

DDCouplings[®]
Dry Disconnect Couplings



Technical Information

KilltheSpill

KilltheSpill

About Mann Tek

Mann Teknik AB is a Swedish company located in Mariestad, Sweden.

Mann Teknik AB produces and markets products for safe and environmentally friendly handling of aggressive fluids for the chemical and petrochemical industries.

The main product is the Dry Disconnect Couplings, DDCouplings®, for spill free liquid handling. The products are marketed through independent representatives in more than 30 countries.

Mann Teknik AB have many years of experience in designing, producing and marketing of DDCouplings® all since 1977.

Mann Teknik AB has shown a high rate of growth during the past years and is now a major player in its specialised field of operation. This is due to a determined expansion into growing markets and recognition by customers of the robust design and reliable quality of the products.

Mann Teknik AB are certified to ISO9001:2008. The products are CE-labeled. The main products are certified to PED, the European Pressure Equipment Directive and ATEX, the European directive for Equipment intended for use in Potentially Explosive Atmospheres.

The products are produced in accordance with several important standards, e.g. the NATO STANAG 3756








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1" (Ø56 mm) Technical Information

Tank unit / Adapter and Hose unit / Coupler



Material	Maximum working pressure	Test pressure	Minimum Burs Pressure
Aluminium	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi
Brass/Gun Metal	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi
Stainless Steel	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Titan	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Hastelloy	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Peek	6 bar / 87 psi	9 bar / 131 psi	30 bar / 435 psi

Connections

3/4", 1" and 1 1/4" in BSP, NPT and Flanged inlet

Applications

For industrial process plant, road and rail tankers, IBC containers, Pharmaceutical and Petrochemical industries etc.

Recommended for all types of mini bulk liquid product transfer, including container and drum filling, or on any application where spillage needs to be minimized.

Media

Petroleum products: Gasoline, diesel, oil etc.

Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.

Dry powder: Chocolate powder e.t.c.

Material

Aluminium, Brass/Gunmetal, Stainless Steel, Hastelloy and PEEK. Other materials on request.

Seals

Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.

High Flow Rates / Low Pressure Drop

Allows maximum product transfer with minimal losses

Recommended Maximum Flow Rates

200 litres/minute (fuel)

Selectivity

- Avoid mixing products:

To avoid product contamination caused by connecting a hose unit to the wrong tank unit, selective versions of the hose and tank units are available. Each unit has a number of selective positions, designated by a coded part number according to the coupling size - specify when placing order.

Interchangeability:

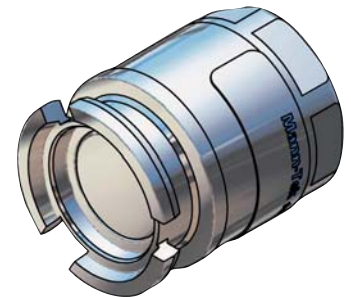
Compatibility with other existing brands, e.g. TODO-matic and Fulcrum couplings.

Hose unit with Integrated Swivel

All Hose units are designed with integrated Swivel

1" (Ø56 mm) Tank unit / Adapter

Connection ¹⁾ Inch/DN	Body Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring	Flat seal	kg	lbs	
F 1/2" BSP	Al		PUR (Vulkollan®)	0,3	0.66	T1133A1101B
F 3/4" BSP						T101A1101B
F 1" BSP						T103A1101B
F 1 1/4" BSP						T105A1101B
F M54x1,5						T1138A1101B
F 1/2" NPT						T1132A1101
F 3/4" NPT						T102A1101
F 1" NPT						T104A1101
F 1 1/4" NPT						T106A1101
F 1/2" BSP	Br		PUR (Vulkollan®)	0,7	1.54	T1133A2201B
F 3/4" BSP						T101A2201B
F 1" BSP						T103A2201B
F 1 1/4" BSP						T105A2201B
F M54x1,5						T1138A2201B
F 1/2" NPT						T1132A2201
F 3/4" NPT						T102A2201
F 1" NPT						T104A2201
F 1 1/4" NPT						T106A2201
F 1/2" BSP	SS	Standard: FPM/FKM (Viton®)	PTFE (Teflon®)	0,7	1.54	T1133A4401B
F 3/4" BSP						T101A4401A
F 1" BSP						T103A4401A
F 1 1/4" BSP						T105A4401A
F M54x1,5						T1138A4401A
F 1/2" NPT						T1132A4401
F 3/4" NPT						T102A4401
F 1" NPT						T104A4401
F 1 1/4" NPT						T106A4401
F 3/4" BSP	Titan		PTFE (Teflon®)	0,4	0.88	T101A6601A
F 1" BSP						T103A6601A
F 1 1/4" BSP						T105A6601A
F 3/4" NPT						T102A6601
F 1" NPT						T104A6601
F 1 1/4" NPT	T106A6601					
F 3/4" BSP	Hastelloy		PTFE (Teflon®)	0,8	1.76	T101A7701A
F 1" BSP						T103A7701A
F 1 1/4" BSP						T105A7701A
F 3/4" NPT						T102A7701
F 1" NPT						T104A7701
F 1 1/4" NPT	T106A7701					
F 3/4" BSP	PEEK		PTFE (Teflon®)	0,1	0.22	T101A9901A
F 1" BSP						T103A9901A
F 1 1/4" BSP						T105A9901A
F 3/4" NPT						T102A9901
F 1" NPT						T104A9901
F 1 1/4" NPT	T106A9901					



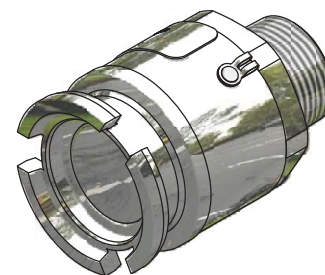
1) Female thread BSP=ISO 228, NPT=ANSI B1.20.1

2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel, Ti=Titan, Ha=Hastelloy, PE=PEEK

3) Standard seal. Other on request.

1" (Ø56 mm) Tank unit / Adapter - Male thread

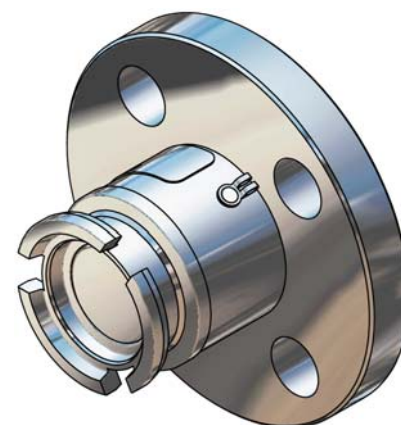
Connection ¹⁾ Inch/DN	Material ²⁾	Seal ³⁾	Weight		Code No		
		O-ring	kg	lbs			
M 3/4" BSP	Al	Standard: FPM/FKM (Viton®)			T169A1101		
M 3/4" NPT					T170A1101		
M 1" BSP					T171A1101		
M 1" NPT					T172A1101		
M 3/4" BSP	Br		Other on request			T169A1101	
M 3/4" NPT						T170A1101	
M 1" BSP						T171A1101	
M 1" NPT						T172A1101	
M 3/4" BSP	SS			Other on request			T169A4401
M 3/4" NPT							T170A4401
M 1" BSP							T171A4401
M 1" NPT							T172A4401



- 1) Male thread BSP=ISO 228, NPT=ANSI B1.20.1
 2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel,
 3) Standard seal. Other on request.

1" (Ø56 mm) Tank unit / Adapter, Flanged inlet

Flange ¹⁾	Body Material ²⁾	Seal ³⁾	Weight		Code No		
		O-ring	kg	lbs			
undrilled	Al	Standard: FPM/FKM (Viton®)	1,1	2.42	T118A1101		
DN 25 PN 10 / 16 Type A					T123A1101		
DN 25 PN 25 / 40 Type A					T124A1101		
1" ANSI 150 PSI					T151A1101		
1 " ANSI 300 PSI					T152A1101		
undrilled	Br		Other on request	1,6	3.53	T118A2201	
DN 25 PN 10 / 16 Type B						T123A2201	
DN 25 PN 25 / 40 Type B						T124A2201	
1" ANSI 150 PSI						T151A2201	
1" ANSI 300 PSI						T152A2201	
undrilled	SS			Other on request	1,5	3.31	T118A4401
DN 25 PN 10 / 16 Type B							T123A4401
DN 25 PN 25 / 40 Type B							T124A4401
1" ANSI 150 PSI							T151A4401
1" ANSI 300 PSI							T152A4401
undrilled	Titan	Other on request			0,8	1.76	T118A6601
DN 25 PN 10 / 16 Type B							T123A6601
DN 25 PN 25 / 40 Type B							T124A6601
1" ANSI 150 PSI							T151A6601
1" ANSI 300 PSI							T152A6601
DN 25 PN 10 / 16 Type B	Hastelloy		Other on request		1,7	3.75	T123A7701
DN 25 PN 25 / 40 Type B							T124A7701
1" ANSI 150 PSI							T151A7701
1" ANSI 300 PSI							T152A7701
undrilled	PEEK				Other on request	0,2	0.44
DN 25 PN 10 / 16 Type B				T123A9901			
DN 25 PN 25 / 40 Type B				T124A9901			
1 " ANSI 150 PSI				T151A9901			
1 " ANSI 300 PSI				T152A9901			



- 1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459.
 2) **Mtrl:** Al=Aluminium , Br=Brass, SS=Stainless Steel, Ti=Titan, Ha=Hastelloy, PE=PEEK
 3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

1" (Ø56 mm) Hose unit / Coupler

Connection ¹⁾ Inch/DN	Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring	Flat seal	kg	lbs	
F 1/2" BSP	Al		PUR (Vulkollan®)	0,5	1.10	S1133A1101B
F 3/4" BSP						S101A1101B
F 1" BSP						S103A1101B
F 1 1/4" BSP						S105A1101B
F M54x1,5						S1138A1101B
F 1/2" NPT						S1132A1101
F 3/4" NPT						S102A1101
F 1" NPT						S104A1101
F 1 1/4" NPT						S106A1101
F 1/2" BSP	Br		PUR (Vulkollan®)	1,4	3.09	S1133A2201B
F 3/4" BSP						S101A2201B
F 1" BSP						S103A2201B
F 1 1/4" BSP						S105A2201B
F M54x1,5						S1138A2201B
F 1/2" NPT						S1132A2201
F 3/4" NPT						S102A2201
F 1" NPT						S104A2201
F 1 1/4" NPT						S106A2201
F 1/2" BSP	SS	Standard: FPM/FKM (Viton®)	PTFE (Teflon®)	1,3	2.87	S1133A4401A
F 3/4" BSP						S101A4401A
F 1" BSP						S103A4401A
F 1 1/4" BSP						S105A4401A
F M54x1,5						S1138A4401A
F 1/2" NPT						S1132A4401
F 3/4" NPT						S102A4401
F 1" NPT						S104A4401
F 1 1/4" NPT						S106A4401
F 3/4" BSP	Titan	Other on request	PTFE (Teflon®)	0,7	1.54	S101A6601A
F 1" BSP						S103A6601A
F 1 1/4" BSP						S105A6601A
F 3/4" NPT						S102A6601
F 1" NPT						S104A6601
F 1 1/4" NPT	S106A6601					
F 3/4" BSP	Hastelloy	Other on request	PTFE (Teflon®)	1,5	3.31	S101A7701A
F 1" BSP						S103A7701A
F 1 1/4" BSP						S105A7701A
F 3/4" NPT						S102A7701
F 1" NPT						S104A7701
F 1 1/4" NPT	S106A7701					
F 3/4" BSP	PEEK	Other on request	PTFE (Teflon®)	0,3	0.66	S101A9901A
F 1" BSP						S103A9901A
F 1 1/4" BSP						S105A9901A
F 3/4" NPT						S102A9901
F 1" NPT						S104A9901
F 1 1/4" NPT	S106A9901					



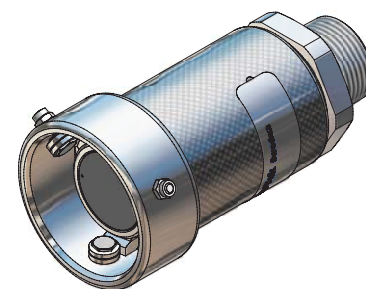
1) Female thread BSP=ISO 228, NPT=ANSI B1.20.1

2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel, Ti=Titan, Ha=Hastelloy, PE=PEEK

3) Standard seal. Other on request.

1" (Ø56 mm) Hose unit / Coupler - Male thread

Connection ¹⁾ Inch/DN	Material ²⁾	Seal ³⁾	Weight		Code No						
		O-ring	kg	lbs							
M 3/4" BSP	Al	Standard: FPM/FKM (Viton®)			S169A1101						
M 3/4" NPT					S170A1101						
M 1" BSP					S171A1101						
M1" NPT					S172A1101						
M 3/4" BSP	Br				Other on request			S169A1101			
M 3/4" NPT								S170A1101			
M 1" BSP								S171A1101			
M 1" NPT								S172A1101			
M 3/4" BSP	SS							Other on request			S169A4401
M 3/4" NPT											S170A4401
M 1" BSP											S171A4401
M 1" NPT											S172A4401

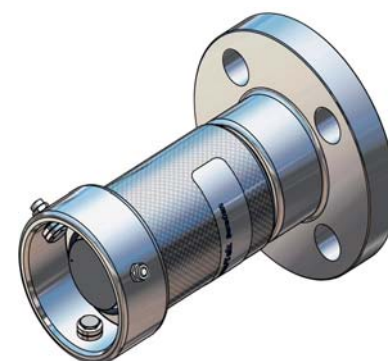


1) Male thread BSP=ISO 228, NPT=ANSI B1.20.1 3) Standard seal. Other on request.

2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel

1" (Ø56 mm) Hose unit / Coupler, Flanged inlet

Flange ¹⁾	Body Material ²⁾	Seal ³⁾	Weight		Code No												
		O-ring	kg	lbs													
undrilled	Al	Standard: FPM/FKM (Viton®)			S118A1101												
DN 25 PN 10 / 16 Type A					S123A1101												
DN 25 PN 25 / 40 Type A					S124A1101												
3/4" ANSI 150 PSI					S149A1101												
1" ANSI 150 PSI					S151A1101												
1 " ANSI 300 PSI					S152A1101												
DN 25 DIN 11864					S1151A1101												
undrilled					Br	Other on request			S118A2201								
DN 25 PN 10 / 16 Type B	S123A2201																
DN 25 PN 25 / 40 Type B	S124A2201																
3/4" ANSI 150 PSI	S149A2201																
1" ANSI 150 PSI	S151A2201																
1" ANSI 300 PSI	S152A2201																
undrilled	SS				Other on request						S118A4401						
DN 25 PN 10 / 16 Type B											S123A4401						
DN 25 PN 25 / 40 Type B											S124A4401						
3/4" ANSI 150 PSI											S149A4401						
1" ANSI 150 PSI											S151A4401						
1" ANSI 300 PSI											S152A4401						
undrilled	Titan										Other on request			S118A6601			
DN 25 PN 10 / 16 Type B														S123A6601			
DN 25 PN 25 / 40 Type B														S124A6601			
1" ANSI 150 PSI														S151A6601			
1" ANSI 300 PSI														S152A6601			
DN 25 PN 10 / 16 Type B	Hastelloy	Other on request												S123A7701			
DN 25 PN 25 / 40 Type B														S124A7701			
1" ANSI 150 PSI														S151A7701			
1" ANSI 300 PSI														S152A7701			
undrilled	PEEK													Other on request			S118A9901
DN 25 PN 10 / 16 Type B																	S123A9901
DN 25 PN 25 / 40 Type B																	S124A9901
1 " ANSI 150 PSI						S151A9901											
1" ANSI 300 PSI						S152A9901											



1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459.

2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel, Ti=Titan, Ha=Hastelloy, PE=PEEK

3) Standard seal. Other on request.

2" (Ø70 mm) Technical Information

Tank unit / Adapter and Hose unit / Coupler



According to NATO STANAG 3756

Material	Maximum working pressure	Test pressure	Minimum Burs Pressure
Aluminium	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi
Brass/Gun Metal	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi
Stainless Steel	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Titan	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Hastelloy	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Peek	6 bar / 87 psi	9 bar / 131 psi	30 bar / 435 psi

Connections

1½" and 2" in BSP, NPT and Flanged inlet

Applications

For industrial process plant, road and rail tankers, ISO containers, IBC containers, Pharmaceutical and Petrochemical industries or on any application where spillage needs to be minimized.

Media

Petroleum products: Gasoline, diesel, oil etc.

Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.

Gas:

Dry powder: Chocolate powder e.t.c.

Material

Aluminium, Brass/Gunmetal, Stainless Steel, Hastelloy and PEEK. Other materials on request.

Seals

Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.

High Flow Rates / Low Pressure Drop

Allows maximum product transfer with minimal losses

Recommended Maximum Flow Rates

900 litres/minute (fuel)

Selectivity

- Avoid mixing products:

To avoid product contamination caused by connecting a hose unit to the wrong tank unit, selective versions of the hose and tank units are available. Each unit has a number of selective positions, designated by a coded part number according to the coupling size - specify when placing order.

Interchangeability:

Compatibility with other existing brands, e.g. TODO-matic and Fulcrum couplings.

Hose unit with Integrated Swivel

All hose units are designed with integrated Swivel

2" (Ø70 mm) Tank unit / Adapter - Female thread

According to NATO STANAG 3756

Connection ¹⁾ Inch/DN	Body Material ²⁾	Seal ³⁾		Weight		Code No				
		O-ring	Flat seal	kg	lbs					
F 1½" BSP	Al	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)			T207A1101B				
F 2" BSP				0,4		T210A1101B				
F S60x6						T2108A1101B				
F W2"-7						T2112A1101B				
F 1½" NPT						T208A1101				
F 2" NPT						T211A1101				
F 1½" BSP	Br		Other on request	PUR (Vulkollan®)	1,2		T207A2201B			
F 2" BSP					1,1		T210A2201B			
F S60x6					1,0		T2108A2201B			
F W2"-7					1,0		T2112A2201B			
F 1½" NPT							T208A2201			
F 2" NPT					1,1		T211A2201			
F 1½" BSP	SS	Other on request		PTFE (Teflon®)	1,1		T207A4401A			
F 2" BSP					1,0		T210A4401A			
F S60x6					1,0		T2108A4401A			
F 1½" NPT					1,2		T208A4401			
F 2" NPT					1,1		T211A4401			
F 1½" BSP					Titan	Other on request	PTFE (Teflon®)			T207A6601A
F 2" BSP	0,6			T210A6601A						
F 1½" NPT				T208A6601						
F 2" NPT	0,6			T211A6601						
F 1½" BSP	Hastelloy		Other on request	PTFE (Teflon®)						T207A7701A
F 2" BSP										T210A7701A
F 1½" NPT								T208A7701		
F 2" NPT							T211A7701			
F 1½" BSP		PEEK			Other on request		PTFE (Teflon®)			T207A9901A
F 2" BSP								0,25		T210A9901A
F 1½" NPT								T208A9901		
F 2" NPT								T211A9901		



1) Female thread BSP=ISO 228, NPT=ANSI B1.20.1

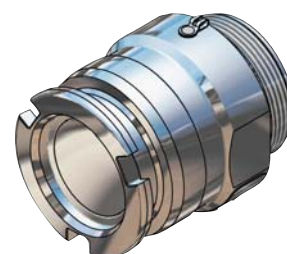
2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel, Ti=Titan, Ha=Hastelloy, PE=PEEK

3) Standard seal. Other on request.

2" (Ø70 mm) Tank unit / Adapter - Male thread

According to NATO STANAG 3756

Connection ¹⁾ Inch/DN	Material ²⁾	Seal ³⁾	Weight		Code No	
		O-ring	kg	lbs		
M 2" BSP	Al	Standard: FPM/FKM (Viton®)	1,0	-	T278A1101	
M 2" NPT					T279A1101	
M W2"-7					T2123A1101	
M 2" BSP	Br		Other on request	-	-	T278A2201
M 2" NPT						T279A2201
M W2"-7						T2123A2201
M 2" BSP	SS	Other on request		1,0	-	T278A4401
M 2" NPT				1,1		T279A4401



1) Male thread BSP=ISO 228, NPT=ANSI B1.20.1

2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel

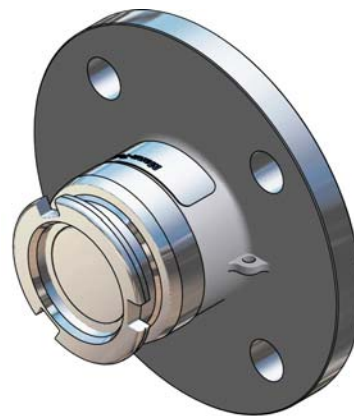
3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

2" (Ø70 mm) Tank unit / Adapter, Flanged inlet

According to NATO STANAG 3756

Flange ¹⁾	Body Material ²⁾	Seal ³⁾		Weight		Code No	
		O-ring		kg	lbs		
undrilled Ø165 mm	Al			1,0		T219B1101	
DN 40 PN 10 / 16 Type A				0,9		T227B1101	
1½" ANSI 150 PSI				0,8		T255B1101	
DN 50 PN 10 / 16 Type A				1,0		T230B1101	
2" ANSI 150 PSI				0,9		T257B1101	
TW1 / 80				0,9		T265B1101	
undrilled Ø165 mm	GM			3,3		T219B2201	
DN 40 PN 10 / 16 Type B				2,5		T227B2201	
DN 40 PN 25 / 40 Type B				-		T228B2201	
1½" ANSI 150 PSI				2,2		T255B2201	
1½ " ANSI 300 PSI				-		T256B2201	
DN 50 PN 10 / 16 Type B				3,1		T230B2201	
DN 50 PN 25 / 40 Type B				-		T231B2201	
2" ANSI 150 PSI				2,5		T257B2201	
2 " ANSI 300 PSI				-		T258B2201	
TW1 / 80				2,4		T265B2201	
undrilled Ø165 mm		SS			3,2		T219B4401
undrilled Ø165 mm **)					-		T219B4401F
DN 40 PN 10 / 16 Type B				2,4		T227B4401	
DN 40 PN 10 / 16 Type B **)				-		T227B4401F	
DN 40 PN 25 / 40 Type B				2,4		T228B4401	
DN 40 PN 25 / 40 Type B **)				-		T228B4401F	
1½" ANSI 150 PSI				1,7		T255B4401	
1½" ANSI 150 PSI **)				-		T255B4401F	
1½ " ANSI 300 PSI				2,1		T256B4401	
1½ " ANSI 300 PSI **)				-		T256B4401F	
DN 50 PN 25 / 40*) Type E				2,9		T229B4401	
DN 50 PN 10 / 16 Type B				2,7		T230B4401	
DN 50 PN 10 / 16 Type B **)				-		T230B4401F	
DN 50 PN 25 / 40 Type B				3,0		T231B4401	
DN 50 PN 25 / 40 Type B **)				-		T231B4401F	
2" ANSI 150 PSI				2,4		T257B4401	
2" ANSI 150 PSI **)				-		T257B4401F	
2 " ANSI 300 PSI				2,5		T258B4401	
2 " ANSI 300 PSI **)				-		T258B4401F	
TW1 / 80				-		T265B4401	
DN 50 DIN 11864				-		T2152B4401	
undrilled Ø165 mm	Titan						T219A6601
DN 40 PN 10 / 16 Type B							T227A6601
DN 40 PN 25 / 40 Type B							T228A6601
1½" ANSI 150 PSI				1,7		T255A6601	
1½ " ANSI 300 PSI						T256A6601	
DN 50 PN 10 / 16 Type B						T230A6601	
DN 50 PN 25 / 40 Type B						T231A6601	
2" ANSI 150 PSI						T257A6601	
2 " ANSI 300 PSI						T258A6601	
undrilled Ø165 mm	Hastel-loy					T219A7701	
DN 40 PN 10 / 16 Type B						T227A7701	
DN 40 PN 25 / 40 Type B						T228A7701	
1½" ANSI 150 PSI						T255A7701	
1½ " ANSI 300 PSI B						T256A7701	
DN 50 PN 10 / 16 Type B						T230A7701	
DN 50 PN 25 / 40 Type B						T231A7701	
2" ANSI 150 PSI						T257A7701	
2 " ANSI 300 PSI						T258A7701	
undrilled Ø165 mm	PEEK					T219A9901	
DN 40 PN 10 / 16 Type B				1,0		T227A9901	
1½" ANSI 150 PSI						T255A9901	
DN 50 PN 10 / 16 Type B				1,0		T230A9901	
2" ANSI 150 PSI				1,0		T257A9901	



*) Type E, EN 1092-1:2001 Spigot
 **) Flange with standard thickness

- 1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459.
- 2) **Mtrl:** Al=Aluminium, GM=Gun Metal, SS=Stainless Steel,
- 3) Standard seal. Other on request.

2" (Ø70 mm) Hose unit / Coupler - Female thread

According to NATO STANAG 3756

Connection ¹⁾ Inch/DN	Material ²⁾	Seal ³⁾		Weight		Code No			
		O-ring	Flat seal	kg	lbs				
F 1½" BSP	Al	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)	1,2		S207A1101B			
F 1½" BSP-Big mouth*)						S207A1101BI			
F 2" BSP				1,1		S210A1101B			
F 2" BSP-Big mouth*)				1,1		S210A1101BI			
F 1½" NPT				1,1		S208A1101			
F 1½" NPT-Big mouth*)				-		S208A1101I			
F 2" NPT				1,1		S211A1101			
F 2" NPT-Big mouth*)				-		S211A1101I			
F 1½" BSP	Br		Other on request	PUR (Vulkollan®)	2,6		S207A2201B		
F 1½" BSP-Big mouth*)					-		S207A2201BI		
F 2" BSP					2,4		S210A2201B		
F 2" BSP-Big mouth*)							S210A2201BI		
F 1½" NPT					2,5		S208A2201		
F 1½" NPT-Big mouth*)							S208A2201I		
F 2" NPT					2,5		S211A2201		
F 2" NPT-Big mouth*)							S211A2201I		
F 1½" BSP	SS	Other on request		PTFE Teflon®	2,5		S207A4401A		
F 2" BSP					2,3		S10A4401A		
F 1½" NPT					2,4		S208A4401		
F 2" NPT					2,3		S211A4401		
F 1½" BSP	Titan			Other on request	PTFE Teflon®	1,3		S207A6601A	
F 2" BSP						1,3		S210A6601A	
F 1½" NPT						-		S208A6601	
F 2" NPT						1,4		S211A6601	
F 1½" BSP	Hastelloy		Other on request		PTFE Teflon®	2,3		S207A7701A	
F 2" BSP						2,3		S210A7701A	
F 1½" NPT						-		S208A7701	
F 2" NPT						2,3		S211A7701	
F 1½" BSP	PEEK				Other on request	PTFE Teflon®	-		S207A9901A
F 2" BSP							1,3		S210A9901A
F 1½" NPT							-		S208A9901
F 2" NPT							1,3		S211A9901



*) Adapted for older models of EMCO Wheaton couplings

1) Female thread BSP=ISO 228, NPT=ANSI B1.20.1

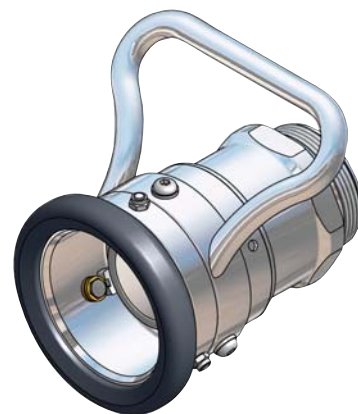
2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel, Ti=Titan, Ha=Hastelloy, PE=PEEK

3) Standard seal. Other on request.

2" (Ø70 mm) Hose unit / Coupler - Male thread

According to NATO STANAG 3756

Connection ¹⁾ Inch/DN	Body Material ²⁾	Seal ³⁾		Weight		Code No				
		O-ring		kg	lbs					
M 2" BSP	Al	Standard: FPM/FKM (Viton®)				S278A1101				
M 2" NPT						S279A1101				
M S60x6						S2109A1101				
M W2"-7				1,3		S2123A1101				
M 2" BSP	Br			Other on request				S278A2201		
M 2" NPT								S279A2201		
M S60x6								S2109A2201		
M W2"-7								S2123A2201		
M 2" BSP	SS					Other on request		2,3		S278A4401
M 2" NPT										S279A4401
M S60x6										S2109A4401
										S2109A4401



1) Male thread BSP=ISO 228, NPT=ANSI B1.20.1

2) **Mtrl:** Al=Aluminium, Br=Brass, SS=Stainless Steel,

3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

2" (Ø70 mm) Hose unit / Coupler, Flanged inlet

Flange ¹⁾	Body Material ²⁾	Seal ³⁾	Weight		Code No		
		O-ring	kg	lbs			
undrilled Ø165 mm	Al	Standard: FPM/FKM (Viton®)			S219A1101		
DN 40 PN 10 / 16 Type A					S227A1101		
1½" ANSI 150 PSI					S255A1101		
DN 50 PN 10 / 16 Type A			2,3		S230A1101		
2" ANSI 150 PSI					S257A1101		
TW1 / 80					S265A1101		
undrilled Ø165 mm	GM		Other on request			S219A2201	
DN 40 PN 10 / 16 Type B						S227A2201	
DN 40 PN 25 / 40 Type B						S228A2201	
1½" ANSI 150 PSI				5,1		S255A2201	
1½" ANSI 300 PSI						S256A2201	
DN 50 PN 10 / 16 Type B						S230A2201	
DN 50 PN 25 / 40 Type B					S231A2201		
2" ANSI 150 PSI		5,1			S257A2201		
2" ANSI 300 PSI					S258A2201		
TW1 / 80					S265A2201		
undrilled Ø165 mm		SS		Other on request			S219A4401
undrilled Ø165 mm **)							S219A4401F
DN 40 PN 10 / 16 Type B					S227A4401		
DN 40 PN 10 / 16 Type B **)					S227A4401F		
DN 40 PN 25 / 40 Type B					S228A4401		
DN 40 PN 25 / 40 Type B **)					S228A4401F		
1½" ANSI 150 PSI					S255A4401		
1½" ANSI 150 PSI **)					S255A4401F		
1½" ANSI 300 PSI					S256A4401		
1½" ANSI 300 PSI **)	6,6				S256A4401F		
DN 50 PN 25 / 40*) Type E					S229A4401		
DN 50 PN 10 / 16 Type B	5,4				S230A4401		
DN 50 PN 10 / 16 Type B **)					S230A4401F		
DN 50 PN 25 / 40 Type B	5,4				S231A4401		
DN 50 PN 25 / 40 Type B **)					S231A4401F		
2" ANSI 150 PSI	5,1				S257A4401		
2" ANSI 150 PSI **)					S257A4401F		
2" ANSI 300 PSI					S258A4401		
2" ANSI 300 PSI **)					S258A4401F		
TW1 / 80					S265A4401		
DN 50 DIN 11864	3,1				S2152B4401		
undrilled Ø165 mm	Titan						S219A6601
DN 40 PN 10 / 16 Type B							S227A6601
DN 40 PN 25 / 40 Type B							S228A6601
1½" ANSI 150 PSI					S255A6601		
1½" ANSI 300 PSI					S256A6601		
DN 50 PN 10 / 16 Type B					S230A6601		
DN 50 PN 25 / 40 Type B					S231A6601		
2" ANSI 150 PSI					S257A6601		
2" ANSI 300 PSI					S258A6601		
undrilled Ø165 mm		Hastelloy				S219A7701	
DN 40 PN 10 / 16 Type B					S227A7701		
DN 40 PN 25 / 40 Type B					S228A7701		
1½" ANSI 150 PSI					S255A7701		
1½" ANSI 300 PSI					S256A7701		
DN 50 PN 10 / 16 Type B	5,4				S230A7701		
DN 50 PN 25 / 40 Type B					S231A7701		
2" ANSI 150 PSI					S257A7701		
2" ANSI 300 PSI					S258A7701		
undrilled Ø165 mm	PEEK					S219A9901	
DN 40 PN 10 / 16 Type B		5,4			S227A9901		
1½" ANSI 150 PSI Type B					S255A9901		
DN 50 PN 10 / 16 Type B		5,4			S230A9901		
2" ANSI 150 PSI					S257A9901		

According to
NATO STANAG 3756



*) Type E, EN 1092-1:2001 Spigot
**) Flange with standard thickness

1) Flanges according to EN 1092, ANSI B16.5 and DIN 28459.

2) **Mtrl:** Al=Aluminium, GM=Gun Metal, SS=Stainless Steel

3) Standard seal. Other on request.

2½" (Ø105 mm) Technical information

Tank unit / Adapter and Hose unit / Coupler



According to NATO STANAG 3756

Material	Maximum working pressure	Test pressure	Minimum Burs Pressure
Aluminium	10 bar / 145 psi	15 bar / 218 psi	50 bar / 726 psi
Brass/Gun Metal	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi
Stainless Steel	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Titan	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Hastelloy	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Peek	6 bar / 87 psi	9 bar / 131 psi	30 bar / 435 psi

Connections

2½" and 3" in BSP, NPT and Flanged inlet

Applications

The 2" (105 mm) DDCoupling is recommended for road tanker bottom loading for a variety of fluids or on any application where product contamination and spillage needs to be minimized.

Media

Petroleum products: Gasoline, diesel, oil etc.

Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.

Gas:

Dry powder: Chocolate powder e.t.c.

Material

Aluminium, Brass/Gunmetal, Stainless Steel, Hastelloy and PEEK. Other materials on request.

Seals

Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.

High Flow Rates / Low Pressure Drop

Allows maximum product transfer with minimal losses

Recommended Maximum Flow Rates

1500 litres/minute (fuel)

Selectivity

- Avoid mixing products:

To avoid product contamination caused by connecting a hose unit to the wrong tank unit, selective versions of the hose and tank units are available. Each unit has a number of selective positions, designated by a coded part number according to the coupling size - specify when placing order.

Interchangeability:

Compatibility with other existing brands, e.g. TODO-matic and Fulcrum couplings.

Hose unit with Integrated Swivel

All hose units are designed with integrated Swivel

2 1/2" (Ø105 mm) Tank unit / Adapter - Female thread

According to NATO STANAG 3756

Connection ¹⁾ Inch/DN	Body Material ²⁾	Seal ³⁾		Weight		Code No		
		O-ring	Flat seal	kg	lbs			
F 2 1/2" BSP	AI	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)	1,0		T312D1101B		
F 3" BSP				1,0		T314D1101B		
F 2 1/2" NPT				1,0		T313D1101		
F 3" NPT				1,1		T315D1101		
F 2 1/2" BSP	GM		Other on request	PUR (Vulkollan®)	2,7		T312D2201B	
F 3" BSP					2,9		T314D2201B	
F 2 1/2" NPT					2,9		T313D2201	
F 3" NPT					3,2		T315D2201	
F 2 1/2" BSP	SS			Other on request	PTFE Teflon®	2,5		T312B4401A
F 3" BSP						3,1		T314B4401A
F 2 1/2" NPT						2,7		T313B4401
F 3" NPT						3,7		T315B4401
F 2 1/2" BSP	Hastelloy	Other on request			PTFE Teflon®	2,6		T312A7701A
F 3" BSP								T314A7701A
F 2 1/2" NPT								T313A7701
F 3" NPT								T315A7701
F 2 1/2" BSP	PEEK		Other on request		PTFE Teflon®			T312A9901A
F 3" BSP								T314A9901A
F 2 1/2" NPT								T313A9901
F 3" NPT								T315A9901



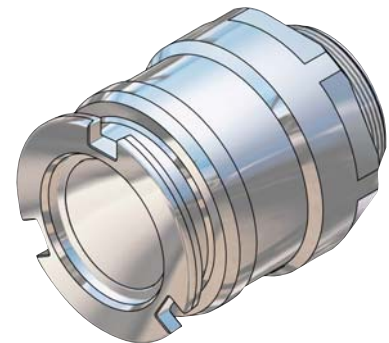
- 1) Female thread BSP=ISO 228, NPT=ANSI B1.20.1
 2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS= Stainless Steel
 3) Standard seal. Other on request.

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2 1/2" (Ø105 mm) Tank unit / Adapter - Male thread

According to NATO STANAG 3756

Connection ¹⁾ Inch/DN	Material ²⁾	Seal ³⁾		Weight		Code No		
		O-ring		kg	lbs			
M 2 1/2" BSP	AI	Standard: FPM/FKM (Viton®)		1,0		T380A1101		
M 3" BSP						T382A1101		
M 2 1/2" NPT						T381A1101		
M 3" NPT						T383A1101		
M 2 1/2" BSP	GM		Other on request				T380A2201	
M 3" BSP							T382A2201	
M 2 1/2" NPT							T381A2201	
M 3" NPT							T383A2201	
M 2 1/2" BSP	SS			Other on request				T380A4401
M 3" BSP								T382A4401
M 2 1/2" NPT								T381A4401
M 3" NPT								T383A4401



- 1) Male thread BSP=ISO 228, NPT=ANSI B1.20.1
 2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel
 3) Standard seal. Other on request.

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2½" (Ø105 mm) Tank unit / Adapter, Flanged inlet

According to NATO STANAG 3756

Flange ¹⁾	Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring		kg	lbs	
undrilled Ø210 mm	AI	Standard: FPM/FKM (Viton®)			2,1	T320D1101
DN 65 PN 10 / 16 Type A					1,6	T333D1101
DN 80 PN 10 / 16 Type A					1,8	T336D1101
2½" ANSI 150 psi					1,7	T359D1101
3" ANSI 150 psi					1,8	T361D1101
TW1 (DN 80)					1,3	T365D1101
TW3 (DN 100)					1,7	T366D1101
3" TTMA					1,4	T367D1101
4" TTMA					1,5	T368D1101
undrilled Ø210 mm			GM	Standard: FPM/FKM (Viton®)		
DN 65 PN 10 / 16 Type B					4,9	T333D2201
DN 65 PN 25 / 40 Type B					-	T334D2201
DN 80 PN 10 / 16 Type B					-	T336D2201
DN 80 PN 25 / 40 Type B					-	T337D2201
2½" ANSI 150 psi					4,4	T359D2201
2½" ANSI 300 psi					-	T360D2201
3" ANSI 150 psi					4,4	T361D2201
3" ANSI 300 psi					-	T362D2201
TW1 (DN 80)					4,4	T365D2201
TW3 (DN 100)			-	T366D2201		
3" TTMA			-	T367D2201		
4" TTMA			-	T368D2201		
undrilled Ø210 mm	SS	Other on request			-	T320B4401
undrilled Ø210 mm **)					-	T320B4401F
DN 65 PN 25 / 40 Type E *)					-	T332B4401
DN 65 PN 10 / 16 Type B					4,2	T333B4401
DN 65 PN 10 / 16 Type B **)					-	T333B4401F
DN 65 PN 25 / 40 Type B					-	T334B4401
DN 65 PN 25 / 40 Type B **)					4,3	T334B4401F
DN 80 PN 10 / 16 Type E *)						T335B4401
DN 80 PN 10 / 16 Type B						T336B4401
DN 80 PN 10 / 16 Type B **)						T336B4401F
DN 80 PN 25 / 40 Type B				T337B4401		
DN 80 PN 25 / 40 Type B **)				T337B4401F		
2½" ANSI 150 psi				T359B4401		
2½" ANSI 150 psi **)				T359B4401F		
2½" ANSI 300 psi				T360B4401		
2½" ANSI 300 psi **)			4,5	T360B4401F		
3" ANSI 150 psi				T361B4401		
3" ANSI 150 psi **)				T361B4401F		
3" ANSI 300 psi				T362B4401		
3" ANSI 300 psi **)				T362B4401F		
TW1 (DN 80)				T365B4401		
TW3 (DN 100)				T366B4401		
3" TTMA				T367B4401		
4" TTMA				T368B4401		



1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459.

2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel

3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

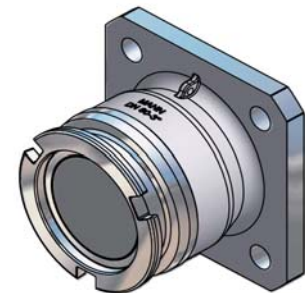
*) Type E, EN 1092-1:2001 Spigot

***) Flange with standard thickness

2½" (105mm) Tank unit / Adapter with square flange connection

According to NATO STANAG 3756

Flange ¹⁾	Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring		kg	lbs	
Normec (120x120 mm)	AI	Standard: FPM/FKM (Viton®)				T3107D1101
Normec (120x120 mm)	GM					



1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459

2) **Mtrl:** AI=Aluminium, GM=Gun Metal

3) Standard seal. Other on request.

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2 1/2" (Ø105 mm) Hose unit / Adapter - Female thread

According to NATO STANAG 3756

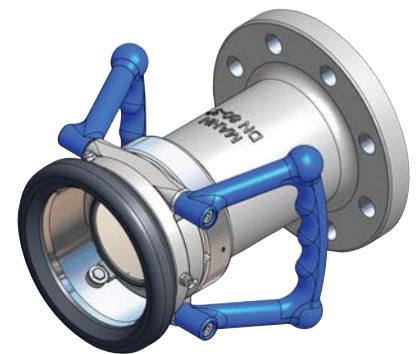
Connection ^{1A)} Inch/DN	Material ²⁾	Seal ³⁾		Weight		Code No	
		O-ring	Flat seal	kg	lbs		
F 2 1/2" BSP	AI	Standard: FPM/FKM (Viton®)	PUR	3,3		S312B1101B	
F 3" BSP			(Vulkollan®)	3,6		S314B1101B	
F 2 1/2" NPT				3,4		S313B1101	
F 3" NPT				3,5		S315B1101	
F 2 1/2" BSP	GM		PUR	7,3		S312B2201B	
F 3" BSP			(Vulkollan®)	7,4		S314B2201B	
F 2 1/2" NPT				-		S313B2201	
F 3" NPT				7,6		S315B2201	
F 2 1/2" BSP	SS		Other on request	PTFE	6,7		S312B4401A
F 3" BSP				(Teflon®)	6,6		S314B4401A
F 2 1/2" NPT					6,6		S313B4401
F 3" NPT					6,6		S315B4401
F 2 1/2" BSP	Ha	PTFE				S312A7701A	
F 3" BSP		(Teflon®)				S314A7701A	
F 2 1/2" NPT						S313A7701	
F 3" NPT						S315A7701	
F 2 1/2" BSP	PEEK	PTFE				S312A9901A	
F 3" BSP		(Teflon®)				S314A9901A	
F 2 1/2" NPT						S313A9901	
F 3" NPT						S315A9901	



2 1/2" (Ø105 mm) Hose unit / Coupler, Flanged inlet

According to NATO STANAG 3756

Flange ^{1B)}	Body Material ²⁾	Seal ³⁾		Weight		Code No		
		O-ring		kg	lbs			
undrilled Ø210 mm	AI	Standard: FPM/FKM (Viton®)				S320B1101		
DN 65 PN 10 / 16 Type A						S333B1101		
DN 80 PN 10 / 16 Type A						S336B1101		
2" ANSI 150 psi						S357B1101		
2 1/2" ANSI 150 psi						S359B1101		
3" ANSI 150 psi						S361B1101		
TW1 (DN 80)						S365B1101		
TW3 (DN 100)						S366B1101		
3" TTMA						S367B1101		
4" TTMA						S368B1101		
undrilled Ø210 mm			GM	Other on request				S320B2201
DN 65 PN 10 / 16 Type B								S333B2201
DN 65 PN 25 / 40 Type B							S334B2201	
DN 80 PN 10 / 16 Type B							S336B2201	
DN 80 PN 25 / 40 Type B						S337B2201		
2" ANSI 150 psi						S357B2201		
2 1/2" ANSI 150 psi						S359B2201		
2 1/2" ANSI 300 psi						S360B2201		
3" ANSI 150 psi						S361B2201		
3" ANSI 300 psi						S362B2201		
TW1 (DN 80)						S365B2201		
TW3 (DN 100)						S366B2201		
3" TTMA					S367B2201			
4" TTMA					S368B2201			
undrilled Ø210 mm	SS	Other on request				S320B4401		
undrilled Ø210 mm **)						S320B4401F		
DN 65 PN 25 / 40 Type E *)						S332B4401		
DN 65 PN 10 / 16 Type B				10,0		S333B4401		
DN 65 PN 10 / 16 Type B **)						S333B4401F		
DN 65 PN 25 / 40 Type B						S334B4401		
DN 65 PN 25 / 40 Type B **)						S334B4401F		
DN 80 PN 10 / 16 Type E *)						S335B4401		
DN 80 PN 10 / 16 Type B						S336B4401		
DN 80 PN 10 / 16 Type B **)						S336B4401F		
DN 80 PN 25 / 40 Type B						S337B4401		
DN 80 PN 25 / 40 Type B **)						S337B4401F		
2" ANSI 150 psi					S357B4401			
2" ANSI 150 psi **)					S357B4401F			
2 1/2" ANSI 150 psi					S359B4401			
2 1/2" ANSI 150 psi **)			6,6		S359B4401F			
2 1/2" ANSI 300 psi					S360B4401			
2 1/2" ANSI 300 psi **)					S360B4401F			
3" ANSI 150 psi					S361B4401			
3" ANSI 150 psi **)					S361B4401F			
3" ANSI 300 psi					S362B4401			
3" ANSI 300 psi **)					S362B4401F			
TW1 (DN 80)					S365B4401			
TW3 (DN 100)					S366B4401			
3" TTMA					S367B4401			
4" TTMA					S368B4401			



*) Type E, EN 1092-1:2001 Spigot **) Flange with standard thickness

1A) Female thread BSP=ISO 228, NPT=ANSI B1.20.1

1B) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459.

2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel, Ti=Titan, Ha=Hastelloy, PE=PEEK

3) Standard seal. Other on request.

3" (Ø119 mm) Technical information

Tank unit / Adapter and Hose unit / Coupler



According to NATO STANAG 3756

Material	Maximum working pressure	Test pressure	Minimum Burs Pressure
Aluminium	10 bar / 145 psi	15 bar / 218 psi	50 bar / 726 psi
Brass/Gun Metal	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi
Stainless Steel	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Titan	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Hastelloy	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi
Peek	6 bar / 87 psi	9 bar / 131 psi	30 bar / 435 psi

Connections

3" in BSP, NPT and Flanged inlet

Applications

The 3" (119 mm) DDCoupling is recommended for similar applications to the 3" (105 mm) range, but where higher loading rates are required. Especially in rail tankers, marine tankers and related activities or on any application where product contamination and spillage needs to be minimized.

Media

Petroleum products: Gasoline, diesel, oil etc.

Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.

Gas:

Dry powder: Chocolate powder e.t.c.

Material

Aluminium, Brass/Gunmetal, Stainless Steel, Hastelloy and PEEK. Other materials on request.

Seals

Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.

High Flow Rates / Low Pressure Drop

Allows maximum product transfer with minimal losses

Recommended Maximum Flow Rates

2000 litres/minute (fuel)

Selectivity

- Avoid mixing products:

To avoid product contamination caused by connecting a hose unit to the wrong tank unit, selective versions of the hose and tank units are available. Each unit has a number of selective positions, designated by a coded part number according to the coupling size - specify when placing order.

Interchangeability:

Compatibility with other existing brands, e.g. TODO-matic and Fulcrum couplings.

Hose unit with Integrated Swivel

All hose units are designed with integrated Swivel

3" (Ø119 mm) Tank unit / Adapter - Female thread

Connection ^{1A)} Inch/DN	Material ²⁾	Seal ³⁾		Weight		Code No					
		O-ring	Flat seal	kg	lbs						
F 3" BSP	AI	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)	1,2		T414D1101B					
F 3" BSP				1,3		T414K1101B *)					
F 3" NPT				1,2		T415D1101					
F 3" BSP	GM		Other on request	PUR (Vulkollan®)	3,2		T414D2201B				
F 3" NPT					3,5		T415D2201				
F 3" BSP	Br			Other on request	PUR (Vulkollan®)	-		T414K2201B *)			
F 3" NPT								T414A7701A			
F 3" BSP	SS				Other on request	PTFE (Teflon®)	3,1		T414B4401A		
F 3" NPT							3,4		T415B4401		
F 3" BSP	Hastelloy					Other on request	PTFE (Teflon®)			T414A7701A	
F 3" NPT										T415A7701	
F 3" BSP	PVDF/Hastelloy						Other on request	PTFE (Teflon®)	3,6		T414A8701A
F 3" NPT										T414A9901A	
F 3" BSP	PEEK	Other on request						PTFE (Teflon®)			T415A9901
F 3" NPT											T415A9901

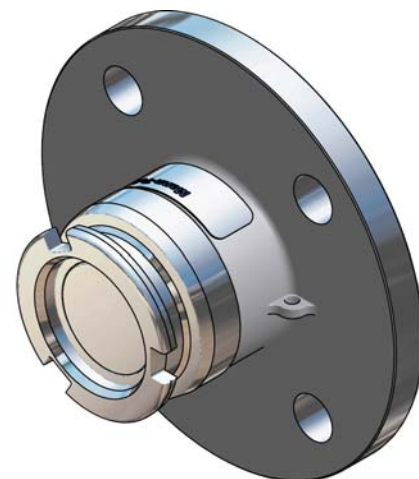
According to
NATO STANAG 3756



3" (Ø119 mm) Tank unit / Adapter, Flanged inlet

Flange ^{1B)}	Material ²⁾	Seal ³⁾		Weight		Code No			
		O-ring		kg	lbs				
undrilled Ø210 mm	AI	Standard: FPM/FKM (Viton®)		2,0		T420D1101			
DN 65PN 10 / 16 Type A						T433D1101			
DN 80 PN 10 / 16 Type A				2,0		T436D1101			
3" ANSI 150 psi				1,8		T461D1101			
TW1 (DN 80)				1,4		T465D1101			
TW3 (DN 100)				1,6		T466D1101			
3" TTMA				1,8		T467D1101			
4" TTMA				1,5		T468D1101			
undrilled Ø210 mm				GM	Standard: FPM/FKM (Viton®)		6,2		T320D2201
DN 65 PN 10 / 16 Type B							4,9		T433D2201
DN 65PN 25 / 40 Type B									T434D2201
DN 80 PN 10 / 16 Type B							5,2		T436D2201
DN 80 PN 25 / 40 Type B			T437D2201						
3" ANSI 150 psi	4,9		T461D2201						
3" ANSI 300 psi			T462D2201						
TW1 (DN 80)	4,1		T465D2201						
TW3 (DN 100)	4,7		T466D2201						
3" TTMA	-		T467D2201						
4" TTMA	4,6		T468D2201						
undrilled Ø210 mm	SS	Other on request							T420B4401
undrilled Ø210 mm **)						T420B4401F			
DN 65PN 10 / 16 Type B						T433B4401			
DN 65 PN 10 / 16 Type B **)						T433B4401F			
DN 65 PN 25 / 40 Type B						T434B4401			
DN 65 PN 25 / 40 Type B **)						T434B4401F			
DN 80 PN 25 / 40 Type E *)						T435B4401F			
DN 80 PN 10 / 16 Type B				5,1		T436B4401			
DN 80 PN 10 / 16 Type B **)						T436B4401F			
DN 80 PN 25 / 40 Type B				5,1		T437B4401			
DN 80 PN 25 / 40 Type B **)						T437B4401F			
3" ANSI 150 psi				4,9		T461B4401			
3" ANSI 150 psi **)			T461B4401F						
3" ANSI 300 psi	4,9		T462B4401						
3" ANSI 300 psi **)			T462B4401F						
TW1 (DN 80)	3,9		T465B4401						
TW3 (DN 100)			T466B4401						
3" TTMA			T467B4401						
4" TTMA			T468B4401						
undrilled Ø210 mm	PEEK					T420A9901			
DN 80 PN 10 / 16 Type B						T436A9901			
3" ANSI 150 psi						T461A9901			
3" TTMA						T467A9901			
4" TTMA			T468A9901						

According to
NATO STANAG 3756



*) Type E, EN 1092-1:2001 Spigot

**) Flange with standard thickness

1A) Female thread BSP=ISO 228,
NPT=ANSI B1.20.1

1B) Flanges according to EN 1092,
ANSI B16.5 and DIN 28459.

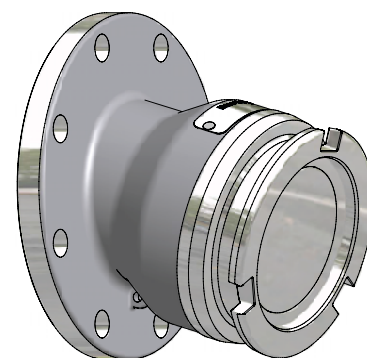
2) **Mtrl:** AI=Aluminium, GM=Gun
Metal, SS=Stainless Steel,
Ti=Titan, Ha=Hastelloy, PE=PEEK

3) Standard seal. Other on request.

3" (119mm) Dropped Tank unit / Adapter with flange connection

According to NATO STANAG 3756

Flange ¹⁾	Material ²⁾	Seal ³⁾	Weight		Code No	
		O-ring	kg	lbs		
TW1 (DN 80)	Al	Standard: FPM/FKM (Viton®)		1,6	T46511101	
TW3 (DN 100)				1,6	T46611101	
3" TTMA						T46711101
4" TTMA						T46811101



15° dropped Tank unit with flange connection makes it easier to connect and reduces hose wear

1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459

2) **Mtrl:** Al=Aluminium

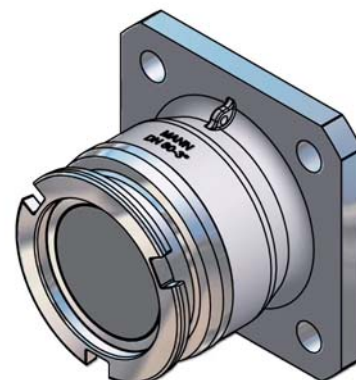
3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

3" (119mm) Tank unit / Adapter with square flange connection

According to NATO STANAG 3756

Flange ¹⁾	Body Material ²⁾	Seal ³⁾	Weight		Code No
		O-ring	kg	lbs	
Normec (120x120 mm)	Al	Standard: FPM/FKM (Viton®)			T4107D1101
Normec (120x120 mm)	GM				T4107D2201



1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459

2) **Mtrl:** Al=Aluminium, GM=Gun Metal

3) Standard seal. Other on request.

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3" (Ø119 mm) Hose unit / Coupler - Female thread

Connection ¹⁾ Inch/DN	Material ²⁾	Seal ³⁾		Weight		Code No	
		O-ring	Flat seal	kg	lbs		
F 3 BSP	AI	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)	3,8		S414B1101B	
F 3" NPT				3,9		S415B1101	
F 3" BSP	GM		PUR (Vulkollan®)	8,4		S414B2201B	
F 3" NPT				9,0		S415B2201	
F 3" BSP	SS		PTFE (Teflon®)	8,4		S414B4401A	
F 3" NPT				8,7		S415B4401	
F 3" BSP	Hastelloy		Other on request	PTFE			S414A7701B
F 3" NPT							S415A7701
F 3" BSP	PVDF/Hastelloy		PTFE			S414A8701B	
F 3" BSP	PEEK		PTFE (Teflon®)			S414A9901B	
F 3" NPT					S415A9901		

According to
NATO STANAG 3756



1) Female thread BSP=ISO 228, NPT=ANSI B1.20.1

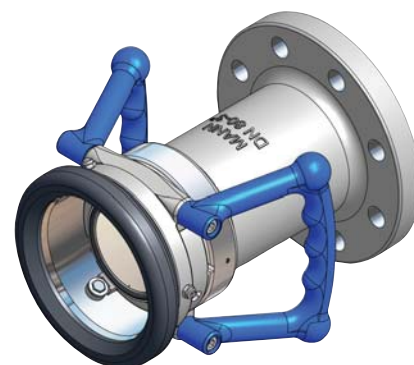
2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel, Ti=Titan, Ha=Hastelloy, PE=PEEK

3) Standard seal. Other on request.

3" (Ø119 mm) Hose unit / Coupler, Flanged inlet

Flange ¹⁾	Body Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring		kg	lbs	
undrilled Ø210 mm	AI	Standard: FPM/FKM (Viton®)				S420B1101
DN 80 PN 10 / 16 Type A						S436B1101
3" ANSI 150 psi			5,5		S461B1101	
TW1 (DN 80)					S465B1101	
TW3 (DN 100)					S466B1101	
3" TTMA					S467B1101	
4" TTMA			5,5		S468B1101	
undrilled Ø210 mm			GM			
DN 80 PN 10 / 16 Type B					S436B2201	
DN 80 PN 25 / 40 Type B					S437B2201	
3" ANSI 150 psi					S461B2201	
3" ANSI 300 psi					S462B2201	
TW1 (DN 80)					S465B2201	
TW3 (DN 100)					S466B2201	
3" TTMA					S467B2201	
4" TTMA				S468B2201		
undrilled Ø210 mm	SS	Other on request				S420B4401
undrilled Ø210 mm **)					S420B4401F	
DN 80 PN 10 / 16 Type B					S436B4401	
DN 80 PN 10 / 16 Type B **)					S436B4401F	
DN 80 PN 25 / 40 Type B					S437B4401	
DN 80 PN 25 / 40 Type B **)					S437B4401F	
DN 80 PN 25 / 40 Type E					S435B4401F	
3" ANSI 150 psi			13,2		S461B4401	
3" ANSI 150 psi **)					S461B4401F	
3" ANSI 300 psi					S462B4401	
3" ANSI 300 psi **)			14,6		S462B4401F	
TW1 (DN 80)					S465B4401	
TW3 (DN 100)					S466B4401	
3" TTMA					S467B4401	
4" TTMA					S468B4401	
undrilled Ø210 mm			PEEK			
DN 80 PN 10 / 16 Type B				S436B9901		
3" ANSI 150 psi				S461B9901		

According to
NATO STANAG 3756



*) Type E, EN 1092-1:2001 Spigot
**) Flange with standard thickness

1) Flanges according to EN 1092, ANSI B16.5 and DIN 28459.

2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel, PE=PEEK

3) Standard seal. Other on request.

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4"(Ø164 mm) Technical information

Tank unit / Adapter and Hose unit / Coupler



According to NATO STANAG 3756

Material	Maximum working pressure	Test pressure	Minimum Burs Pressure
Aluminium	10 bar / 145 psi	15 bar / 218 psi	50 bar / 726 psi
Brass/Gun Metal	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi
Stainless Steel	25 bar / 363 psi	37,5 bar / 544 psi	125 bar / 1813 psi

Connections

4" in BSP, NPT and Flanged inlet

Applications

The 4" (Ø164 mm) is recommended loading/unloading of rail tanker, aviation refueller, road tanker etc. Also recommended for ship to shore transfer, ship to ship transfer and ship to rig transfer or on any application where spillage needs to be minimized.

Media

Petroleum products: Gasoline, diesel, oil etc.

Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.

Gas:

Dry powder: Chocolate powder e.t.c.

Material

Aluminium, Brass/Gunmetal, Stainless Steel, Hastelloy and PEEK. Other materials on request.

Seals

Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.

High Flow Rates / Low Pressure Drop

Allows maximum product transfer with minimal losses

Recommended Maximum Flow Rates

3500 litres/minute (fuel)

Selectivity

- Avoid mixing products:

To avoid product contamination caused by connecting a hose unit to the wrong tank unit, selective versions of the hose and tank units are available. Each unit has a number of selective positions, designated by a coded part number according to the coupling size - specify when placing order.

Interchangeability:

Compatibility with other existing brands, e.g. TODO-matic and Fulcrum couplings.

Hose unit with Integrated Swivel

All hose units are designed with integrated Swivel

4" (Ø164 mm) Tank unit / Adapter - Female thread

According to NATO STANAG 3756

Connection ¹⁾ Inch/DN	Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring	Flat seal	kg	lbs	
F 4" BSP	AI	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)	2,5		T516A1101B
F 4" NPT				2,8		T517A1101
F 4" BSP	GM		PUR (Vulkollan®)	7,0		T516D2201B
F 4" NPT			Other on request		7,7	
F 4" BSP	SS		PTFE (Teflon®)	6,0		T516B4401A
F 4" NPT					6,4	



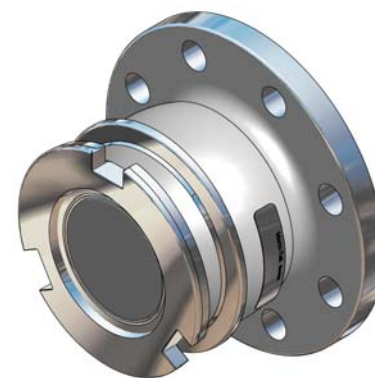
- 1) Female thread BSP=ISO 228, NPT=ANSI B1.20.1
 2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel
 3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

4" (Ø164 mm) Tank unit / Adapter, Flanged inlet

According to NATO STANAG 3756

Flange ¹⁾	Body Material ²⁾	Seal ³⁾		Weight		Code No		
		O-ring		kg	lbs			
undrilled Ø230 mm	AI	Standard: FPM/FKM (Viton®)			3,2		T521D1101	
DN 100 PN 10 / 16 Type B					3,1		T539D1101	
4" ANSI 150 psi					3,2		T563D1101	
TW3 (DN 100)					2,6		T566D1101	
4" TTMA					2,6		T568D1101	
undrilled Ø230 mm	GM						T521D2201	
DN 100 PN 10 / 16 Type B							T539D2201	
DN 100 PN 25 / 40 Type B							T540D2201	
4" ANSI 150 psi							T563D2201	
4" ANSI 300 psi							T564D2201	
TW3 (DN 100)							T566D2201	
4" TTMA							T568D2201	
undrilled Ø230 mm			SS	Other on request				T521B4401
undrilled Ø230 mm **)								T521B4401F
DN 100 PN 10 / 16 Type B					8,7			T539B4401
DN 100 PN 10 / 16 Type B **)						T539B4401F		
DN 100 PN 25 / 40 Type B						T540B4401		
DN 100 PN 25 / 40 Type B **)						T540B4401F		
DN 100 PN 25 / 40 Type E						T538B4401F		
4" ANSI 150 psi						T563B4401		
4" ANSI 150 psi**)		8,9				T563B4401F		
4" ANSI 300 psi						T564B4401		
4" ANSI 300 psi **)		12				T564B4401F		
TW3 (DN 100)						T566B4401		
4" TTMA						T568B4401		



- *) Type E, EN 1092-1:2001 Spigot
 **) Flange with standard thickness

- 1) Flanges according to EN 1092, ANSI B16.5 and DIN 28459.
 2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel
 3) Standard seal. Other on request.

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4" (Ø164 mm) Hose unit / Coupler - Female thread

According to NATO STANAG 3756

Connection ¹⁾ Inch/DN	Body Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring	Flat seal	kg	lbs	
F 4 BSP	AI	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)	7,6		S516B1101B
F 4" ASSPT						S5136B1101B
F 4" NPT						S517B1101
F 4" BSP	GM		PUR (Vulkollan®)	17,5		S516B2201B
F 4" ASSPT						S5136B2201B
F 4" NPT						S517B2201
F 4" BSP	SS	Other on request	PTFE (Teflon®)	15,6		S516B4401A
F 4" ASSPT						S5136B4401A
F 4" NPT						S517B4401



- 1) Female thread BSP=ISO 228, NPT=ANSI B1.20.3
 2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel
 3) Standard seal. Other on request.

4" (Ø164 mm) Hose unit / Coupler, Flanged inlet

According to NATO STANAG 3756

Flange ¹⁾	Body Material ²⁾	Seal ³⁾		Weight		Code No				
		O-ring		kg	lbs					
undrilled Ø230 mm	AI	Standard: FPM/FKM (Viton®)				S521B1101				
DN 100 PN 10 / 16 Type B				9,3		S539B1101				
4" ANSI 150 psi				9,4		S563B1101				
4" TTMA				8,7		S568B1101				
TW3 (DN 100)				8,7		S566B1101				
undrilled Ø230 mm	GM			Other on request				S521B2201		
DN 100 PN 10 / 16 Type B								S539B2201		
DN 100 PN 25 / 40 Type B						23,9		S540B2201		
4" ANSI 150 psi								S563B2201		
4" ANSI 300 psi								S564B2201		
4" TTMA							S568B2201			
TW3 (DN 100)							S566B2201			
undrilled Ø230 mm	SS					Other on request				S521B4401
undrilled Ø230 mm **)										S521B4401F
DN 100 PN 10 / 16 Type B								16,1		S539B4401
DN 100 PN 10 / 16 Type B **)								S539B4401F		
DN 100 PN 25 / 40 Type B		16,1						S540B4401		
DN 100 PN 25 / 40 Type B **)								S540B4401F		
DN 100 PN 25 / 40 Type E								S538B4401F		
4" ANSI 150 psi		21,0						S563B4401		
4" ANSI 150 psi**)				S563B4401						
4" ANSI 300 psi				S564B4401						
4" ANSI 300 psi **)				S564B4401F						
4" TTMA				S568B4401						
TW3 (DN 100)				S566B4401						



- *) Type E, EN 1092-1:2001 Spigot
 **) Flange with standard thickness

- 1) Flanges according to EN 1092, ANSI B16.5 and DIN 28459
 2) **Mtrl:** AI=Aluminium, GM=Gun Metal, SS=Stainless Steel
 3) Standard seal. Other on request.

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6" (Ø238 mm) Technical information

Tank unit / Adapter and Hose unit / Coupler



Material	Maximum working pressure	Test pressure	Minimum Burs Pressure
Aluminium	10 bar / 145 psi	15 bar / 218 psi	50 bar / 726 psi
Stainless Steel	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi

Connections

6" in BSP, NPT and Flanged inlet

Applications

The 6" (Ø238 mm) is recommended for marine bunkering, ship to shore transfer, ship to ship transfer and ship to rig transfer or on any application where spillage needs to be minimized.

Media

Petroleum products: Gasoline, diesel, oil etc.

Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.

Dry powder

Material

Aluminium, Brass/Gunmetal, Stainless Steel, Hastelloy and PEEK. Other materials on request.

Seals

Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.

High Flow Rates / Low Pressure Drop

Allows maximum product transfer with minimal losses

Recommended Maximum Flow Rates

4000 litres/minute (fuel)

Selectivity

- Avoid mixing products:

To avoid product contamination caused by connecting a hose unit to the wrong tank unit, selective versions of the hose and tank units are available. Each unit has a number of selective positions, designated by a coded part number according to the coupling size - specify when placing order.

Interchangeability:

Compatibility with other existing brands, e.g. TODO-matic.

Hose unit with Integrated Swivel

All hose units are designed with integrated Swivel

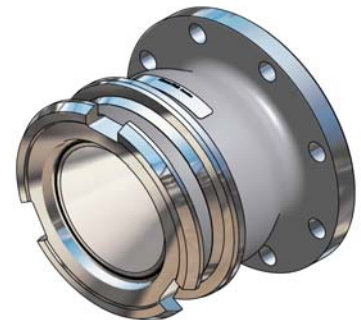
6" (Ø238 mm) Tank unit / Adapter - Female thread

Connection ^{1A)} Inch/DN	Body Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring	Flat seal	kg	lbs	
F 6" BSP	AI	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)			T6110B1101B
F 6" NPT				7,1		T6111B1101
F 6" BSP	SS	Other on request	PTFE (Teflon®)	15,7		T6110B4401A
F 6" NPT				17,6		T6111B4401



6" (Ø238mm) Tank unit / Adapter, Flanged inlet

Flange ^{1B)}	Body Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring	kg	lbs		
DN 150 PN 10 / 16 Type A	AI	Standard: FPM/FKM (Viton®)	8,6		T645B1101	
6" ANSI 150 psi			7,5		T6100B1101	
DN 150 PN 10 / 16 Type B	SS	Other on request	22,4		T645B4401	
6" ANSI 150 psi					T6100B4401	



1A) Female thread BSP=ISO 228, NPT=ANSI B1.20.1

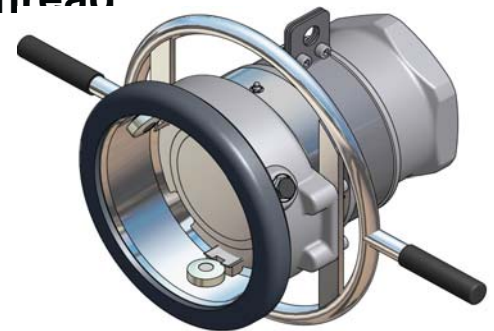
1B) Flanges according to EN 1092, ANSI B16.5 and DIN 28459

2) Mtrl: AI=Aluminium, GM=Gun Metal, SS=Stainless Steel

3) Standard seal. Other on request.

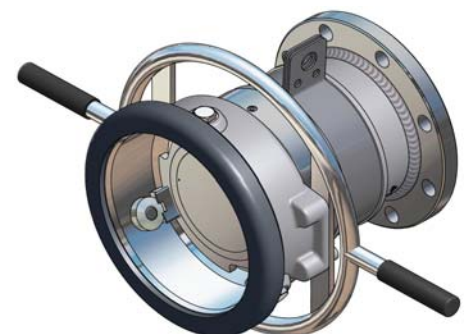
6" (Ø238 mm) Hose unit / Coupler - Female thread

Connection ^{1A)} Inch/DN	Body Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring	Flat seal	kg	lbs	
F 6" BSP	AI	Standard: FPM/FKM (Viton®)	PUR (Vulkollan®)			S6110B1101B
F 6" NPT						S6111B1101
F 6" BSP	SS	Other on request	PTFE Teflon®			S6110B4401A
F 6" NPT				45		S6111B4401



6" (Ø238 mm) Hose unit / Coupler, Flanged inlet

Flange ^{1B)}	Body Material ²⁾	Seal ³⁾		Weight		Code No
		O-ring	kg	lbs		
DN 150 PN 10 / 16 Type A	AI	Standard: FPM/FKM (Viton®)			S645B1101	
6" ANSI 150 psi			25,9		S6100B1101	
DN 150 PN 10 / 16 Type B	SS	Other on request			S645B4401	
6" ANSI 150 psi			49,5		S6100B4401	



1A) Female thread BSP=ISO 228, NPT=ANSI B1.20.1

1B) Flanges according to EN 1092, ANSI B16.5 and DIN 28459.

2) Mtrl: AI=Aluminium, GM=Gun Metal, SS=Stainless Steel

3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

8" (Ø272 mm) Technical information

Tank unit / Adapter and Hose unit / Coupler



Material	Maximum working pressure	Test pressure	Minimum Burs Pressure
Aluminium	10 bar / 145 psi	15 bar / 218 psi	50 bar / 726 psi
Stainless Steel	16 bar / 232 psi	24 bar / 348 psi	80 bar / 1160 psi

Connections

8" in BSP, NPT and Flanged inlet

Applications

The 8" (Ø272 mm) is recommended for marine bunkering, ship to shore transfer, ship to ship transfer and ship to rig transfer or on any application where spillage needs to be minimized.

Media

Petroleum products: Gasoline, diesel, oil etc.

Chemical products: Ethylene Oxide, Propylene Oxide, Acrylonitrile, Butadiene, Ammonia, Vinyl Chloride, Toluene, Xylene, Sulphuric Acid, Phenol etc.

Gas:

Dry powder: Chocolate powder e.t.c.

Material

Aluminium, Brass/Gunmetal, Stainless Steel, Hastelloy and PEEK. Other materials on request.

Seals

Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR (Nitrile). Other materials on request.

High Flow Rates / Low Pressure Drop

Allows maximum product transfer with minimal losses

Recommended Maximum Flow Rates

4000 litres/minute (fuel)

Selectivity

- Avoid mixing products:

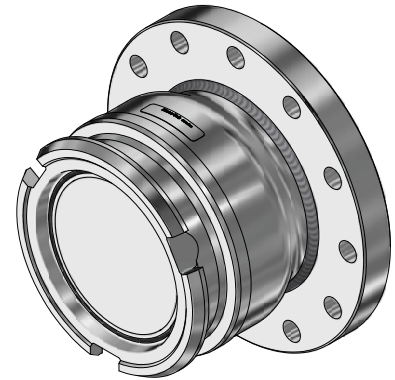
To avoid product contamination caused by connecting a hose unit to the wrong tank unit, selective versions of the hose and tank units are available. Each unit has a number of selective positions, designated by a coded part number according to the coupling size - specify when placing order.

Hose unit with Integrated Swivel

All hose units are designed with integrated Swivel

8" (Ø272mm) Tank unit / Adapter, Flanged inlet

Flange ¹⁾	Body Material ²⁾	Seal ³⁾	Weight		Code No
		O-ring	kg	lbs	
DN 200 PN 10 Type A	Al	Standard: FPM/FKM (Viton®)	-	-	T8102A1101
DN 200 PN 16 Type A					T8103A1101
8" ANSI 150 psi					T8105A1101
DN 200 PN 10 Type B	SS		-	-	T8102A4401
DN 200 PN 16 Type B					T8103A4401
8" ANSI 150 psi					T8105A4401

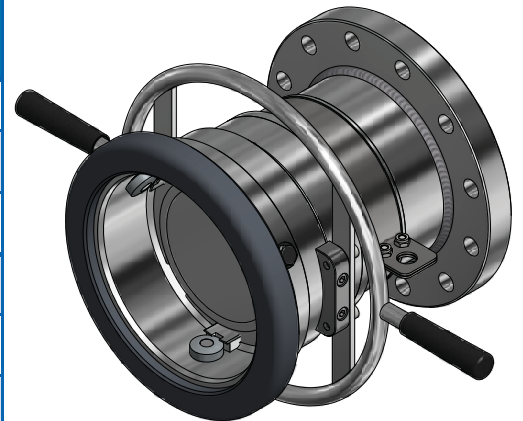


- 1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459.
 2) **Mtrl:** Al=Aluminium, SS=Stainless Steel
 3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

8" (Ø272mm) Hose unit / Coupler, Flanged inlet

Flange ¹⁾	Material ²⁾	Seal ³⁾	Weight		Code No
		O-ring	kg	lbs	
DN 200 PN 10 Type A	Al	Standard: FPM/FKM (Viton®)	-	-	S8102A1101
DN 200 PN 16 Type A					S8103A1101
8" ANSI 150 psi					S8105A1101
DN 200 PN 10 Type B	SS		-	-	S8102A4401
DN 200 PN 16 Type B					S8103A4401
8" ANSI 150 psi					S8105A4401



- 1) Flanges according to EN 1092 , ANSI B16.5 and DIN 28459.
 2) **Mtrl:** Al=Aluminium EN, SS=Stainless Steel
 3) Standard seal. Other on request.

Viton® (FPM) and Teflon® (FPM/KPM) are registered trademarks of DuPont, DuPont Elastomers. Vulkollan® is registered trademark of Bayer AG

Dust cap for Tank unit / Adapter

A wide option of Caps. The Caps is secured against accidental fall off.

Use the Mann Tek Dust cap to prevent ingress of dirt and water in the couplings. The material in the Dust cap is Composite, Aluminium, Rubber and Stainless Steel.

It's only possible to remove the cap from the Tank unit / Adapter after pulling the securing stiff and at the same time twisting the cap.

Features

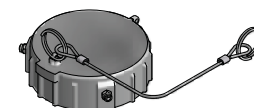
- Elastic v-ring seal in standard NBR that make disassembly easier.
- Lockable and sealed
- Patented design,

Composite

Patent No. 000840780-0001



Stainless Steel



Rubber



Inch DN	Material ¹⁾	Seal ²⁾	Weight		Code No
			Kg	lbs	
3/4"-1" Ø56 mm, DN 20-25	Co	Standard: FPM (Viton®)	0,13	0.287	C100A2201
	Al		0,22	0.485	C100A1101
	SS		0,59	1.301	C100A4401
1½-2" Ø70 mm, DN 40-50	Co	NBR (Nitrile®)			C200E2202
	Al	Standard: FPM (Viton®)			C200A1101
	SS				C200C4401
	Rubber				C200D1300
2½" Ø105 mm, DN 65	Co	NBR (Nitrile®)			C300E2202
	Al	Standard: FPM (Viton®)			C300A1101
	SS				C300C4401
3" Ø119 mm, DN 80	Co	NBR (Nitrile®)			C400E2202
	Al	Standard: FPM (Viton®)			C400A1101
	SS				C400C4401
Co				C500E2202	
4" Ø164 mm, DN 100	Al			C500B1101	
	SS			C500C4401	
	Co			C600A2201	
6" Ø238 mm, DN 150	Al			C600A1101	
	SS			C600A4401	
	Al			C800B1101	
8" Ø272 mm, DN 200	SS			C800B4401	



Rubber



¹⁾ Mtrl: Al=Aluminium, SS=Stainless Steel, Co=Composite (Polyetylen), Rubber
²⁾ Standard sealings FPM (Viton®). Other on request.

Pressure Cap for Tank unit / adapter

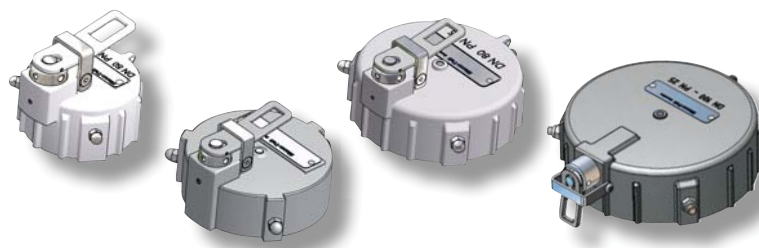
Can be used as a second or third closing device according to ADR/ RID par 6.8.2.2.2

The Mann Tek Pressure Cap for Tank units / Adapters is designed to maximize operator safety and containment safety.

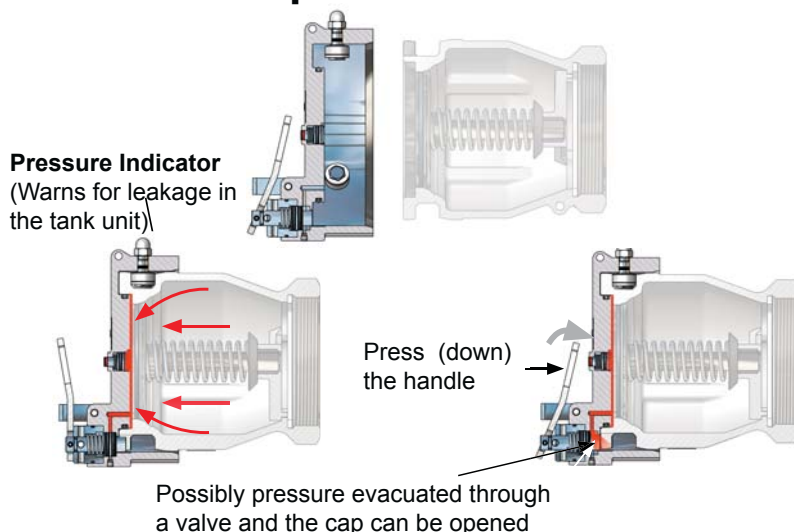
Should the possibility of an upstream closure leakage occur, the Pressure Cap provides identification of a system pressure and will hold this pressure until the problem can be safely resolved. Should the operator still choose to remove the cap it will reduce the static pressure to zero thus preventing the forceful expulsion of the transfer media.

Features

- Pressure indicator
- Depressurization
- Customs / tamper seal feature
- Automatic locking
- Manually lockable (with padlock)



Pressure Cap - How It Works

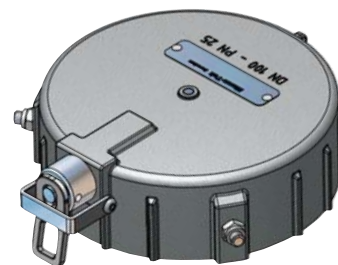


3rd closure (valve) on Rail tankers, Containers and Tank trucks

The pressure caps are approved by ADR/RID regulations as 3rd closure on Rail tankers, Containers and Tank trucks. This meaning that the traditional Ball Valve can be superseded.

Mann Tek Pressure Cap for Tank unit - Working Pressure PN 25 bar / 363 psi

Inch DN	Material ¹⁾	Seal ²⁾	Working Pressure (Bar)	Code No
1½-2" Ø70 mm, DN 40-50	SS	Standard: FPM (Viton®)	25	R200A4401
2½" Ø105 mm, DN 65	SS		25	R300A4401
3" Ø119 mm, DN 80	SS		25	R400A4401
4" Ø164 mm, DN 100	Al		10	R500B4401
	SS		25	R500B4401



¹⁾ Mtrl: Al=Aluminium, SS=Stainless Steel
²⁾ Standard sealings FPM (Viton®). Other on request.

Sealing cap for Tank unit / Adapter - 10 bar / 150psi

Sometimes a simple protection of the Dry Disconnect Couplings Tank unit against pollution is not sufficient. International regulations can require a sealing function of the cap as an additional safety factor in case of worn out gaskets in the tank unit. The sealing cap is a costeffective solution to fulfil these requirements.

Inch DN	Material 1)	Seal 2)	Weight		Code No
			Kg	lbs	
3/4"-1" Ø56 mm, DN 20-25	SS	Standard: FPM (Viton®)	0,59	1,301	C100P4401
1½"-2" Ø70 mm, DN 40-50	Al				C200P1101
	SS				C200P4401
2½" Ø105 mm, DN 65	SS				C300P4401
3" Ø119 mm, DN 80	Al				C400H1101
	SS				C400P4401
4" Ø164 mm, DN 100	SS				C500P4401

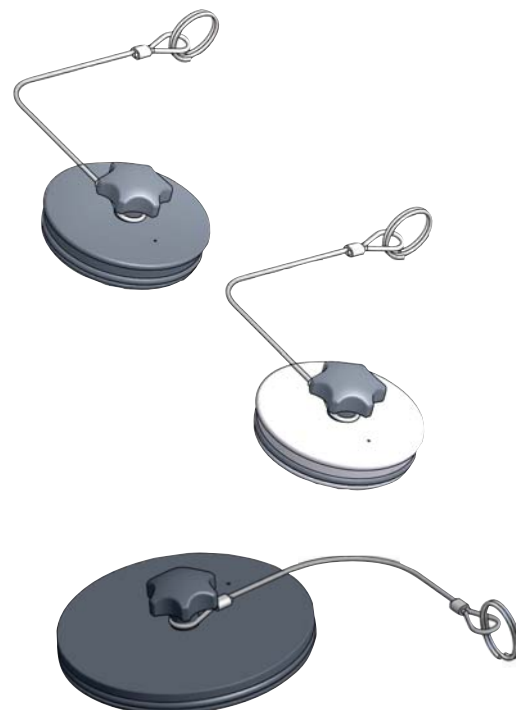


- 1) Mtrl: Co=Composite (Polyetylen), Al=Aluminium, SS=Stainless Steel
 2) Standard sealings FPM (Viton®). Other on request.

Dust plug for Hose unit / Coupler

Use the Mann Tek Dust Plug to prevent ingress of dirt and water in the couplings. The material in the Dust Plug is Composite, Aluminium, Rubber and Stainless Steel.

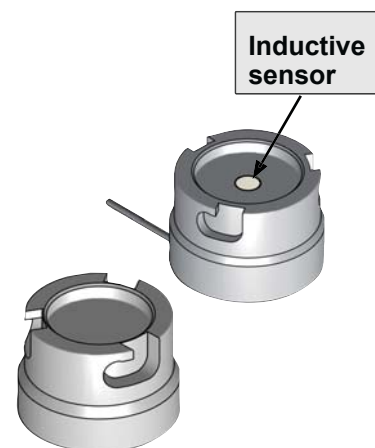
Inch DN	Material 1)	Seal 2)	Weight		Code No
			Kg	lbs	
3/4"-1" Ø56 mm, DN 20-25	Co	Standard: FPM (Viton®)	0,06	0.137	P100A2201
	Al		0,12	0.265	P100A1101
	SS		0,32	0.705	P100A4401
1½"-2" Ø70 mm, DN 40-50	Co				P200A2201
	Al				P200A1101
	SS				P200A4401
2½" Ø105 mm, DN 65	Co				P300A2201
	Al				P300A1101
	SS				P300A4401
3" Ø119 mm, DN 80	Co				P400A2201
	Al				P400A1101
	SS				P400A4401
4" Ø164 mm, DN 100	Co				P500B2201
	Al				P500B1101
	SS				P500A4401
6" Ø238 mm, DN 150	Co			P600A2201	
	Al			P600A1101	
	SS			P600A4401	
8" Ø272 mm, DN 200	Al			P800A1101	
	SS			P800A4401	



- 1) Mtrl: Co=Composite (Polyetylen), Al=Aluminium, SS=Stainless Steel
 2) Standard sealings FPM (Viton®). Other on request.

Parking adapter

Coupling size	Material	Code No
1" (Ø56mm)	Al	Tool 104-1
		Tool 104-1-M18*)
	SS	Tool 104-4
		Tool 104-4-M18*)
2" (Ø70mm)	Al	Tool 204-1
		Tool 204-1-M18*)
	SS	Tool 204-4
		Tool 204-4-M18*)
2½" (Ø105mm)	Al	Tool 304-1
		Tool 304-1-M18*)
	SS	Tool 304-4
		Tool 304-4-M18*)
3" (Ø119mm)	Al	Tool 404-1
		Tool 404-1-M18*)
	SS	Tool 404-4
		Tool 404-4-M18*)
4" (Ø164mm)	Al	Tool 504-1
		Tool 504-1-M18*)
	SS	Tool 504-4
		Tool 504-4-M18*)
6" (Ø238mm)	Al	Tool 604-1
		Tool 604-1-M18*)
	SS	Tool 604-4
		Tool 604-4-M18*)



Parking adapter is a smart equipment for suspension of the Hose unit. Parking adapter is available with or without inductive sensor.

*) With Inductive sensor

Selectivity overview

To prevent accidental mixing of media, selectivity versions of Hose and Tank units are available. The Tank unit are furnished with slots and Hose units with pins.

A number of selectivity are possible depending on coupling size.

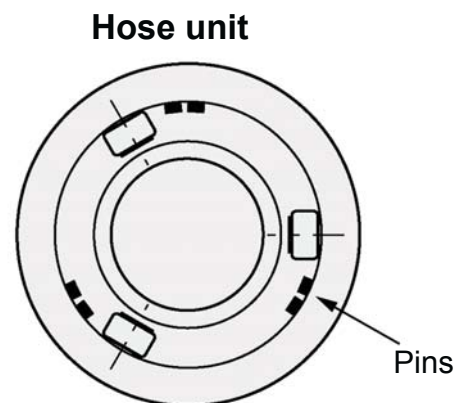
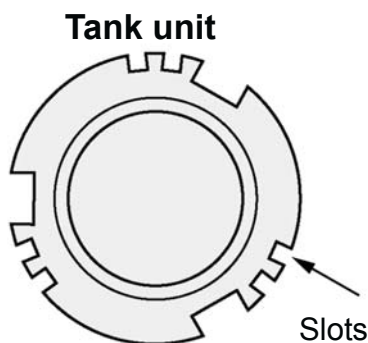


Table of selectivity positions

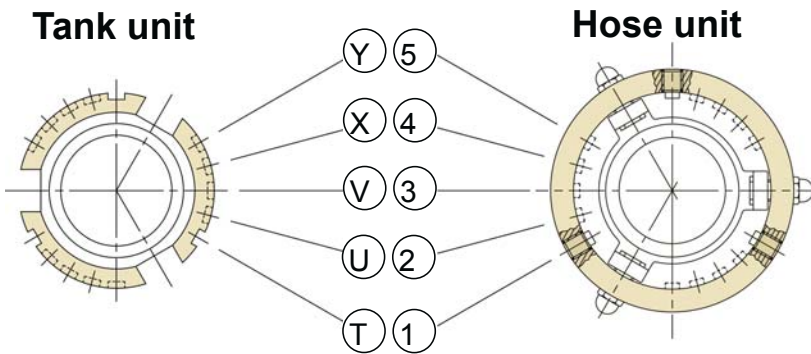
Product	Size	Position
Avgas 100 / 130	2½", 3", 4"	1
Avgas 108 / 135	2½", 3", 4"	2
Avgas 115 / 145	2½", 3", 4"	3
Avtur (Derd 2495) JP1, ATK, ATF 650. JET 'A'	2½", 3", 4"	4
Avtag (Derd 2486) JP4, ATG, JET 'B'	2½", 3", 4"	5

The major oil companies have agreed to use the following selectivity positions for aviation refuelling. For the 2½", 3" and 4" sizes.

Combine selectivity with colored couplings

1" (Ø56mm) - Selectivity

Coupling diameter:
Ø56 mm (3/4"-1")



Product / Media	Position
Acrylonitrile	X (4)
Ethylene oxide	U (2)
Propylene oxide	V (3)

Selectivity positions for Acrylonitrile, Ethylene oxide and Propylene oxide for 1"

Selectivity system: Mann Tek
Compatible with TODO(Gardner Denver)

With 5 options

T	U	V	X	Y
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Each unit can be provided with selectivity according to two systems. With 5 alternatives from T to Y or with 10 alternatives from 12 to 45 (see table).

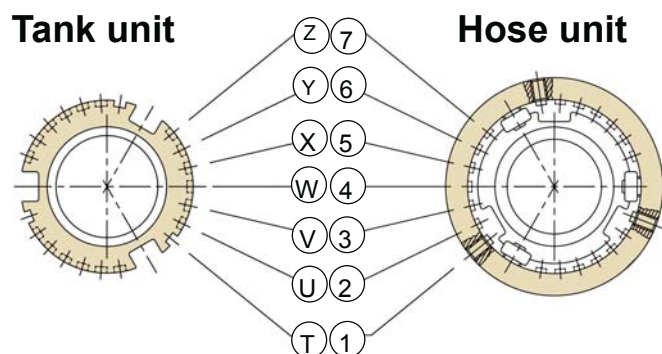
With 10 options

12	13	14	15	23
24	25	34	35	45

When ordering, please add chosen selectivity to the article number (Code No). e.g.S103A4401/SEL T.

2" (Ø70mm) - Selectivity

Coupling diameter:
Ø70 mm (1½"-2")



Product / Media	Position
Acrylonitrile	X (5)
Ethylene oxide	V (3)
Propylene oxide	W (4)

Selectivity positions for Acrylonitrile, Ethylene oxide and Propylene oxide for 2"

Selectivity system:
Mann Tek, TODO (Gardner Denver), Avery Hardoll (7pos)
Nato STANAG 3756 (21 pos with figures)

Each unit can be provided with selectivity according to two systems. With 7 alternatives from T to Z or with 21 alternatives from TU(12) to YZ(67) (see table).

T	U	V	W	X	Y	Z
---	---	---	---	---	---	---

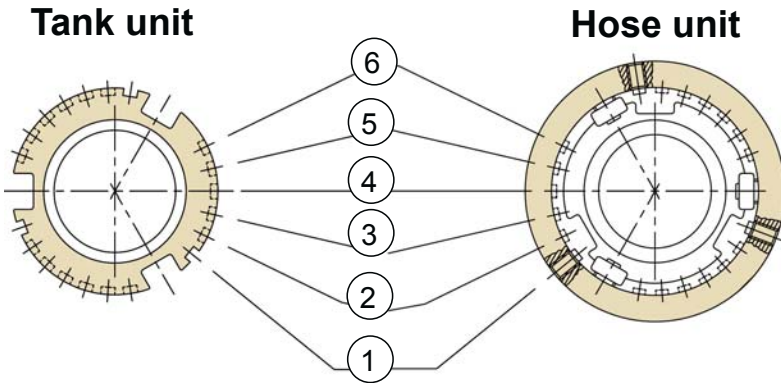
Pin & slot Position

12	13	14	15	16	17	23	24	25	26	27
TU	TV	TW	TX	TY	TZ	UV	UW	UX	UY	UZ
VW	VX	VY	VZ	WX	WY	WZ	XY	XZ	YZ	
34	35	36	37	45	46	47	56	57	67	

When ordering, please add chosen selectivity to the article number (Code No). e.g.S210A4401A/SEL T.
(S210A4401A/SEL 12)

2" (Ø70mm) Fort Vale™ system- Selectivity

Coupling diameter:
Ø70 mm (1½"-2")



Selectivity system:
"FORT VALE"

Each unit can be provided with selectivity with 15 alternatives from A to Q (see table).

When ordering, please add chosen selectivity to the article number (Code No). e.g.S210A4401A/FV-SEL A

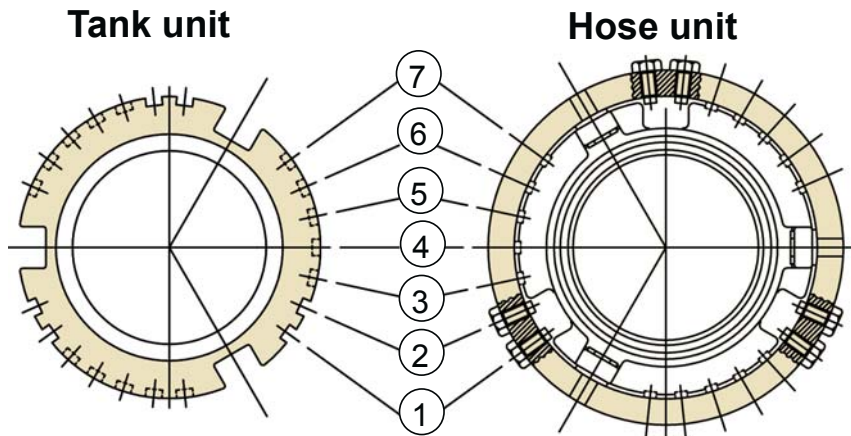
Selectivity code:

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
1-2	1-3	1-4	1-5	1-6	2-3	2-4	2-5	2-6	3-4	3-5	3-6	4-5	4-6	5-6

Pin & slot Position

2½" (Ø105mm) - Selectivity system Mann Tek

Coupling diameter:
Ø105 mm (2½")



Selectivity system:

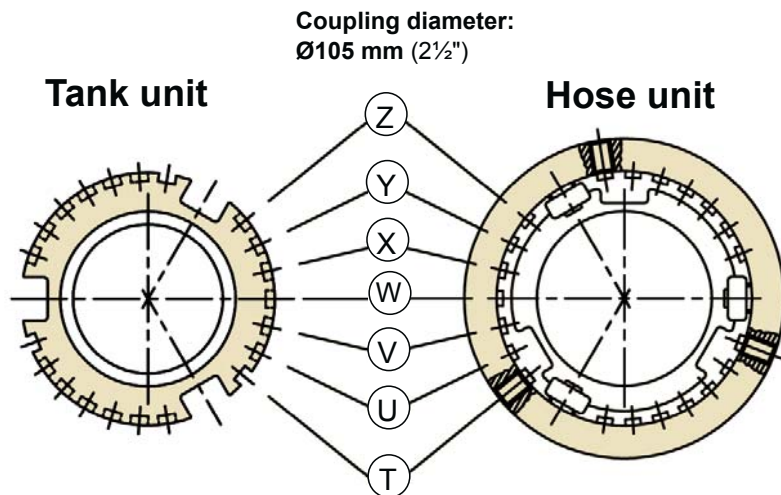
Mann Tek, TODO, NATO STANAG 3756
Avery Hardoll (with letter)

Each unit can be provided with selectivity from 12 (A) to 67 (W) with 21 alternatives (see table)

When ordering, please add chosen selectivity to the article number (Code No). e.g.S312A4401/SEL 12 (A)

	A	B	C	D	E	F	G	H	I	K	L
Pin & slot Position	12	13	14	15	16	17	23	24	25	26	27
	34	35	36	37	45	46	47	56	57	67	
	M	N	P	Q	R	S	T	U	V	W	

2½" (Ø105mm) - Selectivity system Fulcrum



Selectivity system:

Fulcrum

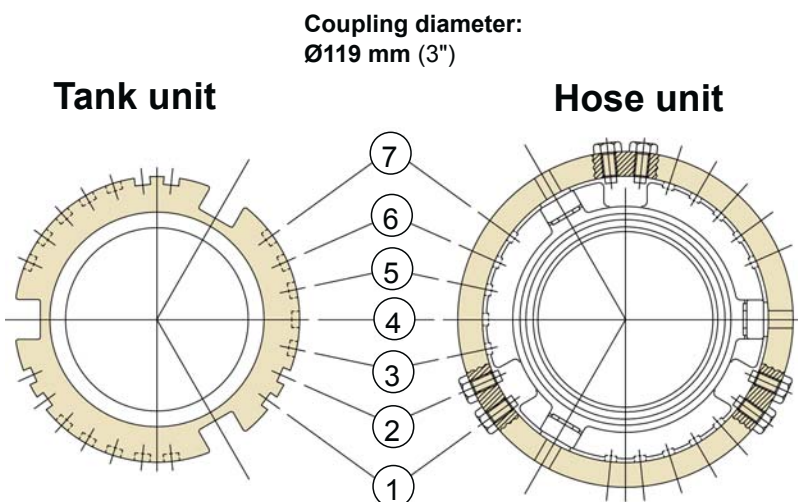
Each unit can be provided with selectivity according two systems:
With 7 alternatives from T to Z or with 21 alternatives from TU to YZ
(see table).

When ordering, please add chosen selectivity to the article number
(Code No) e.g. S210A4401 / FC-SEL T (S210A4401A / FC-SEL TU).

T	U	V	W	X	Y	Z
---	---	---	---	---	---	---

TU	TV	TW	TX	TY	TZ	UV
UW	UX	UY	UZ	VW	VX	VY
VZ	WX	WY	WZ	XY	XZ	YZ

3" (Ø119mm) - Selectivity system Mann Tek



Selectivity positions for Acrylonitrile,
Ethylene oxide and Propylene oxide
for 3"

Product / Media	Position
Acrylonitrile	P (3 6)
Ethylene oxide	M (3 4)
Propylene oxide	N (3 5)

Selectivity system:

Mann Tek, TODO (Gardner Denver), NATO STANAG 3756
Avery Hardoll (with letter)

Each unit can be provided with selectivity from
12 (A) to 67 (W) with 21 alternatives (see table)

When ordering, please add chosen selectivity to
the article number (Code No).
e.g.S414A4401/SEL 12 (A)

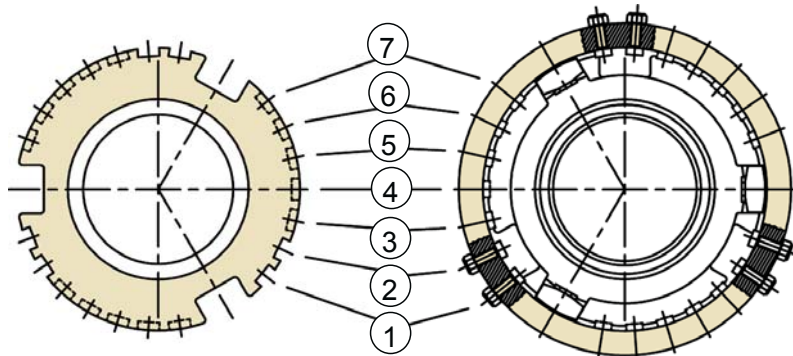
	A	B	C	D	E	F	G	H	I	K	L
Pin & slot Position	12	13	14	15	16	17	23	24	25	26	27
	34	35	36	37	45	46	47	56	57	67	
	M	N	P	Q	R	S	T	U	V	W	

4" (Ø164mm) - Selectivity system Mann Tek

Coupling diameter:
Ø64 mm (4")

Tank unit

Hose unit



Selectivity positions for Acrylonitrile, Ethylene oxide and Propylene oxide for 3"

Product / Media	Position
Acrylonitrile	3 6
Ethylene oxide	3 4
Propylene oxide	3 5

Selectivity system:

Mann Tek, TODO (Gardner Denver), NATO STANAG 3756
Avery Hardoll (with letter)

Each unit can be provided with selectivity from 12 (A) to 67 (W) with 21 alternatives (see table)

When ordering, please add chosen selectivity to the article number (Code No). e.g.S414A4401/SEL 12 (A)

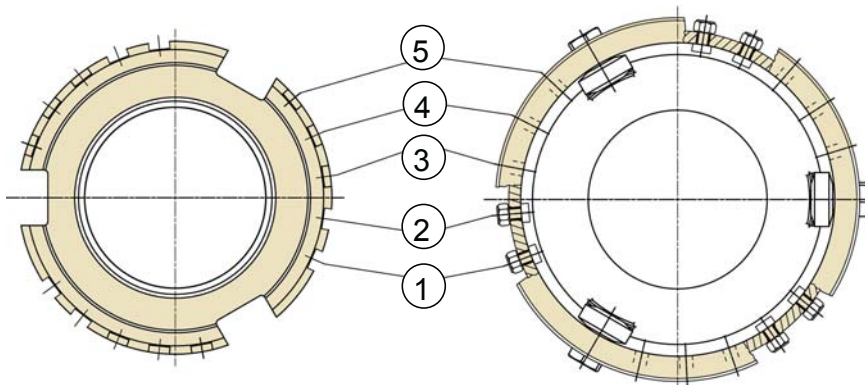
Pin & slot Position	12	13	14	15	16	17	23	24	25	26	27
	34	35	36	37	45	46	47	56	57	67	

6" (Ø238mm) - Selectivity system Mann Tek

Coupling diameter:
Ø238mm (6")

Tank unit

Hose unit



Selectivity system: Mann Tek

Compatible with TODO(Gardner Denver)

Each unit can be provided with selectivity from 12 to 45 with 10 alternatives (see table).

When ordering, please add chosen selectivity to the article number (Code No). e.g.S645B4401/SEL 12

With 10 options

12	13	14	15	23
24	25	34	35	45

Explanation of Designations - 1/2

Ver 1212

First sign (letter): Indicates the type of coupling

A = API-adaptor
 AV = Tank Unit (EN 13081)
 B = Ball Valve
 C = Dust Cap
 CG = Dust Cap LPG
 D = Swivel
 E = Tank Unit with pressure valves
 F = Hose Unit (ISO 45)
 G = Tank Unit (ISO 45)
 GS = Tank Unit (ISO 45) with selectivity

H = Sampling Vent & Drain Unit
 I = Dust Plug ISO 45
 K = Dust Cap ISO 45
 L = Tank Unit LPG
 LC = Tank Unit Cryogenic
 M = Hose Unit LPG
 MC = Hose Unit Cryogenic
 N = Break Away Pin
 NC = Break Away Pin Cryogenic
 O = Break Away Wire

P = Dust Plug
 R = Pressure Cap
 RG = Pressure Cap LPG
 S = Hose Unit (STANAG 3756)
 SN = Hose Unit int. Break Away Pin
 SO = Hose Unit int. Break Away Wire
 T = Tank Unit (STANAG 3756)
 U = Filter / Sight Glass
 V = Dust Plug LPG
 WA = Hose Fittings

Second sign (numeral): Indicates the socket diameter and/or the nominal diameter

0 = 50mm or 3/4"
 1 = 56mm or 1", 1 1/4"
 2 = 70mm or 1 1/2", 2"
 3 = 105mm or 2 1/2"

4 = 119mm or 3"
 5 = 164mm or 4"
 V = 5"
 6 = 238mm or 6"

8 = 272mm or 8"
 10 = 10"
 12 = 12"

Third and fourth sign (numeral): Indicates connection, (thread, flange etc.)

01 = 3/4" BSP (Female)
 02 = 3/4" NPT (Female)
 03 = 1" BSP (Female)
 04 = 1" NPT (Female)
 05 = 1 1/4" BSP (Female)
 06 = 1 1/4" NPT (Female)
 07 = 1 1/2" BSP (Female)
 08 = 1 1/2" NPT (Female)
 09 = 1 3/4" BSP (Female)
 10 = 2" BSP (Female)
 11 = 2" NPT (Female)
 12 = 2 1/2" BSP (Female)
 13 = 2 1/2" NPT (Female)
 14 = 3" BSP (Female)
 15 = 3" NPT (Female)
 16 = 4" BSP (Female)
 17 = 4" NPT (Female)
 18 = Flange undrilled Ø156
 19 = Flange undrilled Ø165
 20 = Flange undrilled Ø210
 21 = Flange undrilled Ø230
 22 = Flange undrilled Ø254
 23 = Flange DN 25 PN 10/16
 24 = Flange DN 40 PN 10/16
 25 = Flange DN 32 PN 10/16
 26 = Flange DN 32 PN 25/40
 27 = Flange DN 40 PN 10/16
 28 = Flange DN 40 PN 25/40
 29 = Flange DN 50 PN 25/40*
 30 = Flange DN 50 PN 10/16
 31 = Flange DN 50 PN 25/40
 32 = Flange DN 65 PN 25/40*
 33 = Flange DN 65 PN 10/16
 34 = Flange DN 65 PN 25/40
 35 = Flange DN 80 PN 25/40*
 36 = Flange DN 80 PN 10/16
 37 = Flange DN 80 PN 25/40
 38 = Flange DN 100 PN 25/40*
 39 = Flange DN 100 PN 10/16
 40 = Flange DN 100 PN 25/40
 41 = Flange DN 125 PN 6
 42 = Flange DN 125 PN 10/16
 43 = Flange DN 125 PN 25/40
 44 = Flange DN 150 PN 6
 45 = Flange DN 150 PN 10/16
 46 = Flange DN 150 PN 25/40
 47 = Flange DN 20 PN 10/16
 48 = Flange DN 20 PN 25/40
 49 = Flange 3/4" ANSI Class 150
 50 = Flange 3/4" ANSI Class 300
 51 = Flange 1" ANSI Class 150
 52 = Flange 1" ANSI Class 300
 53 = Flange 1 1/4" ANSI Class 150
 54 = Flange 1 1/4" ANSI Class 300
 55 = Flange 1 1/2" ANSI Class 150
 56 = Flange 1 1/2" ANSI Class 300
 57 = Flange 2" ANSI Class 150
 58 = Flange 2" ANSI Class 300
 59 = Flange 2 1/2" ANSI Class 150
 60 = Flange 2 1/2" ANSI Class 300
 61 = Flange 3" ANSI Class 150
 62 = Flange 3" ANSI Class 300
 63 = Flange 4" ANSI Class 150
 64 = Flange 4" ANSI Class 300
 65 = Flange TW 1 (3" - DN 80)
 66 = Flange TW 3 (4" - DN 100)
 67 = Flange 3" T.T.M.A.
 68 = Flange 4" T.T.M.A.
 69 = 3/4" BSP (Male)
 70 = 3/4" NPT (Male)
 71 = 1" BSP (Male)

72 = 1" NPT (Male)
 73 = 1 1/4" BSP (Male)
 74 = 1 1/4" NPT (Male)
 75 = 1 1/2" BSP (Male)
 76 = 1 1/2" NPT (Male)
 77 = 1 3/4" BSP (Male)
 78 = 2" BSP (Male)
 79 = 2" NPT (Male)
 80 = 2 1/2" BSP (Male)
 81 = 2 1/2" NPT (Male)
 82 = 3" BSP (Male)
 83 = 3" NPT (Male)
 84 = 4" BSP (Male)
 85 = 4" NPT (Male)
 86 = Weld.flange 2" Ø60,5 inner
 87 = Flange TW 1 (2" DN50)
 88 = Weld.flange 2" Ø50-Ø70 (flat)
 89 = Weld.flange 2" Ø57 (int. chamfer)
 90 = Weld.flange 2" Ø60 (outer chamfer)
 91 = Weld.flange 3" Ø75-Ø90 (flat)
 92 = Weld.flange 3" Ø76 (int. chamfer)
 93 = Weld.flange 3" Ø89 (outer. chamfer)
 94 = Weld.flange 4" Ø100-Ø120 (flat)
 95 = Weld.flange 4" Ø102 (int. chamfer)
 96 = Weld.flange 4" Ø108 (int. chamfer)
 97 = Weld.flange 4" Ø114 (outer. chamfer)
 98 = Flange TW 1 (2" - DN 50)
 with drain connection
 99 = Flange DN 150 PN 25
 100 = Flange 6" ANSI Class 150
 101 = Flange 6" ANSI Class 300
 102 = Flange DN 200 PN 10
 103 = Flange DN 200 PN 16
 104 = Flange DN 200 PN 25
 105 = Flange 8" ANSI Class 150
 106 = Flange 8" ANSI Class 300
 107 = Flange Square ISO 45
 108 = S60x6 (Female)
 109 = S60x6 (Male)
 110 = 6" BSP (Female)
 111 = 6" NPT (Female)
 112 = W2" - 7 (Female)
 113 = Weld.flange 3" Ø92 inner
 114 = Square flange, 4 holes
 115 = 6" BSP (Male)
 116 = 6" NPT (Male)
 117 = 8" NPT (Female)
 118 = 4" Victaulic
 119 = Flange DN 50 PN 25/40**
 120 = Flange DN 65 PN 25/40**
 121 = Flange DN 80 PN 25/40**
 122 = Flange DN 100 PN 25/40**
 123 = W2" - 7 (Male)
 124 = 5" NPT (Female)
 125 = 5" NPT (Male)
 126 = Flange DN100 PN6
 127 = Flange DN80 PN6
 128 = Flange DN65 PN6
 129 = Flange DN50 PN6
 130 = Flange 8" ANSI Class 600
 131 = W90x1/6" (Female)
 132 = 1/2" NPT (Female)
 133 = 1/2" BSP (Female)
 134 = Flange ø184.2, 6 holes
 135 = Flange TW 7 (6" - DN 150)
 136 = 4" ASSPT (Female)
 137 = Triclamp DN 25
 138 = M54x 1,5 (Female)
 139 = Triclamp DN50
 140 = Weld.flange Ø73 (outer chamfer)
 141 = 3" Victaulic

142 = Flange 5" ANSI Class 150
 143 = 3" Ball valve
 144 = 2" Victaulic
 145 = 3" BSPT (Male)
 146 = 5" Victaulic
 147 = 2" BSPT (Female)
 148 = 2" BSPT (Male)
 149 = 1 1/2" Victaulic
 150 = 2 1/2" Victaulic
 151 = Flange 1" DIN 11864-2
 152 = Flange 2" DIN 11864-2
 153 = Flange ø135, 8xM6
 154 = 4" BSPT (Female)
 155 = 4" BSPT (Male)
 156 = Weld flange 2" ø61,5 (inner)
 157 = 3" BSPT (Female)
 158 = Weld end 1 1/2" ø48 (outer)
 159 = Thread TR 57x4
 160 = Flange 2" BS10 Table D
 161 = Flange 12" ANSI Class 150
 162 = Flange 10" ANSI Class 150
 163 = Flange DN 250 PN 16
 164 = M130x6 (Female)
 165 = Flange 10" ANSI Class 300
 166 = ACME 1 1/4" (Female)
 167 = ACME 1 3/4" (Female)
 168 = ACME 2 1/4" (Female)
 169 = ACME 3 1/4" (Female)
 170 = ACME 1 1/4" (Male)
 171 = ACME 1 3/4" (Male)
 172 = ACME 2 1/4" (Male)
 173 = ACME 3 1/4" (Male)
 174 = Weld.flange Ø76 (outer. chamfer)
 175 = Flange DN 15 PN 10/16
 176 = Flange DN 15 PN 25/40
 177 = M130x6 (Male)
 178 = Flange 6" T.T.M.A.
 179 = Flange DN 80 PN 25/40***
 180 = 1/2" NPT (Male)
 181 = 1/2" BSP (Male)
 182 = 5" BSP (Female)
 183 = 5" BSP (Male)
 184 = Weld end 8" ø219 (outer)
 185 = Weld end 6" ø168 (outer)
 186 = Flange DN 250 PN 25
 187 = Flange 2" T.T.M.A.
 188 = Flange 3" BS10 Table D
 189 = Flange 1/2" ANSI Class 150
 190 = Flange 1" ANSI Class 150 Flat Face
 191 = Flange 12" ANSI Class 300
 192 = Flange DN250 PN10
 193 = Weld end Ø114 Schedule 40
 194 = Weld end Ø114 Schedule 80
 195 = 6" Victaulic
 196 = 1" Victaulic
 197 = DN125 JIS 5K
 198 = DN100 JIS 5K
 199 = DN80 JIS 5K
 200 = DN50 JIS 5K
 201 = DN40 JIS 5K
 202 = Flange 2" DIN 11864-3
 203 = 3/2" BSP (Female)
 204 = Flange Ø110, Ø86/Ø5.5 (6x)
 205 = Weld end Ø60 Schedule 80
 206 = Weld end Ø89 Schedule 40
 207 = Weld end Ø89 Schedule 80
 208 = Flange DN 25 PN 6
 209 = Flange DN 32 PN 6
 210 = Flange DN 40 PN 6

* EN 1092-1:2001 Type E: Spigot

** EN 1092-1:2001 Type F

*** EN 1092-1:2001 Type C

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NOTE! When swivels are chosen, the second and the third sign indicates one outlet, the fourth and the fifth sign the second outlet.

Design may change without notice

Explanation of Designations - 2/2

Ver 1212

Fifth sign (letter): Indicates version

A = Version No.1 (Machined from bar)	G = Drain connection	L = Low Temp
B = Version No.2 (Casted)	H = Leaf spring lock	P = Pressure (Custom)
C = Version No.3 (Kokill casted)	I = Bended Tank Unit Short	S = Sight Glass
D = Sep. piston guide	J = Bended Tank Unit	T = Transparent
E = Injection moulded	K = Short Tank Unit/Swivel	U = Stop before disconnected
F = 6" Flange Hydrant		

Sixth sign (numeral): Indicates material in the coupling body

1 = Aluminium	6 = Titan
2 = Brass	7 = Hastelloy
3 = Steel	8 = PVDF
4 = Stainless steel A4 (316)	9 = PEEK
5 = Stainless steel A2 (304)	K = Inconel

Seventn sign (numeral): Indicates material in the innerparts or other components

1 = Aluminium	6 = Titan
2 = Brass	7 = Hastelloy
3 = Steel	8 = PVDF
4 = Stainless steel A4 (316)	9 = PEEK
5 = Stainless steel A2 (304)	K = Inconel

Eight and Ninth sign (numeral): Indicates the O-ring material in the coupling

01 = Viton® (FPM/FKM)	16 = Hypalon® (CSM)	37 = Chemraz® 510 (90 Shore)
02 = Nitrile (NBR)	17 = Chemraz® 505 (FFKM)	40 = FEP PTFE encapsulated Viton®
03 = EPDM	18 = Xyflour® 860 (AFKM)	50 = Kalrez® (PFPM) 1050LF
04 = Kalrez® (FFKM) 6375	19 = Zetpol® / Therban® (HNBR)	51 = Nylon® (PA)
05 = NBR Low temp	20 = NBR 90 shore	61 = Viton® (FPM), FDA, USP C6 & ADI
06 = Teflon® (PTFE)	21 = Viton®-GF (Special Viton quality)	62 = Nitrile (NBR), FDA, USP C6 & ADI
07 = Neoprene® (CR)	22 = Composite	63 = EPDM, FDA, USP C6 & ADI
08 = Silicone (Q)	23 = Viton® GFLT-S	64 = Kalrez® (FFKM) 6230, FDA, USP C6 & ADI
09 = Vulkollan® (PUR)	24 = Viton® GLT	66 = PTFE (Virgin), FDA
10 = Butyl (IIR)	25 = Klingerit®	71 = FPM/FKM Low Temp
11 = Nitrile (Gasol NBR 70 K-6)	26 = POM	77 = Chemraz® SD517, FDA, USP C6 & ADI
12 = Perfluorelastomer (FFPM)	27 = Epiclorhydrin (ECO)	
13 = PVC / NBR	28 = Viton® GF-S NMO	
14 = Fluorsilicone rubber (MFQ)	31 = Viton® 90 Shore (FPM/FKM)	
15 = FEP encapsulated silicone	33 = EPDM 291	
	34 = Kalrez® 0040	

Tenth sign (letter): Used for extra

A = Flat seal, Teflon®(PTFE)	M = Modified Cam Curve	V = Locking house unit
B = Flat seal, Vulkollan®(PUR)	N = No Branding	W = Double ball race
C = 2-way Ball Valve	NA = No Actuator (Ball Valve)	X = Special surface treatment
D = Flat seal, Viton® (FPM)	P = Pressure Equalizing Valve	Z = Excentric tank unit
DA = Double Acting (Ball Valve)	Q = Reduced bore diameter (Argus,Hydrant)	-RA = Racing
E = None projecting piston spindle	R = Hose unit with int. Break Away	-LC = Locking Cap
F = Flange thickness acc. to standard	S = Single Argus valve (Hydrant)	-S = FEP O-ring in Hose Unit swivel
G = Hypalon	SR = Spring Return (Ball Valve)	-ST = Steam
H = Nitrile (NBR)	T = TW-Flange extended circles	-XL = Oversized swivel
I = Emco comp	U = Pressure Bleeding Valve	-45 = 45 Mesh
J = EPDM	U20 = Bleeding valve 20 bar	-60 = 60 Mesh
K = Locked piston guide		-10 = 100 Mesh
L = Locked thread		

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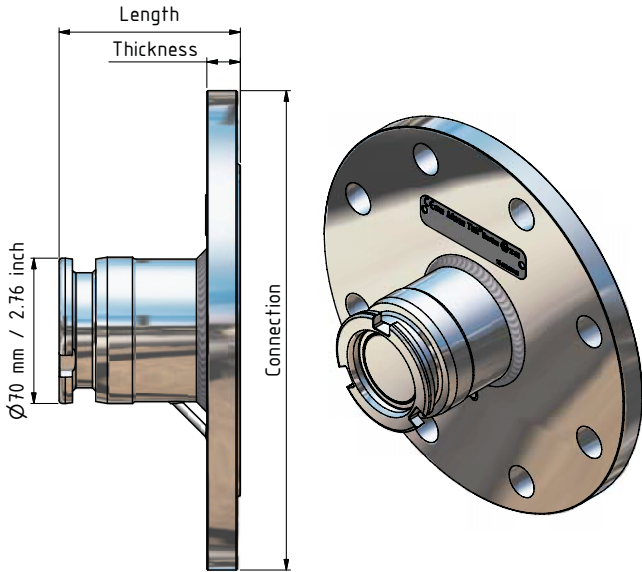
Design may change without notice

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Selection of registered trade names from Messrs BASF, Bayer AG, B.F. Goodrich, Chemische Werke Hüls, Daikin, Dow Company, DSM, Du Pont, DuPont Dow Elastomers, Esso Chemie, Hercules, Hoechst AG, Montedison, Monteflous, Nippon Zeon, Polysar LTD., Rhone Poulenc, 3 M Company, Wacker Chemie, Precision Polymer Engineering Ltd.

Combinations of Couplings - Flanges

We manufacture all combinations of Couplings
- Flanges on request



Example: 2" (Ø70mm) Tank unit / Adapter with
Flange 4" ANSI, Code No: T263A4401

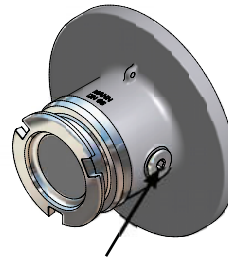
None projecting piston spindle



Tank units with **no parts protruding** from the coupling in connected position.

For mounting directly on ballvalves, etc.

Tank unit / Adapter with Drain connection

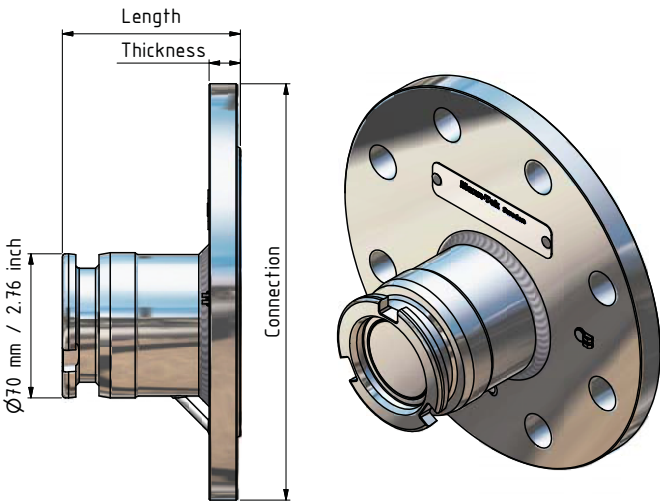


Option Drain connection
Use Mann Tek Tank unit / adapter with Drain connection for easy draining and sampling of your system. Available in all Tank units with flange.

Drain connection

Drain connection: 3/8" (thread standard)
Other threads on request.

Tank unit / Adapter - Eccentric flange

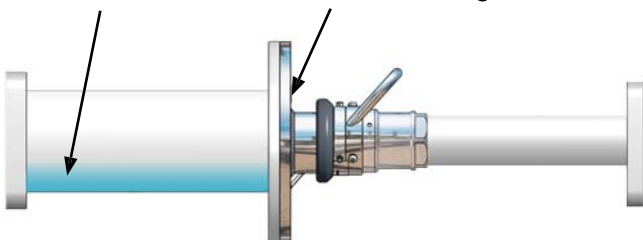


2" (Ø70mm) Tank unit / Adapter with eccentric flange, available in sizes from 1" to 6".

Traditional flange

Liquid left in the tube

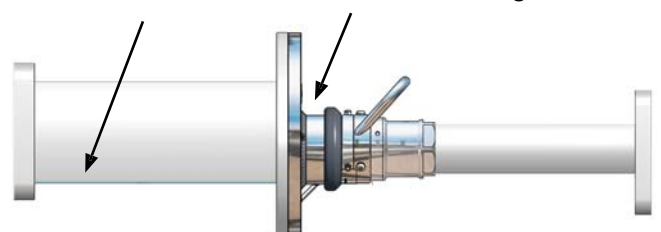
Tank unit with traditional flange



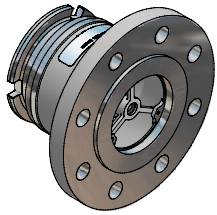
Eccentric flange

No liquid left in the tube

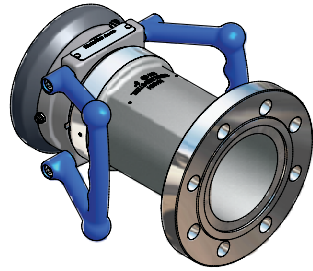
Tank unit with eccentric flange



Tank unit / Hose unit, flange EN 1092-2001 Type E (Spigot) / Type F (Recess)



Tank unit
Flange EN 1092-2001
Type E (Spigot)



Hose unit
Flange EN 1092-2001
Type F (Recess)

Spigot Type E and Recess Type F has a straight sealing surface which differs from standard flanges.

It is a special version that some manufacturers of tankers (tank trucks) and railway-carriages (rail tankers) uses as the default for certain applications.

Victaulic connection

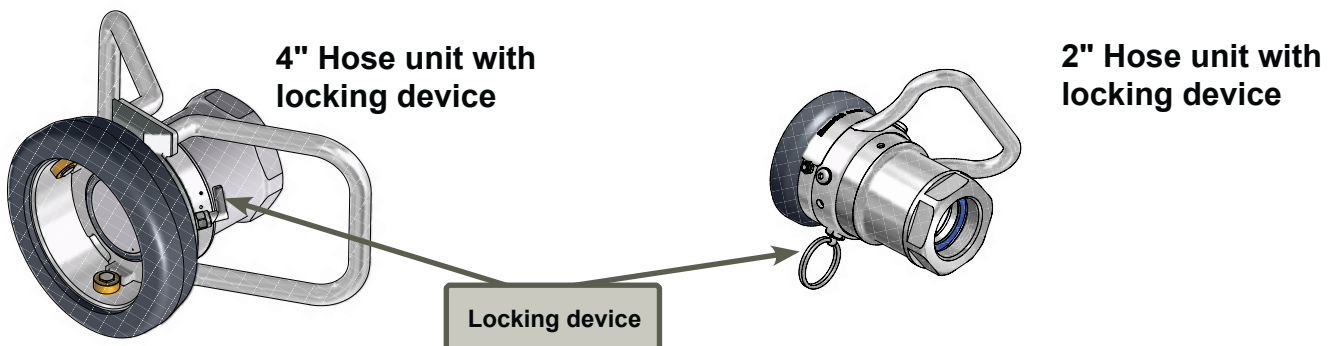
Mann Tek manufacture Dry Disconnect Couplings with Victaulic connection for quick and easy coupling installation in i.e military and offshore applications.



Victaulic

Option - Locking device to avoid unwanted disconnection

Fully connected locking facility eliminates unintentional disconnection when subjected to vibration from transfer pumps.



Option - DDCoupling Hose unit with Ground Connection

Electrostatic charges can be generated by a variety of circumstances. Ignition of flammable vapours is possible by discharge of static.

Electrical conductive hoses and anti-static additives reduces the risk but might not be sufficient. Than the aircraft, the fuelling vehicle, and all accessories including hose nozzle, filters and other equipment through which the fuel passes must all be electrically bonded.

Such connections must always be attached to appropriate bonding connections thus providing a conductive path to equalize potential. Removal of the bonding connection must always be the last operation.



Ground cable assembly with solid brass clamp and bold. Cable with plastic coating.

Option - Hose unit with Break Away integrated

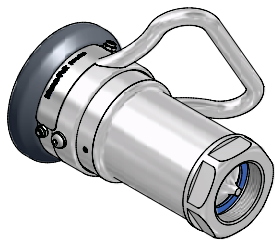


Where there is a risk of excessive force on the hose due to unexpected movement between the loading and unloading station, combining the Dry Disconnect Coupling with a Safety Break Away coupling.

Code No.

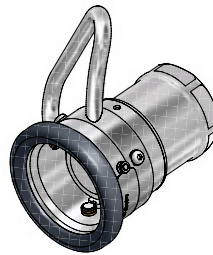
When Code No for the Hose unit is e.g. S211A4401, the Code No for Break Away integrated is SN211A4401

Hose unit with non return valve



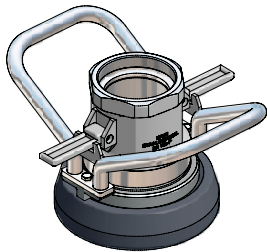
Hose unit with check valve for wet house delivery.

Hose unit / Coupler - "Big mouth"



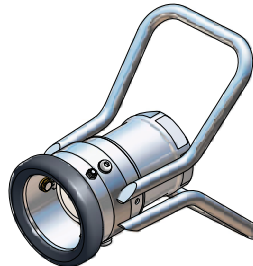
2" (Ø70mm) Hose unit / Coupler - "Big mouth", adapted for older models of EMCO Wheaton Couplings

Hose unit with lockable swivel



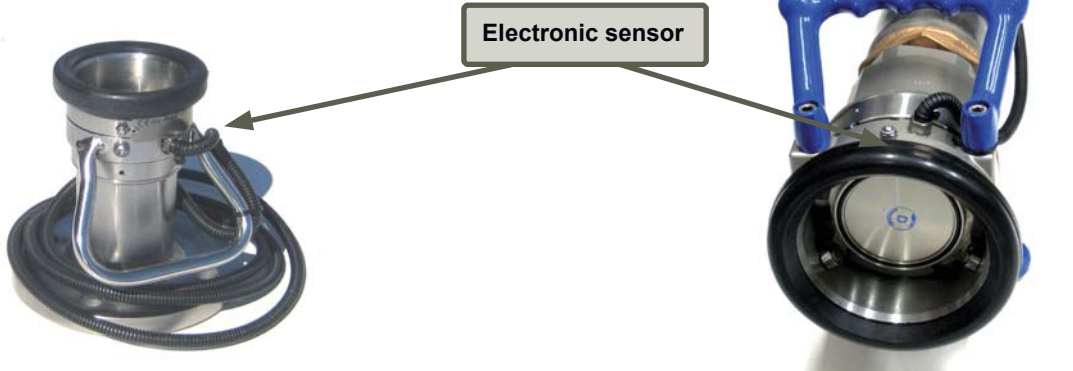
Hose unit used for emergency unloading of Railtankers (RTC)

Option - Extended handle



Extended handle for 2", 2½" and 3" Hose unit

Option - Electronic sensor



Electronic sensor

The sensor is detecting the position of the driving plate inside the hose unit.

No modification on the tank unit is needed. That makes it possible to identify if the hose unit is connected to a tank unit and if they are in an open position.

S1 : For 1" coupling. S2 : For 2" coupling.
 S3 : For 2½" coupling. S4 : For 3" coupling.
 S5 : For 4" coupling. S6 : For 6" coupling.
 44 : Housing material in Stainless Steel
 A1: DC-PNP
 A2: NAMUR

Order information

Code No: Z-S1-44-A1

Available with ATEX on request

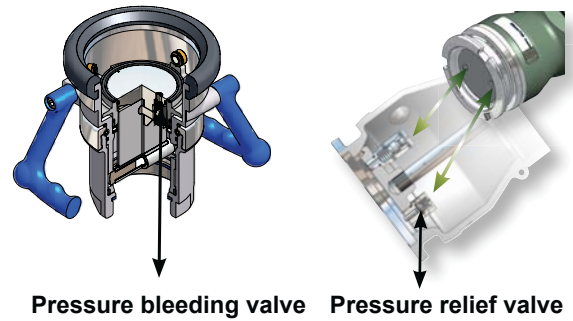


Pressure bleeding valve in Hose unit

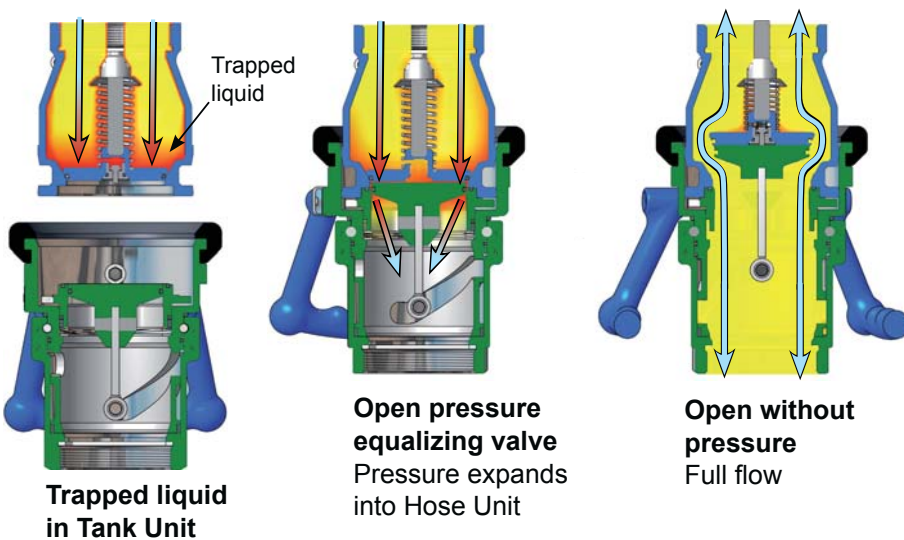
Under thermal influence the liquid will be warmed up and the pressure increases extremely.

To protect the equipment against excessive pressure the PBV opens at a predetermined pressure at an acceptable and riskless limit. Other applications with the same effect are adapter pieces between different DDCouplings, hose lines with DDCouplings/DACouplings on both sides e.g. for military applications (logistic supply lines).

Pressure relief and bleeding valve in Tank unit



Pressure equalizing valve in STANAG 3756 Tank unit



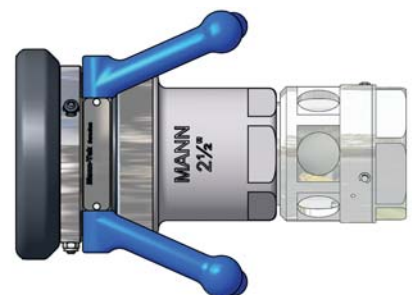
This system dissipates rapped fluid pressure into hose coupler without spillage, to allow easy connection.

Filter Strainer in Aluminium for Petroleum products

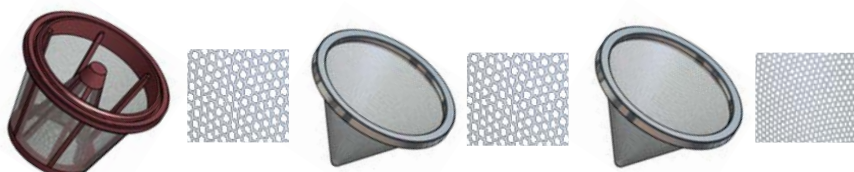
The Filter Strainer is designed to adapt on the DDCoupling. The integrated view glass makes it easy to check when the filter has to be cleaned.

Easy servicing is guaranteed by a new bayonet connection.

The Filter Strainers are available with 2½" BSP/NPT and 3" BSP/NPT connections.



Sight flow indicator with male BSP thread screws into a DDC Hose Unit with female threads.



45 mesh

60 mesh

100 mesh

There are 3 different filter types, 45 mesh, 60 mesh and 100 mesh. When order replace XX with -45 for 45 mesh, -60 for 60 mesh and -10 for 100 mesh.

Option - Colored couplings and handles

Mann Tek supply couplings and handles in any color on request

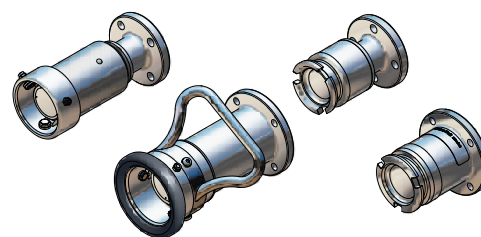


Options for hygienic applications

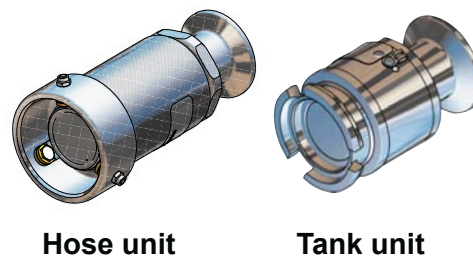
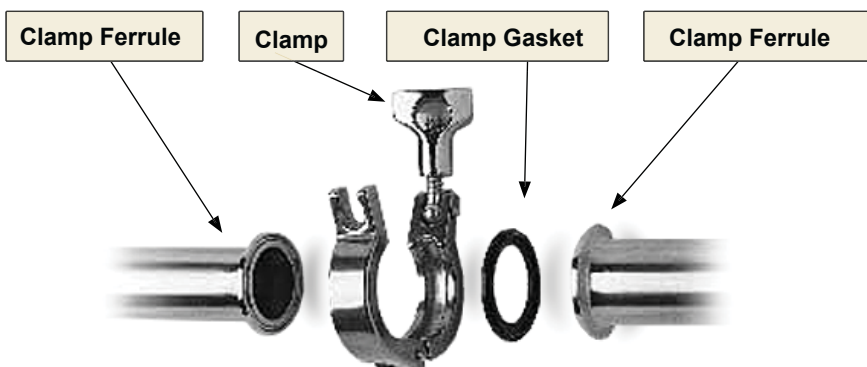
Dry Disconnect Couplings with Triclamp connection or hygienic flange, DIN 11864, are used in working environments demanding high levels of hygiene.

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

Hygienic flange DIN 11864



Triclamp - Hose unit and Tank unit



Hose unit

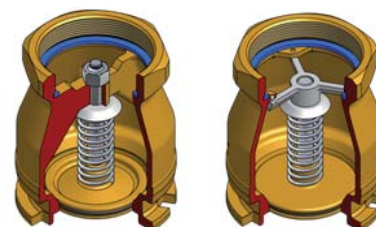
Tank unit

Easier service

You are able to mount and dismount the DDCouplings without any special tools. The Tank unit / Adapter can be mounted and dismounted without any tools at all.

Results:

Quick and safe service with just a few standard tools



Tools for draining of tank units



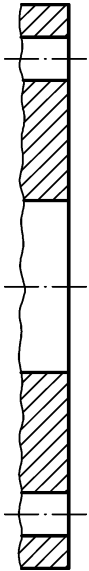
Tools for draining of hose units



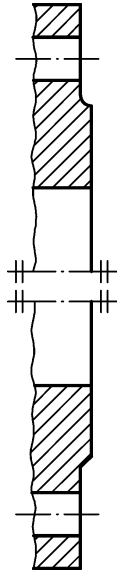
Open end wrench for tank and hose unit

Flange facing types according to EN 1092

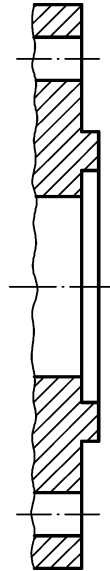
Type A Flat face



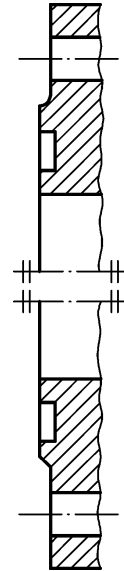
Type B Raised face



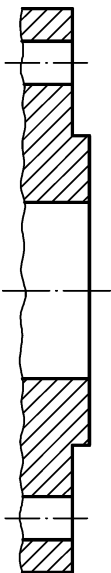
Type C Tongue



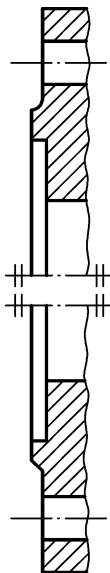
Type D Groove



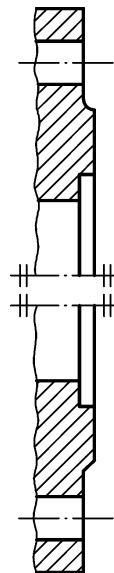
Type E Spigot



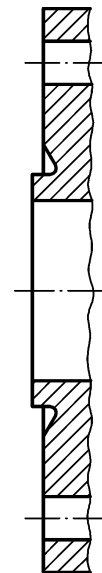
Type F Recess



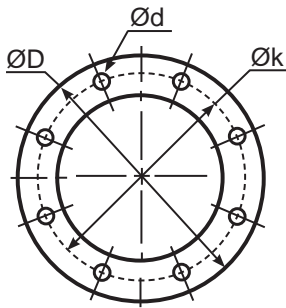
Type G O-ring Spigot



Type G O-ring Groove



Flange Measurement - 1/2



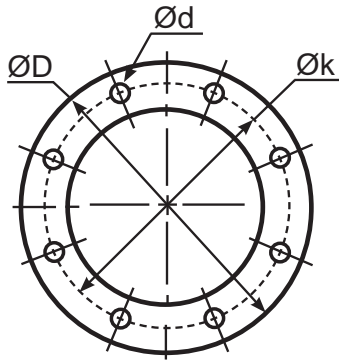
$\varnothing D$ = Diameter
 $\varnothing k$ = Centre diameter
 n = Number of holes
 $\varnothing d$ = Hole diameter

EN 1092-1																	
DN	PN 10				PN 16				PN 25				PN 40				
		ØD	Øk	n	Ød	ØD	Øk	n	Ød	ØD	Øk	n	Ød	ØD	Øk	n	Ød
20	mm	105	75	4	14	105	75	4	14	105	75	4	14	105	75	4	14
	inch	4.13	2.95		0.55	4.13	2.95		0.55	4.13	2.95		0.55	4.13	2.95		0.55
25	mm	115	85	4	14	115	85	4	14	115	85	4	14	115	85	4	14
	inch	4.53	3.35		0.55	4.53	3.35		0.55	4.53	3.35		0.55	4.53	3.35		0.55
32	mm	140	100	4	18	140	100	4	18	140	100	4	18	140	100	4	18
	inch	5.51	3.94		0.71	5.51	3.94		0.71	5.51	3.94		0.71	5.51	3.94		0.71
40	mm	150	110	4	18	150	110	4	18	150	110	4	18	150	110	4	18
	inch	5.91	4.33		0.71	5.91	4.33		0.71	5.91	4.33		0.71	5.91	4.33		0.71
50	mm	165	125	4	18	165	125	4	18	165	125	4	18	165	125	4	18
	inch	6.50	4.92		0.71	6.50	4.92		0.71	6.50	4.92		0.71	6.50	4.92		0.71
65	mm	185	145	4	18	185	145	4	18	185	145	8	18	185	145	8	18
	inch	7.28	5.71		0.71	7.28	5.71		0.71	7.28	5.71		0.71	7.28	5.71		0.71
80	mm	200	160	8	18	200	160	8	18	200	160	8	18	200	160	8	18
	inch	7.87	6.30		0.71	7.87	6.30		0.71	7.87	6.30		0.71	7.87	6.30		0.71
100	mm	220	180	8	18	220	180	8	18	235	190	8	22	235	190	8	22
	inch	8.66	7.09		0.71	8.66	7.09		0.71	9.25	7.48		0.87	9.25	7.48		0.87
125	mm	250	210	8	18	250	210	8	18	270	220	8	26	270	220	8	26
	inch	9.84	8.27		0.71	9.84	8.27		0.71	10.63	8.66		1.02	10.63	8.66		1.02
150	mm	285	240	8	22	285	240	8	22	300	250	8	26	300	250	8	26
	inch	11.22	9.45		0.87	11.22	9.45		0.87	11.81	9.84		1.02	11.81	9.84		1.02
200	mm	340	295	8	22	340	295	12	22	360	310	12	26	375	320	12	30
	inch	13.39	11.61		0.87	13.39	11.61		0.87	14.17	12.20		1.02	14.76	12.60		1.18
250	mm	395	355	12	22	405	355	12	26	425	370	12	30	450	385	12	33
	inch	15.55	13.98		0.87	15.94	13.98		1.02	16.73	14.57		1.18	17.72	15.16		1.30
300	mm	445	400	12	22	460	410	12	26	485	430	16	30	515	450	16	33
	inch	17.52	15.75		0.87	18.11	16.14		1.02	19.09	16.93		1.18	20.28	17.65		1.30

Flange translation EN 1092 ---- DIN

EN 1092-1	DIN
EN 1092-1 PN 6	DIN 2631
EN 1092-1 PN 10	DIN 2632
EN 1092-1 PN 16	DIN 2633
EN 1092-1 PN 25	DIN 2634
EN 1092-1 PN 40	DIN 2635
EN 1092-1 Type B Raised Face	DIN 2526 Form C
EN 1092-1 Type C Tongue	DIN 2512 Form F
EN 1092-1 Type D Groove	DIN 2512 Form N
EN 1092-1 Type E Spigot	DIN 2513 Form V
EN 1092-1 Type F Recess	DIN 2513 Form R

Flange Measurement - 2/2



- Ø D = Diameter
- Ø k = Centre diameter
- n = Numer of holes
- Ø d = Hole diameter

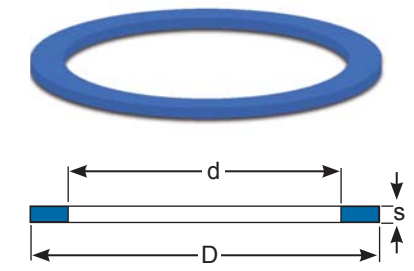
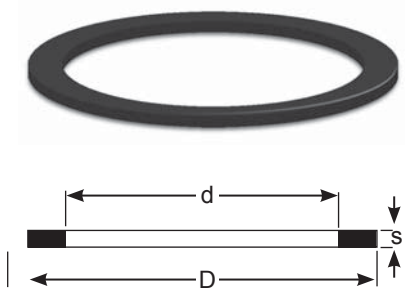
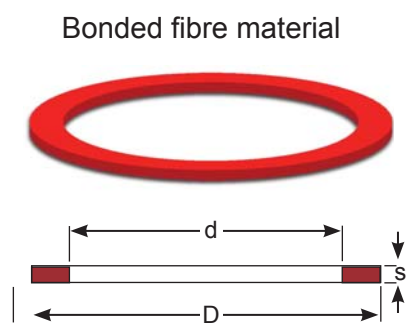
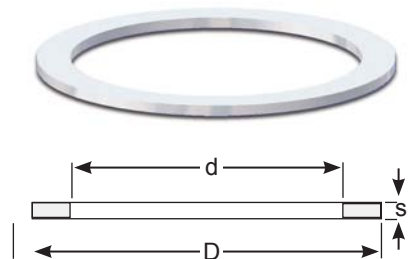
ANSI (ASA) B 16,5									
INCH	150 psi				300 psi				
	ØD	Øk	n	Ød	ØD	Øk	n	Ød	
3/4"	mm	98,4	69,8	4	15,9	117,5	82,5	4	19
	inch	3 7/8	2 3/4		5/8	4 5/8	3 1/4		3/4
1"	mm	107,7	79,4	4	15,9	123,8	88,9	4	19
	inch	4 1/4	3 1/8		5/8	4 7/8	3 1/2		3/4
1 1/4"	mm	117,5	88,9	4	15,9	133,3	98,4	4	19
	inch	4 5/8	3 1/2		5/8	5 1/4	3 7/8		3/4
1 1/2"	mm	127	98,4	4	15,9	155,6	114,3	4	22,2
	inch	5	3 7/8		5/8	6 1/8	4 1/2		7/8
2"	mm	152,4	120,6	4	19	165,1	127	8	19
	inch	6	4 3/4		3/4	6 1/2	5		3/4
2 1/2"	mm	177,8	139,7	4	19	190,5	149,2	8	22,2
	inch	7	5 1/2		3/4	7 1/2	5 7/8		7/8
3"	mm	190,5	152,4	4	19	209,5	168,3	8	22,2
	inch	7 1/2	6		3/4	8 1/4	6 5/8		7/8
4"	mm	228,5	190,5	8	19	254	200	8	22,2
	inch	9	7 1/2		3/4	10	7 7/8		7/8
5"	mm	254	215,9	8	22,2	279,4	234,9	8	22,2
	inch	10	8 1/2		7/8	11	9 1/4		7/8
6"	mm	279,4	241,3	8	22,2	317,5	269,9	12	22,2
	inch	11	9 1/2		7/8	12 1/2	10 5/8		7/8
8"	mm	342,9	298,4	8	22,2	381	330,2	12	25,4
	inch	13 1/2	11 3/4		7/8	15	13		1
10"	mm	406,4	361,9	12	25,4	444,5	387,3	16	28,6
	inch	16	14 1/4		1	17 1/2	15 1/4		1 1/8
12"	mm	482,6	431,8	12	25,4	520,7	450,8	16	31,7
	inch	19	17		1	20 1/2	17 3/4		1 1/4

TW DIN 28459						
	DN	ØD	Øk	n	Ød	
TW1	50	mm	154	130	8	11
		inch	6.06	5.12		0.43
TW1	80	mm	154	130	8	11
		inch	6.06	5.12		0.43
TW3	100	mm	174	150	8	14
		inch	6.85	5.91		0.55
TW5	125	mm	204	176	8	14
		inch	8.03	6.93		0.55
TW7	150	mm	240	210	12	14
		inch	9.45	8.27		0.55

T.T.M.A					
INCH	ØD	Øk	n	Ød	
2"	mm	114,3	95,3	6	11,1
	inch	4.50	3.75		0.44
3"	mm	142,9	123,8	8	11,1
	inch	5.63	4.87		0.44
4"	mm	168,3	149,2	8	11,1
	inch	6.63	5.87		0.44
5"	mm	196,9	177,8	12	11,1
	inch	7.75	7.00		0.44
6"	mm	228,6	206,4	12	11,1
	inch	9.00	8.13		0.44
8"	mm	276,2	257,2	16	11,1
	inch	10.87	10.13		0.44

Flat Seals for thread

weight ≈kg	Thread BSP	Materials Application	Dimensions ≈ mm			Product No
			D	d	s	
0,001	BSP 1/2"	PTFE (Teflon®) white , massive continuously hard, universally resistant Teflon® is a registered trademark of DuPont	20	13	2	On request
0,001	BSP 3/4"		26	19	2	1498-06
0,002	BSP 1"		33	24	2	1220-06
0,003	BSP 1 1/4"		42	34	2	1536-06
0,003	BSP 1 1/2"		48	39	2	1196-06
0,004	BSP 2"		60	49	2	1052-06
0,007	BSP 2 1/2"		76	63	2,5	1181-06
0,006	BSP 3"		88	77	3	1110-06
0,009	BSP 4"		114	100	3	1295-06
0,016	BSP 6"		164	150	3	1963-06
0,001	BSP 1/2"	Thermopac asbestos free, light hard. Especially for hot oils and hot bitumen up to 250° C and for hot water and saturated steam up to 25 bar.	20	13	2	On request
0,001	BSP 3/4"		26	19	2	1498-25
0,002	BSP 1"		33	24	2	1220-25
0,002	BSP 1 1/4"		42	34	2	1536-25
0,003	BSP 1 1/2"		48	39	2	1196-25
0,004	BSP 2"		60	49	2	1052-25
0,005	BSP 2 1/2"		76	63	3	1181-25
0,009	BSP 3"		88	77	3	1110-25
0,013	BSP 4"		114	100	3	1295-25
0,016	BSP 6"		164	150	3	1963-25
0,001	BSP 1/2"	FPM/FKM (Viton®) soft for aromatic hydrocarbons and hot oils. Viton® is a registered trademark of DuPont	20	13	2	On request
0,001	BSP 3/4"		26	19	2	1498-01
0,002	BSP 1"		33	24	2	1220-01
0,002	BSP 1 1/4"		42	34	2	1536-01
0,003	BSP 1 1/2"		48	39	2	1196-01
0,004	BSP 2"		60	49	2	1052-01
0,006	BSP 2 1/2"		76	63	3	1181-01
0,008	BSP 3"		88	77	3	1110-01
0,014	BSP 4"		114	100	3	1295-01
0,016	BSP 6"		164	150	3	1963-01
0,001	BSP 3/4"	PUR (Vulkollan®) Flat seals type of polyurethane, highly resistant to abrasion, non-toxic. Shore hardness=90°. For all petroleum based products and many solvents. Colour:Blue Vulkollan® is a registe- red trademark of Bayer	26	19	2	1498-09
0,001	BSP 1"		33	24	2	1220-09
0,001	BSP 1 1/4"		42	34	2	1536-09
0,002	BSP 1 1/2"		48	39	2	1196-09
0,003	BSP 1 3/4"		54	44	2,5	On request
0,003	BSP 2"		60	49	2	1052-09
0,005	BSP 2 1/2"		76	63	2,5	1181-09
0,006	BSP 3"		88	77	3	1110-09
0,010	BSP 3 1/2"		100	80	3	On request
0,009	BSP 4"		114	100	3	1295-09
0,012	BSP 5" (No std)	140	124	3	On request	
0,016	BSP 6"	164	150	3	1963-09	



O-ring materials

Designation	Trade name	ISO 1629	ASTM 1418	Temp Range °C		Field of Application
Nitrile Butadiene Rubber	Buna N® Europrene N® Hycar® Nipol N® Perbunan N®	NBR	NBR	-45	110	Standard material for hydraulics and pneumatics. Mineral oil-based hydraulic fluids, animal and vegetable oils and fats. Flame retardant liquids. Aliphatic hydrocarbons (propane, butane, petrol). Silicone oils and greases. Water up to 80°C. Bio oils made from synthetic esters and vegetable oils
Ethylene-Propylene-Diene Rubber	Dutral Keltan® Vistalon® Buna AP®	EPDM	EPDM	-55	120	Hot water, vapour, brake fluids, detergents. Alcohols, ketons, engine coolants, flame retardant phosphate-based liquids, organic and inorganic acids and bases. Not resistant to mineral oils
Fluoroelastomer	Fluorel® Technoflon® Viton®	FPM	FKM	-20	200	Mineral oil and greases. Aliphatic, aromatic and chlorinated hydrocarbons, petrol, 99 octan petrol, diesel fuels, flame retardant phosphatebased liquids. Silicone oils and greases acids, lyes
Fluorosilicone Elastomer	-	MFQ	FVMQ	-60	200	Mineral oils, fuels. lubricant on Di-Ester basis, hot air.
Silicone	Silastic® Silopren®	MVQ	VMQ	-60	200	Mineral oils, fuels. lubricant on Di-Ester basis, hot air.
Hydrogenated Nitrile-Butadiene Rubber	Therban® Tornac® Zetpol®	HNBR**	HNBR**	-35	120	Mineral oil-based hydraulic fluids, animal and vegetable fats, aliphatic hydrocarbons, diesel fuels, ozone, sour gas, dilute acids and bases Mineral oil-based hydraulic fluids, animal and vegetable fats, aliphatic hydrocarbons, diesel fuels, ozone, sour gas, dilute acids and bases
Butyl Rubber	Exxon Butyl® Polysar Butyl®	IIR	IIR	-55	100	Butyl is a copolymer of isobutylene and isoprene. It has largely been replaced by ethylene propylene for O-ring usage. Butyl is resistant to the same fluid types as ethylenepropylene and except for resistance to gas permeation, it is somewhat inferior to ethylene-propylene for O-ring service. Excellent weather resistance, and gas permeation resistance. Poor petroleum oil and fuel resistance.
Perfluorinated Elastomer	CHEMRAZ® Kalrez® PERLAST®	FFPM	FFPM	-40	260	Best chemical resistance of all elastomers, including organic acids, f.i. acetic acid, benzoic acid, formic acid
Chloroprene Rubber	Baypren® Neoprene®	CR	CR	-40	120	Resistant to refrigerants, ammonia, carbon dioxide, freon(R12,R13,R21,R22,R113-R115), silicone oils, water, oxygen(low-pres.), bleaches, caustic soda, alcohols, chlorine, ozone, castor oil and veg. oils. Low resistance to mineral oils!
Polyester / Polyether Urethane Rubber	Adiprene® Urepan® Vulkollan® Desmopan®	AU EU PUR	AU EU	-40	100	Mineral oils and greases, oxygen, ozone. HFA and HFB fluids, air. Not resistant in esters, aliphatic, aromatic and chlorinated hydrocarbons, concentrated acids and lyes, water above +50°C.
Polytetrafluoroethylene	Teflon®	PTFE	PTFE	-200	260	PTFE is used wherever the chemical and thermal resistance of the normal elastomer is no longer sufficient. These are primarily applications in the chemical industry, foodstuffs industry, pharmaceuticals and medical technology. PTFE are used only as static seals, e.g. on flange connections, on covers, .etc.
Fluorinated Ethylene Propylene	Teflon FEP®	FEP/MVQ	FEP/VMQ	-60	200	FEP is used wherever the chemical and thermal resistance of the normal elastomer is no longer sufficient. These are primarily applications in the chemical industry, foodstuffs industry, pharmaceuticals and medical technology.
		FEP/FPM	FEP/FKM	-20	200	
Perfluoralkoxy	Teflon PFA®	PFA/MVQ	PFA/VMQ	-60	250	PFA is used wherever the chemical and thermal resistance of the normal elastomer is no longer sufficient. These are primarily applications in the chemical industry, foodstuffs industry, pharmaceuticals and medical technology.
		PFA/FPM	PFA/FKM	-20	250	
Tetrafluoroethylene-Propylene Copolymer Elastomer	Aflas®	---	TFE / P**	-25	200	Mineral oils and greases, brake fluids, fuels, alcohols, heat transfer media, oils. amines, acids, bases

Note! The specifications in the chart above are based on the information given by our suppliers together with published guides. This is not always a guarantee for a proper function.

About NPT and BSP threads

NPT

Sealing NPT threads can be an exasperating experience if certain techniques are not followed. The following tips will help alleviate many common problems in thread sealing:

1. Always use some type of sealant (tape or paste) and apply sealant to male thread only. If using a hydraulic sealant, allow sufficient curing time before system is pressurized.

2. When using tape sealant, wrap the threads in a clockwise motion starting at the first thread and, as layers are applied, work towards the imperfect (vanishing) thread. If the system that the connection being made to cannot tolerate foreign matter (i.e. air systems), leave the first thread exposed and apply the tape sealant as outlined above.

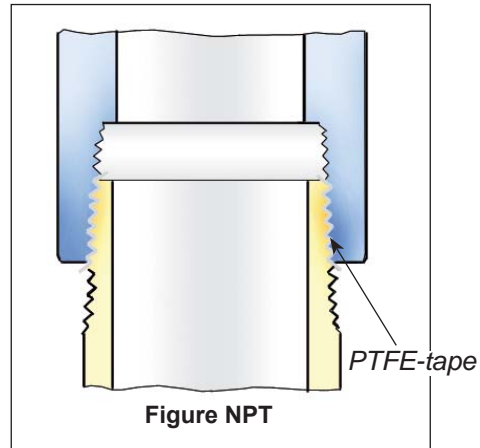
3. When using paste sealant, apply to threads with a brush, using the brush to work the sealant into the threads. Apply enough sealant to fill in all the threads all the way around.

4. When connecting one stainless steel part to another stainless steel part that will require future disassembly, use a thread sealant that is designed for stainless steel. This stainless steel thread sealant is also useful when connecting aluminium to aluminium that needs to be disconnected in the future. These two materials gall easily, and if the correct sealant is not used, it can be next to impossible to disassemble.

5. When connecting parts made of dissimilar metals (i.e. steel and aluminium), standard tape or paste sealant performs satisfactory.

6. For sizes 2" and below, tape or paste performs satisfactory. When using thread tape, four wraps (covering all necessary threads) is usually sufficient.

7. For sizes 2½" and above, thread paste is recommended. If thread tape is used, eight wraps (covering all necessary threads) is usually sufficient. Apply more wraps if necessary.



8. For stubborn to seal threads, apply a normal coating of thread paste followed by a normal layer of thread tape.

9. For extremely stubborn to seal threads, apply a normal coating of thread paste followed by a single layer of gauze bandage followed by a normal layer of thread tape.

Caution!

When this procedure is done, the connection becomes permanent. Extreme measures will be necessary to disconnect these components. All other measures to seal the threads should be explored prior to use of this technique.

10. Over-tightening threads can be just as detrimental as insufficient tightening. For sizes 2" and below, hand tighten the components and, with a wrench, tighten 3 full turns. For sizes 2½" and above, hand tighten the components and, with a wrench, tighten 2 full turns.

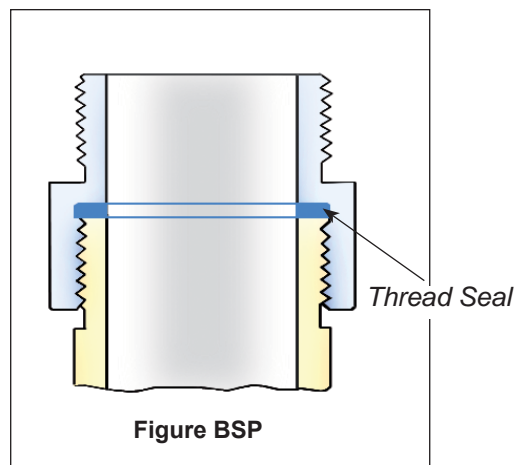
BSP

The threads are parallel with flat sealing surface.

This allows to use the full thread length for screwed-on parts. The largest possible transfer of force is guaranteed for short length. The thread seal behind the relief groove of the thread cannot drop out.

Simple screwing down, makes a safe connection. Subsequent tightening during operation is possible at any time. Change of seal and new assembly do not require any expert knowledge.

The European standardisations for hose assemblies require parallel threads with flat seals, because of the advantages.



Operating advice of Mann-Tek DACouplings, DDCouplings and DGCouplings

This advice is supplementary to your standard terminal operational procedures.

DACouplings, DDCouplings and DGCouplings are designed specifically for the bulk transfer of liquids and vapours. The materials of construction, including the seals should already be confirmed as compatible prior to installation. If in doubt, check before operation. Our help documents "Installation advice for DACouplings, DDCouplings and DGCouplings" plus "Specification advice" are designed to assist you.

All DACouplings, DDCouplings and DGCouplings are marked with a maximum pressure rating that are not to be exceeded. With careful use and regular maintenance they will give safe and trouble free operating for many years.

Service instructions are available for all DACouplings, DDCouplings and DGCouplings upon request. The life expectancy and maintenance frequency of the couplings is dependent upon many variables such as cycles/day, pressures, contaminates etc., but the most significant after correct installation is correct use. The following information is designed to assist in your care of the couplings and associated equipment.

Daily visual inspection

All hose units should be briefly inspected at the start of each day's operation. Look inside the connection socket. Check that the three rollers are not obviously damaged. Check that the connection socket area is free from dirt and foreign objects. Check for signs of seal damage (for example you may see a cut seal or small pieces of rubber coming

from the piston area).

Check that the hose unit rotates freely about the hose swivel. On the first operation, check for leakage and smooth operation. Each tank unit on the truck should also be briefly checked prior to use. Check for dirt, seal damage and any obvious physical damage (such as impacts, etc.).

Making a connection & disconnection

a) Hose unit: When making the connection make sure that all relevant isolation valves connected in the hose unit application are closed. Also check that no pumping pressure is present at the hose unit.

b) Tank unit: Make sure that all isolation valves behind the tank unit in the pipe work are fully open.

c) Lift the hose unit and hose into position to start the connection. Take care to support the hose end assembly so as to present the hose unit to the tank unit in the correct orientation. It is important to ensure the hose unit is not supporting the full weight of the hose assembly during the connection process. Loading should be balanced to a neutral condition in the connection phase. Once connected, the hose unit is secure to the tank unit and able to accommodate all reasonable axial strain. The handles have no operating purpose other than providing handling assistance.

d) When correctly supported, the hose unit should slide easily over the tank unit. The three rollers engage in the three slots in any one of three positions at 120 degree centre. To allow the hose unit to locate to the tank unit, and still sup-

porting the hose assembly, rotate the hose unit whilst gently pushing towards the tank unit.

e) Still supporting the hose assembly, rotate the hose unit clockwise about 100 degrees. At the start of rotation you will feel some resistance. The level of resistance is dependent upon the static line and tank pressure. The higher the pressure, the greater the effort necessary to connect the coupling.

At the completion of the 100 degree turn you will feel a definite stop. Do not attempt to rotate the unit further. Further rotation does not tighten the connection or open the valves more, it only causes unnecessary damage. The hose unit valve are now open and the loading process can start.

f) The sequence of isolation valve and/or pump operation should be taken from your operating procedures, however it is preferable for the vehicle isolation valve to be the last valve opening in the sequence. This reduces the possible surge effect on the coupling seals often associated with automatically actuated valve systems.

g) The disconnection procedure is similar to the connection procedure but in reverse. Before any attempt is made to disconnect the coupling, all isolation valves should be closed and where possible, the pumps be switched off. Where a common pumping system is in use, all flow through the coupling shall be stopped using the isolation valves and not the coupling.

Closing the vehicle isolation valve first is preferred according to reasons in section (f) so long as this is compatible with your standard operating

procedures.

h) Whilst supporting the hose unit assembly, turn the hose unit anti-clockwise approximately 100 degrees. You may feel a slight "pop off" effect at the end of the rotation travel when transferring liquids with an elevated vapour pressure. This is normal. Do not attempt to rotate the hose unit further. This will not further loosen the connection or secure the seal, it only causes unnecessary damage.

i) Still supporting the hose assembly, pull the hose unit away from the tank unit. You may feel a small resistance due to seal vacuum. Correctly supported, the hose unit will come away from the tank unit with ease.

j) The hose assembly should be stowed in a manner so as to avoid physical damage. Do not drop the hose end assembly or stow on the floor. The dust plug provided should always be fitted.

k) Ensure the tank unit cap (if fitted) is replaced and secured.

l) Do not use anything other than the handles provided to operate the coupling. The handles are specifically designed to provide sufficient assistance in operation. Should the couplings become stiff or difficult to operate then something is wrong and they should be inspected prior to further use. Under no circumstances should the couplings be subjected to excessive force.

The use of damaged or faulty equipment may have serious safety consequences.

Service instructions for DDCouplings

Use of dust plug/cap is recommended.

Daily inspection:

1. Inspect the coupling surface for cleanliness and corrosion
2. Inspect the O-ring in the house unit connection for serviceability and correct seating in the groove.
3. Inspect the hose unit swivel for free rotation.
4. Inspect the tank- and hose unit for faultlessness and external signs for leakage.
5. Inspect the hose unit rollers for easy rotation and for external signs of seizure

Three months inspection:

- a. Exterior cleaning of the coupling halves with a neutral cleanser
- b. Careful "daily inspection" of cleaned units
- c. Refill the hose unit ball bearing grooves with grease.

Instructions for correct installation and maintenance of Mann Tek Couplings

All DACouplings, DDCouplings and DGCouplings are designed for trouble free operation in a wide range of applications and operating conditions. Reliable and safe operation is dependent upon the correct installation and handling of the equipment. Regular and appropriate maintenance is essential to ensure both safety and reliability over the life of the equipment.

Specifications

Before you install any DACouplings, DDCouplings or DGCouplings equipment it is essential to check that the material and performance specifications are acceptable for your specific application. The pressure ratings and primary

materials of the construction are clearly indicated on the identification plate of each Mann-Tek product. A drawing showing the materials of construction relating to each individual component is available upon request. The technical department at Mann-Tek is always happy to provide guidance on material suitability. Our data is taken from published chemical resistance information as well as our own application experiences. Specification checks should always be carried out before the product is supplied, but if unsure, ask! Especially if you are using the couplings outside the standard temperature range (-20°C to +80°C), ask for confirmation regarding your application.

Do not assume that a DACoupling, DDCoupling or DGCoupling product supplied for one specific application, automatically will be suitable for other similar applications. Many variables affect the performance of materials. If you wish to use a DACoupling, DDCoupling or DGCoupling product for a different application than the one originally specified, check with Mann Teknik AB to ensure compatibility before installation. Please remember, the application details should include all media transferred through the coupling. Not just the primary transferred media. As with all equipment, a check should be made to ensure that the installation fulfils the requirements of applicable pre-

vailing industry, local, national and international standards. Particular attention should be paid to pressure ratings, safety factors and the position of upstream and downstream affiliated closures.

Installation

The correct installation of all DACoupling, DDCoupling and DGCoupling equipment is essential to ensure safe and satisfactory operation. Checks should be made to ensure that the fitting of DACoupling, DDCoupling and DGCoupling equipment does not interfere with the correct operation of affiliated equipment (i.e.. isolation valve, excess flow valve, etc).

Instructions for correct installation and maintenance of Mann Tek Couplings

Before securing the flange or thread connection to mating equipment (i.e. hose, loading arm, storage tank) ensure that no foreign objects, dirt, grit, etc. are present in the coupling. All flange and thread connections should be made without imparting excessive strain to the equipment and pressure checked at least to 1.5 times the maximum application working pressure prior to use. All gaskets and sealing materials used to make the permanent connection should be of suitable material and able to operate at least up to the maximum parameters of the DACoupling, DDCoupling and DGCoupling equipment.

When installing DACouplings, DDCouplings and DGCouplings equipment to new pipe work, tanks, etc. ensure the system is free from debris that may be transferred through the coupling. Where the hose or loading arm assembly is the primary static dissipation or earth route, the electrical continuity value of the assembly shall be checked to ensure regulatory compliance. Special attention should be paid to the balancing of loading arms. The weight of the coupling plus transfer media should be taken into account at the specification stage. It is usual for loading arm balance settings to account of weight variations due to differences in the full / empty cycle. The loading arm should be set to balance in the condition present at the time of connection. For example, should the loading arm be empty at the time of connection then it should be balanced in the empty condition. If loading/ distributing some kind of liquid gas make sure that Safety Breakaway coupling, SBCoupling, is applied in the application.

Each DACoupling, DDCoupling and DGCoupling is designed to take reasonable axial loads associated with good handling practice but is not designed to accept continuous excessive load values associated with maladjustment or poor installation. Continuous excessive strain will equate to increased component wear and possibly premature failure if not corrected.

When DACoupling, DDCoupling and DGCoupling equipment is used with hoses, attention should be paid to hose length to ensure correct handling characteristics. The hose assembly should be designed such that the minimum hose length is supported by the coupling or the operator. Hoses should be of sufficient length to ensure operation well within the stipulated hose minimum bend radius up to the maximum operation envelope. Also ensure that the flow velocity do not exceed 5,25 m/s due to static electricity.

Once all the above elements are satisfactory, a function check should be carried out to prove the system. The hose unit or coupler should connect and disconnect without physical interference or difficulty. Please remember that the higher the static pressure, the greater the effort to make a connection. The Mann-Tek technical department is happy to advice on this subject at the specification stage.

Maintenance

All DACouplings, DDCouplings and DGCouplings should be visually checked for damage, etc. on a daily or shift basis according to the

handling instructions. Any sign of damage or operating difficulty should be reported and acted upon at the earliest opportunity. Do not continue to use any equipment that is not operating satisfactorily as continued use will cause further deterioration and possible equipment failure.

All DACoupling, DDCoupling and DGCoupling equipment is designed such that all regular service components are contained within the repair or service kit. During normal operation, transferring media that has no or little component degradation, the application of the repair kit will return the equipment to full action. We recommend that the coupling is fully inspected, tested and serviced at least once a year. It must be accepted that some applications cause a greater level of component degradation either by chemical attack or by arduous physical/ environmental conditions. In such circumstances a more frequent regime of inspection and service may be required. We recommend that in such applications a three monthly inspection should be carried out with automatic replacement of the hose unit piston and carrier seals. All other service parts and key components should also be checked. In addition to the three monthly inspection and primary seal replacement the hose unit shall have the full repair kit applied every year irrespective on component condition. After a representative period of time it may be possible to move to a six or twelve monthly service / inspection interval but only against a background of satisfactory operation.

There are full service instructions complete with photographs available for each DACoupling, DDCoupling and DGCoupling size. These instructions show the service method as well as tools required and parts identification. DACouplings, DDCouplings and DGCouplings are designed such that they can be served in a number of ways. Some Mann Tek distributors are trained and accredited by Mann-Tek to carry out service of Mann-Tek couplings. Mann-Tek are always happy to service DACouplings, DDCouplings and DGCouplings at Mann-Tek. We are also happy to offer training either on or off site to customers engineers who wish to carry out servicing themselves.

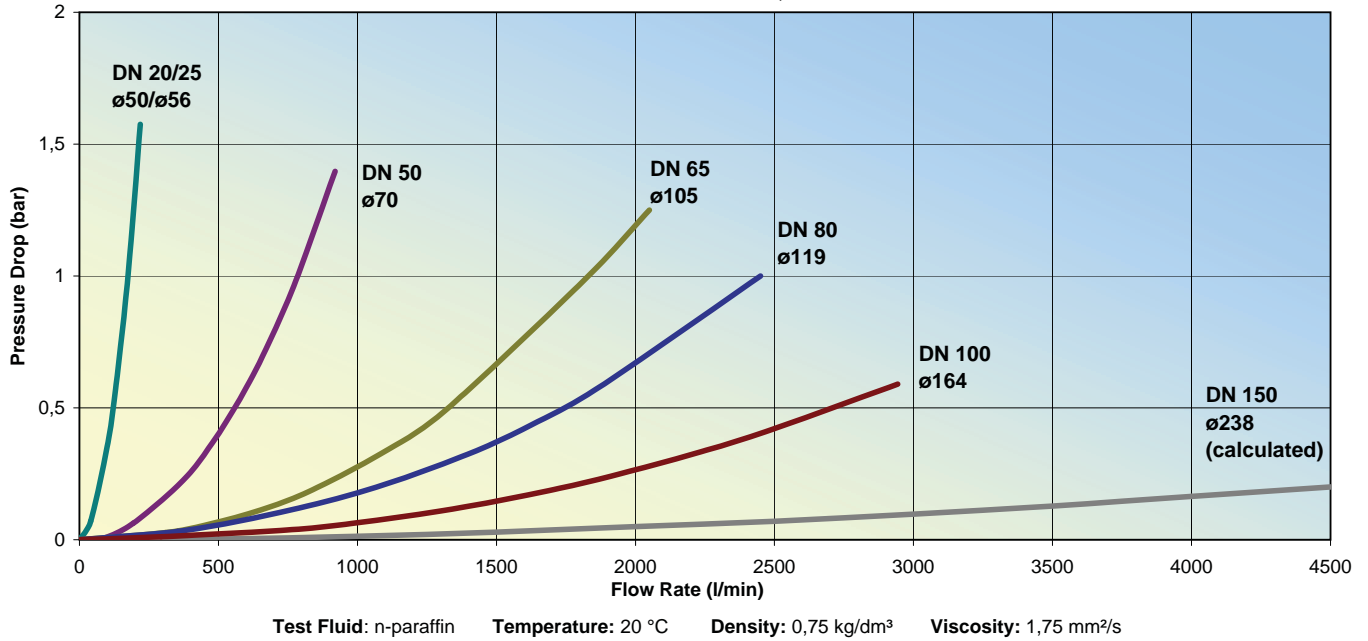
Under no circumstances should Mann-Tek equipment be serviced by untrained personnel.

The distributor of Mann Tek couplings has full responsibility to enclose this information to the customer. If the customer does not understand English the Distributor also have the responsibility to translate this document to a language the customer fully understand.

Flow diagram Pressure Drop Curve:

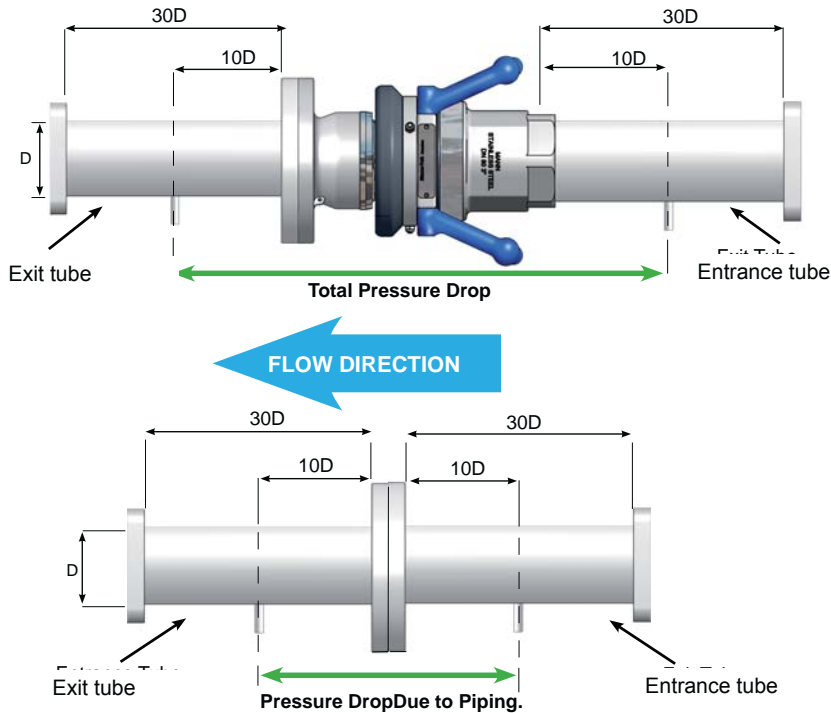
Flow test have been done on all sizes of the DDCoupling Sortiment. The results in the flow diagram below.

Test method: STANAG 3756, Annex E



Pressure Drop Measurement - Illustration

According to NATO STANAG 3756, Annex E



Pressure Drop DDCoupling = ΔP

Pressure Drop Mann Tek DDCoupling = Total Pressure Drop - Pressure Drop Due to Piping



Repair service and certificate of decontamination

REPAIR SERVICE

To comply with Health & Safety Regulations, all returned couplings and valves must be accompanied by a Certificate of Cleanliness and a Data Sheet for the last product carried (even the cleaner).

CERTIFICATE OF DECONTAMINATION

We certify that the returned couplings/valves have been cleaned prior to despatch and are free of any harmful substances.

Quantity: _____
Code No: _____
Serial No: _____

Quantity: _____
Code No: _____
Serial No: _____

Quantity: _____
Code No: _____
Serial No: _____

Quantity: _____
Code No: _____
Serial No: _____

YES NO

Free of all liquid _____
Air blown _____
Coupling/Valve dismantled _____

The last known product the coupling/valve was in contact with:

Company Name/Address:

Media Cast Number:

Signature of Supervisor:

Data sheet of last product attached (Yes/No):

Company Stamp:



Product Information



DDCouplings®
Dry Disconnect Coupling.
1" to 8", PN 16 - PN 25. Aluminium, Brass-Gunmetal, Stainless Steel and PEEK. Other materials on request. According to NATO standard STANAG 3756.



DGCouplings®
Dry Gas Coupling.
1" to 4", PN25. Stainless steel. Other materials on request.



DACouplings,
Dry Aviation Coupling.
2½", PN 10. Main body in Aluminium.
Standards: ISO 45, MS 24484, NATO STANAG 3105, British Aerospace Spec. 2C14.



Sampling, Vent or Drain unit
Stainless Steel SS-EN 10 088-1.4404+AT (AISI 316L). Ball Valve in 1.0619 and 1.4301



Full Flow - ballvalves
2" to 4", PN 10, Aluminium.
Ballvalve and 2-way Ballvalve.
Made for Petroleum Tank Trucks. Variations of flange connections.



Swivel joints
¾" to 10", PN 10 - PN 25.
Aluminium, Brass-Gunmetal, Stainless Steel.
Other materials on request.
Connection: BSP, NPT. Flanged connection (DIN, ANSI/ASA e.t.c)



SBCouplings, bolt series
Industrial and Marine Safety Break-away, breaking bolts,
Aluminium, Brass, Stainless Steel, 1" to 12", female/male threads and with flanges, with breaking bolts.
Safety Break-away, cable release
Stainless Steel, PN10 / PN 25. 2" to 4", female threads. 6" to 12", flanged connection

Business Segment Information



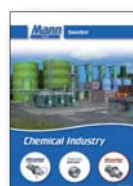
Offshore & Marine



Gas (LPG)



Rail tankers



Chemical industry



Tank trucks



Military



Container



Cryogenic Couplings

Company Information



General Information about Mann Tek, products and Business Segments

Approval Information



Quality, Health, Safety and Environment Policy. Quality Approvals, Product Approvals and Declaration of Conformity

Service



Service instructions and operation manuals

Your distributor

Your distributor:

Contact Mann Tek for your local distributor

Phone: +46 501 39 32 00
Fax: +46 501 39 32 09
Email: sales@mann-tek.com
Web site: www.mann-tek.com

Address: Mann Teknik AB
Strandvägen 16
SE-542 31 Mariestad
Sweden



Mann-Tek is a certified ISO9001-company.