

## 2½" (Ø 105 mm) Technical Information

### Tank Unit (Adapter) and Hose Unit (Coupler)



### According to NATO STANAG 3756

Material	Maximum Working Pressure	Test Pressure	Minimum Burst Pressure
Aluminium	10 bar / 145 psi	15 bar / 218 psi	50 bar / 726 psi
Brass/Gunmetal	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

For road and rail tanker bottom loading/unloading, tanks and containers, 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:** vapor recovery/balance systems for various media.

**Dry powder**

### Material of Body

Aluminium, brass/gunmetal, stainless steel, Hastelloy and PEEK. Other materials on request.

### Seals

Standard seals in FPM (Viton®), EPDM, Chemraz®, Kalrez®, NBR. 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. See page 32 ff.

### Interchangeability

Compatible with couplings of other manufacturers.

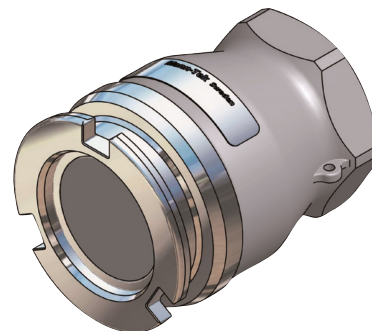
### Hose Unit with Integrated Swivel

All hose units are supplied with an integrated swivel.

## 2½" (Ø 105 mm) Tank Unit (Adapter) – Female Thread

Connection <sup>1)</sup> Inch/DN	Body Material <sup>2)</sup>	Seal		Weight ≈		Mann Tek Code No.
		O-Ring <sup>3)</sup>	Thread Seal	kg	lbs	
F 2½" BSP	AI	Standard: <b>FPM/FKM</b> (Viton®)  Other on request.	<b>PUR</b> (Polyurethane)	1,0	2.2	<b>T312D1101B</b>
F 3" BSP				1,0	2.2	<b>T314D1101B</b>
F 2½" NPT			—	1,0	2.2	<b>T313D1101</b>
F 3" NPT				1,1	2.4	<b>T315D1101</b>
F 2½" BSP	GM		<b>PUR</b> (Polyurethane)	2,7	6.0	<b>T312D2201B</b>
F 3" BSP				2,9	6.4	<b>T314D2201B</b>
F 2½" NPT			—	2,9	6.4	<b>T313D2201</b>
F 3" NPT				3,2	7.1	<b>T315D2201</b>
F 2½" BSP	SS		<b>PTFE</b> (Teflon®)	2,5	5.5	<b>T312B4401A</b>
F 3" BSP				3,1	6.8	<b>T314B4401A</b>
F 2½" NPT			—	2,7	6.0	<b>T313B4401</b>
F 3" NPT				3,7	8.2	<b>T315B4401</b>
F 2½" BSP	Hastelloy		<b>PTFE</b> (Teflon®)	2,6	5.7	<b>T312A7701A</b>
F 3" BSP						<b>T314A7701A</b>
F 2½" NPT			—			<b>T313A7701</b>
F 3" NPT						<b>T315A7701</b>
F 2½" BSP	PEEK		<b>PTFE</b> (Teflon®)			<b>T312A9901A</b>
F 3" BSP						<b>T314A9901A</b>
F 2½" NPT			—			<b>T313A9901</b>
F 3" NPT						<b>T315A9901</b>

According to  
NATO STANAG 3756



<sup>1)</sup> F = Female thread, BSP = EN ISO 228, NPT = ANSI B1.20.1

<sup>2)</sup> Material: AI = Aluminium, GM = Gunmetal, SS = Stainless Steel

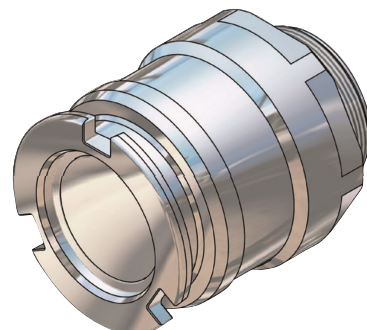
<sup>3)</sup> Standard seal FPM/FKM. Alternative materials, e.g. EPDM, Chemraz®, Kalrez®, NBR or HNBR on request.

Viton® and Teflon® are registered trademarks of DuPont, DuPont Elastomers.

## 2½" (Ø 105 mm) Tank Unit (Adapter) – Male Thread

Connection <sup>1)</sup> Inch/DN	Body Material <sup>2)</sup>	Seal <sup>3)</sup>	Weight ≈		Mann Tek Code No.
		O-Ring	kg	lbs	
2½" BSP	AI	Standard: <b>FPM/FKM</b> (Viton®)  Other on request.	1,0	2.2	<b>T380A1101</b>
3" BSP					<b>T382A1101</b>
2½" NPT					<b>T381A1101</b>
3" NPT					<b>T383A1101</b>
2½" BSP	GM				<b>T380A2201</b>
3" BSP					<b>T382A2201</b>
2½" NPT					<b>T381A2201</b>
3" NPT					<b>T383A2201</b>
2½" BSP	SS				<b>T380A4401</b>
3" BSP					<b>T382A4401</b>
2½" NPT					<b>T381A4401</b>
3" NPT					<b>T383A4401</b>

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<sup>1)</sup> M = Male thread, BSP = EN ISO 228, NPT = ANSI B1.20.1

<sup>2)</sup> Material: AI = Aluminium, GM = Gunmetal, SS = Stainless Steel

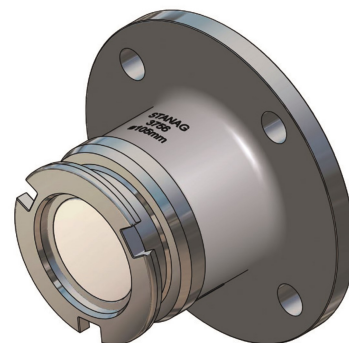
<sup>3)</sup> Standard seal FPM/FKM. Alternative materials, e.g. EPDM, Chemraz®, Kalrez®, NBR or HNBR on request.

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## 2½" (Ø 105 mm) Tank Unit (Adapter) – Flanged Inlet

Flange <sup>1)</sup>	Body Material <sup>2)</sup>	Seal <sup>3)</sup>	Weight ≈		Mann Tek Code No.	
		O-Ring	kg	lbs		
undrilled Ø 210 mm	AI	Standard: FPM/FKM (Viton®)	2,1	4,6	T320D1101	
DN 65 PN 10/16 Type A			1,6	3,5	T333D1101	
DN 80 PN 10/16 Type A			1,8	4,0	T336D1101	
2½" ASA 150			1,7	3,8	T359D1101	
3" ASA 150			1,8	4,0	T361D1101	
DIN 28459 'TW 1' / DN 80			1,3	2,9	T365D1101	
DIN 28459 'TW 3' / DN 100			1,7	3,8	T366D1101	
3" TTMA			1,4	3,1	T367D1101	
4" TTMA			1,5	3,3	T368D1101	
undrilled Ø 210 mm	GM		6,2	13,7	T320D2201	
DN 65 PN 10/16 Type B			4,9	10,8	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" ASA 150			4,4	9,7	T359D2201	
2½" ASA 300					T360D2201	
3" ASA 150			4,4	9,7	T361D2201	
3" ASA 300					T362D2201	
DIN 28459 'TW 1' / DN 80			4,4	9,7	T365D2201	
DIN 28459 'TW 3' / DN 100					T366D2201	
3" TTMA					T367D2201	
4" TTMA			4,2	9,3	T368D2201	
undrilled Ø 210 mm			SS			T320B4401
o. Bohrungen Ø 210 mm **)						T320B4401F
DN 65 PN 25/40 Type E *)				T332B4401		
DN 65 PN 10/16 Type B	4,2	9,3		T333B4401		
DN 65 PN 10/16 Type B **)				T333B4401F		
DN 65 PN 25/40 Type B	4,3	9,5		T334B4401		
DN 65 PN 25/40 Type B **)	4,3	9,5		T334B4401F		
DN 80 PN 10/16 Type E *)				T335B4401		
DN 80 PN 10/16 Type B	4,7	10,4		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" ASA 150	4,0	8,8		T359B4401		
2½" ASA 150 **)				T359B4401F		
2½" ASA 300	4,5	9,9		T360B4401		
2½" ASA 300 **)	4,5	9,9		T360B4401F		
3" ASA 150	4,5	9,9		T361B4401		
3" ASA 150 **)				T361B4401F		
3" ASA 300				T362B4401		
3" ASA 300 **)				T362B4401F		
DIN 28459 'TW 1' / DN 80				T365B4401		
DIN 28459 'TW 3' / DN 100				T366B4401		
3" TTMA				T367B4401		
4" TTMA				T368B4401		

According to  
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\*) Type E (with spigot),  
EN 1092-1, see page 44

\*\*) Flange with standard thickness

1) PN 10/16/25/40 = EN 1092  
(types see page 44),  
ASA = ANSI B16.5 (150 o. 300 psi),  
DIN 28459 = old standard TW, 10 bar.  
TTMA = Standard of the Truck Trailer  
Manufacturers Association

2) Material: Al = Aluminium,  
GM = Gunmetal, SS = Stainless Steel

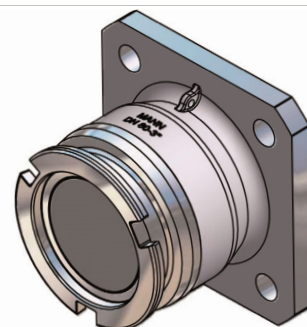
3) Standard seal FPM/FKM. Alternative  
materials, e.g. EPDM, Chemraz®,  
Kalrez®, NBR or HNBR on request.

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DuPont Elastomers.

## 2½" (Ø 105 mm) Tank Unit (Adapter) with Square Flange Connection

Flange <sup>1)</sup>	Body Material <sup>2)</sup>	Seal <sup>3)</sup>	Weight ≈		Mann Tek Code No.
		O-Ring	kg	lbs	
Normec (120 x 120 mm)	Al	Standard: FPM/FKM (Viton®)			T3107D1101
Normec (120 x 120 mm)	GM				T3107D2201

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1) Normec = with drilling for Italian road tanker connection

2) Material: Al = Aluminium, GM = Gunmetal

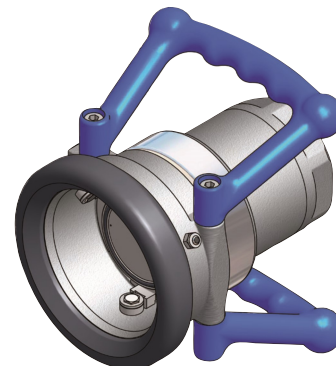
3) Standarddichtung FPM/FKM. Alternative Materialien,  
z.B. EPDM, Chemraz®, Kalrez®, NBR oder HNBR auf Anfrage

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## 2½" (Ø 105 mm) Hose Unit (Coupler) – Female Thread

Connection <sup>1)</sup> Inch/DN	Body Material <sup>2)</sup>	Seal		Weight ≈		Mann Tek Code No.
		O-Ring <sup>3)</sup>	Thread Seal	kg	lbs	
F 2½" BSP	Al	Standard: FPM/FKM (Viton®)	PUR (Polyurethan)	3,3	7,3	S312B1101B
F 3" BSP				3,6	7,9	S314B1101B
F 2½" NPT			—	3,4	7,5	S313B1101
F 3" NPT				3,5	7,7	S315B1101
F 2½" BSP	GM		PUR (Polyurethan)	7,3	16,1	S312B2201B
F 3" BSP				7,4	16,3	S314B2201B
F 2½" NPT			—			S313B2201
F 3" NPT				7,6	16,8	S315B2201
F 2½" BSP	SS		PTFE	6,7	14,8	S312B4401A
F 3" BSP				6,6	14,6	S314B4401A
F 2½" NPT			—	6,6	14,6	S313B4401
F 3" NPT				6,6	14,6	S315B4401
F 2½" BSP	Hastelloy		PTFE	6,8	15,0	S312A7701A
F 3" BSP						S314A7701A
F 2½" NPT			—			S313A7701
F 3" NPT						S315A7701
F 2½" BSP	PEEK		PTFE			S312A9901A
F 3" BSP						S314A9901A
F 2½" NPT			—			S313A9901
F 3" NPT						S315A9901

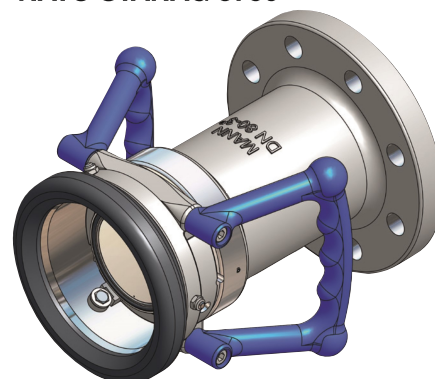
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## 2½" (Ø 105 mm) Coupler – Flanged Inlet

Flange <sup>1B)</sup>	Body Material <sup>2)</sup>	Seal <sup>3)</sup>	Weight ≈		Mann Tek Code No.
		O-Ring	kg	lbs	
undrilled Ø 210 mm	AI	Standard: <b>FPM/FKM</b> (Viton®)  Other on request.			<b>S320B1101</b>
DN 65 PN 10/16 Type A			10,0	22,1	<b>S333B1101</b>
DN 80 PN 10/16 Type A					<b>S336B1101</b>
2" ASA 150					<b>S357B1101</b>
2½" ASA 150					<b>S359B1101</b>
3" ASA 150					<b>S361B1101</b>
DIN 28459 'TW 1' / DN 80					<b>S365B1101</b>
DIN 28459 'TW 3' / DN 100					<b>S366B1101</b>
3" TTMA					<b>S367B1101</b>
4" TTMA					<b>S368B1101</b>
undrilled Ø 210 mm	GM				<b>S320B2201</b>
DN 65 PN 10/16 Type B					<b>S333B2201</b>
DN 65 PN 25/40 Type B					<b>S334B2201</b>
DN 80 PN 10/16 Type B					<b>S336B2201</b>
DN 80 PN 25/40 Type B					<b>S337B2201</b>
2" ASA 150					<b>S357B2201</b>
2½" ASA 150					<b>S359B2201</b>
2½" ASA 300					<b>S360B2201</b>
3" ASA 150					<b>S361B2201</b>
3" ASA 300					<b>S362B2201</b>
DIN 28459 'TW 1' / DN 80				<b>S365B2201</b>	
DIN 28459 'TW 3' / DN 100				<b>S366B2201</b>	
3" TTMA				<b>S367B2201</b>	
4" TTMA				<b>S368B2201</b>	
undrilled Ø 210 mm	SS				<b>S320B4401</b>
undrilled Ø 210 mm <sup>**</sup> )					<b>S320B4401F</b>
DN 65 PN 25/40 Type E <sup>*)</sup>					<b>S332B4401</b>
DN 65 PN 10/16 Type B			10,0	22,1	<b>S333B4401</b>
DN 65 PN 10/16 Type B <sup>**</sup> )					<b>S333B4401F</b>
DN 65 PN 25/40 Type B					<b>S334B4401</b>
DN 65 PN 25/40 Type B <sup>**</sup> )					<b>S334B4401F</b>
DN 80 PN 10/16 Type E <sup>*)</sup>					<b>S335B4401</b>
DN 80 PN 10/16 Type B					<b>S336B4401</b>
DN 80 PN 10/16 Type B <sup>**</sup> )					<b>S336B4401F</b>
DN 80 PN 25/40 Type B					<b>S337B4401</b>
DN 80 PN 25/40 Type B <sup>**</sup> )					<b>S337B4401F</b>
2" ASA 150					<b>S357B4401</b>
2" ASA 150 <sup>**</sup> )					<b>S357B4401F</b>
2½" ASA 150			6,6	14,6	<b>S359B4401</b>
2½" ASA 150 <sup>**</sup> )			6,6	14,6	<b>S359B4401F</b>
2½" ASA 300					<b>S360B4401</b>
2½" ASA 300 <sup>**</sup> )					<b>S360B4401F</b>
3" ASA 150					<b>S361B4401</b>
3" ASA 150 <sup>**</sup> )					<b>S361B4401F</b>
3" ASA 300					<b>S362B4401</b>
3" ASA 300 <sup>**</sup> )					<b>S362B4401F</b>
DIN 28459 'TW 1' / DN 80					<b>S365B4401</b>
DIN 28459 'TW 3' / DN 100					<b>S366B4401</b>
3" TTMA					<b>S367B4401</b>
4" TTMA					<b>S368B4401</b>

According to  
NATO STANAG 3756



<sup>\*)</sup> Type E (with spigot),  
EN 1092-1, see page 44

<sup>\*\*)</sup> Flange with standard thickness

<sup>1A)</sup> F = Female thread, BSP = EN ISO 228,  
NPT = ANSI B1.20.1

<sup>1B)</sup> PN 10/16/25/40 = EN 1092  
(types see page 44),  
ASA = ANSI B16.5 (150 o. 300 psi),  
DIN 28459 = old standard TW, 10 bar.  
TTMA = Truck Trailer Manufacturers Association

<sup>2)</sup> Material: Al = Aluminium, GM = Gunmetal,  
SS = Stainless Steel

<sup>3)</sup> Standard seal FPM/FKM. Alternative  
materials, e. g. EPDM, Chemraz®, Kalrez®,  
NBR or HNBR on request

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