN 12115

**Tube:** Black conductive EPDM

**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire

**Cover:** Black conductive EPDM - abrasion, ozone and fire resistant

**Use:** Acid and chemical suction and delivery

**Safety factor:** 4:1

**Temperature:** -30 °C +100 °C (-22 °F +212 °F)  
depending on conveyed chemical

↔		↔		⊕	↷		⊘			
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	16	240	188	7,50	90	0,670	0,455
25	1	37	1,46	16	240	225	9,00	90	0,820	0,555
32	1 1/4	44	1,73	16	240	263	10,25	90	0,980	0,660
38	1 1/2	50	1,97	16	240	338	13,25	90	1,130	0,760
51	2	63	2,48	16	240	413	16,25	90	1,480	0,995
63	2 1/2	77	3,03	16	240	450	17,50	90	2,270	1,530
76	3	92	3,62	16	240	525	20,75	80	2,720	1,830
102	4	118	4,65	16	240	675	26,50	80	3,710	2,495
NA		LA		NEU		EMEA		SA	AP	AU



## 5050G

### Acid-chemical S&D 16 bar (240 psi) - XLPE

**Tube:** Transparent XLPE (Cross Linked Polyethylene)

**Reinforcement:** High tensile textile cords with embedded steel helix wire

**Cover:** Green EPDM - abrasion and ozone resistant

**Use:** Acid and chemical suction and delivery.

Suitable for 90% of existing chemicals

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏏		⤴		⌘		⚫	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	16	240	188	7,50	90	0,680	0,460	
25	1	37	1,46	16	240	225	9,00	90	0,830	0,560	
32	1 1/4	44	1,73	16	240	263	10,25	90	1,010	0,680	
38	1 1/2	51	2,01	16	240	338	13,25	90	1,160	0,780	
50	2	66	2,6	16	240	413	16,25	90	1,820	1,225	
51	2	67	2,64	16	240	413	16,25	90	1,850	1,245	
75	3	91	3,58	16	240	525	20,75	80	2,880	1,940	
76	3	92	3,62	16	240	525	20,75	80	2,910	1,960	
100	4	116	4,57	16	240	675	26,50	80	3,870	2,605	
102	4	118	4,65	16	240	675	26,50	80	3,930	2,645	

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**529AA**  
**Acid-chemical S&D 16 bar (240 psi)**  
**UPE - EN 12115**  
**EU 10/2011 A+B+C+D2**

**Tube:** Black conductive UPE (Ultra High Molecular Weight Polyethylene)  
**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire  
**Cover:** Black conductive EPDM - abrasion, ozone and fire resistant  
**Use:** Acid and chemical suction and delivery. Suitable for 98% of existing chemicals  
**Safety factor:** 4:1  
**Temperature:** -30 °C +100 °C (-22 °F +212 °F) depending on conveyed chemical

↔		↔		⏏		⤴		⌘		⚫	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	16	240	188	7,50	90	0,600	0,405	
25	1	37	1,46	16	240	225	9,00	90	0,730	0,495	
32	1 1/4	44	1,73	16	240	263	10,25	90	0,880	0,595	
38	1 1/2	50	1,97	16	240	338	13,25	90	1,010	0,680	
40	1 9/16	52	2,05	16	240	338	13,25	90	1,060	0,715	
51	2	63	2,48	16	240	413	16,25	90	1,340	0,905	
63	2 1/2	77	3,03	16	240	450	17,50	90	2,090	1,405	
76	3	92	3,62	16	240	525	20,75	80	2,840	1,910	
102	4	118	4,65	16	240	675	26,50	80	3,870	2,605	

NA LA **NEU** **EMEA** SA AP AU



**5090E**  
**Acid-chemical S&D 16 bar (240 psi) - UPE**  
**FDA EU 10/2011 A+B+C+D2**

**Tube:** Transparent UPE (Ultra High Molecular Weight Polyethylene)  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Blue EPDM - abrasion and ozone resistant  
**Use:** Acid and chemical suction and delivery. Suitable for 98% of existing chemicals.  
**Safety factor:** 3:1  
**Temperature:** -30 °C +100 °C (-22 °F +212 °F) depending on conveyed chemical

↔		↔		⏏		⤴		⌘		⚫	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2			16	240	153	6,00	90	1,390	0,935	
76	3			16	240	228	9,00	90	2,500	1,685	
102	4			16	240	306	12,00	90	4,090	2,750	

**NA** LA NEU **EMEA** SA AP AU



**5190E**  
**Acid-chemical S&D 16 bar (240 psi) - UPE**  
**corrugated - FDA EU 10/2011 A+B+C+D2**

**Tube:** Transparent UPE (Ultra High Molecular Weight Polyethylene)  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Blue EPDM - abrasion and ozone resistant  
**Use:** Acid and chemical suction and delivery. Suitable for 98% of existing chemicals.  
 Special construction for maximum flexibility  
**Safety factor:** 3:1  
**Temperature:** -30 °C +100 °C (-22 °F +212 °F) depending on conveyed chemical

↔		↔		⏏		⤴		⌘		⚫	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	54	2,13	20	300	304	12,00		1,380	0,930	
51	2	67	2,68	20	300	408	16,00		1,730	1,160	

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**538AA**  
**Tank cleaning 20 bar (300 psi) - EPDM**  
**textile braided**

**Tube:** Black conductive EPDM  
**Reinforcement:** High tensile textile braids - stainless steel antistatic wires  
**Cover:** Black conductive EPDM - abrasion and ozone resistant  
**Use:** Acid and chemical delivery in storage tanks cleaning applications.  
**Safety factor:** 3:1  
**Temperature:** -30 °C +100 °C (-22 °F +212 °F) depending on conveyed chemical



↔		↔		⚡	⤴	)		⚡	⚡	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	37	1,46	10	150	100	4,00	90	0,940	0,630
40	1 1/2	52	2,05	10	150	140	5,50	90	1,100	0,740
50	2	62	2,44	10	150	150	6,00	90	1,450	0,970
63*	2 1/2	77	3,03	10	150	175	7,00	90	2,050	1,380
65	2 5/8	77	3,03	10	150	175	7,00	90	2,250	1,510
75*	3	89	3,50	10	150	250	10,00	90	2,400	1,610
80	3 1/8	93	3,66	10	150	250	10,00	90	3,100	2,080
100	4	121	4,76	10	150	350	14	90	4,4	2,95
NA		LA		NEU		EMEA		SA	AP	AU

\* Pitch for UK market



## 5J551

### Acid-chemical S&D 10 bar (150 psi) - standard duty BS 5842

**Inner wire:** Polypropylene coated steel wire

**Tube:** Polypropylene film

**Cover:** Grey PVC coated fabric with longitudinal white stripe

**Outer wire:** Galvanised steel wire

**Use:** Acid and chemical suction and delivery. Specially designed for tank truck applications

**Safety factor:** 4:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↔		↔		⚡	⤴	)		⚡	⚡	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	37	1,46	10	150	100	4,00	90	0,940	0,630
32	1 1/4	44	1,73	10	150	140	5,50	90	1,050	0,700
40	1 1/2	52	2,05	10	150	140	5,50	90	1,100	0,740
50	2	62	2,44	10	150	150	6,00	90	1,450	0,970
65	2 1/2	77	3,03	10	150	175	7,00	90	2,250	1,510
80	3 1/8	93	3,66	10	150	250	10,00	90	3,100	2,080
100	4	121	4,76	10	150	350	14,00	90	5,300	3,560
NA		LA		NEU		EMEA		SA	AP	AU



## 5J553

### Acid-chemical S&D 10 bar (150 psi) - standard duty BS 5842

**Inner wire:** Polypropylene coated steel wire

**Tube:** Polypropylene film

**Cover:** Grey PVC coated fabric with longitudinal white stripe

**Outer wire:** Stainless steel wire

**Use:** Acid and chemical suction and delivery. Specially designed for tank truck applications

**Safety factor:** 4:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↻		↻		⌚	⌚	⌒		⌒	⌚	⌚
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	37	1,46	14	200	100	4,00	90	0,940	0,630
40	1 1/2	53	2,09	14	200	140	5,50	90	1,150	0,770
50	2	63	2,48	14	200	150	6,00	90	1,500	1,010
63*	2 1/2	78	3,07	14	200	175	7,00	90	2,100	1,410
65	2 5/8	78	3,07	14	200	175	7,00	90	2,300	1,540
75*	3	90	3,54	14	200	250	10,00	90	2,500	1,680
80	3 1/8	94	3,70	14	200	250	10,00	90	3,150	2,110
100	4	122	4,80	14	200	350	14,00	90	5,400	3,620

\* Pitch for UK market

NA	LA	NEU	EMEA	SA	AP	AU
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**5N551**  
**Acid-chemical S&D 14 bar (200 psi) - heavy duty BS 5842**

**Inner wire:** Polypropylene coated steel wire  
**Tube:** Polypropylene film  
**Cover:** Grey PVC coated fabric with longitudinal white stripe  
**Outer wire:** Galvanised steel wire  
**Use:** Acid and chemical suction and delivery. Specially designed for tank truck applications  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↻		↻		⌚	⌚	⌒		⌒	⌚	⌚
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 1/2	53	2,09	14	200	140	5,50	90	1,300	0,870
50	2	63	2,48	14	200	150	6,00	90	1,700	1,140
63*	2 1/2	78	3,07	14	200	175	7,00	90	2,300	1,540
65	2 5/8	78	3,07	14	200	175	7,00	90	2,500	1,680
75*	3	90	3,54	14	200	250	10,00	90	2,700	1,810
80	3 1/8	94	3,70	14	200	250	10,00	90	3,500	2,350
100	4	122	4,80	14	200	350	14,00	90	6,200	4,160

\* Pitch for UK market

NA	LA	NEU	EMEA	SA	AP	AU
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**5N331**  
**Acid-chemical S&D 14 bar (200 psi) - heavy duty PTFE BS 5842**

**Inner wire:** Stainless steel wire  
**Tube:** PTFE film  
**Cover:** Grey PVC coated fabric with longitudinal white stripe  
**Outer wire:** Galvanised steel wire  
**Use:** Acid, chemical, fuel and solvents suction and delivery. Specially designed for long service life in heavy duty applications requiring resistance to high temperature  
**Safety factor:** 4:1  
**Temperature:** -30 °C +120 °C (-22 °F +248 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↻		↻		⌚	⌚	⌒		⌒	⌚	⌚
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	37	1,46	14	200	100	4,00	90	1,000	0,670
40	1 1/2	53	2,09	14	200	140	5,50	90	1,300	0,870
50	2	63	2,48	14	200	150	6,00	90	1,700	1,140
63*	2 1/2	78	3,07	14	200	175	7,00	90	2,500	1,680
65	2 5/8	78	3,07	14	200	175	7,00	90	2,800	1,680
75*	3	90	3,54	14	200	250	10,00	90	2,700	1,810
80	3 1/8	94	3,70	14	200	250	10,00	90	3,500	2,350
100	4	122	4,80	14	200	350	14,00	90	6,200	4,160

\* Pitch for UK market

NA	LA	NEU	EMEA	SA	AP	AU
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**5N333**  
**Acid-chemical S&D 14 bar (200 psi) - heavy duty PTFE BS 5842**

**Inner wire:** Stainless steel wire  
**Tube:** PTFE film  
**Cover:** Grey PVC coated fabric with longitudinal white stripe  
**Outer wire:** Stainless steel wire  
**Use:** Acid, chemical, fuel and solvents suction and delivery. Specially designed for long service life in heavy duty applications requiring resistance to high temperature  
**Safety factor:** 4:1  
**Temperature:** -30 °C +120 °C (-22 °F +248 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↻		↻		⌚	⌚	⌒		⌒	⌚	⌚
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
50	2	62	2,44	10	150	150	6,00	90	1,680	1,130
80	3 1/8	93	3,66	10	150	250	10,00	90	3,400	2,280

NA	LA	NEU	EMEA	SA	AP	AU
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**5J533**  
**Tank cleaning 10 bar (150 psi) BS 5842**

**Inner wire:** Stainless steel wire  
**Tube:** Polypropylene film  
**Cover:** Grey PVC coated fabric with longitudinal white stripe  
**Outer wire:** Stainless steel wire  
**Use:** Tank cleaning  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↔		↔		⚡	⌒	⌒	⌒	⌒	⌒	⌒
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 1/2	52	2,05	10	150	140	5,50	90	1,400	0,940
50	2	62	2,44	10	150	150	6,00	90	1,600	1,074
65	2 5/8	77	3,03	10	150	175	7,00	90	2,100	1,410
80	3 1/8	93	3,66	10	150	250	10,00	90	2,800	1,880
100	4	121	4,76	10	150	350	14,00	90	4,800	3,223

NA	LA	NEU	EMEA	SA	AP	AU
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**5J551 EN**  
**Acid-chemical S&D 10 bar (150 psi)**  
**standard duty**  
**EN 13765 arrêté TMD**

**Inner wire:** Polypropylene coated steel wire  
**Tube:** Polypropylene film  
**Cover:** Grey PVC coated fabric with longitudinal white stripe  
**Outer wire:** Galvanised steel wire  
**Use:** Acid and chemical suction and delivery. Specially designed for tank truck applications  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings  
**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
 ≤ 1 Ohm/mt over DN 50mm (2")

↔		↔		⚡	⌒	⌒	⌒	⌒	⌒	⌒
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
50	2	62	2,44	10	150	150	6,00	90	1,700	1,140
80	3 1/8	93	3,66	10	150	250	10,00	90	3,300	2,213

NA	LA	NEU	EMEA	SA	AP	AU
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**5J553 EN**  
**Acid-Chemical S&D 10 bar (150 psi)**  
**standard duty**  
**EN 13765 arrêté TMD**

**Inner wire:** Polypropylene coated steel wire  
**Tube:** Polypropylene film  
**Cover:** Grey PVC coated fabric with longitudinal white stripe  
**Outer wire:** Stainless steel wire  
**Use:** Acid and chemical suction and delivery. Specially designed for tank truck applications  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings  
**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
 ≤ 1 Ohm/mt over DN 50mm (2")

↔		↔		⏏		⤴		⌘		⏏	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
50	2	63	2,48	14	200	150	6,00	90	2,100	1,410	
80	3 1/8	94	3,70	14	200	250	10,00	90	3,800	2,551	
100	4	122	4,80	14	200	350	14,00	90	6,300	4,230	

NA	LA	NEU	EMEA	SA	AP	AU
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**5N333 EN**  
**Acid-Chemical S&D 14 bar (200 psi)**  
**heavy duty - PTFE**  
**EN 13765 arrété TMD**

**Inner wire:** Stainless steel wire  
**Tube:** PTFE film  
**Cover:** Grey PVC coated fabric with longitudinal white stripe  
**Outer wire:** Stainless steel wire  
**Use:** Acid, chemical, fuel and solvents suction and delivery. Specially designed for long service life in heavy duty applications requiring resistance to high temperature  
**Safety factor:** 4:1  
**Temperature:** -30 °C +115 °C (-22 °F +239 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings  
**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
 ≤ 1 Ohm/mt over DN 50mm (2")

↔		↔		⏏		⤴		⌘		⏏	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
50	2	62	2,44	10	150	150	6,00	90	1,780	1,184	
80	3 1/8	93	3,66	10	150	250	10,00	90	3,580	2,382	
100	4	121	4,76	10	150	350	14,00	90	4,820	3,207	

NA	LA	NEU	EMEA	SA	AP	AU
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**5J533 EN**  
**Tank cleaning 10 bar (150 psi)**  
**EN 13765 arrété TMD**

**Inner wire:** Stainless steel wire  
**Tube:** Polypropylene film  
**Cover:** Grey PVC coated fabric with longitudinal white stripe  
**Outer wire:** Stainless steel wire  
**Use:** Tank cleaning  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings  
**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
 ≤ 1 Ohm/mt over DN 50mm (2")





# HYDROCARBONS

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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
3,5	9/64	9,5	0,37	7	100	35	1,50		0,090	0,060
5	3/16	11	0,43	7	100	50	2,00		0,110	0,075
5,5	7/32	11,5	0,45	7	100	55	2,25		0,120	0,080
6	1/4	12	0,47	7	100	60	2,50		0,120	0,080
7,5	19/64	13,5	0,53	7	100	75	3,00		0,140	0,095
9,5	3/8	15,5	0,61	7	100	95	3,75		0,170	0,115
NA	LA	NEU	EMEA	SA	AP	AU				



**687AA**  
Automotive fuel 7 bar (100 psi)  
DIN 73379/2A

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Petrol and diesel transfer in automotive applications. Also suitable for ecodiesel  
**Safety factor:** 4:1  
**Temperature:** -40 °C +85 °C (-40 °F +185 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
3,2	1/8	7	0,28	10	150				0,040	0,027
3,5	9/64	7,5	0,30	10	150				0,045	0,030
4	5/32	8	0,31	10	150				0,050	0,034
4,5	11/64	9,5	0,37	10	150				0,060	0,040
5	3/16	10	0,39	10	150				0,065	0,044
5,5	7/32	10,5	0,41	10	150				0,070	0,047
6	1/4	11	0,43	10	150				0,075	0,050
7,5	19/64	12,5	0,49	10	150				0,080	0,055
8	5/16	13	0,51	10	150				0,090	0,060
9	23/64	14	0,55	10	150				0,105	0,070
12	15/32	17	0,67	7	100				0,135	0,090
NA	LA	NEU	EMEA	SA	AP	AU				



**689AA**  
Automotive fuel 10 bar (150 psi)  
external textile braid

**Tube:** Black NBR  
**Reinforcement:** High tensile textile braid  
**Use:** Petrol and diesel transfer in automotive applications. Also suitable for unleaded fuel and ecodiesel  
**Safety factor:** 3:1  
**Temperature:** -20 °C +100 °C (-4 °F +212 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	11	0,43	15	225				0,100	0,067
8	5/16	13	0,51	15	225				0,155	0,105
10	3/8	15	0,59	15	225				0,190	0,130
12	15/32	17	0,67	15	225				0,230	0,155
NA	LA	NEU	EMEA	SA	AP	AU				



**688AA**  
Diesel oil delivery 15 bar (225 psi)  
external steel braid

**Tube:** Black NBR  
**Reinforcement:** Plated steel braid  
**Use:** Diesel oil delivery. Specially designed for burner feed line  
**Safety factor:** 4:1  
**Temperature:** -20 °C +100 °C (-4 °F +212 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	13	0,51	10	150	48	2,00		0,140	0,095
8	5/16	15	0,59	10	150	64	2,50		0,170	0,115
10	3/8	17	0,67	10	150	80	3,00		0,205	0,140
13	1/2	20	0,79	10	150	104	4,00		0,250	0,170
19	3/4	27	1,06	10	150	152	6,00		0,400	0,270
25	1	35	1,38	10	150	200	8,00		0,630	0,425
NA	LA	NEU	EMEA	SA	AP	AU				



**680AA**  
Fuel-oil delivery 10 bar (150 psi)

**Tube:** Black synthetic elastomer  
**Reinforcement:** High tensile textile cords - antistatic wire ID >= 13 mm  
**Cover:** Black synthetic elastomer - abrasion, ozone and hydrocarbon resistant  
**Use:** General purpose fuel and oil delivery  
**Safety factor:** 3:1  
**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
5	3/16	12	0,47	16	240	50	2,00		0,130	0,087
6	1/4	13	0,51	16	240	60	2,50		0,150	0,100
7	9/32	13	0,51	16	240	70	2,75		0,150	0,100
8	5/16	15	0,59	16	240	80	3,00		0,170	0,115
10	3/8	17	0,67	16	240	100	4,00		0,210	0,140
13	1/2	20	0,79	16	240	120	4,75		0,250	0,170
16	5/8	24	0,94	16	240	160	6,25		0,350	0,235
19	3/4	27	1,06	16	240	190	7,50		0,400	0,270
25	1	35	1,38	16	240	250	10,00		0,730	0,495
NA	LA	NEU	EMEA	SA	AP	AU				



**671AA**  
Fuel-oil delivery 16 bar (240 psi)

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black synthetic rubber - abrasion, ozone and hydrocarbon resistant  
**Use:** General purpose fuel and oil delivery  
**Safety factor:** 3:1  
**Temperature:** -25 °C +80 °C (-13 °F +176 °F)

↔		↔		⌚		⌒		⌘		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	10	150				0,470	0,320	
25	1	35	1,38	10	150				0,580	0,390	
32	1 1/4	42	1,65	10	150				0,710	0,480	
38	1 1/2	48	1,89	10	150				0,840	0,565	
51	2	61	2,40	10	150				1,110	0,750	
63	2 1/2	75	2,95	10	150				1,630	1,100	
76	3	88	3,46	10	150				1,960	1,320	
102	4	114	4,49	10	150				2,650	1,785	
32	1 1/4	44	1,73	10	150				0,880	0,595	
35	1 3/8	47	1,85	10	150				0,960	0,650	
38	1 1/2	50	1,97	10	150				1,030	0,695	
40	1 9/16	52	2,05	10	150				1,070	0,720	
45	1 3/4	57	2,24	10	150				1,190	0,800	
51	2	63	2,48	10	150				1,350	0,910	
NA	LA	NEU	EMEA	SA	AP	AU					



**650AA**  
Fuel-oil delivery 10 bar (150 psi)

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant  
**Use:** General purpose fuel and oil delivery  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⌒		⌘		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	48	1,89	10	150				0,920	0,620	
51	2	61	2,40	10	150				1,220	0,820	
76	3	88	3,46	10	150				2,120	1,425	
102	4	114	4,49	10	150				2,850	1,920	
19	3/4	29	1,14	10	150				0,520	0,350	
22	7/8	32	1,26	10	150				0,580	0,390	
25	1	35	1,38	10	150				0,650	0,440	
32	1 1/4	44	1,73	10	150				0,960	0,650	
38	1 1/2	50	1,97	10	150				1,140	0,770	
51	2	63	2,48	10	150				1,460	0,985	
63	2 1/2	77	3,03	10	150				2,080	1,400	
76	3	92	3,62	10	150				2,550	1,715	
NA	LA	NEU	EMEA	SA	AP	AU					



**650AH**  
Fuel-oil delivery 10 bar (150 psi)

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords - antistatic wire  
**Cover:** Red CR - abrasion, ozone and hydrocarbon resistant  
**Use:** General purpose fuel and oil delivery  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⌒		⌘		⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	35	1,38	10	150				0,650	0,440	
32	1 1/4	42	1,65	10	150				0,790	0,535	
38	1 1/2	48	1,89	10	150				0,920	0,620	
32	1 1/4	44	1,73	10	150				0,960	0,650	
38	1 1/2	50	1,97	10	150				1,110	0,750	
NA	LA	NEU	EMEA	SA	AP	AU					



**650AB**  
Fuel-oil delivery 10 bar (150 psi)

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords - antistatic wire  
**Cover:** Grey CR - abrasion, ozone and hydrocarbon resistant  
**Use:** General purpose fuel and oil delivery  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



↔		↔		⏲	↷		⌋		⬛		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			7	100	150	6,00	90	0,540	0,365	
32	1 1/4			6	90	192	7,50	90	0,680	0,460	
38	1 1/2			6	90	228	9,00	90	0,760	0,515	
40	1 9/16			6	90	240	9,50	90	0,800	0,540	
51	2			5	75	306	12,00	90	1,150	0,775	
60	2 3/8			4	60	360	14,00	90	1,550	1,045	
63	2 1/2			4	60	378	15,00	90	1,600	1,080	
76	3			4	60	456	18,00	90	2,000	1,345	
80	3 1/8			4	60	480	19,00	90	2,100	1,415	
102	4			3	45	612	24,00	90	3,100	2,085	
NA	LA	NEU	EMEA	SA	AP	AU					



## 668EL

### Fuel-oil S&D - PVC - heavy duty

**Construction:** Blue PVC - abrasion, ozone and hydrocarbon resistant

**Reinforcement:** White shock resistant rigid PVC

**Use:** General purpose fuel and oil suction and delivery

**Safety factor:** 3:1

**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⏲	↷		⌋		⬛		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	61	2,40	10	150	255	10,00	100	1,380	0,930	
76	3	88	3,46	10	150	380	15,00	90	2,570	1,730	
102	4	116	4,57	10	150	510	20,00	90	3,560	2,395	
152	6	168	6,61	10	150	760	30,00	80	6,820	4,585	
NA	LA	NEU	EMEA	SA	AP	AU					



## 601AA

### Oil rigger-fracking S&D 10 bar (150 psi)

**Tube:** Black NBR/PVC

**Reinforcement:** High tensile textile cords with embedded steel helix wire

**Cover:** Black SBR - abrasion and ozone resistant

**Use:** Crude oil mud in oilfield vacuum tank service. Extensively used in fracking operations

**Safety factor:** ≤ 102 mm 3:1 152 mm 2,5:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊥		⌒		⌘	■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	29	1,14	10	150	76	3,00	100	0,610	0,410
25	1	35	1,38	10	150	100	4,00	100	0,760	0,515
30	1 3/16	40	1,57	10	150	120	4,75	100	0,850	0,575
32	1 1/4	42	1,65	10	150	128	5,00	100	0,900	0,605
35	1 3/8	45	1,77	10	150	140	5,50	100	0,980	0,660
38	1 1/2	48	1,89	10	150	152	6,00	100	1,050	0,710
40	1 9/16	50	1,97	10	150	160	6,25	100	1,090	0,735
42	1 5/8	52	2,05	10	150	168	6,75	100	1,150	0,775
45	1 3/4	55	2,17	10	150	180	7,00	100	1,220	0,820
48	1 7/8	58	2,28	10	150	192	7,50	100	1,280	0,865
51	2	61	2,40	10	150	204	8,00	100	1,350	0,910
57	2 1/4	67	2,64	10	150	228	9,00	100	1,510	1,015
60	2 3/8	72	2,83	10	150	240	9,50	100	2,020	1,360
63	2 1/2	75	2,95	10	150	252	10,00	90	2,110	1,420
70	2 3/4	82	3,23	10	150	280	11,00	90	2,350	1,580
76	3	88	3,46	10	150	304	12,00	90	2,520	1,695
80	3 1/8	94	3,70	10	150	320	12,50	90	2,700	1,815
90	3 1/2	104	4,09	10	150	360	14,00	90	3,140	2,115
102	4	116	4,57	10	150	408	16,00	90	3,500	2,355
110	4 5/16	124	4,88	10	150	440	17,25	90	4,240	2,850
115	4 1/2	129	5,08	10	150	460	18,00	90	4,410	2,965
120	4 3/4	138	5,43	10	150	480	19,00	80	5,640	3,795
127	5	145	5,71	10	150	508	20,00	80	5,930	3,990
133	5 1/4	151	5,94	10	150	532	21,00	80	6,170	4,150
152	6	170	6,69	10	150	608	24,00	80	7,360	4,950
203	8	225	8,86	10	150	812	32,00	70	11,700	7,865

NA	LA	NEU	EMEA	SA	AP	AU
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**605AA**  
**Fuel-oil S&D 10 bar (150 psi)**  
**exceed SAE 100R4**  
**SAE J2006/R2 - ISO 13363/2/A+B**

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Fuel and oil suction and delivery. Specially designed for tank truck and general industrial applications. Also suitable for marine wet exhaust and bilge pump connection  
**Safety factor:** ≤ 127 mm 3:1 ≥ 133 mm 2,5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊥		⌒		⌘	■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
38	1 1/2	48	1,89	10	150	152	6,00	100	1,080	0,730
51	2	61	2,40	10	150	204	8,00	100	1,390	0,935
76	3	88	3,46	10	150	304	12,00	90	2,580	1,735
102	4	116	4,57	10	150	408	16,00	90	3,580	2,410

NA	LA	NEU	EMEA	SA	AP	AU
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**605AH**  
**Fuel-oil S&D 10 bar (150 psi)**

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Red CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Fuel and oil suction and delivery. Specially designed for tank truck and general industrial applications  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⊥		⌒		⌘	■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	29	1,14	10	150	76	3,00	100	0,610	0,410
25	1	35	1,38	10	150	100	4,00	100	0,760	0,515
32	1 1/4	42	1,65	10	150	128	5,00	100	0,900	0,605
38	1 1/2	48	1,89	10	150	152	6,00	100	1,050	0,710
51	2	61	2,40	10	150	204	8,00	100	1,360	0,915
76	3	88	3,46	10	150	304	12,00	90	2,540	1,710
102	4	116	4,57	10	150	408	16,00	90	3,530	2,375

NA	LA	NEU	EMEA	SA	AP	AU
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**629AA**  
**Biofuel S&D 10 bar (150 psi)**

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** black CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Fuel and oil suction and delivery. Specially designed for biofuel and ethanol  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏰	⏰	↷		⏰	⏰	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2			10	150	76	3,00	100	1,570	1,060
76	3			10	150	114	4,50	100	2,730	1,835
102	4			10	150	153	6,00	100	3,970	2,670
NA		LA	NEU		EMEA	SA	AP	AU		



## 606AE Tank truck 10 bar (150 psi) corrugated - low temperature

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Blue CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Fuel, oil and hydraulic fluids suction and delivery.  
 Specially designed for tank truck applications where extreme flexibility at low temperatures is required  
**Safety factor:** 3:1  
**Temperature:** -54 °C +82 °C (-65 °F +180 °F)

↔		↔		⏰	⏰	↷		⏰	⏰	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
50	2	61	2,40	10	150	150	6,00	90	0,970	0,650
65	2 5/8	75	2,95	10	150	175	7,00	90	1,210	0,810
75	3	88	3,46	10	150	250	10,00	90	1,400	0,940
80	3 1/8	93	3,66	10	150	250	10,00	90	1,680	1,130
100	4	119	4,69	10	150	350	14,00	90	2,250	1,510
NA		LA	NEU		EMEA	SA	AP	AU		



## 6J544 Fuel-oil S&D 10 bar (150 psi) - light duty light weight BS 3492/BX BS 5842

**Inner wire:** Aluminium wire  
**Tube:** Polypropylene film  
**Cover:** Orange PVC coated fabric with longitudinal yellow stripe  
**Outer wire:** Aluminium wire  
**Use:** Fuel and oil suction and delivery.  
 Specially designed for tank truck applications.  
 Light weight construction  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↔		↔		⏰	⏰	↷		⏰	⏰	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 1/2	50	2,05	10	150	140	5,50	90	1,100	0,740
50	2	61	2,40	10	150	150	6,00	90	1,190	0,800
65	2 5/8	75	2,95	10	150	175	7,00	90	1,700	1,140
75	3	88	3,46	10	150	250	10,00	90	2,000	1,340
80	3 1/8	93	3,66	10	150	250	10,00	90	2,500	1,680
100	4	119	4,69	10	150	350	14,00	90	3,200	2,150
NA		LA	NEU		EMEA	SA	AP	AU		



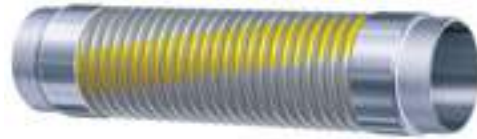
## 6J541 Fuel-oil S&D 10 bar (150 psi) - light duty BS 3492/BX BS 5842

**Inner wire:** Aluminium wire  
**Tube:** Polypropylene film  
**Cover:** Orange PVC coated fabric with longitudinal grey stripe  
**Outer wire:** Galvanised steel wire  
**Use:** Fuel and oil suction and delivery.  
 Especially designed for tank truck applications.  
 Light weight construction.  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↔		↔		⏚		⤴		⌘		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
50	2	61	2,40	10	150	150	6,00	90	1,680	1,130	
63*	2 1/2	75	2,95	10	150	175	7,00	90	2,450	1,650	
65	2 5/8	88	3,46	10	150	175	7,00	90	2,450	1,650	
75*	3	88	3,46	10	150	250	10,00	90	2,600	1,750	
80	3 1/8	93	3,66	10	150	250	10,00	90	2,600	1,750	
100	4	119	4,69	10	150	350	14,00	90	4,200	2,820	

NA	LA	NEU	EMEA	SA	AP	AU
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\* Pitch for UK market



**6J511**

**Fuel-oil S&D 10 bar (150 psi) - standard duty  
BS 3492/BX BS 5842**

**Inner wire:** Galvanised steel wire  
**Tube:** Polypropylene film  
**Cover:** Grey PVC with longitudinal yellow stripe coated fabric  
**Outer wire:** Galvanised steel wire  
**Use:** Fuel and oil suction and delivery.  
 Specially designed for tank truck applications  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↔		↔		⏚		⤴		⌘		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	10	150	100	4,00	90	1,300	0,873	
40	1 1/2	52	2,05	10	150	140	5,50	90	2,000	1,343	
50	2	61	2,40	10	150	150	6,00	90	2,100	1,410	
65	2 5/8	88	3,46	10	150	175	6,00	90	2,200	1,477	
80	3 1/8	93	3,66	10	150	250	10,00	90	2,700	1,810	
100	4	119	4,69	10	150	350	14	90	4,000	2,686	

NA	LA	NEU	EMEA	SA	AP	AU
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**6J511 EN**

**Fuel-oil S&D 10 bar (150 psi) - standard duty  
EN 13765 arrêté TMD**

**Inner wire:** Galvanised steel wire  
**Tube:** Polypropylene film  
**Cover:** Grey PVC coated fabric with longitudinal yellow stripe  
**Outer wire:** Galvanised steel wire  
**Use:** Fuel and oil suction and delivery.  
 Specially designed for tank truck applications  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings  
**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
 ≤ 1 Ohm/mt over DN 50mm (2")

hose

↔		↔		⊖	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	16	240	125	5,00		0,590	0,400
25	1	37	1,46	16	240	150	6,00		0,720	0,485
32	1 1/4	44	1,73	16	240	175	7,00		0,900	0,605
38	1 1/2	51	2,01	16	240	225	9,00		1,060	0,715
51	2	67	2,64	16	240	275	11,00		1,630	1,100
63	2 1/2	79	3,11	16	240	300	12,00		1,980	1,335
76	3	92	3,62	16	240	350	14,00		2,430	1,635
102	4	118	4,65	16	240	450	17,50		3,100	2,085
152	6	170	6,69	16	240	750	30,00		5,440	3,660

NA	LA	NEU	EMEA	SA	AP	AU
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## 655AA

**Fuel-oil delivery 16 bar (240 psi)  
exceeds EN 1761 TRbF 131/2**

**Tube:** Black conductive NBR

**Reinforcement:** High tensile textile cords

**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

**Use:** Fuel and oil delivery.

Designed for long service life in heavy duty applications

**Safety factor:** 3:1

**Temperature:** -30 °C +70 °C (-22 °F +158 °F)

fittings

↔		↔		⊖	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	16	240	95	3,75	100	0,690	0,460
25	1	37	1,46	16	240	150	6,00	100	0,840	0,560
32	1 1/4	44	1,73	16	240	175	7,00	100	1,030	0,690
38	1 1/2	51	2,01	16	240	225	9,00	100	1,180	0,790
50	2	66	2,60	16	240	275	11,00	100	1,760	1,180
51	2	67	2,64	16	240	275	11,00	100	1,790	1,200
63	2 1/2	79	3,11	16	240	300	12,00	90	2,330	1,570
75	3	91	3,58	16	240	350	14,00	90	2,790	1,880
76	3	92	3,62	16	240	350	14,00	90	2,820	1,900
100	4	116	4,57	16	240	450	17,50	90	3,760	2,530
102	4	118	4,65	16	240	450	17,50	90	3,820	2,570

NA	LA	NEU	EMEA	SA	AP	AU
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## 619AA

**Fuel-oil S&D 16 bar (240 psi)  
EN 12115 - exceeds EN 1761 - TRbF 131/2**

**Tube:** Black conductive NBR

**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire

**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

**Use:** Fuel and oil suction and delivery. Designed for long service life in heavy duty applications

**Safety factor:** 4:1

**Temperature:** -30 °C +70 °C (-22 °F +158 °F)

↔		↔		⊖	⌒	⌒	⌒	⌒	⌒	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	63	2,48	20	300	204	8,00	100	1,640	1,105
63	2 1/2	77	3,03	20	300	252	10,00	90	2,160	1,455
76	3	90	3,54	20	300	304	12,00	90	2,640	1,775
102	4	116	4,57	20	300	408	16,00	90	3,610	2,430
127	5	145	5,71	20	300	508	20,00	80	6,080	4,090
152	6	170	6,69	20	300	608	24,00	80	8,320	5,595
203	8	225	8,86	20	300	812	32,00	70	13,740	9,235

NA	LA	NEU	EMEA	SA	AP	AU
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## 620AA

**Fuel-oil S&D 20 bar (300 psi)**

**Tube:** Black conductive NBR

**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire

**Cover:** Black CR - abrasion, ozone and hydrocarbon resistant

**Use:** Fuel and oil suction and delivery.

Designed for long service life in heavy duty applications

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

appendix

↔		↔		⌚		⤴		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	92	3,62	15	225	380	15,0	85	3,200	2,155	
102	4	122	4,80	15	225	510	20,0	85	5,450	3,665	
152	6	176	6,93	15	225	760	30,0	85	10,930	7,350	
203	8	233	9,17	15	225	1000	40,0	85	17,740	11,925	
254	10	288	11,34	15	225	1270	50,0	85	26,000	17,475	
300	12	340	13,39	15	225	1500	60,0	85	36,000	24,195	

NA	LA	NEU	<b>EMEA</b>	SA	<b>AP</b>	AU
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**60PAA**  
**Fuel-oil S&D 15 bar (225 psi) - heavy duty exceeds EN 1765/S15**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR- abrasion, ozone, sea water and hydrocarbon resistant  
**Use:** Fuel and oil suction and delivery. Designed for long service life in heavy duty applications. Also suitable for bunkering service. Electrically continuous (discontinuous on request)  
**Safety factor:** 4:1  
**Temperature:** -20 °C +82 °C (-4 °F +180 °F)

↔		↔		⌚		⤴		⌚		⚖	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	92	3,62	15	225	450	18,0		3,310	2,225	
102	4	120	4,72	15	225	600	24,0		4,010	2,695	
152	6	172	6,77	15	225	900	36,0		7,000	4,705	
203	8	227	8,94	15	225	1200	40,0		12,100	8,135	

NA	LA	NEU	<b>EMEA</b>	SA	<b>AP</b>	AU
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**64PAA**  
**Fuel-oil delivery 15 bar (225 psi) - heavy duty EN 1765/L15**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black CR- abrasion, ozone, sea water and hydrocarbon resistant  
**Use:** Fuel and oil delivery. Designed for long service life in heavy duty applications. Also suitable for bunkering service. Electrically continuous (discontinuous on request)  
**Safety factor:** 4:1  
**Temperature:** -20 °C +82 °C (-4 °F +180 °F)

↔		↔		⌚		⤴		⌚		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	14	200	100	4,00	90	0,900	0,600	
40	1 1/2	53	2,09	14	200	140	5,50	90	1,250	0,840	
50	2	63	2,48	14	200	150	6,00	90	1,700	1,140	
63*	2 1/2	78	3,07	14	200	175	7,00	90	2,250	1,680	
65	2 5/8	78	3,07	14	200	175	7,00	90	2,500	1,680	
75*	3	90	3,54	14	200	250	10,00	90	2,700	1,810	
80	3 1/8	94	3,70	14	200	250	10,00	90	3,400	2,280	
100	4	122	4,80	14	200	350	14,00	90	4,600	3,090	
NA	LA	NEU	EMEA	SA	AP	AU					

\* Pitch for UK market



## 6N111

**Fuel-oil S&D 14 bar (200 psi) - heavy duty high temperature +100 °C (+212 °F)**

**BS 3492/BX BS 5842**

**Inner wire:** Galvanised steel wire

**Tube:** Polyester film

**Cover:** Grey PVC coated fabric with longitudinal grey stripe

**Outer wire:** Galvanised steel wire

**Use:** Fuel and oil suction and delivery.

Specially designed for long service life in heavy duty applications requiring resistance to high temperature

**Safety factor:** 4:1

**Temperature:** -30 °C +100 °C (-22 °F +212 °F)

**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

↔		↔		⌚		⤴		⌚		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	14	200	100	4,00	90	0,900	0,600	
40	1 1/2	53	2,09	14	200	140	5,50	90	1,250	0,840	
50	2	63	2,48	14	200	150	6,00	90	1,700	1,140	
63*	2 1/2	78	3,07	14	200	175	7,00	90	2,250	1,510	
65	2 5/8	78	3,07	14	200	175	7,00	90	2,500	1,680	
75	3	90	3,54	14	200	250	10,00	90	2,700	1,810	
80	3 1/8	94	3,70	14	200	250	10,00	90	3,400	2,280	
100	4	122	4,80	14	200	350	14,00	90	4,600	3,090	
NA	LA	NEU	EMEA	SA	AP	AU					



## 6N111 EN

**Fuel-oil S&D 14 bar (200 psi) - heavy duty high temperature +100 °C (+212 °F)**

**EN 13765 arrêté TMD**

**Inner wire:** Galvanised steel wire

**Tube:** Polyester film

**Cover:** Grey PVC coated fabric with longitudinal grey stripe

**Outer wire:** Galvanised steel wire

**Use:** Fuel and oil suction and delivery.

Specially designed for long service life in heavy duty applications requiring resistance to high temperature

**Safety factor:** 4:1

**Temperature:** -30 °C +100 °C (-22 °F +212 °F)

**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings

**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
≤ 1 Ohm/mt over DN 50mm (2")

↔		↔		⌚		⌒		⌘		⏺	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	16	240	125	5,00		0,810	0,545	
32	1 1/4	44	1,73	16	240	160	6,25		0,970	0,655	
35	1 3/8	47	1,85	16	240	175	7,00		1,040	0,700	
38	1 1/2	51	2,01	16	240	190	7,50		1,130	0,760	
51	2	67	2,64	16	240	255	10,00		1,660	1,120	
NA	LA	NEU	EMEA	SA	AP	AU					



**658AA**  
**Domestic fuel reeling 16 bar (240 psi)**  
**textile braided**  
**EN 1360/1 TRbF 131/2**

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile braids  
**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant  
**Use:** Fuel and oil delivery in heavy duty reeling applications. Also suitable for tank cleaning. Antistatic wire available on request  
**Safety factor:** 3:1  
**Temperature:** -30 °C +70 °C (-22 °F +158 °F)

↔		↔		⌚		⌒		⌘		⏺	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	25	375	160	6,25		0,630	0,425	
25	1	38	1,50	25	375	200	8,00		0,810	0,545	
32	1 1/4	45	1,77	25	375	250	10,00		0,950	0,640	
38	1 1/2	52	2,05	25	375	320	12,50		1,350	0,910	
51	2	67	2,64	25	375	400	16,00		2,030	1,365	
NA	LA	NEU	EMEA	SA	AP	AU					



**659AA**  
**LPG delivery 25 bar (375 psi) - textile braided**  
**EN 1762/DM**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile braids - antistatic wire  
**Cover:** Black CR - abrasion, ozone, hydrocarbon and fire resistant - pin pricked  
**Use:** LPG delivery in heavy duty reeling applications  
**Safety factor:** 4:1  
**Temperature:** -30 °C +70 °C (-22 °F +158 °F)



↔		↔		⊕		⌒		⌒		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	20	300	150	6,00		0,820	0,555	
32	1 1/4	44	1,73	20	300	190	7,50		0,970	0,655	
38	1 1/2	51	2,01	20	300	225	9,00		1,160	0,780	
50	2	66	2,60	20	300	275	11,00		1,670	1,125	
63	2 1/2	79	3,11	20	300	300	12,00		2,000	1,345	
75	3	91	3,58	20	300	300	12,00		2,390	1,610	
100	4	116	4,57	20	300	450	17,50		3,670	2,470	
NA		LA		NEU		EMEA		SA	AP	AU	



## 656AA Aircraft ground fuelling 20 bar (300 psi) EN ISO 1825/C

**Tube:** Black NBR  
**Reinforcement:** High tensile textile braids.  
**Cover:** Black conductive CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Aircraft ground fuelling  
**Safety factor:** 4:1  
**Temperature:** -30 °C +55 °C (-22 °F +131 °F)

↔		↔		⊕		⌒		⌒		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	41	1,61	20	300	150	6,00	65	0,840	0,565	
32	1 1/4	48	1,89	20	300	190	7,50	65	1,050	0,710	
38	1 1/2	54	2,13	20	300	225	9,00	65	1,220	0,820	
50	2	67	2,64	20	300	275	11,00	65	1,850	1,245	
63	2 1/2	81	3,19	20	300	300	12,00	65	2,370	1,595	
75	3	93	3,66	20	300	300	12,00	65	2,820	1,900	
NA		LA		NEU		EMEA		SA	AP	AU	



## 611AA Aircraft ground fuelling-defuelling 20 bar (300 psi) EN ISO 1825/F

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords with embedded nylon helix  
**Cover:** Black conductive CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Aircraft ground fuelling and defuelling  
**Safety factor:** 4:1  
**Temperature:** -30 °C +55 °C (-22 °F +131 °F)

↔		↔		⊕		⌒		⌒		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	69	2,72	10	150	255	10,00	100	2,430	1,635	
76	3	96	3,78	10	150	380	15,00	90	3,990	2,685	
102	4	122	4,80	10	150	510	20,00	90	5,300	3,565	
NA		LA		NEU		EMEA		SA	AP	AU	



## 614AA Hot tar 10 bar (150 psi)

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CSM - abrasion and ozone resistant  
**Use:** Hot tar, asphalt and bitumen suction and delivery  
**Safety factor:** 4:1  
**Temperature:** -20 °C +180 °C (-4 °F +356 °F)

↔		↔		⏴		⤵		⌘		⏴	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	21	300	57	2,25	100	0,610	0,410	
25	1	35	1,38	17	250	75	3,00	100	0,760	0,515	
32	1 1/4	42	1,65	14	200	96	3,75	100	0,900	0,605	
38	1 1/2	48	1,89	10	150	114	4,50	100	1,030	0,695	
51	2	61	2,40	7	100	153	6,00	100	1,330	0,895	
63	2 1/2	75	2,95	4	60	189	7,50	100	2,080	1,400	
76	3	88	3,46	4	60	228	9,00	100	2,480	1,670	
90	3 1/2	104	4,09	3	45	270	10,50	100	3,050	2,050	
102	4	116	4,57	2	30	306	12,00	100	3,410	2,295	
NA		LA		NEU		EMEA		SA	AP	AU	



**604AA**  
**Oil suction & return**  
**exceeds SAE 100R4**

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Hydraulic oil suction and return lines  
**Safety factor:** 4:1  
**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

↔		↔		⏴		⤵		⌘		⏴	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	25	375	38	1,50	100	0,580	0,390	
25	1	35	1,38	20	300	50	2,00	100	0,750	0,505	
32	1 1/4	42	1,65	17	250	64	2,50	100	0,920	0,620	
38	1 1/2	48	1,89	10	150	76	3,00	100	1,070	0,720	
51	2	61	2,40	7	100	102	4,00	100	1,390	0,935	
63	2 1/2	75	2,95	5	75	126	5,00	100	2,100	1,415	
76	3	88	3,46	5	75	152	6,00	100	2,600	1,750	
102	4	116	4,57	5	75	204	8,00	100	3,410	2,295	
NA		LA		NEU		EMEA		SA	AP	AU	



**634AA**  
**Oil suction & return - extra flexible**  
**exceeds SAE 100R4**

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR - abrasion, ozone, hydrocarbon and flame resistant  
**Use:** Hydraulic oil suction and return lines requiring tight bend radius  
**Safety factor:** 4:1  
**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

↔		↔		⏴		⤵		⌘		⏴	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	25	375	38	1,50	100	0,630	0,425	
25	1	35	1,38	20	300	50	2,00	100	0,810	0,545	
32	1 1/4	42	1,65	17	250	64	2,50	100	0,990	0,670	
38	1 1/2	48	1,89	10	150	76	3,00	100	1,150	0,775	
51	2	61	2,40	7	100	102	4,00	100	1,490	1,005	
NA		LA		NEU		EMEA		SA	AP	AU	



**644AA**  
**Oil suction & return - extra flexible**  
**high temperature**  
**exceeds SAE 100R4**

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR - abrasion, ozone, hydrocarbon and flame resistant  
**Use:** Hydraulic oil suction and return lines requiring tight bend radius and resistance to high temperature  
**Safety factor:** 4:1  
**Temperature:** -40 °C +135 °C (-40 °F +275 °F)





# MARINE

## HOSE

266LL	Marine sanitary hose - PVC .....	H.104
202AL	Marine sanitary hose 10 bar (150 psi) .....	H.104
653AA	Marine exhaust - soft wall SAE J2006/R1 ISO 13363/1/A+B .....	H.105
6E1AA	Marine exhaust - hard wall SAE J2006/R2 ISO 13363/1/A+B .....	H.105
605AA	Fuel-oil S&D 10 bar (150 psi) - exceed SAE 100R4 SAE J2006/R2 - ISO 13363/2/A+B.....	H.106
616AA	Marine fuel-exhaust - hard wall ISO 7840/A2 SAE J1527/A2 SAE 20R3/C 94/25/CE 2003/44/EC.....	H.106



↔		↔		Ⓜ		⤵		Ⓜ		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4			8	120	75	3,00	70	0,300	0,200	
25	1			8	120	120	4,75	70	0,380	0,255	
38	1 1/2			6	90	170	6,75	70	0,580	0,390	
NA		LA		NEU		EMEA		SA		AP AU	



## 266LL

### Marine sanitary hose - PVC

**Construction:** White thermoplastic elastomer

**Reinforcement:** White shock resistant rigid PVC

**Use:** Sanitary hose for marine installations

**Safety factor:** 3:1

**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		Ⓜ		⤵		Ⓜ		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	10	150	76	3,00	100	0,580	0,390	
25	1	35	1,38	10	150	100	4,00	100	0,720	0,485	
38	1 1/2	48	1,89	10	150	152	6,00	100	0,990	0,670	
NA		LA		NEU		EMEA		SA		AP AU	



## 202AL

### Marine sanitary hose 10 bar (150 psi)

**Tube:** Black chlorobutyl

**Reinforcement:** High tensile textile cords with embedded steel helix wire

**Cover:** White EPDM - abrasion and ozone resistant

**Use:** Sanitary hose for marine installations. Designed for excellent kink resistance at tight bend radius and maximum flexibility.

Top permeability resistance

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	35	1,38	3	45				0,630	0,425	
28	1 1/8	38	1,50	3	45				0,690	0,465	
32	1 1/4	42	1,65	3	45				0,770	0,520	
35	1 3/8	45	1,77	3	45				0,830	0,560	
38	1 1/2	48	1,89	3	45				0,900	0,605	
42	1 5/8	52	2,05	3	45				0,980	0,660	
45	1 3/4	55	2,17	3	45				1,040	0,700	
48	1 7/8	58	2,28	3	45				1,110	0,750	
51	2	63	2,48	3	45				1,430	0,965	
57	2 1/4	69	2,72	3	45				1,580	1,065	
60	2 3/8	74	2,91	3	45				1,940	1,305	
63	2 1/2	77	3,03	3	45				2,030	1,365	
76	3	90	3,54	3	45				2,430	1,635	
90	3 1/2	104	4,09	3	45				2,890	1,945	
102	4	116	4,57	3	45				3,240	2,180	
115	4 1/2	129	5,08	3	45				3,610	2,430	
127	5	141	5,55	3	45				3,980	2,675	
152	6	168	6,61	3	45				4,850	3,260	
168	6 5/8	184	7,24	3	45				5,310	3,570	
203	8	221	8,70	3	45				7,380	4,960	

NA	LA	NEU	EMEA	SA	AP	AU
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**653AA**  
**Marine exhaust - soft wall**  
**SAE J2006/R1 ISO 13363/1/A+B**

**Tube:** Black synthetic rubber  
**Reinforcement:** High tensile textile cords  
**Cover:** Black synthetic rubber - abrasion and ozone resistant  
**Use:** Marine wet exhaust. Also suitable for bilge pump connection  
**Safety factor:** 5:1  
**Temperature:** -30 °C +100 °C (-22 °F +212 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			3	45	50	2,00	100	0,520	0,350	
28	1 1/8			3	45	56	2,25	100	0,570	0,385	
32	1 1/4			3	45	64	2,50	100	0,640	0,435	
35	1 3/8			3	45	70	2,75	100	0,690	0,465	
38	1 1/2			3	45	76	3,00	100	0,750	0,505	
40	1 9/16			3	45	80	3,00	100	0,780	0,525	
42	1 5/8			3	45	84	3,25	100	0,810	0,545	
45	1 3/4			3	45	90	3,50	100	0,870	0,585	
48	1 7/8			3	45	96	3,75	100	0,920	0,620	
51	2			3	45	102	4,00	100	0,970	0,655	
60	2 3/8			3	45	120	4,75	90	1,500	1,010	
63	2 1/2			3	45	126	5,00	90	1,570	1,060	
70	2 3/4			3	45	140	5,50	90	1,720	1,160	
76	3			3	45	152	6,00	90	1,870	1,260	
80	3 1/8			3	45	160	6,25	90	1,960	1,320	
90	3 1/2			3	45	180	7,00	90	2,380	1,600	
102	4			3	45	204	8,00	90	2,680	1,805	
115	4 1/2			3	45	230	9,00	90	3,000	2,020	
127	5			3	45	254	10,00	80	3,620	2,435	
152	6			3	45	304	12,00	80	4,300	2,890	
203	8			3	45	406	16,00	80	7,460	5,015	

NA	LA	NEU	EMEA	SA	AP	AU
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**6E1AA**  
**Marine exhaust - hard wall**  
**SAE J2006/R2 - ISO 13363/2/A+B**

**Tube:** Black synthetic rubber  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black synthetic rubber - abrasion and ozone resistant  
**Use:** Marine wet exhaust. Also suitable for bilge pump connection. Special lightweight construction for maximum flexibility  
**Safety factor:** 5:1  
**Temperature:** -30 °C +100 °C (-22 °F +212 °F)

↔		↔		Ⓜ		⌒		⌒		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	10	150	76	3,00	100	0,610	0,410	
25	1	35	1,38	10	150	100	4,00	100	0,760	0,515	
30	1 3/16	40	1,57	10	150	120	4,75	100	0,850	0,575	
32	1 1/4	42	1,65	10	150	128	5,00	100	0,900	0,605	
35	1 3/8	45	1,77	10	150	140	5,50	100	0,980	0,660	
38	1 1/2	48	1,89	10	150	152	6,00	100	1,050	0,710	
40	1 9/16	50	1,97	10	150	160	6,25	100	1,090	0,735	
42	1 5/8	52	2,05	10	150	168	6,75	100	1,150	0,775	
45	1 3/4	55	2,17	10	150	180	7,00	100	1,220	0,820	
48	1 7/8	58	2,28	10	150	192	7,50	100	1,280	0,865	
51	2	61	2,40	10	150	204	8,00	100	1,350	0,910	
57	2 1/4	67	2,64	10	150	228	9,00	100	1,510	1,015	
60	2 3/8	72	2,83	10	150	240	9,50	100	2,020	1,360	
63	2 1/2	75	2,95	10	150	252	10,00	90	2,110	1,420	
70	2 3/4	82	3,23	10	150	280	11,00	90	2,350	1,580	
76	3	88	3,46	10	150	304	12,00	90	2,520	1,695	
80	3 1/8	94	3,70	10	150	320	12,50	90	2,700	1,815	
90	3 1/2	104	4,09	10	150	360	14,00	90	3,140	2,115	
102	4	116	4,57	10	150	408	16,00	90	3,500	2,355	
110	4 5/16	124	4,88	10	150	440	17,25	90	4,240	2,850	
115	4 1/2	129	5,08	10	150	460	18,00	90	4,410	2,965	
120	4 3/4	138	5,43	10	150	480	19,00	80	5,640	3,795	
127	5	145	5,71	10	150	508	20,00	80	5,930	3,990	
133	5 1/4	151	5,94	10	150	532	21,00	80	6,170	4,150	
152	6	170	6,69	10	150	608	24,00	80	7,360	4,950	
203	8	225	8,86	10	150	812	32,00	70	11,700	7,865	

NA	LA	NEU	EMEA	SA	AP	AU
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**605AA**  
**Fuel-oil S&D 10 bar (150 psi)**  
**exceed SAE 100R4**  
**SAE J2006/R2 - ISO 13363/2/A+B**

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR - abrasion, ozone and hydrocarbon resistant  
**Use:** Fuel and oil suction and delivery. Specially designed for tank truck and general industrial applications. Also suitable for marine wet exhaust and bilge pump connection  
**Safety factor:** ≤ 127 mm 3:1 ≥ 133 mm 2,5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		Ⓜ		⌒		⌒		Ⓜ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	2	30	57	2,25	100	0,650	0,440	
22	7/8	32	1,26	2	30	66	2,75	100	0,730	0,495	
25	1	35	1,38	2	30	75	3,00	100	0,820	0,555	
28	1 1/8	38	1,50	2	30	84	3,25	100	0,880	0,595	
35	1 3/8	45	1,77	2	30	105	4,25	100	1,040	0,700	
38	1 1/2	48	1,89	2	30	114	4,50	100	1,120	0,755	
40	1 9/16	50	1,97	2	30	120	4,75	100	1,170	0,790	
42	1 5/8	52	2,05	2	30	126	5,00	100	1,210	0,815	
45	1 3/4	55	2,17	2	30	135	5,25	100	1,290	0,870	
48	1 7/8	58	2,28	2	30	144	5,75	100	1,360	0,915	
51	2	61	2,40	2	30	153	6,00	100	1,460	0,985	
57	2 1/4	67	2,64	2	30	171	6,75	100	1,610	1,085	
60	2 3/8	70	2,76	2	30	180	7,00	90	1,860	1,250	
63	2 1/2	73	2,87	2	30	189	7,50	90	1,940	1,305	
76	3	86	3,39	2	30	228	9,00	90	2,270	1,530	
90	3 1/2	100	3,94	2	30	270	10,50	90	2,840	1,910	
102	4	112	4,41	2	30	306	12,00	90	3,140	2,115	
115	4 1/2	127	5,00	2	30	345	13,50	90	4,040	2,720	
127	5	141	5,55	2	30	381	15,00	80	4,520	3,040	

NA	LA	NEU	EMEA	SA	AP	AU
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**616AA**  
**Marine fuel-exhaust - hard wall**  
**ISO 7840/A2 SAE J1527/A2 SAE 20R3/C**  
**94/25/CE 2003/44/EC**

**Tube:** Black NBR - fuel and fire resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black NBR/PVC - abrasion, ozone, hydrocarbon and fire resistant  
**Use:** Marine fuel transfer. Designed for excellent kink resistance at tight bend radius and maximum flexibility. Also suitable for marine wet exhaust applications  
**Safety factor:** 5:1  
**Temperature:** -20 °C +100 °C (-4 °F +212 °F)



# DOCK

## HOSE

60DAA	Fuel-oil S&D 10 bar (150 psi) - EN 1765/S10.....	H.108
64AAA	Fuel-oil delivery 10 bar (150 psi) - EN 1765/L10 .....	H.108
60NAA	Fuel-oil S&D 15 bar (225 psi) - EN 1765/S15.....	H.109
60GAA	Fuel-oil S&D 15 bar (225 psi) - EN 1765/S15.....	H.109
64DAA	Fuel-oil delivery 15 bar (225 psi) - EN 1765/L15 .....	H.109
6N511 EN	Fuel - Oil S&D - heavy duty EN 13765 arrêté TMD .....	H.110
5N551 EN	Acid-Chemical S&D - heavy duty EN 13765 arrêté TMD .....	H.110
5N331 EN	Acid-Chemical S&D - heavy duty - PTFE EN 13765 arrêté TMD .....	H.110

HOSE & RECOMMENDED FITTING TABLE .....A.50

## FITTINGS

Chapter COMBINATION NIPPLE /  
Male with pre-crimped ferrule..... F.69

Chapter FLANGE.....F.85-87

Built-in Fittings with flange PN16/ASA150  
available on request





↔		↔		⌚		⌒		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			10	150	500	20,00	100	10,200	6,850	
150	6			10	150	750	30,00	100	15,900	10,690	
200	8			10	150	1000	40,00	100	24,300	16,330	
250	10			10	150	1250	50,00	100	33,900	22,780	
300	12			10	150	1500	60,00	100	45,800	30,780	
NA		LA		NEU		EMEA		SA		AP AU	



**60DAA**

**Fuel-oil S&D 10 bar (150 psi)  
EN 1765/S10**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR- abrasion, ozone, sea water and hydrocarbon resistant  
**Use:** Crude oil and liquid petroleum products suction and delivery to/from tankers and bunkering vessels.  
 Max 55% aromatic content resistance.  
 Electrically continuous (discontinuous on request)  
**BUILT-IN FITTINGS**  
**ALSO AVAILABLE:**  
 • 60EAA 100% aromatic content  
 • 60FAA biofuel  
**Safety factor:** 4:1  
**Temperature:** -20 °C +82 °C (-4 °F +180 °F)

↔		↔		⌚		⌒		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			10	150	600	24,00		6,700	4,500	
150	6			10	150	900	36,00		11,000	7,390	
200	8			10	150	1200	48,00		16,100	10,820	
250	10			10	150	1500	60,00		20,100	13,510	
300	12			10	150	1800	72,00		25,000	16,800	
NA		LA		NEU		EMEA		SA		AP AU	



**64AAA**

**Fuel-oil delivery 10 bar (150 psi)  
EN 1765/L10**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black CR- abrasion, ozone, sea water and hydrocarbon resistant  
**Use:** Crude oil and liquid petroleum products delivery to/from tankers and bunkering vessels.  
 Max 55% aromatic content resistance.  
 Electrically continuous (discontinuous on request)  
**BUILT-IN FITTINGS**  
**ALSO AVAILABLE:**  
 • 64BAA 100% aromatic content  
 • 64CAA biofuel  
**Safety factor:** 4:1  
**Temperature:** -20 °C +82 °C (-4 °F +180 °F)

↔		↔		⊕		⌒		⌒		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	98	3,86	15	225	380	5,00	85	4,500	3,030	
102	4	128	5,04	15	225	510	5,00	85	7,700	5,180	
152	6	180	7,09	15	225	760	5,00	85	13,000	8,740	
NA		LA		NEU		EMEA		SA		AP AU	



**60NAA**  
**Fuel-oil S&D 15 bar (225 psi)**  
**EN 1765/S15**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR- abrasion, ozone, sea water and hydrocarbon resistant  
**Use:** Crude oil and liquid petroleum products suction and delivery to/from tankers and bunkering vessels.  
 Max 55% aromatic content resistance.  
 Electrically continuous (discontinuous on request)  
**AVAILABLE WITH SWAGED FITTINGS**  
**Safety factor:** 4:1  
**Temperature:** -20 °C +82 °C (-4 °F +180 °F)

↔		↔		⊕		⌒		⌒		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			15	225	500	20,00	100	11,000	7,390	
150	6			15	225	750	30,00	100	17,100	11,490	
200	8			15	225	1000	40,00	100	26,500	17,810	
250	10			15	225	1250	50,00	100	36,600	24,600	
300	12			15	225	1500	60,00	100	51,400	34,540	
NA		LA		NEU		EMEA		SA		AP AU	



**60GAA**  
**Fuel-oil S&D 15 bar (225 psi)**  
**EN 1765/S15**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black CR- abrasion, ozone, sea water and hydrocarbon resistant  
**Use:** Crude oil and liquid petroleum products suction and delivery to/from tankers and bunkering vessels.  
 Max 55% aromatic content resistance.  
 Electrically continuous (discontinuous on request)  
**BUILT-IN FITTINGS**  
**ALSO AVAILABLE:**  
 • 60HAA 100% aromatic content  
 • 60IAA biofuel  
**Safety factor:** 4:1  
**Temperature:** -20 °C +82 °C (-4 °F +180 °F)

↔		↔		⊕		⌒		⌒		■	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			15	225	600	24,00		7,500	5,040	
150	6			15	225	900	36,00		13,400	9,010	
200	8			15	225	1200	48,00		18,100	12,160	
250	10			15	225	1500	60,00		24,700	16,600	
300	12			15	225	1800	72,00		31,400	21,100	
NA		LA		NEU		EMEA		SA		AP AU	



**64DAA**  
**Fuel-oil delivery 15 bar (225 psi)**  
**EN 1765/L15**

**Tube:** Black NBR  
**Reinforcement:** High tensile textile cords  
**Cover:** Black CR- abrasion, ozone, sea water and hydrocarbon resistant  
**Use:** Crude oil and liquid petroleum products delivery to/from tankers and bunkering vessels.  
 Max 55% aromatic content resistance.  
 Electrically continuous (discontinuous on request)  
**BUILT-IN FITTINGS**  
**ALSO AVAILABLE:**  
 • 64EAA 100% aromatic content  
 • 64FAA biofuel  
**Safety factor:** 4:1  
**Temperature:** -20 °C +82 °C (-4 °F +180 °F)

↔		↔		⌚	⌒		⌒	⌒	⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
150	6			14	200	575	22,00	90	12,40	8,335
200	8			14	200	800	30,00	90	21,80	14,655
250	10			10,5	150	1000	38,00	90	26,70	17,945
300	12			10,5	150	1200	45,50	90	32,00	21,510

NA	LA	NEU	EMEA	SA	AP	AU
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**6N511 EN**

**Fuel - Oil S&D - heavy duty  
EN 13765 arrêté TMD**

**Inner wire:** Galvanised steel wire  
**Tube:** Polypropylene film  
**Cover:** Blue PVC coated fabric with longitudinal yellow stripe  
**Outer wire:** Galvanised steel wire  
**Use:** Fuel and Oil suction and delivery to/from tankers and bunkering vessels  
**Safety factor:** 5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings  
**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
 ≤ 1 Ohm/mt over DN 50mm (2")

↔		↔		⌚	⌒		⌒	⌒	⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
150	6			14	200	575	22,00	90	12,40	12,40
200	8			14	200	800	30,00	90	21,80	21,80
250	10			10,5	150	1000	38,00	90	26,70	26,70

NA	LA	NEU	EMEA	SA	AP	AU
----	----	-----	------	----	----	----



**5N551 EN**

**Acid-Chemical S&D - heavy duty  
EN 13765 arrêté TMD**

**Inner wire:** Polypropylene coated steel wire  
**Tube:** Polypropylene film  
**Cover:** Black PVC coated fabric with longitudinal white stripe  
**Outer wire:** Galvanised steel wire  
**Use:** Acid and Chemical suction and delivery to/from tankers and bunkering vessels  
**Safety factor:** 5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings  
**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
 ≤ 1 Ohm/mt over DN 50mm (2")

↔		↔		⌚	⌒		⌒	⌒	⌚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
150	6			14	200	575	22,00	90	12,40	8,33
200	8			14	200	800	30,00	90	21,80	14,65
250	10			10,5	150	1000	38,00	90	26,70	17,94
300	12			10,5	150	1200	45,50	90	32,00	21,51

NA	LA	NEU	EMEA	SA	AP	AU
----	----	-----	------	----	----	----



**5N331 EN**

**Acid-Chemical S&D - heavy duty - PTFE  
EN 13765 arrêté TMD**

**Inner wire:** Stainless Steel 316 wire  
**Tube:** PTFE film  
**Cover:** Red PVC coated fabric with longitudinal white stripe  
**Outer wire:** Galvanised steel wire  
**Use:** Acid and Chemical suction and delivery to/from tankers and bunkering vessels  
**Safety factor:** 5:1  
**Temperature:** -30 °C +100 °C (-22 °F +212 °F)  
**Electrical Conductivity:** Ensured by the 2 wires in contact with fittings  
**Electrical Resistance:** ≤ 2.5 Ohm/mt up to DN 50mm (2");  
 ≤ 1 Ohm/mt over DN 50mm (2")



# FLOATING ROOF DRAIN

## HOSE

906AA Roof drain 10 bar (150 psi).....H.112

## FITTINGS

Fittings with Flange ASA150 and lead ballast available on request



↔		↔		⊕		⤴		⊕	⬛		
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	102	4,02	10	150	380	15,00	90	4,780	3,210	
102	4	128	5,04	10	150	510	20,00	90	6,340	4,260	
152	6	180	7,09	10	150	760	30,00	80	10,550	7,090	
NA		LA		NEU		EMEA		SA		AP AU	



## 906AA

### Roof drain 10 bar (150 psi)

**Tube:** Black conductive NBR

**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black conductive NBR- abrasion, ozone and hydrocarbon resistant

**Use:** Rain water drainage in floating petrochemical storage tank roofs. 80% max aromatic content resistance

**ALSO AVAILABLE:**

- 905AA 100% aromatic

**AVAILABLE WITH SWAGED FITTINGS**

**Safety factor:** 3:1

**Temperature:** -20 °C +82 °C (-4 °F +180 °F)

hose

fittings

appendix



# RIG SUPPLY

## HOSE

648AA	Rig supply soft wall - fuel-liquid mud 20 bar (300 psi) ...H.114
615AA	Rig supply hard wall - fuel-liquid mud 20 bar (300 psi) ..H.114
622AA	Rig supply hard wall - fuel-liquid mud.....H.114
748AA	Rig supply soft wall - bulk material 20 bar (300 psi).....H.115
715AA	Rig supply hard wall - bulk material 20 bar (300 psi).....H.115
448LI	Rig supply soft wall - potable water 20 bar (300 psi) FDA .....H.116
415LI	Rig supply hard wall - potable water 20 bar (300 psi) FDA .....H.116

HOSE & RECOMMENDED FITTING TABLE .....A.51

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Chapter COMBINATION NIPPLE /  
Male with pre-crimped ferrule..... F.69

Chapter FLANGE..... F.85-87

HYDRAULIC FITTINGS - AG Hydraulic catalogue



↔		↔		⏏		⤴		⦿		⏏	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	20	300	300	11,81		1,890	1,28	
76	3	94	3,70	20	300	456	17,95		2,950	1,99	
102	4	120	4,72	20	300	612	24,09		3,950	2,66	
127	5	147	5,79	20	225	762	30		5,640	3,80	
152	6	176	6,93	20	225	912	35,91		8,030	5,40	
NA		LA		NEU		EMEA		SA	AP		AU



## 648AA Rig supply soft wall fuel-liquid mud 20 bar (300 psi)

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords - antistatic wire  
**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant  
**Use:** Fuel, oil and liquid mud transfer from supply vessels to offshore platforms. Also suitable for sea water pumping and barite transfer. Also available in self floating version. Reserve buoyancy calculated according to GMPHOM 2009 standard  
**Tensile and load resistance:**  
 D2" 2.000 kg  
 D3" 4.000 kg  
 D4" 7.000 kg  
 D ≥ 5" 10.000 kg  
**Safety factor:** 4:1  
**Temperature:** -30 °C +70 °C (-22 °F +158 °F)

↔		↔		⏏		⤴		⦿		⏏	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	37	2,64	20	300	255	10,40	100	2,230	1,50	
76	3	94	3,70	20	300	380	14,96	90	3,800	2,56	
102	4	122	4,80	20	300	510	20,08	90	5,480	3,69	
127	5	149	5,87	20	300	635	25,00	90	7,760	5,22	
152	6	176	6,93	20	300	760	29,92	90	10,200	6,86	
203	8	237	9,33	20	225	1015	39,96	90	19,060	12,81	
NA		LA		NEU		EMEA		SA	AP		AU



## 615AA Rig supply hard wall fuel-liquid mud 20 bar (300 psi)

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire  
**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant  
**Use:** Fuel, oil and liquid mud transfer from supply vessels to offshore platforms. Also suitable for sea water pumping and bulk material transfer. Also available in self floating version. Reserve buoyancy calculated according to GMPHOM 2009 standard  
**Tensile and load resistance:**  
 D2" 2.000 kg  
 D3" 4.000 kg  
 D4" 7.000 kg  
 D ≥ 5" 10.000 kg  
**Safety factor:** 4:1  
**Temperature:** -30 °C +90 °C (-22 °F +194 °F)

↔		↔		⏏		⤴		⦿		⏏	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	98	3,86	40	600	380	14,96	90	4,870	3,28	
102	4	128	5,04	40	600	510	20,08	90	7,430	5,00	
127	5	157	6,18	35	525	635	25,00	90	11,160	7,51	
NA		LA		NEU		EMEA		SA	AP		AU



## 622AA Rig supply hard wall fuel-liquid mud

**Tube:** Black conductive NBR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire  
**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant  
**Use:** fuel, oil and liquid mud transfer from supply vessels to offshore platforms. Also suitable for sea water pumping and bulk material transfer.  
**Tensile and load resistance:**  
 D3" 6.000 kg  
 D4" 10.000 kg  
**Safety factor:** 4:1  
**Temperature:** -30 °C +90 °C (-22 °F +194 °F)

↔		↔		⏚		⤴		⌋		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
102	4	122	4,80	20	300	612	24,09		4,470	3,01	
127	5	149	5,87	20	300	762	30,00		6,330	4,26	
NA		LA		NEU		EMEA		SA	AP		AU



**Ω**  
R≤10<sup>6</sup>Ω

**ABS**

**748AA**  
**Rig supply soft wall**  
**bulk material 20 bar (300 psi)**

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords - antistatic wire  
**Cover:** Black conductive CR - abrasion, ozone hydrocarbon and fire resistant  
**Use:** Bulk material, sand, barite and dry cement transfer from supply vessels to offshore platforms.  
**Tensile and load resistance:**  
 D4" 7.000 kg  
 D ≥ 5" 10.000 kg  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏚		⤴		⌋		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
102	4	124	4,88	20	300	510	20,08	90	6,060	4,08	
127	5	151	5,94	20	300	635	25,00	90	8,540	5,74	
NA		LA		NEU		EMEA		SA	AP		AU



**Ω**  
R≤10<sup>6</sup>Ω

**ABS**

**715AA**  
**Rig supply hard wall**  
**bulk material 20 bar (300 psi)**

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire  
**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant  
**Use:** Bulk material, sand, barite and dry cement transfer from supply vessels to offshore platforms.  
 Also available in self floating version. Reserve bouyancy calculated according to GMPHOM 2009 standard  
**Tensile and load resistance:**  
 D4" 7.000 kg  
 D ≥ 5" 10.000 kg  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



↔		↔		⌚		⤴		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	20	300	300	11,81		1,880	1,27	
76	3	94	3,70	20	300	456	17,95		2,960	1,99	
102	4	120	4,72	20	300	612	24,09		3,990	2,69	
NA		LA		NEU		EMEA		SA	AP		AU



## 448LI Rig supply soft wall potable water 20 bar (300 psi) FDA

**Tube:** White NR  
**Reinforcement:** High tensile textile cords  
**Cover:** Orange NBR/PVC - abrasion, ozone and hydrocarbon resistant  
**Use:** Potable water transfer from supply vessels to offshore platforms. Sterilize with 5% soda solution  
**Tensile and load resistance:**  
 D2" 2.000 kg  
 D3" 4.000 kg  
 D4" 7.000 kg  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌘		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	20	300	255	10,04	100	2,230	1,50	
76	3	94	3,70	20	300	380	14,96	90	3800	2,56	
102	4	122	4,80	20	300	510	20,08	90	5,580	3,76	
NA		LA		NEU		EMEA		SA	AP		AU



## 415LI Rig supply hard wall potable water 20 bar (300 psi) FDA

**Tube:** White NR  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Orange NBR/PVC - abrasion, ozone and hydrocarbon resistant  
**Use:** Potable water transfer from supply vessel to offshore platforms. Sterilize with 5% soda solution.  
 Also available in self floating version. Reserve buoyancy calculated according to GMPHOM 2009 standard  
**Tensile and load resistance:**  
 D2" 2.000 kg  
 D3" 4.000 kg  
 D4" 7.000 kg  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



# MINING

## HOSE

151AA	Compressed air 20 bar (300 psi) heavy duty mining .....	H.118
151AK	Compressed air 20 bar (300 psi) heavy duty mining .....	H.118
157AK	Compressed air 27 bar (400 psi) heavy duty mining .....	H.118
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240AA	Air-water delivery 20 bar (300 psi) - FRAS exceeds AS 2660/B .....	H.120
241AA	Air-water delivery 35 bar (525 psi) - FRAS AS 2660/B .....	H.120
225AA	General purpose S&D 10 bar (150 psi) - FRAS exceeds AS 2660/C .....	H.121
245AA	General purpose delivery & light suction 27 bar (400 psi) crush resistant - FRAS - exceeds AS 2660/B .....	H.121
756AA	Gunite 14 bar (200 psi) - FRAS exceeds AS 2660/C .....	H.122
765AA	Stone dust 7 bar (100 psi) - FRAS - AS 2660/C .....	H.122
706AA	Abrasive slurry S&D 10 bar (150 psi) - muff couplings.....	H.122
776AA	Mineral sampling 35 bar (525 psi).....	H.123
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714HA	Drill cuttings suction 5 bar (75 psi) corrugated AS 2187/2.....	H.123
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### HOSE & RECOMMENDED FITTING TABLE .....A.52

### FITTINGS

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HYDRAULIC FITTINGS - AG Hydraulic catalogue	

↔		↔		⏲	⏲	⌒		⌒	⏲	⏲
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	20	300				0,420	0,285
19	3/4	31	1,22	20	300				0,690	0,465
25	1	37	1,46	20	300				0,850	0,575
38	1 1/2	52	2,05	20	300				1,250	0,845
51	2	67	2,64	20	300				2,140	1,440
NA		LA		NEU		EMEA		SA	AP	AU

**151AA**

**Compressed air 20 bar (300 psi)  
heavy duty mining**

**Tube:** Black SBR/NBR - oil mist resistant

**Reinforcement:** High tensile textile cords

**Cover:** Black SBR - abrasion and ozone resistant

**Use:** Compressed air designed for heavy duty mining applications

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏲	⏲	⌒		⌒	⏲	⏲
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	20	300				0,430	0,290
19	3/4	31	1,22	20	300				0,700	0,475
25	1	37	1,46	20	300				0,860	0,580
38	1 1/2	52	2,05	20	300				1,260	0,850
51	2	67	2,64	20	300				1,930	1,300
NA		LA		NEU		EMEA		SA	AP	AU

**151AK**

**Compressed air 20 bar (300 psi)  
heavy duty mining**

**Tube:** Black SBR/NBR - oil mist resistant

**Reinforcement:** High tensile textile cords

**Cover:** Yellow SBR - abrasion and ozone resistant

**Use:** Compressed air designed for heavy duty mining applications

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏲	⏲	⌒		⌒	⏲	⏲
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	29	1,14	27	400	190	7,50		0,560	0,380
25	1	35	1,38	27	400	250	10,00		0,710	0,480
32	1 1/4	44	1,73	27	400	320	12,50		0,920	0,620
38	1 1/2	50	1,97	27	400	380	15,00		1,050	0,710
51	2	65	2,56	27	400	510	20,00		1,690	1,140
NA		LA		NEU		EMEA		SA	AP	AU

**157AK**

**Compressed air 27 bar (400 psi)  
heavy duty mining**

**Tube:** Black SBR/NBR - oil mist resistant

**Reinforcement:** High tensile textile cords

**Cover:** Yellow SBR - abrasion and ozone resistant

**Use:** Compressed air designed for heavy duty mining applications

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏲	⏲	⌒		⌒	⏲	⏲
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	21	0,83	20	300	104	4,00		0,275	0,185
19	3/4	29	1,14	20	300	152	6,00		0,485	0,330
25	1	35	1,38	35	525	200	8,00		0,565	0,380
38	1 1/2	48	1,89	20	300	304	12,00		0,890	0,600
50	2	62	2,44	20	300	408	16,00		1,270	0,855
NA		LA		NEU		EMEA		SA	AP	AU

**189AK**

**Air-water delivery - PVC - FRAS  
AS 2660/A AS/NZS 2554/A**

**Tube:** Black antistatic PVC

**Reinforcement:** High tensile textile cords

**Cover:** Yellow ribbed PVC with longitudinal antistatic stripes - abrasion and ozone resistant

**Use:** Compressed air in underground mining applications.

Specially designed for roof bolting applications

**Safety factor:** 3,5:1 25 mm 2:1

**Temperature:** -5 °C +60 °C (+23 °F +140 °F)

↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	28	1,10	70	1000	95	3,75		0,660	0,445	
25	1	34	1,34	70	1000	125	5,00		0,860	0,580	
32	1 1/4	41	1,61	70	1000	160	6,25		1,110	0,750	
38	1 1/2	49	1,93	70	1000	190	7,50		1,600	1,080	
51	2	63	2,48	70	1000	255	10,00		2,180	1,470	
NA		LA		NEU		EMEA		SA		AP	
										AU	



**146AK**  
**Compressed air-water 70 bar (1000 psi)**  
**steel braided**

**Tube:** Black SBR/NBR - oil mist resistant  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Yellow SBR/NBR - abrasion, ozone, hydrocarbon and flame resistant - pin pricked  
**Use:** High pressure compressed air and water in heavy duty mining where long service life and maximum safety is required. Ideal for water spraying in mining dust control operation  
**Safety factor:** 4:1  
**Temperature:** -30 °C +90 °C (-22 °F +200 °F)

↔		↔		⊕		⌒		⌒		⊞	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	64	2,52	70	1000	255	10,00		1,810	1,220	
76	3	90	3,54	40	600	380	15,00		2,748	1,850	
102	4	118	4,65	40	600	510	20,00		3,753	2,525	
NA		LA		NEU		EMEA		SA		AP	
										AU	



**141AA**  
**Compressed air 70 bar (1000 psi)**  
**steel braided - FRAS**  
**exceeds AS 2660/B**

**Tube:** Black conductive SBR/NR - oil mist resistant  
**Reinforcement:** High tensile steel wire braids  
**Cover:** Black conductive SBR - abrasion, ozone and fire resistant  
**Use:** High pressure compressed air and water in heavy duty "long wall" mining where long service life and maximum safety is required  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌚		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
105	4	113	4,45	14	200				1,740	1,170	
157	6	167	6,57	10	150				3,300	2,220	
208	8	220	8,66	10	150				5,140	3,455	

NA	LA	NEU	EMEA	SA	AP	<b>AU</b>
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**289GG****Mine dewatering - PVC - lay flat****Tube:** Green PVC**Reinforcement:** High tensile textile cords**Cover:** Green PVC - abrasion, ozone and cut resistant**Use:** Lay flat water discharge for heavy duty applications. Specially designed for mine and construction sites dewatering. High end load resistance**Safety factor:** 4:1**Temperature:** -10 °C +60 °C (+14 °F +140 °F)

↔		↔		⌚		⤴		⌚		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	20	300	78	3,00		0,390	0,265	
19	3/4	31	1,22	20	300	114	4,50		0,520	0,350	
25	1	37	1,46	20	300	150	6,00		0,660	0,445	
32	1 1/4	46	1,81	20	300	192	7,50		1,000	0,675	
38	1 1/2	52	2,05	20	300	228	9,00		1,140	0,770	
51	2	67	2,64	20	300	306	12,00		1,720	1,160	
63	2 1/2	79	3,11	20	300	378	15,00		2,180	1,470	
76	3	92	3,62	20	300	456	18,00		2,520	1,695	
102	4	118	4,65	20	300	612	24,00		3,380	2,275	

NA	LA	NEU	EMEA	<b>SA</b>	AP	<b>AU</b>
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**240AA****Air-water delivery 20 bar (300 psi) - FRAS exceeds AS 2660/B****Tube:** Black conductive SBR/NR**Reinforcement:** High tensile textile cords**Cover:** Black conductive SBR - abrasion, ozone and fire resistant**Use:** Air, water and stone dust delivery in underground mines**Safety factor:** ≤ 63 mm 4:1 ≥ 76 mm 3,5:1**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌚		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	35	525	114	4,50		0,520	0,350	
25	1	37	1,46	35	525	150	6,00		0,660	0,445	

NA	LA	NEU	EMEA	SA	AP	<b>AU</b>
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**241AA****Air-water delivery 35 bar (525 psi) AS 2660/B****Tube:** Black conductive SBR/NR**Reinforcement:** High tensile textile cords**Cover:** Black conductive SBR - abrasion, ozone and fire resistant**Use:** Air, water and stone dust delivery in underground mines**Safety factor:** 2,5:1**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		Ⓢ		⌒		⌒		Ⓢ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	61	2,40	10	150	204	8,00	100	1,190	0,800	
76	3	88	3,46	10	150	304	12,00	90	2,260	1,520	
102	4	116	4,57	10	150	408	16,00	90	3,490	2,350	
152	6	170	6,69	10	150	760	30,00	80	6,620	4,450	

NA	LA	NEU	EMEA	SA	AP	<b>AU</b>
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**225AA**

**General purpose S&D 10 bar (150 psi) - FRAS exceeds AS 2660/C**

**Tube:** Black conductive SBR/NR

**Reinforcement:** High tensile textile cords with embedded steel helix wire

**Cover:** Black conductive SBR - abrasion, ozone and fire resistant

**Use:** Water and stone dust suction and delivery.

Also suitable for methane drainage/extraction in underground coal mines

**Safety factor:** 4:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		Ⓢ		⌒		⌒		Ⓢ	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	73	2,87	27	400			60	2,350	1,580	

NA	LA	NEU	EMEA	SA	AP	<b>AU</b>
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**245AA**

**General purpose delivery & light suction 27 bar (400 psi) - crush resistant - FRAS exceeds AS 2660/B**

**Tube:** Black conductive SBR/NR

**Reinforcement:** High tensile textile braids

**Cover:** Black conductive SBR - abrasion, ozone and fire resistant

**Use:** Air and water delivery-light suction.

Special heavy wall braided construction for vacuum, crush and kink resistance.

Ideal for methane drainage/extraction in underground coal mines.

Vacuum resistance 60%

**Safety factor:** 3:1

**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌚		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	62	2,44	14	200				2,210	1,490	
51	2	75	2,95	14	200				2,840	1,910	

NA	LA	NEU	EMEA	SA	AP	<b>AU</b>
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## 756AA Gunite 14 bar (200 psi) - FRAS exceeds AS 2660/C

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black conductive SBR - abrasion, ozone and fire resistant  
**Use:** Gunite  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⌚		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
32	1 1/4	46	1,81	7	100				0,920	0,620	
38	1 1/2	52	2,05	7	100				1,070	0,720	
51	2	65	2,56	7	100				1,410	0,950	

NA	LA	NEU	EMEA	SA	AP	<b>AU</b>
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## 765AA Stone dust 7 bar (100 psi) - FRAS AS 2660/C

**Tube:** Black conductive SBR/NR - abrasion resistant  
**Reinforcement:** High tensile textile cords  
**Cover:** Black conductive SBR - abrasion, ozone and fire resistant  
**Use:** "Stone dusting" in underground mines.  
 Also suitable for air and water delivery  
**Safety factor:** 4:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		Tube Gauge		⌚		⤴		⌚		⏚	
mm	inch	mm	inch	mm	bar	psi	mm	inch	%	kg/m	lb/ft		
51	2	69	2,72	4	10	150	204	8,00	90	2,080	1,400		
76	3	100	3,94	6	10	150	304	12,00	90	4,220	2,840		
102	4	126	4,96	6	10	150	408	16,00	90	5,650	3,800		
127	5	155	6,10	6	10	150	635	25,00	80	7,900	5,310		
152	6	182	7,17	7	10	150	760	30,00	80	10,300	6,925		
203	8	235	9,25	7	10	150	1015	40,00	70	14,420	9,695		
254	10	286	11,26	7	10	150	1270	50,00	60	20,450	13,745		
305	12	343	13,50	9	10	150	1500	60,00	60	29,800	20,030		

NA	<b>LA</b>	NEU	EMEA	<b>SA</b>	<b>AP</b>	<b>AU</b>
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## 706AA Abrasive slurry S&D 10 bar (150 psi) muff couplings

**Tube:** Black conductive NR. Abrasion resistance 50 mm<sup>3</sup> (ISO 4649/A)  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Bulk material and abrasive slurries suction and delivery in heavy duty mining. Designed for muff coupling use  
**Safety factor:** ≤ 127 mm 3:1 ≥ 152 mm 2,5:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏚		⤴		⏚		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	77	3,03	35	525	204	8,00	100	3,020	2,030	
76	3	106	4,17	35	525	304	12,00	90	4,890	3,290	
102	4	134	5,28	35	525	408	16,00	90	7,250	4,875	
NA		LA		NEU		EMEA		SA		AP AU	



**776AA**  
**Mineral sampling 35 bar (525 psi)**

**Tube:** Black conductive NR - abrasion resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Mineral recovery in sampling operations  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏚		⤴		⏚		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	106	4,17	35	525	304	12,00	90	4,850	3,260	
NA		LA		NEU		EMEA		SA		AP AU	



**776HA**  
**Mineral sampling 35 bar (525 psi)**

**Tube:** Red NR - abrasion resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Mineral recovery in sampling operations  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⏚		⤴		⏚		⏚	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	61	2,4	5	75	127	5,00	90	1,180	0,795	
63	2 1/2	75	2,95	5	75	157	6,50	90	1,850	1,245	
76	3	90	3,54	5	75	190	7,50	90	2,550	1,715	
102	4	116	4,57	5	75	255	10,00	90	3,560	2,395	
115	4 1/2	129	5,08	5	75	287	11,50	90	4,050	2,725	
127	5	141	5,55	5	75	318	13,00	80	4,680	3,150	
152	6	166	6,54	5	75	380	15,00	80	5,550	3,730	
NA		LA		NEU		EMEA		SA		AP AU	



**714HA**  
**Drill cutting suction 5 bar (75 psi) - corrugated**

**Tube:** Red NR - abrasion resistant  
**Reinforcement:** High tensile textile cords with embedded steel helix wire - antistatic wire  
**Cover:** Black conductive SBR/NR - abrasion and ozone resistant  
**Use:** Bulk material suction and delivery. Specially designed for drill cutting suction in mobile drilling rigs. Corrugated construction for maximum flexibility  
**Safety factor:** 3:1  
**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



↔		↔		⌚		⤴		⚡		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	25	0,98						0,200	0,135	
NA	LA	NEU	EMEA	SA	AP	AU					

**660AA****Nitro blast loading  
AS 2187.2****Tube:** Black conductive NBR - abrasion resistant**Reinforcement:** High tensile textile fabric**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant**Use:** Explosive loading in blasting holes**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⚡		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	71	2,80	20	300	255	10,00	70	2,840	1,910	
63	2 1/2	83	3,27	20	300	315	12,50	70	3,320	2,230	
NA	LA	NEU	EMEA	SA	AP	AU					

**612AA****Nitro blast handling 20 bar (300 psi)****Tube:** Black conductive NBR - abrasion resistant**Reinforcement:** High tensile textile cords with embedded steel helix wire**Cover:** Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant**Use:** Explosive handling in mobile delivery units.

Specially designed for heavy duty reeling applications

**Safety factor:** 3:1**Temperature:** -30 °C +80 °C (-22 °F +176 °F)

↔		↔		⌚		⤴		⚡		⬛	
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	21	0,83	5	75				0,250	0,170	
16	5/8	24	0,94	5	75				0,290	0,195	
19	3/4	29	1,14	5	75				0,420	0,280	
25	1	35	1,38	5	75				0,520	0,350	
32	1 1/4	42	1,65	5	75				0,650	0,440	
38	1 1/2	48	1,89	5	75				0,750	0,500	
45	1 3/4	55	2,17	5	75				0,870	0,580	
51	2	61	2,40	5	75				0,980	0,660	
NA	LA	NEU	EMEA	SA	AP	AU					

**964AA****Cable protection - FRAS  
AS 1802 AS 2660****Tube:** Black conductive SBR/NR**Reinforcement:** High tensile textile cords**Cover:** Black conductive SBR - abrasion, ozone and fire resistant**Use:** Cable protection in underground mines.

Also suitable for light duty air and water delivery max 5 bar (75 psi)

**Safety factor:** 3:1**Temperature:** -30 °C +80 °C (-22 °F +176 °F)



# OSG G N Z H H L

COMPRESSED AIR

F.3

WATER

F.12

HYGIENIC-FOOD

F.23

STEAM

F.27

SYMMETRIC GUILLEMIN

F.33

SYMMETRIC DSP & AR  
GFR - GROS FILET ROND

F.41

STORZ

F.43

TANKWAGEN

F.47

CAM & GROOVE

F.51

COMBINATION NIPPLE

F.67

EN 14 420-5 / DIN 2817

F.71

AVIATION

F.73

SANDBLAST

F.77

MORTAR

F.79

CONCRETE

F.81

FLANGE

F.85

MUFF COUPLING

F.89

CLAMPS & FERRULES

F.91

COMPOSITE HOSE FITTINGS

F.103





# COMPRESSED AIR

## FITTINGS

### EXPRESS (NF E 29.573)

Hose Shank - Complete with seal .....	F.4
Male BSP - Complete with seal .....	F.4
Female BSP - Complete with seal .....	F.4
Blank cap - Complete with seal .....	F.4
Seal .....	F.5
Clamps - 2 Gripping Finger Type .....	F.5

### TYPE A CLAW COUPLING (EUROPEAN TYPE)

Hose Shank with safety collar and safety pin holes - complete with seal ....	F.6
BSPT Male with safety pin holes - complete with seal .....	F.6
BSPP Female with safety pin holes - complete with seal .....	F.6
Hose Mender DIN 20038 - hose shank without safety collar .....	F.6
Three way connector with safety pin holes - complete with seal .....	F.7
Blank cap with safety pin holes - complete with seal .....	F.7
Seal .....	F.7
Claw clamps - DIN 20 039 B .....	F.7

### TYPE B CLAW COUPLING (U.S. TYPE)

Hose shank - Complete with seal .....	F.8
Male NPT - Complete with seal .....	F.8
Female NPT - Complete with seal .....	F.8
Three way connector - Complete with seal .....	F.8
Blank cap - Complete with seal .....	F.9
Seal .....	F.9
Claw clamps - DIN 20 039 B .....	F.9
Safety pin .....	F.9

### TYPE S CLAW COUPLING (AUSTRALIAN TYPE)

Hose shank - Complete with seal .....	F.10
Male BSPT - Complete with seal .....	F.10
Female BSP - Complete with seal .....	F.10
Hose Mender - Hose shank for claw clamps .....	F.10
Three way connector - Complete with seal .....	F.11
Seal .....	F.11
Safety pin .....	F.11
Claw clamps .....	F.11
Safety chain with shackles .....	F.11
Serrated Ferrule .....	F.11

**EXPRESS (NF E 29.573)**

Hose Shank - Complete with seal



Item Code	Part Number	Hose ID in	Hose ID mm	Claw Distance Internal mm	Claw Distance External mm	Material
2300699	I819E300-010041	3/8	10	41	57	BRASS
2300701	I819E300-013041	1/2	13	41	57	BRASS
2300702	I819E300-016041	5/8	16	41	57	BRASS
2300703	I819E300-019041	3/4	19	41	57	BRASS
2300704	I819E300-025041	1	25	41	57	BRASS

TO ASSEMBLE THE INSERT WITH **CRIMPING RING**, CONSULT CHAPTER "CLAMPS & FERRULES"**EXPRESS (NF E 29.573)**

Male BSP - Complete with seal



Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2300334	I8A9E206-041017	3/8	BSP	41	57	BRASS
2300335	I8A9E206-041021	1/2	BSP	41	57	BRASS
2300336	I8A9E206-041027	3/4	BSP	41	57	BRASS
2300337	I8A9E206-041034	1	BSP	41	57	BRASS

**EXPRESS (NF E 29.573)**

Female BSP - Complete with seal



Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2300340	I8A9E306-041017	3/8	BSP	41	57	BRASS
2300341	I8A9E306-041021	1/2	BSP	41	57	BRASS
2300342	I8A9E306-041027	3/4	BSP	41	57	BRASS
2300343	I8A9E306-041034	1	BSP	41	57	BRASS

**EXPRESS (NF E 29.573)**

Blank cap - Complete with seal



Item Code	Part Number	Claw Distance Internal mm	Claw Distance External mm	Material
2301099	I8A9E400-041000	41	57	BRASS

**EXPRESS (NF E 29.573)**

Seal



Item Code	Part Number	Material
2301807	INJM9E-041	NBR

**EXPRESS (NF E 29.573)**

Clamps - 2 Gripping Finger Type



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min mm	Hose OD max mm	Material
2302138	I1LG2E-013020	1/2	13	19	21	PLATED STEEL
2302139	I1LG2E-016026	5/8	16	25	27	PLATED STEEL
2302140	I1LG2E-019029	3/4	19	28	30	PLATED STEEL
2302141	I1LG2E-025035	1	25	34	36	PLATED STEEL

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

Hose Shank with safety collar and safety pin holes - complete with seal



Item Code	Part Number AG Australia	Hose ID in	Hose ID mm	Claw Distance Internal mm	Claw Distance External mm	Material
2306889	I919L300-010042	10	3/8	42	63	PLATED STEEL
2304835	I919L300-013042	13	1/2	42	63	PLATED STEEL
2305227	I919L300-019042	19	3/4	42	63	PLATED STEEL
2304830	I919L300-025042	25	1	42	63	PLATED STEEL
2306890	I919L300-032042	32	1 1/4	42	63	PLATED STEEL

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

BSPT Male with safety pin holes - complete with seal



Item Code	Part Number AG Australia	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2306893	I9A9L206-042017	3/8	BSPT	42	63	PLATED STEEL
2304836	I9A9L206-042021	1/2	BSPT	42	63	PLATED STEEL
2304846	I9A9L206-042027	3/4	BSPT	42	63	PLATED STEEL
2304831	I9A9L206-042034	1	BSPT	42	63	PLATED STEEL
2306894	I9A9L206-042042	1 1/4	BSPT	42	63	PLATED STEEL

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

BSPP Female with safety pin holes - complete with seal



Item Code	Part Number AG Australia	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2306891	I9A9L306-042017	3/8	BSPP	42	63	PLATED STEEL
2304834	I9A9L306-042021	1/2	BSPP	42	63	PLATED STEEL
2304844	I9A9L306-042027	3/4	BSPP	42	63	PLATED STEEL
2304829	I9A9L306-042034	1	BSPP	42	63	PLATED STEEL
2306892	I9A9L306-042042	1 1/4	BSPP	42	63	PLATED STEEL

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

Hose Mender DIN 20038 - hose shank without safety collar



Item Code	Part Number	Hose ID in	Hose ID mm	Material
2305004		3/8	10	PLATED STEEL
2305001		1/2	13	PLATED STEEL
2305005		5/8	16	PLATED STEEL
2305003		3/4	19	PLATED STEEL
2305000		1	25	PLATED STEEL
2304999		1 1/4	32	PLATED STEEL
2304998		1 1/2	38	PLATED STEEL
2305002		2	51	PLATED STEEL

TO ASSEMBLE THE HOSE MENDERS, USE CLAMP DIN 20039 A "DOUBLE BOLT CLAMP WITH TWO SADDLE - DIN 20039 A":  
CONSULT CHAPTER "CLAMPS & FERRULES"

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

Three way connector with safety pin holes - complete with seal



Item Code	Part Number AG Australia	Claw Distance Internal mm	Claw Distance External mm	Material
2306896	I9Y9L001	42	63	PLATED STEEL

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

Blank cap with safety pin holes - complete with seal



Item Code	Part Number AG Australia	Claw Distance Internal mm	Claw Distance External mm	Material
2306895	I9A9L400-042000	42	63	PLATED STEEL

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

Seal



Item Code	Part Number	Material
2303056	INJM9L-042	NBR
2304439	IOJM9L-042	OHASIL

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

Claw clamps - DIN 20 039 B



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min mm	Hose OD max mm	Material
2302828	I9LG2A-013026	1/2	13	22	29	MALLEABLE IRON
2302829	I9LG2A-019030	3/4	19	28	32	MALLEABLE IRON
2302830	I9LG2A-025039	1	25	35	42	MALLEABLE IRON
2303974	I9LG2A-035049	1 3/8	35	45	53	MALLEABLE IRON

**TYPE A CLAW COUPLING (EUROPEAN TYPE) - WITH SAFETY PIN HOLES**

Safety pin



Item Code	Part Number	Material
2303232	I1YC4001	PLATED STEEL



**TYPE B CLAW COUPLING (U.S. TYPE)**

Hose shank - Complete with seal



Item Code	Part Number	Hose ID in	Hose ID mm	Claw Distance Internal mm	Claw Distance External mm	Material	Note
2303335	I919K300-010041	3/8	10	41	62	MALLEABLE IRON	
2302919	I919K300-013041	1/2	13	41	62	MALLEABLE IRON	
2302920	I919K300-019041	3/4	19	41	62	MALLEABLE IRON	
2302921	I919K300-025041	1	25	41	62	MALLEABLE IRON	
2303366	I919K300-032041	1 1/4	32	41	62	MALLEABLE IRON	4 LUG TYPE
2303367	I919K300-038041	1 1/2	38	41	62	MALLEABLE IRON	4 LUG TYPE
2303368	I919K300-051041	2	51	41	62	MALLEABLE IRON	4 LUG TYPE

TO ASSEMBLE THE INSERT WITH **CRIMPING RING**, CONSULT CHAPTER "CLAMPS & FERRULES"

**TYPE B CLAW COUPLING (U.S. TYPE)**

Male NPT - Complete with seal



Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2303344	I9A9K228-041013	1/4	NPT	41	62	MALLEABLE IRON
2303345	I9A9K228-041017	3/8	NPT	41	62	MALLEABLE IRON
2302922	I9A9K228-041021	1/2	NPT	41	62	MALLEABLE IRON
2302923	I9A9K228-041027	3/4	NPT	41	62	MALLEABLE IRON
2302924	I9A9K228-041034	1	NPT	41	62	MALLEABLE IRON

**TYPE B CLAW COUPLING (U.S. TYPE)**

Female NPT - Complete with seal



Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material	Note
2303354	I9A9K328-041013	1/4	NPT	41	62	MALLEABLE IRON	
2303355	I9A9K328-041017	3/8	NPT	41	62	MALLEABLE IRON	
2302925	I9A9K328-041021	1/2	NPT	41	62	MALLEABLE IRON	
2302926	I9A9K328-041027	3/4	NPT	41	62	MALLEABLE IRON	
2302927	I9A9K328-041034	1	NPT	41	62	MALLEABLE IRON	
2303372	I9A9K328-041042	1 1/4	NPT	41	62	MALLEABLE IRON	4 LUG TYPE
2303373	I9A9K328-041049	1 1/2	NPT	41	62	MALLEABLE IRON	4 LUG TYPE
2303374	I9A9K328-041060	2	NPT	41	62	MALLEABLE IRON	4 LUG TYPE

**TYPE B CLAW COUPLING (U.S. TYPE)**

Three way connector - Complete with seal



Item Code	Part Number	Claw Distance Internal mm	Claw Distance External mm	Material
2303052	I9Y9K003	41	62	MALLEABLE IRON

**TYPE B CLAW COUPLING (U.S. TYPE)**

Blank cap - Complete with seal



Item Code	Part Number	Claw Distance Internal mm	Claw Distance External mm	Material
2303362	I9A9K400-041000	41	62	MALLEABLE IRON

**TYPE B CLAW COUPLING (U.S. TYPE)**

Seal



Item Code	Part Number	Material
2305661	INJM9K-041	NBR

**TYPE B CLAW COUPLING (U.S. TYPE)**

Claw clamps



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min mm	Hose OD max mm	Material
2304357		3/8	10	17,5	22,2	MALLEABLE IRON
2305068	I9LG2B-013027	1/2	13	21,0	27,0	MALLEABLE IRON
2302928	I9LG2B-013028	1/2	13	25,0	30,0	MALLEABLE IRON
2302929	I9LG2B-019031	3/4	19	30,0	33,0	MALLEABLE IRON
2304358		1	25	33,0	38,0	MALLEABLE IRON
2302930	I9LG2B-025042	1	25	35,0	45,0	MALLEABLE IRON

**TYPE B CLAW COUPLING (U.S. TYPE)**

Safety pin



Item Code	Part Number	Material
2303232	I1YC4001	PLATED STEEL

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Hose shank - Complete with seal

AU



Item Code	Part Number	Hose ID in	Hose ID mm	Claw Distance Internal mm	Claw Distance External mm	Material
2303057	I919N300-010045	3/8	10	45	68	PLATED STEEL
2302931	I919N300-013045	1/2	13	45	68	PLATED STEEL
2302932	I919N300-019045	3/4	19	45	68	PLATED STEEL
2302933	I919N300-025045	1	25	45	68	PLATED STEEL
2302934	I919N300-032045	1 1/4	32	45	68	PLATED STEEL
2302935	I919N300-038074	1 1/2	38	74	115	PLATED STEEL
2302936	I919N300-051074	2	51	74	115	PLATED STEEL
2302937	I919N300-076117	3	76	117	174	PLATED STEEL

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Male BSPT - Complete with seal

AU

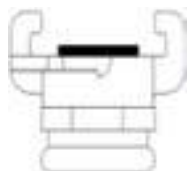


Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2303058	I9A9N207-045017	3/8	BSPT	45	68	PLATED STEEL
2302938	I9A9N207-045021	1/2	BSPT	45	68	PLATED STEEL
2302939	I9A9N207-045027	3/4	BSPT	45	68	PLATED STEEL
2302940	I9A9N207-045034	1	BSPT	45	68	PLATED STEEL
2302941	I9A9N207-045042	1 1/4	BSPT	45	68	PLATED STEEL
2302942	I9A9N207-074049	1 1/2	BSPT	74	115	PLATED STEEL
2302943	I9A9N207-074060	2	BSPT	74	115	PLATED STEEL
2302944	I9A9N207-117090	3	BSPT	117	174	PLATED STEEL

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Female BSP - Complete with seal

AU



Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2303059	I9A9N306-045017	3/8	BSP	45	68	PLATED STEEL
2302945	I9A9N306-045021	1/2	BSP	45	68	PLATED STEEL
2302946	I9A9N306-045027	3/4	BSP	45	68	PLATED STEEL
2302947	I9A9N306-045034	1	BSP	45	68	PLATED STEEL
2302948	I9A9N306-045042	1 1/4	BSP	45	68	PLATED STEEL
2302949	I9A9N306-074049	1 1/2	BSP	74	115	PLATED STEEL
2302950	I9A9N306-074060	2	BSP	74	115	PLATED STEEL
2302951	I9A9N306-117090	3	BSP	117	174	PLATED STEEL

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Hose Mender - Hose shank for claw clamps

AU

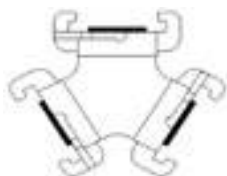


Item Code	Part Number	Hose ID in	Hose ID mm	Material
2303062	I1156100-013013	1/2	13	PLATED STEEL
2303063	I1156100-019019	3/4	19	PLATED STEEL
2303064	I1156100-025025	1	25	PLATED STEEL
2303065	I1156100-038038	1 1/2	38	PLATED STEEL
2303066	I1156100-051051	2	51	PLATED STEEL
	I1156100-076076	3	76	PLATED STEEL

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Three way connector - Complete with seal

**AU**



Item Code	Part Number	Claw Distance Internal mm	Claw Distance External mm	Material
2303060	I9Y9N001	45	68	PLATED STEEL
2303061	I9Y9N002	74	115	PLATED STEEL

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Seal

**AU**



Item Code	Part Number	Claw Distance Internal mm	Claw Distance External mm	Material
2303085	INJM9N-045	45	68	NBR
2303086	INJM9N-074	74	115	NBR
2306583	INJM9N-117	117	174	NBR

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Safety pin

**AU**



Item Code	Part Number	Material	Note
2303084	I1Y9N003	PLATED STEEL	(A)

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Claw clamps

**AU**



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min mm	Hose OD max mm	Material	Note
2303069	I1LG2M-013022	1/2	13	19	24	PLATED STEEL	(A)
2303071	I1LG2M-013026	1/2	13	22	28	PLATED STEEL	(A)
2303072	I1LG2M-019030	3/4	19	29	31	PLATED STEEL	(A)
2303070	I1LG2M-025034	1	25	31	36	PLATED STEEL	(A)
2303073	I1LG2M-025038	1	25	35	40	PLATED STEEL	(A)
2303074	I1LG2M-038052	1 1/2	38	50	54	PLATED STEEL	WITH SAFETY CHAIN LUGS
2303075	I1LG2M-051065	2	51	63	67	PLATED STEEL	WITH SAFETY CHAIN LUGS
	I1LG2M-038Z52	1 1/2	38	50	54	PLATED STEEL	WITH SAFETY CHAIN
2303076	I1LG2M-051Z65	2	51	63	67	PLATED STEEL	WITH SAFETY CHAIN

Safety chain with shackles

**AU**

Item Code	Part Number	Length (mm)	Material
	I1LG2MSC-0450	450	PLATED STEEL

**TYPE S CLAW COUPLING (AUSTRALIAN TYPE)**

Serrated Ferrule

**AU**



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min mm	Hose OD max mm	Material	Note
2303078	I101U013-020023	1/2	13	20	23	PLATED STEEL	(A)
2303080	I101U025-034038	1	25	34	38	PLATED STEEL	(A)
2303081	I101U032-044048	1 1/4	32	44	48	PLATED STEEL	(A)
2303082	I101U038-048054	1 1/2	38	48	54	PLATED STEEL	(A)
2303083	I101U051-062067	2	51	62	67	PLATED STEEL	(A)

(A) SUITABLE ALSO FOR TYPE A CLAW COUPLINGS WITH SAFETY PIN HOLES





# WATER

## FITTINGS

### GEKA

Hose Shank - Complete with seal .....	F.14
Male BSP - Complete with seal .....	F.14
Female BSP - Complete with seal .....	F.14
Blank cap - Complete with seal .....	F.14
Seal .....	F.14

### TYPE B - BAUER COMPATIBLE

Male with closure lever - Hose shank .....	F.15
Female - Hose shank - Complete with seal .....	F.15
Female - Hose shank heavy duty - Seal not included .....	F.15
Male without closure lever - Hose shank .....	F.16
Male without closure lever - Hose shank heavy duty .....	F.16
Closure lever .....	F.16
Male without closure lever - Black weld on .....	F.17
Female - Black weld on - Complete with seal .....	F.17
Male without closure lever - Male BSPT .....	F.17
Female - Male BSPT - Complete with seal .....	F.17
Male - Fixed flange table D PN10 .....	F.18
Female - Fixed flange table D PN10 - Complete with seal .....	F.18
Seal .....	F.18
Antioil Rubber Seal .....	F.18

### TYPE C - CARDAN/PERROT COMPATIBLE

Male - Hose shank .....	F.19
Female with closure lever - Hose shank - Complete with seal .....	F.19

### VIDANGE

Male .....	F.19
Female - Complete with seal .....	F.19

### TYPE 42

Male - Hose shank .....	F.20
Female with closure lever - Hose shank - Complete with seal .....	F.20
Male - Weld on .....	F.20
Female with closure lever - Weld on - Complete with seal .....	F.20
Male - Male BSP .....	F.21
Female with closure lever - Male BSP - Complete with seal .....	F.21
Male Plug .....	F.21
Female Cap with closure lever - Complete with seal .....	F.21
Seal .....	F.21

### SHOULDERED STYLE

Low Pressure - Serrated hose shank complete with pre-crimped ferrule...	F.22
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## GEKA

## Hose Shank - Complete with seal



Item Code	Part Number	Hose ID in	Hose ID mm	Claw Distance Internal mm	Claw Distance External mm	Material
2304856		3/8	10	40	54	BRASS
2301796	I818A300-013040	1/2	13	40	54	BRASS
2304857		5/8	16	40	54	BRASS
2301797	I818A300-019040	3/4	19	40	54	BRASS
2301798	I818A300-025040	1	25	40	54	BRASS
2304859		1 1/4	32	40	54	BRASS
2304858		1 1/2	38	40	54	BRASS

TO ASSEMBLE THE INSERT WITH **CRIMPING RING**, CONSULT CHAPTER "CLAMPS & FERRULES"

## GEKA

## Male BSP - Complete with seal



Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2305651	I8A8A206-040017	3/8	BSP	40	54	BRASS
2305648	I8A8A206-040021	1/2	BSP	40	54	BRASS
2305650	I8A8A206-040027	3/4	BSP	40	54	BRASS
2305647	I8A8A206-040034	1	BSP	40	54	BRASS
2305652	I8A8A206-040042	1 1/4	BSP	40	54	BRASS

## GEKA

## Female BSP - Complete with seal



Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Claw Distance External mm	Material
2305658	I8A8A306-040017	3/8	BSP	40	54	BRASS
2305654	I8A8A306-040021	1/2	BSP	40	54	BRASS
2305657	I8A8A306-040027	3/4	BSP	40	54	BRASS
2305653	I8A8A306-040034	1	BSP	40	54	BRASS
2305659	I8A8A306-040042	1 1/4	BSP	40	54	BRASS

## GEKA

## Blank cap - Complete with seal



Item Code	Part Number	Claw Distance Internal mm	Claw Distance External mm	Material
2305660	I8A8A400-040000	40	54	BRASS

## GEKA

## Seal



Item Code	Part Number	Material
2304440	INJM8A-040	NBR

**TYPE B - BAUER COMPATIBLE**

Male with closure lever - Hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Coupling size mm	Material
2301799	I119B100-050050	2	50	50	PLATED STEEL
2302221	I119B100-076076	3	76	76	PLATED STEEL
2301800	I119B100-076089	3	76	89	PLATED STEEL
2301801	I119B100-102108	4	102	108	PLATED STEEL
2302268	I119B100-125133	5	125	133	PLATED STEEL
2301802	I119B100-152159	6	152	159	PLATED STEEL
2302269	I119B100-203194	8	203	194	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Female - Hose shank - Complete with seal



Item Code	Part Number	Hose ID in	Hose ID mm	Coupling size mm	Material
2301803	I119B200-050050	2	50	50	PLATED STEEL
2302222	I119B200-076076	3	76	76	PLATED STEEL
2301804	I119B200-076089	3	76	89	PLATED STEEL
2301805	I119B200-102108	4	102	108	PLATED STEEL
2302270	I119B200-125133	5	125	133	PLATED STEEL
2301806	I119B200-152159	6	152	159	PLATED STEEL
2302271	I119B200-203194	8	203	194	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Female - Hose shank heavy duty - Seal not included

**AU**



Item Code	Part Number	Hose ID in	Hose ID mm	Coupling size mm	Material
2303120	I119B20H-102108	4	102	108	PLATED STEEL
2303121	I119B20H-152159	6	152	159	PLATED STEEL
2303122	I119B20H-203194	8	203	194	PLATED STEEL



**TYPE B - BAUER COMPATIBLE**

Male without closure lever - Hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Coupling size mm	Material
2303103	I11SB100-050050	2	50	50	PLATED STEEL
2303104	I11SB100-076076	3	76	76	PLATED STEEL
2303105	I11SB100-076089	3	76	89	PLATED STEEL
2303106	I11SB100-102108	4	102	108	PLATED STEEL
	I11SB100-125133	5	127	133	PLATED STEEL
2303107	I11SB100-152159	6	152	159	PLATED STEEL
2303108	I11SB100-203194	8	203	194	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Male without closure lever - Hose shank heavy duty

AU



Item Code	Part Number	Hose ID in	Hose ID mm	Coupling size mm	Material
2303113	I11SB10H-102108	4	102	108	PLATED STEEL
2303114	I11SB10H-152159	6	152	159	PLATED STEEL
2303115	I11SB10H-203194	8	203	194	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Closure lever



Item Code	Part Number	Coupling size mm	Material
2303127	I1Y9B050	50	PLATED STEEL
2303128	I1Y9B076	76	PLATED STEEL
2303129	I1Y9B089	89	PLATED STEEL
2303130	I1Y9B108	108	PLATED STEEL
2305904	I1Y9B133	133	PLATED STEEL
2303131	I1Y9B159	159	PLATED STEEL
2303132	I1Y9B194	194	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Male without closure lever - Black weld on

**AU**



Item Code	Part Number	Coupling size mm	Material
2303095	I0BSB100-089	89	UNPLATED STEEL
2303096	I0BSB100-108	108	UNPLATED STEEL
2303097	I0BSB100-159	159	UNPLATED STEEL
2303098	I0BSB100-194	194	UNPLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Female - Black weld on - Complete with seal

**AU**



Item Code	Part Number	Coupling size mm	Material
2303087	I0B9B200-089	89	UNPLATED STEEL
2303088	I0B9B200-108	108	UNPLATED STEEL
2303089	I0B9B200-159	159	UNPLATED STEEL
2303090	I0B9B200-194	194	UNPLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Male without closure lever - Male BSPT



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2303139	I1ASB507-050060	50	2	BSPT	PLATED STEEL
2303140	I1ASB507-076090	76	3	BSPT	PLATED STEEL
2303141	I1ASB507-089090	89	3	BSPT	PLATED STEEL
2303142	I1ASB507-108114	108	4	BSPT	PLATED STEEL
2303143	I1ASB507-159165	159	6	BSPT	PLATED STEEL
2303144	I1ASB507-194219	194	8	BSPT	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Female - Male BSPT - Complete with seal



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2303133	I1A9B007-050060	50	2	BSPT	PLATED STEEL
2303134	I1A9B007-076090	76	3	BSPT	PLATED STEEL
2303135	I1A9B007-089090	89	3	BSPT	PLATED STEEL
2303136	I1A9B007-108114	108	4	BSPT	PLATED STEEL
2303137	I1A9B007-159165	159	6	BSPT	PLATED STEEL
2303138	I1A9B007-194219	194	8	BSPT	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Male with closure lever - Fixed flange table D PN10

AU



Item Code	Part Number	Head DN mm	Flange type	Head size mm	Material
2303145	I1ABZ29B-102108	108	TABLE D - BS 10	102	PLATED STEEL
2303146	I1ABZ29B-152159	159	TABLE D - BS 10	152	PLATED STEEL
2303147	I1ABZ29B-203194	194	TABLE D - BS 10	203	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Female - Fixed flange table D PN10 - Complete with seal

AU



Item Code	Part Number	Head DN mm	Flange type	Head size mm	Material
2303148	I1ABZ39B-102108	108	TABLE D - BS 10	102	PLATED STEEL
2303149	I1ABZ39B-152159	159	TABLE D - BS 10	152	PLATED STEEL
2303150	I1ABZ39B-203194	194	TABLE D - BS 10	203	PLATED STEEL

**TYPE B - BAUER COMPATIBLE**

Seal



Item Code	Part Number	Coupling size mm	Material
2302959	ISJM9B-050	50	SBR
2302960	ISJM9B-076	76	SBR
2302961	ISJM9B-089	89	SBR
2302962	ISJM9B-108	108	SBR
2302963	ISJM9B-133	133	SBR
2302964	ISJM9B-159	159	SBR
2302965	ISJM9B-194	194	SBR

**TYPE B - BAUER COMPATIBLE**

Antioil Rubber Seal



Item Code	Part Number	Coupling size mm	Material
2302869	INJM9B-050	50	NBR
2302870	INJM9B-076	76	NBR
2302871	INJM9B-089	89	NBR
2302872	INJM9B-108	108	NBR
2302873	INJM9B-133	133	NBR
2302874	INJM9B-159	159	NBR
2302875	INJM9B-194	194	NBR

**TYPE C - CARDAN/PERROT COMPATIBLE**

Male - Hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Coupling size mm	Material
2302272	I119P100-050050	2	50	50	PLATED STEEL
2306770	I119P100-063070	2 1/2	63	70	PLATED STEEL
2302273	I119P100-076070	3	76	70	PLATED STEEL
2306072	I119P100-076089	3	76	89	PLATED STEEL
2301791	I119P100-102108	4	102	108	PLATED STEEL
2301792	I119P100-125133	5	125	133	PLATED STEEL
2302275	I119P100-152159	6	152	159	PLATED STEEL

**TYPE C - CARDAN/PERROT COMPATIBLE**

Female with closure lever - Hose shank - Complete with seal



Item Code	Part Number	Hose ID in	Hose ID mm	Coupling size mm	Material
2302276	I119P200-050050	2	50	50	PLATED STEEL
2306771	I119P200-063070	2 1/2	63	70	PLATED STEEL
2302277	I119P200-076070	3	76	70	PLATED STEEL
2306071	I119P200-076089	3	76	89	PLATED STEEL
2306128	I119P200-090089	3 1/2	90	89	PLATED STEEL
2301793	I119P200-102108	4	102	108	PLATED STEEL
2301794	I119P200-125133	5	125	133	PLATED STEEL
2302279	I119P200-152159	6	152	159	PLATED STEEL

**VIDANGE**

Male



Item Code	Part Number	Hose DN mm	Head size mm	Material
2301558	I819A100-105100	105	100	BRASS

**VIDANGE**

Female - Complete with seal



Item Code	Part Number	Hose DN mm	Head size mm	Material
2301557	I819A200-105100	105	100	BRASS

**TYPE 42**

Male - Hose shank



Item code	Part Number	Hose ID mm	Coupling size mm	Material
2305186		51	48	PLATED STEEL
2304741		51	76	PLATED STEEL
2305275		63	76	PLATED STEEL
2305187		76	76	PLATED STEEL
2304736		76	102	PLATED STEEL
2305188		102	102	PLATED STEEL
2305189		127	133	PLATED STEEL
2305190		152	152	PLATED STEEL

**TYPE 42**

Female with closure lever - Hose shank - Complete with seal



Item code	Part Number	Hose ID mm	Coupling size mm	Material
2305199		51	48	PLATED STEEL
2304749		51	76	PLATED STEEL
2305278		63	76	PLATED STEEL
2305200		76	76	PLATED STEEL
2305576		76	102	PLATED STEEL
2305201		102	102	PLATED STEEL
2305202		127	133	PLATED STEEL
2305203		152	152	PLATED STEEL

**TYPE 42**

Male - Weld on



Item code	Part Number	Coupling size mm	Head DN mm	Material
2305569		48	51	PLATED STEEL
2305180		76	76	PLATED STEEL
2305181		102	102	PLATED STEEL
2304737		133	133	PLATED STEEL
2305272		152	152	PLATED STEEL

**TYPE 42**

Female with closure lever - Weld on - Complete with seal



Item code	Part Number	Coupling size mm	Head DN mm	Material
2305193		76	76	PLATED STEEL
2305194		102	102	PLATED STEEL

**TYPE 42**

Male - Male BSP



Item code	Part Number	Coupling size mm	Thread in	Thread type	Material
2305183		48	2	BSP	PLATED STEEL
2304739		76	3	BSP	PLATED STEEL
2305273		102	4	BSP	PLATED STEEL

**TYPE 42**

Female with closure lever - Male BSP - Complete with seal



Item code	Part Number	Coupling size mm	Thread in	Thread type	Material
2305196		48	2	BSP	PLATED STEEL
2304747		76	3	BSP	PLATED STEEL
2305277		102	4	BSP	PLATED STEEL

**TYPE 42**

Male Plug



Item code	Part Number	Coupling size mm	Material
2305573		48	PLATED STEEL
2304742		76	PLATED STEEL
2304743		102	PLATED STEEL

**TYPE 42**

Female Cap with closure lever - Complete with seal



Item code	Part Number	Coupling size mm	Material
2304750		48	PLATED STEEL
2304751		76	PLATED STEEL
2304752		102	PLATED STEEL
2305571		133	PLATED STEEL

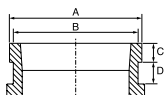
**TYPE 42**

Seal



Item code	Part Number	Coupling size mm	Material
2305588		48	EPDM
2304418		60	EPDM
2304419		76	EPDM
2304420		102	EPDM
2304421		133	EPDM
2304422		152	EPDM

Item code	Part Number	Coupling size mm	Material
2304423		48	NBR
2304424		76	NBR
2304425		102	NBR
2305589		133	NBR
2304426		152	NBR

**SHOULDERED STYLE**

Low Pressure - Serrated hose shank complete with pre-crimped ferrule

AU



Item Code	Part Number	Hose ID inch	Hose ID mm	Head DN inch	Head A mm	Head B mm	Head C mm	Head D mm	Material
2306883	I179RL00-076097	3	76	3	97	88,5	16,0	20	PLATED STEEL
2306884	I179RL00-102122	4	102	4	122	115,0	17,5	20	PLATED STEEL
2307046	I179RL00-152175	6	152	6	174,5	165,1	17,5	20	PLATED STEEL



# HYGIENIC-FOOD

## FITTINGS

### SMS

Male - Serrated hose shank - Complete with seal.....	F.24
Female - Serrated hose shank.....	F.24

### DIN 11851

Male - EN 14 420-2 / DIN 2817 hose shank - Complete with seal .....	F.25
Female - EN 14 420-2 / DIN 2817 hose shank .....	F.25
Male - Serrated hose shank - Complete with seal.....	F.25
Female with round Nut - Serrated hose shank .....	F.25

### MACON

Male - Serrated hose shank.....	F.26
Female with round nut - Serrated hose shank - Complete with seal.....	F.26

### SERRATED FERRULE FOR HYGIENIC COUPLING

Serrated ferrule for hygienic coupling.....	F.26
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**SMS****Male - Serrated hose shank - Complete with seal**

Item Code	Part Number	Hose ID in	Hose ID mm	Head DN mm	Thread Type	Material
2301811	I389S100-025025	1	25	25	40 x 1/6	S/S 316
2301812	I389S100-038040	1 1/2	38	40	60 x 1/6	S/S 316
2301611	I389S100-051050	2	51	50	70 x 1/6	S/S 316
2301638	I389S100-063065	2 1/2	63	65	85 x 1/6	S/S 316
2301737	I389S100-076080	3	76	80	98 x 1/6	S/S 316
2302567	I389S100-102100	4	102	100	132 x 1/6	S/S 316

**SMS****Female - Serrated hose shank**

Item Code	Part Number	Hose ID in	Hose ID mm	Head DN mm	Thread Type	Material
2301612	I389S200-025025	1	25	25	40 x 1/6	S/S 316
2301813	I389S200-038040	1 1/2	38	40	60 x 1/6	S/S 316
2301276	I389S200-051050	2	51	50	70 x 1/6	S/S 316
2301637	I389S200-063065	2 1/2	63	65	85 x 1/6	S/S 316
2301814	I389S200-076080	3	76	80	98 x 1/6	S/S 316
2302568	I389S200-102100	4	102	100	132 x 1/6	S/S 316

**DIN 11851**

Male - EN 14 420-2 / DIN 2817 hose shank - Complete with seal



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN mm	Thread Type	Material
2302529	I349Q100-025025	1	25	25	52 x 1/6	S/S 316
2302530	I349Q100-032032	1 1/4	32	32	58 x 1/6	S/S 316
2302531	I349Q100-038040	1 1/2	38	40	65 x 1/6	S/S 316
2302532	I349Q100-051050	2	51	50	78 x 1/6	S/S 316
2302533	I349Q100-063065	2 1/2	63	65	95 x 1/6	S/S 316
2302534	I349Q100-076080	3	76	80	110 x 1/4	S/S 316
2302535	I349Q100-102100	4	102	100	130 x 1/4	S/S 316

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817 AND SAFETY CLAMPS FLEXOLINE: CONSULT CHAPTER "CLAMPS & FERRULES"

**DIN 11851**

Female - EN 14 420-2 / DIN 2817 hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN mm	Thread Type	Material
2302536	I349Q200-025025	1	25	25	52 x 1/6	S/S 316
2302537	I349Q200-032032	1 1/4	32	32	58 x 1/6	S/S 316
2302538	I349Q200-038040	1 1/2	38	40	65 x 1/6	S/S 316
2302539	I349Q200-051050	2	51	50	78 x 1/6	S/S 316
2302540	I349Q200-063065	2 1/2	63	65	95 x 1/6	S/S 316
2302541	I349Q200-076080	3	76	80	110 x 1/4	S/S 316
2302542	I349Q200-102100	4	102	100	130 x 1/4	S/S 316

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817 AND SAFETY CLAMPS FLEXOLINE: CONSULT CHAPTER "CLAMPS & FERRULES"

**DIN 11851**

Male - Serrated hose shank - Complete with seal



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN mm	Thread Type	Material
2302561	I389Q100-025025	1	25	25	52 x 1/6	S/S 316
2302562	I389Q100-032032	1 1/4	32	32	58 x 1/6	S/S 316
2302563	I389Q100-038040	1 1/2	38	40	65 x 1/6	S/S 316
2301713	I389Q100-051050	2	51	50	78 x 1/6	S/S 316
2301642	I389Q100-063065	2 1/2	63	65	95 x 1/6	S/S 316
2301643	I389Q100-076080	3	76	80	110 x 1/4	S/S 316
2302564	I389Q100-102100	4	102	100	130 x 1/4	S/S 316

**DIN 11851**

Female with round Nut - Serrated hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN mm	Thread Type	Material
2301816	I389Q200-025025	1	25	25	52 x 1/6	S/S 316
2302565	I389Q200-032032	1 1/4	32	32	58 x 1/6	S/S 316
2301741	I389Q200-038040	1 1/2	38	40	65 x 1/6	S/S 316
2301639	I389Q200-051050	2	51	50	78 x 1/6	S/S 316
2301640	I389Q200-063065	2 1/2	63	65	95 x 1/6	S/S 316
2301641	I389Q200-076080	3	76	80	110 x 1/4	S/S 316
2302566	I389Q200-102100	4	102	100	130 x 1/4	S/S 316

**MACON**

Male - Serrated hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN mm	Material
2301635	I389M100-040040		40	40	S/S 316
2301636	I389M100-050050		50	50	S/S 316
2301817	I389M100-070070		70	70	S/S 316

**MACON**

Female with round nut - Serrated hose shank - Complete with seal



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN mm	Material
2301633	I389M200-040040		40	40	S/S 316
2301634	I389M200-050050		50	50	S/S 316
2301818	I389M200-070070		70	70	S/S 316

**SERRATED FERRULE FOR HYGIENIC COUPLING**

Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD Min mm	Hose OD Max mm	Material
2301526	I208U040-047053	1 1/2	38	47	53	S/S 304
2301527	I208U051-060065	2	51	60	65	S/S 304
2301528	I208U063-074078	2 1/2	63	74	78	S/S 304
2301529	I208U070-081086	2 7/8	70	81	86	S/S 304
2301530	I208U076-087092	3	76	87	92	S/S 304

TO ASSEMBLE WITH "SERRATED FERRULE S/S316" CONSULT CHAPTER "CLAMPS &amp; FERRULES"



# STEAM

## FITTINGS

### EN 14 423 / DIN 2826

Male BSPT - Hose shank .....	F.28
Female BSP - Hose shank .....	F.28
Swivel flange - Hose shank.....	F.29
Safety Clamps .....	F.29

### GROUND JOINT SEAL

Complete coupling BSP .....	F.30
Complete coupling NPT .....	F.30
Male BSP - Hose shank .....	F.30
Male NPT - Hose shank .....	F.30
Clamps - 2 Bolt - 2 Gripping finger type .....	F.31
Clamps - 4 Bolt - 2 Gripping finger type .....	F.31
Clamps - 6 Bolt - 3 Gripping finger type .....	F.31

### TURNEX P

Complete Coupling.....	F.31
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**EN 14 423 / DIN 2826**

**Male BSPT - Hose shank**



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread Type	Material
2302755	I8107100-013021	1/2	13	1/2	BSPT	BRASS
2302218	I8107100-019027	3/4	19	3/4	BSPT	BRASS
2301718	I8107100-025034	1	25	1	BSPT	BRASS
2301819	I8107100-038049	1 1/2	38	1 1/2	BSPT	BRASS
2301820	I8107100-051060	2	50	2	BSPT	BRASS



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread Type	Material
2302433	I3107100-013021	1/2	13	1/2	BSPT	S/S 316
2302434	I3107100-019027	3/4	19	3/4	BSPT	S/S 316
2302435	I3107100-025034	1	25	1	BSPT	S/S 316
2302436	I3107100-038049	1 1/2	38	1 1/2	BSPT	S/S 316
2302437	I3107100-051060	2	50	2	BSPT	S/S 316

**EN 14 423 / DIN 2826**

**Female BSP - Hose shank**



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread Type	Material
2302754	I8106200-013021	1/2	13	1/2	BSP	BRASS
2301821	I8106200-019027	3/4	19	3/4	BSP	BRASS
2301822	I8106200-025034	1	25	1	BSP	BRASS
2301823	I8106200-038049	1 1/2	38	1 1/2	BSP	BRASS
2301824	I8106200-051060	2	50	2	BSP	BRASS



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread Type	Material
2302428	I3106200-013021	1/2	13	1/2	BSP	S/S 316
2302429	I3106200-019027	3/4	19	3/4	BSP	S/S 316
2302430	I3106200-025034	1	25	1	BSP	S/S 316
2302431	I3106200-038049	1 1/2	38	1 1/2	BSP	S/S 316
2302432	I3106200-051060	2	50	2	BSP	S/S 316

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**EN 14 423 / DIN 2826**

**Swivel flange - Hose shank**



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose Shank	Material Flange
2302371	I17BG74A-019020	3/4	19	PN 40	PLATED STEEL	PLATED STEEL
2302372	I17BG74A-025025	1	25	PN 40	PLATED STEEL	PLATED STEEL
2302373	I17BG74A-038040	1 1/2	38	PN 40	PLATED STEEL	PLATED STEEL
2302374	I17BG74A-051050	2	50	PN 40	PLATED STEEL	PLATED STEEL



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose Shank	Material Flange
2302555	I37BG74A-019020	3/4	19	PN 40	S/S 316	S/S 316
2302556	I37BG74A-025025	1	25	PN 40	S/S 316	S/S 316
2302557	I37BG74A-038040	1 1/2	38	PN 40	S/S 316	S/S 316
2302558	I37BG74A-051050	2	50	PN 40	S/S 316	S/S 316

**EN 14 423 / DIN 2826**

**Safety Clamps**



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD Min mm	Hose OD Max mm	Material
2302810	I8LG4C-013025	1/2	13 x 6.0	24	26	BRASS
2302223	I8LG4C-019033	3/4	19 x 7.0	32	34	BRASS
2302811	I8LG4C-025040	1	25 x 7.5	39	41	BRASS
2302812	I8LG4C-038054	1 1/2	38 X 8.0	53	56	BRASS
2302813	I8LG4C-050068	2	50 x 9.0	67	69	BRASS

**GROUND JOINT SEAL**

Complete coupling BSP



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread Type	Material
2302966	I918B206-013021	1/2	13	1/2	BSP	MALLEABLE IRON
2302967	I918B206-019027	3/4	19	3/4	BSP	MALLEABLE IRON
2302968	I918B206-025034	1	25	1	BSP	MALLEABLE IRON
2302969	I918B206-032042	1 1/4	32	1 1/4	BSP	MALLEABLE IRON
2302970	I918B206-038049	1 1/2	38	1 1/2	BSP	MALLEABLE IRON
2302971	I918B206-051060	2	51	2	BSP	MALLEABLE IRON
2302972	I918B206-063076	2 1/2	63	2 1/2	BSP	MALLEABLE IRON
2302973	I918B206-076090	3	76	3	BSP	MALLEABLE IRON
2302974	I918B206-102114	4	102	4	BSP	MALLEABLE IRON

**GROUND JOINT SEAL**

Complete coupling NPT

NA



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread Type	Material
2303386	I918B228-013021	1/2	13	1/2	NPT	MALLEABLE IRON
2303387	I918B228-019027	3/4	19	3/4	NPT	MALLEABLE IRON
2303388	I918B228-025034	1	25	1	NPT	MALLEABLE IRON
2303389	I918B228-032042	1 1/4	32	1 1/4	NPT	MALLEABLE IRON
2303390	I918B228-038049	1 1/2	38	1 1/2	NPT	MALLEABLE IRON
2303391	I918B228-051060	2	51	2	NPT	MALLEABLE IRON
2303392	I918B228-063076	2 1/2	63	2 1/2	NPT	MALLEABLE IRON
2303393	I918B228-076090	3	76	3	NPT	MALLEABLE IRON
2303394	I918B228-102114	4	102	4	NPT	MALLEABLE IRON

**GROUND JOINT SEAL**

Male BSP - Hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread Type	Material
2302983	I118B107-013021	1/2	13	1/2	BSP	PLATED STEEL
2302984	I118B107-019027	3/4	19	3/4	BSP	PLATED STEEL
2302985	I118B107-025034	1	25	1	BSP	PLATED STEEL
2302986	I918B107-032042	1 1/4	32	1 1/4	BSP	MALLEABLE IRON
2302987	I918B107-038049	1 1/2	38	1 1/2	BSP	MALLEABLE IRON
2302988	I918B107-051060	2	51	2	BSP	MALLEABLE IRON
2302989	I918B107-063076	2 1/2	63	2 1/2	BSP	MALLEABLE IRON
2302990	I918B107-076090	3	76	3	BSP	MALLEABLE IRON
2302991	I918B107-102114	4	102	4	BSP	MALLEABLE IRON

**GROUND JOINT SEAL**

Male NPT - Hose shank

NA



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread Type	Material
2303428	I918B128-013021	1/2	13	1/2	NPT	MALLEABLE IRON
2303429	I918B128-019027	3/4	19	3/4	NPT	MALLEABLE IRON
2303430	I918B128-025034	1	25	1	NPT	MALLEABLE IRON
2303431	I918B128-032042	1 1/4	32	1 1/4	NPT	MALLEABLE IRON
2303432	I918B128-038049	1 1/2	38	1 1/2	NPT	MALLEABLE IRON
2303433	I918B128-051060	2	51	2	NPT	MALLEABLE IRON
2303434	I918B128-063076	2 1/2	63	2 1/2	NPT	MALLEABLE IRON
2303435	I918B128-076090	3	76	3	NPT	MALLEABLE IRON
2303436	I918B128-102114	4	102	4	NPT	MALLEABLE IRON

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**GROUND JOINT SEAL**

Clamps - 2 Bolt - 2 Gripping finger type



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD Min mm	Hose OD Max mm	Material
2302992	I9LG2F-013026	1/2	13	24	27	MALLEABLE IRON
2302993	I9LG2F-019032	3/4	19	30	33	MALLEABLE IRON
2303440	I9LG2F-019036	3/4	19	33	38	MALLEABLE IRON

**GROUND JOINT SEAL**

Clamps - 4 Bolt - 2 Gripping finger type



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD Min mm	Hose OD Max mm	Material
2303443	I9LG4F-025038	1	25	35,5	40	MALLEABLE IRON
2302994	I9LG4F-025041	1	25	39	43,5	MALLEABLE IRON
2302995	I9LG4F-032046	1 1/4	32	43	47,5	MALLEABLE IRON
2302996	I9LG4F-038049	1 1/4	32	45	53	MALLEABLE IRON
2303448	I9LG4F-038060	1 1/2	38	55,5	60	MALLEABLE IRON
2302997	I9LG4F-051067	2	51	63	71	MALLEABLE IRON
	I9LG4F-063083	2 1/2	63	78,5	87,5	MALLEABLE IRON
2302998	I9LG4F-076094	3	76	89	100	MALLEABLE IRON

▪ 4 GRIPPING FINGER

**GROUND JOINT SEAL**

Clamps - 6 Bolt - 3 Gripping finger type



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD Min mm	Hose OD Max mm	Material
2302999	I9LG6F-102123	4	102	117,5	127	MALLEABLE IRON
	I9LG6F-102142	4	102	133,5	142	MALLEABLE IRON

**TURNEX P**

Complete Coupling



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Material
2300617	I119X200-019027	3/4	19	3/4	PLATED STEEL
2302280	I119X200-025034	1	25	1	PLATED STEEL
2302281	I119X200-025049	1	25	1 1/2	PLATED STEEL

TO ASSEMBLE THE INSERT USE HYDRAULIC ALFACRIMP SERRATED FERRULE (H1200004-120000 AND H1200004-160000). CONSULT ALFAGOMMA HYDRAULIC CATALOGUE







# SYMMETRIC GUILLEMIN

## FITTINGS

### SYMMETRIC GUILLEMIN NF E 29.572

Hose shank - With locking ring - Complete with seal.....	F.34
Male BSP - With locking ring - Complete with seal.....	F.35
Male BSP - Without locking ring - Complete with seal .....	F.36
Female BSP - With locking ring - Complete with seal.....	F.37
Female BSP - Without locking ring - Complete with seal .....	F.38
Reducing adapter with locking rings - Complete with seal.....	F.38
Male plug with locking ring and chain.....	F.39
Handled male plug without locking ring - With chain.....	F.39
Seal .....	F.40
Wranches.....	F.40

## SYMMETRIC GUILLEMIN NF E 29.572

Hose shank - With locking ring - Complete with seal



Item Code	Part Number	Hose Shank DN mm	Head DN mm	Material	Note
2300648	I5191300-025020	25	20	ALUMINIUM	
2300649	I5191300-030025	30	25	ALUMINIUM	
2302106	I5191300-035032	35	32	ALUMINIUM	
2300653	I5191300-045040	45	40	ALUMINIUM	
2300655	I5191300-055050	55	50	ALUMINIUM	
2300656	I5191300-070065	70	65	ALUMINIUM	
2300658	I5191300-090080	90	80	ALUMINIUM	
2300660	I5191300-110100	110	100	ALUMINIUM	
2302105	I5191300-030032	30	32	ALUMINIUM	HOSE SHANK WITH COLLAR
2300652	I5191300-040040	40	40	ALUMINIUM	HOSE SHANK WITH COLLAR
2300654	I5191300-051050	51	50	ALUMINIUM	HOSE SHANK WITH COLLAR
2302107	I5191300-065065	65	65	ALUMINIUM	HOSE SHANK WITH COLLAR
2300657	I5191300-076080	76	80	ALUMINIUM	HOSE SHANK WITH COLLAR
2302108	I5191300-081080	81	80	ALUMINIUM	HOSE SHANK WITH COLLAR
2302109	I5191300-102100	102	100	ALUMINIUM	HOSE SHANK WITH COLLAR
2300659	I5191300-105100	105	100	ALUMINIUM	HOSE SHANK WITH COLLAR
2300661	I5191300-152150	152	150	ALUMINIUM	HOSE SHANK WITH COLLAR



Item Code	Part Number	Hose Shank DN mm	Head DN mm	Material	Note
2302438	I3191300-025020	25	20	S/S 316	
2302439	I3191300-030025	30	25	S/S 316	
2302101	I3191300-035032	35	32	S/S 316	
2300624	I3191300-045040	45	40	S/S 316	
2300625	I3191300-055050	55	50	S/S 316	
2301044	I3191300-070065	70	65	S/S 316	
2300627	I3191300-090080	90	80	S/S 316	
2302442	I3191300-110100	110	100	S/S 316	
2302440	I3191300-040040	40	40	S/S 316	HOSE SHANK WITH COLLAR
2302102	I3191300-051050	51	50	S/S 316	HOSE SHANK WITH COLLAR
2302103	I3191300-065065	65	65	S/S 316	HOSE SHANK WITH COLLAR
2300626	I3191300-076080	76	80	S/S 316	HOSE SHANK WITH COLLAR
2302441	I3191300-080080	80	80	S/S 316	HOSE SHANK WITH COLLAR
2302104	I3191300-102100	102	100	S/S 316	HOSE SHANK WITH COLLAR



Item Code	Part Number	Hose Shank DN mm	Head DN mm	Material	Note
2300679	I7191300-025020	25	20	BRONZE	
2300680	I7191300-030025	30	25	BRONZE	
2302111	I7191300-035032	35	32	BRONZE	
2300682	I7191300-045040	45	40	BRONZE	
2300684	I7191300-055050	55	50	BRONZE	
2300685	I7191300-070065	70	65	BRONZE	
2300687	I7191300-090080	90	80	BRONZE	
2300688	I7191300-110100	110	100	BRONZE	
2300958	I7191300-040040	40	40	BRONZE	HOSE SHANK WITH COLLAR
2300683	I7191300-051050	51	50	BRONZE	HOSE SHANK WITH COLLAR
2300938	I7191300-065065	65	65	BRONZE	HOSE SHANK WITH COLLAR
2302066	I7191300-076080	76	80	BRONZE	HOSE SHANK WITH COLLAR
2300686	I7191300-080080	80	80	BRONZE	HOSE SHANK WITH COLLAR
2302068	I7191300-102100	102	100	BRONZE	HOSE SHANK WITH COLLAR

**SYMMETRIC GUILLEMIN NF E 29.572**

Male BSP - With locking ring - Complete with seal



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2300221	I5A91206-020027	20	3/4	BSP	ALUMINIUM
2300222	I5A91206-025034	25	1	BSP	ALUMINIUM
2302077	I5A91206-032042	32	1 1/4	BSP	ALUMINIUM
2300224	I5A91206-040049	40	1 1/2	BSP	ALUMINIUM
2300225	I5A91206-050060	50	2	BSP	ALUMINIUM
2300226	I5A91206-065076	65	2 1/2	BSP	ALUMINIUM
2300227	I5A91206-080090	80	3	BSP	ALUMINIUM
2300228	I5A91206-100114	100	4	BSP	ALUMINIUM
2302695	I5A91206-150165	150	6	BSP	ALUMINIUM



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2302569	I3A91206-020027	20	3/4	BSP	S/S 316
2302570	I3A91206-025034	25	1	BSP	S/S 316
2302571	I3A91206-032042	32	1 1/4	BSP	S/S 316
2302064	I3A91206-040049	40	1 1/2	BSP	S/S 316
2300982	I3A91206-050060	50	2	BSP	S/S 316
2302572	I3A91206-065076	65	2 1/2	BSP	S/S 316
2301660	I3A91206-080090	80	3	BSP	S/S 316
2301251	I3A91206-100114	100	4	BSP	S/S 316



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2300296	I7A91206-020027	20	3/4	BSP	BRONZE
2300297	I7A91206-025034	25	1	BSP	BRONZE
2302072	I7A91206-032042	32	1 1/4	BSP	BRONZE
2300299	I7A91206-040049	40	1 1/2	BSP	BRONZE
2300300	I7A91206-050060	50	2	BSP	BRONZE
2300301	I7A91206-065076	65	2 1/2	BSP	BRONZE
2300302	I7A91206-080090	80	3	BSP	BRONZE
2300303	I7A91206-100114	100	4	BSP	BRONZE

**SYMMETRIC GUILLEMIN NF E 29.572**

Male BSP - Without locking ring - Complete with seal



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2300247	I5A94206-020027	20	3/4	BSP	ALUMINIUM
2300248	I5A94206-025034	25	1	BSP	ALUMINIUM
2302153	I5A94206-032042	32	1 1/4	BSP	ALUMINIUM
2300250	I5A94206-040049	40	1 1/2	BSP	ALUMINIUM
2300251	I5A94206-050060	50	2	BSP	ALUMINIUM
2300252	I5A94206-065076	65	2 1/2	BSP	ALUMINIUM
2300253	I5A94206-080090	80	3	BSP	ALUMINIUM
2300254	I5A94206-100114	100	4	BSP	ALUMINIUM



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2302579	I3A94206-020027	20	3/4	BSP	S/S 316
2302580	I3A94206-025034	25	1	BSP	S/S 316
2302581	I3A94206-032042	32	1 1/4	BSP	S/S 316
2302582	I3A94206-040049	40	1 1/2	BSP	S/S 316
2302583	I3A94206-050060	50	2	BSP	S/S 316
2302584	I3A94206-065076	65	2 1/2	BSP	S/S 316
2302065	I3A94206-080090	80	3	BSP	S/S 316
2302585	I3A94206-100114	100	4	BSP	S/S 316



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2302750	I7A94206-020027	20	3/4	BSP	BRONZE
2302751	I7A94206-025034	25	1	BSP	BRONZE
2302752	I7A94206-032042	32	1 1/4	BSP	BRONZE
2300320	I7A94206-040049	40	1 1/2	BSP	BRONZE
2300321	I7A94206-050060	50	2	BSP	BRONZE
2300322	I7A94206-065076	65	2 1/2	BSP	BRONZE
2300323	I7A94206-080090	80	3	BSP	BRONZE
2300324	I7A94206-100114	100	4	BSP	BRONZE

**SYMMETRIC GUILLEMIN NF E 29.572**

Female BSP - With locking ring - Complete with seal



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2300229	I5A91306-020027	20	3/4	BSP	ALUMINIUM
2300230	I5A91306-025034	25	1	BSP	ALUMINIUM
2302078	I5A91306-032042	32	1 1/4	BSP	ALUMINIUM
2300232	I5A91306-040049	40	1 1/2	BSP	ALUMINIUM
2300233	I5A91306-050060	50	2	BSP	ALUMINIUM
2300234	I5A91306-065076	65	2 1/2	BSP	ALUMINIUM
2300235	I5A91306-080090	80	3	BSP	ALUMINIUM
2300236	I5A91306-100114	100	4	BSP	ALUMINIUM
2300237	I5A91306-150165	150	6	BSP	ALUMINIUM



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2302573	I3A91306-020027	20	3/4	BSP	S/S 316
2300161	I3A91306-025034	25	1	BSP	S/S 316
2302574	I3A91306-032042	32	1 1/4	BSP	S/S 316
2300163	I3A91306-040049	40	1 1/2	BSP	S/S 316
2300164	I3A91306-050060	50	2	BSP	S/S 316
2300165	I3A91306-065076	65	2 1/2	BSP	S/S 316
2300166	I3A91306-080090	80	3	BSP	S/S 316
2300167	I3A91306-100114	100	4	BSP	S/S 316



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2300304	I7A91306-020027	20	3/4	BSP	BRONZE
2300305	I7A91306-025034	25	1	BSP	BRONZE
2302073	I7A91306-032042	32	1 1/4	BSP	BRONZE
2300307	I7A91306-040049	40	1 1/2	BSP	BRONZE
2300308	I7A91306-050060	50	2	BSP	BRONZE
2300309	I7A91306-065076	65	2 1/2	BSP	BRONZE
2300310	I7A91306-080090	80	3	BSP	BRONZE
2300311	I7A91306-100114	100	4	BSP	BRONZE

**SYMMETRIC GUILLEMIN NF E 29.572**

Female BSP - Without locking ring - Complete with seal



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2300255	I5A94306-020027	20	3/4	BSP	ALUMINIUM
2300256	I5A94306-025034	25	1	BSP	ALUMINIUM
2302697	I5A94306-032042	32	1 1/4	BSP	ALUMINIUM
2300258	I5A94306-040049	40	1 1/2	BSP	ALUMINIUM
2300259	I5A94306-050060	50	2	BSP	ALUMINIUM
2300260	I5A94306-065076	65	2 1/2	BSP	ALUMINIUM
2300261	I5A94306-080090	80	3	BSP	ALUMINIUM
2300262	I5A94306-100114	100	4	BSP	ALUMINIUM



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2302586	I3A94306-020027	20	3/4	BSP	S/S 316
2302587	I3A94306-025034	25	1	BSP	S/S 316
2302588	I3A94306-032042	32	1 1/4	BSP	S/S 316
2302589	I3A94306-040049	40	1 1/2	BSP	S/S 316
2302067	I3A94306-050060	50	2	BSP	S/S 316
2302590	I3A94306-065076	65	2 1/2	BSP	S/S 316
2302591	I3A94306-080090	80	3	BSP	S/S 316
2302592	I3A94306-100114	100	4	BSP	S/S 316



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2300325	I7A94306-020027	20	3/4	BSP	BRONZE
2300326	I7A94306-025034	25	1	BSP	BRONZE
2302753	I7A94306-032042	32	1 1/4	BSP	BRONZE
2300328	I7A94306-040049	40	1 1/2	BSP	BRONZE
2300329	I7A94306-050060	50	2	BSP	BRONZE
2300330	I7A94306-065076	65	2 1/2	BSP	BRONZE
2300331	I7A94306-080090	80	3	BSP	BRONZE
2300332	I7A94306-100114	100	4	BSP	BRONZE

**SYMMETRIC GUILLEMIN NF E 29.572**

Reducing adapter with locking rings - Complete with seal



Item Code	Part Number	Head Side A DN mm	Head Side B DN mm	Material
2300212	I5A91191-050040	40	50	ALUMINIUM
2300214	I5A91191-065050	65	50	ALUMINIUM
2300216	I5A91191-080050	80	50	ALUMINIUM
2300217	I5A91191-080065	80	65	ALUMINIUM
2300220	I5A91191-100080	100	80	ALUMINIUM

**SYMMETRIC GUILLEMIN NF E 29.572**

Male plug with locking ring and chain



Item Code	Part Number	Head DN mm	Material	Note
2300238	I5A91400-020	20	ALUMINIUM	FIXED LOCKING RING
2300239	I5A91400-025	25	ALUMINIUM	FIXED LOCKING RING
2302696	I5A91400-032	32	ALUMINIUM	FIXED LOCKING RING
2300241	I5A91400-040	40	ALUMINIUM	FIXED LOCKING RING
2300242	I5A91400-050	50		
2300243	I5A91400-065	65		
2300244	I5A91400-080	80		
2300245	I5A91400-100	100		
2300246	I5A91400-150	150		



Item Code	Part Number	Head DN mm	Material	Note
2302575	I3A91400-020	20	S/S 316	
2302576	I3A91400-025	25	S/S 316	
2302577	I3A91400-032	32	S/S 316	
2300168	I3A91400-040	40	S/S 316	
2301038	I3A91400-050	50	S/S 316	
2300169	I3A91400-065	65	S/S 316	
2300096	I3A91400-080	80	S/S 316	
2302578	I3A91400-100	100	S/S 316	



Item Code	Part Number	Head DN mm	Material	Note
2300312	I7A91400-020	20	BRONZE	FIXED LOCKING RING
2300313	I7A91400-025	25	BRONZE	FIXED LOCKING RING
2302149	I7A91400-032	32	BRONZE	FIXED LOCKING RING
2300315	I7A91400-040	40	BRONZE	FIXED LOCKING RING
2300316	I7A91400-050	50	BRONZE	
2300317	I7A91400-065	65	BRONZE	
2300318	I7A91400-080	80	BRONZE	
2300319	I7A91400-100	100	BRONZE	

**SYMMETRIC GUILLEMIN NF E 29.572**

Handled male plug without locking ring - With chain



Item Code	Part Number	Head DN mm	Material
2300263	I5A94400-040	40	ALUMINIUM
2300264	I5A94400-050	50	ALUMINIUM
2300265	I5A94400-065	65	ALUMINIUM
2300266	I5A94400-080	80	ALUMINIUM
2300267	I5A94400-100	100	ALUMINIUM



## SYMMETRIC GUILLEMIN NF E 29.572

## Seal



Item Code	Part Number	Head DN mm	Material
2300497	INJ091-020	20	NBR
2300498	INJ091-025	25	NBR
2301659	INJ091-032	32	NBR
2300500	INJ091-040	40	NBR
2300501	INJ091-050	50	NBR
2300502	INJ091-065	65	NBR
2300503	INJ091-080	80	NBR
2300504	INJ091-100	100	NBR
2302862	INJ091-150	150	NBR

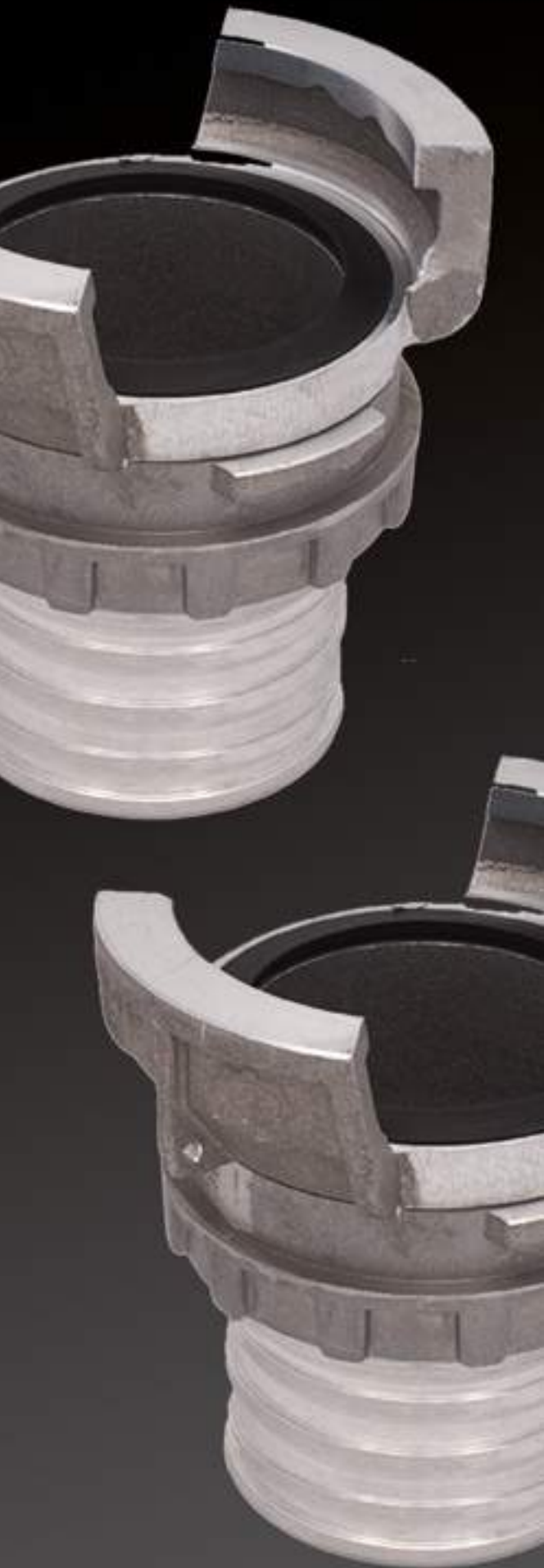
Item Code	Part Number	Head DN mm	Material
2300988	IBJ091-050	50	FOOD GRADE RUBBER
2300456	IBJ091-080	80	FOOD GRADE RUBBER
2300457	IBJ091-100	100	FOOD GRADE RUBBER

Item Code	Part Number	Head DN mm	Material
2302884	ITJ091-020	20	PTFE
2302885	ITJ091-025	25	PTFE
2300514	ITJ091-032	32	PTFE
2300515	ITJ091-040	40	PTFE
2300516	ITJ091-050	50	PTFE
2300517	ITJ091-065	65	PTFE
2300518	ITJ091-080	80	PTFE
2300987	ITJ091-100	100	PTFE

SYMMETRIC  
Wrenches

Item Code	Part Number	Fitting Head DN mm	Material	Model
2300572		20 - 65	PLATED STEEL	Clé Tricoise Simple
2301057		20 - 115	PLATED STEEL	Clé Tricoise Universelle
2300586		20 - 65	BRASS	Clé Simple*
2300587		50 - 100	BRASS	Clé Tricoise speciale camion pétrolier*
2300588		20 - 115	BRASS	Clé Universelle*

\* NO- SPARKLING



# SYMMETRIC DSP & AR

## FITTINGS

### SYMMETRIC DSP & AR (NF S 61.704 - NF S 61.705)

Hose shank - With locking ring - Complete with seal..... F.42

### GFR - ROUND THREAD COUPLING NF E 29.579

Male - Hose shank..... F.42

Female - Hose shank - Complete with seal ..... F.42

**SYMMETRIC DSP & AR (NF S 61.704 - NF S 61.705)**

Hose shank - With locking ring - Complete with seal



Item Code	Part Number	Head DN mm	Hose Shank DN mm	Material	Note
2300663	I5193300-045040	40	45	ALUMINIUM	DSP (DELIVERY)
2300664	I5193300-070065	65	70	ALUMINIUM	DSP (DELIVERY)
2300662	I5192300-110100	100	110	ALUMINIUM	AR (SUCTION & DELIVERY)

**GFR - ROUND THREAD COUPLING NF E 29.579**

Male - Hose shank



Item Code	Part Number	Hose ID mm	Head DN mm	Thread Type	Material
2300674	I7190100-025025	25	20	GFR	BRONZE

FOR HOSE 251AA

**GFR - ROUND THREAD COUPLING NF E 29.579**

Female - Hose shank - Complete with seal



Item Code	Part Number	Hose ID mm	Head DN mm	Thread Type	Material
2300675	I7190200-025025	25	20	GFR	BRONZE

FOR HOSE 251AA



STORZ

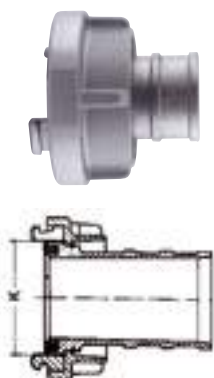
## FITTINGS

### STORZ

Suction & delivery hose shank - Complete with seal .....	F.44
Male - Complete with seal .....	F.44
Female - Complete with seal .....	F.45
Reducer adapter - Complete with seal .....	F.45
Blank cap with chain - Complete with seal .....	F.45

**STORZ**

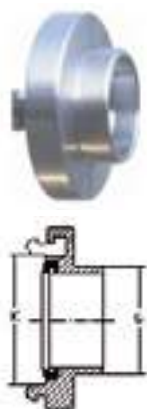
**Suction & delivery hose shank - Complete with seal**



Item Code	Part Number	Hose ID mm	Head DN mm	K mm	Material
2306056	I519Z300-019025	19	25 - D - DS	31	ALUMINIUM
2305397	I519Z300-025025	25	25 - D - DS	31	ALUMINIUM
2306058	I519Z300-025052	25	52 - C - DS	66	ALUMINIUM
2302681	I519Z300-032032	32	32 - DS	44	ALUMINIUM
2306057	I519Z300-032052	32	52 - C - DS	66	ALUMINIUM
2302682	I519Z300-038038	38	38 - DS	51	ALUMINIUM
2305089	I519Z300-038052	38	52 - C - DS	66	ALUMINIUM
2303000	I519Z300-045052	45	52 - C	66	ALUMINIUM
2301825	I519Z300-051052	51	52 - C - DS	66	ALUMINIUM
2306193	I519Z300-063075	63	75 - B - DS	89	ALUMINIUM
2301764	I519Z300-076075	76	75 - B - DS	89	ALUMINIUM
2302684	I519Z300-102100	102	100 - DS	115	ALUMINIUM
2305301	I519Z300-102110	102	110 - A - DS	133	ALUMINIUM
2300647	I519Z300-110110	110	110 - A-DS	133	ALUMINIUM
2306192	I519Z300-125125	127	125 - DS	148	ALUMINIUM
2306059	I519Z300-150150	152	150 - DS	160	ALUMINIUM

**STORZ**

**Male - Complete with seal**



Item Code	Part Number	Head DN mm	K mm	Thread type	Material
2306195	I5A9Z206-025027	25 - D - DS	31	G 3/4"	ALUMINIUM
2302714	I5A9Z206-025034	25 - D - DS	31	G 1"	ALUMINIUM
2302715	I5A9Z206-032042	32 - DS	44	G 1 1/4"	ALUMINIUM
2302716	I5A9Z206-038049	38 - DS	51	G 1 1/2"	ALUMINIUM
2305920	I5A9Z206-052034	52 - C - DS	66	G 1"	ALUMINIUM
2305922	I5A9Z206-052042	52 - C - DS	66	G 1 1/4"	ALUMINIUM
2305090	I5A9Z206-052049	52 - C - DS	66	G 1 1/2"	ALUMINIUM
2300208	I5A9Z206-052060	52 - C - DS	66	G 2"	ALUMINIUM
2305925	I5A9Z206-075076	75 - B - DS	89	G 2 1/2"	ALUMINIUM
2301743	I5A9Z206-075090	75 - B - DS	89	G 3"	ALUMINIUM
2302717	I5A9Z206-100114	100 - DS	115	G 4"	ALUMINIUM
2302718	I5A9Z206-110114	110 - A - DS	133	G 4"	ALUMINIUM

**STORZ**

**Female - Complete with seal**



Item Code	Part Number	Head DN mm	K mm	Thread type	Material
2306194	I5A9Z306-025021	25 - D - DS	31	G 1/2"	ALUMINIUM
2305918	I5A9Z306-025027	25 - D - DS	31	G 3/4"	ALUMINIUM
2305400	I5A9Z306-025034	25 - D - DS	31	G 1"	ALUMINIUM
2302719	I5A9Z306-032042	32 - DS	44	G 1 1/4"	ALUMINIUM
2301717	I5A9Z306-038060	38 - DS	51	G 2"	ALUMINIUM
2305919	I5A9Z306-052034	52 - C - DS	66	G 1"	ALUMINIUM
2305921	I5A9Z306-052042	52 - C - DS	66	G 1 1/4"	ALUMINIUM
2305086	I5A9Z306-052049	52 - C - DS	66	G 1 1/2"	ALUMINIUM
2302720	I5A9Z306-052060	52 - C - DS	66	G 2"	ALUMINIUM
2305923	I5A9Z306-052076	52 - C - DS	66	G 2 1/2"	ALUMINIUM
2305087	I5A9Z306-065076	65 - DS	81	G 2 1/2"	ALUMINIUM
2305403	I5A9Z306-075060	75 - B - DS	89	G 2"	ALUMINIUM
2305924	I5A9Z306-075076	75 - B - DS	89	G 2 1/2"	ALUMINIUM
2301688	I5A9Z306-075090	75 - B - DS	89	G 3"	ALUMINIUM
2302721	I5A9Z306-100114	100 - DS	115	G 4"	ALUMINIUM
2302722	I5A9Z306-110114	110 - A - DS	133	G 4"	ALUMINIUM
2306196	I5A9Z306-125140	125 - DS	148	G 5"	ALUMINIUM
2305404	I5A9Z306-150165	150 - DS	160	G 6"	ALUMINIUM

**STORZ**

**Reducer adapter - Complete with seal**



Item Code	Part Number	Head DN mm	K mm	Head DN mm	K mm	Material
2305091	I5A9Z19Z-075052	75 - B - DS	89	52 - C - DS	66	ALLUMINIUM
2305092	I5A9Z19Z-110075	110 - A - DS	133	75 - B - DS	89	ALLUMINIUM
2305927	I5A9Z19Z-052025	52 - C - DS	66	25 - D - DS	31	ALLUMINIUM
2305928	I5A9Z19Z-100075	100 - DS	115	75 - B - DS	89	ALLUMINIUM
2305929	I5A9Z19Z-110100	110 - A - DS	133	100 - DS	115	ALLUMINIUM

**STORZ**

**Blank cap with chain - Complete with seal**



Item Code	Part Number	Head DN mm	K mm	Material
2302723	I5A9Z400-025	25 - D - DS	31	ALUMINIUM
2302724	I5A9Z400-032	32 - DS	44	ALUMINIUM
2302725	I5A9Z400-038	38 - DS	51	ALUMINIUM
2302726	I5A9Z400-052	52 - C - DS	66	ALUMINIUM
2305088	I5A9Z400-065	65 - DS	81	ALUMINIUM
2301742	I5A9Z400-075	75 - B - DS	89	ALUMINIUM
2302727	I5A9Z400-100	100 - DS	115	ALUMINIUM
2302728	I5A9Z400-110	110 - A - DS	133	ALUMINIUM
2305399	I5A9Z400-150	150 - DS	160	ALUMINIUM





# TANKWAGEN

## FITTINGS

### TANKWAGEN EN 14 420-6 / DIN 28 450

Type VK - Male part with female thread .....	F.48
Type MK - Female part with female thread and locking handle.....	F.48
Type VB - Male plug .....	F.48
Type MB - Female Cup.....	F.49
Profiled seal for type MK.....	F.49
Flat seal for type MK and VK thread end .....	F.49
Flat seal for type MB .....	F.49



## TANKWAGEN EN 14 420-6 / DIN 28 450

Type VK - Male part with female Thread



Item Code	Part Number	Head DN in	Head DN mm	Thread in	Thread type	Material
2302636	I3A9T606-050060	2	50	2	BSP	S/S 316
2301815	I3A9T606-080090	3	80	3	BSP	S/S 316
2305915	I3A9T606-100114	4	100	4	BSP	S/S 316

Item Code	Part Number	Head DN in	Head DN mm	Thread in	Thread type	Material
2302803	I8A9T606-050060	2	50	2	BSP	BRASS
2302804	I8A9T606-080090	3	80	3	BSP	BRASS
2301395	I8A9T606-100114	4	100	4	BSP	BRASS

## TANKWAGEN EN 14 420-6 / DIN 28 450

Type MK - Female part with female Thread and locking handle



Item Code	Part Number	Head DN in	Head DN mm	Thread in	Thread type	Material
2302638	I3A9T806-050060	2	50	2	BSP	S/S 316
2302639	I3A9T806-080090	3	80	3	BSP	S/S 316
2305914	I3A9T806-100114	4	100	4	BSP	S/S 316

Item Code	Part Number	Head DN in	Head DN mm	Thread in	Thread type	Material
2302807	I8A9T806-050060	2	50	2	BSP	BRASS
2301827	I8A9T806-080090	3	80	3	BSP	BRASS
2301394	I8A9T806-100114	4	100	4	BSP	BRASS

## TANKWAGEN EN 14 420-6 / DIN 28 450

Type VB - Male plug



Item Code	Part Number	Head DN in	Head DN mm	Material
2306088	I5A9T700-050	2	50	ALUMINIUM
2305916	I5A9T700-080	3	80	ALUMINIUM
2306090	I5A9T700-100	4	100	ALUMINIUM

Item Code	Part Number	Head DN in	Head DN mm	Material
2302637	I3A9T700-050	2	50	S/S 316
2301537	I3A9T700-080	3	80	S/S 316
2306089	I3A9T700-100	4	100	S/S 316

Item Code	Part Number	Head DN in	Head DN mm	Material
2302805	I8A9T700-050	2	50	BRASS
2301828	I8A9T700-080	3	80	BRASS

Item Code	Part Number	Head DN in	Head DN mm	Material
2305368	IPA9T700-050	2	50	PP
2305369	IPA9T700-080	3	80	PP
2305370	IPA9T700-100	4	100	PP

**TANKWAGEN EN 14 420-6 / DIN 28 450**

Type MB - Female Cap



Item Code	Part Number	Head DN in	Head DN mm	Material
2305364	I5A9T900-050	2	50	ALUMINIUM
2305365	I5A9T900-080	3	80	ALUMINIUM
2305366	I5A9T900-100	4	100	ALUMINIUM

Item Code	Part Number	Head DN in	Head DN mm	Material
2302640	I3A9T900-050	2	50	S/S 316
2301538	I3A9T900-080	3	80	S/S 316
2302809	I3A9T900-100	4	100	S/S 316

Item Code	Part Number	Head DN in	Head DN mm	Material
2302808	I8A9T900-050	2	50	BRASS
2301829	I8A9T900-080	3	80	BRASS

**TANKWAGEN EN 14 420-6 / DIN 28 450**

Profiled Seal for type MK



Item Code	Part Number	Head DN in	Head DN mm	Material
2302860	IHJM9T-050	2	50	HYPALON
2302861	IHJM9T-080	3	80	HYPALON

Item Code	Part Number	Head DN in	Head DN mm	Material
2302876	INJM9T-050	2	50	NBR
2302877	INJM9T-080	3	80	NBR
2302878	INJM9T-100	4	100	NBR

Item Code	Part Number	Head DN in	Head DN mm	Material
2306843		2	50	PTFE
2304385		3	80	PTFE

**TANKWAGEN EN 14 420-6 / DIN 28 450**

Flat Seal for type MK and VK Thread end



Item Code	Part Number	Head DN in	Head DN mm	Material
2302886	ITJ09T-050	2	50	PTFE
2302887	ITJ09T-080	3	80	PTFE

**TANKWAGEN EN 14 420-6 / DIN 28 450**

Flat Seal for type MB



Item Code	Part Number	Head DN in	Head DN mm	Material
2302858	IHJ09T-050	2	50	HYPALON
2302859	IHJ09T-080	3	80	HYPALON

Item Code	Part Number	Head DN in	Head DN mm	Material
2302866	INJ09T-050	2	50	NBR
2302867	INJ09T-080	3	80	NBR
2302868	INJ09T-100	4	100	NBR

Item Code	Part Number	Head DN in	Head DN mm	Material
2304383		2	50	PU
2304386		3	80	PU
2304387		4	100	PU





# CAM & GROOVE

## FITTINGS

### CAM & GROOVE MIL A-A-59326A / MIL C - 27.487

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### CAM & GROOVE

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**CAM & GROOVE MIL A-A-59326A / MIL C - 27.487**

Type A - Adapter, female BSP



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303234	I5A9C606-013021	1/2	BSP	1/2	13	ALUMINIUM
2301830	I5A9C606-019027	3/4	BSP	3/4	19	ALUMINIUM
2300182	I5A9C606-025034	1	BSP	1	25	ALUMINIUM
2300183	I5A9C606-032042	1 1/4	BSP	1 1/4	32	ALUMINIUM
2301831	I5A9C606-038049	1 1/2	BSP	1 1/2	38	ALUMINIUM
2301832	I5A9C606-051060	2	BSP	2	51	ALUMINIUM
2301833	I5A9C606-063076	2 1/2	BSP	2 1/2	63	ALUMINIUM
2301834	I5A9C606-076090	3	BSP	3	76	ALUMINIUM
2301835	I5A9C606-102114	4	BSP	4	102	ALUMINIUM
2302706	I5A9C606-127140	5	BSP	5	127	ALUMINIUM
2301836	I5A9C606-152165	6	BSP	6	152	ALUMINIUM



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303236	I3A9C606-013021	1/2	BSP	1/2	13	S/S 316
2301837	I3A9C606-019027	3/4	BSP	3/4	19	S/S 316
2300148	I3A9C606-025034	1	BSP	1	25	S/S 316
2300149	I3A9C606-032042	1 1/4	BSP	1 1/4	32	S/S 316
2301838	I3A9C606-038049	1 1/2	BSP	1 1/2	38	S/S 316
2301839	I3A9C606-051060	2	BSP	2	51	S/S 316
2301840	I3A9C606-063076	2 1/2	BSP	2 1/2	63	S/S 316
2302602	I3A9C606-076090	3	BSP	3	76	S/S 316
2302603	I3A9C606-102114	4	BSP	4	102	S/S 316
2302604	I3A9C606-152165	6	BSP	6	152	S/S 316



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303235	I8A9C606-013021	1/2	BSP	1/2	13	BRASS
2301841	I8A9C606-019027	3/4	BSP	3/4	19	BRASS
2301842	I8A9C606-025034	1	BSP	1	25	BRASS
2302789	I8A9C606-032042	1 1/4	BSP	1 1/4	32	BRASS
2302790	I8A9C606-038049	1 1/2	BSP	1 1/2	38	BRASS
2301843	I8A9C606-051060	2	BSP	2	51	BRASS
2301844	I8A9C606-063076	2 1/2	BSP	2 1/2	63	BRASS
2301845	I8A9C606-076090	3	BSP	3	76	BRASS
2301846	I8A9C606-102114	4	BSP	4	102	BRASS



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303259	IPA9C606-013021	1/2	BSP	1/2	13	PP
2303260	IPA9C606-019027	3/4	BSP	3/4	19	PP
2303261	IPA9C606-025034	1	BSP	1	25	PP
2303262	IPA9C606-032042	1 1/4	BSP	1 1/4	32	PP
2303263	IPA9C606-038049	1 1/2	BSP	1 1/2	38	PP
2303264	IPA9C606-051060	2	BSP	2	51	PP
2303266	IPA9C606-076090	3	BSP	3	76	PP
2303267	IPA9C606-102114	4	BSP	4	102	PP

hose

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appendix

**CAM & GROOVE MIL A-A-59326A / MIL C - 27.487**

**Type A - Adapter, female NPT**

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303469	I5A9C628-013021	1/2	NPT	1/2	13	ALUMINIUM
2303470	I5A9C628-019027	3/4	NPT	3/4	19	ALUMINIUM
2303471	I5A9C628-025034	1	NPT	1	25	ALUMINIUM
2303472	I5A9C628-032042	1 1/4	NPT	1 1/4	32	ALUMINIUM
2303473	I5A9C628-038049	1 1/2	NPT	1 1/2	38	ALUMINIUM
2303474	I5A9C628-051060	2	NPT	2	51	ALUMINIUM
2303475	I5A9C628-063076	2 1/2	NPT	2 1/2	63	ALUMINIUM
2303476	I5A9C628-076090	3	NPT	3	76	ALUMINIUM
2303477	I5A9C628-102114	4	NPT	4	102	ALUMINIUM
2303478	I5A9C628-127140	5	NPT	5	127	ALUMINIUM
2303479	I5A9C628-152165	6	NPT	6	152	ALUMINIUM
2303480	I5A9C628-203219	8	NPT	8	203	ALUMINIUM

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303492	I3A9C628-013021	1/2	NPT	1/2	13	S/S 316
2303493	I3A9C628-019027	3/4	NPT	3/4	19	S/S 316
2303494	I3A9C628-025034	1	NPT	1	25	S/S 316
2303495	I3A9C628-032042	1 1/4	NPT	1 1/4	32	S/S 316
2303496	I3A9C628-038049	1 1/2	NPT	1 1/2	38	S/S 316
2303497	I3A9C628-051060	2	NPT	2	51	S/S 316
2303498	I3A9C628-063076	2 1/2	NPT	2 1/2	63	S/S 316
2303499	I3A9C628-076090	3	NPT	3	76	S/S 316
2303500	I3A9C628-102114	4	NPT	4	102	S/S 316
2303501	I3A9C628-127140	5	NPT	5	127	S/S 316
2303502	I3A9C628-152165	6	NPT	6	152	S/S 316
2303503	I3A9C628-203219	8	NPT	8	203	S/S 316

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303481	I8A9C628-013021	1/2	NPT	1/2	13	BRASS
2303482	I8A9C628-019027	3/4	NPT	3/4	19	BRASS
2303483	I8A9C628-025034	1	NPT	1	25	BRASS
2303484	I8A9C628-032042	1 1/4	NPT	1 1/4	32	BRASS
2303485	I8A9C628-038049	1 1/2	NPT	1 1/2	38	BRASS
2303486	I8A9C628-051060	2	NPT	2	51	BRASS
2303487	I8A9C628-063076	2 1/2	NPT	2 1/2	63	BRASS
2303488	I8A9C628-076090	3	NPT	3	76	BRASS
2303489	I8A9C628-102114	4	NPT	4	102	BRASS
2303490	I8A9C628-127140	5	NPT	5	127	BRASS
2303491	I8A9C628-152165	6	NPT	6	152	BRASS

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303504	IPA9C628-013021	1/2	NPT	1/2	13	PP
2303505	IPA9C628-019027	3/4	NPT	3/4	19	PP
2303506	IPA9C628-025034	1	NPT	1	25	PP
2303507	IPA9C628-032042	1 1/4	NPT	1 1/4	32	PP
2303508	IPA9C628-038049	1 1/2	NPT	1 1/2	38	PP
2303509	IPA9C628-051060	2	NPT	2	51	PP
2303511	IPA9C628-076090	3	NPT	3	76	PP
2303512	IPA9C628-102114	4	NPT	4	102	PP

## CAM & GROOVE MIL A-A-59326A / MIL C - 27.487

### Type B - Coupler, male BSPT



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303239	I5A9C007-013021	1/2	BSPT	1/2	13	ALUMINIUM
2301847	I5A9C007-019027	3/4	BSPT	3/4	19	ALUMINIUM
2301848	I5A9C007-025034	1	BSPT	1	25	ALUMINIUM
2301849	I5A9C007-032042	1 1/4	BSPT	1 1/4	32	ALUMINIUM
2301850	I5A9C007-038049	1 1/2	BSPT	1 1/2	38	ALUMINIUM
2301851	I5A9C007-051060	2	BSPT	2	51	ALUMINIUM
2301852	I5A9C007-063076	2 1/2	BSPT	2 1/2	63	ALUMINIUM
2301853	I5A9C007-076090	3	BSPT	3	76	ALUMINIUM
2302699	I5A9C007-102114	4	BSPT	4	102	ALUMINIUM
2302700	I5A9C007-127140	5	BSPT	5	127	ALUMINIUM
2302701	I5A9C007-152165	6	BSPT	6	152	ALUMINIUM



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303241	I3A9C007-013021	1/2	BSPT	1/2	13	S/S 316
2301765	I3A9C007-019027	3/4	BSPT	3/4	19	S/S 316
2301854	I3A9C007-025034	1	BSPT	1	25	S/S 316
2302593	I3A9C007-032042	1 1/4	BSPT	1 1/4	32	S/S 316
2301855	I3A9C007-038049	1 1/2	BSPT	1 1/2	38	S/S 316
2301856	I3A9C007-051060	2	BSPT	2	51	S/S 316
2302594	I3A9C007-063076	2 1/2	BSPT	2 1/2	63	S/S 316
2302595	I3A9C007-076090	3	BSPT	3	76	S/S 316
2302596	I3A9C007-102114	4	BSPT	4	102	S/S 316
2302597	I3A9C007-152165	6	BSPP	6	152	S/S 316



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303240	I8A9C007-013021	1/2	BSPT	1/2	13	BRASS
2302779	I8A9C007-019027	3/4	BSPP	3/4	19	BRASS
2302780	I8A9C007-025034	1	BSPT	1	25	BRASS
2301857	I8A9C007-032042	1 1/4	BSPT	1 1/4	32	BRASS
2301858	I8A9C007-038049	1 1/2	BSPT	1 1/2	38	BRASS
2302781	I8A9C007-051060	2	BSPT	2	51	BRASS
2302782	I8A9C007-063076	2 1/2	BSPT	2 1/2	63	BRASS
2302783	I8A9C007-076090	3	BSPT	3	76	BRASS
2302784	I8A9C007-102114	4	BSPT	4	102	BRASS



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303268	IPA9C007-013021	1/2	BSPP	1/2	13	PP
2303269	IPA9C007-019027	3/4	BSPT	3/4	19	PP
2303270	IPA9C007-025034	1	BSPT	1	25	PP
2303271	IPA9C007-032042	1 1/4	BSPT	1 1/4	32	PP
2303272	IPA9C007-038049	1 1/2	BSPT	1 1/2	38	PP
2303273	IPA9C007-051060	2	BSPT	2	51	PP
2303275	IPA9C007-076090	3	BSPT	3	76	PP
2303276	IPA9C007-102114	4	BSPT	4	102	PP

**CAM & GROOVE MIL A-A-59326A / MIL C - 27.487**

**Type B - Coupler, male NPT**

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303522	I5A9C028-013021	1/2	NPT	1/2	13	ALUMINIUM
2303523	I5A9C028-019027	3/4	NPT	3/4	19	ALUMINIUM
2303524	I5A9C028-025034	1	NPT	1	25	ALUMINIUM
2303525	I5A9C028-032042	1 1/4	NPT	1 1/4	32	ALUMINIUM
2303526	I5A9C028-038049	1 1/2	NPT	1 1/2	38	ALUMINIUM
2303527	I5A9C028-051060	2	NPT	2	51	ALUMINIUM
2303528	I5A9C028-063076	2 1/2	NPT	2 1/2	63	ALUMINIUM
2303529	I5A9C028-076090	3	NPT	3	76	ALUMINIUM
2303530	I5A9C028-102114	4	NPT	4	102	ALUMINIUM
2303531	I5A9C028-127140	5	NPT	5	127	ALUMINIUM
2303532	I5A9C028-152165	6	NPT	6	152	ALUMINIUM

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303544	I3A9C028-013021	1/2	NPT	1/2	13	S/S 316
2303545	I3A9C028-019027	3/4	NPT	3/4	19	S/S 316
2303546	I3A9C028-025034	1	NPT	1	25	S/S 316
2303547	I3A9C028-032042	1 1/4	NPT	1 1/4	32	S/S 316
2303548	I3A9C028-038049	1 1/2	NPT	1 1/2	38	S/S 316
2303549	I3A9C028-051060	2	NPT	2	51	S/S 316
2303550	I3A9C028-063076	2 1/2	NPT	2 1/2	63	S/S 316
2303551	I3A9C028-076090	3	NPT	3	76	S/S 316
2303552	I3A9C028-102114	4	NPT	4	102	S/S 316
2303553	I3A9C028-127140	5	NPT	5	127	S/S 316
2303554	I3A9C028-152165	6	NPT	6	152	S/S 316

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303533	I8A9C028-013021	1/2	NPT	1/2	13	BRASS
2303534	I8A9C028-019027	3/4	NPT	3/4	19	BRASS
2303535	I8A9C028-025034	1	NPT	1	25	BRASS
2303536	I8A9C028-032042	1 1/4	NPT	1 1/4	32	BRASS
2303537	I8A9C028-038049	1 1/2	NPT	1 1/2	38	BRASS
2303538	I8A9C028-051060	2	NPT	2	51	BRASS
2303539	I8A9C028-063076	2 1/2	NPT	2 1/2	63	BRASS
2303540	I8A9C028-076090	3	NPT	3	76	BRASS
2303541	I8A9C028-102114	4	NPT	4	102	BRASS
2303542	I8A9C028-127140	5	NPT	5	127	BRASS
2303543	I8A9C028-152165	6	NPT	6	152	BRASS

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303555	IPA9C028-013021	1/2	NPT	1/2	13	PP
2303556	IPA9C028-019027	3/4	NPT	3/4	19	PP
2303557	IPA9C028-025034	1	NPT	1	25	PP
2303558	IPA9C028-032042	1 1/4	NPT	1 1/4	32	PP
2303559	IPA9C028-038049	1 1/2	NPT	1 1/2	38	PP
2303560	IPA9C028-051060	2	NPT	2	51	PP
2303561	IPA9C028-063076	2 1/2	NPT	2 1/2	63	PP
2303562	IPA9C028-076090	3	NPT	3	76	PP
2303563	IPA9C028-102114	4	NPT	4	102	PP



## CAM & GROOVE MIL A-A-59326A / MIL C - 27.487

Type C - Coupler, hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2303242	I519C200-013013	1/2	13	1/2	13	ALUMINIUM
2301859	I519C200-019019	3/4	19	3/4	19	ALUMINIUM
2300640	I519C200-025025	1	25	1	25	ALUMINIUM
2300641	I519C200-032032	1 1/4	32	1 1/4	32	ALUMINIUM
2301860	I519C200-038038	1 1/2	38	1 1/2	38	ALUMINIUM
2301861	I519C200-051051	2	51	2	51	ALUMINIUM
2301862	I519C200-063063	2 1/2	63	2 1/2	63	ALUMINIUM
2301863	I519C200-076076	3	76	3	76	ALUMINIUM
2301864	I519C200-102102	4	102	4	102	ALUMINIUM
2302679	I519C200-127127	5	127	5	127	ALUMINIUM
2301865	I519C200-152152	6	152	6	152	ALUMINIUM
2303584	I569C200-203203	8	203	8	203	ALUMINIUM



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2303244	I319C200-013013	1/2	13	1/2	13	S/S 316
2301866	I319C200-019019	3/4	19	3/4	19	S/S 316
2300620	I319C200-025025	1	25	1	25	S/S 316
2300621	I319C200-032032	1 1/4	32	1 1/4	32	S/S 316
2301867	I319C200-038038	1 1/2	38	1 1/2	38	S/S 316
2302448	I319C200-051051	2	51	2	51	S/S 316
2301868	I319C200-063063	2 1/2	63	2 1/2	63	S/S 316
2301869	I319C200-076076	3	76	3	76	S/S 316
2301870	I319C200-102102	4	102	4	102	S/S 316
2303605	I319C200-127127	5	127	5	127	S/S 316
2302449	I319C200-152152	6	152	6	152	S/S 316



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2303243	I819C200-013013	1/2	13	1/2	13	BRASS
2301871	I819C200-019019	3/4	19	3/4	19	BRASS
2302759	I819C200-025025	1	25	1	25	BRASS
2302760	I819C200-032032	1 1/4	32	1 1/4	32	BRASS
2301872	I819C200-038038	1 1/2	38	1 1/2	38	BRASS
2301750	I819C200-051051	2	51	2	51	BRASS
2301873	I819C200-063063	2 1/2	63	2 1/2	63	BRASS
2301874	I819C200-076076	3	76	3	76	BRASS
2301875	I819C200-102102	4	102	4	102	BRASS
2303594	I819C200-127127	5	127	5	127	BRASS



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2303277	IP19C200-013013	1/2	13	1/2	13	PP
2303278	IP19C200-019019	3/4	19	3/4	19	PP
2303279	IP19C200-025025	1	25	1	25	PP
2303280	IP19C200-032032	1 1/4	32	1 1/4	32	PP
2303281	IP19C200-038038	1 1/2	38	1 1/2	38	PP
2303282	IP19C200-051051	2	51	2	51	PP
2303284	IP19C200-076076	3	76	3	76	PP
2303285	IP19C200-102102	4	102	4	102	PP

hose

fittings

appendix

**CAM & GROOVE MIL A-A-59326A / MIL C - 27.487**

**Type D - Coupler, female BSP**



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303245	I5A9C806-013021	1/2	BSP	1/2	13	ALUMINIUM
2301876	I5A9C806-019027	3/4	BSP	3/4	19	ALUMINIUM
2300193	I5A9C806-025034	1	BSP	1	25	ALUMINIUM
2300194	I5A9C806-032042	1 1/4	BSP	1 1/4	32	ALUMINIUM
2301877	I5A9C806-038049	1 1/2	BSP	1 1/2	38	ALUMINIUM
2301878	I5A9C806-051060	2	BSP	2	51	ALUMINIUM
2301879	I5A9C806-063076	2 1/2	BSP	2 1/2	63	ALUMINIUM
2301880	I5A9C806-076090	3	BSP	3	76	ALUMINIUM
2301881	I5A9C806-102114	4	BSP	4	102	ALUMINIUM
2302711	I5A9C806-127140	5	BSP	5	127	ALUMINIUM
2301882	I5A9C806-152165	6	BSP	6	152	ALUMINIUM



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303247	I3A9C806-013021	1/2	BSP	1/2	13	S/S 316
2301883	I3A9C806-019027	3/4	BSP	3/4	19	S/S 316
2300155	I3A9C806-025034	1	BSP	1	25	S/S 316
2300156	I3A9C806-032042	1 1/4	BSP	1 1/4	32	S/S 316
2301884	I3A9C806-038049	1 1/2	BSP	1 1/2	38	S/S 316
2301885	I3A9C806-051060	2	BSP	2	51	S/S 316
2301886	I3A9C806-063076	2 1/2	BSP	2 1/2	63	S/S 316
2301887	I3A9C806-076090	3	BSP	3	76	S/S 316
2302224	I3A9C806-102114	4	BSP	4	102	S/S 316
2302611	I3A9C806-152165	6	BSP	6	152	S/S 316



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2304806	I8A9C806-013021	1/2	BSP	1/2	13	BRASS
2301888	I8A9C806-019027	3/4	BSP	3/4	19	BRASS
2301889	I8A9C806-025034	1	BSP	1	25	BRASS
2301890	I8A9C806-032042	1 1/4	BSP	1 1/4	32	BRASS
2301891	I8A9C806-038049	1 1/2	BSP	1 1/2	38	BRASS
2301892	I8A9C806-051060	2	BSP	2	51	BRASS
2301893	I8A9C806-063076	2 1/2	BSP	2 1/2	63	BRASS
2301894	I8A9C806-076090	3	BSP	3	76	BRASS
2301895	I8A9C806-102114	4	BSP	4	102	BRASS



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303286	IPA9C806-013021	1/2	BSP	1/2	13	PP
2303287	IPA9C806-019027	1/4	BSP	1/4	19	PP
2303288	IPA9C806-025034	1	BSP	1	25	PP
2303289	IPA9C806-032042	1 1/4	BSP	1 1/4	32	PP
2303290	IPA9C806-038049	1 1/2	BSP	1 1/2	38	PP
2303291	IPA9C806-051060	2	BSP	2	51	PP
2303293	IPA9C806-076090	3	BSP	3	76	PP
2303294	IPA9C806-102114	4	BSP	4	102	PP

**CAM & GROOVE MIL A-A-59326A / MIL C - 27.487**

Type D - Coupler, female NPT

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303626	I5A9C828-013021	1/2	NPT	1/2	13	ALUMINIUM
2303627	I5A9C828-019027	3/4	NPT	3/4	19	ALUMINIUM
2303628	I5A9C828-025034	1	NPT	1	25	ALUMINIUM
2303629	I5A9C828-032042	1 1/4	NPT	1 1/4	32	ALUMINIUM
2303630	I5A9C828-038049	1 1/2	NPT	1 1/2	38	ALUMINIUM
2303631	I5A9C828-051060	2	NPT	2	51	ALUMINIUM
2303632	I5A9C828-063076	2 1/2	NPT	2 1/2	63	ALUMINIUM
2303633	I5A9C828-076090	3	NPT	3	76	ALUMINIUM
2303634	I5A9C828-102114	4	NPT	4	102	ALUMINIUM
2303635	I5A9C828-127140	5	NPT	5	127	ALUMINIUM
2303636	I5A9C828-152165	6	NPT	6	152	ALUMINIUM
2303637	I5A9C828-203219	8	NPT	8	203	ALUMINIUM

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303649	I3A9C828-013021	1/2	NPT	1/2	13	S/S 316
2303650	I3A9C828-019027	3/4	NPT	3/4	19	S/S 316
2303651	I3A9C828-025034	1	NPT	1	25	S/S 316
2303652	I3A9C828-032042	1 1/4	NPT	1 1/4	32	S/S 316
2303653	I3A9C828-038049	1 1/2	NPT	1 1/2	38	S/S 316
2303654	I3A9C828-051060	2	NPT	2	51	S/S 316
2303655	I3A9C828-063076	2 1/2	NPT	2 1/2	63	S/S 316
2303656	I3A9C828-076090	3	NPT	3	76	S/S 316
2303657	I3A9C828-102114	4	NPT	4	102	S/S 316
2303658	I3A9C828-127140	5	NPT	5	127	S/S 316
2303659	I3A9C828-152165	6	NPT	6	152	S/S 316

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303638	I8A9C828-013021	1/2	NPT	1/2	13	BRASS
2303639	I8A9C828-019027	3/4	NPT	3/4	19	BRASS
2303640	I8A9C828-025034	1	NPT	1	25	BRASS
2303641	I8A9C828-032042	1 1/4	NPT	1 1/4	32	BRASS
2303642	I8A9C828-038049	1 1/2	NPT	1 1/2	38	BRASS
2303643	I8A9C828-051060	2	NPT	2	51	BRASS
2303644	I8A9C828-063076	2 1/2	NPT	2 1/2	63	BRASS
2303645	I8A9C828-076090	3	NPT	3	76	BRASS
2303646	I8A9C828-102114	4	NPT	4	102	BRASS
2303647	I8A9C828-127140	5	NPT	5	127	BRASS
2303648	I8A9C828-152165	6	NPT	6	152	BRASS

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303660	IPA9C828-013021	1/2	NPT	1/2	13	PP
2303661	IPA9C828-019027	1/4	NPT	1/4	19	PP
2303662	IPA9C828-025034	1	NPT	1	25	PP
2303663	IPA9C828-032042	1 1/4	NPT	1 1/4	32	PP
2303664	IPA9C828-038049	1 1/2	NPT	1 1/2	38	PP
2303665	IPA9C828-051060	2	NPT	2	51	PP
2303667	IPA9C828-076090	3	NPT	3	76	PP
2303668	IPA9C828-102114	4	NPT	4	102	PP

**CAM & GROOVE MIL A-A-59326A / MIL C - 27.487**

Type E - Adapter, hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2303248	I519C100-013013	1/2	13	1/2	13	ALUMINIUM
2302675	I519C100-019019	3/4	19	3/4	19	ALUMINIUM
2300633	I519C100-025025	1	25	1	25	ALUMINIUM
2301736	I519C100-032032	1 1/4	32	1 1/4	32	ALUMINIUM
2301915	I519C100-038038	1 1/2	38	1 1/2	38	ALUMINIUM
2301916	I519C100-051051	2	51	2	51	ALUMINIUM
2302676	I519C100-063063	2 1/2	63	2 1/2	63	ALUMINIUM
2301918	I519C100-076076	3	76	3	76	ALUMINIUM
2302677	I519C100-102102	4	102	4	102	ALUMINIUM
2302678	I519C100-127127	5	127	5	127	ALUMINIUM
2301920	I519C100-152152	6	152	6	152	ALUMINIUM
2303679	I519C100-203203	8	203	8	203	ALUMINIUM



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2303250	I319C100-013013	1/2	13	1/2	13	S/S 316
2301927	I319C100-019019	3/4	19	3/4	19	S/S 316
2300618	I319C100-025025	1	25	1	25	S/S 316
2301929	I319C100-032032	1 1/4	32	1 1/4	32	S/S 316
2302443	I319C100-038038	1 1/2	38	1 1/2	28	S/S 316
2302444	I319C100-051051	2	51	2	51	S/S 316
2302445	I319C100-063063	2 1/2	63	2 1/2	63	S/S 316
2301931	I319C100-076076	3	76	3	76	S/S 316
2302446	I319C100-102102	4	102	4	102	S/S 316
2303683	I319C100-127127	5	127	5	127	S/S 316
2302447	I319C100-152152	6	152	6	152	S/S 316



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2303249	I819C100-013013	1/2	13	1/2	13	BRASS
2302756	I819C100-019019	3/4	19	3/4	19	BRASS
2302757	I819C100-025025	1	25	1	25	BRASS
2301943	I819C100-032032	1 1/4	32	1 1/4	32	BRASS
2301944	I819C100-038038	1 1/2	38	1 1/2	38	BRASS
2301749	I819C100-051051	2	51	2	51	BRASS
2301945	I819C100-063063	2 1/2	63	2 1/2	63	BRASS
2301946	I819C100-076076	3	76	3	76	BRASS
2301947	I819C100-102102	4	102	4	102	BRASS
2303681	I819C100-127127	5	127	5	127	BRASS
2302758	I819C100-152152	6	152	6	152	BRASS



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2303295	IP19C100-013013	1/2	13	1/2	13	PP
2303296	IP19C100-019019	3/4	19	3/4	19	PP
2303297	IP19C100-025025	1	25	1	25	PP
2303298	IP19C100-032032	1 1/4	32	1 1/4	32	PP
2303299	IP19C100-038038	1 1/2	38	1 1/2	38	PP
2303300	IP19C100-051051	2	51	2	51	PP
2303302	IP19C100-076076	3	76	3	76	PP
2303303	IP19C100-102102	4	102	4	102	PP

## CAM & GROOVE MIL A-A-59326A / MIL C - 27.487

### Type F - Adapter, male BSPT



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303251	I5A9C507-013021	1/2	BSPT	1/2	13	ALUMINIUM
2301948	I5A9C507-019027	3/4	BSPT	3/4	19	ALUMINIUM
2301949	I5A9C507-025034	1	BSPT	1	25	ALUMINIUM
2301950	I5A9C507-032042	1 1/4	BSPT	1 1/4	32	ALUMINIUM
2301951	I5A9C507-038049	1 1/2	BSPT	1 1/2	38	ALUMINIUM
2301952	I5A9C507-051060	2	BSPT	2	51	ALUMINIUM
2301953	I5A9C507-063076	2 1/2	BSPT	2 1/2	63	ALUMINIUM
2301954	I5A9C507-076090	3	BSPT	3	76	ALUMINIUM
2301955	I5A9C507-102114	4	BSPT	4	102	ALUMINIUM
2302703	I5A9C507-127140	5	BSPT	5	127	ALUMINIUM
2302704	I5A9C507-152165	6	BSPT	6	152	ALUMINIUM



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303253	I3A9C507-013021	1/2	BSPT	1/2	13	S/S 316
2301956	I3A9C507-019027	3/4	BSPT	3/4	19	S/S 316
2301957	I3A9C507-025034	1	BSPT	1	25	S/S 316
2301958	I3A9C507-032042	1 1/4	BSPT	1 1/4	32	S/S 316
2302598	I3A9C507-038049	1 1/2	BSPT	1 1/2	38	S/S 316
2301960	I3A9C507-051060	2	BSPT	2	51	S/S 316
2301961	I3A9C507-063076	2 1/2	BSPT	2 1/2	63	S/S 316
2302599	I3A9C507-076090	3	BSPT	3	76	S/S 316
2302600	I3A9C507-102114	4	BSPT	4	102	S/S 316
2302601	I3A9C507-152165	6	BSPT	6	152	S/S 316



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303252	I8A9C507-013021	1/2	BSPT	1/2	13	BRASS
2302785	I8A9C507-019027	3/4	BSPT	3/4	19	BRASS
2302786	I8A9C507-025034	1	BSPT	1	25	BRASS
2302787	I8A9C507-032042	1 1/4	BSPT	1 1/4	32	BRASS
2301962	I8A9C507-038049	1 1/2	BSPT	1 1/2	38	BRASS
2301963	I8A9C507-051060	2	BSPT	2	51	BRASS
2301964	I8A9C507-063076	2 1/2	BSPT	2 1/2	63	BRASS
2301965	I8A9C507-076090	3	BSPT	3	76	BRASS
2302788	I8A9C507-102114	4	BSPT	4	102	BRASS



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303304	IPA9C507-013021	1/2	BSPT	1/2	13	PP
2303305	IPA9C507-019027	3/4	BSPT	3/4	19	PP
2303306	IPA9C507-025034	1	BSPT	1	25	PP
2303307	IPA9C507-032042	1 1/4	BSPT	1 1/4	32	PP
2303308	IPA9C507-038049	1 1/2	BSPT	1 1/2	38	PP
2303309	IPA9C507-051060	2	BSPT	2	51	PP
2303311	IPA9C507-076090	3	BSPT	3	76	PP
2303312	IPA9C507-102114	4	BSPT	4	102	PP

**CAM & GROOVE MIL A-A-59326A / MIL C - 27.487**

**Type F - Adapter, male NPT**

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303702	I5A9C528-013021	1/2	NPT	1/2	13	ALUMINIUM
2303703	I5A9C528-019027	3/4	NPT	3/4	19	ALUMINIUM
2303704	I5A9C528-025034	1	NPT	1	25	ALUMINIUM
2303705	I5A9C528-032042	1 1/4	NPT	1 1/4	32	ALUMINIUM
2303706	I5A9C528-038049	1 1/2	NPT	1 1/2	38	ALUMINIUM
2303707	I5A9C528-051060	2	NPT	2	51	ALUMINIUM
2303708	I5A9C528-063076	2 1/2	NPT	2 1/2	63	ALUMINIUM
2303709	I5A9C528-076090	3	NPT	3	76	ALUMINIUM
2303710	I5A9C528-102114	4	NPT	4	102	ALUMINIUM
2303711	I5A9C528-127140	5	NPT	5	127	ALUMINIUM
2303712	I5A9C528-152165	6	NPT	6	152	ALUMINIUM
2303713	I5A9C528-203219	8	NPT	8	203	ALUMINIUM

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303725	I3A9C528-013021	1/2	NPT	1/2	13	S/S 316
2303726	I3A9C528-019027	3/4	NPT	3/4	19	S/S 316
2303727	I3A9C528-025034	1	NPT	1	25	S/S 316
2303728	I3A9C528-032042	1 1/4	NPT	1 1/4	32	S/S 316
2303729	I3A9C528-038049	1 1/2	NPT	1 1/2	38	S/S 316
2303730	I3A9C528-051060	2	NPT	2	51	S/S 316
2303731	I3A9C528-063076	2 1/2	NPT	2 1/2	63	S/S 316
2303732	I3A9C528-076090	3	NPT	3	76	S/S 316
2303733	I3A9C528-102114	4	NPT	4	102	S/S 316
2303734	I3A9C528-127140	5	NPT	5	127	S/S 316
2303735	I3A9C528-152165	6	NPT	6	152	S/S 316

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303714	I8A9C528-013021	1/2	NPT	1/2	13	BRASS
2303715	I8A9C528-019027	3/4	NPT	3/4	19	BRASS
2303716	I8A9C528-025034	1	NPT	1	25	BRASS
2303717	I8A9C528-032042	1 1/4	NPT	1 1/4	32	BRASS
2303718	I8A9C528-038049	1 1/2	NPT	1 1/2	38	BRASS
2303719	I8A9C528-051060	2	NPT	2	51	BRASS
2303720	I8A9C528-063076	2 1/2	NPT	2 1/2	63	BRASS
2303721	I8A9C528-076090	3	NPT	3	76	BRASS
2303722	I8A9C528-102114	4	NPT	4	102	BRASS
2303723	I8A9C528-127140	5	NPT	5	127	BRASS
2303724	I8A9C528-152165	6	NPT	6	152	BRASS

NA



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2303736	IPA9C528-013021	1/2	NPT	1/2	13	PP
2303737	IPA9C528-019027	3/4	NPT	3/4	19	PP
2303738	IPA9C528-025034	1	NPT	1	25	PP
2303739	IPA9C528-032042	1 1/4	NPT	1 1/4	32	PP
2303740	IPA9C528-038049	1 1/2	NPT	1 1/2	38	PP
2303741	IPA9C528-051060	2	NPT	2	51	PP
2303743	IPA9C528-076090	3	NPT	3	76	PP
2303744	IPA9C528-102114	4	NPT	4	102	PP

## CAM & GROOVE MIL A-A-59326A / MIL C - 27.487

Type DC - Female dust cap for adapter



Item Code	Part Number	Head DN in	Head DN mm	Material
2303254	I5A9C900-013	1/2	13	ALUMINIUM
2301967	I5A9C900-019	3/4	19	ALUMINIUM
2300200	I5A9C900-025	1	25	ALUMINIUM
2300201	I5A9C900-032	1 1/4	32	ALUMINIUM
2301968	I5A9C900-038	1 1/2	38	ALUMINIUM
2301969	I5A9C900-051	2	51	ALUMINIUM
2301970	I5A9C900-063	2 1/2	63	ALUMINIUM
2301971	I5A9C900-076	3	76	ALUMINIUM
2301972	I5A9C900-102	4	102	ALUMINIUM
2302712	I5A9C900-127	5	127	ALUMINIUM
2302713	I5A9C900-152	6	152	ALUMINIUM
2303756	I5A9C900-203	8	203	ALUMINIUM



Item Code	Part Number	Head DN in	Head DN mm	Material
2303256	I3A9C900-013	1/2	13	S/S 316
2301973	I3A9C900-019	3/4	19	S/S 316
2301546	I3A9C900-025	1	25	S/S 316
2302612	I3A9C900-032	1 1/4	32	S/S 316
2302613	I3A9C900-038	1 1/2	38	S/S 316
2302225	I3A9C900-051	2	51	S/S 316
2302614	I3A9C900-063	2 1/2	63	S/S 316
2302615	I3A9C900-076	3	76	S/S 316
2302616	I3A9C900-102	4	102	S/S 316
2303761	I3A9C900-127	5	127	S/S 316
2302617	I3A9C900-152	6	152	S/S 316



Item Code	Part Number	Head DN in	Head DN mm	Material
2303255	I8A9C900-013	1/2	13	BRASS
2302797	I8A9C900-019	3/4	19	BRASS
2302798	I8A9C900-025	1	25	BRASS
2302799	I8A9C900-032	1 1/4	32	BRASS
2302800	I8A9C900-038	1 1/2	38	BRASS
2302226	I8A9C900-051	2	51	BRASS
2302801	I8A9C900-063	2 1/2	63	BRASS
2302227	I8A9C900-076	3	76	BRASS
2302802	I8A9C900-102	4	102	BRASS
2303758	I8A9C900-127	5	127	BRASS
2303759	I8A9C900-152	6	152	BRASS



Item Code	Part Number	Head DN in	Head DN mm	Material
2303313	IPA9C900-013	1/2	13	PP
2303314	IPA9C900-019	3/4	19	PP
2303315	IPA9C900-025	1	25	PP
2303316	IPA9C900-032	1 1/4	32	PP
2303317	IPA9C900-038	1 1/2	38	PP
2303318	IPA9C900-051	2	51	PP
2303320	IPA9C900-076	3	76	PP
2303321	IPA9C900-102	4	102	PP

**CAM & GROOVE MIL A-A-59326A / MIL C - 27.487**

Type DP - Male dust plug for coupler



Item Code	Part Number	Head DN in	Head DN mm	Material
2303257	I5A9C700-013	1/2	13	ALUMINIUM
2301979	I5A9C700-019	3/4	19	ALUMINIUM
2300967	I5A9C700-025	1	25	ALUMINIUM
2302707	I5A9C700-032	1 1/4	32	ALUMINIUM
2301982	I5A9C700-038	1 1/2	38	ALUMINIUM
2301983	I5A9C700-051	2	51	ALUMINIUM
2301985	I5A9C700-063	2 1/2	63	ALUMINIUM
2301986	I5A9C700-076	3	76	ALUMINIUM
2302708	I5A9C700-102	4	102	ALUMINIUM
2302709	I5A9C700-127	5	127	ALUMINIUM
2301988	I5A9C700-152	6	152	ALUMINIUM



Item Code	Part Number	Head DN in	Head DN mm	Material
2303237	I3A9C700-013	1/2	13	S/S 316
2302605	I3A9C700-019	3/4	19	S/S 316
2302606	I3A9C700-025	1	25	S/S 316
2302607	I3A9C700-032	1 1/4	32	S/S 316
2301746	I3A9C700-038	1 1/2	38	S/S 316
2302608	I3A9C700-051	2	51	S/S 316
2301989	I3A9C700-063	2 1/2	63	S/S 316
2301747	I3A9C700-076	3	76	S/S 316
2302609	I3A9C700-102	4	102	S/S 316
2302610	I3A9C700-152	6	152	S/S 316



Item Code	Part Number	Head DN in	Head DN mm	Material
2303258	I8A9C700-013	1/2	13	BRASS
2302792	I8A9C700-019	3/4	19	BRASS
2302793	I8A9C700-025	1	25	BRASS
2302794	I8A9C700-032	1 1/4	32	BRASS
2302795	I8A9C700-038	1 1/2	38	BRASS
2302228	I8A9C700-051	2	51	BRASS
2302229	I8A9C700-063	2 1/2	63	BRASS
2302230	I8A9C700-076	3	76	BRASS
2302231	I8A9C700-102	4	102	BRASS
2302796	I8A9C700-127	5	127	BRASS
2303782	I8A9C700-152	6	152	BRASS



Item Code	Part Number	Head DN in	Head DN mm	Material
2303322	IPA9C700-013	1/2	13	PP
2303323	IPA9C700-019	3/4	19	PP
2303324	IPA9C700-025	1	25	PP
2303325	IPA9C700-032	1 1/4	32	PP
2303326	IPA9C700-038	1 1/2	38	PP
2303327	IPA9C700-051	2	51	PP
2303329	IPA9C700-076	3	76	PP
2303330	IPA9C700-102	4	102	PP



**CAM & GROOVE EN 14 420-7 / DIN 2828**

Type AF - Adapter, female BSP - PTFE Seal



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2306724	I3A9G606-013021	1/2	BSP	1/2	13	S/S 316
2302618	I3A9G606-020027	3/4	BSP	3/4	20	S/S 316
2302619	I3A9G606-025034	1	BSP	1	25	S/S 316
2302620	I3A9G606-032042	1 1/4	BSP	1 1/4	32	S/S 316
2302621	I3A9G606-040049	1 1/2	BSP	1 1/2	40	S/S 316
2302622	I3A9G606-050060	2	BSP	2	50	S/S 316
2302623	I3A9G606-065076	2 1/2	BSP	2 1/2	65	S/S 316
2302624	I3A9G606-080090	3	BSP	3	80	S/S 316
2302625	I3A9G606-100114	4	BSP	4	100	S/S 316

**CAM & GROOVE EN 14 420-7 / DIN 2828**

Type CC - Coupler, EN 14 420-2 / DIN 2817 hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2302522	I349G200-020020	3/4	20	3/4	20	S/S 316
2302523	I349G200-025025	1	25	1	25	S/S 316
2302524	I349G200-032032	1 1/4	32	1 1/4	32	S/S 316
2302525	I349G200-038040	1 1/2	38	1 1/2	40	S/S 316
2302099	I349G200-051050	2	51	2	50	S/S 316
2302526	I349G200-065065	2 1/2	65	2 1/2	65	S/S 316
2302527	I349G200-076080	3	76	3	80	S/S 316
2302528	I349G200-102100	4	102	4	100	S/S 316

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817: CONSULT CHAPTER "CLAMPS & FERRULES"  
TYPE C IN BRASS AVAILABLE ON REQUEST

**CAM & GROOVE EN 14 420-7 / DIN 2828**

Type DF - Coupler, female BSP - PTFE Seal



Item Code	Part Number	Thread in	Thread type	Head DN in	Head DN mm	Material
2306723	I3A9G806-013021	1/2	BSP	1/2	13	S/S 316
2302626	I3A9G806-020027	3/4	BSP	3/4	20	S/S 316
2302627	I3A9G806-025034	1	BSP	1	25	S/S 316
2302628	I3A9G806-032042	1 1/4	BSP	1 1/4	32	S/S 316
2302629	I3A9G806-040049	1 1/2	BSP	1 1/2	40	S/S 316
2302630	I3A9G806-050060	2	BSP	2	50	S/S 316
2302631	I3A9G806-065076	2 1/2	BSP	2 1/2	65	S/S 316
2302632	I3A9G806-080090	3	BSP	3	80	S/S 316
2302633	I3A9G806-100114	4	BSP	4	100	S/S 316

**CAM & GROOVE EN 14 420-7 / DIN 2828**

Type EE - Adapter, EN 14 420-2 / DIN 2817 hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head DN mm	Material
2302514	I349G100-020020	3/4	20	3/4	20	S/S 316
2302515	I349G100-025025	1	25	1	25	S/S 316
2302516	I349G100-032032	1 1/4	32	1 1/4	32	S/S 316
2302517	I349G100-038040	1 1/2	38	1 1/2	40	S/S 316
2302518	I349G100-051050	2	51	2	50	S/S 316
2302519	I349G100-065065	2 1/2	65	2 1/2	65	S/S 316
2302520	I349G100-076080	3	76	3	80	S/S 316
2302521	I349G100-102100	4	102	4	100	S/S 316

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817: CONSULT CHAPTER "CLAMPS & FERRULES"  
TYPE E IN BRASS AVAILABLE ON REQUEST

hose

fittings

appendix

**CAM & GROOVE**

**Seal**



Item Code	Part Number	Head DN in	Head DN mm	Material
2303238	INJ09C-013	1/2	13	NBR
2301991	INJ09C-019	3/4	19	NBR
2300492	INJ09C-025	1	25	NBR
2300493	INJ09C-032	1 1/4	32	NBR
2302863	INJ09C-038	1 1/2	38	NBR
2301993	INJ09C-051	2	51	NBR
2302864	INJ09C-063	2 1/2	63	NBR
2301995	INJ09C-076	3	76	NBR
2301997	INJ09C-102	4	102	NBR
2302865	INJ09C-127	5	127	NBR
2301998	INJ09C-152	6	152	NBR

Item Code	Part Number	Head DN in	Head DN mm	Material
2306104	IJ09C-013	1/2	13	VITON®
2305621	IJ09C-019	3/4	19	VITON®
2300470	IJ09C-025	1	25	VITON®
2306105	IJ09C-032	1 1/4	32	VITON®
2303152	IJ09C-038	1 1/2	38	VITON®
2303153	IJ09C-051	2	51	VITON®
2303154	IJ09C-063	2 1/2	63	VITON®
2303155	IJ09C-076	3	76	VITON®
2303156	IJ09C-102	4	102	VITON®

**CAM & GROOVE**

**Seal - Closed envelope**



Item Code	Part Number	Head DN in	Head DN mm	Material
2302004	ITJM9C-038	1 1/2	38	PTFE
2302005	ITJM9C-051	2	51	PTFE
2302888	ITJM9C-076	3	76	PTFE
2302889	ITJM9C-102	4	100	PTFE

**CAM & GROOVE**

**Handle, Ring & Pin**



Item Code	Part Number	Head DN in	Head DN mm	Material
2302672	I3Y9C001	1/2 - 3/4	13 - 19	S/S 316
2302673	I3Y9C002	1	25	S/S 316
2302232	I3Y9C003	1 1/4 - 2 1/2	32 - 63	S/S 316
2301677	I3Y9C004	3 - 5	76 - 127	S/S 316
2302674	I3Y9C005	6	152	S/S 316





# COMBINATION NIPPLE

## FITTINGS

### COMBINATION NIPPLE

Male BSPT - Hose shank for clamps.....	F.68
Male NPT - Hose shank for clamps.....	F.68
Hose mender - Hose shank for clamps.....	F.68
Male BSPT complete with pre-crimped ferrule - heavy duty .....	F.69
Male NPT complete with pre-crimped ferrule - heavy duty .....	F.69

## COMBINATION NIPPLE

Male BSPT - Hose shank for clamps



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2303820	I1607100-013021	1/2	13	1/2	BSPT	PLATED STEEL
2303821	I1607100-019027	3/4	19	3/4	BSPT	PLATED STEEL
2303822	I1607100-025034	1	25	1	BSPT	PLATED STEEL
2303823	I1607100-032042	1 1/4	32	1 1/4	BSPT	PLATED STEEL
2303824	I1607100-038049	1 1/2	38	1 1/2	BSPT	PLATED STEEL
2303825	I1607100-051060	2	51	2	BSPT	PLATED STEEL
2303826	I1607100-063076	2 1/2	63	2 1/2	BSPT	PLATED STEEL
2303827	I1607100-076090	3	76	3	BSPT	PLATED STEEL
2303828	I1607100-102114	4	102	4	BSPT	PLATED STEEL
2306051	I1607100-127140	5	127	5	BSPT	PLATED STEEL
2303829	I1607100-152165	6	152	6	BSPT	PLATED STEEL

COMBINATION NIPPLE IN S/S AVAILABLE ON REQUEST

## COMBINATION NIPPLE

Male NPT - Hose shank for clamps



NA

Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2303830	I1628100-013021	1/2	13	1/2	NPT	PLATED STEEL
2303831	I1628100-019027	3/4	19	3/4	NPT	PLATED STEEL
2303832	I1628100-025034	1	25	1	NPT	PLATED STEEL
2303833	I1628100-032042	1 1/4	32	1 1/4	NPT	PLATED STEEL
2303834	I1628100-038049	1 1/2	38	1 1/2	NPT	PLATED STEEL
2303835	I1628100-051060	2	51	2	NPT	PLATED STEEL
2303836	I1628100-063076	2 1/2	63	2 1/2	NPT	PLATED STEEL
2303837	I1628100-076090	3	76	3	NPT	PLATED STEEL
2303838	I1628100-102114	4	102	4	NPT	PLATED STEEL
2303839	I1628100-127140	5	127	5	NPT	PLATED STEEL
2303840	I1628100-152165	6	152	6	NPT	PLATED STEEL
2303841	I1628100-203219	8	203	8	NPT	PLATED STEEL

COMBINATION NIPPLE IN S/S AVAILABLE ON REQUEST

## COMBINATION NIPPLE

Hose mender - Hose shank for clamps



Item Code	Part Number	Hose ID in	Hose ID mm	Material
2303878	I1656100-013013	1/2	13	PLATED STEEL
2303879	I1656100-019019	3/4	19	PLATED STEEL
2303880	I1656100-025025	1	25	PLATED STEEL
2303881	I1656100-032032	1 1/4	32	PLATED STEEL
2303882	I1656100-038038	1 1/2	38	PLATED STEEL
2303883	I1656100-051051	2	51	PLATED STEEL
2303884	I1656100-063063	2 1/2	63	PLATED STEEL
2303885	I1656100-076076	3	76	PLATED STEEL
2303886	I1656100-102102	4	102	PLATED STEEL
2303887	I1656100-127127	5	127	PLATED STEEL
2303888	I1656100-152152	6	152	PLATED STEEL
2303889	I1656100-203203	8	203	PLATED STEEL

**COMBINATION NIPPLE**

Male BSPT complete with pre-crimped ferrule - heavy duty



Item Code	Part Number	Hose ID mm	Hose ID mm	Thread in	Thread type	Hose OD min-MAX mm	Material Hose shank	Material Ferrule
2302324	I1707M00-076090	3	76	3	BSPT	88-102	PLATED STEEL	PLATED STEEL
2302325	I1707M00-102114	4	102	4	BSPT	114-128	PLATED STEEL	PLATED STEEL
2302326	I1707M00-127140	5	127	5	BSPT	139-153	PLATED STEEL	PLATED STEEL
2302007	I1707M00-152165	6	152	6	BSPT	166-184	PLATED STEEL	PLATED STEEL
2307175	I1707M0S-076090	3	76	3	BSPT	86-96	PLATED STEEL	PLATED STEEL
2307176	I1707M0S-102114	4	102	4	BSPT	112-122	PLATED STEEL	PLATED STEEL
2307177	I1707M0S-127140	5	127	5	BSPT	139-147	PLATED STEEL	PLATED STEEL
2307178	I1707M0S-152165	6	152	6	BSPT	164-172	PLATED STEEL	PLATED STEEL



Item Code	Part Number	Hose ID mm	Hose ID mm	Thread in	Thread type	Hose OD min-MAX mm	Material Hose shank	Material Ferrule
2307188	I3707M00-076090	3	76	3	BSPT	88-102	S/S 316	S/S 316
2307190	I3707M00-102114	4	102	4	BSPT	114-128	S/S 316	S/S 316
2307192	I3707M00-127140	5	127	5	BSPT	139-153	S/S 316	S/S 316
2307194	I3707M00-152165	6	152	6	BSPT	166-184	S/S 316	S/S 316

FOR MALE BSPT WITH SERRATED HOSE SHANK FOR CRIMPING FERRULE AND DN<76 mm  
CONSULT AG HYDRAULIC CATALOGUE  
(RECOMMENDED HYDRAULIC FERRULE H1200203)

**COMBINATION NIPPLE**

Male NPT complete with pre-crimped ferrule - heavy duty



Item Code	Part Number	Hose ID mm	Hose ID mm	Thread in	Thread type	Hose OD min-MAX mm	Material Hose shank	Material Ferrule
2302332	I1728M00-076090	3	76	3	NPT	88-102	PLATED STEEL	PLATED STEEL
2302333	I1728M00-102114	4	102	4	NPT	114-128	PLATED STEEL	PLATED STEEL
2302334	I1728M00-127140	5	127	5	NPT	139-153	PLATED STEEL	PLATED STEEL
2302335	I1728M00-152165	6	152	6	NPT	166-184	PLATED STEEL	PLATED STEEL
2307179	I1728M0S-076090	3	76	3	NPT	86-96	PLATED STEEL	PLATED STEEL
2307180	I1728M0S-102114	4	102	4	NPT	112-122	PLATED STEEL	PLATED STEEL
2307181	I1728M0S-127140	5	127	5	NPT	139-147	PLATED STEEL	PLATED STEEL
2307182	I1728M0S-152165	6	152	6	NPT	164-172	PLATED STEEL	PLATED STEEL



Item Code	Part Number	Hose ID mm	Hose ID mm	Thread in	Thread type	Hose OD min-MAX mm	Material Hose shank	Material Ferrule
2307196	I3728M00-076090	3	76	3	NPT	88-102	S/S 316	S/S 316
2307198	I3728M00-102114	4	102	4	NPT	114-128	S/S 316	S/S 316
2307200	I3728M00-127140	5	127	5	NPT	139-153	S/S 316	S/S 316
2307202	I3728M00-152165	6	152	6	NPT	166-184	S/S 316	S/S 316

FOR MALE NPT WITH SERRATED HOSE SHANK FOR CRIMPING FERRULE AND DN<76 mm  
CONSULT AG HYDRAULIC CATALOGUE  
(RECOMMENDED HYDRAULIC FERRULE H1200203)





# EN 14 420-5/DIN 2817

## FITTINGS

EN 14 420-5 / DIN 2817

Male BSP - EN 14 420-2 / DIN 2817 hose shank ..... F.72

Female BSP with swivel nut - EN 14 420-2 / DIN 2817 hose shank..... F.72



**EN 14 420-5 / DIN 2817**

**Male BSP - EN 14 420-2 / DIN 2817 hose shank**



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material	Note
2302501	I3406100-013021	1/2	13	1/2	BSP	S/S 316	FULL HEXAGONE
2302502	I3406100-019027	3/4	19	3/4	BSP	S/S 316	FULL HEXAGONE
2302503	I3406100-025034	1	25	1	BSP	S/S 316	FULL HEXAGONE
2301771	I3406100-032042	1 1/4	32	1 1/4	BSP	S/S 316	FULL HEXAGONE
2302504	I3406100-038049	1 1/2	38	1 1/2	BSP	S/S 316	FULL HEXAGONE
2301772	I3406100-051060	2	50	2	BSP	S/S 316	FULL HEXAGONE
2301773	I3406100-063076	2 1/2	63	2 1/2	BSP	S/S 316	FULL HEXAGONE
2301770	I3406100-076090	3	75	3	BSP	S/S 316	FULL HEXAGONE
2302505	I3406100-102114	4	100	4	BSP	S/S 316	FULL HEXAGONE

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817 AND SAFETY CLAMPS FLEXOLINE: CONSULT CHAPTER "CLAMPS & FERRULES"



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material	Note
2302761	I8406100-013021	1/2	13	1/2	BSP	BRASS	FULL HEXAGONE
2302762	I8406100-019027	3/4	19	3/4	BSP	BRASS	FULL HEXAGONE
2301774	I8406100-025034	1	25	1	BSP	BRASS	FULL HEXAGONE
2302763	I8406100-032042	1 1/4	32	1 1/4	BSP	BRASS	GROOVED HEXAGONE
2301775	I8406100-038049	1 1/2	38	1 1/2	BSP	BRASS	GROOVED HEXAGONE
2301776	I8406100-051060	2	50	2	BSP	BRASS	GROOVED HEXAGONE
2301777	I8406100-063076	2 1/2	63	2 1/2	BSP	BRASS	GROOVED HEXAGONE
2301778	I8406100-076090	3	75	3	BSP	BRASS	GROOVED HEXAGONE
2301779	I8406100-102114	4	100	4	BSP	BRASS	GROOVED HEXAGONE

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817 AND SAFETY CLAMPS FLEXOLINE: CONSULT CHAPTER "CLAMPS & FERRULES"

**EN 14 420-5 / DIN 2817**

**Female BSP with swivel nut - EN 14 420-2 / DIN 2817 hose shank**



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material	Note
2302506	I3406200-013021	1/2	13	1/2	BSP	S/S 316	FULL HEXAGONE
2302507	I3406200-019027	3/4	19	3/4	BSP	S/S 316	FULL HEXAGONE
2302508	I3406200-025034	1	25	1	BSP	S/S 316	FULL HEXAGONE
2301734	I3406200-032042	1 1/4	32	1 1/4	BSP	S/S 316	FULL HEXAGONE
2302509	I3406200-038049	1 1/2	38	1 1/2	BSP	S/S 316	FULL HEXAGONE
2302510	I3406200-051060	2	50	2	BSP	S/S 316	FULL HEXAGONE
2302511	I3406200-063076	2 1/2	63	2 1/2	BSP	S/S 316	FULL HEXAGONE
2302512	I3406200-076090	3	75	3	BSP	S/S 316	FULL HEXAGONE
2302513	I3406200-102114	4	100	4	BSP	S/S 316	FULL HEXAGONE

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817 AND SAFETY CLAMPS FLEXOLINE: CONSULT CHAPTER "CLAMPS & FERRULES"



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material	Note
2302771	I8406200-013021	1/2	13	1/2	BSP	BRASS	FULL HEXAGONE
2302772	I8406200-019027	3/4	19	3/4	BSP	BRASS	FULL HEXAGONE
2301598	I8406200-025034	1	25	1	BSP	BRASS	FULL HEXAGONE
2301599	I8406200-032042	1 1/4	32	1 1/4	BSP	BRASS	GROOVED HEXAGONE
2301600	I8406200-038049	1 1/2	38	1 1/2	BSP	BRASS	GROOVED HEXAGONE
2301780	I8406200-051060	2	50	2	BSP	BRASS	GROOVED HEXAGONE
2301781	I8406200-063076	2 1/2	63	2 1/2	BSP	BRASS	GROOVED HEXAGONE
2301782	I8406200-076090	3	75	3	BSP	BRASS	GROOVED HEXAGONE
2301783	I8406200-102114	4	100	4	BSP	BRASS	GROOVED HEXAGONE

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817 AND SAFETY CLAMPS FLEXOLINE: CONSULT CHAPTER "CLAMPS & FERRULES"



# AVIATION

## FITTINGS

### EN 14 420-5 / DIN 2817

Male BSP - EN 14 420-2 / DIN 2817 hose shank.

Aviation refuelling service approved ..... F.74

Female BSP with swivel nut - EN 14 420-2 / DIN 2817 hose shank.

Aviation refuelling service approved ..... F.74

### MALE BSPP - SERRATED HOSE SHANK

Male BSPP - serrated hose shank.

Aviation refuelling service approved ..... F.74

### SAFETY CLAMP EN 14 420-3 / DIN 2817

Safety Clamps EN 14 420-3 / DIN 2817.

Aviation refuelling service approved ..... F.75

### SERRATED FERRULE

Serrated ferrule. Aviation refuelling service approved..... F.75

**EN 14 420-5 / DIN 2817**

Male BSP - EN 14 420-2 / DIN 2817 hose shank  
Aviation refuelling service approved



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2302764	I840610A-025034	1	25	1	BSP	TINNED BRASS
2302765	I840610A-032042	1 1/4	32	1 1/4	BSP	TINNED BRASS
2302766	I840610A-038049	1 1/2	38	1 1/2	BSP	TINNED BRASS
2302767	I840610A-051060	2	51	2	BSP	TINNED BRASS
2302768	I840610A-063076	2 1/2	63	2 1/2	BSP	TINNED BRASS
2302769	I840610A-076090	3	76	3	BSP	TINNED BRASS
2302770	I840610A-102114	4	102	4	BSP	TINNED BRASS

**EN 14 420-5 / DIN 2817**

Female BSP with swivel nut - EN 14 420-2 / DIN 2817 hose shank  
Aviation refuelling service approved



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2302100	I840620A-025034	1	25	1	BSP	TINNED BRASS
2302773	I840620A-032042	1 1/4	32	1 1/4	BSP	TINNED BRASS
2302774	I840620A-038049	1 1/2	38	1 1/2	BSP	TINNED BRASS
2302775	I840620A-051060	2	51	2	BSP	TINNED BRASS
2302776	I840620A-063076	2 1/2	63	2 1/2	BSP	TINNED BRASS
2302777	I840620A-076090	3	76	3	BSP	TINNED BRASS
2302778	I840620A-102114	4	102	4	BSP	TINNED BRASS

**MALE BSPP - SERRATED HOSE SHANK**

Aviation refuelling service approved



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2302690	I5906100-025034	1	25	1	BSPP	ALUMINIUM
2302079	I5906100-032042	1 1/4	32	1 1/4	BSPP	ALUMINIUM
2302080	I5906100-038049	1 1/2	38	1 1/2	BSPP	ALUMINIUM
2302081	I5906100-051060	2	51	2	BSPP	ALUMINIUM
2302082	I5906100-063076	2 1/2	63	2 1/2	BSPP	ALUMINIUM
2302691	I5906100-076090	3	76	3	BSPP	ALUMINIUM
2302692	I5906100-102114	4	102	4	BSPP	ALUMINIUM

**SAFETY CLAMP EN 14 420-3 / DIN 2817**

Aviation refuelling service approved



Item Code	Part Number	Hose ID mm	Hose OD min mm	Hose OD MAX mm	Material
2301784	I5LG4D-025041	25 x 8	40	43	ALUMINIUM
	I5LG4D-032045	32 x 6	43	46	ALUMINIUM
2301785	I5LG4D-032048	32 x 8	47	50	ALUMINIUM
2306262	I5LG4D-038052	38 x 6,5	50	52	ALUMINIUM
2301786	I5LG4D-038054	38 x 8	53	56	ALUMINIUM
2304563	I5LG4D-050066	50 x 8	64	67	ALUMINIUM
2301787	I5LG4D-051070	50 x 10	69	71	ALUMINIUM
2301788	I5LG4D-063081	63 x 8	78	81	ALUMINIUM
2304564	I5LG4D-075091	75 x 8	89	93	ALUMINIUM
2301789	I5LG4D-076096	75 x 10	94	97	ALUMINIUM
	I5LG4D-100117	100 x 8	114	119	ALUMINIUM
2303001	I5LG4D-102120	100 x 10	118	122	ALUMINIUM
2301790	I5LG4D-102124	100 x 12	122	126	ALUMINIUM

**SERRATED FERRULE**

Aviation refuelling service approved



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min mm	Hose OD MAX mm	Material
2302264	I109U025-037042	1	25	37	42	PLATED STEEL
2302265	I109U032-044048	1 1/4	32	44	48	PLATED STEEL
2302112	I109U038-050054	1 1/2	38	50	54	PLATED STEEL
2302266	I109U051-065071	2	51	65	71	PLATED STEEL
2302113	I109U063-077083	2 1/2	63	77	83	PLATED STEEL
2302114	I109U076-090096	3	76	90	96	PLATED STEEL
2302267	I109U102-116124	4	102	116	124	PLATED STEEL





# SANDBLAST

## FITTINGS

### SANDBLAST

Quick coupling - Complete with seal .....	F.78
Nozzle holder - Female BSP .....	F.78
Nozzle holder - Female coarse thread .....	F.78
Female BSP - Complete with seal .....	F.78

**SANDBLAST**

Quick coupling - Complete with seal



Item Code	Part Number	Hose ID mm	Hose ID in	Claw Distance Internal mm	Material
2304636	IRC9I300-019027	19x7	3/4	58	NYLON
2305641	IRC9I300-025034	25x9	1	58	NYLON
2304637	IRC9I300-032042	32x8	1 1/4	58	NYLON
2305642	IRC9I300-038049	38x9	1 1/2	58	NYLON
2307121	I9C9I300-019027	19x6	3/4	58	MALLEABLE IRON
2305689	I9C9I300-025034	25x7	1	58	MALLEABLE IRON
2305690	I9C9I300-032042	32x8	1 1/4	58	MALLEABLE IRON
2307122	I9C9I300-038049	38x9	1 1/2	58	MALLEABLE IRON

**SANDBLAST**

Nozzle holder - Female BSP



Item Code	Part Number	Hose ID mm	Hose ID in	Thread in	Thread type	Material
2307124	I5C9I06D-032042	32	1 1/4	1 1/4	BSP	ALUMINIUM
2307126	IRC9I06D-019042	19	3/4	1 1/4	BSP	NYLON
2307127	IRC9I06D-025042	25	1	1 1/4	BSP	NYLON
2307128	IRC9I06D-032042	32	1 1/4	1 1/4	BSP	NYLON
2307129	IRC9I06D-038042	38	1 1/2	1 1/4	BSP	NYLON

**SANDBLAST**

Nozzle holder - Female coarse Thread



Item Code	Part Number	Hose ID mm	Hose ID in	Thread mm	Thread type	Material
2303915	I5C50200-032060	32	1 1/4	50	COARSE Thread	ALUMINIUM
2303917	IRC50200-019060	19	3/4	50	COARSE Thread	NYLON
2303918	IRC50200-025060	25	1	50	COARSE Thread	NYLON
2303919	IRC50200-032060	32	1 1/4	50	COARSE Thread	NYLON
2303920	IRC50200-038060	38	1 1/2	50	COARSE Thread	NYLON

**SANDBLAST**

Female BSP - Complete with seal



Item Code	Part Number	Thread in	Thread type	Claw Distance Internal mm	Material
2304638	I9A9I306-000049	1 1/2	BSP	58	MALLEABLE IRON
2307123	IRA9I306-000042	1 1/4	BSP	58	NYLON



# MORTAR

## FITTINGS

### MORTAR

Adapter - Hose shank .....	F.80
Coupler - Hose shank - Complete with seal .....	F.80
Male BSP - Hose shank .....	F.80
Crimping Ring .....	F.80



**MORTAR****Adapter - Hose shank**

Item Code	Part Number	Hose ID in	Hose ID mm	Coupling Size C mm	Coupling Size D mm	Material
2302084	I938C100-025025	1	25	35	22	MALLEABLE IRON
2302085	I938C100-025035	1	25	49,5	22	MALLEABLE IRON
2301758	I938C100-025X25	1	25	41	22	MALLEABLE IRON
2302086	I938C100-035035	1 3/8	35	49,5	22	MALLEABLE IRON
2302087	I938C100-035050	1 3/8	35	63	22	MALLEABLE IRON
2302088	I938C100-050050	2	50	63	22	MALLEABLE IRON
2302089	I938C101-025035	1	25	49,5	23,5	MALLEABLE IRON
2302090	I938C101-035035	1 3/8	35	49,5	23,5	MALLEABLE IRON
2301757	I938C101-035050	1 3/8	35	63	23,5	MALLEABLE IRON
2302091	I938C101-050050	2	50	63	23,5	MALLEABLE IRON

**MORTAR****Coupler - Hose shank - Complete with seal**

Item Code	Part Number	Hose ID in	Hose ID mm	Coupling Size C mm	Coupling Size D mm	Material
2302092	I938C200-025025	1	25	35,5	22	MALLEABLE IRON
2302818	I938C200-025035	1	25	51	22	MALLEABLE IRON
2302093	I938C200-025X25	1	25	42	22	MALLEABLE IRON
2302094	I938C200-035035	1 3/8	35	51	22	MALLEABLE IRON
2302819	I938C200-035050	1 3/8	35	64	22	MALLEABLE IRON
2302095	I938C200-050050	2	50	64	22	MALLEABLE IRON
2302096	I938C201-025035	1	25	51	23,5	MALLEABLE IRON
2302097	I938C201-035035	1 3/8	35	51	23,5	MALLEABLE IRON
2302820	I938C201-035050	1 3/8	35	64	23,5	MALLEABLE IRON
2302098	I938C201-050050	2	50	64	23,5	MALLEABLE IRON

**MORTAR****Male BSP - Hose shank**

Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2302310	I1306100-025034	1	25	1	BSP	PLATED STEEL
2302311	I1306100-035042	1 3/8	35	1 1/4	BSP	PLATED STEEL
2302083	I1306100-050060	2	50	2	BSP	PLATED STEEL

**MORTAR****Crimping Ring**

Item Code	Part Number	Hose ID in	Hose ID mm	Ring ID mm	Ring OD mm	L mm	Material
2303031	R5YBFF0-0452550	1	25	45	50	50	ALUMINIUM
2303032	R5YBFF0-0552555	1 3/8	35	55	60	55	ALUMINIUM
1900418	R5YBFF0-0752555	2	51	75	80	55	ALUMINIUM



# CONCRETE

## FITTINGS

### VICTAULIC STYLE

Hardened steel hose shank complete with pre-crimped ferrule..... F.82

### SHOULDERED STYLE

Hardened steel hose shank complete with pre-crimped ferrule..... F.82

### CALIFORNIA STYLE - HEAVY DUTY RAISED END

Hardened steel hose shank complete with pre-crimped ferrule..... F.82

### SCHWING STYLE

Female - Hardened steel hose shank complete with pre-crimped ferrule ..... F.82

Male - Hardened steel hose shank complete with pre-crimped ferrule ..... F.83

### THREADED STYLE

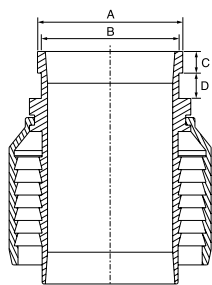
BSPT Male - Hardened steel hose shank complete with pre-crimped ferrule ..... F.83

NPTF Male - Hardened steel hose shank complete with pre-crimped ferrule ..... F.83

BSPP Female - Hardened steel hose shank complete with pre-crimped ferrule ..... F.83

**VICTAULIC STYLE**

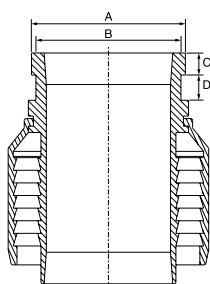
Hardened steel hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head A mm	Head B mm	Head C mm	Head D mm	Material
2306772	IV39VL00-051060	2	51	2	60,3	57,2	16	20	HARDENED STEEL
2301752	IV39VL00-051089	2	51	3	88,9	84,9	16	20	HARDENED STEEL
2301753	IV39VL00-063089	2 1/2	63	3	88,9	84,9	16	20	HARDENED STEEL
2301754	IV39VL00-076089	3	76	3	88,9	84,9	16	20	HARDENED STEEL
2302892	IV39VL00-076097	3	76	3 1/4	97	88,5	16	20	HARDENED STEEL
2302217	IV39VL00-102114	4	102	4	114,3	108,3	17	20	HARDENED STEEL
2302216	IV39VL00-102127	4	102	4 1/2	127	115	17	20	HARDENED STEEL
2302219	IV39VL00-127142	5	127	5	142	133	17	20	HARDENED STEEL
2302220	IV39VL00-127148	5	127	5 1/2	148	139	17	20	HARDENED STEEL
2302893	IV39VL00-152168	6	152	6	168,3	159	17	20	HARDENED STEEL

**SHOULDERED STYLE**

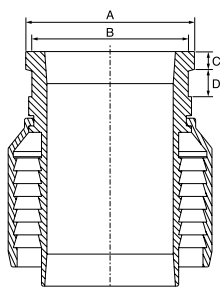
Hardened steel hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head A mm	Head B mm	Head C mm	Head D mm	Material
2303021	IV39RL00-051067	2	51	2	66,5	59,5	16	20	HARDENED STEEL
2303022	IV39RL00-063097	2 1/2	63	3	97	88,5	16	20	HARDENED STEEL
2303023	IV39RL00-076097	3	76	3	97	88,5	16	20	HARDENED STEEL
2303024	IV39RL00-090122	3 1/2	90	4	122	115	17,5	20	HARDENED STEEL
2306505	IV39RL00-090127	3 1/2	90	4 1/2	127	115	17	20	HARDENED STEEL
2303025	IV39RL00-102122	4	102	4	122	115	17,5	20	HARDENED STEEL

**CALIFORNIA STYLE - HEAVY DUTY RAISED END**

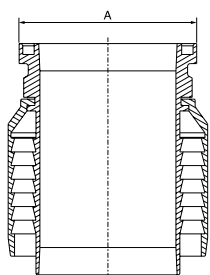
Hardened steel hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head A mm	Head B mm	Head C mm	Head D mm	Material
2303026	IV39JL00-051078	2	51	2	77,7	69,9	12,7	20	HARDENED STEEL
2303027	IV39JL00-063082	2 1/2	63	2 1/2	82,3	73,2	12,3	20	HARDENED STEEL
2303028	IV39JL00-076106	3	76	3	106,2	97	12,7	20	HARDENED STEEL
2303029	IV39JL00-102132	4	102	4	131,6	122	15,2	20	HARDENED STEEL
2303030	IV39JL00-127157	5	127	5	157	147,3	15,2	20	HARDENED STEEL

**SCHWING STYLE**

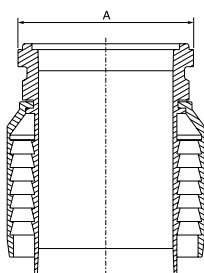
Female - Hardened steel hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head A mm	Material
2302894	IV39WF00-102102	4	102	4	148	HARDENED STEEL
2302895	IV39WF00-127127	5	127	5	166	HARDENED STEEL
2306524	IV39WF00-152152	6	152	6	195	HARDENED STEEL

**SCHWING STYLE**

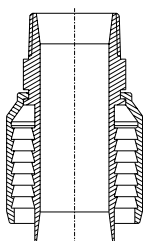
Male - Hardened steel hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Head DN in	Head A mm	Material
2302896	IV39WM00-102102	4	102	4	148	HARDENED STEEL
2302897	IV39WM00-127127	5	127	5	166	HARDENED STEEL
2306525	IV39WM00-152152	6	152	6	195	HARDENED STEEL

**THREADED STYLE**

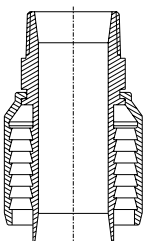
BSPT Male - Hardened steel hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2301755	IV307M00-051060	2	51	2	BSPT	HARDENED STEEL
2301756	IV307M00-076090	3	76	3	BSPT	HARDENED STEEL

**THREADED STYLE**

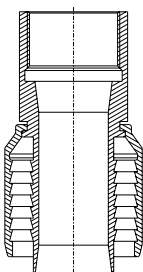
NPTF Male - Hardened steel hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2302890	IV328M00-051060	2	51	2	NPT	HARDENED STEEL
2302891	IV328M00-076090	3	76	3	NPT	HARDENED STEEL

**THREADED STYLE**

BSPP Female - Hardened steel hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Thread in	Thread type	Material
2306526	IV306F00-051060	2	51	2	BSPP	HARDENED STEEL





# FLANGE

## FITTINGS

### FIXED FLANGE

Serrated hose shank complete with pre-crimped ferrule..... F.86

### FIXED FLANGE

Serrated hose shank ..... F.86

### SWIVEL FLANGE

Serrated hose shank complete with pre-crimped ferrule..... F.87

### SWIVEL FLANGE

Serrated hose shank ..... F.87

### SERRATED FERRULE I107U-AF

Serrated ferrule..... F.88

### SWIVEL FLANGE

EN 14 420-2 / DIN 2817 hose shank..... F.88

## FIXED FLANGE

Serrated hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Hose OD min-MAX mm	Material Hose shank & Flange	Material Ferrule
2307314	I17BDW1B-076076	3	76	PN 16	88-102	PLATED STEEL	PLATED STEEL
2307316	I17BDW1B-102102	4	102	PN 16	114-128	PLATED STEEL	PLATED STEEL
2307318	I17BDW1B-127127	5	127	PN 16	139-153	PLATED STEEL	PLATED STEEL
2307320	I17BDW1B-152152	6	152	PN 16	166-184	PLATED STEEL	PLATED STEEL

2307313	I17BDW1B-00S076	3	76	PN 16	86-96	PLATED STEEL	PLATED STEEL
2307315	I17BDW1B-00S102	4	102	PN 16	112-122	PLATED STEEL	PLATED STEEL
2307317	I17BDW1B-00S127	5	127	PN 16	139-147	PLATED STEEL	PLATED STEEL
2307319	I17BDW1B-00S152	6	152	PN 16	164-172	PLATED STEEL	PLATED STEEL



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Hose OD min-MAX mm	Material Hose shank & Flange	Material Ferrule
2307346	I37BDW1B-076076	3	76	PN 16	88-102	S/S 316	S/S 316
2307348	I37BDW1B-102102	4	102	PN 16	114-128	S/S 316	S/S 316
2307350	I37BDW1B-127127	5	127	PN 16	139-153	S/S 316	S/S 316
2307352	I37BDW1B-152152	6	152	PN 16	166-184	S/S 316	S/S 316



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Hose OD min-MAX mm	Material Hose shank & Flange	Material Ferrule
2307300	I17BEW7B-076076	3	76	ASA 150	88-102	PLATED STEEL	PLATED STEEL
2302366	I17BEW7B-102102	4	102	ASA 150	114-128	PLATED STEEL	PLATED STEEL
2307303	I17BEW7B-127127	5	127	ASA 150	139-153	PLATED STEEL	PLATED STEEL
2302368	I17BEW7B-152152	6	152	ASA 150	166-184	PLATED STEEL	PLATED STEEL

2307299	I17BEW7B-00S076	3	76	ASA 150	86-96	PLATED STEEL	PLATED STEEL
2307301	I17BEW7B-00S102	4	102	ASA 150	112-122	PLATED STEEL	PLATED STEEL
2307302	I17BEW7B-00S127	5	127	ASA 150	139-147	PLATED STEEL	PLATED STEEL
2307304	I17BEW7B-00S152	6	152	ASA 150	164-172	PLATED STEEL	PLATED STEEL



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Hose OD min-MAX mm	Material Hose shank & Flange	Material Ferrule
2307330	I37BEW7B-076076	3	76	ASA 150	88-102	S/S 316	S/S 316
2307332	I37BEW7B-102102	4	102	ASA 150	114-128	S/S 316	S/S 316
2307334	I37BEW7B-127127	5	127	ASA 150	139-153	S/S 316	S/S 316
2307336	I37BEW7B-152152	6	152	ASA 150	166-184	S/S 316	S/S 316

## FIXED FLANGE

Serrated hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose shank & Flange	Note Ferrule to be used
2307233	I17BD61B-A00051	2	51	PN 16	PLATED STEEL	HYDRAULIC FERRULE
2307277	I37BD61B-A00051	2	51	PN 16	S/S 316	HYDRAULIC FERRULE
2307242	I17BD61B-A00203	8	203	PN 16	PLATED STEEL	2307171 (I107U203-219235)
2307243	I17BD61B-A00254	10	254	PN 16	PLATED STEEL	2307172 (I107U254-274292)



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose shank & Flange	Note Ferrule to be used
2307211	I17BE67B-A00051	2	51	ASA 150	PLATED STEEL	HYDRAULIC FERRULE
2307255	I37BE67B-A00051	2	51	ASA 150	S/S 316	HYDRAULIC FERRULE
2307220	I17BE67B-A00203	8	203	ASA 150	PLATED STEEL	2307171 (I107U203-219235)
2307221	I17BE67B-A00254	10	254	ASA 150	PLATED STEEL	2307172 (I107U254-274292)

**SWIVEL FLANGE**

Serrated hose shank complete with pre-crimped ferrule



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Hose OD min-MAX mm	Material Hose shank & Flange	Material Ferrule
2307322	I17BDT2A-076076	3	76	PN 16	88-102	PLATED STEEL	PLATED STEEL
2307324	I17BDT2A-102102	4	102	PN 16	114-128	PLATED STEEL	PLATED STEEL
2307326	I17BDT2A-127127	5	127	PN 16	139-153	PLATED STEEL	PLATED STEEL
2307328	I17BDT2A-152152	6	152	PN 16	166-184	PLATED STEEL	PLATED STEEL



2307321	I17BDT2A-00S076	3	76	PN 16	86-96	PLATED STEEL	PLATED STEEL
2307323	I17BDT2A-00S102	4	102	PN 16	112-122	PLATED STEEL	PLATED STEEL
2307325	I17BDT2A-00S127	5	127	PN 16	139-147	PLATED STEEL	PLATED STEEL
2307327	I17BDT2A-00S152	6	152	PN 16	164-172	PLATED STEEL	PLATED STEEL

Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Hose OD min-MAX mm	Material Hose shank & Flange	Material Ferrule
2307354	I37BDT2A-076076	3	76	PN 16	88-102	S/S 316	S/S 316
2307356	I37BDT2A-102102	4	102	PN 16	114-128	S/S 316	S/S 316
2307358	I37BDT2A-127127	5	127	PN 16	139-153	S/S 316	S/S 316
2307360	I37BDT2A-152152	6	152	PN 16	166-184	S/S 316	S/S 316



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Hose OD min-MAX mm	Material Hose shank & Flange	Material Ferrule
2307306	I17BET9A-076076	3	76	ASA 150	88-102	PLATED STEEL	PLATED STEEL
2307308	I17BET9A-102102	4	102	ASA 150	114-128	PLATED STEEL	PLATED STEEL
2307310	I17BET9A-127127	5	127	ASA 150	139-153	PLATED STEEL	PLATED STEEL
2307312	I17BET9A-152152	6	152	ASA 150	166-184	PLATED STEEL	PLATED STEEL



2307305	I17BET9A-00S076	3	76	ASA 150	86-96	PLATED STEEL	PLATED STEEL
2307307	I17BET9A-00S102	4	102	ASA 150	112-122	PLATED STEEL	PLATED STEEL
2307309	I17BET9A-00S127	5	127	ASA 150	139-147	PLATED STEEL	PLATED STEEL
2307311	I17BET9A-00S152	6	152	ASA 150	164-172	PLATED STEEL	PLATED STEEL

Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Hose OD min-MAX mm	Material Hose shank & Flange	Material Ferrule
2307338	I37BET9A-076076	3	76	ASA 150	88-102	S/S 316	S/S 316
2307340	I37BET9A-102102	4	102	ASA 150	114-128	S/S 316	S/S 316
2307342	I37BET9A-127127	5	127	ASA 150	139-153	S/S 316	S/S 316
2307344	I37BET9A-152152	6	152	ASA 150	166-184	S/S 316	S/S 316

**SWIVEL FLANGE**

Serrated hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose shank & Flange	Note Ferrule to be used
2307244	I17BD72A-A00051	2	51	PN 16	PLATED STEEL	HYDRAULIC FERRULE
2307288	I37BD72A-A00051	2	51	PN 16	S/S 316	HYDRAULIC FERRULE



2307253	I17BD72A-A00203	8	203	PN 16	PLATED STEEL	2307171 (I107U203-219235)
2307254	I17BD72A-A00254	10	254	PN 16	PLATED STEEL	2307172 (I107U254-274292)

Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose shank & Flange	Note Ferrule to be used
2307222	I17BE79A-A00051	2	51	ASA 150	PLATED STEEL	HYDRAULIC FERRULE
2307266	I37BE79A-A00051	2	51	ASA 150	S/S 316	HYDRAULIC FERRULE
2307231	I17BE79A-A00203	8	203	ASA 150	PLATED STEEL	2307171 (I107U203-219235)
2307232	I17BE79A-A00254	10	254	ASA 150	PLATED STEEL	2307172 (I107U254-274292)



## SERRATED FERRULE I107U-AF



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min-MAX mm	Material
2307171	I107U203-219235	8	203	219-235	PLATED STEEL
2307172	I107U254-274292	10	254	274-292	PLATED STEEL

FERRULE TO BE USED ONLY WITH ALFAGOMMA FIXED AND SWIVEL FLANGED COUPLING

## SWIVEL FLANGE

EN 14 420-2 / DIN 2817 hose shank



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose shank	Material Flange
2306420	I14BD74A-032032	1 1/4	32	PN 10/16	PLATED STEEL	PLATED STEEL
2302312	I14BD74A-038038	1 1/2	40	PN 10/16	PLATED STEEL	PLATED STEEL
2302313	I14BD74A-051051	2	50	PN 10/16	PLATED STEEL	PLATED STEEL
2302314	I14BD74A-063063	2 1/2	63	PN 10/16	PLATED STEEL	PLATED STEEL
2302315	I14BD74A-076076	3	75	PN 10/16	PLATED STEEL	PLATED STEEL
2302316	I14BD74A-080080		80	PN 10/16	PLATED STEEL	PLATED STEEL
2302317	I14BD74A-102102	4	100	PN 10/16	PLATED STEEL	PLATED STEEL
2302318	I14BD74A-127127	5	125	PN 10/16	PLATED STEEL	PLATED STEEL
2302319	I14BD74A-152152	6	150	PN 10/16	PLATED STEEL	PLATED STEEL
2302009	I14BD74A-203203	8	200	PN 16	PLATED STEEL	PLATED STEEL

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817 AND SAFETY CLAMPS FLEXOLINE: CONSULT CHAPTER "CLAMPS & FERRULES"



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose shank	Material Flange
2304871	I34BD74A-025025	1	25	PN 10/16	S/S 316	S/S 316
2304870	I34BD74A-038038	1 1/2	40	PN 10/16	S/S 316	S/S 316
2302543	I34BD74A-051051	2	50	PN 10/16	S/S 316	S/S 316
2304872	I34BD74A-063063	2 1/2	63	PN 10/16	S/S 316	S/S 316
2302544	I34BD74A-076076	3	75	PN 10/16	S/S 316	S/S 316
2302010	I34BD74A-102102	4	100	PN 10/16	S/S 316	S/S 316
2304873	I34BD74A-152152	6	150	PN 10/16	S/S 316	S/S 316

TO ASSEMBLE THE INSERT, USE SAFETY CLAMPS EN 14 420-3 / DIN 2817 AND SAFETY CLAMPS FLEXOLINE: CONSULT CHAPTER "CLAMPS & FERRULES"

## FITTINGS

### MUFF COUPLING

Coupling for 706AA Hose - Fixed flange..... F.90

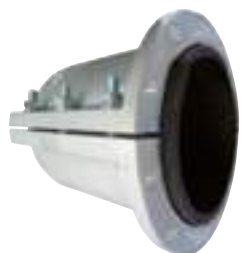
# MUFF COUPLING



## MUFF COUPLING

Coupling for 706AA Hose - Fixed flange

AU



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD MAX mm	Flange type	Material
2303194	I5MBZ61A-051069	2	51	69	TABLE D	ALUMINIUM
2303187	I5MBZ61A-076102	3	76	100	TABLE D	ALUMINIUM
2303188	I5MBZ61A-102128	4	102	126	TABLE D	ALUMINIUM
2303189	I5MBZ61A-127159	5	127	155	TABLE D	ALUMINIUM
2303190	I5MBZ61A-152184	6	152	182	TABLE D	ALUMINIUM
2303191	I5MBZ61A-203235	8	203	235	TABLE D	ALUMINIUM
2303192	I5MBZ61A-254286	10	254	286	TABLE D	ALUMINIUM
2303193	I5MBZ61A-300344	12	300	343	TABLE D	ALUMINIUM

hose

fittings

appendix



# CLAMPS & FERRULES

## FITTINGS

### EAR PINCH ON CLAMP

1-EAR WITH INNER RING .....	F.92
2-EARS.....	F.92

### MINICLAMP

Clamps - 1 bolt .....	F.93
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### WORM GEAR CLAMP

Clamps - 1 bolt - DIN 3017.....	F.93
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### RUBBER LINED CLIPS

DIN 3016 .....	F.94
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### BAND-IT SYSTEM

Banding tools, bands and buckles .....	F.95
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### SUPERCLAMP

Single bolt superclamp .....	F.96
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### PW-CLAMP

Clamps - 1 bolt .....	F.97
Clamps - 2 bolts .....	F.98-99

### DOUBLE BOLT CLAMP WITH TWO SADDLES

Double bolt clamp with two saddles .....	F.99
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### SAFETY CLAMPS EN 14 420-3 / DIN 2817

Safety clamps EN 14 420-3 / DIN 2817 .....	F.100
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### SAFETY CLAMPS FLEXOLINE®

Safety clamps FLEXOLINE.....	F.100
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### SMOOTH FERRULE

Ferrule for composite hose suitable also for industrial hose .....	F.102
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### SERRATED FERRULE

Serrated ferrule.....	F.102
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## EAR PINCH ON CLAMP

### 1-EAR WITH INNER RING



Item Code	Part Number	Hose OD min-MAX mm	Material
2306009		7,5 - 8,5	W1 (PLATED STEEL)
2306011		9 - 10,5	W1 (PLATED STEEL)
2306013		10 - 11,5	W1 (PLATED STEEL)
2306014		10,5 - 12,5	W1 (PLATED STEEL)
2306019		13 - 15,3	W1 (PLATED STEEL)
2304309		14 - 16	W1 (PLATED STEEL)
2306021		15 - 17,3	W1 (PLATED STEEL)



2304911		7,5 - 8,5	W4 (S/S 304)
2304306		8 - 9,5	W4 (S/S 304)
2306028		10,5 - 12,5	W4 (S/S 304)
2306030		11,5 - 13,5	W4 (S/S 304)
2304918		12,5 - 14,5	W4 (S/S 304)
2306031		13 - 15,3	W4 (S/S 304)
2304310		14 - 16,3	W4 (S/S 304)
2304311		15 - 17,3	W4 (S/S 304)
2305292		16 - 18,3	W4 (S/S 304)
2306033		17 - 19,3	W4 (S/S 304)

## EAR PINCH ON CLAMP

### 2-EARS



Item Code	Part Number	Hose OD min-MAX mm	Material
2304286		7 - 9	W1 (PLATED STEEL)
2304287		9 - 11	W1 (PLATED STEEL)
2304289		11 - 13	W1 (PLATED STEEL)
2304290		13 - 15	W1 (PLATED STEEL)
2304293		15 - 18	W1 (PLATED STEEL)
2304294		17 - 20	W1 (PLATED STEEL)
2304296		20 - 23	W1 (PLATED STEEL)
2304298		23 - 27	W1 (PLATED STEEL)



2304924		7 - 9	W4 (S/S 304)
2304288		9 - 11	W4 (S/S 304)
2304908		11 - 13	W4 (S/S 304)
2304291		13 - 15	W4 (S/S 304)
2305998		15 - 18	W4 (S/S 304)
2305999		17 - 20	W4 (S/S 304)
2306001		20 - 23	W4 (S/S 304)
2306003		23 - 27	W4 (S/S 304)
2304922		27 - 31	W4 (S/S 304)
2306005		31 - 34	W4 (S/S 304)
2306006		34 - 37	W4 (S/S 304)

**MINICLAMP**

Clamps - 1 bolt



Item Code	Part Number	Hose OD min-MAX mm	Clamp width mm	Material
2304140		8	9	W1 (PLATED STEEL)
2304142		9	10	W1 (PLATED STEEL)
2304143		9,5 - 10	10	W1 (PLATED STEEL)
2304144		10 - 11	10	W1 (PLATED STEEL)
2304147		12 - 13	10	W1 (PLATED STEEL)
2304148		13 - 14	10	W1 (PLATED STEEL)
2304150		14 - 15	10	W1 (PLATED STEEL)
2304154		15 - 17	10	W1 (PLATED STEEL)

**WORM GEAR CLAMP**

Clamps - 1 bolt - DIN 3017



Item Code	Part Number	Hose OD min-MAX mm	Clamp width mm	Material
2304156		8-16	9	W1 (PLATED STEEL)
2304157		12-22	9	W1 (PLATED STEEL)
2304159		16-27	12	W1 (PLATED STEEL)
2304162		20-32	12	W1 (PLATED STEEL)
2304163		25-40	12	W1 (PLATED STEEL)
2304164		30-45	12	W1 (PLATED STEEL)
2304165		32-50	12	W1 (PLATED STEEL)
2304166		40-60	12	W1 (PLATED STEEL)
2304167		50-70	12	W1 (PLATED STEEL)
2304168		60-80	12	W1 (PLATED STEEL)
2304169		70-90	12	W1 (PLATED STEEL)
2304170		80-100	12	W1 (PLATED STEEL)
2304172		90-110	12	W1 (PLATED STEEL)
2304173		110-130	12	W1 (PLATED STEEL)
2304174		130-150	12	W1 (PLATED STEEL)
2306217		140-160	12	W1 (PLATED STEEL)
2304175		160-180	12	W1 (PLATED STEEL)
2304176		180-200	12	W1 (PLATED STEEL)
2304177		200-220	12	W1 (PLATED STEEL)
2304178		220-240	12	W1 (PLATED STEEL)



2304181		8-16	9	W5 (S/S 316)
2304182		12-22	9	W5 (S/S 316)
2304030		16-27	12	W5 (S/S 316)
2304032		20-32	12	W5 (S/S 316)
2304033		25-40	12	W5 (S/S 316)
2304034		30-45	12	W5 (S/S 316)
2304035		32-50	12	W5 (S/S 316)
2304036		40-60	12	W5 (S/S 316)
2304037		50-70	12	W5 (S/S 316)
2304038		60-80	12	W5 (S/S 316)
2304039		70-90	12	W5 (S/S 316)
2304040		80-100	12	W5 (S/S 316)
2304041		90-110	12	W5 (S/S 316)
2304042		110-130	12	W5 (S/S 316)
2304043		140-160	12	W5 (S/S 316)
2304044		160-180	12	W5 (S/S 316)
2304045		180-200	12	W5 (S/S 316)
2304046		200-220	12	W5 (S/S 316)
2304047		220-240	12	W5 (S/S 316)

## RUBBER LINED CLIPS

DIN 3016



Item Code	Part Number	Application diameter mm	Band width mm	Material
2304065		10	12	EPDM / W1 (PLATED STEEL)
2304066		12	12	EPDM / W1 (PLATED STEEL)
2305178		15	12	EPDM / W1 (PLATED STEEL)
2304068		6	15	EPDM / W1 (PLATED STEEL)
2304069		8	15	EPDM / W1 (PLATED STEEL)
2304070		10	15	EPDM / W1 (PLATED STEEL)
2304071		13	15	EPDM / W1 (PLATED STEEL)
2304072		16	15	EPDM / W1 (PLATED STEEL)
2304073		18	15	EPDM / W1 (PLATED STEEL)
2304074		20	15	EPDM / W1 (PLATED STEEL)
2304079		25	20	EPDM / W1 (PLATED STEEL)
2304080		30	20	EPDM / W1 (PLATED STEEL)
2304083		35	25	EPDM / W1 (PLATED STEEL)
2304084		40	25	EPDM / W1 (PLATED STEEL)
2304086		50	25	EPDM / W1 (PLATED STEEL)

RUBBER LINED CLIPS IN EPDM / W4 (S/S 304) AVAILABLE ON REQUEST

## RUBBER LINED CLIPS

SMS



Item Code	Part Number	Application diameter mm	Band width mm	Material
2304702		6,4	12,7	EPDM / PLATED STEEL
2304703		7,9	12,7	EPDM / PLATED STEEL
2304704		9,5	12,7	EPDM / PLATED STEEL
2304707		11,1	12,7	EPDM / PLATED STEEL
2304708		12,7	12,7	EPDM / PLATED STEEL
2304050		15,9	12,7	EPDM / PLATED STEEL
2304051		19	12,7	EPDM / PLATED STEEL
2305951		20,6	12,7	EPDM / PLATED STEEL
2304713		22,2	12,7	EPDM / PLATED STEEL
2304716		25,4	12,7	EPDM / PLATED STEEL
2304719		28,6	12,7	EPDM / PLATED STEEL
2304721		31,8	12,7	EPDM / PLATED STEEL
2304723		34,9	12,7	EPDM / PLATED STEEL
2304725		38,1	12,7	EPDM / PLATED STEEL
2304727		44,5	12,7	EPDM / PLATED STEEL
2304729		51	12,7	EPDM / PLATED STEEL
2304730		65	12,7	EPDM / PLATED STEEL

**BAND-IT SYSTEM**

Banding tools, bands and buckles



Item Code	Part Number	Item
2300912	I0LLT0	BANDING TOOL

Item Code	Part Number	Item	Width in	Width mm	Thickness mm	Roll m	Material
2302154	I2LLF0-013	BAND	1/2	12,7	0,76	30	S/S 304
2302155	I2LLF0-019	BAND	3/4	19	0,76	30	S/S 304

Item Code	Part Number	Item	Width in	Width mm	Thickness mm	Box n° pcs/box	Material
2302157	I2LLB0-013	BUCKLES	1/2	12,7	0,76	100	S/S 304
2302156	I2LLB0-019	BUCKLES	3/4	19	0,76	100	S/S 304



## SUPERCLAMP

Single bolt superclamp



Item Code	Part Number	Hose OD min-MAX mm	Clamp width mm	Material
2303161	I1LP10-01918	17 - 19	18	W1 (PLATED STEEL)
2303162	I1LP10-02218	20 - 22	18	W1 (PLATED STEEL)
2303163	I1LP10-02518	23 - 25	18	W1 (PLATED STEEL)
2303164	I1LP10-02818	26 - 28	18	W1 (PLATED STEEL)
2302041	I1LP10-03121	29 - 31	20	W1 (PLATED STEEL)
2302042	I1LP10-03521	32 - 35	20	W1 (PLATED STEEL)
2302043	I1LP10-03921	36 - 39	20	W1 (PLATED STEEL)
2302044	I1LP10-04321	40 - 43	20	W1 (PLATED STEEL)
2302045	I1LP10-04721	44 - 47	22	W1 (PLATED STEEL)
2302046	I1LP10-05121	48 - 51	22	W1 (PLATED STEEL)
2302047	I1LP10-05521	52 - 55	22	W1 (PLATED STEEL)
2302048	I1LP10-05921	56 - 59	22	W1 (PLATED STEEL)
2302026	I1LP10-06321	60 - 63	22	W1 (PLATED STEEL)
2302027	I1LP10-06721	64 - 67	22	W1 (PLATED STEEL)
2302028	I1LP10-07324	68 - 73	24	W1 (PLATED STEEL)
2302029	I1LP10-07924	74 - 79	24	W1 (PLATED STEEL)
2302030	I1LP10-08524	80 - 85	24	W1 (PLATED STEEL)
2302031	I1LP10-09124	86 - 91	24	W1 (PLATED STEEL)
2302032	I1LP10-09724	92 - 97	24	W1 (PLATED STEEL)
2302033	I1LP10-10324	98 - 103	24	W1 (PLATED STEEL)
2302034	I1LP10-11224	104 - 112	24	W1 (PLATED STEEL)
2302035	I1LP10-12124	113 - 121	24	W1 (PLATED STEEL)
2302036	I1LP10-13026	122 - 130	24	W1 (PLATED STEEL)
2302037	I1LP10-13926	131 - 139	26	W1 (PLATED STEEL)
2302038	I1LP10-14826	140 - 148	26	W1 (PLATED STEEL)
2302039	I1LP10-16126	149 - 161	26	W1 (PLATED STEEL)
2302040	I1LP10-17426	162 - 174	26	W1 (PLATED STEEL)



2303165	I2LP10-01918	17 - 19	18	W4 (S/S 304)
2303166	I2LP10-02218	19 - 21	18	W4 (S/S 304)
2303167	I2LP10-02518	23 - 25	18	W4 (S/S 304)
2303168	I2LP10-02818	25 - 27	18	W4 (S/S 304)
2302402	I2LP10-03121	29 - 31	20	W4 (S/S 304)
2302049	I2LP10-03521	31 - 34	20	W4 (S/S 304)
2301826	I2LP10-03921	37 - 40	20	W4 (S/S 304)
2301760	I2LP10-04321	40 - 43	20	W4 (S/S 304)
2302403	I2LP10-04721	43 - 47	20	W4 (S/S 304)
2302050	I2LP10-05121	47 - 51	20	W4 (S/S 304)
2301761	I2LP10-05521	51 - 55	20	W4 (S/S 304)
2301762	I2LP10-05921	55 - 59	20	W4 (S/S 304)
2301763	I2LP10-06321	59 - 63	20	W4 (S/S 304)
2302404	I2LP10-06721	63 - 68	20	W4 (S/S 304)
2302405	I2LP10-07324	68 - 73	25	W4 (S/S 304)
2302234	I2LP10-07924	73 - 79	25	W4 (S/S 304)
2302406	I2LP10-08524	79 - 85	25	W4 (S/S 304)
2302051	I2LP10-09124	85 - 91	25	W4 (S/S 304)
2302407	I2LP10-09724	91 - 97	25	W4 (S/S 304)
2302408	I2LP10-10324	97 - 104	25	W4 (S/S 304)
2302409	I2LP10-11224	104 - 112	25	W4 (S/S 304)
2302411	I2LP10-12124	112 - 121	25	W4 (S/S 304)
2302412	I2LP10-13026	121 - 130	25	W4 (S/S 304)
2302413	I2LP10-13926	130 - 140	28	W4 (S/S 304)
2302414	I2LP10-14826	140 - 150	28	W4 (S/S 304)
2302415	I2LP10-16126	150 - 162	28	W4 (S/S 304)
2302416	I2LP10-17426	162 - 174	28	W4 (S/S 304)

**PW-CLAMP**

Clamps - 1 bolt



Item Code	Part Number	Hose OD min-MAX mm	Clamp width mm	Material
2304220		31 - 35	20	W1 (PLATED STEEL)
2304222		35 - 40	20	W1 (PLATED STEEL)
2304224		40 - 45	20	W1 (PLATED STEEL)
2304225		44 - 50	20	W1 (PLATED STEEL)
2304226		49 - 55	20	W1 (PLATED STEEL)
2304227		54 - 60	20	W1 (PLATED STEEL)
2304229		59 - 65	20	W1 (PLATED STEEL)
2304230		64 - 70	20	W1 (PLATED STEEL)
2304231		69 - 75	20	W1 (PLATED STEEL)



2304098		31 - 35	20	W5 (S/S 316)
2304099		35 - 40	20	W5 (S/S 316)
2304100		40 - 45	20	W5 (S/S 316)
2304761	I3LP10-04720	43 - 47	20	W5 (S/S 316)
2304101		44 - 50	20	W5 (S/S 316)
2304102		49 - 55	20	W5 (S/S 316)
2304767		54 - 60	20	W5 (S/S 316)

## PW-CLAMP

Clamps - 2 bolts



Item Code	Part Number	Hose OD min-MAX mm	Clamp width mm	Material
2304240		40 - 50	20	W1 (PLATED STEEL)
2304241		45 - 55	20	W1 (PLATED STEEL)
2304242		50 - 60	20	W1 (PLATED STEEL)
2304243		55 - 65	20	W1 (PLATED STEEL)
2304244		60 - 70	20	W1 (PLATED STEEL)
2304245		65 - 75	20	W1 (PLATED STEEL)
2304246		70 - 80	20	W1 (PLATED STEEL)
2304247		75 - 85	20	W1 (PLATED STEEL)
2304248		80 - 90	20	W1 (PLATED STEEL)
2304250		85 - 95	20	W1 (PLATED STEEL)
2304251		90 - 100	25	W1 (PLATED STEEL)
2304252		95 - 105	25	W1 (PLATED STEEL)
2304253		100 - 110	25	W1 (PLATED STEEL)
2304254		105 - 115	25	W1 (PLATED STEEL)
2304255		110 - 120	25	W1 (PLATED STEEL)
2304256		115 - 125	25	W1 (PLATED STEEL)
2304257		120 - 130	25	W1 (PLATED STEEL)
2304258		125 - 135	25	W1 (PLATED STEEL)
2304259		130 - 140	25	W1 (PLATED STEEL)
2305983		135 - 145	25	W1 (PLATED STEEL)
2304260		140 - 150	25	W1 (PLATED STEEL)
2304261		150 - 160	25	W1 (PLATED STEEL)
2304262		160 - 170	25	W1 (PLATED STEEL)
2304263		170 - 180	25	W1 (PLATED STEEL)
2304264		180 - 190	25	W1 (PLATED STEEL)
2304265		190 - 200	25	W1 (PLATED STEEL)
2304266		200 - 210	25	W1 (PLATED STEEL)
2304267		210 - 220	25	W1 (PLATED STEEL)
2304268		220 - 230	25	W1 (PLATED STEEL)
2304766		230 - 240	25	W1 (PLATED STEEL)
2305986		240 - 250	25	W1 (PLATED STEEL)
2304271		250 - 260	25	W1 (PLATED STEEL)
2305987		260 - 270	25	W1 (PLATED STEEL)
2306207		270 - 280	25	W1 (PLATED STEEL)
2304273		295 - 305	25	W1 (PLATED STEEL)

hose

fittings

appendix

**PW-CLAMP**

Clamps - 2 bolts



Item Code	Part Number	Hose OD min-MAX mm	Clamp width mm	Material
2304107		40 - 50	20	W5 (S/S 316)
2304109		50 - 60	20	W5 (S/S 316)
2304110		55 - 65	20	W5 (S/S 316)
2304111		60 - 70	20	W5 (S/S 316)
2304112		65 - 75	20	W5 (S/S 316)
2304113		70 - 80	20	W5 (S/S 316)
2304114	I3LP20-08520	75 - 85	20	W5 (S/S 316)
2304115		80 - 90	20	W5 (S/S 316)
2304116		85 - 95	25	W5 (S/S 316)
2304117		90 - 100	25	W5 (S/S 316)
2304118		95 - 105	25	W5 (S/S 316)
2304119		100 - 110	25	W5 (S/S 316)
2304120		105 - 115	25	W5 (S/S 316)
2304121		110 - 120	25	W5 (S/S 316)
2304122		115 - 125	25	W5 (S/S 316)
2304123		120 - 130	25	W5 (S/S 316)
2304124		125 - 135	25	W5 (S/S 316)
2304125		130 - 140	25	W5 (S/S 316)
2304126		140 - 150	25	W5 (S/S 316)
2304128		150 - 160	25	W5 (S/S 316)
2304130		160 - 170	25	W5 (S/S 316)
2304131		170 - 180	25	W5 (S/S 316)
2304772		180 - 190	25	W5 (S/S 316)
2304344		190 - 200	25	W5 (S/S 316)
2304132		200 - 210	25	W5 (S/S 316)
2304133	I3LP20-22025	210 - 220	25	W5 (S/S 316)
2304134		220 - 230	25	W5 (S/S 316)

**DOUBLE BOLT CLAMP WITH TWO SADDLES**



Item Code	Part Number	Hose OD min mm	Hose OD MAX mm	Note	Material
2303169	I9LP20-02200	17	22		MALLEABLE IRON
2303170	I9LP20-02900	22	29	DIN 20039 A	MALLEABLE IRON
2303171	I9LP20-03400	28	34	DIN 20039 A	MALLEABLE IRON
2303172	I9LP20-04000	32	40	DIN 20039 A	MALLEABLE IRON
2303173	I9LP20-04900	39	49	DIN 20039 A	MALLEABLE IRON
2303174	I9LP20-06000	48	60	DIN 20039 A	MALLEABLE IRON
2302152	I9LP20-07200	56	72		MALLEABLE IRON
2303175	I9LP20-07600	60	76	DIN 20039 A	MALLEABLE IRON
2303176	I9LP20-X9400	77	94	DIN 20039 A	MALLEABLE IRON
2303177	I9LP20-10200	89	101		MALLEABLE IRON
2303178	I9LP20-11400	95,2	114,3		MALLEABLE IRON
2303180	I9LP20-12800	114	128		MALLEABLE IRON
2303938	I9LP20-14000	127	139,7		MALLEABLE IRON
2303182	I9LP20-15500	135	155		MALLEABLE IRON
2303184	I9LP20-17500	155	175		MALLEABLE IRON
2303940	I9LP20-19400	175	195		MALLEABLE IRON
2303941	I9LP20-20800	195,3	208		PLATED STEEL
2303186	I9LP20-22500	210	225		MALLEABLE IRON
2303942	I9LP20-25100	227	250		MALLEABLE IRON
2303943	I9LP20-28900	252,4	288,9		PLATED STEEL

## SAFETY CLAMPS EN 14 420-3 / DIN 2817



Item Code	Part Number	Hose ID mm	Hose OD min mm	Hose OD MAX mm	Material
2302729	I5LG4D-013023	13 x 5	22	24	ALUMINIUM
2302730	I5LG4D-019031	19 x 6	30	33	ALUMINIUM
2302731	I5LG4D-025037	25 x 6	36	39	ALUMINIUM
2302015	I5LG4D-032044	32 x 6	43	46	ALUMINIUM
2302016	I5LG4D-038051	38 x 6,5	50	52	ALUMINIUM
2304819	I5LG4D-038055	38 x 8	53	56	ALUMINIUM
2302017	I5LG4D-051066	50 x 8	64	67	ALUMINIUM
2304095	I5LG4D-051069	50 x 10	69	71	ALUMINIUM
2301675	I5LG4D-063080	63 x 7	78	82	ALUMINIUM
2302018	I5LG4D-076091	75 x 8	89	93	ALUMINIUM
2302732	I5LG4D-080096	75 x 10	94	97	ALUMINIUM
2304096	I5LG4D-076099	75 x 12	98	101	ALUMINIUM
2302019	I5LG4D-102117	100 x 8	114	119	ALUMINIUM
2304097	I5LG4D-100120	100 x 10	118	122	ALUMINIUM
2302233	I5LG4D-127146	125 x 10	143	148	ALUMINIUM
2302020	I5LG4D-152171	150 x 10	168	174	ALUMINIUM
2302021	I5LG4D-203226	200 x 12	222	229	ALUMINIUM

Item Code	Part Number	Hose ID mm	Hose OD min mm	Hose OD MAX mm	Material
2304094	I3LG4D-019031	19 x 6	30	33	S/S 316
2302660	I3LG4D-025037	25 x 6	36	39	S/S 316
2302022	I3LG4D-032044	32 x 6	43	46	S/S 316
2302023	I3LG4D-038051	38 x 6,5	50	52	S/S 316
2302024	I3LG4D-051066	50 x 8	64	67	S/S 316
2301676	I3LG4D-063080	65 x 7	78	82	S/S 316
2301759	I3LG4D-076091	75 x 8	89	93	S/S 316
2302025	I3LG4D-102117	100 x 8	114	119	S/S 316

## SAFETY CLAMPS FLEXOLINE®



Item Code	Part Number	Hose ID mm	Hose OD min mm	Hose OD MAX mm	Material
2306570	I5LG4N-025035	25 x 5	34	36	ALUMINIUM
2307051	I5LG4N-032042	32 x 5	41	43	ALUMINIUM
2307052	I5LG4N-038048	38 x 5	47	49	ALUMINIUM
2304822	I5LG4N-051060	50 x 5	59	61	ALUMINIUM
2304823	I5LG4N-063075	63 x 6	74	76	ALUMINIUM
2304824	I5LG4N-076087	75 x 6	86	88	ALUMINIUM
2305871	I5LG4N-102114	100 x 6,5	112	114	ALUMINIUM

TO BE USED WITH THIN-WALL HOSES FOR WHICH SAFETY CLAMPS EN 14 420-3 / DIN 2817 ARE TOO BIG AND NOT SUITABLE

**CRIMPING RING**



Item Code	Part Number	Hose ID mm	Ring ID mm	Ring OD mm	Ring L mm	Material	Note
2303033	R5YBFF0-0242020	13	24	28	20	ALUMINIUM	
2303034	R5YBFF0-0312020	19	31	35	20	ALUMINIUM	
2303035	R5YBFF0-0402520	25	40	45	20	ALUMINIUM	
2306680	R5YBFF0-0552530	45	55	60	30	ALUMINIUM	
2304550	R5YBFF0-0602535	45	60	65	35	ALUMINIUM	
2304551	R5YBFF0-0902540	70-76	90	95	40	ALUMINIUM	
2306888	R5YBFF0-0952575	76	95	100	75	ALUMINIUM	
2303040	R5YBFF0-1102560	90	110	115	60	ALUMINIUM	
2304552	R5YBFF0-1252580	102-105-110	125	130	80	ALUMINIUM	
2303031	R5YBFF0-0452550	25	45	50	50	ALUMINIUM	FOR MORTAR 757AA
2303032	R5YBFF0-0552555	35	55	60	55	ALUMINIUM	FOR MORTAR 757AA
1900418	R5YBFF0-0752555	51	75	80	55	ALUMINIUM	FOR MORTAR 757AA

CRIMPING RING Code	Hose family	Hose ID mm	Hose OD mm	Ring ID mm	INSERT Code
R5YBFF0-0242020	180AA	13	19	24	I818A300-013040 GEKA INSERT ID13 I819E300-013041 EXPRESS-INSERT-ID13
	284AA	13	19		
	185AA	13	21		
R5YBFF0-0312020	180AA	19	27	31	I818A300-019040 GEKA INSERT ID19 I819E300-019041 EXPRESS-INSERT-ID19
	284AA	19	26		
	185AA	19	28		
R5YBFF0-0402520	180AA	25	34	40	I818A300-025040 GEKA INSERT ID25 I819E300-025041 EXPRESS-INSERT-ID25
	284AA	25	33		
	185AA	25	35		
	175AA	25	35		
R5YBFF0-0452550	757AA	25	38	45	Ix38Cxxx-025xxx INN.MORTAR I1306100-025034 INS.MORTAR DN25 BSPP 1" P24
R5YBFF0-0552555	757AA	35	49	55	Ix38Cxxx-035xxx INN.MORTAR I1306100-035042 INS.MORTAR DN35 BSPP 1"1/4 P34
R5YBFF0-0552530	764OL	45	54	55	I519Z300-045052 STORZ ALU 52-C ID45
R5YBFF0-0602535	212AA	45	55	60	I5191300-045040 SYMMETRIC INSERT AL ID45 DN40
R5YBFF0-0752555	757AA	51	67	75	Ix38Cxxx-05xxxx INN.MORTAR I1306100-051060 INS.MORTAR DN51 BSPP 2" P47
	737AA	51	69		
R5YBFF0-0902540	212AA	70	82	90	I5191300-070065 SYMMETRIC INSERT AL ID70 DN65
R5YBFF0-0952575	605AA	76	88	95	I519C200-076076 INS.C&G TYPE C 3" AL
R5YBFF0-1102560	760AA	90	102	110	I5191300-090080 SYMMETRIC INSERT AL ID90 DN80
	760LA	90	102		
	472OO	90	104		
R5YBFF0-1252580	472OO	105	121	125	I5191300-105100 SYMMETRIC INSERT AL ID105 DN100 I5192300-110100 SYMMETRIC INSERT AR AL 100X110
	212AA	110	122		

## SMOOTH FERRULE

Ferrule for composite hose suitable also for industrial hose



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min mm	Hose OD MAX mm	Material
2300847	I205C5-020	3/4	19-20	27	33	S/S 304
2300848	I205C5-025	1	25	33	39	S/S 304
2300849	I205C5-032	1 1/4	32	40	48	S/S 304
2300850	I205C5-040	1 1/2	38-40	46	54	S/S 304
2300851	I205C5-050	2	50-51	61	65	S/S 304
2300852	I205C5-065	2 1/2	63-65	73	81	S/S 304
2300853	I205C5-080	3	76-80	86	94	S/S 304
2300854	I205C5-100	4	100-102	112	118	S/S 304



2300891	I505C5-040	1 1/2	38-40	46	54	ALUMINIUM
2301751	I505C5-050	2	50-51	61	64	ALUMINIUM
2300099	I505C5-065	2 1/2	63-65	73	81	ALUMINIUM
2300917	I505C5-080	3	76-80	86	94	ALUMINIUM
2300892	I505C5-100	4	100-102	112	120	ALUMINIUM

FOR SMOOTH FERRULE IN PLATED STEEL, CONSULT CHAPTER "COMPOSITE HOSE FITTINGS"

## SERRATED FERRULE



Item Code	Part Number	Hose ID in	Hose ID mm	Hose OD min-MAX mm	Material
2303961	I307U038-049053	1 1/2	38	48,5-53	S/S 316
2303962	I307U051-064067	2	51	64-67	S/S 316
2303963	I307U051-068074	2	51	68-74	S/S 316
2304503	I307U063-079082	2 1/2	63	79-82	S/S 316
2303964	I307U063-087091	2 1/2	63	87-91	S/S 316
2304504	I307U076-089092	3	76	88,5-92,5	S/S 316
2303965	I307U076-099000	3	76	95-101,5	S/S 316
2304556	I307U102-117122	4	102	117-122	S/S 316
2303966	I307U102-128135	4	102	128-135	S/S 316



# COMPOSITE

## FITTINGS

### COMBINATION NIPPLE

Male BSPP - Helical hose shank for composite hose ..... F.104  
Male NPT - Helical hose shank for composite hose..... F.104

### SYMMETRIC GUILLEMIN NF E 29.572

Helical hose shank with locking ring for composite hose ..... F.105

### COUPLING API (API RF 1004) - DEVICES FOR TANKS

Gravity coupler API 4" - Symmetric coupling DN80 without locking ring -  
Gasketed included..... F.105

### COUPLING API (API RF 1004) - DEVICES FOR TANKS

Vapor recovery coupler - Female BSP - Gasketed included ..... F.105

### COUPLING API (API RF 1004) - DEVICES FOR TANKS

Vapor recovery coupler - Symmetric coupling DN80 - Gasketed included .. F.105

### FIXED FLANGE

Helical hose shank for composite hose ..... F.106

### SWIVEL FLANGE

Helical hose shank for composite hose ..... F.107

### SMOOTH FERRULE FOR COMPOSITE HOSE

Smooth ferrule for composite hose ..... F.108

### CRIMPING SEAL FOR COMPOSITE HOSE

Crimping Seal for composite hose ..... F.108



## COMBINATION NIPPLE

Male BSPP - Helical hose shank for composite hose



Item Code	Part Number	Hose ID mm	Thread in	Thread type	Material
2304567	I5206100-025034	25	1	BSPP	ALUMINIUM
2300740	I5206100-040049	40	1 1/2	BSPP	ALUMINIUM
2300741	I5206100-050060	50	2	BSPP	ALUMINIUM
2300742	I5206100-065076	65	2 1/2	BSPP	ALUMINIUM
2300743	I5206100-080090	80	3	BSPP	ALUMINIUM
2300744	I5206100-100114	100	4	BSPP	ALUMINIUM

Item Code	Part Number	Hose ID mm	Thread in	Thread type	Material
	I1206100-150165	150	6	BSPP	PLATED STEEL
	I1206100-200219	200	8	BSPP	PLATED STEEL



Item Code	Part Number	Hose ID mm	Thread in	Thread type	Material
2300729	I3206100-025034	25	1	BSPP	S/S 316
2300730	I3206100-032042	32	1 1/4	BSPP	S/S 316
2300731	I3206100-040049	40	1 1/2	BSPP	S/S 316
2300732	I3206100-050060	50	2	BSPP	S/S 316
2300733	I3206100-065076	65	2 1/2	BSPP	S/S 316
2300734	I3206100-080090	80	3	BSPP	S/S 316
2300735	I3206100-100114	100	4	BSPP	S/S 316
	I3206100-150165	150	6	BSPP	S/S 316
	I3206100-200219	200	8	BSPP	S/S 316



Item Code	Part Number	Hose ID mm	Thread in	Thread type	Material
	I7206100-025034	25	1	BSPP	BRONZE
	I7206100-032042	32	1 1/4	BSPP	BRONZE
	I7206100-040049	40	1 1/2	BSPP	BRONZE
	I7206100-050060	50	2	BSPP	BRONZE
	I7206100-065076	65	2 1/2	BSPP	BRONZE
	I7206100-080090	80	3	BSPP	BRONZE
	I7206100-100114	100	4	BSPP	BRONZE



Item Code	Part Number	Hose ID mm	Thread in	Thread type	Material
2300711	IP206100-040049	40	1 1/2	BSPP	PP
2300712	IP206100-050060	50	2	BSPP	PP
	IP206100-065076	65	2 1/2	BSPP	PP
2300713	IP206100-080090	80	3	BSPP	PP
2300714	IP206100-100114	100	4	BSPP	PP

## COMBINATION NIPPLE

Male NPT - Helical hose shank for composite hose



Item Code	Part Number	Hose ID mm	Thread in	Thread type	Material
	I1228100-050060	50	2	NPT	PLATED STEEL
	I1228100-080090	80	3	NPT	PLATED STEEL
	I1228100-100114	100	4	NPT	PLATED STEEL



Item Code	Part Number	Hose ID mm	Thread in	Thread type	Material
	I3228100-050060	50	2	NPT	S/S 316
	I3228100-080090	80	3	NPT	S/S 316
2306670	I3228100-100114	100	4	NPT	S/S 316

**SYMMETRIC GUILLEMIN NF E 29.572**

Helical hose shank with locking ring for composite hose



Item Code	Part Number	Hose shank DN mm	Head DN mm	Material
2300753	I5291300-040040	40	40	ALUMINIUM
2300754	I5291300-050050	50	50	ALUMINIUM
2300755	I5291300-065065	65	65	ALUMINIUM
2300756	I5291300-080080	80	80	ALUMINIUM
2300757	I5291300-100100	100	100	ALUMINIUM



Item Code	Part Number	Hose shank DN mm	Head DN mm	Material
2302462	I3291300-040040	40	40	S/S 316
2300736	I3291300-050050	50	50	S/S 316
2300737	I3291300-065065	65	65	S/S 316
2300738	I3291300-080080	80	80	S/S 316
2300739	I3291300-100100	100	100	S/S 316



Item Code	Part Number	Hose shank DN mm	Head DN mm	Material
2300763	I7291300-040040	40	40	BRONZE
2300764	I7291300-050050	50	50	BRONZE
2300765	I7291300-065065	65	65	BRONZE
2300766	I7291300-080080	80	80	BRONZE
2300767	I7291300-100100	100	100	BRONZE

**COUPLING API (API RF 1004) - DEVICES FOR TANKS**

Gravity coupler API 4" - Symmetric Guillemin coupling DN80 without locking ring - Gasketed included



Item Code	Part Number	Head DN mm	Head DN mm	Material	Note
2302201	I5A943C3-Z80100	100	SYM 80	ALUMINIUM	FITTING WITH SIGHTGLASS
2302202	I5A943C3-080100	100	SYM 80	ALUMINIUM	FITTING WITHOUT SIGHTGLASS

**COUPLING API (API RF 1004) - DEVICES FOR TANKS**

Vapor recovery coupler - Female BSP - Gasketed included



Item Code	Part Number	Head DN mm	Thread in	Thread type	Material
2302186	I5AC3806-080090	80	3	BSP	ALUMINIUM
2302187	I5AC3806-080114	100	3	BSP	ALUMINIUM

**COUPLING API (API RF 1004) - DEVICES FOR TANKS**

Vapor recovery coupler - Symmetric Guillemin coupling DN80 - Gasketed included



Item Code	Part Number	Head DN mm	Head DN mm	Material	Note
2301027	I5A9C091-080080	80	SYM 80	ALUMINIUM	SYM. WITHOUT LOCKING RING
2301028	I5A9C091-080100	100	SYM 80	ALUMINIUM	SYM. WITH LOCKING RING

## FIXED FLANGE

Helical hose shank for composite hose



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose Shank	Material flange
2301253	I12BD66B-040040	1 1/2	40	PN 10/16	PLATED STEEL	PLATED STEEL
2301254	I12BD66B-050050	2	50	PN 10/16	PLATED STEEL	PLATED STEEL
2301256	I12BD66B-080080	3	80	PN 10/16	PLATED STEEL	PLATED STEEL
2301257	I12BD66B-100100	4	100	PN 10/16	PLATED STEEL	PLATED STEEL
	I12BD66B-150150	6	150	PN 10/16	PLATED STEEL	PLATED STEEL
	I12BD66B-200200	8	200	PN 10/16	PLATED STEEL	PLATED STEEL
	I12BD66B-250250	10	250	PN 10/16	PLATED STEEL	PLATED STEEL



	I32BD66B-040040	1 1/2	40	PN 10/16	S/S 316	S/S 316
	I32BD66B-050050	2	50	PN 10/16	S/S 316	S/S 316
	I32BD66B-080080	3	80	PN 10/16	S/S 316	S/S 316
2304576	I32BD66B-100100	4	100	PN 10/16	S/S 316	S/S 316
	I32BD66B-150150	6	150	PN 10/16	S/S 316	S/S 316
	I32BD66B-200200	8	200	PN 10/16	S/S 316	S/S 316
	I32BD66B-250250	10	250	PN 10/16	S/S 316	S/S 316



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose Shank	Material flange
	I12BE66B-040040	1 1/2	40	ASA 150	PLATED STEEL	PLATED STEEL
2300062	I12BE66B-050050	2	50	ASA 150	PLATED STEEL	PLATED STEEL
2300064	I12BE66B-080080	3	80	ASA 150	PLATED STEEL	PLATED STEEL
2300065	I12BE66B-100100	4	100	ASA 150	PLATED STEEL	PLATED STEEL
	I12BE66B-150150	6	150	ASA 150	PLATED STEEL	PLATED STEEL
	I12BE66B-200200	8	200	ASA 150	PLATED STEEL	PLATED STEEL
	I12BE66B-250250	10	250	ASA 150	PLATED STEEL	PLATED STEEL



	I32BE66B-040040	1 1/2	40	ASA 150	S/S 316	S/S 316
	I32BE66B-050050	2	50	ASA 150	S/S 316	S/S 316
	I32BE66B-080080	3	80	ASA 150	S/S 316	S/S 316
2301308	I32BE66B-100100	4	100	ASA 150	S/S 316	S/S 316
	I32BE66B-150150	6	150	ASA 150	S/S 316	S/S 316
	I32BE66B-200200	8	200	ASA 150	S/S 316	S/S 316
	I32BE66B-250250	10	250	ASA 150	S/S 316	S/S 316

**SWIVEL FLANGE**

Helical hose shank for composite hose



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose Shank	Material flange
2300000	I12BD72A-040040	1 1/2	40	PN 10/16	PLATED STEEL	PLATED STEEL
2300001	I12BD72A-050050	2	50	PN 10/16	PLATED STEEL	PLATED STEEL
2300002	I12BD72A-065065	2 1/2	65	PN 10/16	PLATED STEEL	PLATED STEEL
2300003	I12BD72A-080080	3	80	PN 10/16	PLATED STEEL	PLATED STEEL
2300004	I12BD72A-100100	4	100	PN 10/16	PLATED STEEL	PLATED STEEL
	I12BD72A-150150	6	150	PN 10/16	PLATED STEEL	PLATED STEEL
	I12BD72A-200200	8	200	PN 10/16	PLATED STEEL	PLATED STEEL
	I12BD72A-250250	10	250	PN 10/16	PLATED STEEL	PLATED STEEL



	IA2BD72A-040040	1 1/2	40	PN 10/16	S/S 316	PLATED STEEL
	IA2BD72A-050050	2	50	PN 10/16	S/S 316	PLATED STEEL
	IA2BD72A-080080	3	80	PN 10/16	S/S 316	PLATED STEEL
	IA2BD72A-100100	4	100	PN 10/16	S/S 316	PLATED STEEL
	IA2BD72A-150150	6	150	PN 10/16	S/S 316	PLATED STEEL
	IA2BD72A-200200	8	200	PN 10/16	S/S 316	PLATED STEEL
	IA2BD72A-250250	10	250	PN 10/16	S/S 316	PLATED STEEL



	I32BD72A-040040	1 1/2	40	PN 10/16	S/S 316	S/S 316
	I32BD72A-050050	2	50	PN 10/16	S/S 316	S/S 316
	I32BD72A-080080	3	80	PN 10/16	S/S 316	S/S 316
	I32BD72A-100100	4	100	PN 10/16	S/S 316	S/S 316
	I32BD72A-150150	6	150	PN 10/16	S/S 316	S/S 316
	I32BD72A-200200	8	200	PN 10/16	S/S 316	S/S 316
	I32BD72A-250250	10	250	PN 10/16	S/S 316	S/S 316



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose Shank	Material flange
	IP2BC72A-050050	2	50	PN 10	PP	PP
	IP2BC72A-080080	3	80	PN 10	PP	PP
	IP2BC72A-100100	4	100	PN 10	PP	PP



Item Code	Part Number	Hose ID in	Hose ID mm	Flange type	Material Hose Shank	Material flange
	I12BE77A-040040	1 1/2	40	ASA 150	PLATED STEEL	PLATED STEEL
2300049	I12BE77A-050050	2	50	ASA 150	PLATED STEEL	PLATED STEEL
2300051	I12BE77A-080080	3	80	ASA 150	PLATED STEEL	PLATED STEEL
2300052	I12BE77A-100100	4	100	ASA 150	PLATED STEEL	PLATED STEEL
	I12BE77A-150150	6	150	ASA 150	PLATED STEEL	PLATED STEEL
	I12BE77A-200200	8	200	ASA 150	PLATED STEEL	PLATED STEEL
	I12BE77A-250250	10	250	ASA 150	PLATED STEEL	PLATED STEEL



	IA2BE77A-040040	1 1/2	40	ASA 150	S/S 316	PLATED STEEL
	IA2BE77A-050050	2	50	ASA 150	S/S 316	PLATED STEEL
	IA2BE77A-080080	3	80	ASA 150	S/S 316	PLATED STEEL
	IA2BE77A-100100	4	100	ASA 150	S/S 316	PLATED STEEL
	IA2BE77A-150150	6	150	ASA 150	S/S 316	PLATED STEEL
	IA2BE77A-200200	8	200	ASA 150	S/S 316	PLATED STEEL
	IA2BE77A-250250	10	250	ASA 150	S/S 316	PLATED STEEL



	I32BE77A-040040	1 1/2	40	ASA 150	S/S 316	S/S 316
	I32BE77A-050050	2	50	ASA 150	S/S 316	S/S 316
	I32BE77A-080080	3	80	ASA 150	S/S 316	S/S 316
	I32BE77A-100100	4	100	ASA 150	S/S 316	S/S 316
	I32BE77A-150150	6	150	ASA 150	S/S 316	S/S 316
	I32BE77A-200200	8	200	ASA 150	S/S 316	S/S 316
	I32BE77A-250250	10	250	ASA 150	S/S 316	S/S 316

## SMOOTH FERRULE FOR COMPOSITE HOSE



Item Code	Part Number	Hose ID mm	Material
2304568	I105C5-040	40	PLATED STEEL
2300824	I105C5-050	50	PLATED STEEL
2300896	I105C5-065	65	PLATED STEEL
2300825	I105C5-080	80	PLATED STEEL
2304569	I105C5-100	100	PLATED STEEL



Item Code	Part Number	Hose ID mm	Material
2300848	I205C5-025	25	S/S 304
2300849	I205C5-032	32	S/S 304
2300850	I205C5-040	40	S/S 304
2300851	I205C5-050	50	S/S 304
2300852	I205C5-065	65	S/S 304
2300853	I205C5-080	80	S/S 304
2300854	I205C5-100	100	S/S 304



Item Code	Part Number	Hose ID mm	Material
2300891	I505C5-040	40	ALUMINIUM
2301751	I505C5-050	50	ALUMINIUM
2300099	I505C5-065	65	ALUMINIUM
2300917	I505C5-080	80	ALUMINIUM
2300892	I505C5-100	100	ALUMINIUM

## CRIMPING SEAL FOR COMPOSITE HOSE



Item Code	Part Number	Hose ID mm	Material
2300484	INJS00-025	25	NBR
2300485	INJS00-032	32	NBR
2300486	INJS00-040	40	NBR
2300487	INJS00-050	50	NBR
2300488	INJS00-065	65	NBR
2300489	INJS00-080	80	NBR
2300490	INJS00-100	100	NBR

SEALS IN VITON® ARE AVAILABLE ON REQUEST



# APPENDIX

HOSE CHOICE, STORAGE,  
USE & MAINTENANCE

**A.3**

HOSE CHEMICAL GUIDE &  
RESISTANCE CHART

**A.6**

INDUSTRIAL FITTINGS  
MANUAL

**A.22**

INDUSTRIAL HOSE &  
RECOMMENDED FITTING  
TABLES

**A.40**



(Reprinted from Assogomma "Recommendation regarding choice, storing, use and maintenance of rubber hoses" June 2004.)

**1. CHOICE CRITERIA**

In order to choose a hose suitable for a specific use it is necessary to determine at least the following basic points:

**1.1 Pressure - suction**

It is necessary to determine the maximum working pressure or suction values. It should be taken into consideration that the normal life of the hose will be prejudiced in the case of a sudden pressure variation or pressure peaks exceeding the maximum allowed.

**1.2 Compatibility of conveyed substances**

The nature, designation, concentration, temperature and state ( liquid, solid, gaseous) must be determined. In the case of solid substances conveyed, it is necessary to indicate granulometry, density, quantity of the solid substance conveyed as well as the nature, speed and flow of the fluid carrying it.

**1.3 Environment**

It is necessary to know the place of usage, ambient temperature, hygrometric conditions and exposure to atmospheric agents. Specific environment conditions such as ultraviolet rays, ozone, sea water, chemical agents and other aggressive elements could cause early degeneration of the hose.

**1.4 Mechanical stress**

The minimum bend radius\* must be established as well as any stress related to traction, torsion, bending, vibration, compression, deflection and longitudinal or transversal loads.

**1.5 Cover abrasion**

Even though the hoses are manufactured to guarantee good resistance to abrasion, it is advisable to use further protection when damage to the hose may be caused by shock, corrosion and/or dragging.

**1.6 Working position**

Indicate if the hose is either placed on the ground, suspended or immersed.

**1.7 Used or foreseen couplings**

This must be selected according to:

- couplings and flanges: type, dimension, type of thread, standard references and kind of application;
- hose shank: internal and external diameter and length;
- ferrules/clumps: type and dimension.

In order to guarantee good performance the compatibility between the hose and type of coupling must be ensured. The assembly must guarantee the working pressure suggested by the manufacturer.

**1.8 Technical standards**

National, European and International technical standards and rules must always be adhered to. In the case of hoses for peculiar purposes it is advisable to establish proper specification with the manufacturer.

**1.9 Marking**

Manufacturers must mark hoses at regular intervals with the information necessary for the proper use of the product.

When interpretation is not clear or information is insufficient, user should apply to the manufacturer.

\* The **minimum bend radius** is the radius to which the hose can be bent in service without damage or appreciably shortening its life. The radius is measured to the inside of the curvature. **Formula to determine minimum hose length given bend radius and degree of bend required:**

$$L = \frac{A}{360^\circ} \times 2 \pi B$$

Where:

- L = Minimum length of hose to make bend (Bend must be made equally along this portion of hose length).
- A = Angle of bend
- B = Given bend radius of hose
- π = 3.14

Example: To make a 60° bend at the hose's rated minimum bend radius of 15 cm

$$L = \frac{60}{360^\circ} \times 2 \times 3.14 \times 15 = 15.7 \text{ cm} \cong 16 \text{ cm}$$

Thus, the bend must be made over approximately 16 cm of hose length. The bend radius used must be equal to or greater than the rated minimum bend radius. Bending the hose to a smaller bend radius than minimum may kink the hose and result in damage and early failure.

**2. RECOMMENDATION FOR CORRECT STORAGE**

Rubber is subject, by nature, to changes in physical properties. These changes, which normally occur over the course of time, according to the kind of rubber used, can be accelerated by one particular factor or by a combination of these.

Reinforcement materials are also adversely affected by unsuitable conditions of storage. The following recommendations give some precautions to be taken to ensure the minimum deterioration to stored articles.

**2.1 Storage life**

Storage time should be reduced to the minimum through programme rotation.

When it is not possible to avoid long term storage, it is necessary that the user, as indicated in ISO 8331, carries out a complete check of the hose before its use according to the following criteria:

- maximum two years storage for assembly;
- maximum four years storage for hoses.

**2.2 Temperature and humidity**

The best temperature for the storage of rubber hoses varies from 10 to 25 degrees centigrade. Hoses should not be stored at temperature above 40 °C or below 0 °C. When the temperature is below -15 °C it is necessary to take precautions when handling.

Hoses should not be stored near sources of heat nor in conditions of high or low humidity. A humidity level of a maximum of 65% is recommended.

**2.3 Light**

Hoses must be stored in dark places, avoiding direct sun light or strong artificial light. Should store rooms have windows or glass openings, these must be screened.

**2.4 Oxygen and ozone**

Hoses should be protected from circulating air by suitable packing or by storage in air-tight containers. As ozone has a particularly aggressive action on all rubber products, the store house must not contain material producing ozone like devices under high electrical tension, electric engines or other materials provoking sparks or electric arcs.

**2.5 Contact with other materials**

Hoses should not come into contact with solvents, fuels, oils, greases, volatile chemical mixtures, acids, disinfectants and other organic liquids in general.

Furthermore direct contact with some metals ( for example manganese, iron, copper and its alloys) and relative mixture exercise harmful effects on some types of rubber.

Contact with PVC and creosote impregnated timber or fabrics should be avoided.

**2.6 Heat sources**

The temperature limits given in point 2.2 must be respected. When this is impossible, it is necessary to use a thermic shield at a distance not less than one meter.

**2.7 Electric or magnetic field**

Variation in electric or magnetic fields must be eliminated in store houses as these could provoke currents in metal coupling, heating them. Similar fields could be caused by high-tension cables or high frequency generators.



## 2.8 Storage conditions

Hoses must be stored in a relaxed condition free from tension, compression or other deformation and contact with objects that could pierce or cut must be avoided. It is preferable to store hoses on special shelves or on dry surfaces.

Coiled hoses must be stored horizontally avoiding piling. When this is not possible the height of the piles must be such to avoid permanent deformation of hoses stored underneath.

The inside diameter of the coil, during the storage, must be such as to not compromise the performances of the products. In particular, this diameter must not have value less than those indicated by the manufacturers.

It is advisable to avoid storing coiled hoses on poles or hooks. Furthermore it is advisable to store hoses to be delivered straight, horizontally, without bending.

## 2.9 Rodents and insects

Hoses must be protected from rodents and insects. When such a risk is probable adequate precautions must be taken.

## 2.10 Marking or packaged items

It is advisable that hoses are always easy to identify even if packaged.

## 2.11 Exit from storage

Prior to delivery hoses must be checked for integrity and must correspond to the required use. After long storage if couplings are not clipped, swaged or built-in, it is necessary to check that locking collars are tight.

## 2.12 Return to storage

Hoses that have been used must be free from all substances prior to storage. Particular attention must be paid when chemical, explosive, inflammable, abrasive and corrosive substances have been conveyed. After cleaning, check whether the hose is suitable to use again.

## 3. NORMS AND METHOD OF USE

After having chosen the type of hose, the users must keep in mind the following hose installation criteria:

### 3.1 Preassembly checks

Prior to installation it is necessary to check the characteristics of the hose carefully to verify that type, diameter and length conform with the required specifications. Moreover a visual check must be effected to make sure that there are no obstructions, cuts, damaged cover or any other evident imperfections.

### 3.2 Handling

Hoses must be moved with care avoiding knocks, dragging over abrasive surfaces and compression. Hoses must not be pulled violently when twisted or knotted. Heavy hoses, normally delivered in a straight line, must be laid on special supports for transport (see attachment). Should wood supports be used these must not be treated with creosote or painted with substances which could damage the rubber.

### 3.3 Pressure and seal test

The working pressure generally indicated by manufacturer must be respected. Following installation, when air bubbles have been eliminated, increase the pressure to test the assembly and check possible leaks. This test must be carried out in a place free from danger.

### 3.4 Temperature

Hoses must always be used within the temperature limits generally indicated. In case of doubt apply to manufacturers.

### 3.5 Conveyed products

Hoses must be used exclusively to convey substances for which they were manufactured. In case of doubt it is always advisable to contact manufacturer. As far as possible, hoses must be empty after usage. Where any risks are involved special precautions must be taken to avoid bursts.

### 3.6 Environment

Hoses must be used exclusively in the environment conditions for which they were manufactured.

### 3.7 Bending radius

Installation underneath the minimum bending radius reduces the life of the hose considerably. Moreover it is necessary to avoid bending at fitting ends. \*(See attached 1).

### 3.8 Torsion

Hoses are not manufactured to work in torsion, except for specific purposes.

### 3.9 Traction

Traction must be within limits specified by manufacturer. In case of doubts it's advisable to get in touch with manufacturers.

### 3.10 Vibration

Vibrations subject hoses to stress from heat and fatigue above all near couplings and premature bursting may occur. It is therefore advisable to check that hoses have been manufactured to resist such stress.

### 3.11 Kinking

Some users tend to obstruct the flow of liquids by kinking the hose. This system is not advised by manufacturers because the reinforcement is subjected to excessive stress and could lead to bursting.

## 3.12 Choice and application of couplings

Provided that the manufacturers instructions are met it is always necessary to check the compatibility between the working pressure of couplings and hoses. Couplings with too large diameters cause abnormal stress which can split the hose reinforcement, whilst too small dimensions can create clumping difficulties and leakage.

Furthermore couplings must be free from sharp and cutting edges which could damage the hose.

Water or soap and water can be used to fit couplings. Do not use products containing oils or solvents except for the kind of hoses destined to be used with the latter.

Softening hoses with mallet or similar tools is forbidden.

Take care to avoid external collars or other tightening tools. The use of makeshift collars (for example wire) with sharp edges or too tight clumping leads to damage of cover and reinforcement.

## 3.13 Electrical properties

According to ISO 8031: 2009 "Rubber and plastics hoses and hose assemblies – Determination of electrical resistance and conductivity" hoses and hose assemblies are classified in three types depending on their property to conduct electricity:

### a) INSULATING

Not incorporating conductive elements and not capable of dissipating electrostatic charges.

The electrical resistance is more than  $10^8 \Omega$  per length.

### b) CONDUCTIVE ( $\Omega$ grade)

Incorporating electrically conducting materials in the hose construction.

The resistance along the conductive layer, in case of hoses, or the resistance between fittings, in case of hose assemblies, shall not exceed  $10^6 \Omega$  per length.

### c) ELECTRICALLY BONDED (grade M)

Incorporating at least two metallic bonding wires into the hose construction. The resistance along the bonding wires, in case of hoses, or the resistance between fittings, in case of hose assemblies, shall not exceed  $10^2 \Omega$  per length.

According to EN 12115: 2011 "Rubber and thermoplastics hoses and hose assemblies for liquid or gaseous chemicals – specification", when there is a need for hose assemblies of type b) or c) with an electrical resistance through the hose wall of not more than  $10^9$ , these hoses shall be marked with the additional symbol "/T", e.g. "Ω/T" or "M/T".

Such hose assemblies are required in situations where dissipation of electrostatic charges are a safety requirement (i.e. in explosive environments).

## 3.14 Installation between two points

The hoses must be supported in a suitable way, so as the normal movement when the hose is under pressure (variations in length, diameter, twisting, etc.) are allowed.

## 3.15 Mobile pieces

When hoses link mobile pieces, it is necessary to check that the length of the hose is suitable and that the movement does not subject the hose to shock or chafing and that abnormal stress, bending, traction or torsion do not occur.

## 3.16 Identification

If further marking is necessary, self-adhesive tape may be used. When the use of paint is unavoidable check compatibility of cover with manufacturer.

## 4. MAINTENANCE

Even though choice, storage and installation have been carried out correctly regular maintenance is necessary.

Frequency of the latter is determined according to use involved. During regular check special attention must be paid to couplings and to the appearance of the following irregularities which show deterioration of hose:

- Cracks, cuts, abrasions, unsticking, tears in cover revealing reinforcement;
- Deformity, bubbles, local swelling under pressure;
- Sticky or soft areas;
- Leaks.

Such irregularities justify hose substitutions. When cover bears date of expiry this must be kept to even if the hose shows no apparent signs of wear.

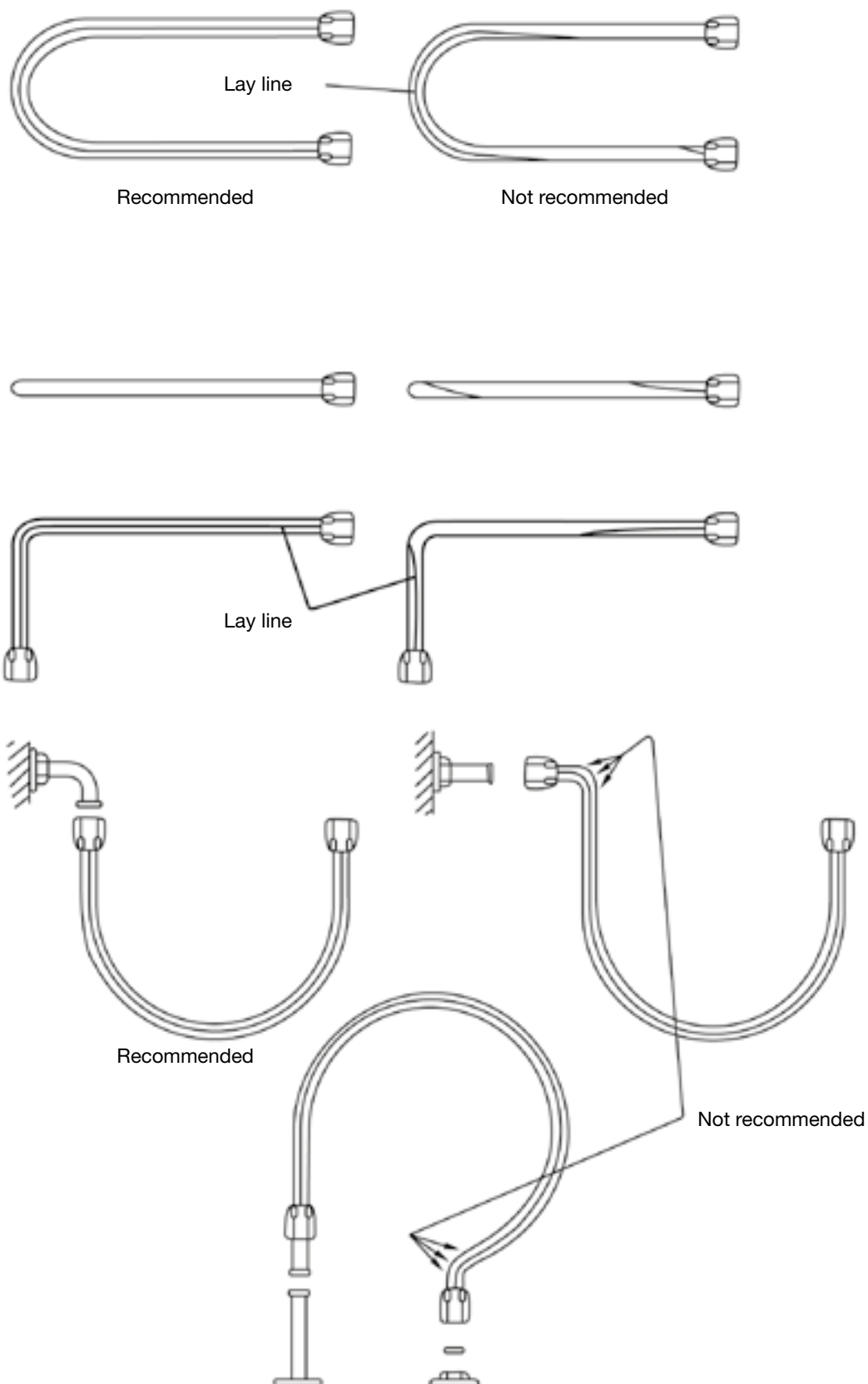
### 4.1 Repairs

Hose repairs are not advisable. However when deterioration occurs at an end section, and if the full length allows for such, the worn section may be eliminated.

### 4.2 Cleaning

If cleaning instructions are not supplied by the manufacturer clean, if necessary, with soap and water avoiding use of solvents (petrol, paraffin, etc) or detergents. Never use abrasive, pointed or cutting tools (wire brushes).

\*(Attached 1)



This drawings refer to assemble installed in real conditions. Some of these may request layouts violating such recommendations. It is necessary to point out that such cases are only applicable in test conditions and cannot be used for general use.

The chemical guide in this section is offered as a general indication of the compatibility of the various materials used in ALFAGOMMA hose with the chemicals and fluids listed. The basis for the ratings in this guide include actual service experience, the advice of various polymer suppliers, and the considered opinion of our rubber chemists. When in doubt, a sample of the compound should always be tested with the particular chemical it is to handle. Some of the variables that come into play in the resistance of a compound to chemical attack are:

**1. Temperature of the Material Transmitted:**

Higher temperatures increase the effect of chemicals on rubber compounds. The increase varies with the polymer and the chemical. A compound quite suitable at room temperature might fail very quickly at higher temperatures.

**2. Service Conditions:**

A rubber compound usually swells when exposed to a chemical. With a given percent of swell, a hose tube may function satisfactorily if the hose is in a static condition, but fail quickly if the hose is subject to flexing.

**3. The Grade or Blend of the Rubber Compound:**

Basic rubber polymers are sometimes mixed or blended together to enhance a particular property for a specific service. The reaction to a particular chemical blend of polymers may, therefore, be somewhat different from the reaction to the single ones. When in doubt, a sample of the compound should always be tested with the particular chemical it is to handle.

## GENERAL CHEMICAL RESISTANCE OF ALFAGOMMA HOSE COMPOUNDS

COMMON NAME	ASTM Designation D1418-93	COMPOSITION	GENERAL PROPERTIES
Natural rubber	NR	Isoprene rubber	Excellent physical properties, including abrasion resistance. Not oil resistant.
SBR	SBR	Styrene-butadiene rubber	Good physical properties, including abrasion resistance. Not oil resistant.
Butyl rubber	IIR	Isobutene-isoprene rubber	Very good weathering resistance. Low permeability to air. Good physical properties. Poor resistance to petroleum based fluids.
EPDM	EPDM	Ethylene-propylene-diene-terpolymer	Good general purpose polymer. Excellent heat, ozone and weathering resistance. Not oil resistant.
Cross linked polyethylene	XLPE	Cross linked polyethylene	Excellent resistance to most solvents, oils and chemicals. Do not confuse with chemical properties of standard polyethylene.
Ultra high molecular weight polyethylene	UPE	Ultra high molecular weight polyethylene	Excellent resistance to most solvents, chemicals and hydrocarbons. Excellent abrasion and wear resistance. Inert and suitable for food contact. Do not confuse with chemical properties of standard polyethylene.
Teflon/Fluorocarbon resin	PTFE	Polytetra-fluoroethylene	Excellent chemical and solvent resistance. Inert to most materials. Smooth anti-adhesive surface, easy to clean.
Nitrile rubber	NBR	Acrylonitrile-butadiene rubber	Excellent oil resistance. Good physical properties.
Neoprene	CR	Chloroprene rubber	Excellent weathering resistance. Flame retardant. Good oil resistance. Good physical properties.
Hypalon®	CSM	Chloro-sulfonated polyethylene	Excellent ozone, weathering and acid resistance. Good abrasion and heat resistance. Can be compounded for good oil resistance.
Polyurethane	AU	Polyester urethane	Excellent abrasion and wear resistance. Not resistant to hydrolysis.
Viton	FKM	Fluorocarbon rubber	Excellent high temperature resistance, particularly in air or oil. Very good resistance to chemicals.

The following data is based on tests and believed to be reliable; however, we emphasise that the tabulation should be used as a guide only, since it does not take into consideration all variables such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Contact ALFAGOMMA for recommendation and assistance.

Note : All data based on 20 °C (68 °F) unless otherwise noted.

Key:

- Blank = No Data
- E = Excellent
- G = Good
- F = Fair
- C = Conditional
- X = Unsatisfactory

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
ACETALDEHYDE	F	X	E	E	E	E	C	X	C	F	X	X
ACETIC ACID, GLACIAL	C	X	G	G	E	E	C	X	F	C	C	X
ACETIC ACID, 10%	G	F	G	E	E	E	C	E	E	E	X	G
ACETIC ACID, 50%	X	F	G	E	E	E	C	F	F	E	X	F
ACETIC ANHYDRIDE	F	X	C	G	E	E	F	X	G	E	F	X
ACETIC OXIDE	F	X	G	G	E	E	F	X	G	E	F	X
ACETONE	C	C	E	E	E	E	X	X	C	X	X	X
ACETONE CYANOHYDRIN	F		E	E			X	X	G	F	X	X
ACETONITRILE	G		E	E			E	X	E	G		X
ACETOPHENONE	C	X	G	E	E	E	X	X	X	X	X	X
ACETYL ACETONE	X	X	E	E			X	X	X	X	C	X
ACETYL CHLORIDE	X	X	X	X			E	X	X	C	X	G
ACETYL OXIDE	F		G	G	E	E	F	X	G	E	F	X
ACETYLENE	C	F	E	E	E	E	E	E	E	C	C	E
ACETYLENE DICHLORIDE	X	X	F	C			E	X	X	X		G
ACETYLENE TERACHLORIDE	X		X	C			X	X	C	X	X	
ACROLEIN	G	F	E	E				F	G	G	X	C
ACRYLONITRILE	C	F	X	E	E	E	G	X	X	C	X	X
ACRYLIC ACID	X			X			X	X	X	G	C	
ADIPIC ACID	E		X	C	E	E	G	E	E	G	E	E
AIR, +300°F	X	X	G	G			E	G	G	G	C	E
ALK-TRI	X		X	X			X	X	X	X	X	E
ALLYL ALCOHOL	E		E	E	E	E		E	E	E		E
ALLYL BROMIDE	X		X	X				X	X	X		G
ALLYL CHLORIDE	X	E	C	X	E	F	G	G	X	X		E
ALUM	E		E	G	E	E	C	C	E	E	G	E
ALUMINIUM ACETATE	E	X	G	E			E	C	C	F	X	C
ALUMINIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	C	E
ALUMINIUM FLUORIDE	E	E	E	E	E	E	E	E	E	E	C	E
ALUMINIUM FORMATE	X		G	E				X	E	X	X	X
ALUMINIUM HYDROXIDE	E	G	E	E	E	E	E	E	E	E	G	E
ALUMINIUM NITRATE	E	E	E	E			E	E	E	E	C	E
ALUMINIUM SULFATE	E	G	A	E	E	E	C	E	G	E	C	E
AMINES-MIXED	C	G		G			G	X	C	X	X	X
AMINO BENZENE	X	X	E	C	E	E	E	X	X	C	X	E
AMINODIMETHILBENZENE	X		G	C				C	X	F		X
AMINOETHANE	C	X	G	E	E	E	E	C	C	F	X	X
AMINOXYLENE	X		G	E			G	C	X	X	X	F
AMMONIUM CARBONATE	E	E	E	E			C	C	E	C	C	E
AMMONIUM CHLORIDE	E	E	E	E	E	E	E	G	E	E	G	E
AMMONIUM HYDROXIDE	G	X	G	E	E	E	E	C	E	E	C	G
AMMONIUM NITRATE	E	E	E	E	E	E	C	E	E	E	C	E
AMMONIUM PHOSPHATE, DIBASIC	E	E	E	E	E	E	C	E	E	E		E
AMMONIUM SULFATE	E	G	E	E	E	E	C	E	E	E	E	E
AMMONIUM SULFIDE	E	G	E	E	E	E	C	C	E	E		X
AMMONIUM THIOSULFATE	E		E	E				C	E	E	X	E
AMYL ACETATE	C	X	G	C	E	E	X	X	X	X	X	X
AMYL ACETONE	X		G	G				X	X	X		X
AMYL ALCOHOL	C	G	E	E	E	E	E	C	C	E	X	E
AMYL BROMIDE	X		X	C				X	X	X		G
AMYL CHLORIDE	X	X	X	X	E	E	E	X	X	X	F	E
AMYL ETHER	X		X	X				C	X	F		
AMYLAMINE	F		G	X				F	C	F		C
ANETHOLE	X		X	X				X	X	X		G
ANILINE	X	X	E	C	E	E	E	X	X	C	X	E
ANILINE DYES	C	G	G	C	E	E	C	X	C	G	X	G

CHEMICAL OR MATERIAL CONVEYED	COMPOUND												
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM	
ANILINE OIL	X	X	G	C	E	E	G	X	X	C	X	F	
ANIMAL FATS	X	X	C	C	E	E	E	E	C	F	F	E	
ANTIMONY PENTACHLORIDE	X			C	E	E		X	C	X	E		
AQUA REGIA	X	X	C	C	X	X	C	X	X	C	X	E	
ARGON	X	C	G	E			E	E	G	X	C	E	
ARSENIC ACID	E	E	E	E	E	E	E	E	E	E	C	E	
ASPHALT	X	X	X	X	E	E	E	C	C	F	C	E	
ASTM FUEL A	X	X	X	X			F	E	C	C	E	E	
ASTM FUEL B	X	X	X	X			X	C	X	X	C	E	
ASTM FUEL C	X	X	X	X			X	C	X	X	X	E	
ASTM OIL NO.1	X	X	X	X	E	E	E	E	E	C	E	E	
ASTM OIL NO.2	X	X	X	X	E	E	G	E	C	X	C	E	
ASTM OIL NO.3	X	X	X	X	E	E	G	E	C	C	C	E	
ASTM OIL NO.4	X	X	X	X			G	C	X	X	X	E	
AUTOMATIC TRANSMISSION FLUID	X	X	X	X			C	E	C	C	C	E	
BANANA OIL	X		C	C			X	X	X	C	X	X	
BARIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E	
BARIUM HYDROXIDE	E	E	E	E	E	E	E	E	E	E	E	E	
BARIUM SULPHIDE	E	G	E	E	E	E	E	E	E	E	E	E	
BEER	E	E	E	E	E	E	E	E	E	E	C	E	
BEET SUGAR LIQUORS	E	E	E	E	E	E	E	E	C	E	X	E	
BENZAL CHLORIDE			G					X					
BENZALDEHYDE	X	X	G	E	E	E	C	X	X	X	X	X	
BENZENE	X	X	X	C	E	F	C	X	C	C	X	E	
BENZENE CARBOXYLIC ACID	X		E	C			E	X	E	C	X	E	
BENZINE		X	X	X	E	E	F	E	C	C	F	E	
BENZOIC ACID	X	X	C	C			C	X	E	C	X	E	
BENZOL	X	X	X	C	E	F	C	X	C	C	X	E	
BENZOTRICHLORIDE	X			E			E	X	X	X			
BENZYL ACETATE	X		E	E				X	E	G	X	X	
BENZYL ALCOHOL	X	X	E	C			E	X	C	C	X	E	
BENZYL CHLORIDE	X	X	X	X			E	X	X	X	X	C	
BENZYL ETHER	X	X	G	C			F	X	X	X	C	X	
BLACK SULFATE LIQUOR	G	G	G	G	E	E		G	G	G	X	E	
BLEACH	C	X	E	E	G	F	E	X	C	E	C	G	
BORAX SOLUTION	C	G	E	E	E	E	E	C	E	E	E	E	
BORIC ACID	E	E	E	E	E	E	E	E	E	E	E	E	
BRAKE FLUID (HD-557)12 DAYS	X	E	E	E			E	C	C	C	X	X	
BRINE	E		E	E	E	E	E	E	E	E	G	E	
BROMACIL													
BROMOBENZENE	X	X	X	X			X	X	X	X	X	E	
BROMOCHLOROMETANE	X		C	G	F	F		X	X	X		F	
BROMOETHANE	C	X	C	X	E	E	E	C	X	X	X	E	
BROMOTOLUENE	X		X					X		X		G	
BUNKER OIL	X	X	X	X			E	E	G	C	C	E	
BUTADIENE	X	X	X	X	E	E	C	X	X	G	X	E	
BUTANE	X	X	X	X	E	E	C	E	E	C	E	E	
BUTANOIC ACID	C		X	C			E	C	X	C	C	E	
BUTANOL	E	E	C	C	E	E	E	E	E	E	X	E	
BUTANONE	X	X	E	E	E	E	X	X	X	X	X	X	
BUTOXYETHANOL	X		C	E			F	C	X	G	X	X	
BUTYL ACETATE	X	X	C	C	E	E	X	X	X	X	X	X	
BUTYL ACRYLATE	X	X	X	C	E	E	X	X	X	X		X	
BUTYL ALCOHOL	E	E	C	C	E	E	E	E	E	E	X	E	
BUTYL ALDEHYDE	X	X	C	C	E	E	X	X	X	X	C	X	
BUTYL BENZYL PHTHALATE	X		E	E	E	E		X	E	X	X	F	
BUTYL CARBITOL	X	X	E	E			C	X	X	C	X	F	
BUTYL CELLOSOLVE	X	X	C	C	E	E	F	C	X	G	X	X	
BUTYL CHLORIDE	X		F	X				X	X	X	E	E	
BUTYL ETHER	X	X	C	C	E	E	X	X	C	X	C	X	
BUTYL ETHER ACETALDEHYDE	X		G	X				X	X	X		X	
BUTYL ETHYL ETHER	X		X	F				G	X	C			
BUTYL OLEATE	X	X	C	C			C	X	X	X		E	
BUTYL PHTHALATE	X	X	G	E	E	E	C	X	X	X	X	F	
BUTYL STEARATE	X	X	C	X	E	E	C	C	X	X	G	E	
BUTYLENE	X	X	X	X			C	C	C	C	C	E	
BUTYRALDEHYDE	X	X	C	C	E	E	X	X	X	X	C	X	
BUTYRIC ACID	C	X	X	C	E	E	E	C	X	C	C	G	
BUTYRIC ANHYDRIDE	F		F	E				C	G	G	X		
CADMIUM ACETATE	X		E					X		E		X	
CALCIUM ALUMINATE	E		E					E		E		E	
CALCIUM BICHROMATE			E	E				C	E	F			
CALCIUM BISULFIDE	X	G	X	E			E	C	E	F	C	E	

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
CALCIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E
CALCIUM HYDROXIDE	E	E	E	E	E	E	E	E	E	E	C	E
CALCIUM HYPOCHLORITE	C	X	E	E	E	E	E	C	C	E	C	E
CALCIUM NITRATE	E	E	E	E			E	E	E	E	E	E
CALCIUM SULFIDE	C	X	E	E			E	E	E	E	C	E
CALCIUM ACETATE	E	X	E	E			C	C	C	C	X	E
CAPRYLIC ACID	C		F					F		G		
CARBAMIDE	E		E	E	E	E	F	G	G	E	G	E
CARBITOL	C	E	C	C	E	E	E	C	C	C	X	E
CARBOLIC ACID PHENOL	C		C				E			C	C	
CARBON DIOXIDE	G	G	E	G	E	E	E	E	G	E	E	E
CARBON DISULFIDE	X		X	X	C	C	C	X	X	X	C	E
CARBON MONOXIDE	C	G	E	E	E	E	E	E	C	C	E	E
CARBON TETRACHLORIDE	X		X	X	E	E	X	X	X	X	C	E
CARBONIC ACID	E	G	E	E	E	E	E	C	E	E	E	E
CASTOR OIL	E	E	C	C	E	E	E	E	E	E	E	E
CAUSTIC SODA	E	E	E	G	E	E	E	C	G	E	C	E
CELLOSOLVE ACETATE	C	X	C	G	E	E	C	X	X	X	C	X
CELLUGUARD	E	E	E	E			E	E	E	E	X	E
CETYLIC ACID	C	G	C	C	E	E	E	E	G	C	C	E
CHINA WOOD OIL	X	X	C	X	E	E	E	E	C	C	C	E
CHLORINATED SOLVENTS	X	X	X	X	E	E	C	X	X	X	X	E
CHLORO-2-PROPANONE	X		C				C			X	X	
CHLOROACETIC ACID	X	X	C	C	E	E	C	X	X	G	X	G
CHLOROACETONE	X	X	C	E	E	E	C	X	X	X	X	X
CHLOROBENZENE	X	X	X	X	E	E	C	X	X	X	X	E
CHLOROBUTANE	X		F	X				X	X	X	E	E
CHLORODANE	X	X	X	X			C	C	C	C	C	E
CHLOROETHYL BENZENE	X		X	X				C	X	X	C	
CHLOROFORM	X	X	X	X	F	F	E	X	X	X	X	E
CHLOROPENTANE	X		X	X			C	X	X	X	F	E
CHLOROSULFONIC ACID	X	X	X	X	F	X	C	X	X	X	X	X
CHLOROTOLUENE	X	X	X	X			C	X	X	X	X	E
CHLORO-X	X	X	C	G			E	C	C	C	X	E
CHROME PLATING SOLUTIONS	X	X	C	C			E	X	X	X	X	E
CHROMIC ACID	C	X	C	C	E	E	E	X	X	E	C	E
CHROMIUM TRIOXIDE	X	X	G	C			E	X	X	E	X	C
CINNAMENE	X	X	X	X			X	C	X	X	C	G
CIS-9-OCTADECENOIC ACID	X	X	X	C	E	E	E	G	C	C	C	E
CITRIC ACID	E	E	E	E	E	E	E	E	E	E	E	E
COAL TAR OIL	X	X	X	X	E	E	E	E	G	F	F	E
COAL TAR	X	X	X	X	E	E	C	C	C	C	C	E
COAL TAR NAPHTHA	X		X	X	E	E	E	X	X	X	G	E
COCONUT OIL	X	X	C	C	E	E	C	E	C	C	C	E
COKE OVEN GAS	C	X	C	X	E	E	C	X	X	C	X	E
COOLANOL	X	X	X	X			E	E	C	C	X	E
COPPER CHLORIDE	E	E	E	E	E	E	E	E	C	C	E	E
COPPER CYANIDE	E	E	E	E	E	E	G	E	E	E	E	E
COPPER HYDRATE	F		E					G		G		F
COPPER HYDROXIDE	F		E					G		G		F
COPPER SULFATE	C	G	C	E	E	E	E	E	E	E	C	E
CORN OIL	X	X	C	C	E	E	E	E	C	C	E	E
COTTONSEED OIL	X	X	C	C	E	E	C	E	C	C	E	E
CREOSOTE	X	X	X	X	E	E	C	C	C	X	C	E
CRESOLS	X	X	X	X	E	E	E	X	X	X	X	E
CRESYLIC ACID	X	X	X	X	E	E	C	X	X	X	X	E
CROTONALDEHYDE	X	F	E	E	E	E		X	X	X	X	X
CRUDE OIL	X	X	X	X	E	E	C	C	C	C	E	E
CUMENE	X	X	X	X			C	X	X	X	X	E
CUPRIC CARBONATE												E
CUPRIC HYDROXIDE	F		E					G		G		F
CUPRIC NITRATE	G		E	C	E	E	G	C	E	E	G	E
CUPRIC SULFATE	C	G	C	E	E	E	E	E	E	E	C	E
CUTTING OIL	C	X	X	X			C	E	C	C	E	E
CYCLOHEXANE	X	X	X	X	E	E	C	E	X	C	C	E
CYCLOHEXANOL	C	X	X	X	E	E	C	G	C	C	F	E
CYCLOHEXANONE	X	X	C	C	E	E	C	X	X	X	X	X
CYCLOPENTANE	X		X	X			C	G	C	X	E	E
CYCLOPENTANOL												G
CYCLOPENTANONE	X		X					X		X		X
CYCLOPENTYL ALCOHOL				C				X	F			
D-FURALDEHYDE	X		C	E			C	G	F	C	C	

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
DDT IN KEROSENE	X	X	X	X			X	E	C	C	G	E
DECAHYDRONAPHTHALENE	X	E	X	X	E	E	C	X	X	X	X	X
DECALIN	X	E	X	X	E	E	C	X	X	X	X	X
DECYL ALCOHOL	X		X	X				E	X	C	E	G
DECYL ALDEHYDE	X		F	X				X		X		X
DECYL BUTYL PHTHALATE	X		E					X		X		F
DETERGENT, WATER SOLUTION	E	G	E	E	E	E	E	E	C	C	G	E
DEVELOPING FLUID	E	G	C	C			E	E	E	E	E	E
DEXTRON	X	X	X	X			E	E	C	X	C	E
DI (2ETHYLHEXYL) ADIPATE	X		E	G	G	G		X	X	X		F
DI (2ETHYLHEXYL) PHTHALATE	X	X	C	C	E	E	C	X	X	X	C	G
DI-ISO-BUTYLENE	X	X	X	X	E		C	C	C	X	X	E
DI-ISO-DECYL PHTHALATE	X		E	E				X	X	X		F
DI-ISO-PROPANOLAMINE	G		E	E				G	G	F		
DI-ISO-PROPYL ETHER	X		X	X	E	E	X	G	C	C	G	X
DI-ISO-PROPYL KETONE	X	X	E	E	E		C	X	X	X	X	X
DI-P-MENTHA-1,8-DIENE	X		X	X				C	X	X		E
DIACETONE ALCOHOL	X	X	E	E	E	E	X	X	F	C	X	X
DIACETYLMETHANE		X	E	E			X	X	X	X	F	X
DIAMMONIUM ORTHOPHOSPHATE				E				E	E			
DIAMYL NAPHTHALENE	X		E		E	E				X		
DIAMYLAMINE	G	X	E	E			E	G	C	C	E	X
DIAMYLENE	X		X	X					X	X		E
DIAMYLPHENOL	X		X		E	E		X		X		E
DIBENZYL ETHER	X	X	C	C			C	X	X	X	C	X
DIBROMOBENZENE	X		X	X				X	X	X		E
DIBROMOMETHANE	X		X	C			G	X	X	X	C	E
DIBUTYL ETHER	X	X	C	C	E	E	X	X	C	X	C	X
DIBUTYL PHTHALATE	X	X	C	C	E	E	C	X	X	X	C	C
DIBUTYL SEBACATE	X	X	C	C	E	E	C	X	X	X	X	E
DIBUTYLAMINE	X	X	X	F			C	X	C	C	X	X
DICALCIUM PHOSPHATE	E		E	E				E	E	E		E
DICHLOROETHYLENE	X		C	C	F	F	C	X	X	X	X	E
DICHLOROACETIC ACID	X	X	C	X	E	E		X	X	X	C	X
DICHLOROBENZENE	X	X	X	X			X	X	X	X	X	E
DICHLOROBUTANE	X	X	X	X			C	C	X	X	X	E
DICHLORODIFLUOROMETHANE	C	E	C	C	E	G	X	C	C	C	C	G
DICHLOROETHANE	X	X	C	X	E	E	C	X	X	X	X	E
DICHLOROETHYL ETHER	X		X	X			E	X	X	X		
DICHLOROHEXANE	X		X	X				X	X	X		E
DICHLOROMETHANE	X	X	X	X			C	X	X	X	X	G
DICHLOROPENTANE	X	X	X	X				X	X	X	X	E
DICHLOROPROPANE	X		X	X	G	G		F	X	X	C	E
DICHLOROPROPENE	X		X	X	G	G		C	X	X	C	
DIESEL OIL	X	X	X	X	E	E	E	E	C	C	C	E
DIETHANOL AMINE	G	X	E	G			E	C	G	F	C	X
DIETHYLBENZENE	X	X	X				C			X	X	E
DIETHYL ETHER	X	X	X	X	E	E	X	X	X	X	C	X
DIETHYL KETONE	X		G	G	E	E		X	X	X		X
DIETHYL OXALATE	F		X	X				X	X	X		
DIETHYL PHTHALATE	X		X	F	E	E		X	X	X	C	F
DIETHYL SEBACATE	X	X	G	F			C	C	X	F	X	G
DIETHYL SULFATE	X	E	C	E			C	X	E	X	X	X
DIETHYL AMINE	C	G	C	C	E	E	C	C	C	C	C	X
DIETHYLENE GLYCOL	E	E	E	E	E	E	E	E	E	E	X	E
DIETHYLENE OXIDE	X		X	E			X	X	X	X	C	X
DIETHYLENETRIAMINE	G	X	E	E			E	G	X	F		X
DIHYDROXY SUCCINIC ACID	E		G	G			E	G	G	E	E	E
DIHYDROXYDIETHYL ETHER	E		E	E	E	E	E	E	E	E	X	E
DIISOBUTYL KETONE	X	X	G	E	E	E	C	X	X	X	X	E
DIISODECYL PHTHALATE	X		E	E	E	E		X	X	X		F
DIISOCTYL ADIPATE	X		E	E				X	X	X		F
DIISOCTYL PHTHALATE	X		E	G	E	E		X	X	X		F
DIMETHYL CARBINOL	E		E	E	E	E	E	C	G	E	X	E
DIMETHYL KETONE	C	F	E	E	E	E	X	X	C	X	C	X
DIMETHYL PHTHALATE	X	X	C	C	E	E	C	X	X	X	X	E
DIMETHYL SULFATE	X		G	X	E	E		X	X	X	G	X
DIMETHYL SULFIDE	X		F	X				X	X	X		
DIMETHYLAMINE	G	X	G	E	E	E		F	X	X	X	X
DIMETHYLANILINE	X	X	G	E			G	X	X	X	X	X
DIMETHYLBENZENE	X	X	X	X			X	X	X	X	C	E
DIMETHYLBUTANE	X		X				X			X	G	

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
DIOXANE	X	X	C	C	E	E	X	X	X	X	X	X
DIPENTENE	X	X	X	X			C	C	X	X	X	E
DIPENTYLAMINE	G	X	E	E			E	G	C	C	E	X
DIPROPYLAMINEOLAMINE												
DIPROPYLENE GLYCOL	E		E	E				E	E	E		E
DISODIUM PHOSPHATE	E		E	E				E	E	E	E	E
DIVINYL BENZENE	X	X	X	X				X	X	X	X	E
DOWTHERMN, A AND E	X	X	X	X			C	X	X	C	X	E
DRY CLEANING FLUIDS	X	X	X	X			G	C	X	X	X	E
ETHANOIC ACID		G		C	E	E		C	C			X
ETHANOL	E	E	E	E	E	E	E	C	E	E	C	E
ETHANOLAMINE	C	X	C	E			E	C	C	C	C	X
ETHERS	X	X	X	X	E	E	X	F	X	X	C	X
ETHYL ACETATE	X	X	C	C	E	E	X	X	X	X	C	X
ETHYL ACETOACETATE	C	F	C	C			X	X	X	X	C	X
ETHYL ACETONE	X		G	G				X	X	X		X
ETHYL ACRYLATE	X	X	C	C			C	X	X	X	X	X
ETHYL ALCOHOL	E	E	E	E	E	E	E	C	E	E	C	E
ETHYL ALDEHYDE	C		E	E	E	E	C	X	X	F	F	X
ETHYL ALUMINIUM DICHLORIDE	X		X					X		X		G
ETHYL BENZENE	X	X	X	X	E	E	F	X	X	X	X	E
ETHYL BROMIDE	C	X	X	X	E	E	E	C	X	X	X	E
ETHYL BUTYL ACETATE	X		E					X		G		X
ETHYL BUTYL ALCOHOL	E		E							E		G
ETHYL CELLULOSE	C	G	C	C	E	E	E	C	C	C	C	X
ETHYL CHLORIDE	C	G	E	C	E	E	G	E	X	C	C	E
ETHYL DICHLORIDE	X	X	F	X	E	E	E	X	X	X	X	G
ETHYL ETHER	X	X	X	X	E	E	X	X	X	X	C	X
ETHYL FORMATE	X	X	C	C			E	X	C	C		E
ETHYL IODIDE	X		F	F	E	E		X	X	X		G
ETHYL OXALATE	E	X	X	E			E	X	X	X	E	E
ETHYL PHTHALATE	X		X	F	E	E		X	X	X	C	F
ETHYL SILICATE	C	G	E	E			E	E	E	C	X	E
ETHYL-N-BUTYL KETONE	X		G	G				X	X	X		X
ETHYL-1-BUTANOL	E		E	E				E	E	E		
ETHYLAMINE	C	X	C	E			E	C	C	F	X	X
ETHYLENE CHLOROXYDRIN	C	G	C	C			E	X	C	C	X	E
ETHYLENE DIAMINE	C	G	E	E	E	E	G	C	E	C	X	X
ETHYLENE DIBROMIDE	X	X	C	C	F	F	G	X	X	X	X	G
ETHYLENE DICHLORIDE	X	X	C	X	F	F	C	X	X	X	X	E
ETHYLENE GLYCOL MONOETHYL ACETATE												E
ETHYLENE GLYCOL MONOBUTYL ETHER	X	X	E	E	E	E	G	F	X	C	X	X
ETHYLENE GLYCOL MONOETHYL ETHER	X		C	C	E	E	C	C	X	X	X	X
ETHYLENE GLYCOL	E	E	E	E	E	E	E	E	E	E	C	E
ETHYLENE OXIDE	X	X	C	C	E	E	X	X	X	X	X	X
FATTY ACIDS	X	X	C	X	E	G	E	C	C	C	G	E
FERRIC BROMIDE	E		E					E		E		E
FERRIC CHLORIDE	E	E	E	E		E	E	E	C	C	E	E
FERRIC NITRATE	E	E	E	E		E	E	E	E	E	E	E
FERRIC SULFATE	E	E	E	E		E	E	E	E	E	E	E
FERROUS ACETATE	X		E	G				X	X	E		X
FERROUS CHLORIDE	E		E	E		E	E	E	E	E	E	E
FERROUS SULFATE	E	E	E	E		E	E	E	E	E	E	E
FLUOROBORIC ACID	E	E	C	E	E	E		E	E	E	X	E
FLUORINE	X		X	E	G	G		X	X	X	X	E
FLUOROSILICIC ACID	E	G	E	E	E	E	E	E	E	E	C	E
FORMALDEHYDE	C	G	C	C	E	E	C	C	C	C	C	E
FORMALIN	C	G	C	E	E	E	C	G	G	C	C	E
FORMIC ACID	C	E	E	E	E	E	C	C	C	E	X	C
FREON 113	C	G	X	X			X	E	E	C	C	E
FREON 12	X	E	X	C	F	G	X	C	C	E	E	E
FREON 22	C	E	C	C	F	E	X	X	E	E	X	X
FUEL A	X		X	X			F	E	C	C	E	
FUEL B	X		X	X			X	C	X	X	C	
FUEL OIL	X	X	X	X	E	E	C	E	C	C	C	E
FURAN	X	X	X	X	E	E	C	X	X	X	X	X
FURFURAL	X	X	C	C	E	E	C	X	X	C	C	X
FUEL A (ASTM)	X	X	X	X				E	C	X		E
FUEL B (ASTM)	X	X	X	X				C	X	X		E
FUEL OIL	X	X	X	X	E	E	E	E	C	C	X	E
FURAN	X	X	X	X	E	E		X	X	X		
FURFURAL	X	X	E	C	E	E	E	X	X	X		X

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
FURFURAN	X	X	X	X	E	E	C	X	X	X	X	X
FURFURYL ALCOHOL	X	X	C	C	E	E	G	X	X	X	X	X
GALLIC ACID	E	G	C	C	E	E	E	C	C	C	X	E
GALLOTANNIC ACID	E		G	E			E		E	E	E	E
GAS, COAL											G	
GASOLINE	C	X	C	X	E	E	C	E	X	C	C	E
GLACIAL ACRYLIC ACID	X		X	X			X	X	X	G	C	
GLUCONIC ACID	X		F	E				C	E	G		
GLUCOSE	E	E	E	E	E	E	E	E	C	E	E	E
GLYCERINE	E	E	E	E	E	E	E	E	E	E	G	E
GLYCEROL	E	E	E	E	E	E	E	E	E	E	G	E
GLYCOGENIC ACID	X		F	E				F	E	G		
GLYCOLS	E	E	E	E	E	E	E	E	E	E	C	E
GLYCONIC ACID	X		F	E				F	E	G		
GLYCLYL ALCOHOL												
GREASE	X	X	X	X			G	E	F	C	E	E
GREEN SULPHATE LIQUOR	C	G	E	E			E	C	C	G	E	E
HELIUM	E	E	E	E			E	E	E	E	E	E
HEPTALDEHYDE	X	X	C	C			C	E	C	X	C	
HEPTANAL	X	X	C	C			C	E	C	X	C	
HEPTANE	X	X	X	X		E	C	E	C	C	C	E
HEPTANOIC ACID	X		X	X				E	C	C	E	
HEXADECANOIC ACID	E	G	G	G	E	E		E	X	X	E	E
HEXALDEHYDE	X	X	C	C	E	E	C	X	C	C	C	X
HEXANE	X	X	X	X	E	E	C	E	C	C	C	E
HEXANOL	E	E	C	C	E	E	E	C	C	C	C	E
HEXENE	X	X	X	X			X	C	C	C	C	E
HEXYL ALCOHOL	E	E	C	C	E	E	E	C	C	C	C	E
HEXYL METHYL KETONE	X		G	G				X	C	X	X	X
HEXYLAMINE	F		G	G				F	G	F		X
HEXYLENE GLYCOL	E		E	F				C	E	E	X	E
HISTOWAX	X		X							C	E	
HYDRAULIC & MOTOR OIL	X	X	C	C	E	E	E	C	C	C	C	E
HYDRAZINE	C	G	C	E			E	C	C	C	X	X
HYDROBROMIC ACID	E	X	E	E	E	E	E	X	C	E	X	E
HYDROCHLORIC ACID	C	X	C	C	C	C	E	C	C	C	C	E
HYDROCYANIC ACID	C	G	C	E			E	C	C	E	C	E
HYDROFLUORIC ACID	C	X	C	C	E	E	E	C	C	E	C	G
HYDROFLUOSILICIC ACID	E	G	E	E	E	E	E	X	C	E	F	E
HYDROGEN CHLORIDE ANHYDROUS	X	X	E	E			E	X	C	E		E
HYDROGEN DIOXIDE	G		G	G			E	F	F	C	G	E
HYDROGEN GAS	C	G	E	E	E	E	E	E	E	E	E	E
HYDROGEN PEROXIDE OVER 10%	C	X	C	C	C	F	C	X	X	C	C	E
HYDROGEN PEROXIDE 10%	G	X	G	G	E	E	E	F	F	C	G	E
HYDROGEN SULFIDE	X	X	E	E	E	E	E	X	E	G	C	X
HYDROXY BENZENE	C		C	C			E	X	X	C	X	E
HYDROXYISOBUTYRONIRILE	C		E	E				C	G	F	X	
HYDROXYTOLUENE	X	X	C	C			E	X	C	C	X	E
IMINODI-2-PROPANOL	G		E	E				G	G	F		
IMINODIETHANOL	C	X	C	G			E	C	G	F	C	X
IODINE	X	G	C	C	E	E	E	C	C	C	C	E
IODINE PENTAFLUORIDE	X	X	X	X			X	X	X	X	X	X
IODOFORM	X		X	E			X	E	X	X	C	
ISO-BUTANAL	X	G		G	E	E	X	X	F		X	X
ISO-BUTYLAMINE	F		E	G				X	X	F		X
ISO-BUTYLBROMIDE	X		X	X				X	X	X		G
ISO-BUTYLCARBINOL	X		E	E			E	E	E	E	F	E
ISOCYANATES	F		G	G	E	E	F	C	X	F	G	G
ISOCTANE	X	X	X	X	E	E	F	E	C	C	C	E
ISOPROPYL ACETATE	X	X	C	C	E	E	X	X	X	X	X	X
ISOPROPYL ALCOHOL	E	E	E	E	E	E	E	C	C	E	X	E
ISOPROPYL ETHER	X	X	X	X	E	E	X	G	X	C	G	X
JET FUELS	X	X	X	X	E	E	C	C	C	X	C	E
JP-4 OIL	X	X	X	X			C	E	X	X	C	E
KEROSENE	X	X	X	X	E	E	C	E	C	C	E	E
KETONES	C	E	G	E	E	E	X	C	C	C	C	X
LACQUER SOLVENTS	X		X	X	E	E	X	X	X	X	X	X
LACTIC ACID - COLD	E	G	E	C	G	G	E	C	C	E	C	E
LACTIC ACID - HOT	E	X	E	C	G	G	E	C	C	E	C	E
LARD	X	X	C	C	E	E	E	E	C	C	E	E
LAVENDER OIL	X	X	X	X			E	C	X	X	X	E
LEAD ACETATE	E	X	E	E	E	E	X	C	C	X	C	E

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
LEAD NITRATE	E	E	E	E			G	E	E	E		E
LEAD SULFATE	E		E	E	E	E		E	E	E	G	E
LIME	E		E	E	E	E		G	G	G	E	E
LIME BLEACH	C	E	E	E			E	C	C	E	C	E
LIME SULFUR	C	X	E	E	E	E	E	E	E	E	C	E
LIMONENE	X		X	X			C	C	X	X	X	E
LINOLEIC ACID	X	X	X	X			E	C	C	X	F	G
LINSEED OIL	X	X	C	C	E	E	E	E	C	C	E	E
LIQUID PETROLEUM GAS	X	X	X	X	E	E	G	E	G	C	E	E
LUBRICATING OIL	X	X	X	X	E	E	E	C	C	C	C	E
LYE SOLUTIONS	E	G	E	G			E	C	G	E	C	G
MEK	X	X	E	E	E	E	X	X	X	X	X	X
MAGNESIUM ACETATE	X	X	E	G				X	X	E	X	X
MAGNESIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E
MAGNESIUM HYDRATE	C	G	E	E	E	E	G	C	C	E	C	G
MAGNESIUM HYDROXYDE	C	G	E	E	E	E	G	C	C	E	C	G
MAGNESIUM SULFATE	C	G	E	E	E	E	E	E	E	E	G	E
MALEIC ACID	X	X	X	C	E	E	E	X	X	X	C	E
MALEIC ANHYDRIDE	X	X	C	C			E	X	X	X		G
MALIC ACID	E	G	X	C	C	C	E	E	C	C	C	E
MANGANOUS SULFATE	G		G	E			E	E	E	E	X	
MERCURY	E	E	E	E	E	E	E	E	E	E	E	E
MERCURY VAPORS	G	E	E	E			E	E	G	E		E
MESITYL OXIDE	X	X	F	C			X	X	X	X	X	X
METHALLYL ALCOHOL	E		E	E				E	E	E		G
METHALLYL CHLORIDE	X		X						X	X	C	
METHANE CARBOXYLIC ACID see Acetic Acid					E	E						
METHANOIC ACID	C	E	E	E	E	E	C	G	E	E	X	C
METHANOL	E	E	C	E	E	E	E	C	E	E	C	F
METHOXY ETHANOL	E		E	E	E	E		C	E	E	X	
METHYL ACETATE	C	X	C	C			X	X	C	X	X	X
METHYL ACETOACETATE	X	X	C	C			X	X	X	X	X	
METHYL ACETONE	X	X	E	E	E	E	X	X	X	X	X	
METHYL ALLYL CHLORIDE	X		X						X	X	C	F
METHYL AMYL CARBINOL	G		G	E			C	E	G	E	X	G
METHYL BENZENE	X	X	X	X	F	F	X	X	X	X	X	E
METHYL BROMIDE	X	X	C	X	F	F	G	C	X	X	X	E
METHYL BUTANE	X		X	X			X	E	X	X	G	
METHYL BUTYL KETONE	X	X	E	E	E	E	X	X	X	X	X	X
METHYL CARBITOL				G			E	F	F			
METHYL CELLOSOLVE	X	X	C	C	E	E	E	C	C	C	X	X
METHYL CHLORIDE	X	X	C	C	F	F	X	X	X	X	X	E
METHYL CYANIDE	G		E	E			E	C	E	G	X	X
METHYL ETHYL KETONE	X	X	E	E	E	E	X	X	X	X	X	X
METHYL HEXANOL	E		E	E				E	E	E		G
METHYL METHACRYLATE	X	X	X	X	E	E	X	X	X	X	X	X
METHYL NORMAL AMYL KETONE	X			E				C	E	X		X
METHYL PROPYL ETHER	X		X	X				X	X	C	X	
METHYL SALICYLATE	X		C	C	E	E	F	X	X	X		
METHYL STYRENE	X		X	X				X	X	X		
METHYL SULFIDE	X		F	X				X	X	X		
METHYL-ISO-AMYL-KETONE	X		G							X		
METHYL-2-BUTANONE	X	X	C	C			X	X	X	X	X	X
METHYL-2-HEXANONE	X		G							X		
METHYL-2-PENTANOL	G		E	E				G	G	E		C
METHYL-2-PENTANONE	X		C	C			X	X	X	X	X	
METHYL-4-ISOPROPYL BENZENE	X		X	X			F	X	X	X	X	E
METHYL AMYL ACETATE	X									X		X
METHYL AMYL ALCOHOL	G		E	E				G	G	E		C
METHYLCYCLOHEXANE	X		X	X				X	X	C		G
METHYLENE BROMIDE	X		X	X	E	E	G	C	X	X	C	G
METHYLENE CHLORIDE	X	X	X	C	F	F	C	X	X	X	X	G
METHYLETHYL KETONE	X	X	E	E			X	X	X	X	X	X
METHYL HEXYL KETONE	X		G	G	E			X	C	X	X	X
METHYL ISOBUTYL CARBINOL	G		E	C				X	X	E		C
METHYLISOBUTYL KETONE	X	X	C	C	E	E	X	X	X	X	X	X
METHYLISOPROPYL KETONE	X	X	C	C			X	X	X	X	X	X
METHYLLACTONITRILE	F		E	E				X	G	F	X	
METHYLPROPYL CARBINOL	E		E					E		E		G
METHYLPROPYL KETONE	X		G	G	E	E		X	X	X		X
MIL-A-6091	E		E	E				C	E	E	X	
MIL-C-4339	X		X	X				E	X	X	E	

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
MIL-C-7024	X		X	X				E	C	X	E	
MIL-E-9500	E	E	E	E				E	E	E	X	E
MIL-F-16884	X	X	X	X				E	C	C	C	E
MIL-F-17111	X	X	X	X				E	C	X	C	E
MIL-F-25558	X	X	X	X			E	E	C	C	G	
MIL-G-10924	X	X	X	X				E	C	C	G	E
MIL-G-25013	C	X	X	E				E	C	C	C	
MIL-G-25537	X	X	X	X				E	C	C	G	
MIL-G-3545	X		X	X				E	C	C	E	
MIL-G-5572	X	X	X	X				E	X	X	C	E
MIL-G-7711	X	X	X	X				E	X	X	E	E
MIL-H-05606	X		X	C				E	C	C	C	E
MIL-H-13910	E	E	G	E				E	E	G	X	E
MIL-H-19457	X	X	E	C				X	X	X	X	C
MIL-H-22251			G	E				C	C	C		
MIL-H-27601	X		X	X				G	C	C	C	X
MIL-H-5606	X		X	C			E	E	C	C	C	E
MIL-H-6083	C	X	X	X				E	E	C	G	E
MIL-H-8446	X	X	X	X			E	G	E	C	C	E
MIL-J-5161	X	X	X	X				C	X	X	C	E
MIL-J-5624	X	X	X	X			C	E	X	X	C	E
MIL-L-15016	X	X	X							C	E	E
MIL-L-17331	X	X	X							G	E	E
MIL-L-2104	X		X	X				E	C	C	E	
MIL-L-21260	X	X	X	X				E	C	C	E	
MIL-L-23699	X	X	X	X			E	C	C	C	C	
MIL-L-25681	C	G	E	E				C	C	C	C	
MIL-L-3150	X	X	X	X				E	C	C	C	E
MIL-L-4343		X										E
MIL-L-6082		X										E
MIL-L-6085	X	X	X	X				C	X	X	C	E
MIL-L-7808	X	X	X	X			E	G	X	X	X	E
MIL-L-7870	X	X	X	X				E	C	X	C	E
MIL-L-9000	X	X	X	X				E	C	C	C	E
MIL-L-9236	X	X	X	X				C	X	X	X	E
MIL-P-27402		G	E	E				C	C	C		
MIL-R-25576	X		X				E			C	E	
MIL-S-3136 TYPE 1 FUEL	X	X	X	X				E	C	C	G	E
MIL-S-3136 TYPE 2 FUEL	X	X	X	X				C	X	X	C	E
MIL-S-3136 TYPE 3 FUEL	X	X	X	X				G	X	X	C	E
MIL-S-3136 TYPE 4 OIL, LOWSWELL	X	X	X	X				E	X	C	E	E
MIL-S-3136 TYPE 5 OIL, MEDSWELL	X	X	X	X				E	G	G	E	E
MIL-S-3136 TYPE 6 OIL, HI SWELL	X	X	X	X			E	E	X	C	E	E
MIL-S-81087	E	E	E	E				E	E	E	E	
MINERAL OIL	X	X	C	X	E	E	E	E	C	C	E	E
MINERAL SPIRITS	X	X	X	X				C	C	G	C	E
MOBILE HF A	X	X	X	X			E	E	C	X	G	E
MOLTEN SULFUR	G		G	E				G	E	E	G	E
MONO-CHLOROACETIC ACID	C	X	G	G	E	E	X	X	C	G	X	C
MONOBUTYL ETHER	X	X	C	C				G	C	C	C	X
MONOCHLOROBENZENE	X	X	X	X	F	F	C	X	X	X	X	E
MONOCHLORODIFLUOROMETHANE	C	E	C	C	E	E	X	X	C	E	X	C
MONOETHANOL AMINE	C	G	C	C				E	G	G	C	X
MONOETHYL AMINE	C	F	C	E				E	C	C	F	X
MORPHOLINE	X		C	C				X	X	X	C	
MOTOR OIL, 40W	X		X	X				E	C	C	G	E
MTBE			G				G	X	X			
MURIATIC ACID	C	X	C	F				C	C	C	C	E
N-BUTANAL	X	X	C	C	E	E	X	X	X	X	C	X
N-BUTYLAMINE	X	X	C	C			C	C	X	X	X	X
N-BUTYLBENZENE	X		X	X				X	X	X		E
N-BUTYLBROMIDE	X		X	X				X	X	X		G
N-BUTYLBUTYRATE	X	X	E	E			E	X	X	X		E
N-BUTYLCARBINOL	E		E	E	E	E	E	E	E	E	X	G
N-NONYL ALCOHOL	E		E	E				E	E	E		G
N-OCTANE	X	X	X	X	E	E	C	C	G	X	X	E
NAPHTHA	X	X	X	X	E	E	E	C	X	C	F	E
NAPHTHALENE	X	X	X	X	E	E	F	X	X	X	C	E
NAPHTHENIC ACID	X	X	X	X			E	C	X	X		E
NATURAL GAS	C	F	X	X	E	E	E	E	E	E	F	E
NEOHEXANE	X		X	X				E	G	X	X	E
NEON GAS	E	E	E	E			E	E	E	E	E	E

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
NEU-TRI	X		X					X		X		E
NICKEL ACETATE	E	X	E	E			X	C	G	X	X	X
NICKEL CHLORIDE	E	E	E	E	E	E	E	E	C	E	C	E
NICKEL NITRATE	E		E	E	E	E		E	E	E	C	E
NICKEL SULFATE	C	G	E	E	E	E	E	E	E	E	E	E
NITRIC ACID, CONC	X		X	X			C	X	X	X	X	
NITRIC ACID, RED FUMING	X	X	X	X	X	X	F	X	X	X	X	E
NITRIC ACID, 10%	X	X	E	E	E	E	E	X	G	E	X	E
NITRIC ACID, 13N	X						C	X	X		X	
NITRIC ACID, 13N +5%	X						C	X	X		X	
NITRIC ACID, 20%	X	X	G	E	E	E	E	X	X	E	X	E
NITRIC ACID, 30%	X	X	F	F	G	G	E	X	X	E	X	E
NITRIC ACID, 30% - 70%	X	X	F	X	F	F	G	X	X	C	X	E
NITRILOTRIETHANOL	C	G	E	E	E	E	E	F	C	C	X	X
NITROBENZENE	X	X	F	C	E	E	E	X	X	X	X	G
NITROETHANE	G	G	G	C			C	X	C	G	X	X
NITROGEN	E	E	E	E	E	E	E	E	E	E	E	E
NITROMETHANE	G	C	G	C			C	X	C	C	X	X
NITROUS OXIDE GAS				E			F	E	G			E
NONANOIC ACID	X		E		E	E		E		X		
NONANOL	E		E	E				E	E	E		
OCTANOIC ACID	F		F				G	F		G		
OCTANOL	C	E	C	C			E	C	C	C	X	E
OCTYL ACETATE	C	X	E	G	E	E		C	C	E	X	
OCTYL ALCOHOL	C	E	C	C			E	C	C	C	X	G
OCTYL ALDEHYDE	X		F		E	E		X		X		X
OCTYL AMINE	F		E	G				F	G	F		X
OCTYL CARBINOL	E		E	E				E	E	E		G
OCTYLENE GLYCOL	E		E	E				E	E	E		E
OIL-PETROLEUM		X			G	G						E
OLEIC ACID	X	X	X	X	E	E	E	G	F	C	C	E
OLEUM	X	X	X	X	X	X	E	X	X	X	X	G
OLIVE OIL	X	X	C	G			E	E	G	C	E	E
ORTHO-DICHLOROBENZENE	X	X	X	X			X	X	X	X	X	E
ORTHO-DICHLOROBENZOL	X	X	X	X			X	X	X	X	X	E
ORTHOXYLENE	X	X	X	X			X	X	X	X	C	E
OXALIC ACID	C	G	E	E	E	E	E	G	G	E	C	E
OXYDIETHANOL												
OZONE	X	X	G	E	E	E	E	X	F	G	G	E
P-CYMENE	X		X	X			F	X	X	X	X	E
PAINT THINNER	X	X	X	X			F	X	X	X	C	E
PALMITIC ACID	C	G	C	C	E	E	E	E	G	C	C	E
PAPERMAKERS ALUM												E
PARA-DICHLOROBENZENE	X	X	X	X			C	X	X	X	X	E
PARAFFIN WAX	X		X	X				E	G	E	E	E
PARALDEHYDE	F		E	E				C	G	X	X	X
PARAXYLENE	X		X	X			X	X	X	X	C	E
PELARGONIC ALCOHOL	E		E	E	E	E		E	E	E		G
PENTACHLOROETHANE	X		X					X	X	X	C	E
PENTADIONE												
PENTAMETHYLENE	X		X	X			C	G	C	X	E	E
PENTANE	X	X	X	X	E	E	E	E	E	C	X	E
PENTANOL	E		E		E	E	E			E	X	G
PENTANONE	X		G	G				X	X	X		X
PENTASOL	X	G	E	G	E	E	E	C	G	E	X	G
PENTYL ACETATE	C	X	X	C	E	E	X	X	X	X	X	X
PENTYL ALCOHOL	C	G	C	E	E	E	E	C	C	E	X	E
PENTYL BROMIDE	X		X	C				X	X	X		G
PENTYL CHLORIDE	X	X	X	X	E	E	E	X	X	X	F	E
PENTYL ETHER	X		X	X				C	X	F		
PENTYLAMINE	F		G	X				F	F	F		X
PERCHLORIC ACID	C	X	C	G	E	E	E	X	E	C	C	E
PERCHLOROETHYLENE	X	X	X	X	E	E	X	F	X	X	X	E
PERCHLOROMETHANE	X		X	X			X	X	X	X	X	
PETROLEUM CRUDE	X	X	X	X	E	E	E	G	G	E	G	E
PETROLEUM ETHER	X	X	X	X			G	E	X	C	G	E
PETROLEUM OILS	X	X	X	X	E	E		X	G	G	G	E
PHENBO												
PHENOL	C	X	C	X	E	E	E	X	X	C	X	E
PHENOLSULFONIC ACID	C	X	G	E				C	C	C	X	C
PHENYLAMINE	X		E	C	E	E		X	X	C	X	E
PHENYLBROMIDE	X		X				X			X	X	G

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
PHENYLMETHANE	X		X	X	E	E	X	X	X	X	X	E
PHENYLMETHANOL	X		E	C			E	X	C	C	X	E
PHENYLMETHYL ACETATE												X
PHOSPHATE ESTERS	X	X	E	E			E	X	X	X	X	C
PHOSPHORIC ACID 10%	E	E	E	E	E	E	E	E	E	E	E	E
PHOSFORIC ACID 10% - 85%	G	G	E	E	E	E	E	G	G	E	G	E
PHOSPHORUS TRICHLORIDE	X	X	E	E	E	E	E	X	X	X		E
PICRIC ACID, H2O SOLUTION	C	G	G	E			G	E	E	E	G	E
PINE OIL	X	X	X	X	E	E	E	E	X	X	E	E
PINENE	X	X	X	X			E	C	C	X	C	E
POLYETHYLENE GLYCOL E-400	E		E	E			E	C	G	E		E
POLYOL ESTER				X				G	X			
POLYPROPYLENE GLYCOL	E		E		E	E	E	E	E	E		E
POTASSIUM ACETATE	E	X	E	E			E	C	E	E	X	C
POTASSIUM BISULFATE	E	G	E	E				E	E	E	X	E
POTASSIUM BISULFITE	E	G	E	E				E	E	E	E	E
POTASSIUM CARBONATE	E	E	E	E	E	E	E	E	E	E	X	E
POTASSIUM CHLORIDE	E	E	E	E	E	E	E	E	E	G	E	E
POTASSIUM CHROMATE	G	G	E	E				G	E	F	C	E
POTASSIUM CYANIDE	E	E	E	E	E	E	E	E	E	E	E	E
POTASSIUM DICHROMATE	C	G	E	E	E	E	E	E	E	G	G	E
POTASSIUM HYDRATE	C	G	E		E	E	E			E	C	F
POTASSIUM HYDROXYDE	C	G	E	E	E	E	E	G	G	E	C	F
POTASSIUM NITRATE	E	E	E	E	E	E	E	E	E	E	E	E
POTASSIUM PERMANGANATE, 5%	E	G	E	E	E	E	E	F	E	G	X	E
POTASSIUM SILICATE	E	E	E	E				E	E	E	E	E
POTASSIUM SULFATE	C	G	E	E	E	E	E	E	E	E	E	E
POTASSIUM SULFIDE	G	G	E	E				C	E	E	C	E
POTASSIUM SULFITE	C	G	E	E	E	E		E	E	C	E	E
PRESTONE ANTIFREEZE	E	E	E	E			G	E	E	E	X	E
PRODUCER GAS	X	X	X	X			E	E	G	C	E	E
PROPANE	X	X	X	X	E	E	E	E	E	C	G	E
PROPANEDIOL	E	E	E	E	E	E	E	E	G	E	G	E
PROPANETRIOL	E	E	E	E	E	E	E	E	E	E	C	E
PROPANOL	E	E	E	E	E	E	E	E	E	E	X	E
PROPANOLAMINE												
PROPANONE	C	G	E	E	E	E	X	X	X	C	X	X
PROPENOL	E		E							E		E
PROPANEDIAMINE	G		E					G		F		
PROPENE NITRILE	G		X		E	E		X	X			
PROPENYL ALCOHOL	E		E	E	E	E		E	E	E		E
PROPENYL ANISOLE	X		X		E	E		X		X		G
PROPIONIC ACID	E	X	E	E			E	C	C	G	X	X
PROPIONITRILE	E		E	C			E	E	C			X
PROPYL ACETATE	X	X	C	C	E	E	X	X	X	X	X	X
PROPYL ALCOHOL	E	E	E	E	E	E	E	E	E	E	X	E
PROPYL ALDEHYDE	F		G	G				X	X	X		X
PROPYL BENZENE	X		X					X	X	X	C	
PROPYL CHLORIDE	X		F	F				X	F	X		G
PROPYL NITRATE	X	X	C	C			F	X	X	X	X	X
PROPYLENE	X	X	X	X			E	X	X	X	X	E
PROPYLENE DIAMINE	G		E					G		F		
PROPYLENE GLYCOL	E	E	E	E	E	E	E	E	E	E	G	E
PYDRAUL, 'E' SERIES	X	X	C	C			E	X	X	X	X	X
PYDRAULIC 'C'	X	X	X	X			E	X	X	X	X	E
RED OIL	X	X	X	F	E	E	E	E	F	C	C	E
REFRIGERANT 11	X	X	X		E	E	X			E	X	C
REFRIGERANT 12	X	E	X		E	E	X			E	E	G
REFRIGERANT 22	C	E	X		E	E	X			E	X	C
RESORCINOL	E	G	E	G			E	C	A	G	X	E
SAE NO. 10 OIL	X	X	X	X			E	E	C	X	E	E
SAL AMMONIAC	E	E	E	E	E	E	E	E	E	E	G	E
SEA WATER	E	E	E	E	E	E	E	E	E	E	G	E
SEWAGE	G	G	G	G	E	E	E	E	C	E	X	E
SILICATE ESTERS	X	C	X	X			E	G	E	G	E	E
SILICATE OF SODA	E	E	E	E			E	E	E	E	G	E
SILICONE GREASE	E	E	E	E	E	E	E	E	E	E	E	E
SILICONE OIL	E	E	E	E	E	E	E	E	E	E	E	E
SILVER NITRATE	E	G	E	E	E	E	E	C	E	E	E	E
SKYDROL 500 TYPE 2	X	X	G	E			X	X	X	X	X	G
SKYDROL 500B	X	X	G	E			X	X	X	X	X	G
SKYDROL 500C	X	X	G	E			X	X	X	X	X	G

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	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
SKYDROL 7000 TYPE 2	E	X	E	E			E	X	X	X	X	F
SOAP SOLUTIONS	F	X	E	E	E	E	E	E	G	E	G	E
SODA ASH	E	X	E	E	E	E	E	E	E	E	G	E
SODA LIME	E		E	E			G	G	G	G	F	G
SODA NITER	G	G	E	E	E	E	E	E	G	E	E	E
SODIUM ACETATE	F	X	F	E	E	E	C	G	C	G	C	X
SODIUM ALUMINATE	E	G	E	E			E	E	E	E	X	E
SODIUM BICARBONATE	E	E	E	E	E	E	E	E	E	E	E	E
SODIUM BISULFATE	E	G	E	E	E	E	E	E	E	E	E	E
SODIUM BISULFITE	E	G	E	E	E	E	E	E	E	E	G	E
SODIUM BORATE	E	E	E	E	E	E	E	E	E	E	E	E
SODIUM CARBONATE	E	E	E	E	E	E	E	E	E	E	C	E
SODIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E
SODIUM CYANIDE	E	E	E	E	E	E	E	E	E	E	E	E
SODIUM DICHROMATE	X	G	E	E			E	E	F	G	G	E
SODIUM HYDRATE	E	G	E	E	E	E	E	X	G	C	C	G
SODIUM HYDROCHLORITE	F	G	G	G			E	F	F	E	C	E
SODIUM HYDROXIDE	E	G	E	E	E	E	E	X	G	C	C	G
SODIUM HYPOCHLORITE	X	F	C	E	E	E	E	C	C	G	X	E
SODIUM METAPHOSPHATE	E	E	G	E	E	E	E	E	E	C	C	E
SODIUM NITRATE	G	G	E	E	E	E	C	C	G	E	E	E
SODIUM PERBORATE	G	G	E	E			E	C	G	E	G	E
SODIUM PEROXIDE	C	G	E	E	E	E	E	C	G	G	X	E
SODIUM PHOSPHATE	E	E	E	E	E	E	E	E	G	E	E	E
SODIUM SILICATE	E	E	E	E	E	E	E	E	E	E	G	E
SODIUM SULFATE	C	G	E	E	E	E	E	E	E	E	E	E
SODIUM SULFIDE	G	G	E	E	E	E	E	E	E	E	E	E
SODIUM SULFITE	G	G	E	E	E	E	E	E	E	E	E	E
SODIUM THIOSULFATE	G		E	E	E	E	E	C	E	E	E	E
SOYBEAN OIL	X	X	G	C			E	E	E	G	C	E
STANNIC CHLORIDE	E	E	E	E	E	E	E	E	G	E	E	E
STANNIC SULFIDE	E		E	E			E	E	E	E		
STANNOUS CHLORIDE	E	E	E	G	E	E	E	E	E	E	G	E
STANNOUS SULFIDE	E		E	E			E	E	E	E		
STEAM, BELOW 350 DEG F	C	X	G	E	X	X	E	X	X	C	X	C
STEARIC ACID	C	G	C	G	E	E	E	G	G	G	E	E
STODDARD SOLVENT	X	X	X	X	E	E	E	G	E	G	X	E
STYRENE	X	X	X	X	F	F	X	X	X	X	X	E
SULFAMIC ACID	G		E	E				C	G	E	X	E
SULFUR	X	X	E	E	E	E	E	X	E	E	X	E
SULFUR CHLORIDE	X	X	X	E			E	C	E		C	E
SULFUR DIOXIDE	C	G	C	E		G	G	X	C	C	C	E
SULFUR TRIOXIDE, DRY	C	X	G	E	X	X	G	X	X	X	X	E
SULFURIC ACID, CONC.	X	X	X	X	F	F	E	X	X	X	X	E
SULFURIC ACID, FUMING	X	X	X	X	X	X	E	X	X	X	X	E
SULFURIC ACID, 25%	E	F	G	E	E	E	E	C	C	E	X	E
SULFURIC ACID, 25%-50%	G	F	G	E	E	E	E	C	X	G	X	E
SULFURIC ACID, 50%-96%	X	X	X	X	G	G	E	X	X	X	X	E
SULFUROUS ACID, 10%	G	G	E	E	E	E	E	E	C	E	X	E
SULFUROUS ACID, 10%-75%	G	G	E	E	E	E	E	F	C	E	X	E
T-BUTYL AMINE	X		C	C			G	C	X	X	X	
TALL OIL	X	X	X	X			E	E	C	F	E	E
TALLOW	X	X	X	E	E	E	E	E	G	F	E	E
TANNIC ACID	E	G	E	E	E	E	E	E	E	E	E	E
TAR	X	X	X	X	X	F	E	X	X		G	E
TAR BITUMINOUS	X	X	X	X			E	G	C	X	G	E
TARTARIC ACID	E	G	G	G	E	E	E	E	E	E	E	E
TELLONE 2	C											
TERTIARY BUTYL ALCOHOL	C	G	C	C			E	C	C	C	X	E
TERPINEOL	X	X	C				E			X	C	E
TERTIARY BUTYL AMINE	X		C	C			G	C	X	X	X	
TERTIARY BUTYL MERCAPTAN	X	X	X	X			E	X	X	X	X	E
TETRACHLOROENZENE	X		X	X				X	X	X		G
TETRACHLOROETHANE	X	X	X	X	F	F	X	X	X	X	X	E
TETRACHLOROETHYLENE	X	X	X	X	F	F	X	C	X	X	X	E
TETRACHLOROMETHANE	X		X	X	E	E	E	X	X	X	F	E
TETRACHLORONAPHTHALENE	X		X	X	E	E		X	X	X		G
TETRAETHYLENE GLYCOL	E		E	E				E	E	E		E
TETRAETHYLORTHOSILICATE	X		E	E				E	E			
TETRAHYDROFURAN	X	X	C	X			X	X	X	X	X	X
TIN CHLORIDE	E		E	E	E	E	E	E	C	C	G	E
TITANIUM TETRACHLORIDE	X	X	X	X			G	C	C	X	X	E

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
TOLUENE	X	X	X	X	E	E	X	X	X	X	X	E
TOLUIDINE	X		X	X	E	F		C	X	X	C	G
TOLUOL	X	X	X	X	E	E	X	X	X	X	X	E
TRANSFORMER OIL	X	X	X	X	E	E	E	C	C	C	C	E
TRANSMISSION 'A' OIL	X		X	X			E	E	C	C	E	
TRI-AMINE	C		E	E			E	G	C	C	X	
TRIBUTYL PHOSPHATE	C	X	G	G			G	F		X	X	X
TRIBUTYLAMINE	G		E					G		F		
TRICHLOROACETIC ACID	C	X	C	C			F	C	C	X	X	X
TRICHLOROBENZENE	X	X	X	X	F	F	C	C	X	X	C	G
TRICHLOROETHANE	X	X	X	X			X	X	X	X	X	E
TRICHLOROETHYLENE	X	X	X	X	F	F	X	X	X	X	X	E
TRICHLOROMETHANE	X	X	X	X	F	F	X	X	X	X	X	E
TRICHLOROTOLUENE	X			E			E	X	X	X		
TRICRESYL PHOSPHATE	X	X	E	E			E	X	X	X	X	E
TRITHANOLAMINE	C	G	E	E	E	E	E	C	C	C	X	X
TRIETHYLAMINE	G	X	G	E			E	E	G	E	X	E
TRIETHYLENE GLYCOL	E		E	E	E	E		C	E	E	X	E
TRIHYDROXYBENZOIC ACID	E		C	C			E	C	C	G	X	
TRIMETHYL PENTANE	X	X	X	X			F	E	G	C	G	E
TRIMETHYLAMINE	E		E	C				C	E	E	X	
TRISODIUM PHOSPHATE	E	E	E	E	E	E	E	E	E	E	E	E
TRITOYL PHOSPHATE	X	X	E	E			E	X	C	C	C	E
TUNG OIL	X	X	C	X	E	E	E	E	C	C	F	E
TUNG OIL	X	X	C	X	E	E	E	E	C	C	F	E
TURPENTINE	X	X	X	X	E	E	E	E	X	X	G	E
UNSYMETRICAL DIMETHYL HYDRAZINE	E	X	E	E			F	C	C	E	X	X
UNDECYL ALCOHOL	E		E	E				E	E	E		G
UREA	E		E	E	E	E	F	G	G	E	G	E
URIC ACID	E		E	E				C	E	E	X	
VARNISH	X	X	X	X	E	E	C	G	X	X	G	E
VEGETABLE OILS	X	X	C	F	E	E	E	E	C	G	E	E
VERSILUBE F44	E	E	E	E				E	E	E	E	E
VERSILUBE F55	E	E	E	X				E	E	E	E	E
VINEGAR	G	G	E	E	E	E	E	G	G	E	C	E
VINEGAR ACID	G		E		E	E	E			E	C	
VINYL ACETATE	X	X	E	G	E	E	X	C	C	F	X	E
VINYL BENZENE	X	X	X	X	F	F	X	C	X	X	C	G
VINYL CHLORIDE	X		X	C	E	E	E	X	X	X	C	E
VINYL CYANIDE	G	F	X	X	E	E	G	X	X	G	X	X
VINYL ETHER	X		X				X	G		G		X
VINYL STYRENE												
VINYL TOLUENE	X		X	X				X	X	X		E
VINYL TRICHLORIDE	X		X	X			X	X	X	X	X	E
VM & NAPHTHA	X	X	X	X				G	F	X		E
WATER	E	C	E	E	E	E	E	E	G	E	E	E
WATER, BOILING	E		E	E			E	G	G	E	E	
WATER, SODA					E	E						
WEMCO C	X	X	X	X			E	E	C	X	E	E
WHISKEY	E	E	E	E	E	E	E	E	E	E	X	E
WHITE OIL	X	X	X	X	E	E	E	E	G	C	E	E
WHITE PINE OIL	X	X	X	X			E	C	X	X		E
WINES	E	E	E	E	E	E	E	E	E	E	X	E
WOOD ALCOHOL	E	E	C	E	E	E	E	C	E	E	C	F
WOOD OIL	X	X	C	X	E	E	E	E	C	C	C	E
XENON	E	E	E	E			E	E	E	E	E	E
XYLENE, XYLON	X	X	X	X	F	F	X	X	X	X	X	E
XYLIDINE	X	X	G	G			G	C	X	X	X	X
ZEOLITES	E	E	E	E			E	E	E	E	E	E
ZINC ACETATE	E	X	E	E			F	G	C		X	C
ZINC CARBONATE	E		E	E				E	E	E	E	E
ZINC CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E
ZINC CHROMATE	E		E	E				C	E	G	X	
ZINC SULFATE	E	G	E	E	E	E	E	E	E	E	X	E
O-AMINOTOLUENE	X		C	C			C	X	X	X	X	
1 UNDECANOL	E	E	E	E	E	G		E	E	E		G
1-AMINO-2-PROPANOL	G		E	E				C	E	F		X
1-AMINO BUTANE	X	X	C	C			G	C	X	X	X	X
1-AMINOPENTANE	F		G	X				F	C	F		X
1-BROMO-2-METHYL PROPANE	X		X	X				X	X	X		G
1-BROMO-3-METHYL BUTANE	X		X	X				X	X	X		G
1-BROMOBUTANE	X		X	X				X	X	X		

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CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UPE	PTFE	NBR	CR	CSM	AU	FKM
1-CHLORO-2-METHYL PROPANE	X		X	X				X	X	X		G
1-CHLORO-3-METHYL BUTANE	X		X	X			X	X	X	X	X	E
1-DECANOL	X		X	X	E	E		E	X	C	E	G
1-HENDECANOL	E		E	E				E	E	E		
1,4-DIOXANE	X		C	C	E		X	X	X	X	X	
2(2AMINOETHYLAMINO) ETHANOL	G		E							G		
2(2ETHOXYETHOXY) ETHANOL	C	G	C	C			E	C	C	C	X	G
2(2ETHOXYETHOXY) ETHYL ACETATE	X	X	G	X			E	X	X	G	X	G
2-AMINOETHANOL	C	F	C	E			E	C	C	C	X	X
2-CHLORO-1-HYDROXY-BENZENE	X		X	X			E	X	X	X	X	
2-CHLOROPHENOL	X	X	X	X			E	X	X	X	X	G
2-CHLOROPROPANE	X	X	X	X			X	X	X	X	X	E
2-ETHOXYETHANOL	X	X	C	C	E	E	C	C	X	X	X	X
2-ETHOXYETHYL ACETATE	C		C	G	E	E	C	X	X	X	C	
2-ETHYL	X		G					X		X		X
2-ETHYL-1-HEXANOL	G	G	C	C	E	E	E	C	C	C	X	G
2-ETHYLHEXANOIC ACID	F		F					F		G		
2-ETHYLHEXYL ACETATE	X		E		C	C		X		G		
2-OCTANONE	X		G	G				X	C		X	X
3-BROMOPROPENE	X		X	X				X	X	X		G
3-CHLOROPROPENE	X	E	C	X	E	G	G	C	X	X		E
3-COAL OIL	X		X	X			E	E	G	F	F	
4-HYDROXY-4-METHYL-2-PENTANONE	X	X	E	E	E	E	X	X	F	C	X	X

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- A: Satisfactory  
 C: Questionable - Suggest testing  
 U: Unsatisfactory  
 Blank: No data available

Chemical	Concentration	Temperature	
		20 °C 68 °F	60 °C 140 °F
Acetate Solvents		U	U
Acetic Acid	10%	A	C
Acetic Acid	Glacial	C	U
Acetone		U	U
Acrylonitrile		A	C
Adipic Acid		A	C
Alcohol Butyl		A	C
Alcohol Ethyl		A	C
Alcohol Isopropyl		A	C
Alcohol Methyl		A	C
Aluminum Acetate		A	
Aluminum Chloride		A	A
Aluminum Hydroxide		A	
Aluminum Sulfate		A	A
Allyl Chloride			
Ammonia	0.88 S.G. (Aqueous)	A	A
Ammonia	Dry Gas	A	
Ammonia	Liquid	U	U
Ammonium Chloride		A	A
Ammonium Hydroxide		A	
Animal Oils			
Amyl Acetate		U	U
Aniline Oils			
Aromatic Hydrocarbons		U	U
Asphalt		U	U
ASTM Fuel A		A	A
ASTM Fuel B		U	U
ASTM 1 Oil			
ASTM 3 Oil			
Barium Chloride		A	A
Barium Hydroxide		A	A
Barium Sulfide		A	A
Benzene		U	U
Benzine		C	C
Bordeaux Mixture		A	A
Borax		A	A
Boric Acid		A	A
Brine		A	A
Bromine Traces		U	U
Butyl Acetate		U	U
Calcium Hydroxide		A	A
Calcium Hypochlorite		A	A
Carbonic Acid		C	U
Carbon Dioxide		A	A
Carbon Disulphite		U	U
Carbon Monoxide		A	A
Carbon Tetrachloride		U	U
Casein		A	C
Chlorine	Dry gas	A	A
Chlorine	Wet Gas	C	U
Chlorine	Water	U	U
Chlorobenzene		U	U
Chlorinated Hydrocarbons		U	U
Chloroform		U	U
Chromic Acid	10%	A	C
Citric Acid		A	A
Coal Tar		U	U
Copper Chloride		A	A
Copper Nitrate		A	A
Copper Sulphate		A	A
Cottonseed Oil			
Creosote		U	U
Cresol		A	C

Chemical	Concentration	Temperature	
		20 °C 68 °F	60 °C 140 °F
Cresylic Acid		U	U
Cyclohexane		A	C
Cyclohexanone		U	U
DDT Weed Killer		A	C
Detergent Synthetic		A	A
Developers Photographic		A	A
Dextrin		A	A
Dextrose		A	A
Dibutyl Phthalate		U	U
Dichlorobenzene		U	U
Diesel Oil			
Diethylene Glycol		A	A
Diethyl Ether		U	U
Di-isodecyl Phthalate		U	U
Dicotyl Phthalate		U	U
Emulsifiers		A	A
Emulsions Photographic		A	A
Ethyl Acetate		U	U
Ethylene Dichloride		U	U
Ethylene Glycol		A	A
Fatty Acid		A	A
Ferric Chloride		A	A
Ferric Sulphate		A	A
Ferrous Chloride		A	A
Ferrous Sulphate		A	A
Fixing Solution Photographic	A	A	
Fluorine		U	U
Formaldehyde	40%	U	U
Formic Acid	40%	A	A
Formic Acid	50%	C	U
Formic Acid	100%	U	U
Fuel Oil			
Glacial Acetic Acid		C	U
Glucose		A	A
Glycerine		A	A
Grape Sugar		A	A
Grease			
Heptane		C	U
Hexane		C	U
Hydrobromic Acid		A	A
Hydrochloric Acid	10%	A	A
Hydrochloric Acid	40%	A	U
Hydrofluoric Acid	10%	A	C
Hydrofluoric Acid	40%	A	U
Hydrofluoboric Acid		A	A
Hydrofluosilicic Acid		A	A
Hydrogen Peroxide		A	
Hydrogen Sulphide		A	
Iso-octan		A	C
Isopropyl Acetate		U	U
Kerosene		C	C
Ketones		U	U
Lactic Acid	10%	A	
Lactic Acid	100%	U	U
Lacquer Solvents		C	U
Linseed Oil			
Lubricating Oils			
Magnesium Chloride		A	A
Magnesium Hydroxide		A	A
Magnesium Sulphate		A	A
Malic Acid		A	A
Methyl Acetate		U	U
Methyl Bromide		U	U

Chemical	Concentration	Temperature	
		20 °C 68 °F	60 °C 140 °F
Methyl Ethyl Ketone		U	U
Methylene Chloride		U	U
Mineral Oils			
Monochlorobenzene		U	U
Naphtha		C	U
Napthalene		C	U
Nitric Acid	10%	A	A
Nitric Acid	40%	A	C
Nitric Acid	70%	U	U
Nitrobenzene		U	U
Nitrogen Fertilizers		A	
Oleic Acid		A	C
Oxalic Acid		A	A
Palmitic Acid		A	A
Paraffin		A	A
Pentane		C	U
Perchloroethylene		U	U
Phenol		C	U
Phosphoric Acid		A	A
Pitch		A	C
Potassium Hydroxide		A	A
Propane		A	A
Sea Water		A	A
Sodium Hydroxide (caustic soda)	10%	A	A
Sodium Hydroxide (caustic soda)	50%	A	U
Sodium Cyanide		A	A

Chemical	Concentration	Temperature	
		20 °C 68 °F	60 °C 140 °F
Soybean Oil			
Stearic Acid		A	A
Styrene		U	U
Sulphur Dioxide	Dry	A	A
Sulphur Dioxide	Moist	C	U
Sulphur Dioxide	Liquid	U	U
Sulphuric Acid	45%	A	A
Sulphuric Acid	60%	C	C
Sulphuric Acid	98%	U	U
Sulphurous Acid	30%	A	
Tannic Acid		A	A
Tartaric Acid		A	A
Tetrahydrofuran		U	U
Toluene		U	U
Trichlorethylene		U	U
Triethanolamine		A	A
Tricresyl Phosphate		U	U
Turpentine		C	U
Urea		A	A
Vinegar		A	A
Vinyl Acetate		U	U
Vinyl Chloride		U	U
Water		A	A
Xylene		U	U
Zinc Chloride		A	A
Zinc Sulphate		A	A

**Formulas and conversion factors**

<b>LENGTH</b>	mm	in	mm x 0,03937 = in
	in	mm	in x 25,4001 = mm
	m	ft	m x 3,2808 = ft
	ft	m	ft x 0,3048 = m
<b>WEIGHT</b>	kg	lb	kg x 2,20462 = lb
	lb	kg	lb x 0,45359 = kg
	kg/m	lb/ft	kg/m x 0,672 = lb/ft
	lb/ft	kg/m	lb/ft x 1,488 = kg/m
<b>PRESSURE</b>	bar	MPa	bar x 10 <sup>-1</sup> = MPa
	MPa	bar	MPa x 10 = bar
	bar	psi	bar x 14,504 = psi
	psi	bar	psi x 0,068948 = bar
	mm Hg	bar	mm Hg x 1,33322 x 10 <sup>-3</sup> = bar
<b>TEMPERATURE</b>	°C	°F	9/5 °C + 32 = °F
	°F	°C	5/9 x (°F - 32) = °C

CHAPTER	FITTING	FITTING	WP	RECOMENDED FERRULE/CLAMPS (see Table A-B-C)
COMPRESSED AIR	<b>EXPRESS NF E 29.573</b>		WP = 10 bar	EXPRESS CLAMPS - 2 GRIPPING FINGER TYPE WORM GEAR CLAMP CRIMPING RING
COMPRESSED AIR	<b>TYPE A CLAW COUPLING (EUROPEAN TYPE)</b>		WP = 10 bar	CLAW CLAMPS TYPE A - DIN20039B WORM GEAR CLAMP TWO BOLT SADDLE CLAMP CRIMPING RING
COMPRESSED AIR	<b>TYPE A CLAW COUPLING (EUROPEAN TYPE) WITH SAFETY PIN HOLES</b>		WP = 10 bar  Australian version: WP = 17.5 bar as per AS 2660/A requirements for air and water	CLAW CLAMPS TYPE A - DIN20039B WORM GEAR CLAMP TWO BOLT SADDLE CLAMP CRIMPING RING  AUSTRALIAN VERSION: SERRATED FERRULE FOR COMPR. AIR TYPE S
COMPRESSED AIR	<b>TYPE B CLAW COUPLING (U.S. TYPE)</b>		WP = 10 bar	CLAW CLAMPS TYPE B CRIMPING RING
COMPRESSED AIR	<b>SAFETY LOCK CLAW COUPLING (AUSTRALIAN TYPE)</b>		WP = 17.5 bar as per AS 2660/A requirements for air and water	CLAW CLAMPS TYPE S - AUSTRALIAN TYPE  CLAW CLAMPS TYPE S - AUSTRALIAN TYPE - WITH SAFETY CHAIN  SERRATED FERRULE FOR COMPR. AIR TYPE S

INSERT TYPE	CONNECTION TYPE	APPLICATION	WARNING & NOTE
serrated insert without locking collar	<b>symmetric coupling system.</b> The two symmetrical half-couplings have two claws each, which are connected by pushing them together and rotating the two claws to be 45° apart to form a seal.	For air compressed and water applications	Internal claw distance = 41 mm Not interchangeable with Geka couplings and with other compressed air claw couplings (type A, type B, type S) Not to be used for steam application As the connecting heads are the same on all parts, hose and threads of all dimensions can be connected together with no adaptors being required.
serrated insert with safety collar	<b>symmetric coupling system.</b> The two symmetrical half-couplings have two claws each, which are connected by pushing them together and rotating the two claws to form a seal.	For air compressed and water applications	Internal claw distance = 42 mm Not interchangeable with Express, Geka couplings and with other compressed air claw couplings (type B, type S) Not to be used for steam application As the connecting heads are the same on all parts, hose and threads of all dimensions can be connected together with no adaptors being required.
serrated insert with safety collar	<b>symmetric coupling system.</b> The two symmetrical half-couplings have two claws each, which are connected by pushing them together and rotating the two claws to form a seal.	For air compressed and water applications	Internal claw distance = 42 mm Not interchangeable with Express, Geka couplings and with other compressed air claw couplings (type B, type S) Not to be used for steam application As the connecting heads are the same on all parts, hose and threads of all dimensions can be connected together with no adaptors being required.
serrated insert with safety collar	<b>symmetric coupling system.</b> The two symmetrical half-couplings have two claws each, which are connected by pushing them together and rotating the two claws to form a seal.	For air compressed and water applications	Internal claw distance = 41 mm Not interchangeable with Express, Geka couplings and with other compressed air claw couplings (type A, type S) Not to be used for steam application As the connecting heads are the same on all parts, hose and threads of all dimensions can be connected together with no adaptors being required.
serrated insert with safety collar	<b>symmetric coupling system.</b> The two symmetrical half-couplings have two claws each, which are connected by pushing them together and rotating the two claws to form a seal.	For air compressed and water applications	Internal claw distance = 45-74-117 mm (different for each DN) Not interchangeable with Express, Geka couplings and with other compressed air claw couplings (type A, type B)

CHAPTER	FITTING	FITTING	WP	RECOMENDED FERRULE/CLAMPS (see Table A-B-C)
WATER	GEKA		WP = 10 bar	BAND-IT SYSTEM CLAMPS WORM GEAR CLAMP CRIMPING RING SMOOTH FERRULE
WATER	TYPE B - BAUER COMPATIBLE		WP = 20 bar (DN 50mm / 89mm)  WP = 12 bar (DN 108mm / 300mm)	BAND-IT SYSTEM CLAMPS PW-CLAMP
WATER	TYPE C - CARDAN / PERROT COMPATIBLE		WP = 12 bar	BAND-IT SYSTEM CLAMPS PW-CLAMP
WATER	VIDANGE		WP = 6 bar	BAND-IT SYSTEM CLAMPS PW-CLAMP SMOOTH FERRULE
WATER	TYPE 42		WP = 12 bar (liquids)	CLAMPS

INSERT TYPE	CONNECTION TYPE	APPLICATION	WARNING & NOTE
serrated insert without locking collar	<p><b>symmetric coupling system.</b></p> <p>The two symmetrical half-couplings have two claws each, which are connected by pushing them together and rotating the two claws to form a seal.</p>	For agricultural, gardening, irrigation, construction and public service applications	<p>Internal claw distance = 40 mm</p> <p>Not interchangeable with Express couplings and with other compressed air claw couplings (type A, type B, type S)</p> <p>Not to be used for steam application</p> <p>As the connecting heads are the same on all parts, hose and threads of all dimensions can be connected together with no adaptors being required.</p>
ridged insert for clamps	<p><b>asymmetric coupling system: male &amp; female part</b></p> <p>The male fitting has a double pin closure lever for smoother closing action. The male fitting is inserted into the female fitting and the joint closed by latching the lever over the head of the female fitting.</p>	For different applications like: agriculture, irrigation, road construction, water delivery in the mines, suction line, civil projects, dewatering, by pass lines, chemical and food industry. Used in a wide range of water related applications and activities such as gulley emptiers, sewage systems, fertiliser spraying and general water pumping.	Not interchangeable with type C - Cardan / Perrot compatible couplings
ridged insert for clamps	<p><b>asymmetric coupling system: male &amp; female part</b></p> <p>The female fitting incorporates a thick o-ring seal and a closure lever with two-claws. The male fitting is inserted into the female fitting and the joint closed by latching the lever over the conical head of the male fitting.</p>	For agricultural, irrigation, cleaning and construction applications. Most commonly used with systems carrying water, mortar, bitumen, bulk products. They assure the delivery of several media like: potable drinking water, waste water, sludge, bentonite, cement, compressed air in the most various applications like the food, pharmaceutical and chemical industries, irrigation, mining and tunneling, civil projects and dewatering.	Not interchangeable with type B - Bauer compatible couplings
serrated insert without locking collar	<p><b>asymmetric coupling system: male &amp; female part</b></p>	For water applications	
ridged insert for clamps	<p><b>asymmetric coupling system: male &amp; female part</b></p>	<p>For water applications (irrigation systems)</p> <p>For different applications like: chemical industry, paper industry, process industry, for mobile water pipes in mining, steel and heavy industry.</p> <p>On sewage vehicles, on trucks for bulk transport of granulates (grain, flour, feed, pellets), concrete and minerals.</p>	<p>Not interchangeable with type B - Bauer compatible couplings</p> <p>Not interchangeable with type C - Cardan / Perrot compatible couplings</p>

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CHAPTER	FITTING	FITTING	WP	RECOMENDED FERRULE/CLAMPS (see Table A-B-C)
HYGIENIC - FOOD	<b>SMS</b>		WP = 6 bar	SERRATED FERRULE FOR HYGIENIC COUPLING
HYGIENIC - FOOD	<b>DIN 11851</b>		WP = 40 bar / 25 bar (DN 15 mm / 100 mm)	SAFETY CLAMPS EN 14 420-3 / DIN 2817 SAFETY CLAMPS FLEXOLINE® SERRATED FERRULE FOR HYGIENIC COUPLING
HYGIENIC - FOOD	<b>DIN 11851</b>		WP = 40 bar / 25 bar (DN 15 mm / 100 mm)	SERRATED FERRULE FOR HYGIENIC COUPLING
HYGIENIC - FOOD	<b>MACON</b>		WP = 10 bar	SERRATED FERRULE FOR HYGIENIC COUPLING

INSERT TYPE	CONNECTION TYPE	APPLICATION	WARNING & NOTE
serrated insert with EN 14 420-2 / DIN 2817 collar	<p><b>asymmetric coupling system: male &amp; female threaded end</b></p> <p>SMS food couplings are connected in the same way as DIN 11851 food couplings. The nut is slid across the head of the female coupling and onto the male coupling. The flat face of the female coupling is brought into contact with the turned-up seal of the male coupling. The nut is then tightened by hand or using a wrench.</p> <p>Threaded food couplings complying with SMS have a rounded thread complying with DIN 405/1. This rounded thread ensures that SMS food couplings are easy to connect by hand or using a wrench.</p>	Used in food, beverage, chemical and pharmaceutical industries.	<p>Supplied in Stainless Steel in order to meet the specifications of the Food Processing, Brewing, Dairy and Pharmaceutical industries.</p> <p>Food couplings complying with SMS (Swedish Manufacturing Standard) are not interchangeable with DIN 11851 food couplings. Although the threads of both couplings comply with DIN 405/1, precise dimensions vary, making them non-interchangeable.</p> <p>Female coupling = flat face Male coupling = turned-up seal Seal = square seal</p>
EN 14 420-2 / DIN 2817 smooth insert with collar	<p><b>asymmetric coupling system: male &amp; female threaded end</b></p> <p>The seal must be inserted correctly into the seal sitting of the male coupling before connection. The conical female coupling is then pushed onto the male threaded coupling. The two are secured by sliding the nut across the conical head of the female coupling and onto the thread of the male coupling. The flanged seal enables easy assembly and prevents any displacement by vacuum or pressure. Threaded food couplings complying with DIN 11851 have a rounded thread complying with DIN 405/1. This rounded thread ensures that DIN 11851 compliant food couplings are easy to connect by hand or using a wrench.</p>	Used in food, beverage, pharmaceutical and chemical industries.	<p>Food couplings complying with DIN 11851 are not interchangeable with SMS food couplings. Although the threads of both couplings comply with DIN 405/1, precise dimensions vary, making them non-interchangeable.</p> <p>Female coupling = conical face Male coupling = deep seal Seal = U-shape seal</p>
serrated insert with EN 14 420-2 / DIN 2817 collar	<p><b>asymmetric coupling system: male &amp; female threaded end</b></p> <p>The seal must be inserted correctly into the seal sitting of the male coupling before connection. The conical female coupling is then pushed onto the male threaded coupling. The two are secured by sliding the nut across the conical head of the female coupling and onto the thread of the male coupling. The flanged seal enables easy assembly and prevents any displacement by vacuum or pressure.</p> <p>Threaded food couplings complying with DIN 11851 have a rounded thread complying with DIN 405/1. This rounded thread ensures that DIN 11851 food couplings are easy to connect by hand or using a wrench.</p>	Used in food, beverage, pharmaceutical and chemical industries.	<p>Supplied in Stainless Steel in order to meet the specifications of the Food Processing, Brewing, Dairy and Pharmaceutical industries.</p> <p>Food couplings complying with DIN 11851 are not interchangeable with SMS food couplings. Although the threads of both couplings comply with DIN 405/1, precise dimensions vary, making them non-interchangeable.</p> <p>Female coupling = conical face Male coupling = deep seal Seal = U-shape seal</p>
serrated insert with locking collar	<p><b>asymmetric coupling system: male &amp; female threaded end</b></p>	Especially designed for wine industry in France	



CHAPTER	FITTING	FITTING	WP	RECOMENDED FERRULE/CLAMPS (see Table A-B-C)
STEAM	EN 14 423 / DIN 2826		WP max = 100 bar	SAFETY CLAMPS EN 14 423 / DIN 2826
STEAM	GROUND JOINT SEAL		WP max = 41 bar	CLAMPS - 2 BOLT - 2 GRIPPING FINGER TYPE CLAMPS - 4 BOLT - 2 GRIPPING FINGER TYPE CLAMPS - 6 BOLT - 3 GRIPPING FINGER TYPE
STEAM	TURNEX P		WP = 25 bar	ALFACRIMP HYDRAULIC SERRATED FERRULE (H1200004-xx0000)
SYMMETRIC GUILLEMIN	SYMMETRIC GUILLEMIN EN 14 420-8 / NF E 29.572		WP = 16 bar	BAND-IT SYSTEM CLAMPS CRIMPING RING SMOOTH FERRULE
SYMMETRIC	SYMMETRIC DPS & AR NF S 61.704 - NF S 61.705		WP = 16 bar	BAND-IT SYSTEM WORM GEAR CLAMP CLAMPS CRIMPING RING SMOOTH FERRULE
GROS FILET ROND	GROS FILET ROND NF E 29-579		WP = 16 bar WP = 25 bar (DN20mm)	BAND-IT SYSTEM CLAMPS CRIMPING RING SMOOTH FERRULE

INSERT TYPE	CONNECTION TYPE	APPLICATION	WARNING & NOTE
EN 14 423 / DIN 2826 serrated insert with collar	<b>asymmetric coupling system: male &amp; female threaded end</b> <b>symmetric coupling system: flanged end</b> Steam couplings complying with EN 14423/ DIN 2826 are available in female and male threaded screw couplings and in flanged couplings.	To be used for saturated steam up to +210°C, resp. hot water up to +120°C and up to 18 bar working pressure	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 steam clamps complying with EN 14423 / DIN 2826. Under no circumstances safety clamps EN 14420-3 / DIN 2817 shall be used. Compared with EN 14420-2 / DIN 2817 smooth hose shanks, steam hose shanks complying with EN 14423 / DIN 2826 are serrated and are physically longer and larger.
serrated insert with safety collar	<b>asymmetric coupling system: male &amp; female threaded end</b> The coupling system consists of a male threaded insert (with a serrated hose shank with safety collar for safety clamps) and a female threaded complete coupling composed by 3 elements: a female stem (with a serrated hose shank with safety collar for safety clamps), a female threaded spud and a swivel nut.	Designed for steam and high pressure compressed air and other high pressure or hazardous applications requiring a safety coupling and clamp assembly. This reusable, rugged coupling can be fitted or re-attached in the field without special equipment. Widely used in oil refineries, chemical plants and other factories using steam as an essential service. Used for compressed air (especially in larger sizes), in quarrying, mining, pile driving, as well as other service duties. Also used for LPG, grouting, volatile liquids and similar applications.	
serrated insert with locking collar / serrated insert without locking collar	<b>asymmetric coupling system: female threaded end</b>	Used in petrochemical plants in France	
serrated insert with locking collar / serrated insert without locking collar	<b>symmetric coupling system.</b> A coupling system in which both halves are identical. Couplings have locking rings to connect and secure the other half. This is the French standard tanker connection. The coupling is connected by simply putting the two halves together and turning a tapered locking ring which tightens into a tapered channel on the other half of the coupling making a tight, secure connection. Couplings can be connected by hand or with the aid of spanners designed for the purpose.	For pressure and suction delivery of liquid (general industrial, water, hydrocarbons, chemicals) and solids (powders, granules)	Symmetric Guillemin Couplings are not interchangeable with DSP/AR couplings Not to be used for steam or liquid gas application.
serrated insert without locking collar	<b>symmetric coupling system.</b> These French hose couplings are symmetrical, clamp fitting and hose tail are one piece fitted with a locking ring. By turning the locking ring the bosses are pushed underneath the two strips of the mating coupling.	For fire fighting application. DSP couplings are used for pressure (delivery) purposes in the fire fighting field. AR couplings are used for suction & delivery purposes in the fire fighting field.	Symmetric DSP/AR Couplings are not interchangeable with Symmetric Guillemin Couplings They differ from Guillemin Couplings by the preformed bosses on the locking ring respect the strips on the lugs.
serrated insert without locking collar	<b>asymmetric coupling system: male &amp; female threaded end</b>	For air, nitrogen and water in petrochemical plants and refineries in France.	

CHAPTER	FITTING	FITTING	WP	RECOMENDED FERRULE/CLAMPS (see Table A-B-C)
STORZ	STORZ		WP = 16 bar	BAND-IT SYSTEM CLAMPS CRIMPING RING SMOOTH FERRULE
TANKWAGEN	TANKWAGEN EN 14 420-6 / DIN 28 450		WP = 25 bar	
CAM & GROOVE	CAM & GROOVE MIL C - 27.487		WP = 11 bar / 3 bar (DN 1/2" / 8")	BAND-IT SYSTEM WORM GEAR CLAMP CLAMPS SMOOTH FERRULE
CAM & GROOVE	CAM & GROOVE EN 14420-7 / DIN 2828		WP = 18 bar / 7 bar (DN 3/4" / 4")	SAFETY CLAMPS EN 14 420-3 / DIN 2817 SAFETY CLAMPS FLEXOLINE®
COMBINATION NIPPLE	COMBINATION NIPPLE - INSERT FOR CLAMPS		WP max = 10 bar the WP varies with size of the comb.nipple, the size and construction of the hose and the type of clamping system used	BAND-IT SYSTEM WORM GEAR CLAMP CLAMPS SMOOTH FERRULE
COMBINATION NIPPLE	COMBINATION NIPPLE - THREADED SERRATED INSERT			DN < 3": H1200203-xxxxxx hydraulic serrated ferrule
COMBINATION NIPPLE	COMBINATION NIPPLE - MALE THREADED INSERT COMPLETE WITH PRE CRIMPED FERRULE - HEAVY DUTY		WP = 25 bar	DN ≥ 3": INDUSTRIAL PRECRIMPED FERRULE

INSERT TYPE	CONNECTION TYPE	APPLICATION	WARNING & NOTE
ridged insert for clamps	<p><b>symmetric coupling system.</b></p> <p>A straight through coupling in which both halves are identical. Each half has forward projecting lugs and mating recesses. Any two parts with the same lug dimensions will connect together. This is the standard German tanker connection. The coupling is connected by simply locating the lugs into the recesses of each half and turning clockwise up to the stop (a 120° rotation). One half of the coupling normally has a swivel head which prevents hose / pipe twists when connecting. Couplings can be connected by hand or with the aid of spanners designed for the purpose.</p>	<p>Used for liquids, powders and granulates. The storz system was originally designed for fire fighting equipment. it is suitable for water and a wide range of other fluids. It has also been adopted for use with powder blowing systems.</p>	<p>Different lug spaced units can be used to prevent accidental cross line contamination.</p>
	<p><b>asymmetric coupling system: male &amp; female part.</b></p> <p>To be screwed on BSPP male fittings The locking lever fitted to the female (MK) coupling engages in the rim of the male (VK) part. It's turned until both halves are tightly compressed. The locking lever is then pushed downwards.</p>	<p>Used for trasport of liquids, solids and gases, with exception of liquefied gas and steam. Potential areas of application are stationary and mobile tanking facilities, forwarding/ tanking and silo vehicles, chemical industry, food industry, plant and power station construction and shipbuilding.</p>	
ridged insert for clamps / serrated insert without locking collar	<p><b>asymmetric coupling system: male adapter &amp; female coupler</b></p> <p>The coupling is connected by simply opening the coupler arms and inserting the adapter into the coupler. The cam arms are then closed under normal hand pressure to complete joint.</p>	<p>Used for trasfer of liquid or dry bulk products with exception of liquid gas or steam. For pipe, hose, tubing and tanks conveying liquids, powders, vapours &amp; gases including cooling water, fuels, chemicals, cosmetics, foodstuffs, offshore, pumps, adhesives, dyes, pharmaceuticals, pellets and many more. Couplings applicable to almost any industry that uses liquids, powders and gases.</p>	<p>Not to be used for compressed air and steam application</p>
EN 14 420-2 / DIN 2817 smooth insert with collar	<p><b>asymmetric coupling system: male adapter &amp; female coupler</b></p> <p>The coupling is connected by simply opening the coupler arms and inserting the adaptor into the coupler. The cam arms are then closed under normal hand pressure to complete joint.</p>	<p>Used for trasfer of liquid or dry bulk products with exception of liquid gas or steam. For pipe, hose, tubing and tanks conveying liquids, powders, vapours &amp; gases including cooling water, fuels, chemicals, cosmetics, foodstuffs, offshore, pumps, adhesives, dyes, pharmaceuticals, pellets and many more. Couplings applicable to almost any industry that uses liquids, powders and gases.</p>	<p>Not to be used for compressed air and steam application Couplings CAM &amp; GROOVE (EN 14420-7 / DIN 2828) are interchangeable with couplings CAM &amp; GROOVE (MIL C - 27.487) as coupling side but differ in term of hose shank design and thread side. A flat PTFE thread seal has been added to the female threaded parts compared to Cam &amp; Groove (MIL C - 27.487)</p>
serrated insert without locking collar	<p><b>asymmetric coupling system: male threaded end</b> <b>symmetric coupling system: plain end</b></p>	<p>For all suction and discharge hose applications at low pressure. For oil, petroleum, water (widely used in offshore rig operations by oil companies) , volatile fluids, abrasives and dry products.</p>	<p>Not to be used for compressed air application Hose nipples made from tubular stock; threaded male end, in all style, has the same size as hose</p>
hydraulic serrated insert	<p><b>asymmetric coupling system: male &amp; female threaded end</b></p>		<p>DN &lt; 3": male and female threaded hydraulic fittings to be used. (CONSULT AG HYDRAULIC CATALOGUE)</p>
industrial "one-piece" (precrimped serrated insert)	<p><b>asymmetric coupling system: male threaded end</b></p>	<p>For all suction and discharge hose applications at low pressure. For oil, petroleum, water (widely used in offshore rig operations by oil companies) , volatile fluids, abrasives and dry products.</p>	

hose

fittings

appendix

CHAPTER	FITTING	FITTING	WP	RECOMENDED FERRULE/CLAMPS (see Table A-B-C)
EN 14420-5 / DIN 2817	EN 14420-5 / DIN 2817		WP = 25 bar	SAFETY CLAMPS EN 14 420-3 / DIN 2817  SAFETY CLAMPS FLEXOLINE® SERRATED FERRULE SUITABLE TO EN 14 420-2 / DIN 2817
AVIATION	SCREW HOSE COUPLINGS EN 14420-5 / DIN 2817 - aviation refuelling service approved		WP = 25 bar	SAFETY CLAMPS EN 14 420-3 / DIN 2817 (aviation refuelling service approved)  SAFETY CLAMPS FLEXOLINE® SERRATED FERRULE
AVIATION	SCREW HOSE COUPLINGS MALE BSPP - SERRATED INSERT WITH COLLAR - aviation refuelling service approved		WP = 25 bar	SAFETY CLAMPS EN 14 420-3 / DIN 2817 (aviation refuelling service approved)  SERRATED FERRULE
SANDBLAST	SANDBLAST		WP = 12 bar	
MORTAR	MORTAR - INSERT FOR CLAMPS		WP max = 50 bar	BAND-IT SYSTEM CRIMPING RING SMOOTH FERRULE
MORTAR	MORTAR - INSERT FOR SERRATED FERRULE		WP max = 50 bar	SERRATED FERRULE
CONCRETE	CONCRETE - HARDENED INSERT COMPLETE WITH PRECRIMPED FERRULE		WP = 85 bar	CONCRETE PRECRIMPED FERRULE

INSERT TYPE	CONNECTION TYPE	APPLICATION	WARNING & NOTE
EN 14 420-2 / DIN 2817 smooth insert with collar	<b>asymmetric coupling system: male &amp; female threaded end</b>	Potential Areas of Application are chemical, petrochemical, pharmaceutical industry, food industry and blast furnaces.	Screw hose couplings EN 14420-5 / DIN 2817 are not interchangeable with steam hose couplings EN 14 423 / DIN 2826, due to differences in application and overall dimensions.
EN 14 420-2 / DIN 2817 smooth insert with collar	<b>asymmetric coupling system: male &amp; female threaded end</b>	For aircraft ground fuelling and defuelling application.	Different from the standard screw hose couplings EN 14420-5 / DIN 2817 for the material: produced in tinned brass for aviation refuelling service.
serrated insert with EN 14 420-2 / DIN 2817 collar	<b>asymmetric coupling system: male threaded end</b>	For aircraft ground fuelling and defuelling application.	
external insert secured with screws on the hose external diameter	<b>symmetric coupling system.</b> A coupling system related to claw couplings, always identical head dimensions and therefore always interchangeable	Used on all stationary and mobile blasting machines and plants.	Internal claw distance = 58 mm
serrated insert without locking collar	<b>asymmetric coupling system: male adapter &amp; female coupler</b> <b>asymmetric coupling system: male threaded end</b> The principle of the Mortar coupling is similar to Cam & Groove Coupling, but both are not interchangeable.	For mortar and concrete lines on pumps, spraying-devices, plastering machine, ect..	Note that there are two different Systems used in the market: System 22 and System 23,5 Attention: only fittings with same coupling-size and same system are interchangeable
serrated insert with locking collar	<b>asymmetric coupling system: male adapter &amp; female coupler</b> <b>asymmetric coupling system: male threaded end</b> The principle of the Mortar coupling is similar to Cam & Groove Coupling, but both are not interchangeable.	For mortar and concrete lines on pumps, spraying-devices, plastering machine, ect..	Note that there are two different Systems used in the market: System 22 and System 23,5 Attention: only fittings with same coupling-size and same system are interchangeable  Not present in AG catalogue
concrete "one-piece" (precrimped serrated insert)	<b>symmetric coupling system: grooved end - indirect connection through joint clamps</b> <b>asymmetric coupling system: male &amp; female threaded end</b> <b>asymmetric coupling system: male &amp; female part</b>	For high pressure concrete pumping.	

CHAPTER	FITTING	FITTING	WP	RECOMENDED FERRULE/CLAMPS (see Table A-B-C)
FLANGE	FIXED FLANGE - SERRATED INSERT COMPLETE WITH PRE-CRIMPED FERRULE  SWIVEL FLANGE - SERRATED INSERT COMPLETE WITH PRE-CRIMPED FERRULE		WP = 16 / 25 bar	DN = 3" - 6": INDUSTRIAL PRECRIMPED FERRULE
FLANGE	FIXED FLANGE - SERRATED INSERT  SWIVEL FLANGE - SERRATED INSERT		WP = 16 / 25 bar	SERRATED FERRULE
FLANGE	SWIVEL FLANGE - EN 14 420-2 / DIN 2817 INSERT		WP = 25 bar	SAFETY CLAMPS EN 14 420-3 / DIN 2817 SAFETY CLAMPS FLEXOLINE®
MUFF COUPLING	MUFF COUPLING - FIXE FLANGED COUPLING FOR 706AA & 707AA HOSE		WP = 10 bar	
COMPOSITE HOSE FITTINGS			WP = 10 / 25 bar The WP varies with the type of fittings	SMOOTH FERRULE FOR COMPOSITE HOSE

hose

fittings







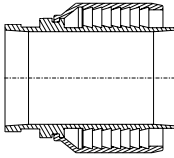
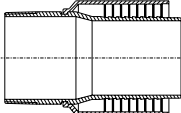




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INSERT TYPE	CONNECTION TYPE	APPLICATION	WARNING & NOTE
industrial "one-piece" (precrimped serrated insert)	<b>symmetric coupling system: flanged end</b>	For all suction and discharge hose applications at low pressure. For oil, petroleum, water and other fluids (chemicals included).	
serrated insert with locking collar	<b>symmetric coupling system: flanged end</b>	For all suction and discharge hose applications at low pressure. For oil, petroleum, water and other fluids (chemicals included).	
EN 14 420-2 / DIN 2817 smooth insert with collar	<b>symmetric coupling system: flanged end</b>	For all suction and discharge hose applications at low pressure. For oil, petroleum, water and other fluids (chemicals included).	
muff coupling with external insert clamped with screwed bolts on hose external diameter	<b>symmetric coupling system: flanged end</b>	For bulk material and abrasive slurries suction and delivery in heavy duty mining.	
Helical insert for composite hose		For acid, chemical, fuel, oil and solvents suction and delivery	



**CLAMPS & FERRULES FOR ASSEMBLY**

**INSERT TYPE**

INSERT TYPE (IND)	Drawing Example	FERRULE/CLAMPS TO BE USED X ASSEMBLY
SERRATED INSERT WITH LOCKING COLLAR		SERRATED FERRULE
SERRATED INSERT WITHOUT LOCKING COLLAR		SMOOTH FERRULE - CRIMPING RING - CLAMPS - BAND-IT
STANDARD INSERT FOR CLAMP / RIDGED INSERT FOR CLAMP		SMOOTH FERRULE - CRIMPING RING - CLAMPS - BAND-IT
SERRATED INSERT WITH EN 14 420-2 / DIN 2817 COLLAR		EN 14 420-3 / DIN 2817 SAFETY CLAMPS - SERRATED FERRULE SUITABLE X EN 14 420-2 / DIN 2817 HOSE SHANK
EN 14 420-2 / DIN 2817 SMOOTH INSERT WITH COLLAR		EN 14 420-3 / DIN 2817 SAFETY CLAMPS
EN 14 423 / DIN 2826 SERRATED INSERT WITH COLLAR		EN 14 423 / DIN 2826 SAFETY CLAMPS
CONCRETE "ONE-PIECE" - PRECRIMPED SERRATED INSERT (FULL FLOW)		CONCRETE SERRATED FERRULE ALREADY PRECRIMPED TO THE FITTING
INDUSTRIAL "ONE-PIECE" - PRECRIMPED SERRATED INSERT		INDUSTRIAL SERRATED FERRULE ALREADY PRECRIMPED TO THE FITTING
EXTERNAL INSERT FIXED BY SCREWS		SECURED WITH SCREWS TO THE HOSE EXTERNAL DIAMETER (NO FERRULE & CLAMPS NEEDED)
EXTERNAL INSERT - MUFF COUPLING		CLAMPED WITH SCREWED BOLTS ON HOSE EXTERNAL DIAMETER (NO FERRULE & CLAMPS NEEDED)
COMPOSITE INSERT		COMPOSITE SMOOTH FERRULE
BUILT IN INSERT		INSERT BONDED TO HOSE DURING CONSTRUCTION (NO FERRULE NEEDED)

hose

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**CLAMPS & FERRULES FOR ASSEMBLY**

**TABLE A: FERRULES**

FERRULE TYPE (IND)	FERRULE DRAWING
CRIMPING RING	
SMOOTH FERRULE X COMPOSITE HOSE (SUITABLE FOR INDUSTRIAL HOSE)	
SERRATED FERRULE	
INDUSTRIAL PRECRIMPED SERRATED FERRULE	
CONCRETE PRECRIMPED SERRATED FERRULE	

**CLAMPS & FERRULES FOR ASSEMBLY**

**TABLE B: CLAMPS**

CLAMP FAMILY	CLAMPS DRAWING
EXPRESS CLAMPS	
TYPE A CLAW CLAMPS - DIN20039B	
TYPE B CLAW CLAMPS	
TYPE S (AUSTRALIAN TYPE) CLAW CLAMPS	
LOOSE SADDLE&SAF.CLAW CLAMPS	
BOSS CLAMPS - GROUND JOINT	
SAFETY CLAMPS EN 14 423 / DIN 2826	
SAFETY CLAMPS EN 14 420-3 / DIN 2817	
LOOSE SADDLE CLAMPS	
LOOSE SADDLE CLAMPS - DIN20039A	


**CLAMPS & FERRULES FOR ASSEMBLY**

**TABLE B: CLAMPS**

CLAMP FAMILY	CLAMPS DRAWING
EAR PINCH ON CLAMP	
MINICLAMP	
WORM GEAR CLAMP	
SPIRAL CLAMP - DOUBLE BRIDGE	
BOLT SUPERCLAMP	
POWER CLAMP	
BAND-IT BAND & BAND-IT BUCKLES	
PREFORMED BAND CLAMP	
RUBBER LINED CLIPS	
EXHAUST PIPE CLAMP	

## COMPRESSED AIR

Hose chapter

		195AT	191AK	180AA	185AA/AH/AK	186AA	175AA/AH/AK	155AA/AK	140AK	132AE
	<b>Express</b>	X	X	X	X	X	X			
	<b>Claw Couplings EU</b>	X	X	X	X	X	X	X		
	<b>Claw Couplings USA</b>	X	X	X	X	X	X	X		
	<b>Claw Couplings AUS</b>	X	X	X	X	X	X	X		
	<b>Geka</b>	X	X	X	X	X	X			
	<b>Ground Joint Seal</b>							X	X	
	<b>Combination nipples precrimped ferrule</b>							X	X	
	<b>Hydraulic Fittings</b>	X	X	X	X	X	X	X	X	X

**HOT AIR**

Hose chapter

		952AA	902AA	902AE	902LE	903LE
	<b>Cardan-Perrot</b>	X				
	<b>Type 42</b>		X			
	<b>SMS</b>					X
	<b>DIN 11851</b>				X	X
	<b>Symmetric Guillemin</b>		X		X	X
	<b>Storz</b>	X	X		X	X
	<b>Cam &amp; Groove</b>	X	X	X	X	X
	<b>TW Couplings EN 14 420-6 DIN 28 450</b>	X			X	X
	<b>Flange PN10/16 ASA150</b>		X			

## WATER & LIQUIDS

Hose chapter

		49000	49200	284AA/AH	286EE/288HH	250AA	253AA	254AA/AH	256AA	264GL	266GL/KL/OL	265TH	267BE	269BA	268BL	47200	204AA	202AA	221AA	248AE
	<b>Geka</b>	X	X	X				X												
	<b>Bauer</b>				X	X	X	X				X		X			X	X	X	
	<b>Cardan-Perrot</b>				X	X	X	X		X	X	X	X	X	X	X	X	X	X	
	<b>Type 42</b>									X	X	X	X	X	X					
	<b>Symmetric Guillemin</b>									X	X		X	X	X	X			X	
	<b>Storz</b>				X		X	X		X	X	X	X	X	X	X			X	X
	<b>Cam &amp; Groove</b>		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
	<b>Comb. nipple</b>	X	X	X		X	X	X				X		X		X	X			X
	<b>Comb. nipple precrimped Ferrule</b>							X	X								X	X		
	<b>Flange PN10/16 ASA150</b>				X*	X*	X*	X	X							X	X	X	X	
	<b>Hydraulic Fittings</b>							X	X											X

\* FLANGE WITH PRE-CRIMPED FERRULE NOT TO BE USED

hose

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**FIRE FIGHTING**

Hose chapter

					
	Gros filet rond couplings	Symmetric Guillemain	Symmetric DSP & AR	Storz	Fire Fighting Couplings
283AA				X	X
251AA	X				X
212AA		X	X	X	X
210AA				X	X

**HOT WATER & STEAM**

Hose chapter

				
	Hydraulic Fittings	Turnexp	Ground Joint Seal	EN 14 423 - DIN 2826 couplings
350AA	X		X	
354AA				X
350LL/LE	X		X	
340AA/AH	X		X	
343AH	X		X	
344AH				X
341AA/AH	X	X	X	
345AA				X



## LIQUID FOOD




Hose chapter

FITTINGS IN STAINLESS STEEL		49200	4660L	4680H	47200	452LH	402LH	410LL	412LE	418LE	455LE/LL	405LE/LL/LH	417LE
	SMS	X	X	X	X	X	X	X	X	X	X	X	X
	DIN 11851	X	X	X	X	X	X	X	X	X	X	X	X
	Macon			X	X		X						
	Symmetric Guillemín	X	X	X	X	X	X	X	X	X	X	X	X
	Storz		X	X	X								
	Cam & Groove	X	X	X	X	X	X	X	X		X	X	X
	TW Couplings								X	X	X	X	X
	EN14 420-5 DIN 2817								X	X	X	X	X

**BULK FOOD**









Hose chapter

**FITTINGS IN STAINLESS STEEL**

				
	SMS	DIN 11851	Symmetric Guillemin	Cam & Groove
760LA	X	X	X	X
760LB				X
720LA	X	X	X	X
720LG				X




**BULK MATERIAL**

Hose chapter

								
	Bauer	Cardan-Perrot	Type 42	Symmetric Guillemin	Storz	Cam & Groove	Comb. nipple	Flange PN10/16 ASA150
760AA		X	X	X	X	X		
766AA	X	X	X	X	X	X	X	
720AA		X	X	X	X	X		X
767AL	X					X	X	
780AA	X					X		

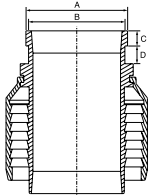
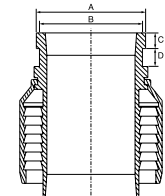
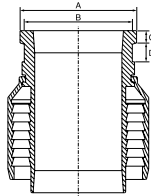
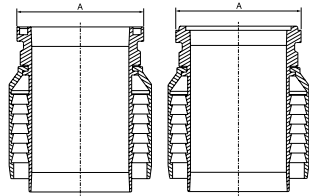
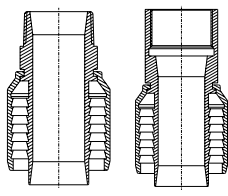
## PLASTER

### Hose chapter

			
	Cardan-Perrot	Storz (hose ID 45 mm)	Mortar Couplings
764OL		X	
752AA	X		
757AA			X
758AA			X
758AE			X






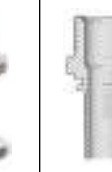
## CONCRETE

### Hose chapter




					
	Victaulic style	Shouldered style	California style	Schwing style	Male & Female threaded Fittings
737AA	X	X			X
740AA	X	X	X	X	X
741AA	X	X	X	X	X

**ACID, CHEMICAL & MULTIPURPOSE**

Hose chapter

								
	Claw Couplings EU-AUS	Symmetric Guillemín	Cam & Groove	TW Couplings	EN 14 420-5 DIN 2817	Combination nipple precrimped Ferrule	Flange PN10/16 ASA150	Hydraulic Fittings
984AH								X
974AH	X							X
975AH								X
954AH								X
976AB								X
956AB				X	X			X
503AA		X	X	X	X	X	X	X
505OG		X	X	X	X	X	X	X
529AA		X	X	X	X		X	X
509OE		X	X	X	X	X	X	X
538AA				X	X			X

**COMPOSITE HOSE FITTINGS**

			
	Combination nipple	Symmetric Guillemín	Flange PN10/16 ASA150
5J551	X	X	X
5J553	X	X	X
5N551	X	X	X
5N331	X	X	X
5N333	X	X	X
5J533	X	X	X

POSSIBLE TO SCREW CAM & GROOVE ADAPTER/COUPLER ON COMBINATION NIPPLE

## HYDROCARBONS

Hose chapter

								
	Symmetric Guillemin	Cam & Groove	TW Couplings EN 14 420-6 DIN 28 450	EN14 420-5 DIN 2817	Comb. nipple	Combination nipple precrimped Ferrule	Flange PN10/16 ASA150	Hydraulic Fittings
650AA/AH		X	X	X	X	X	X	X
650AB		X	X	X	X		X	X
668EL		X			X			X
601AA		X				X	X	
605AA	X	X	X	X	X	X	X	X
605AH	X	X			X	X	X	X
629AA	X	X	X	X	X	X	X	X
655AA		X	X	X		X	X	X
619AA		X	X	X		X	X	X
620AA			X	X		X	X	X
60PAA						X	X	
64PAA						X	X	
604AA	X	X	X		X	X	X	X
634AA	X	X	X		X	X	X	X
644AA	X	X	X		X	X	X	X

**HYDROCARBONS**




Hose chapter

			
	EN 14 420-5 DIN 2817	Hydraulic Fittings	Volucompteur*
658AA	X	X	X
659AA	X	X	

\* AVAILABLE ON REQUEST

		
	EN14 420-5 DIN 2817 AVIATION	Male AVIATION
656AA	X	X
611AA	X	X

**COMPOSITE HOSE FITTINGS**

			
	Combination nipple	Symmetric Guillemin	Flange PN10/16 ASA150
6J544	X	X	X
6J541	X	X	X
6J511	X	X	X
6N111	X	X	X

POSSIBLE TO SCREW CAM & GROOVE ADAPTER/COUPLER ON COMBINATION NIPPLE


## DOCK

Hose chapter

			
	Combination nipple precrimped Ferrule	Crimped fittings with flange PN10/16 ASA150	Built-in Fittings * with flange PN10/16 ASA150
60LAA	X	X	
60AAA			X
60MAA	X	X	
60DAA			X
64AAA			X
60NAA	X	X	
60GAA			X
6ADAA			X




\* AVAILABLE ON REQUEST

### COMPOSITE HOSE FITTINGS

	
	Flange PN10/16 ASA150
6N551	X
5N551	X
5N331	X

**RIG SUPPLY**

Hose chapter

			
	<b>Cam &amp; Groove</b>	<b>Combination nipple precrimped Ferrule</b>	<b>Flange PN10/16 ASA150</b>
642AA	X (adapter)	X	X
646AA		X	X
648AA		X	X
652AA		X	X
615AA		X	X
742AA	X (adapter)	X	X
748AA		X	X
715AA	X (adapter)	X	X
727AA		X	X

hose

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appendix



## MINING

### Hose chapter

							
	Compr. Air Claw Coupling	Bauer	Shouldered style low pressure	Ground Joint Seal	Cam & Groove	Combination nipple precrimped Ferrule	Hydraulic Fittings
151AA	X						X
151AK	X						X
157AK				X			X
189AK	X						X
136AK							X
141AA				X*		X	X
289GG		X			X		
240AA	X					X	X
241AA	X*						X
225AA					X (Brass)	X	X
245AA					X*		
226AA					X	X	X
242AA						X	X
765AA					X (Brass)		
776AA/HA				X			

\* PAY ATTENTION:  
HOSE WP HIGHER THAN FITTING WP  
HOSE ASSEMBLY MUST BE USED AT FITTING WORKING PRESSURE



Muff coupling with Flanges table D

706AA	X
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**THE NEW STANDARD**

Since January, 1<sup>st</sup> 2014, the TMD\* decree requires compliance with the European standard EN 13765 "Thermoplastic multi-layer (non-vulcanized) hoses and hose assemblies for the transfer of hydrocarbons, solvents and chemicals - Specification".

The new standard specifies requirements for thermoplastic multi-layer (non-vulcanized) hoses and hose assemblies carrying hydrocarbons, solvents and chemicals.

The annexes give indications regarding test methods; namely, crush recovery test, thermal ageing test, resilience test for fittings at low temperatures, pressure resistance (hydrostatic test), fitting security test, leak tightness test, fuel resistance test and flammability test.

PRESSURE AND TEMPERATURE RANGE	Gas / Hydrocarbon steam	Liquids	
	Type 1	Type 2	Type 3
Maximum working pressure (bar)	4	10	14
Proof pressure (bar)	6	15	21
Minimum burst pressure (bar)	16	40	56
Vacuum (bar)	0,5	0,9	0,9
Working temperature range (°C)	-20 +60	-30 +80	-30 +80

**MANDATORY BRANDING ACCORDING TO THE NEW STANDARD (I.E. ALFAGOMMA HOSE 6J511 DN 80):**

**ALFAGOMMA 6J511 - WP 10 - DN 80 - PP - 80 °C - QQ/YY - EN 13765:2010 - Type 2**

**FLAMMABILITY TEST ACCORDING TO EN 13765 STANDARD (ANNEX G)**

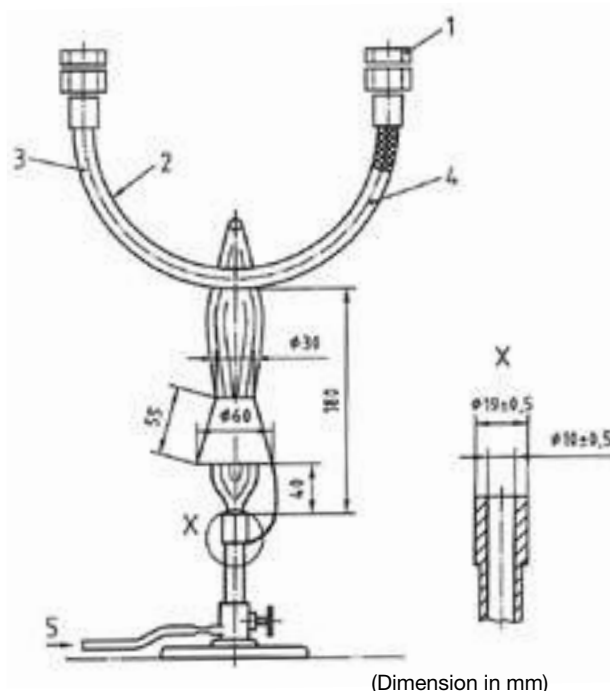
The most important requirement of EN 13765 standard is the flammability resistance test which requires the hoses to withstand exposure to a naked flame for 3 minutes.

Our products were subjected to numerous tests in order to improve our hoses and meet the standard's requirements. Our technical experts have tested our composite hoses according to the method in annex G: the test piece must resist for a period of 3 minutes, bended in U-shape, to the exposure to naked flame and shall be impervious to the test fluid.

The composite hose manufactured according to the BS 5842 standard resists less than one minute to the flammability test and no longer complies with the TMD requirements.

**Legend**

- 1. Cap
- 2. Bending radius - 10 to 15 time of outside diameter
- 3. Hose assembly
- 4. Liquid F in accordance with ISO 1817:2005
- 5. Propane (GPL) = 50 mbar



(Dimension in mm)

**ALFAGOMMA COMPOSITE RANGE**

ALFAGOMMA acknowledges legislative change and is committed to protecting both the safety of operators and of the environment. This is the reason why we developed a hose structure that offers our customers a completely renewed high quality and reliable composite hose range in compliance with the new EN13765 standard and the TMD decree

The new ALFAGOMMA composite hoses resist naked flame for a period of 3 minutes and fully comply with the requirements of EN 13765 and TMD decree.

ALFAGOMMA products, certified by DREAL, guarantee a high safety level in hazardous materials transport, according to current legislation.

Our Sales Team is available to answer your questions and advise you in the choice of the suitable product according to your needs.

\* Transports de Marchandises Dangereuses par voies terrestres - Road Transport of Dangerous Goods

**INDUSTRIAL HOSE CATALOGUE**

**DUCTING & VENTILATION**

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163AL	General purpose .....	H.4
174BB	Air ducting - high temperature +100 °C (+212 °F) - UL 94 V0 .....	H.5
178AA	Air ducting - high temperature +120 °C (+248 °F) .....	H.5
1710O	Air ducting - polyurethane - gauge 0,4 mm .....	H.6
1720O	Air ducting - polyurethane - gauge 0,8 mm .....	H.6
1730O	Air ducting - polyurethane - gauge 1,2 mm .....	H.7
1770O	Air ducting - polyurethane - gauge 1,7 mm .....	H.7

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081AH	Acetylene 20 bar (300 psi) .....	H.10
088AI	LPG-natural gas 25 bar (375 psi) .....	H.10
076AE	Oxygen welding 20 bar (300 psi) - EN ISO 3821 .....	H.11
076AH	Acetylene welding 20 bar (300 psi) - EN ISO 3821 .....	H.11
076AI	LPG welding 20 bar (300 psi) - EN ISO 3821 .....	H.11
076EH	Oxygen/acetylene twin welding 20 bar (300 psi) - EN ISO 3821 .....	H.11
076EI	Oxygen/LPG twin welding 20 bar (300 psi) - EN ISO 3821 .....	H.11
071AI	LPG welding 12 bar (180 psi) - AS 1335 .....	H.12
071EH	Oxygen/acetylene twin welding 12 bar (180 psi) - AS 1335 .....	H.12
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191AK	Compressed air 20 bar (300 psi) - PVC - exceeds AS/NZS 2554/B .....	H.14
180AA	Compressed air 20 bar (300 psi) .....	H.15
185AA	Compressed air 20 bar (300 psi) - standard duty - exceeds DIN 20018/1 .....	H.15
185AH	Compressed air 20 bar (300 psi) - standard duty .....	H.15
185AK	Compressed air 20 bar (300 psi) - standard duty .....	H.15
186AA	Compressed air 20 bar (300 psi) - heavy duty .....	H.15
175AA	Compressed air 20 bar (300 psi) - standard duty .....	H.16
175AH	Compressed air 20 bar (300 psi) - standard duty .....	H.16
175AK	Compressed air 20 bar (300 psi) - standard duty .....	H.16
155AA	Compressed air 20 bar (300 psi) - heavy duty .....	H.17
155AK	Compressed air 20 bar (300 psi) - heavy duty .....	H.17
140AK	Compressed air 40 bar (600 psi) - steel braided .....	H.18
142AK	Compressed air 40 bar (600 psi) - high temperature - oil resistant - steel braided .....	H.18
132AE	Compressed air 80 bar (1200 psi) - high temperature - steel braided .....	H.18
179AA	Push-loc/push-on .....	H.19
179AB	Push-loc/push-on .....	H.19
165AA	Air brake 10 bar (150 psi) - DIN 74310 .....	H.19
166AA	Air brake 20 bar (300 psi) - SAE J1402 .....	H.19
160AA	Railway air brake 20 bar (300 psi) - BS 3682/1 AS 2435 UIC 830-1/V .....	H.19

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962LA	Hot air blower 10 bar (150 psi) - soft wall .....	H.22
902AA	Hot air blower 10 bar (150 psi) - hard wall .....	H.23
902AE	Hot air blower 10 bar (150 psi) - hard wall .....	H.23
902LE	Hot air blower 10 bar (150 psi) - hard wall .....	H.23
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284AH	Water delivery 10 bar (150 psi) .....	H.26
286EE	Water discharge - PVC - lay flat - standard duty .....	H.27
288HH	Water discharge - PVC - lay flat - heavy duty .....	H.27
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253AA	Water discharge 10 bar (150 psi) - lay flat .....	H.27
254AA	Air-water delivery 10 bar (150 psi) .....	H.28
254AH	Air-water delivery 10 bar (150 psi) .....	H.28
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266GL	Water S&D - PVC - standard duty .....	H.29
266KL	Water S&D - PVC - standard duty .....	H.29
266OL	Water S&D - PVC - standard duty - super elastic .....	H.29
265TH	Water-slurry S&D - PVC - standard duty - super elastic .....	H.30
267BE	Water-slurry S&D - PVC - medium duty - super elastic .....	H.30
269BA	Water-slurry S&D - PVC/NBR - medium duty - superior flexibility .....	H.30
268BL	Water-abrasive slurry S&D - PVC - heavy duty .....	H.30
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204AA	Water S&D 5 bar (75 psi) .....	H.32
202AA	General purpose S&D 10 bar (150 psi) - EPDM .....	H.32
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340AH	Steam 18 bar (270 psi) - steel braided .....	H.47
344AH	Steam 18 bar (270 psi) - steel braided - EN ISO 6134/2A .....	H.47
343AH	Steam 18 bar (270 psi) - oil resistant - steel braided .....	H.47
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468OH	Liquid food S&D - PVC - heavy duty - FDA - EU 10/2011 A+B+C AS 2070 .....	H.52
4720O	General purpose food quality S&D - PVC - FDA - EU 10/2011 A+B+C AS 2070 .....	H.53
452LH	Liquid food delivery 10 bar (150 psi) - FDA arrêté du 09/11/94 D.....	H.54
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405LL	Fat food S&D 10 bar (150 psi) - FDA D.M. 21/03/73.....	H.57
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519OE	Acid-chemical S&D 16 bar (240 psi) - UPE - corrugated .....	H.83
538AA	Tank cleaning 20 bar (300 psi) - EPDM - textile braided.....	H.83
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5J553	Acid-chemical S&D 10 bar (150 psi) - standard duty - BS 5842 arrêté ADR annexe 1.....	H.84
5N551	Acid-chemical S&D 14 bar (200 psi) - heavy duty - BS 5842 arrêté ADR annexe 1 .....	H.85
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60DAA	Fuel-oil S&D 10 bar (150 psi) - EN 1765/S7 .....	H.108
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## INDUSTRIAL FITTINGS CATALOGUE

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Male BSP - Complete with seal .....	F.4
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Seal.....	F.5
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Hose shank - Complete with seal .....	F.8
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Three way connector - Complete with seal.....	F.8
Blank cap - Complete with seal .....	F.9
Seal.....	F.9
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Safety pin .....	F.9

#### TYPE S CLAW COUPLING (AUSTRALIAN TYPE)

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Three way connector - Complete with seal.....	F.11
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#### GEKA

Hose Shank - Complete with seal .....	F.14
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**SMS**

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**DIN 11851**

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**MACON**

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**SYMMETRIC GUILLEMIN NF E 29.572**

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**SYMMETRIC DSP & AR**

**SYMMETRIC DSP & AR (NF S 61.704 - NF S 61.705)**

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## GFR - ROUND THREAD COUPLING NF E 29.579

### GFR - ROUND THREAD COUPLING NF E 29.579

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## STORZ

### STORZ

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### TANKWAGEN EN 14 420-6 / DIN 28 450

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### CAM & GROOVE MIL A-A-59326A / MIL C - 27.487

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### COMBINATION NIPPLE

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## EN 14 420-5 / DIN 2817

### EN 14 420-5 / DIN 2817

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## AVIATION

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**SANDBLAST**

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**MORTAR**

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**FIXED FLANGE**

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**FIXED FLANGE**

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**SWIVEL FLANGE**

Serrated hose shank ..... F.87

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**MUFF COUPLING**

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