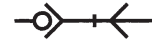


# HYDRAULIC COUPLINGS TEMA®

**Temperature Range:**  
-40°C up to +100°C (Nitrile)  
-25°C up to +200°C (Viton)

**Max Working Pressure:**  
Maximum static working pressure  
with safety factor 4:1



**Description:** Thanks to the double O-Ring seal, this coupling system can be used for pressures of up to 400 bar for the T3800 Series and 350 bar for the T5000 Series. The coupling system is available with double shut-off, straight through or with single shut-off. Also available in stainless steel.

**Advantages:** Straight through minimum pressure drop. Double safety through double O-Ring seal. A safety closing ring prevents unintentional uncoupling. Corrosion resistant.

**Applications:** Chemical industries off-shore, deep-sea technology, elevating mechanism, building machinery, materials handling technology and industrial plants.

**Standard Version:**

**Coupling:** Brass, chromated, nitrile seal.  
Valve holder (up to 100°C) Zinc-alloy.  
Valve holder (over 100°C) Brass.

**Plug:** Steel hardened, zinc chromated, nitrile seal.  
Valve holder (up to 100°C) Zinc-alloy.  
Valve holder (over 100°C) Brass.

**Stainless Version:** AISI 316, viton seal.

## G3/8 TEMA Series T3800



### Couplings



<b>TE-3810</b>	G3/8	400	Nitrile	With valve
<b>TE-3810 H</b>	G3/8	400	Nitrile	No valve
<b>TE-3810 UV</b>	G3/8	400	Nitrile	No valve
<b>TE-3810 HV</b>	G3/8	400	Viton	No valve
<b>TE-3810 V</b>	G3/8	400	Viton	With valve
<b>TE-3810 RV</b>	G3/8	300	Viton	With valve

### Couplings with Pressure Eliminator



<b>TE-3811</b>	G3/8	400	Nitrile	With valve
<b>TE-3811 V</b>	G3/8	400	Viton	With valve



### Plugs



<b>TE-3820</b>	G3/8	400	Nitrile	With valve
<b>TE-3820 UV</b>	G3/8	400	-	No valve
<b>TE-3820 V</b>	G3/8	400	Viton	With valve
<b>TE-3820 RV</b>	G3/8	300	Viton	With valve
<b>TE-3820 RUV</b>	G3/8	300	-	No valve

### Plugs with Pressure Eliminator



<b>TE-3821</b>	G3/8	400	Nitrile	With valve
<b>TE-3821 V</b>	G3/8	400	Viton	With valve
<b>TE-3821 RV</b>	G3/8	300	Viton	With valve

## G1/2 TEMA Series T5000



### Couplings



<b>TE-5010</b>	G1/2	350	Nitrile	With valve
<b>TE-5010 UV</b>	G1/2	350	Nitrile	No valve
<b>TE-5010 V</b>	G1/2	350	Viton	With valve
<b>TE-5010 VUV</b>	G1/2	350	Viton	No valve
<b>TE-5010 RV</b>	G1/2	300	Viton	With valve
<b>TE-5010 RVUV</b>	G1/2	300	Viton	No valve

### Couplings with Pressure Eliminator



<b>TE-5011</b>	G1/2	350	Nitrile	With valve
<b>TE-5011 V</b>	G1/2	350	Viton	With valve
<b>TE-5011 RV</b>	G1/2	300	Viton	With valve



### Plugs



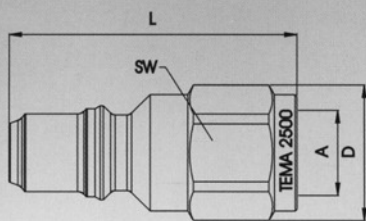
<b>TE-5020</b>	G1/2	350	Nitrile	With valve
<b>TE-5020 UV</b>	G1/2	350	-	No valve
<b>TE-5020 V</b>	G1/2	350	Viton	With valve
<b>TE-5020 RV</b>	G1/2	300	Viton	With valve
<b>TE-5020 RUV</b>	G1/2	300	-	No valve

### Plugs with Pressure Eliminator



<b>TE-5021</b>	G1/2	350	Nitrile	With valve
<b>TE-5021 V</b>	G1/2	350	Viton	With valve
<b>TE-5021 RV</b>	G1/2	300	Viton	With valve

## Plugs



Female Thread

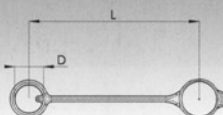
Connection A	SW* mm	L mm	D mm	Valve	Working pressure connected in bar	Version	Seal	Part Number
G 1/4 IG	19	45	21	with	450	Standard	Nitrile	T2520
G 1/4 IG	19	45	21	with	450	Standard	Viton®	T2520 V
G 1/4 IG	19	45	21	with	250	Stainless Steel	Viton®	T2520 RV 3)
G 1/4 IG	19	45	21	with	250	Stainless Steel	Viton®	T2520 RFV 1) 3)
G 1/4 IG	19	45	21	with	170	Stainless Steel	Viton®	T2520 RFV2 1) 2) 3)
G 1/4 IG	19	45	21	without	450	Standard	-	T2520 UV
G 1/4 IG	19	45	21	without	250	Stainless Steel	-	T2520 RUV 3)
G 1/4 IG	19	45	21	without	450	Stainless Steel	-	T2520 RHUV 4)
G 1/4 IG	19	45	21	without	170	Stainless Steel	-	T2520 RFUV 2) 3)

## Seal-Kit

Description	Material	Part Number
Coupling	Nitrile	T2500-PSN
Coupling	Viton®	T2500-PSV

Further sealing materials on request.

## Dust Protection



Description	L mm	D mm	Material	Colour	Part Number
Coupling	145	44	PVC	Blue	T2516
Plug	145	42	PVC	Blue	T2526

Further colours on request.

1) Valve made of brass

2) Suitable for high pressure water, AISI 303

3) For pulsating pressure, the pressure must not exceed 50% of the given value.

4) Material, AISI 420 hardened

\* SW = dimension over flats

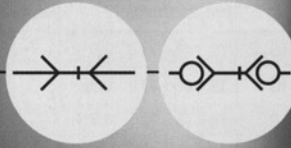
# The most important sealing materials in TEMA couplings

Sealing-material	TEMA abbreviation	Temperature range	Characteristic properties (general)
Nitrile	N	-40°C - +100°C	Can be used with compressed air. Resistant to heat and many fluids, for example mineral oils, fuel (not biodiesel), water, glycol and grease.
Rubberfluoride Viton	V	-25°C - +200°C	Very high resistance to heat and fluids incl. petrol, oils, biodiesel, grease and aromatic oils. Can be used for steam up to max. +150°C.
EPDM	EP	-50°C - +150°C	Heat-resistant and specially suitable for hot water and steam. Good resistance to brake fluids, glycol and incombustible oils. Not suitable for mineral-based oils and petrol.

Further sealing materials for other media and/or higher temperatures on request.

Nominal Diameter **10** = 80 mm<sup>2</sup>

**T3800 series**



**Technical Description**

The coupling system is available with straight-through and double shut-off. Also available in stainless steel.

Connected length in total: 74 mm

**Advantages**

Straight through for minimum pressure drop. Double safety through a double O-ring seal. A safety closing ring prevents unintentional uncoupling.

Corrosion-resistant. Compact dimensions. Pressure eliminator for coupling and plug available. With pressure eliminator, can be coupled up to operating pressure.

**Applications**

Chemical industries, Off-Shore, deep-sea technology, elevating mechanism, building machinery, materials-handling technology, industrial plant.

**Working Pressure**

See chart.

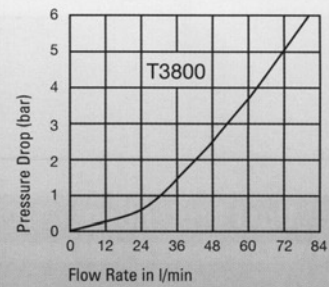
**Working Temperature**

-40°C up to +100°C (Nitrile)  
-25°C up to +200°C (Viton®)

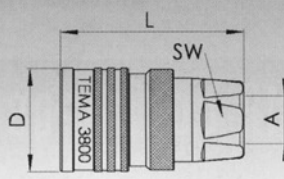
- The sealing material also depends on the flow medium.
- Couplings for higher temperatures on request.

Material	Standard Version	Stainless Steel	High Pressure Water Vers.
<b>Coupling</b>			
Coupling Body	Brass, Chromated	AISI 316	Brass, Chromated
Sleeve	Brass, Chromated	AISI 316	Brass, Chromated
Locking Ring	Brass, Zinc Chromate Conversion Coated	AISI 316	-
Valve	Brass	AISI 316	-
Springs	AISI 301	AISI 301	AISI 301
Locking Balls	AISI 420 C	AISI 420 C	AISI 420 C
Seals	Nitrile/Viton®	Viton®	Nitrile
Valve Holder (up to 100°C)	Zinc Casting	AISI 316	
Valve Holder (over 100°C)	Brass	AISI 316	
<b>Plug</b>			
Plug Connection Face	Steel Hardened	AISI 316	
Valve	Aquarez-treated Brass	AISI 316	
Springs	AISI 301	AISI 301	
Seals	Nitrile/Viton®	Viton®	
Valve Holder (up to 100°C)	Zinc Casting	AISI 316	
Valve Holder (over 100°C)	Brass	AISI 316	
<b>Pressures</b>			
Bursting Pressure coupled	<b>Coupling</b> > 1300 bar	<b>Plug</b> > 1300 bar	<b>Plug</b> > 1300 bar
Working Pressure uncoupled	280 bar	210 bar	250 bar
			280 bar

**Flow Capacity**  
Viscosity for 32cSt at 40°C  
as per ISO 7241/2-2000



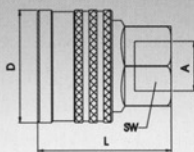
**Couplings**



Female Thread

Connection A	SW* mm	L mm	D mm	Valve	Working pressure connected in bar	Version	Seal	Part Number
G 3/8 IG	24	60	34	with	350	Standard	Nitrile	T3810
G 3/8 IG	24	60	34	with	350	Standard	Viton®	T3810 V
G 3/8 IG	24	60	34	with	300	Stainless Steel	Viton®	T3810 RV 3)
G 3/8 IG	24	60	34	without	350	Standard	Nitrile	T3810 UV
G 3/8 IG	24	60	34	without	350	Standard	Viton®	T3810 VUV
G 3/8 IG	24	60	34	without	300	Stainless Steel	Viton®	T3810 RVUV 3)

**Couplings for high pressure water**



Female Thread

Connection A	SW* mm	L mm	D mm	Valve	Working pressure connected in bar	Version	Seal	Part Number
G 3/8 IG	24	40	34	without	350	High Pressure Water	Nitrile	T3810 H
G 3/8 IG	29	40	34	without	350	High Pressure Water	Nitrile	T3810 H2
G 3/8 IG	24	40	34	without	350	High Pressure Water	Viton®	T3810 HV
G 3/8 IG	29	40	34	without	350	High Pressure Water	Viton®	T3810 H2V
G 3/8 IG	24	40	34	without	350	High Pressure Water	EPDM	T3810 HEP
G 3/8 IG	29	40	34	without	350	High Pressure Water	EPDM	T3810 H2EP

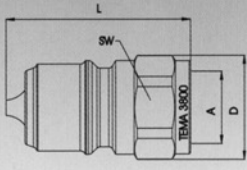
Further connections on request.

\* SW = dimension over flats

## Couplings with Pressure Eliminator

	Connection A	SW* mm	L mm	D mm	Valve	Working pressure connected in bar	Version	Seal	Part Number
for technical drawing see couplings	G 3/8 IG	24	60	34	with	350	Standard	Nitrile	T3811
	G 3/8 IG	24	60	34	with	350	Standard	Viton®	T3811 V
	G 3/8 IG	24	60	34	with	300	Stainless Steel	Viton®	T3811 RV <sup>3)</sup>
	G 3/8 IG	24	60	34	with	300	Stainless Steel	Viton®	T3811 RFV <sup>1) 3)</sup>

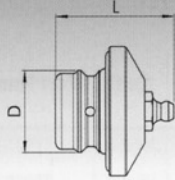
## Plugs

	Connection A	SW* mm	L mm	D mm	Valve	Working pressure connected in bar	Version	Seal	Part Number
 <p>FEMALE THREAD</p>	G 3/8 IG	22	42	24	with	350	Standard	Nitrile	T3820
	G 3/8 IG	22	42	24	with	350	Standard	Viton®	T3820 V
	G 3/8 IG	22	42	24	with	50	Brass	Nitrile	T3820 M
	G 3/8 IG	22	42	24	with	50	Brass	Viton®	T3820 MV
	G 3/8 IG	22	42	24	with	300	Stainless Steel	Viton®	T3820 RV <sup>3)</sup>
	G 3/8 IG	22	42	24	with	300	Stainless Steel	Nitrile	T3820 RF <sup>1) 3)</sup>
	G 3/8 IG	22	42	24	with	300	Stainless Steel	Viton®	T3820 RFV <sup>1) 3)</sup>
	G 3/8 IG	22	38	24	without	350	Standard	–	T3820 UV
	G 3/8 IG	22	38	24	without	300	Stainless Steel	–	T3820 RUV <sup>3)</sup>
	G 3/8 IG	22	38	24	without	170	Stainless Steel	–	T3820 RFUV <sup>2) 3)</sup>

## Plugs with Pressure Eliminator

	Connection A	SW* mm	L mm	D mm	Valve	Working pressure connected in bar	Version	Seal	Part Number
for technical drawing see plugs	G 3/8 IG	22	43	24	with	350	Standard	Nitrile	T3821
	G 3/8 IG	22	43	24	with	350	Standard	Viton®	T3821 V
	G 3/8 IG	22	43	24	with	300	Stainless Steel	Viton®	T3821 RV <sup>3)</sup>
	G 3/8 IG	22	43	24	with	300	Stainless Steel	Viton®	T3821 RFV <sup>3)</sup>

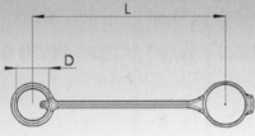
## Lubrication Nipple

	Description	L mm	D mm	Part Number
	Coupling	36	36	TGR3

## Seal-Kit

	Description	Material	Part Number
	Coupling	Nitrile	T3800-PSN
	Coupling	Viton®	T3800-PSV
Further sealing materials on request.			

## Dust Protection

	Description	L mm	D mm	Material	Colour	Part Number
	Coupling	145	54	PVC	Blue	T3816
	Plug	145	46	PVC	Blue	T3826
	Coupling	145	54	PVC	Yellow	T3816 Y
	Plug	145	46	PVC	Yellow	T3826 Y
Further colours on request.						

1) Valve made of brass

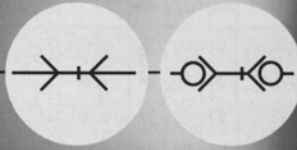
2) Suitable for high pressure water, AISI 303

3) For pulsating pressure, the pressure must not exceed 50% of the given value.

\* SW = dimension over flats

Nominal Diameter **13** = 133 mm<sup>2</sup>

**T5000 series**



**Technical Description**

The coupling system is available as straight-through and double shut-off version. Also available in stainless steel.

Connected length in total: 82 mm

**Advantages**

Straight-through – minimum pressure drop. Double safety through a double O-ring seal. A safety closing ring prevents

unintentional uncoupling. Corrosion-resistant. Compact dimensions. Pressure eliminator for coupling and plug available. With pressure eliminator, can be coupled up to operating pressure.

**Applications**

Chemical industries, Off-Shore, deep-sea technology, elevating mechanism, building machinery, materials-handling technology, industrial plant.

**Working Pressure**

See chart.

**Working Temperature**

-40°C up to +100°C (Nitrile)  
-25°C up to +200°C (Viton®)

- The sealing material also depends on the flow medium.
- Couplings for higher temperatures on request.

**Material**

**Coupling**

Coupling Body  
Sleeve  
Locking Ring  
Valve  
Springs  
Locking Balls  
Seals  
Valve Holder (up to 100°C)  
Valve Holder (over 100°C)

**Plug**

Plug Connection Face

Valve  
Springs  
Seals  
Valve Holder (up to 100°C)  
Valve Holder (over 100°C)

**Pressures**

Bursting Pressure coupled  
Working Pressure uncoupled

**Standard Version**

Brass, Chromated  
Brass, Chromated  
Brass, Zinc Chromate Conversion Coated  
Brass  
AISI 301  
AISI 420 C  
Nitrile/Viton®  
Zinc Casting  
Brass

Steel Hardened, Zinc Chromated, Aquarez-treated  
Brass  
AISI 301  
Nitrile/Viton®  
Zinc Casting  
Brass

**Stainless Steel**

AISI 316  
AISI 316  
AISI 316  
AISI 316  
AISI 301  
AISI 420 C  
Viton®  
AISI 316  
AISI 316

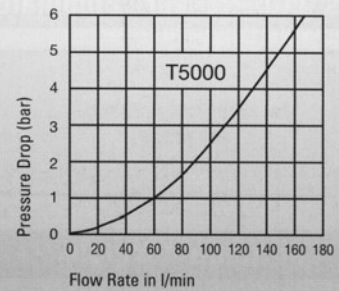
AISI 316  
AISI 316  
AISI 301  
Viton®  
AISI 316  
AISI 316

>1200 bar  
250 bar

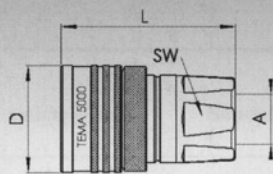
>1200 bar  
250 bar

**Flow Capacity**

Viscosity for 32cSt at 40°C  
as per ISO 7241/2-2000



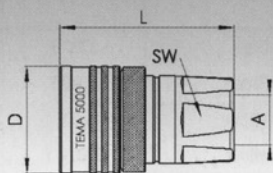
**Couplings**



Female Thread

Connection A	SW* mm	L mm	D mm	Valve	Working pressure connected in bar	Version	Seal	Part Number
G 1/2 IG	30	65	40	with	300	Standard	Nitrile	T5010
G 1/2 IG	30	65	40	with	300	Standard	Viton®	T5010 V
G 1/2 IG	30	65	40	with	300	Stainless Steel	Viton®	T5010 RV 3)
G 1/2 IG	30	65	40	without	300	Standard	Nitrile	T5010 UV
G 1/2 IG	30	65	40	without	300	Standard	Viton®	T5010 VUV
G 1/2 IG	30	65	40	without	300	Stainless Steel	Viton®	T5010 RVUV 3)

**Couplings with Pressure Eliminator**

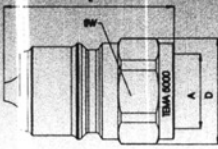


Female Thread

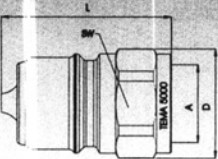
Connection A	SW* mm	L mm	D mm	Valve	Working pressure connected in bar	Version	Seal	Part Number
G 1/2 IG	30	65	40	with	300	Standard	Nitrile	T5011
G 1/2 IG	30	65	40	with	300	Standard	Viton®	T5011 V
G 1/2 IG	30	65	40	with	300	Stainless Steel	Viton®	T5011 RV 3)
G 1/2 IG	30	65	40	with	300	Stainless Steel	Viton®	T5011 RFV 1) 3)

\* SW = dimension over flats

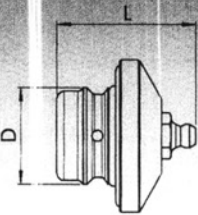
## Plugs

	Connection	SW*	L	D	Valve	Working pressure	Version	Seal	Part Number
	A	mm	mm	mm		connected in bar			
<p>Female Thread</p>	G 1/2 IG	27	46	30	with	320	Standard	Nitrile	T5020
	G 1/2 IG	27	46	30	with	320	Standard	Viton®	T5020 V
	G 1/2 IG	27	46	30	with	300	Stainless Steel	Viton®	T5020 RV 3)
	G 1/2 IG	27	42	30	without	320	Standard	–	T5020 UV
	G 1/2 IG	27	42	30	without	300	Stainless Steel	–	T5020 RUV 3)
	G 1/2 IG	27	42	30	without	300	Stainless Steel	–	T5020 RHUV 4)

## Plugs with Pressure Eliminator

	Connection	SW*	L	D	Valve	Working pressure	Version	Seal	Part Number
	A	mm	mm	mm		connected in bar			
<p>Female Thread</p>	G 1/2 IG	27	47	30	with	320	Standard	Nitrile	T5021
	G 1/2 IG	27	47	30	with	320	Standard	Viton®	T5021 V
	G 1/2 IG	27	47	30	with	300	Stainless Steel	Viton®	T5021 RV 3)
	G 1/2 IG	27	47	30	with	300	Stainless Steel	Viton®	T5021 RFV 1) 3)

## Lubrication Nipple

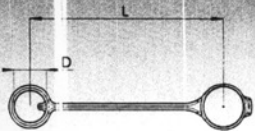
	Description	L	D	Part Number
		mm	mm	
<p>Coupling</p>	Coupling	41	25	TGR5

## Seal-Kit

Description	Material	Part Number
Coupling	Nitrile	T5000-PSN
Coupling	Viton®	T5000-PSV

Further sealing materials on request.

## Dust Protection

	Description	L	D	Material	Colour	Part Number
		mm	mm			
<p>Coupling</p> <p>Plug</p>	Coupling	170	60	PVC	Blue	T5016
	Plug	170	52	PVC	Blue	T5026

Further colours on request.

1) Valve made of brass

2) Suitable for high pressure water, AISI 303

3) For pulsating pressure, the pressure must not exceed 50% of the given value.

4) Material, AISI 420 hardened  
\* SW = dimension over flats