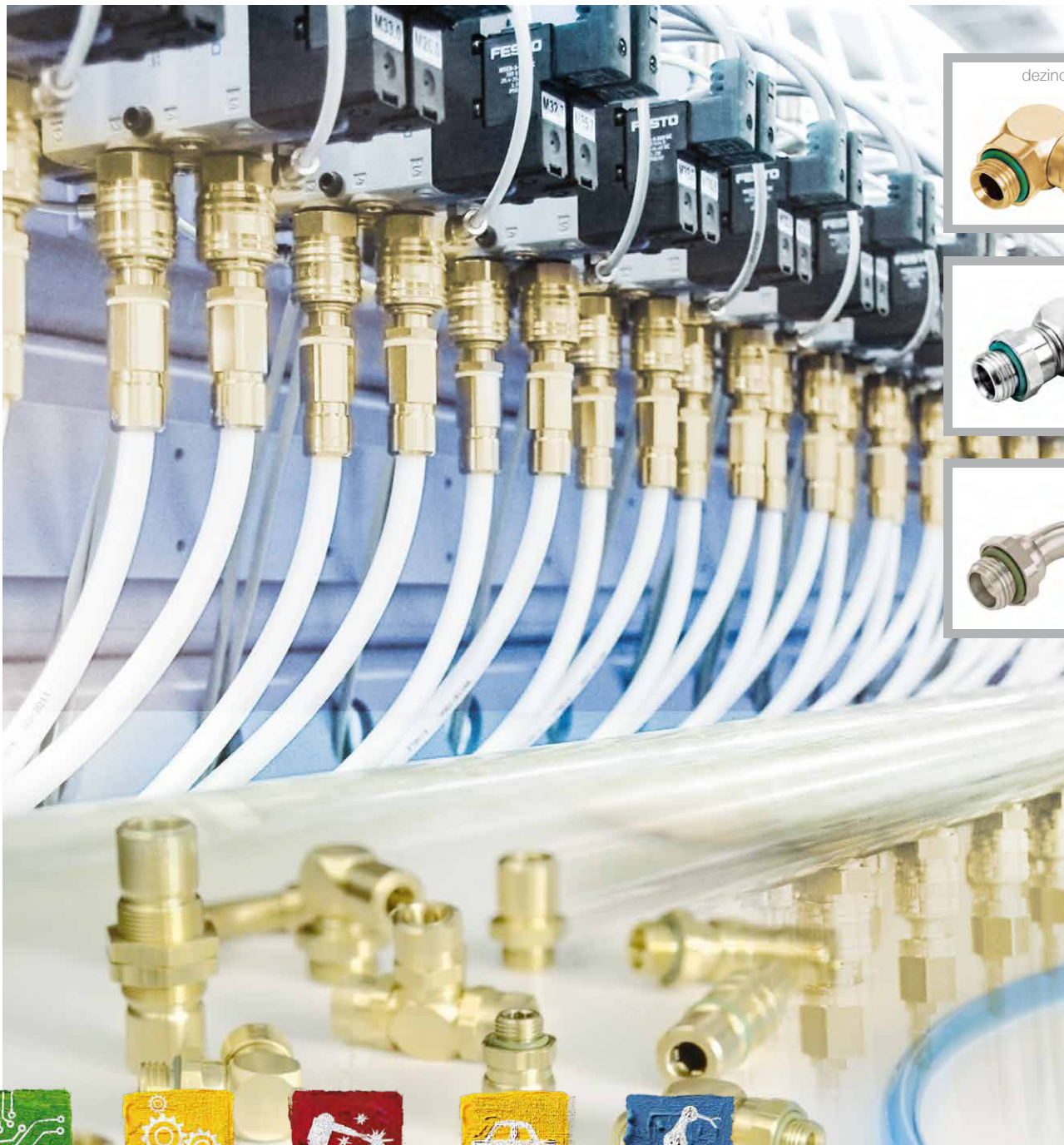


## LIQUIDLINE PROGRAM

Connections for cooling water



dezincification-resistant brass



aluminium



stainless steel



## EISELE IS QUALITY MADE IN GERMANY

Over 30 patents, more than 8,000 standard articles, and 2,000 customized solutions impressively underline our top quality performance.

DIN EN ISO 9001: 2008 – EISELE has been certified since 1994. We have continuously been updating this quality standard and will continue to maintain it with future certifications.



QUALITY SOLUTIONS  
MADE BY EISELE



### Take into account for brass connections

#### Stress corrosion:

- Please assure that the recommended tightening torques\* are respected. This will avoid creating stresses in the brass material.
- With chloride or ammonia filled water the use of brass is not recommended.





#### Electrical corrosion:

- Please assure that the system does not contain large potential differences if you use brass connectors. Large potential differences will create a galvanic cell. The use of brass is in these cases not recommended.

\* For more information about tightening torques see the introduction to each connection series.

As a supplier of high-quality connection solutions we offer specially tailored connections and tubes to your specific application.

The user is responsible for the right selection of the material.

Content overview		Page	Series
<b>Brass, dezincification resistant</b>		6	
	<p>For all applications with cooling water:</p> <ul style="list-style-type: none"> <li>• Cooling circuits in general</li> <li>• Welding guns</li> <li>• Welding robots</li> </ul>		2600
			2400
			2500
			2300
<b>Aluminum</b>		54	
	<p>For electric heatsinks made of aluminum:</p> <ul style="list-style-type: none"> <li>• Robotics</li> <li>• Offshore wind turbines</li> </ul>		5500
<b>Stainless steel</b>		64	
	<p>For laser welding systems and complex applications:</p> <ul style="list-style-type: none"> <li>• Laser welding equipment</li> <li>• In the food industry (FDA-approved seals)</li> </ul>		4600
			4500
<b>Plastic tubes</b>		83	
	<p>Perfect complement to the Eisele connectors. Calibrated tubes for various applications:</p> <ul style="list-style-type: none"> <li>• Cooling water</li> <li>• Compressed air</li> <li>• Aggressive detergents</li> <li>• Cable carriers</li> <li>• Food</li> <li>• In the field of weld spatter</li> </ul>		99

For more information about our terms of sale please visit our website [www.eisele.eu](http://www.eisele.eu)

## Additional information

### Materials

Eisele manufactures and supplies in accordance to the directives 2011/65 / EU (RoHS) and China RoHS. Possible exceptions are marked on our documents (order confirmation, delivery note, invoice).

DIN	DIN EN	Short description	International
1.4301	AISI 304	X5CrNi18-10	0Cr18Ni9 (China) SUS 304 (Japan) STS 304 (Korea) 08Ch18N10 (GUS)
1.4404	AISI 316L	X2CrNiMo17-12-2	00Cr17Ni14Mo2 (China) STS 316L (Korea) SUS 316L (Japan)
1.4571	AISI 316Ti	X6CrNiMoTi17-12-2	0Cr18Ni12MoTi (China) 10Ch17N13M2T (GUS) STS 316Ti (Korea) SUS 316Ti (Japan)
AlCu6BiPb	-	EN AW-2011	-
AlMgSiSnBi	-	EN AW-6023	-
AlMgSi1	-	EN AW-6082	-
CuZn36Pb2As	UNS C35330	CW602N	-
CuZn39Pb3	UNS C37700	CW614N	-

FKM = Viton®

### Relative pressure

In the catalogue bar is used as the unit for the working pressure range.

1 bar = 14,5 psi = 10<sup>5</sup> Pa  
0,07 bar = 1 psi

bar	psi
-0,95	~ -14,00
-0,80	~ -11,50
0,00	~ 0,00
0,50	~ 7,00
1,00	~ 14,50
10,00	~ 145,00
15,00	~ 217,00
24,00	~ 348,00
100,00	~ 1450,00

### Dimension

All information about lengths and diameters in the catalog are given in millimeters (mm). Based on the following data a conversion can be done

1 mm = 0,04 inch (Zoll)  
25,4 mm = 1 inch (Zoll)

**For further information and assistance, don't hesitate to contact us.**

### Temperatur

In the catalogue °C is used as the unit for the working temperature range.

1 °C = 1,8 °F  
0,55 °C = 1 °F

°C	°F
-20	-4
-10	14
0	32
60	140
80	176
120	248
200	392



## FITTINGS MADE OF **BRASS** FOR **COOLING-WATER** APPLICATIONS

### 1. Flow optimization

The flow-optimized connections of EISELE LIQUID LINE are preferably suitable for applications with closed fluid circuits and for use in aqueous, aggressive media. They are used in cooling water circuits for welding applications.

### 2. Efficient corrosion protection

The connectors are nickel-free and provide a low cost alternative to stainless steel plug connections: all parts with contact to the media are made of a dezincification resistant brass alloy and are thanks to FKM seals resistant to many substances and higher temperatures.

### 3. Patent-registered assembly technique

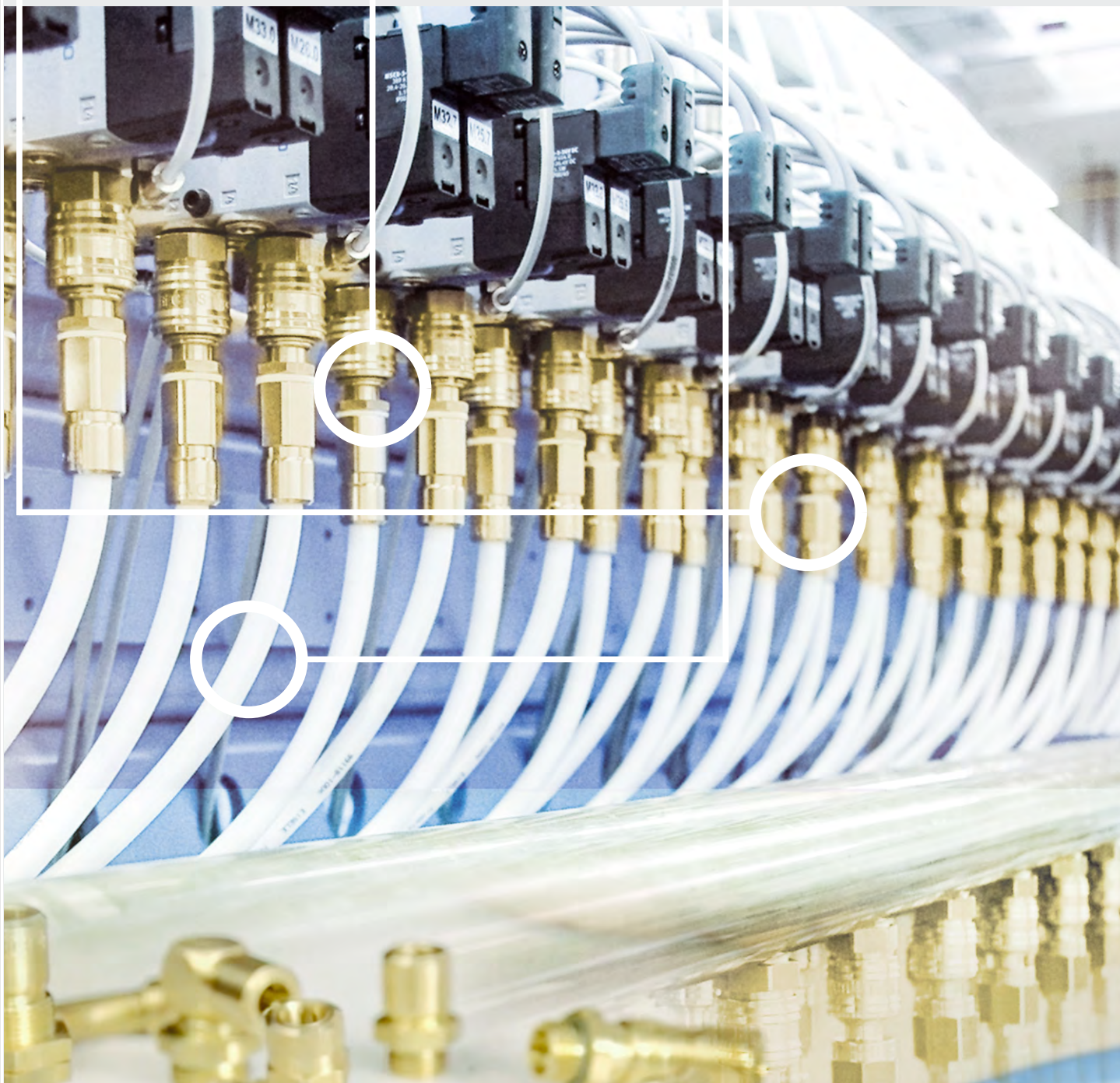
Due to EISELE's patent-registered release sleeve, the assembly and disassembly of the tubes can be done easily, fast and without using any tools. This is a cost-saving method and ensures a flexible and reliable connection solution, even if the plug connectors are frequently used.

2600

2400

2500

2300



## AN OVERVIEW OF THE **BRASS-SERIES** AND THEIR RANGE OF APPLICATIONS

### SERIES 2600



**Plug connectors with release sleeve and 1 seal**  
High reliability up to 232 psi (16 bar); suitable for most applications

**Application examples:**

Areas with industrial cooling water connections, welding operations, robotics



Welding gun with LIQUIDLINE fittings

2600

2400

2500

2300

### SERIES 2400



**Plug connectors with release sleeve and 2 seals**  
Plug connectors for applications up to 348 / 1450 psi (24 / 100 bar) concerning the highest sealing requirements

**Application examples:**

Working pressure > 232 psi (16 bar), cooling systems for electronic devices, lubrication systems, measurement connectors



Power electronics with water chiller

### SERIES 2500



**Screw joints with larger nominal width**

Screw joints for applications with special requirements on the tube

**Application examples:**

Especially in combination with aluminum heat sinks and other cooling water circuits with aluminum components for example at offshore installations. Particularly suitable for systems with movement and with additional tensile load on the tube. High security against loosening tube even under strong pressure fluctuations.



Flexible welding robots

## Material properties - Brass, dezincification free

### What is dezincification?

Dezincification is a long-known process that can lead to corrosion damage on cooling water fittings. In rare cases it is observed on brass components that are in constant contact with water. The colour of the corroded area changes to reddish copper, indicating that it no longer has any inherent strength.

Explained simply, the main alloy components of the brass dissolve: copper and zinc are oxidised into water-soluble salts. The zinc is carried away by the cooling water, while the copper accumulates as a sponge-like mass. This process generally occurs only in soft water with a high chloride content with low carbonate hardness.

### What is the solution offered by Eisele?

Dezincification can be prevented by the right choice of materials and proper handling of the components (compliance with tightening torques, for example). Eisele recommends using the products of the LIQUIDLINE. They are flow-optimised and are manufactured from a special dezincification-resistant brass alloy.

These products eliminate dezincification corrosion due to high chloride content and low carbonate hardness. Dezincification resistance is tested in accordance with ISO 6509. The LIQUIDLINE is highly resistant in industrial water, various saline solutions and many organic liquids. The material is approved by Lloyd's Register for certain components in shipbuilding. The nickelfree fittings are an economical alternative to stainless steel solutions.

### What else is important to know?

Eisele recommends checking the use of the fittings under the actual specific conditions. For selection of the right materials one needs to consider not only the media used, but also the ambient conditions such as temperature and atmosphere. Stainless steel fittings are necessary especially in case of pH values below 5. The same applies if ammonia or very high nitrate and chloride content is present in the medium itself, in any cleaners that are used or in the installation environment.

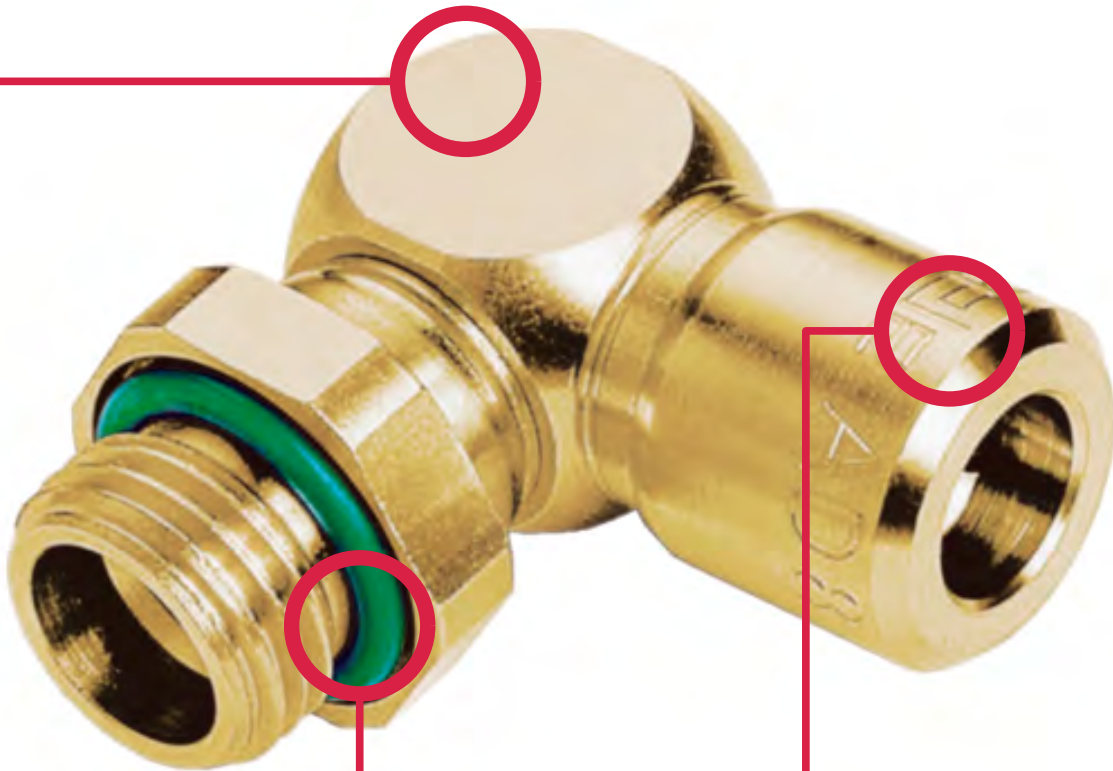
The experts at Eisele will be glad to assist you in selecting suitable fittings.





## Series 2600 - Plug connectors with release sleeve and 1 seal

2600



### Low total costs

- Cost-effective alternative e.g. in comparison to stainless steel connectors
- Easy and fast assembly and disassembly through release sleeves, even if used several times
- Many types available as standard version

### High reliability

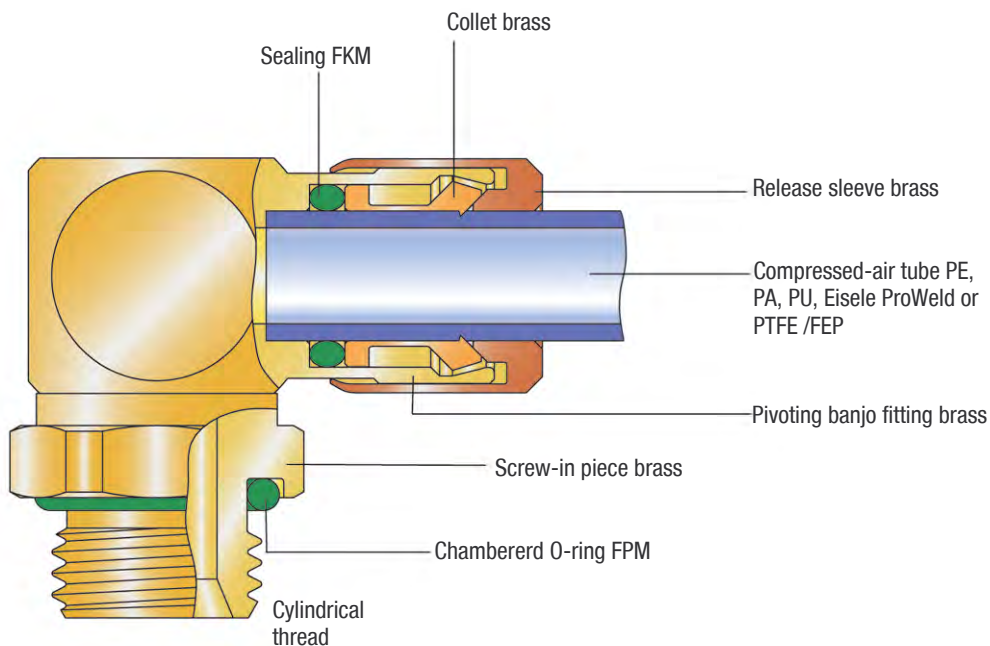
- Dezincification-resistant brass, suitable for almost all applications with water
- High-quality seals made out of FPM
- All sealing points on tube, thread and body are designed to life-long tightness

### Sophisticated technology for all applications

- Patented system with 1 seal
- Dirt-repellent release sleeve
- Resistant against weld spatters
- Shut-off valve optionally available
- Exclusive design

The dezincification-resistant all-round connector with outstanding system characteristics.

## Functional principle



The collet guarantees the secure clamp of the plugged in tube. The external release sleeve protects the connector of dirt and makes it possible to release the tube without any tools. Simple assembly and operation.

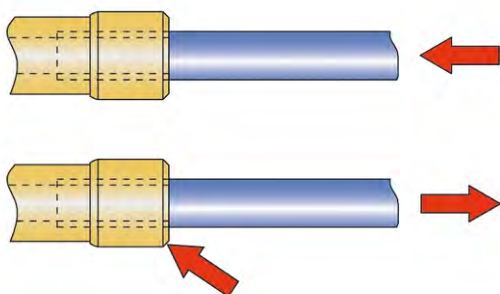
## Range of application

- Cooling water systems with low pressure from -14 to 232 psi (-0.95 to 16 bar)
- Robotics, welding technology
- Plant construction

## Service conditions

- Temperature range: -4 to 248 °F (-20 to +120°C)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar), depending on the used tube
- Suitable for vacuum
- Full tube passage
- Flow-rate optimized
- Dirt-repellent design
- Fast assembly
- Disassembly without tools possible
- Thread with chambered O-Ring

## Handling



Assembly: Push tube into the connector up to the limit stop

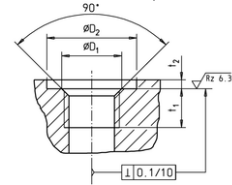
Disassembly: Push release sleeve, pull out tube

## Connection thread, cylindrical

Thread	Thread depth t1 min. (mm)	Thread counterbore ØD1 max. (mm)	Counterbore <sup>1)</sup>		Torque <sup>2)</sup>			Thread standards
			ØD2 min. (mm)	t2 max. (mm)	min. (Nm)	max. (Nm)	recommen- dation (Nm)	
G1/8	5.5	11	15.3	0,5	5,5	9	7	Pipe thread G: DIN ISO 228
G1/4	7.5	14.2	19	0,5	7	18	12	
G3/8	7.5	17.5	23	0,5	10	25	15	
G1/2	9.5	22	27	0,5	15	34	20	

<sup>1)</sup> A counterbore is not necessary. However, the indicated values apply if a counterbore is applied.

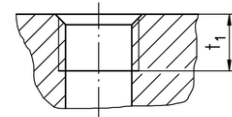
<sup>2)</sup> Information about torques for hexagon socket on demand (assembly instructions 800 00 / 00-1)



2600

## Connection thread, conical

Thread	Thread depth t1 min. (mm)	Torque			Thread standard
		min. (Nm)	max. (Nm)	recommendation (Nm)	
NPT1/8, R1/8	7,4	5,5	10	7	Pipe thread ISO 7-1 / EN 10226-1
NPT1/4, R1/4	11	7,5	15	12	
NPT3/8, R3/8	11,4	12,5	20	16	
NPT1/2, R1/2	15	20	30	25	
NPT3/4, R3/4	16,3	30	50	40	



## Tubes

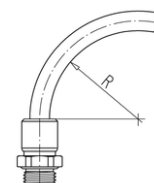
Tube dimension		Polyethylene (PE) Temperature range 14 to 104°F (-10 to +40°C)		Polyamide (PA) Temperature range -76 to 212°F (-60 to +100°C)		Polyurethane (PU) Temperature range -31 to 158°F (-35 to +70°C)		ProWeld (PUR) <sup>1)</sup> Temperature range -31 to 194°F (-35 to +90°C)		Teflon (PTFE) /FEP <sup>2)</sup> Temperature range -31 to 248°F (-35 to +120°C)	
Outside-Ø	Inside-Ø	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)
4 (±0,1)	(2)	20	290 psi (20 bar)	20	435 psi (30 bar)	10	145 psi (10 bar)	10	290 psi (20 bar)	16	362 psi (25 bar)
4,3 (±0,1)	(3)	20	188 psi (13 bar)	20	290 psi (20 bar)	10	145 psi (10 bar)	-	-	35	145 psi (10 bar)
5 (±0,1)	(3)	25	217 psi (15 bar)	25	362 psi (25 bar)	11	145 psi (10 bar)	-	-	25	290 psi (20 bar)
6 (±0,1)	(4)	30	188 psi (13 bar)	30	290 psi (20 bar)	15	145 psi (10 bar)	15	159 psi (11 bar)	35	217 psi (15 bar)
8 (±0,15)	(6)	40	116 psi (8 bar)	40	217 psi (15 bar)	20	130 psi (9 bar)	20	130 psi (9 bar)	65	159 psi (11 bar)
10 (±0,15)	(8)	60	87 psi (6 bar)	60	174 psi (12 bar)	40	116 psi (8 bar)	25	203 psi (14 bar)	100	130 psi (9 bar)
12 (±0,15)	(9)	60	130 psi (9 bar)	85	217 psi (15 bar)	50	145 psi (10 bar)	30	145 psi (10 bar)	100	130 psi (9 bar)
14 (±0,15)	(11)	90	116 psi (8 bar)	80	174 psi (12 bar)	60	109 psi (7,5 bar)	45	130 psi (9 bar)	140	130 psi (9 bar)
16 (±0,15)	(12)	90	87 psi (6 bar)	90	159 psi (11 bar)	45	145 psi (10 bar)	50	130 psi (9 bar)	-	-
20 (±0,2)	(14)	-	-	-	-	-	-	-	116 psi (8 bar)	-	-
1/4" (6,3±0,1)	(4)	-	-	23	290 psi (20 bar)	-	-	10	145 psi (10 bar)	-	-
3/8" (9,5±0,15)	(6)	-	-	32	275 psi (19 bar)	-	-	25	130 psi (9 bar)	-	-
1/2" (12,7±0,15)	(8)	-	-	60	260 psi (19 bar)	-	-	23	130 psi (9 bar)	-	-
5/8" (15,9±0,15)	(11)	-	-	-	-	-	-	-	-	-	-

The mounted compressed-air tubes are not to be exposed to tensile loading.

<sup>1)</sup> In the case of Eisele ProWeld tubes a smaller inside diameter results from a partially larger wall thickness.

<sup>2)</sup> Important notes for the use of compressed-air tubes made of PTFE (Teflon) and FEP:

- The outside diameter of compressed-air tubes must be free of grooves and other damages (e.g. damage from installation tools).
- Prior to assembly, use the Eisele tube cutter Art. No. 99605-0014 or Art. No. 99606-0022 to cut compressed-air tubes at a right angle. Ensure that tubes are not being deformed or damaged during the cutting process.
- During assembly, compressed-air tubes must be pressed until the bottom of the plug connectors to achieve proper tightness.



## Threaded connectors

starting on page 13



Straight threaded connectors

page 13



Angled threaded connectors

page 15

## Plug connector

starting on page 20



Double connectors

page 20



Elbow connectors

page 21



T-connectors

page 21



Y-connectors

page 22



Bulkhead connectors

page 22

## Plug

starting on page 23



Double plug

page 23



Sealing plug

page 23

## Adapter pipe/tube

starting on page 24



Plug screw joints

page 24



Elbow screw joints

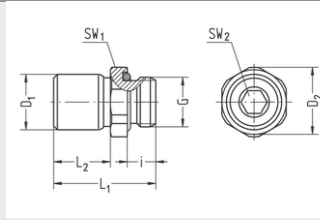
page 24

## Accessories

starting on page 48

## Screw-in connector

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range : -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

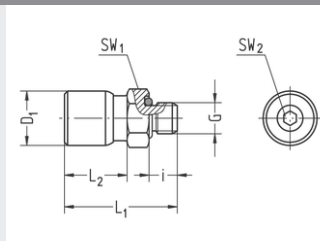


2600

Part no.	G	for tube	SW1	SW2	i	L1	L2	D1	D2	NW	g/piece
VT2628-0202	G1/8	OD4	13	3	5,5	19,5	10	8,5	14,2	2	9
VT2628-0204	G1/8	OD6	13	5	5,5	22	12,5	11,5	14,2	4	10
VT2628-0206	G1/8	OD8	14	5	5,5	27	17,5	14,5	15,2	5,1	17
VT2628-0208	G1/8	OD10	15	5	5,5	30,5	19,5	16,5	16,5	5,1	21
VT2628-0209	G1/8	OD12	20	5	5,5	35,5	20	19,9	21,8	5,1	37
VT2628-0212	G1/8	OD16	24	5	5,5	43	27,7	24,9	26,2	5,1	62
VT2628-0402	G1/4	OD4	17	3	7,5	22	10	8,5	18,5	2	17
VT2628-0404	G1/4	OD6	17	5	7,5	24,5	12,5	11,5	18,5	4	18
VT2628-0406	G1/4	OD8	17	6	7,5	27,5	15,5	14,5	18,5	6	21
VT2628-0408	G1/4	OD10	17	8	7,5	32,5	20,5	16,5	18,5	8	24
VT2628-0409	G1/4	OD12	20	8	7,5	36,5	23,5	20	21,8	8,3	38
VT2628-0411	G1/4	OD14	20	8	7,5	40	26	22	21,8	8,3	42
VT2628-0604	G3/8	OD6	20	5	7,5	25,5	12,5	11,5	21,8	4	29
VT2628-0606	G3/8	OD8	20	6	7,5	28,5	15,5	14,5	21,8	6	32
VT2628-0608	G3/8	OD10	20	8	7,5	30,5	17,5	16,5	21,8	8	32
VT2628-0609	G3/8	OD12	20	9	7,5	32,5	19,5	20	21,8	9	35
VT2628-0611	G3/8	OD14	22	10	7,5	40	24,5	22	23,8	10,3	51
VT2628-0612	G3/8	OD16	24	10	7,5	43	27,5	25	26,2	10,3	60
VT2628-0804	G1/2	OD6	24	5	9,5	28	12,5	11,5	26,2	4	49
VT2628-0806	G1/2	OD8	24	6	9,5	31	15,5	14,5	26,2	6	52
VT2628-0808	G1/2	OD10	24	8	9,5	33	17,5	16,5	26,2	8	52
VT2628-0809	G1/2	OD12	24	9	9,5	35	19,5	20	26,2	9	54
VT2628-0811	G1/2	OD14	24	10	9,5	36,5	21	22	26,2	10,3	55
VT2628-0812	G1/2	OD16	24	12	9,5	43,5	27,5	25	26,2	12	60
VT2628-0815	G1/2	OD20	30	12	9,5	59,6	39,1	30,5	33,5	12,5	130

## Screw-in connector

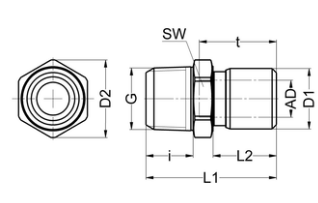
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range -4 to 248 °F (-20 to +120 °C)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar)



Part no.	G	for tube	SW1	SW2	i	L1	L2	D1	NW	g/piece
VT2629-5406	M10x1	OD8	14	5	5,5	27	17,5	14,5	5	17

2600

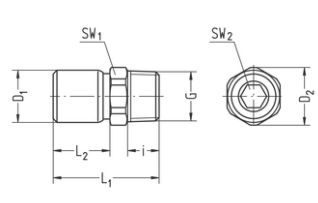
## Screw-in connector with NPT-thread



- Thread NPT
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	G	for tube	SW	i	L1	L2	D1	D2	t	NW	g/piece
VT2630-0608	3/8-NPT	OD10	19	13	36	17,5	16,6	21,3	21,6	9	40

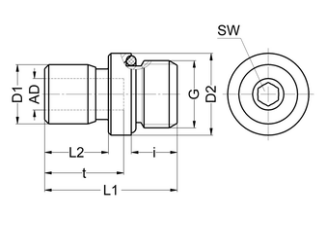
## Screw-in connector with R-thread



- Pipe thread conical ISO 7-1 / EN10226-1
- Seal FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	G	for tube	SW1	SW2	i	L1	L2	D1	D2	NW	g/piece
VT2631-0202	R1/8	OD4	11	3	9	23	10	8,6	12,3	3,2	10
VT2631-0204	R1/8	OD6	11	4	9	25,5	12,5	11,4	12,3	4,3	12
VT2631-0206	R1/8	OD8	13	5	9	28,5	15,5	14,6	14,6	5,4	16
VT2631-0404	R1/4	OD6	14	4	12,5	29,5	12,5	11,4	15,7	4,2	22
VT2631-0406	R1/4	OD8	14	6	12,5	32,5	15,5	14,6	15,7	6,5	24
VT2631-0408	R1/4	OD10	17	8	12,5	34,5	17,5	16,6	19	8,5	26
VT2631-0409	R1/4	OD12	19	8	12,5	40,5	22	19,9	21,3	8,5	39
VT2631-0608	R3/8	OD10	17	8	13	35	17,5	16,6	21,3	8,5	37
VT2631-0609	R3/8	OD12	19	10	13	41	22	19,9	21,3	8,5	45

## Screw-in connector



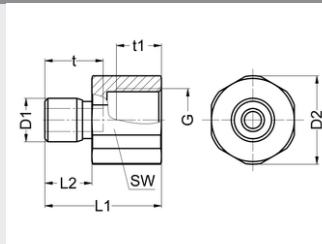
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range : -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	G	for tube	SW	i	L1	L2	D1	D2	t	NW	g/piece
VT2662-0206	G1/8	OD8	5	7,5	28	16	14,6	13,9	18,5	5,5	16
VT2662-0408	G1/4	OD10	8	8	31	18	16,6	17,9	20,3	8,5	24
VT2662-0409	G1/4	OD12	8	8	36	25	19,9	17,9	25	8,5	34

EISELE LIQUIDLINE

## Straight screw-in connector with female thread

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

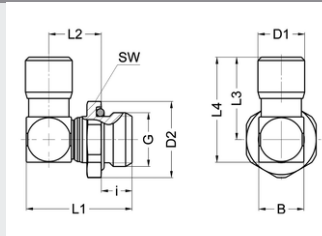


2600

Part no.	G	for tube	SW	L1	L2	D1	D2	t	t1	NW	g/piece
VT2617-0311	G1/4	OD14	22	44	25	21,9	24	28,3	12	8,5	75
VT2617-0709	G1/2	OD12	27	44,5	22	19,9	28,6	28,3	14	9,5	92
VT2617-0711	G1/2	OD14	27	47	25	21,9	28,6	31,2	14	11,5	94
VT2617-0712	G1/2	OD16	27	50,5	28	24,9	28,6	36,5	14	12,5	104

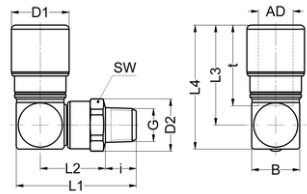
## Elbow screw-in connector, swiveling

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube



Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	D2	NW	g/piece
VT2604-0202	G1/8	OD4	13	5,5	22,9	12,9	16,7	21,2	9	8,5	14,2	2,5	15
VT2604-0204	G1/8	OD6	13	5,5	25,9	14,9	20	25,5	11	11,5	14,2	4,2	19
VT2604-0206	G1/8	OD8	14	5,5	31,4	18,9	24,5	31,5	14	14,5	15,2	5,5	40
VT2604-0208	G1/8	OD10	14	5,5	31,5	19	27	34	14	16,5	15,2	5,5	73
VT2604-0402	G1/4	OD4	17	7,5	24,9	12,9	16,5	21	9	8,5	18,5	2,5	21
VT2604-0404	G1/4	OD6	17	7,5	25,9	12,9	20	25,5	11	11,5	18,5	4,2	23
VT2604-0406	G1/4	OD8	17	7,5	31,4	16,9	24,5	31,5	14	14,5	18,5	6,5	41
VT2604-0408	G1/4	OD10	17	7,5	36,3	20,8	28	36	16	16,5	18,5	8,5	54
VT2604-0409	G1/4	OD12	17	7,5	36,3	20,8	32,5	40,5	16	20	18,5	8,5	62
VT2604-0411	G1/4	OD14	17	7,5	36,3	20,8	44	36	16	22	18,5	8,5	68
VT2604-0604	G3/8	OD6	20	7,5	26,9	13,9	20	25,5	11	8,5	21,8	4,2	31
VT2604-0606	G3/8	OD8	20	7,5	29,9	15,4	24,5	31,5	14	14,5	21,8	6,5	46
VT2604-0608	G3/8	OD10	20	7,5	33,3	17,8	28	36	16	16,5	21,8	8,5	56
VT2604-0609	G3/8	OD12	20	7,5	40,3	22,8	34,5	44,5	20	20	21,8	9	94
VT2604-0611	G3/8	OD14	22	7,5	43,5	25	38	49	22	22	23,8	11	112
VT2604-0612	G3/8	OD16	24	7,5	46	26,5	42,5	54,5	24	25	26,2	12,5	123
VT2604-0804	G1/2	OD6	24	9,5	30,4	15,4	20	25,5	11	8,5	26,2	4,2	50
VT2604-0806	G1/2	OD8	24	9,5	33,4	16,9	24,5	31,5	14	14,5	26,2	6,5	65
VT2604-0808	G1/2	OD10	24	9,5	35,8	18,3	28	36	16	16,5	26,2	8,5	74
VT2604-0809	G1/2	OD12	24	9,5	39,9	20,4	34,5	44,5	20	20	26,2	9	106
VT2604-0811	G1/2	OD14	24	9,5	42,5	22	38	49	22	22	26,2	11	122
VT2604-0812	G1/2	OD16	24	9,5	47,5	26	42,5	54,5	24	25	26,2	12,5	132
VT2604-0815	G1/2	OD20	24	9,5	60,8	36,3	56,5	70	30	30,5	26	13,5	256
VT2604-1015	G3/4	OD20	32	9,5	60,8	36,3	57,1	70,6	30	30,5	34,8	18	278

## Elbow screw-in connector, swiveling with R-thread

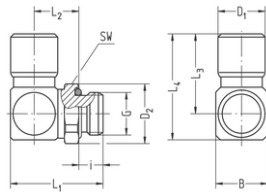


- Whitworth conical pipe thread ISO 7-1 / EN10226-1
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

2600

Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	D2	NW	g/piece
VT2606-0206	R1/8	OD8	14	9	35	28	24,5	31,5	14	14,6	15,2	5,5	42

## Elbow screw-in connector, swiveling



- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant or Ecobrass
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for permanent swivel movements
- Lateral forces have to be avoided!\*

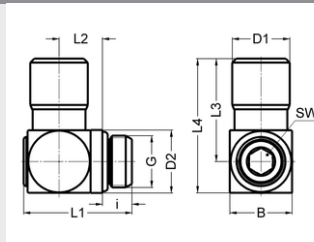
Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	D2	NW	g/piece
VT2686-0204	G1/8	OD6	13	5,5	22,8	11,7	20,7	26,7	12	11,5	14,2	4	21
VT2686-0206	G1/8	OD8	14	5,5	26,2	13,4	25	33	16	14,5	15,2	5,5	38
VT2686-0404	G1/4	OD6	17	7,5	25,3	12,2	20,7	26,7	12	11,5	18,5	4	31
VT2686-0406	G1/4	OD8	17	7,5	28,7	13,9	25	33	16	14,5	18,5	6	44
VT2686-0408	G1/4	OD10	17	7,5	30,7	14,9	29	38	18	16,5	18,5	8	56
VT2686-0409	G1/4	OD12	20	7,5	34	17	35,5	46	21	20	21,8	7,8	88
VT2686-0606	G3/8	OD8	20	7,5	29,7	14,9	25	33	16	14,5	21,8	6	52
VT2686-0608	G3/8	OD10	20	7,5	31,7	15,9	29	38	18	16,5	21,8	8	64
VT2686-0609	G3/8	OD12	20	7,5	34	17	35,5	46	21	20	21,8	9	87
VT2686-0611	G3/8	OD14	22	7,5	37,5	19	39	51	24	22	23,8	10	117
VT2686-0612	G3/8	OD16	24	7,5	39,8	20,2	44	57	26	25	26,2	11,5	153
VT2686-0806	G1/2	OD8	24	9,5	31,7	14,9	25	33	16	14,5	26,2	6	64
VT2686-0808	G1/2	OD10	24	9,5	33,7	15,9	29	38	18	16,5	26,2	8	75
VT2686-0809	G1/2	OD12	24	9,5	36	17	35,5	46	21	20	26,2	9	99
VT2686-0811	G1/2	OD14	24	9,5	39	18,5	39	51	24	22	26,2	11	123
VT2686-0812	G1/2	OD16	24	9,5	41,3	19,2	44	57	26	25	26,2	12	156

\*Lifetime depends on working conditions, application specific tests are required by user.



## Elbow screw-in connector, swiveling

- Whitworth pipe thread DIN ISO 228 with hexagon socket
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

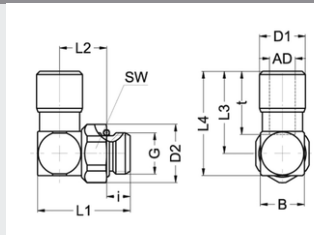


2600

Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	D2	NW	g/piece
VT2656-0202	G1/8	OD4	4	5,5	22	8,7	17,8	23,7	11,8	8,6	11,9	2	17
VT2656-0204	G1/8	OD6	4	5,5	22	8,7	21,3	27,2	11,8	11,4	11,9	4	20
VT2656-0206	G1/8	OD8	4	5,5	22	8,7	24,2	30,1	13,9	14,6	11,9	4,5	27
VT2656-0208	G1/8	OD10	4	5,5	22	8,7	26,4	32,5	13,9	16,6	11,9	4,4	31
VT2656-0402	G1/4	OD4	6	7,5	27,5	11	19,5	27,4	15,8	8,6	15,9	2	34
VT2656-0404	G1/4	OD6	6	7,5	27,5	11	23	30,9	15,8	11,4	15,9	4	37
VT2656-0406	G1/4	OD8	6	7,5	27,5	11	26	33,9	15,8	14,6	15,9	6	42
VT2656-0408	G1/4	OD10	6	7,5	27,5	11	28	35,9	15,9	16,6	15,9	6,5	46
VT2656-0409	G1/4	OD12	6	7,5	32,1	13,8	46	33,5	19,9	19,9	15,9	8,5	79
VT2656-0609	G3/8	OD12	8	7,5	31,8	13,5	35,5	46	19,9	19,9	19,9	9	81

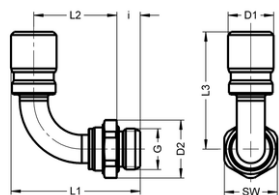
## Elbow screw-in connector, lockable

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Stiff angular shape, can be locked with jam nut



Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	D2	t	NW	g/piece
VT2640-0202	G1/8	AD5/32" (4)	13	5,5 - 1	21,5	11 + 1	16,5	21,5	10	8,6	14,2	12,7	3	18
VT2640-0203	G1/8	OD5	13	5,5 - 1	21,5	11 + 1	19,5	24,5	10	10,4	14,2	14	4	19
VT2640-0204	G1/8	OD6	13	5,5 - 2	22,5	11,5 + 1	21,5	27	11	11,4	14,2	15,5	5,3	21
VT2640-0206	G1/8	AD5/16" (8)	13	5,5 - 3	26,5	14 + 1	26	33	14	14,6	14,2	18,5	5,5	37
VT2640-0208	G1/8	OD10	13	5,5 - 4	29	15,5 + 1	30,5	38,5	16	16,6	14,2	21,3	5,5	49
VT2640-0243	G1/8	OD4,3	13	5,5 - 5	21,5	11 + 1	16,5	21,5	10	8,9	14,2	12,7	3	18
VT2640-0402	G1/4	AD5/32" (4)	17	7,5 - 1,5	26,5	14 + 1,5	16,5	21,5	10	8,6	18,5	12,7	3	29
VT2640-0403	G1/4	OD5	17	7,5 - 1,5	26,5	14 + 1,5	19,5	24,5	10	10,4	18,5	14	4	31
VT2640-0404	G1/4	OD6	17	7,5 - 1,5	27,5	14,5 + 1,5	21,5	27	11	11,4	18,5	15,5	5,3	34
VT2640-0406	G1/4	AD5/16" (8)	17	7,5 - 1,5	29,5	15 + 1,5	26	33	14	14,6	18,5	18,5	6,3	45
VT2640-0408	G1/4	OD10	17	7,5 - 1,5	31,5	16 + 1,5	30,5	38,5	16	16,6	18,5	21,5	8	56
VT2640-0409	G1/4	OD12	17	7,5 - 1,5	33,5	17 + 1,5	35,5	44,5	18	19,9	18,5	26	8	75
VT2640-0443	G1/4	OD4,3	17	7,5 - 1,5	26,5	14 + 1,5	16,5	21,5	10	8,9	18,5	12,7	3	29
VT2640-0606	G3/8	AD5/16" (8)	20	7,5 - 1,5	30,5	16 + 1,5	26	33	14	14,6	21,8	18,5	6,3	56
VT2640-0608	G3/8	OD10	20	7,5 - 1,5	32,5	17 + 1,5	30,5	38,5	16	16,6	21,8	21,3	8,5	66
VT2640-0609	G3/8	OD12	20	7,5 - 1,5	33,5	17 + 1,5	35,5	44,5	18	19,9	21,8	26	9	83
VT2640-0611	G3/8	OD14	20	7,5 - 1,5	35,5	18 + 1,5	39	49	20	21,9	21,8	28,5	11	94
VT2640-0612	G3/8	OD16	20	7,5 - 1,5	39,5	20 + 1,5	42,4	54,4	24	24,9	21,8	32,5	11,5	130
VT2640-0806	G1/2	AD5/16" (8)	24	9,5 - 1,8	37	19 + 1,8	26	33	14	14,6	26,2	18,5	6,5	77
VT2640-0808	G1/2	OD10	24	9,5 - 1,8	37	19 + 1,8	30,5	38,5	16	16,6	26,2	21,3	8,5	95
VT2640-0809	G1/2	OD12	24	9,5 - 1,8	39,2	20,7 + 1,8	35,5	44,5	18	19,9	26,2	26	9,5	114
VT2640-0811	G1/2	OD14	24	9,5 - 1,8	41,5	21 + 1,8	40	51	22	21,9	26,2	28,5	11,5	127
VT2640-0812	G1/2	OD16	24	9,5 - 1,8	43,5	22 + 1,8	42,4	54,4	24	24,9	26,2	32,5	12,5	148
VT2640-0815	G1/2	OD20	24	9,5 - 1,8	45,5	23 + 1,8	63,2	78,2	30	30,5	26,2	44,5	14	251
VT2640-1015	G3/4	OD20	30	9,5 - 1,8	45,5	23 + 1,8	63,2	78,2	30	30,5	32,7	44,5	15	261

## Swept screw-in elbow 90°, swiveling

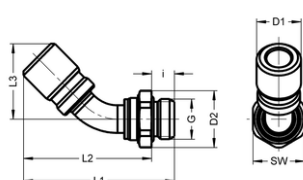


- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

2600

Part no.	G	for tube	SW	i	L1	L2	L3	D1	D2	NW	g/piece
VT2603-020490	G1/8	OD6	13	5,5	36	25	30	11,5	14,2	4	20
VT2603-020690	G1/8	OD8	14	5,5	43	30	36	14,5	15,2	5,5	33
VT2603-040490	G1/4	OD6	17	7,5	37	24	30	11,5	18,5	4	26
VT2603-040690	G1/4	OD8	17	7,5	43	28	36	14,5	18,5	6	35
VT2603-040890	G1/4	OD10	17	7,5	50	34	43	16,6	18,5	8	46
VT2603-040990	G1/4	OD12	17	7,5	58,5	41	53	19,9	18,5	9	73
VT2603-060490	G3/8	OD6	20	7,5	37	24	30	11,5	21,8	4	34
VT2603-060690	G3/8	OD8	20	7,5	41	26	36	14,5	21,8	6	41
VT2603-060890	G3/8	OD10	20	7,5	46	31	43	16,6	21,8	8	49
VT2603-060990	G3/8	OD12	20	7,5	56	39	53	19,9	21,8	9	75
VT2603-061190	G3/8	OD14	20	7,5	62	44	58	21,9	21,8	11	88
VT2603-061290	G3/8	OD16	20	7,5	68	47	66	24,9	21,8	11,5	116
VT2603-080690	G1/2	OD8	24	9,5	45	27	36	14,5	26,2	6	62
VT2603-080890	G1/2	OD10	24	9,5	50	32	43	16,6	26,2	8	69
VT2603-080990	G1/2	OD12	24	9,5	57,5	37	53	19,9	26,2	9	89
VT2603-081190	G1/2	OD14	24	9,5	60,5	40	58	21,9	26,2	11	99
VT2603-081290	G1/2	OD16	24	9,5	68	46	66	24,9	26,2	12	125

## Swept screw-in elbow 45°, swiveling

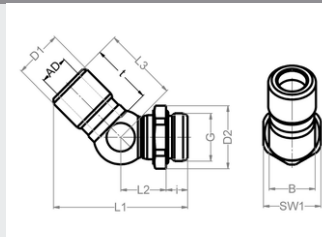


- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

Part no.	G	for tube	SW	i	L1	L2	L3	D1	D2	NW	g/piece
VT2603-020445	G1/8	OD6	13	5,5	41,1	35,6	20,2	11,5	14,2	4	20
VT2603-020645	G1/8	OD8	14	5,5	49,6	44,1	24,5	14,5	15,2	5,5	33
VT2603-040445	G1/4	OD6	17	7,5	42,1	34,6	20,2	11,5	18,5	4	26
VT2603-040645	G1/4	OD8	17	7,5	49,6	42,1	24,5	14,5	18,5	6	35
VT2603-040845	G1/4	OD10	17	7,5	57,8	50,3	28,5	16,6	18,5	8	46
VT2603-040945	G1/4	OD12	17	7,5	69,2	62,7	34,1	19,9	18,5	9	73
VT2603-060445	G3/8	OD6	20	7,5	42,1	34,6	20,2	11,5	21,8	4	34
VT2603-060645	G3/8	OD8	20	7,5	48,1	40,6	24,5	14,5	21,8	6	41
VT2603-060845	G3/8	OD10	20	7,5	54,8	47,3	28,5	16,6	21,8	8	49
VT2603-060945	G3/8	OD12	20	7,5	67,2	59,7	34,1	19,9	21,8	9	75
VT2603-061145	G3/8	OD14	20	7,5	71,7	64,2	37,6	21,9	21,8	11	88
VT2603-061245	G3/8	OD16	20	7,5	75,9	68,4	42,4	24,9	21,8	11,5	116
VT2603-080645	G1/2	OD8	24	9,5	51,6	42,1	24,5	14,5	26,2	6	62
VT2603-080845	G1/2	OD10	24	9,5	57,3	47,8	28,5	16,6	26,2	8	69
VT2603-080945	G1/2	OD12	24	9,5	66,7	57,2	34,1	19,9	26,2	9	89
VT2603-081145	G1/2	OD14	24	9,5	70,7	61,2	37,6	21,9	26,2	11	99
VT2603-081245	G1/2	OD16	24	9,5	79,9	70,4	42,4	24,9	26,2	12	125

## Elbow screw-in connector 45°, swiveling

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

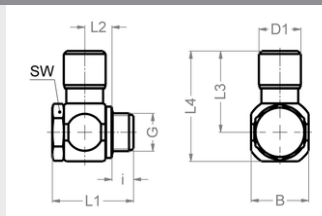


2600

Part no.	G	for tube	SW1	i	L1	L2	L3	B	D1	D2	t	NW	g/piece
VT2698-0202	G1/8	OD4	13	5,5	31	11,5	16,6	8,5	8,6	14,2	13	3	13
VT2698-0204	G1/8	OD6	13	5,5	35,4	13	19	11	11,4	14,2	15,5	4,5	18
VT2698-0206	G1/8	OD8	14	5,5	24,9	16,6	23	14	14,6	15,2	18,5	5,5	35
VT2698-0402	G1/4	OD4	17	7,5	33	11,5	16	8,5	8,6	18,5	13	3	20
VT2698-0404	G1/4	OD6	17	7,5	36,4	12	19	11	11,4	18,5	15,5	4	24
VT2698-0406	G1/4	OD8	17	7,5	42,9	14,6	23	14	14,6	18,5	18,5	5,5	36
VT2698-0408	G1/4	OD10	17	7,5	49,7	18,8	26	16	16,6	18,5	21,3	8,5	55
VT2698-0409	G1/4	OD12	17	7,5	54,7	18,8	32	16	19,9	18,5	26	8,5	59
VT2698-0606	G3/8	OD8	20	7,5	41,4	13,2	23	11	14,6	21,8	18,5	6,5	43
VT2698-0608	G3/8	OD10	20	7,5	46,7	15,8	26	11	16,6	21,8	21,3	8,5	51
VT2698-0609	G3/8	OD12	20	7,5	54,7	18,8	32	19	19,9	21,8	26	9	76
VT2698-0611	G3/8	OD14	20	7,5	59,3	20,7	35	21	21,9	21,8	28,5	11	90
VT2698-0612	G3/8	OD16	22	7,5	66,1	19,7	41	24	24,9	23,4	32	11,5	127
VT2698-0806	G1/2	OD8	24	9,5	44,9	14,7	23	14	14,6	26,2	18,5	6,5	63
VT2698-0808	G1/2	OD10	24	9,5	49,2	16,3	26	16	16,6	26,2	21,3	8,5	71
VT2698-0809	G1/2	OD12	24	9,5	54,2	16,3	32	19	19,9	26,2	26	9	91
VT2698-0811	G1/2	OD14	24	9,5	58,3	17,7	35	21	21,9	26,2	28,5	11	102
VT2698-0812	G1/2	OD16	24	9,5	67,6	21,7	41	24	24,9	26,2	32	12,5	135

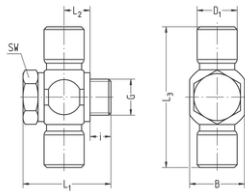
## Single swivel joint

- Whitworth pipe thread DIN ISO 228
- VS seal rings
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)



Part no.	G	for tube	SW1	SW2	SW3	i	L1	L2	D1	D2	t	NW	g/piece
VT2634-0202K	G1/8	OD4	24,5	32,5		5,5	26,5	9,5	8,5			3	33
VT2634-0204K	G1/8	OD6	24,5	32,5		5,5	26,5	9,5	11,5			5	35
VT2634-0206K	G1/8	OD8	24,5	32,5		5,5	26,5	9,5	14,6			6	41
VT2634-0208K	G1/8	OD10	24,5	32,5		5,5	26,5	9,5	16,5			6	44
VT2634-0404K	G1/4	OD6	23	33		7,5	28,7	9,5	11,5			5	45
VT2634-0406K	G1/4	OD8	26	36		7,5	28,7	9,5	14,6			6	57
VT2634-0408K	G1/4	OD10	28,5	38,5		7,5	28,7	9,5	16,5			8	59
VT2634-0409K	G1/4	OD12	33,5	43,5		7,5	33,5	11,7	20			8	83
VT2634-0412	G1/4	OD16				7,5	37	14,1	25			7,2	116
VT2634-0606K	G3/8	OD8	38	49		7,5	33,7	11,7	14,6			5	81
VT2634-0608K	G3/8	OD10	38	49		7,5	33,7	11,7	16,5			8,5	83
VT2634-0609K	G3/8	OD12	38	49		7,5	41	14,3	20			9,2	128
VT2634-0611K	G3/8	OD14	38	49		7,5	41	14,3	21,9			9,2	130
VT2634-0612K	G3/8	OD16	38	49		7,5	41	14,3	25			9,2	140
VT2634-0806K	G1/2	OD8	30	44,5		9	36	10	14,6			5	117
VT2634-0808K	G1/2	OD10	33,5	48		9	36	11,7	16,5			8,5	118
VT2634-0809K	G1/2	OD12	37,5	51,5		9	41	14,3	20			10	155
VT2634-0811K	G1/2	OD14	40	54		9	41	14,3	21,9			11	159
VT2634-0812K	G1/2	OD16	43,5	57,5		9	41	14,3	25			12	170

## Double swivel joint

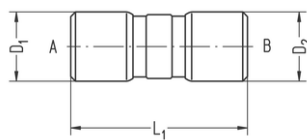


- Whitworth pipe thread DIN ISO 228
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

2600

Part no.	G	for tube	SW	i	L1	L2	L3	B	D1	NW	g/piece
VT2638-0202K	G1/8	OD4	14	5,5	28,5	9,5	36,4	16	8,5	2	40
VT2638-0204K	G1/8	OD6	14	5,5	28,5	9,5	42	16	11,5	4	45
VT2638-0206K	G1/8	OD8	14	5,5	28,5	9,5	48	16	14,5	5,2	53
VT2638-0404K	G1/4	OD6	17	7,5	28,7	9,5	46	18	11,5	5	50
VT2638-0406K	G1/4	OD8	17	7,5	28,7	9,5	54	20	14,5	6	66
VT2638-0408K	G1/4	OD10	17	7,5	28,7	9,5	58	20	16,5	8	70
VT2638-0402K	G1/4	OD4	17	7,5	30,5	9,5	40	20	8,5	2	58
VT2638-0604K	G3/8	OD6	22	7,5	31,5	9,5	50	22	11,5	4	80
VT2638-0606K	G3/8	OD8	22	7,5	31,5	9,5	56	22	14,5	6	89
VT2638-0608K	G3/8	OD10	22	7,5	33,7	9,5	62	22	16,5	8,5	96
VT2638-0804K	G1/2	OD6	27	9	33,5	9,5	54	29	11,5	4	122
VT2638-0806K	G1/2	OD8	27	9	33,5	9,5	60	29	14,5	6	130
VT2638-0808K	G1/2	OD10	27	9	33,5	9,5	67	29	16,5	8	136

## Double connector

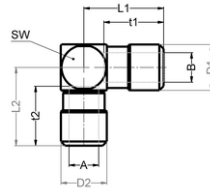


- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	for tube A	for tube B	L1	D1	D2	NW	g/piece
VT2632-0206	OD4	OD8	33	8,6	14,6	4	18
VT2632-0406	OD6	OD8	35,5	11,5	14,5	4	20
VT2632-0408	OD6	OD10	38,5	11,5	16,5	4	26
VT2632-0608	OD8	OD10	41,5	14,5	16,5	6	30
VT2632-0811	OD10	OD14	51	16,5	22	8	49
VT2632-1112	OD14	OD16	62	22	25	11	87
VT2633-0202	OD4	OD4	26,5	8,5	8,5	2	6
VT2633-0404	OD6	OD6	32,5	11,5	11,5	4	13
VT2633-0606	OD8	OD8	38,5	14,5	14,5	6	25
VT2633-0808	OD10	OD10	44	16,5	16,5	8	33
VT2633-0909	OD12	OD12	54	20	20	9	58
VT2633-1111	OD14	OD14	59	22	22	11	71
VT2633-1212	OD16	OD16	65,5	25	25	12	92
VT2633-1313	OD15	OD15	59,4	22,9	22,9	12,5	75
VT2633-1515	OD20	OD20	92,2	30,5	30,5	16,5	188

## Elbow connector

- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

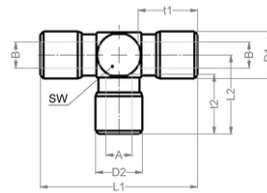


2600

Part no.	for tube A	for tube B	SW	L1	L2	D1	D2	t1	t2	NW	g/piece
VT2677-0200	OD4	OD4	9	16	16,7	8,6	8,6	12,7	12,7	2,5	10
VT2677-0400	OD6	OD6	11	20	21,5	11,4	11,4	15,5	15,5	4	18
VT2677-0600	OD8	OD8	14	24,5	26	14,6	14,6	18,5	18,5	6	37
VT2677-0608	OD8	OD10	14	27	26	16,6	14,6	21,3	18,5	6	39
VT2677-0800	OD10	OD10	16	28	30,5	16,6	16,6	21,3	21,3	8	50
VT2677-0809	OD10	OD12	16	32,5	30,5	19,9	16,6	26	21,3	8	58
VT2677-0811	OD10	OD14	16	36	30,5	21,9	16,6	28,5	21,3	8	64
VT2677-0900	OD12	OD12	20	34	36,5	19,9	19,9	26	26	9	92
VT2677-1100	OD14	OD14	22	38	40	21,9	21,9	28,5	28,5	11	113
VT2677-1200	OD16	OD16	24	42,5	42,5	24,9	24,9	32	32	12	146
VT2677-1500	OD20	OD20	30	70,6	63	30,5	30,5	44,9	44,9	14,5	302

## T-connector

- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

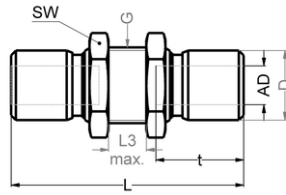


Part no.	for tube A	for tube B	SW	L1	L2	D1	D2	t1	t2	NW	g/piece
VT2678-0200	OD4	OD4	9	33,5	16	8,6	8,6	12,7	12,7	2,5	12
VT2678-0206	OD4	OD8	14	45	18,5	8,6	14,6	12,7	18,5	2,5	38
VT2678-0400	OD6	OD6	11	40	21,5	11,4	11,4	15,5	15,5	4	24
VT2678-0409	OD6	OD12	20	61	26	11,4	19,9	15,5	26	4	92
VT2678-0600	OD8	OD8	14	49	26	14,6	14,6	18,5	18,5	6	47
VT2678-0608	OD8	OD10	16	56	27	14,6	16,6	18,5	21,3	6	61
VT2678-0800	OD10	OD10	16	56	30,5	16,6	16,6	21,3	21,3	8	56
VT2678-0806	OD10	OD8	16	50,5	30,5	14,6	16,6	19	21,3	8,5	59
VT2678-0900	OD12	OD12	20	69	36,5	19,9	19,9	26	26	9	114
VT2678-1100	OD14	OD14	22	76	40	21,9	21,9	28,5	28,5	11	139
VT2678-1108	OD14	OD10	22	61,5	40	16,6	21,9	21,3	28,5	8,5	116
VT2678-1200	OD16	OD16	24	84,5	42	24,9	24,9	32	32	12	185
VT2678-1500	OD20	OD20	30	112	63	30,5	30,5	44,9	44,9	14,5	370

# Plug connectors with release sleeve and 1 seal

22 High reliability up to 232 psi (16 bar); suitable for most applications

## Bulkhead connector

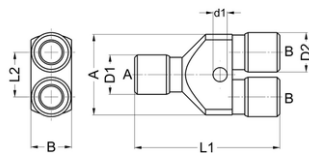


- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

2600

Part no.	for tube	G	SW	L	L3 max.	D	t	NW	g/piece
VT2680-0202	OD4	M12x1	14	34	6	8,6	12,7	2,5	20
VT2680-0404	OD6	M14x1	17	43	8	11,4	15,5	4	37
VT2680-0606	OD8	M16x1	19	49	8	14,6	18,5	6	52
VT2680-0808	OD10	M18x1	22	56	10	16,6	21,3	8	70
VT2680-0909	OD12	M22x1	27	63	12	19,9	26	9	117
VT2680-1111	OD14	M24x1	30	66	12	21,9	28,5	11	137
VT2680-1212	OD16	M28x1	32	72	12	24,9	32	12	185
VT2680-1515	OD20	M34x1	41	103	15	30,5	45	14,5	334

## Y-connector

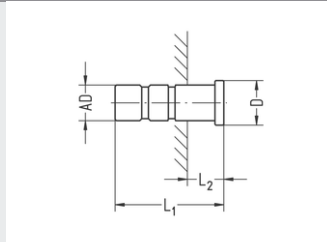


- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	for tube A	for tube B	L1	L2	D1	D2	A	B	d1	NW	g/piece
VT2675-0202	OD4	OD4	35	11	8,5	8,5	20	10	3,2	2	13
VT2675-0402	OD6	OD4	39	11	11,5	8,5	20	12	3,2	2	27
VT2675-0404	OD6	OD6	46	13,2	11,5	11,5	25	12	4,2	4	40
VT2675-0604	OD8	OD6	49	13,2	14,5	11,5	25	15	4,2	4	52
VT2675-0606	OD8	OD8	56,5	16,5	14,5	14,5	30	17	5,2	6	78
VT2675-0806	OD10	OD8	59	16,5	16,5	14,5	30	17	5,2	6	86
VT2675-0808	OD10	OD10	65,5	19	16,5	16,5	35	17	5,2	8	106
VT2675-0906	OD12	OD8	63,5	16,5	20	14,5	30	21	5,2	6	112
VT2675-0908	OD12	OD10	69	19	20	16,5	35	21	5,2	8	125
VT2675-0909	OD12	OD12	77	21,8	20	20	40	21	5,2	9	184
VT2675-1108	OD14	OD10	40,5	18,4	22	16,5	35	23	5,2	8	143
VT2675-1109	OD14	OD12	73	21,8	22	20	40	23	5,2	9	152
VT2675-1111	OD14	OD14	84	23,8	22	22	45	23	5,2	11	230

## Closure plug

- **Material with media contact:** Brass, dezincification resistant
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)
- Fits all connections in the series 2400 and 2600 in the respective size

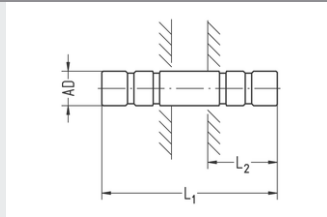


2600

Part no.	plug AD	L1	L2	D	g/piece
2623-0200	4	19	7	5,5	2
2623-0400	6	21,5	6,5	8	5
2623-0600	8	24,5	6,5	10	11
2623-0800	10	28	7,5	12	19
2623-0900	12	33	7	14	32
2623-1100	14	36	7,5	16	47
2623-1200	16	38	7,5	17,8	33
2623-1500	20	52	-	21,8	69

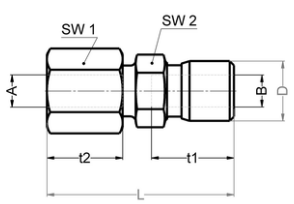
## Double plug

- **Material with media contact:** Brass, dezincification resistant
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)
- Fits all connections in the series 2400 and 2600 in the respective size



Part no.	plug AD	L1	L2	NW	g/piece
2622-0202	4	30	12	2	2
2622-4343	4,3	30	12	3	2
2622-0303	5	35	13,5	3	3
2622-0404	6	36	15	4	4
2622-0606	8	41	18	6	7
2622-0808	10	47	20,5	8	10
2622-0909	12	60	26	10	17
2622-1111	14	64	28,5	12	21

## Double connector, adapter for pipe/tube

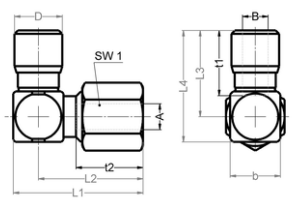


- Combination between cutting ring screw joint and plug connector
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

2600

Part no.	for pipe A	for tube B	SW1	SW2	L	D	t1	t2	g/piece
VT2647-0604	6	OD6	14	12	39	11,4	16	17	29
VT2647-0606	6	OD8	14	14	43	14,8	18	17	36
VT2647-0608	6	OD10	14	17	45	16,6	21	17	42
VT2647-0804	8	OD6	17	17	40	11,4	16	17	45
VT2647-0806	8	OD8	17	17	43	14,6	18	17	48
VT2647-0808	8	OD10	17	17	45	16,6	21	17	50
VT2647-1006	10	OD8	19	17	44	14,6	18	18	57
VT2647-1008	10	OD10	19	17	45	16,6	21	20	58

## Elbow connector, adapter for pipe/tube

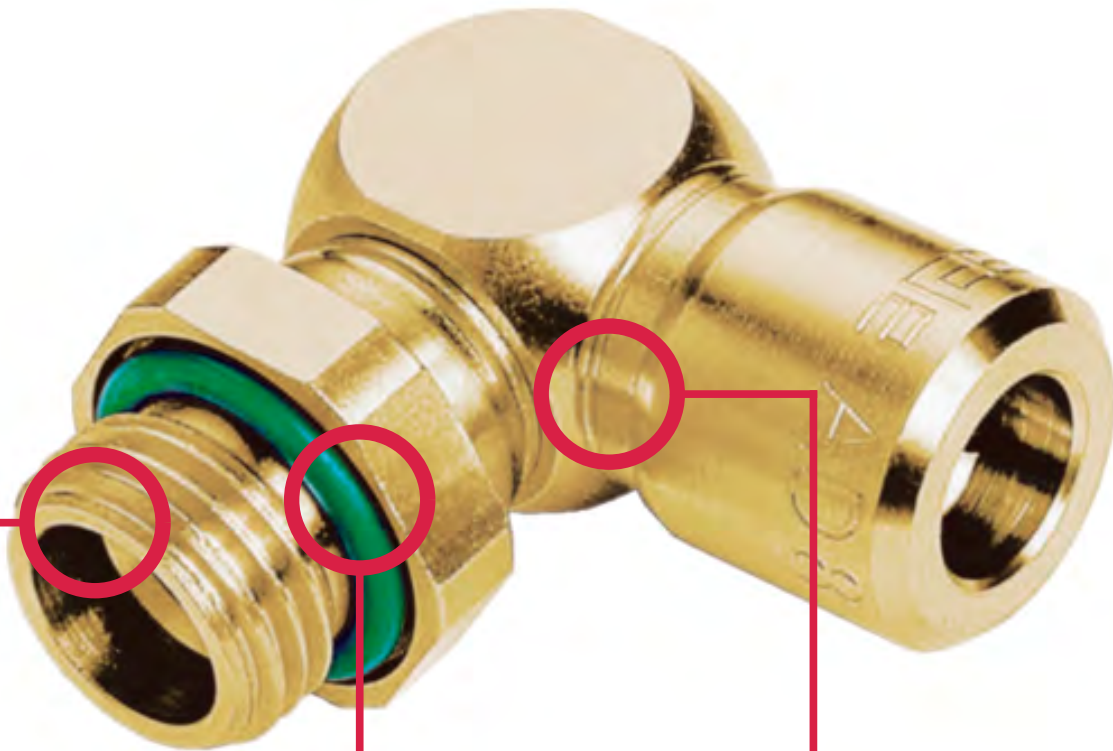


- Combination between cutting ring screw joint and plug connector
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	for pipe A	for tube B	SW1	L1	L2	L3	L4	t1	t2	b	D	NW	g/piece
VT2646-0604	6	OD6	14	32	26	20,5	26,5	16	17	12	11,4	4,5	35
VT2646-0606	6	OD8	14	34	27	24,5	31,5	18	17	14	14,6	6,5	46
VT2646-0608	6	OD10	14	36	28	28	36	21	17	16	16,6	4,5	56
VT2646-0804	8	OD6	17	34	27	21,5	28,5	16	17	14	11,4	4,5	50
VT2646-0806	8	OD8	17	34	27	24,5	31,5	18	17	14	14,6	6,5	53
VT2646-0808	8	OD10	17	36	28	28	36	21	17	16	16,6	6,5	63
VT2646-1006	10	OD8	19	38	30	25,5	33,5	18	18	16	14,6	6,5	70
VT2646-1008	10	OD10	19	38	29,5	28	36	21	18	16	16,6	8,5	71



## Series 2400 - Plug connectors with release sleeve and 2 seals



2400

### Maximum security against leakage

- Two seals minimize the risk of leakage considerably
- Dezincification-resistant brass, suitable for almost all applications with water
- High-quality seals made out of FPM

### Sophisticated technology for all applications

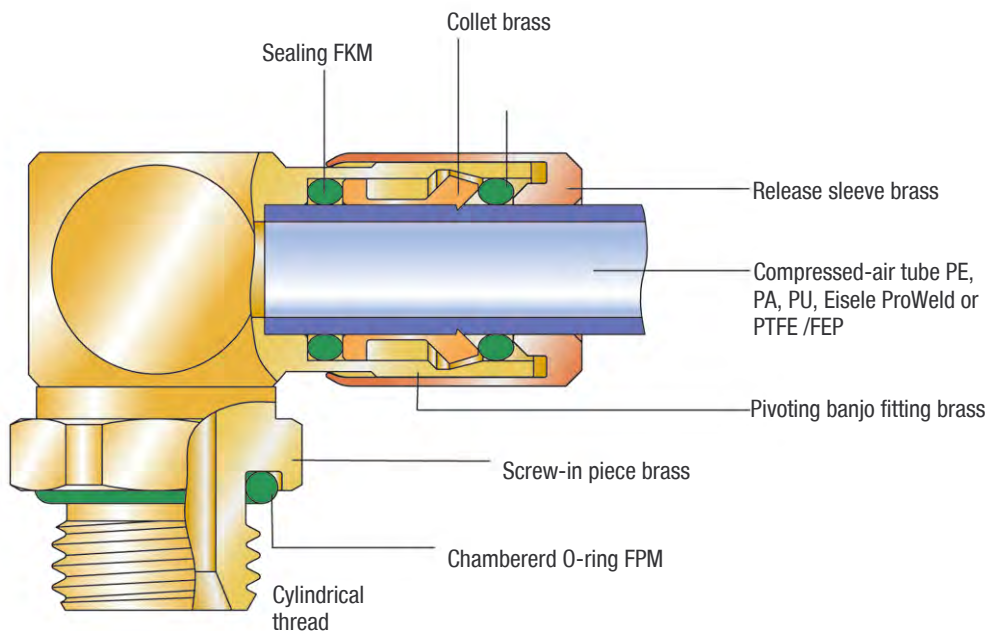
- Patented system with 2 seals
- Dirt-repellent release sleeve
- Resistant against weld spatters
- Shut-off valve optionally available
- Exclusive design

### Perfect for high pressures

- High pressures up to 1450 psi (100 bar) possible by using fluids in conjunction with pipes
- Ideal for the use with compressed air up to 348 psi (24 bar)
- Full tube passage

The connector for applications with the highest requirements.

## Functional principle



The collet guarantees the secure clamp of the plugged in tube. The external release sleeve protects the connector of dirt and makes it possible to release the tube without any tools. Through the patented 2-sealing system the use of this plug-in technology is also possible in areas in which leakage is not allowed. E.g. electrical contacts or measuring devices.

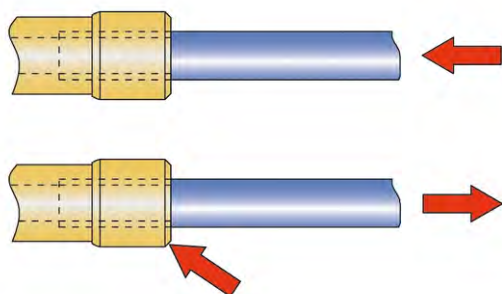
## Range of application

- Cooling water systems with medium pressure from -14 to 348 psi (-0.95 to 24)
- Heat sink connections for power electronics
- Lubricating lines

## Service conditions

- Temperature range: -4 to 248 °F (-20 to +120°C)
- Working pressure range -14 to 348 psi (-0.95 to 24 bar), depending on the used tube
- Suitable for vacuum
- 2-sealing system for reliable tight connections
- Full tube passage
- Flow-rate optimized
- Dirt-repellent design
- Fast assembly
- Disassembly without tools possible
- Thread with chambered O-Ring

## Handling



Assembly: Push release sleeve, push tube into the connector up to the limit stop

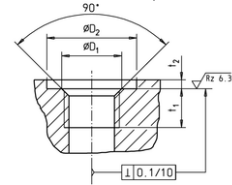
Disassembly: Push release sleeve, pull out tube

## Connection thread, cylindrical

Thread	Thread depth t1 min. (mm)	Thread counterbore ØD1 max. (mm)	Counterbore <sup>1)</sup>		Torque <sup>2)</sup>			Thread standards
			ØD2 min. (mm)	t2 max. (mm)	min. (Nm)	max. (Nm)	recommen- dation (Nm)	
G1/8	5.5	11	15.3	0,5	5,5	9	7	Pipe thread G: DIN ISO 228
G1/4	7.5	14.2	19	0,5	7	18	12	
G3/8	7.5	17.5	23	0,5	10	25	15	
G1/2	9.5	22	27	0,5	15	34	20	

<sup>1)</sup> A counterbore is not necessary. However, the indicated values apply if a counterbore is applied.

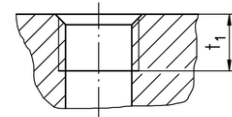
<sup>2)</sup> Information about torques for hexagon socket on demand (assembly instructions 800 00 / 00-1)



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## Connection thread, conical

Thread	Thread depth t1 min. (mm)	Torque			Thread standard
		min. (Nm)	max. (Nm)	recommendation (Nm)	
NPT1/8, R1/8	7,4	5,5	10	7	Pipe thread ISO 7-1 / EN 10226-1
NPT1/4, R1/4	11	7,5	15	12	
NPT3/8, R3/8	11,4	12,5	20	16	
NPT1/2, R1/2	15	20	30	25	
NPT3/4, R3/4	16,3	30	50	40	



## Tubes

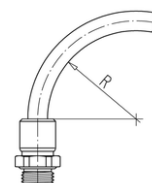
Tube dimension		Polyethylene (PE) Temperature range 14 to 104°F (-10 to +40°C)		Polyamide (PA) Temperature range -76 to 212°F (-60 to +100°C)		Polyurethane (PU) Temperature range -31 to 158°F (-35 to +70°C)		ProWeld (PUR) <sup>1)</sup> Temperature range -31 to 194°F (-35 to +90°C)		Teflon (PTFE) /FEP <sup>2)</sup> Temperature range -31 to 248°F (-35 to +120°C)	
Outside-Ø	Inside-Ø	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)
4 (±0,1)	(2)	20	290 psi (20 bar)	20	435 psi (30 bar)	10	145 psi (10 bar)	10	290 psi (20 bar)	16	362 psi (25 bar)
4,3 (±0,1)	(3)	20	188 psi (13 bar)	20	290 psi (20 bar)	10	145 psi (10 bar)	-	-	35	145 psi (10 bar)
5 (±0,1)	(3)	25	217 psi (15 bar)	25	362 psi (25 bar)	11	145 psi (10 bar)	-	-	25	290 psi (20 bar)
6 (±0,1)	(4)	30	188 psi (13 bar)	30	290 psi (20 bar)	15	145 psi (10 bar)	15	159 psi (11 bar)	35	217 psi (15 bar)
8 (±0,15)	(6)	40	116 psi (8 bar)	40	217 psi (15 bar)	20	130 psi (9 bar)	20	130 psi (9 bar)	65	159 psi (11 bar)
10 (±0,15)	(8)	60	87 psi (6 bar)	60	174 psi (12 bar)	40	116 psi (8 bar)	25	203 psi (14 bar)	100	130 psi (9 bar)
12 (±0,15)	(9)	60	130 psi (9 bar)	85	217 psi (15 bar)	50	145 psi (10 bar)	30	145 psi (10 bar)	100	130 psi (9 bar)
14 (±0,15)	(11)	90	116 psi (8 bar)	80	174 psi (12 bar)	60	109 psi (7,5 bar)	45	130 psi (9 bar)	140	130 psi (9 bar)
16 (±0,15)	(12)	90	87 psi (6 bar)	90	159 psi (11 bar)	45	145 psi (10 bar)	50	130 psi (9 bar)	-	-
20 (±0,2)	(14)	-	-	-	-	-	-	-	116 psi (8 bar)	-	-
1/4" (6,3±0,1)	(4)	-	-	23	290 psi (20 bar)	-	-	10	145 psi (10 bar)	-	-
3/8" (9,5±0,15)	(6)	-	-	32	275 psi (19 bar)	-	-	25	130 psi (9 bar)	-	-
1/2" (12,7±0,15)	(8)	-	-	60	260 psi (19 bar)	-	-	23	130 psi (9 bar)	-	-
5/8" (15,9±0,15)	(11)	-	-	-	-	-	-	-	-	-	-

The mounted compressed-air tubes are not to be exposed to tensile loading.

<sup>1)</sup> In the case of Eisele ProWeld tubes a smaller inside diameter results from a partially larger wall thickness.

<sup>2)</sup> Important notes for the use of compressed-air tubes made of PTFE (Teflon) and FEP:

- The outside diameter of compressed-air tubes must be free of grooves and other damages (e.g. damage from installation tools).
- Prior to assembly, use the Eisele tube cutter Art. No. 99605-0014 or Art. No. 99606-0022 to cut compressed-air tubes at a right angle. Ensure that tubes are not being deformed or damaged during the cutting process.
- During assembly, compressed-air tubes must be pressed until the bottom of the plug connectors to achieve proper tightness.



## Threaded connectors

starting on page 29



Straight threaded connectors

page 29



Angled threaded connectors

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## Plug connector

starting on page 33



T-connectors

page 33



Bulkhead connectors

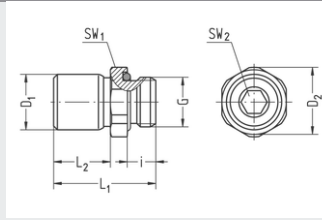
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## Accessories

starting on page 48

## Screw-in connector

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>



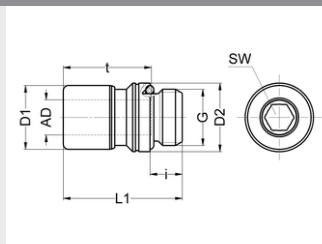
Part no.	G	for tube	SW1	SW2	i	L1	L2	D1	D2	NW	g/piece
VT2428-0202	G1/8	OD4	13	3	5.5	19	9,8	8,8	14.2	3	9
VT2428-0204	G1/8	OD6	13	5	5.5	25	15,6	11,6	14.2	4,5	12
VT2428-0206	G1/8	OD8	14	5	5.5	28,8	19,5	14,8	15.2	5	18
VT2428-0208	G1/8	OD10	15	5	5.5	33	22	16,8	16,5	5	24
VT2428-0404	G1/4	OD6	17	5	7.5	23,5	11,8	11,6	18.5	5	18
VT2428-0406	G1/4	OD8	17	6	7.5	27	15,3	14,8	18.5	6	21
VT2428-0408	G1/4	OD10	17	8	7.5	34	22,3	16,8	18.5	8	27
VT2428-0409	G1/4	OD12	20	8	7.5	39,5	24,8	20,1	21.8	8	42
VT2428-0606	G3/8	OD8	20	6	7.5	28	15,3	14,8	21.8	6	32
VT2428-0608	G3/8	OD10	20	8	7.5	30,5	17,5	16,8	21.8	8	33
VT2428-0609	G3/8	OD12	20	9	7.5	36,5	23,5	20,1	21.8	9	41
VT2428-0611	G3/8	OD14	20	10	7.5	43	27,5	22,1	21,8	11	47
VT2428-0612	G3/8	OD16	24	10	7.5	46	30,5	25,1	23,4	12,5	63
VT2428-0806	G1/2	OD8	24	6	9.5	34	18,5	14,8	26.2	6,5	48
VT2428-0808	G1/2	OD10	24	8	9.5	37	20,5	16,8	26.2	8,5	50
VT2428-0809	G1/2	OD12	24	9	9.5	39	22,5	20,1	26.2	9	55
VT2428-0811	G1/2	OD14	24	10	9.5	40,5	24	22,1	26.2	11	57
VT2428-0812	G1/2	OD16	24	12	9.5	46	30	25,1	26.2	12,5	64

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

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## Screw-in connector

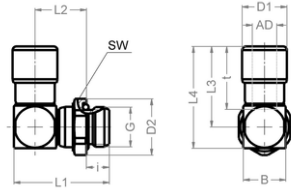
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>



Part no.	G	for tube	SW	i	L1	D1	D2	t	NW	g/piece
VT2462-0206	G1/8	8	5	5,5	29	14,8	11,9	21	5,5	16
VT2462-0406	G1/4	8	5	7,5	27,7	14,8	15,9	20,5	6,5	20

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Elbow screw-in connector, swiveling



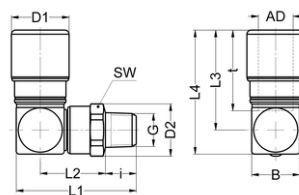
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>
- Not designed for steady motion of the tube

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Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	D2	t	NW	g/piece
VT2404-0202	G1/8	OD4	13	5,5	23	13	17,8	22,3	9	8,8	14,2	13,7	2,5	15
VT2404-0204	G1/8	OD6	13	5,5	26	15	22	27,5	11	11,6	14,2	17,1	4,5	23
VT2404-0206	G1/8	OD8	13	5,5	31,5	19	26,5	33,5	14	14,8	15,2	20,3	5,5	42
VT2404-0208	G1/8	OD10	13	5,5	31,5	19	29	36	14	16,8	15,2	23,3	5,5	45
VT2404-0404	G1/4	OD6	17	7,5	27	14	22	27,5	11	11,6	18,5	17,1	4,5	29
VT2404-0406	G1/4	OD8	17	7,5	31,5	17	26,5	33,5	14	14,8	18,5	20,3	6,5	44
VT2404-0408	G1/4	OD10	17	7,5	36,3	20,8	29	37	16	16,8	18,5	23,3	8,5	54
VT2404-0409	G1/4	OD12	17	7,5	36,3	20,8	35	43	16	20,1	18,5	28,3	8,5	65
VT2404-0604	G3/8	OD6	17	7,5	27	14	22	27,5	11	11,6	21,8	17,1	4,5	31
VT2404-0606	G3/8	OD8	17	7,5	30	15,5	26,5	33,5	14	14,8	21,8	20,3	6,5	49
VT2404-0608	G3/8	OD10	17	7,5	33,3	17,8	30	38	16	16,8	21,8	23,3	8,5	59
VT2404-0609	G3/8	OD12	17	7,5	40,3	22,8	37	47	20	20,1	21,8	28,3	8,5	97
VT2404-0611	G3/8	OD14	17	7,5	43,5	25	41	52	22	22,1	21,8	31,2	11	116
VT2404-0612	G3/8	OD16	17	7,5	46	26,5	48,3	60,3	24	25,1	23,4	36,5	12,5	154
VT2404-0806	G1/2	OD8	20	9,5	33,5	17	26,5	33,5	14	14,8	26,2	20,3	6,5	70
VT2404-0808	G1/2	OD10	20	9,5	35,8	18,3	30	38	16	16,8	26,2	23,3	8,5	80
VT2404-0809	G1/2	OD12	20	9,5	39,8	20,3	37	47	20	20,1	26,2	28,3	9	111
VT2404-0811	G1/2	OD14	20	9,5	42,5	22	41	52	22	22,1	26,2	31,2	11	127
VT2404-0812	G1/2	OD16	20	9,5	47,5	26	48,8	60,8	24	25,1	26,2	36,5	12,5	163

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Elbow screw-in connector, swiveling with R-thread



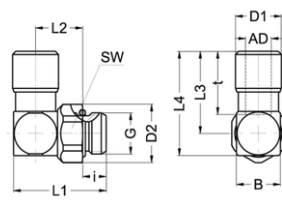
- Whitworth conical pipe thread ISO 7-1 / EN10226-1
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)
- Not designed for steady motion of the tube

Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	D2	t	NW	g/piece
VT2406-0206	R1/8	OD8	14	9	35	28	26,5	33,5	14	14,8	15,2	20,3	5,5	45
VT2406-0208	R1/8	OD10	14	9	35	28	29	36	14	16,8	15,2	23,4	5,5	47

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Elbow screw-in connector, lockable

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring, FPM seals
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>
- Stiff angular shape, can be locked with jam nut

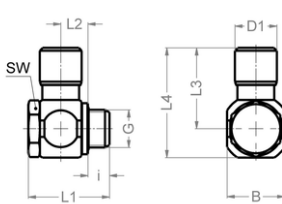


Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	D2	t	NW	g/piece
VT2440-0204	G1/8	OD6	13	5,5	22,5	17	23,5	29	11	11,4	14,2	17,1	5,2	23
VT2440-0206	G1/8	AD5/16" (8)	13	5,5	26,5	19,5	27,7	34,7	14	14,6	14,2	21,3	5,5	38
VT2440-0208	G1/8	OD10	13	5,5	29	21	32,5	40,5	16	16,6	14,2	23,4	5,5	52
VT2440-0404	G1/4	OD6	17	7,5	27,5	22,5	23	28,5	11	11,6	18,5	17	5,5	35
VT2440-0406	G1/4	AD5/16" (8)	17	7,5	29,5	22,5	28	35	14	14,8	18,5	20,3	6,5	48
VT2440-0408	G1/4	OD10	17	7,5	31,5	23,5	32	40	16	16,8	18,5	23	8	59
VT2440-0409	G1/4	OD12	17	7,5	33,5	24,5	38,5	47,5	18	20,1	18,5	31,3	8,5	79
VT2440-0609	G3/8	OD12	20	7,5	33,5	24,5	38,5	47,5	18	20,1	21,8	28,3	8,5	87
VT2440-0612	G3/8	OD16	20	7,5	39,5	20	42,4	54,4	24	24,9	21,8		11,5	128
VT2440-0806	G1/2	AD5/16" (8)	24	9,5	37	28,5	28,5	35,5	14	14,8	26,2	20,3	6,5	79
VT2440-0809	G1/2	OD12	24	9,5	39,2	30,2	38,5	47,5	18	20,1	26,2	28,3	9,5	118

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Single swivel joint

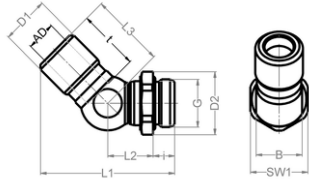
- Whitworth pipe thread DIN ISO 228
- VS seal rings
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>



Part no.	G	for tube	SW	i	L1	L2	L3	L4	B	D1	NW	g/piece
VT2434-0202K	G1/8	OD4	13	5,5	26,5	9,5	24,5	32,5	16	8,5	2,5	39
VT2434-0204K	G1/8	OD6	13	5,5	26,5	9,5	23,5	31,5	16	11,5	5	38
VT2434-0206K	G1/8	OD8	13	5,5	26,5	9,5	26,5	34,5	16	14,8	6	45
VT2434-0208K	G1/8	OD10	13	5,5	26,5	9,5	29,5	37	16	16,8	6	47
VT2434-0404K	G1/4	OD6	17	7,5	28,7	9,5	23	33	20	11,5	5	58
VT2434-0406K	G1/4	OD8	17	7,5	28,7	9,5	28,5	38,5	20	14,8	6	59
VT2434-0408K	G1/4	OD10	17	7,5	28,7	9,5	30,5	40,5	20	16,8	8	62
VT2434-0409K	G1/4	OD12	17	7,5	33,5	11,7	36	46	20	20	8	84

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Elbow screw-in connector 45°, swiveling



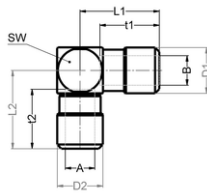
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>
- Not designed for steady motion of the tube

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Part no.	G	for tube	SW1	i	L1	L2	L3	B	D1	D2	t	NW	g/piece
VT2498-0202	G1/8	OD4	17	5,5	31,3	11,3	16,5	8,5	8,5	14,2	13,7	2,5	14
VT2498-0204	G1/8	OD6	17	5,5	35,3	12,9	19	11	11,5	14,2	17,1	4,2	19
VT2498-0206	G1/8	OD8	17	5,5	42,8	16,6	23	14	14,5	15,2	20,3	5,5	35
VT2498-0208	G1/8	OD10	17	5,5	45,6	16,6	26	16	16,5	15,5	23,3	5,5	43
VT2498-0404	G1/4	OD6	20	7,5	35,3	10,9	19	11	11,5	18,5	17,1	4,2	23
VT2498-0406	G1/4	OD8	20	7,5	42,8	14,6	23	14	14,5	18,5	20,3	6,5	36
VT2498-0408	G1/4	OD10	20	7,5	49,7	18,8	26	16	16,5	18,5	23,3	8,5	48
VT2498-0409	G1/4	OD12	22	7,5	53	18,8	30,5	16	20	18,5	28,3	8,5	55
VT2498-0606	G3/8	OD8	24	7,5	41,3	13,1	23	14	14,5	21,8	20,3	6,5	41
VT2498-0608	G3/8	OD10	24	7,5	46,7	15,9	26	16	16,5	21,8	23,3	8,5	51
VT2498-0609	G3/8	OD12	24	7,5	54,7	18,8	32	20	20	21,8	28,3	9	77
VT2498-0611	G3/8	OD14	24	7,5	59,3	20,7	35	22	22	23,8	31,2	11	91
VT2498-0612	G3/8	OD16	24	7,5	66,1	22,2	41	24	25	26,2	36,5	12,5	110
VT2498-0806	G1/2	OD8	24	9,5	44,8	14,6	23	14	14,5	26,2	20,3	6,5	60
VT2498-0808	G1/2	OD10	24	9,5	49,2	16,3	26	16	16,5	26,2	23,3	8,5	69
VT2498-0809	G1/2	OD12	24	9,5	54,3	16,4	32	20	20	26,2	28,3	9	89
VT2498-0811	G1/2	OD14	24	9,5	58,3	17,7	35	22	22	26,2	31,2	11	101
VT2498-0812	G1/2	OD16	24	9,5	67,6	21,7	41	24	25	26,2	36,5	12,5	119

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Elbow connector



- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>

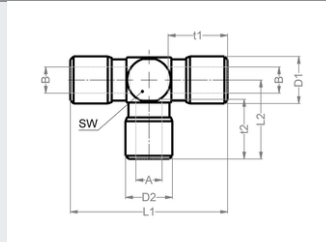
Part no.	for tube A	for tube B	SW	L1	L2	D1	D2	t1	t2	NW	g/piece
VT2477-0200	OD4	OD4	9	16,7	16	8,5	8,5	13,7	13,7	2	10
VT2477-0400	OD6	OD6	11	20	20	11,5	11,5	17,1	17,1	4	19
VT2477-0600	OD8	OD8	14	24,5	24,5	14,5	14,5	20,3	20,3	6	37
VT2477-0800	OD10	OD10	16	28	28	16,5	16,5	23,3	23,3	8	43
VT2477-0900	OD12	OD12	20	34,5	34	20	20	28,3	28,3	9	92
VT2477-1100	OD14	OD14	22	38	38	22	22	31,2	31,2	11	112
VT2477-1200	OD16	OD16	24	42,5	42,5	25	25	36,5	36,5	12	145

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.



## T-connector

- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>



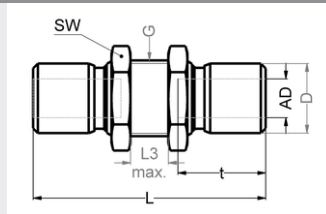
Part no.	for tube A	for tube B	SW	L1	L2	D1	D2	t1	t2	NW	g/piece
VT2478-0200	OD4	OD4	9	33,4	16	8,5	8,5	13,7	13,7	2	12
VT2478-0206	OD4	OD8	14	45	18,5	8,5	14,5	13,7	20,3	2	38
VT2478-0400	OD6	OD6	11	40	20	11,5	11,5	17,1	17,1	4	24
VT2478-0409	OD6	OD12	20	61	24,5	11,5	20	17,1	28,3	4	92
VT2478-0600	OD8	OD8	14	49	24,5	14,5	14,5	20,3	20,3	6	47
VT2478-0608	OD8	OD10	16	56	27	14,5	16,5	20,3	23,3	6	61
VT2478-0609	OD8	OD12	20	69	29,5	14,5	20	20,3	28,3	6	104
VT2478-0800	OD10	OD10	16	56	28	16,5	16,5	23,3	23,3	8	56
VT2478-0900	OD12	OD12	20	69	34	20	20	28,3	28,3	9	114
VT2478-1100	OD14	OD14	22	76	37,5	22	22	31,2	31,2	11	139
VT2478-1200	OD16	OD16	24	84,5	42,5	25	25	36,5	36,5	12	185

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

2400

## Bulkhead connector

- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>

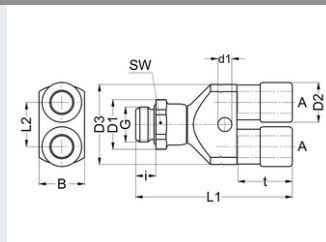


Part no.	for tube	G	SW	L	L3 max.	D	t	NW	g/piece
VT2480-0202	OD4	M12x1	14	34	6	8,5	13,7	2	20
VT2480-0404	OD6	M14x1	17	43	8	11,5	17,1	4	37
VT2480-0606	OD8	M16x1	19	49	8	14,5	20,3	6	52
VT2480-0808	OD10	M18x1	22	56	10	16,5	23,3	8	70
VT2480-0909	OD12	M22x1	27	63	12	20	28,3	9	117
VT2480-1111	OD14	M24x1	30	66	12	22	31,2	11	137
VT2480-1212	OD16	M27x1	32	72	12	25	36,5	12	185

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Y-plug, swiveling

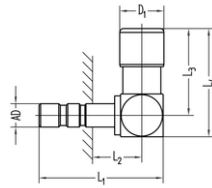
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>
- Not designed for steady motion of the tube



Part no.	G	for tube A	SW	i	L1	L2	D1	D2	B	d1	NW	g/piece
VT2472-0406	G1/4	OD8	17	7,5	58,5	16,5	18,5	14,8	17	5,2	6	91

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Elbow plug



- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)<sup>1)</sup>

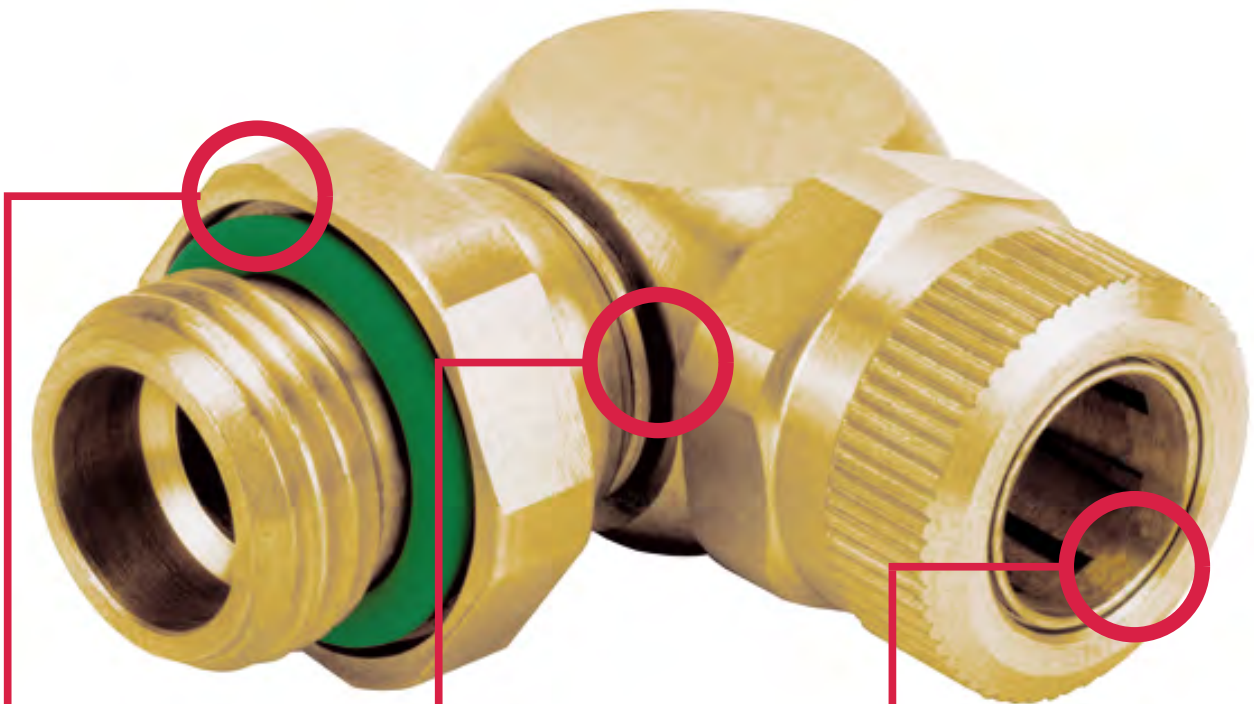
2400

Part no.	Daimler order no.	plug AD	for tube	L1	L2	L3	L4	D1	NW	g/piece
VT2441-0606		8	OD8	38	12,5	26,5	33,5	14,8	6	33

<sup>1)</sup> Depending on the tubes used, pressures up to 1450 psi (100 bar) are possible. Please enquire.

## Series 2500 - Screw joints with larger nominal width

2500



### Classical Screw joints

- Patented screw joint technique with 1 seal
- Dezincification-resistant brass, suitable for almost all applications with water
- High-quality seals made of FPM

### Outstanding retention ability

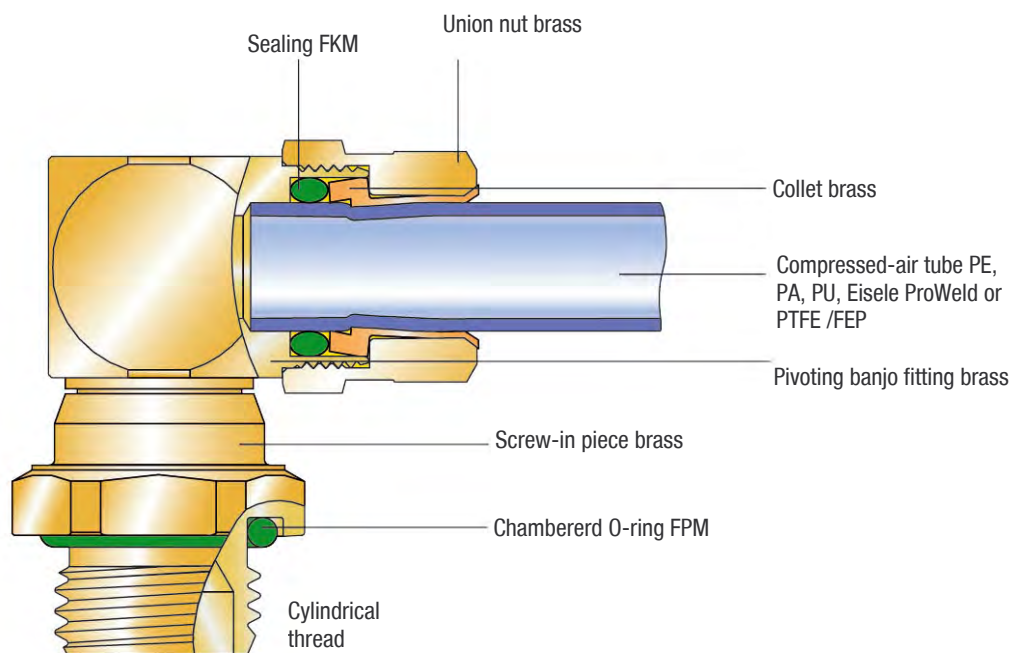
- Maximum tube retention force
- Even after a long time the tube can still be released and screwed together

### Intuitive handling and assembly

- Full tube passage
- Intuitive assembly through touchable end stop
- Closed position viewable

Modern screw joints for applications with high requirements regarding the retention form.

## Functional principle



Insert the union nut over the tube. Then the tube is plugged-in in the pre-assembled screw-joint. The collet securely holds the tube after the union nut is tightened. Even after a long time the union nut with tube can still be released and screwed together without any damage.

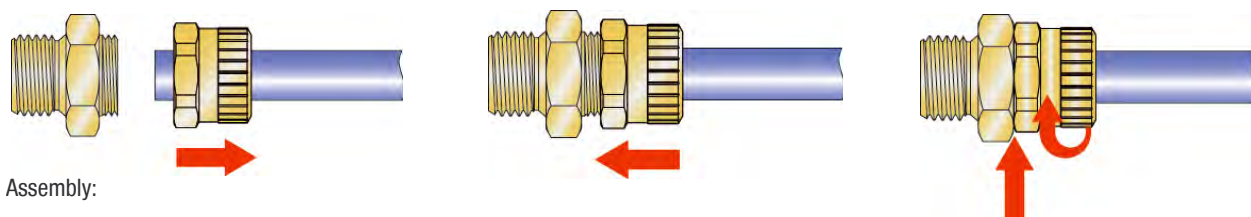
## Range of application

- Connections with high requirements regarding the retention force
- Connections with tube movement
- Moveable systems with high dynamics
- Strong fluctuating pressures and pressure surges

## Service conditions

- Temperature range: -4 to 248 °F (-20 to +120°C) (VTT seals with extended temperature range on request)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar), depending on the used tube
- Acceptable media: cooling water, air
- Suitable for vacuum
- Full tube passage
- Flow-rate optimized
- Disassembly without tube damage possible
- Intuitive handling through touchable end stop
- Closed position is visible from the outside

## Handling



Assembly:

1. Insert the union nut over the tube

2. Press tube fully into the fitting, a slight twisting movement facilitates insertion

3. Tighten union nut to stop by hand or with an open-end wrench

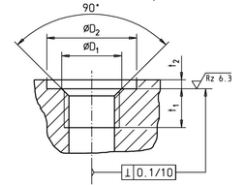
2500

## Connection thread, cylindrical

Thread	Thread depth t1 min. (mm)	Thread counterbore ØD1 max. (mm)	Counterbore <sup>1)</sup>		Torque <sup>2)</sup>			Thread standards
			ØD2 min. (mm)	t2 max. (mm)	min. (Nm)	max. (Nm)	recommen- dation (Nm)	
G1/8	5.5	11	15.3	0,5	5,5	9	7	Pipe thread G: DIN ISO 228
G1/4	7.5	14.2	19	0,5	7	18	12	
G3/8	7.5	17.5	23	0,5	10	25	15	
G1/2	9.5	22	27	0,5	15	34	20	

<sup>1)</sup> A counterbore is not necessary. However, the indicated values apply if a counterbore is applied.

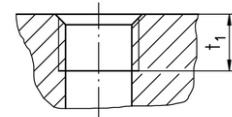
<sup>2)</sup> Information about torques for hexagon socket on demand (assembly instructions 800 00 / 00-1)



2500

## Connection thread, conical

Thread	Thread depth t1 min. (mm)	Torque			Thread standard
		min. (Nm)	max. (Nm)	recommendation (Nm)	
NPT1/8, R1/8	7,4	5,5	10	7	Pipe thread ISO 7-1 / EN 10226-1
NPT1/4, R1/4	11	7,5	15	12	
NPT3/8, R3/8	11,4	12,5	20	16	
NPT1/2, R1/2	15	20	30	25	
NPT3/4, R3/4	16,3	30	50	40	



## Tubes

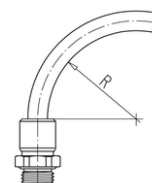
Tube dimension		Polyethylene (PE) Temperature range 14 to 104°F (-10 to +40°C)		Polyamide (PA) Temperature range -76 to 212°F (-60 to +100°C)		Polyurethane (PU) Temperature range -31 to 158°F (-35 to +70°C)		ProWeld (PUR) <sup>1)</sup> Temperature range -31 to 194°F (-35 to +90°C)		Teflon (PTFE) /FEP <sup>2)</sup> Temperature range -31 to 248°F (-35 to +120°C)	
Outside-Ø	Inside-Ø	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)
4 (±0,1)	(2)	20	290 psi (20 bar)	20	435 psi (30 bar)	10	145 psi (10 bar)	10	290 psi (20 bar)	16	362 psi (25 bar)
4,3 (±0,1)	(3)	20	188 psi (13 bar)	20	290 psi (20 bar)	10	145 psi (10 bar)	-	-	35	145 psi (10 bar)
5 (±0,1)	(3)	25	217 psi (15 bar)	25	362 psi (25 bar)	11	145 psi (10 bar)	-	-	25	290 psi (20 bar)
6 (±0,1)	(4)	30	188 psi (13 bar)	30	290 psi (20 bar)	15	145 psi (10 bar)	15	159 psi (11 bar)	35	217 psi (15 bar)
8 (±0,15)	(6)	40	116 psi (8 bar)	40	217 psi (15 bar)	20	130 psi (9 bar)	20	130 psi (9 bar)	65	159 psi (11 bar)
10 (±0,15)	(8)	60	87 psi (6 bar)	60	174 psi (12 bar)	40	116 psi (8 bar)	25	203 psi (14 bar)	100	130 psi (9 bar)
12 (±0,15)	(9)	60	130 psi (9 bar)	85	217 psi (15 bar)	50	145 psi (10 bar)	30	145 psi (10 bar)	100	130 psi (9 bar)
14 (±0,15)	(11)	90	116 psi (8 bar)	80	174 psi (12 bar)	60	109 psi (7,5 bar)	45	130 psi (9 bar)	140	130 psi (9 bar)
16 (±0,15)	(12)	90	87 psi (6 bar)	90	159 psi (11 bar)	45	145 psi (10 bar)	50	130 psi (9 bar)	-	-
20 (±0,2)	(14)	-	-	-	-	-	-	-	116 psi (8 bar)	-	-
1/4" (6,3±0,1)	(4)	-	-	23	290 psi (20 bar)	-	-	10	145 psi (10 bar)	-	-
3/8" (9,5±0,15)	(6)	-	-	32	275 psi (19 bar)	-	-	25	130 psi (9 bar)	-	-
1/2" (12,7±0,15)	(8)	-	-	60	260 psi (19 bar)	-	-	23	130 psi (9 bar)	-	-
5/8" (15,9±0,15)	(11)	-	-	-	-	-	-	-	-	-	-

The mounted compressed-air tubes are not to be exposed to tensile loading.

<sup>1)</sup> In the case of Eisele ProWeld tubes a smaller inside diameter results from a partially larger wall thickness.

<sup>2)</sup> Important notes for the use of compressed-air tubes made of PTFE (Teflon) and FEP:

- The outside diameter of compressed-air tubes must be free of grooves and other damages (e.g. damage from installation tools).
- Prior to assembly, use the Eisele tube cutter Art. No. 99605-0014 or Art. No. 99606-0022 to cut compressed-air tubes at a right angle. Ensure that tubes are not being deformed or damaged during the cutting process.
- During assembly, compressed-air tubes must be pressed until the bottom of the plug connectors to achieve proper tightness.



## Threaded connectors

starting on page 39



Straight threaded connectors

Seite 39



Angled threaded connectors

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## Plug connector

starting on page 43



Elbow connectors

page 43



T-connectors

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Bulkhead connectors

page 44

## Adapter pipe/tube

starting on page 44



Double screw joints

page 44



Elbow screw joints

page 45

## Push-through screw joints

starting on page 45

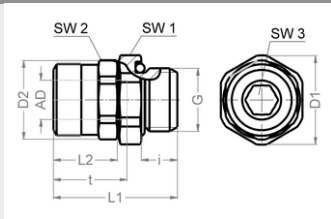
## Accessories

starting on page 48

2500

## Screw-in connector

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

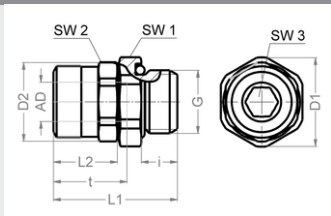


Part no.	G	for tube	SW1	SW2	SW3	i	L1	L2	D1	D2	t	NW	g/piece
VT2528-0202	G1/8	OD4	13	10	3	5,5	22	11,6	14,2	11,2	13	3	12
VT2528-0204	G1/8	OD6	13	12	4	5,5	23,8	13	14,2	13,1	15	4,5	14
VT2528-0206	G1/8	OD8	14	15	5	5,5	25,5	15	15,2	16,4	17	5,2	17
VT2528-0208	G1/8	OD10	17	17	5	5,5	28	15,5	18,5	18,5	18,5	5,2	27
VT2528-0402	G1/4	OD4	17	10	3	7,5	24,3	11,8	18,5	11,2	13	3	19
VT2528-0404	G1/4	OD6	17	12	4	7,5	25,8	13	18,5	13,1	15	4,5	21
VT2528-0406	G1/4	OD8	17	15	6	7,5	27,5	15	18,5	16,4	17	6,5	24
VT2528-0408	G1/4	OD10	17	17	8	7,5	28,8	15	18,5	18,5	18	8,5	26
VT2528-0409	G1/4	OD12	20	22	8	7,5	32	16,5	21,8	23,5	20	8,5	49
VT2528-0606	G3/8	OD8	20	15	6	7,5	27,5	15	21,8	16,4	17	6,5	30
VT2528-0608	G3/8	OD10	20	17	8	7,5	28	15	21,8	18,5	18	8,5	32
VT2528-0609	G3/8	OD12	22	22	9	7,5	32	16,5	23,8	23,5	20	8,5	59
VT2528-0611	G3/8	OD14	22	24	10	7,5	33,2	17,7	23,8	25,5	21,7	10,5	60
VT2528-0808	G1/2	OD10	24	17	8	9,5	31	15	26,2	18,5	18	8,5	53
VT2528-0809	G1/2	OD12	24	22	10	9,5	32	16,5	26,2	23,5	20	10,5	64
VT2528-0811	G1/2	OD14	24	24	12	9,5	33,2	17,7	26,2	25,5	21,7	12,5	65
VT2528-0812	G1/2	OD16	27	27	14	9,5	42,3	22,8	29,8	29,8	30	13,5	105
VT2528-0815	G1/2	OD20	30	32	14	9,5	42,3	22,8	33,5	35	30	14,5	118

2500

## Screw-in connector

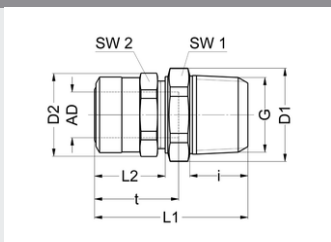
- Thread metric
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)



Part no.	G	for tube	SW1	SW2	SW3	i	L1	L2	D1	D2	t	NW	g/piece
VT2529-5406	M10x1	OD8	14	15		5,5	27,5	15	15	16,4	16,4	5,5	22
VT2529-5408	M10x1	OD10	17	17	5	5,5	28	15,5	18,5	18,5	18,5	5,5	27

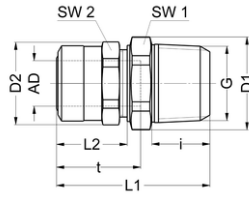
## Screw-in connector with NPT-thread

- Thread NPT
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)



Part no.	G	for tube	SW1	SW2	i	L1	L2	D1	D2	t	NW	g/piece
VT2530-0608	NPT3/8	OD10	19	17	13	33,5	15,5	20,7	18,5	18	5,5	39

## Screw-in connector with R-thread

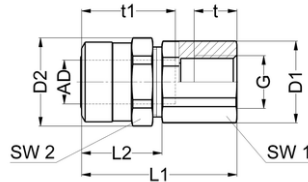
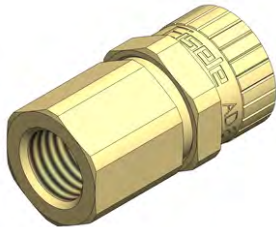


- Whitworth conical pipe thread ISO 7-1/EN10226-1
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range -4 to 248 °F (-20 to +120 °C)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar)

Part no.	G	for tube	SW1	SW2	i	L1	L2	D1	D2	t	NW	g/piece
VT2531-0208	R1/8	OD10	17	17	5,5	28	15,5	18,5	18,5	18,5	5,2	27
VT2531-0809	R1/2	OD12	22	22	9,5	40	16,5	24	23,5	20	10,5	79

2500

## Straight screw-in connector with female thread



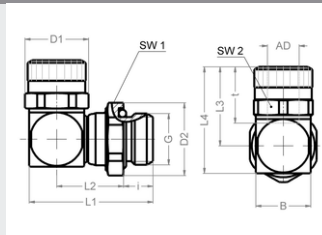
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	G	for tube	SW1	SW2	L1	L2	D1	D2	t	t1	NW	g/piece
VT2517-0106	G1/8	OD8	14	15	29	15	15,2	16,4	8	17,5	6,5	25



## Elbow screw-in connector, swiveling

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

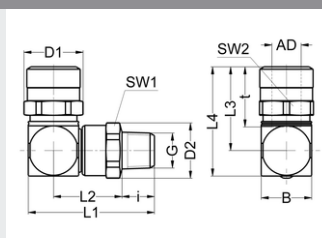


Part no.	G	for tube	SW1	SW2	i	L1	L2	L3	L4	D1	D2	t	B	NW	g/piece
VT2504-0202	G1/8	OD4	13	10	5,5	23	13	17	21	11,2	14,2	13	9	3	18
VT2504-0204	G1/8	OD6	14	12	5,5	26	15	20	25	13,1	14,2	15	11	4,5	24
VT2504-0206	G1/8	OD8	14	15	5,5	31,5	19	23	30	16,4	15,2	17	14	5,5	42
VT2504-0208	G1/8	OD10	14	17	5,5	32,5	19,5	25	33	18,5	15,2	19	15	5,5	50
VT2504-0402	G1/4	OD4	17	10	7,5	25	13	17	21	11,2	18,5	13	9	3	24
VT2504-0404	G1/4	OD6	17	12	7,5	27	14	20	25	13,1	18,5	15	11	4,5	30
VT2504-0406	G1/4	OD8	17	15	7,5	31,5	17	23	30	16,4	18,5	17	14	6,5	43
VT2504-0408	G1/4	OD10	17	17	7,5	36,3	20,8	25	33	18,5	18,5	18	16	8,5	56
VT2504-0409	G1/4	OD12	17	22	7,5	36,3	20,8	29,7	38	23,5	18,5	20	16	8,5	79
VT2504-0411	G1/4	OD14	17	24	7,5	36,3	20,8	31,6	39,9	25,5	18,5	21,7	16	8,5	85
VT2504-0604	G3/8	OD6	20	12	7,5	27	14	20	25	13,1	21,8	15	11	4,5	38
VT2504-0606	G3/8	OD8	20	15	7,5	30	15,5	23	30	16,5,4	21,8	17	14	6,5	50
VT2504-0608	G3/8	OD10	20	17	7,5	33,3	17,8	25	33	18,5	21,8	18	16	8,5	59
VT2504-0609	G3/8	OD12	20	22	7,5	41,3	23,3	29	39,5	23,5	21,8	20	21	9	113
VT2504-0611	G3/8	OD14	20	24	7,5	43,5	25	31,5	43,1	25,5	21,8	21,7	22	11	126
VT2504-0808	G1/2	OD10	24	17	9,5	35,8	18,3	25	33	18,5	26,2	18	16	8,5	79
VT2504-0809	G1/2	OD12	24	22	9,5	40,8	20,8	29	39,5	23,5	26,2	20	21	9	128
VT2504-0811	G1/2	OD14	24	24	9,5	42,5	22	31,5	43,1	25,5	26,2	21,7	22	11	138
VT2504-0812	G1/2	OD16	24	27	9,5	47,5	26	53	41	29,8	26,2	30	24	12,5	187
VT2504-0815	G1/2	OD20	24	32	9,5	60,8	36,3	42,5	56	35	25,8	30	30	13,5	289
VT2504-5408	M10x1	OD10	14	17	5,5	32,5	19,5	25	32	18,5	15,2	18,5	15	5,5	48

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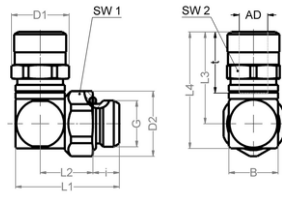
## Elbow screw-in connector, swiveling with R-thread

- Whitworth conical pipe thread ISO 7-1 / EN10226-1
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube



Part no.	G	for tube	SW1	SW2	i	L1	L2	L3	L4	D1	D2	t	B	NW	g/piece
VT2506-0206	R1/8	OD8	14	15	9	36	19	23	30	16,4	15,2	18	14	5,5	45
VT2506-0208	R1/8	OD10	14	17	9	36	19,5	25	33	18,5	15,2	19	15	5,5	50

## Elbow screw-in connector, lockable

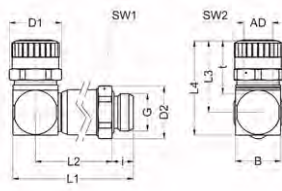
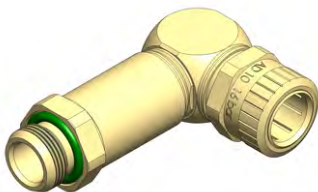


- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Stiff angular shape, can be locked with jam nut

Part no.	G	for tube	SW1	SW2	i	L1	L2	L3	L4	B	D1	D2	t	NW	g/piece
VT2540-0202	G1/8	OD4	13	10	5,5	21,5	11	18,5	23,5	10	11	14,2	13	3	21
VT2540-0204	G1/8	OD6	13	12	5,5	22,5	11,5	21,3	26,8	11	13,1	14,2	15	4,5	25
VT2540-0206	G1/8	OD8	13	15	5,5	26,5	14	26	33	14	16,4	14,2	17,3	5,5	41
VT2540-0208	G1/8	OD10	13	17	5,5	29	15,5	28	36	16	18,5	14,2	18,5	5,5	53
VT2540-0402	G1/4	OD4	17	10	7,5	26,5	14	18,5	23,5	10	11	18,5	13	3	33
VT2540-0404	G1/4	OD6	17	12	7,5	27,5	14,5	21,3	26,8	11	13,1	18,5	15	4,5	37
VT2540-0406	G1/4	OD8	17	15	7,5	29,5	15	26	33	14	16,4	18,5	17,3	6	51
VT2540-0408	G1/4	OD10	17	17	7,5	31,5	16	28	36	16	18,5	18,5	18,5	8	60
VT2540-0409	G1/4	OD12	17	22	7,5	33,5	17	31,5	40,5	18	23,5	18,5	20	8	90
VT2540-0606	G3/8	OD8	20	15	7,5	30,5	16	26	33	14	16,4	21,8	17,3	6	60
VT2540-0608	G3/8	OD10	20	17	7,5	32,5	17	28	36	16	18,5	21,8	18,5	8	70
VT2540-0609	G3/8	OD12	20	22	7,5	33,5	17	31,5	40,5	18	23,5	21,8	20	9	98
VT2540-0611	G3/8	OD14	20	24	7,5	35,5	18	33,7	43,7	20	25,5	21,8	21,7	11	112
VT2540-0811	G1/2	OD14	24	24	9,5	41,5	21	34,7	45,7	22	25,5	26,2	21,7	11	144

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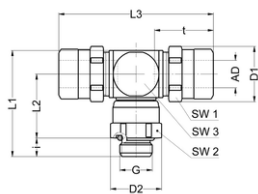
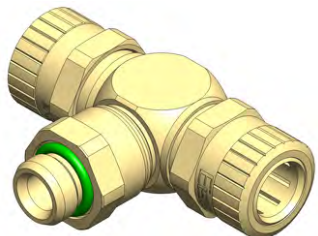
## Elbow screw-in connector, swiveling, long



- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

Part no.	G	for tube	SW1	SW2	i	L1	L2	L3	L4	D1	D2	t	B	NW	g/piece
VT2582-0408	G1/4	OD10	17	17	7,5	54,3	38,8	25	33	18,5	18,5	18	16	8,5	79

## T-screw-in connector, swiveling

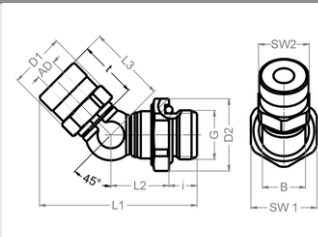


- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

Part no.	G	for tube	SW1	SW2	SW3	i	L1	L2	L3	D1	D2	t	NW	g/piece
VT2588-0206	G1/8	OD8	15	14	14	5,5	31,5	19	46	16,4	15,2	17,5	5	45

## Elbow screw-in connector 45°, swiveling

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

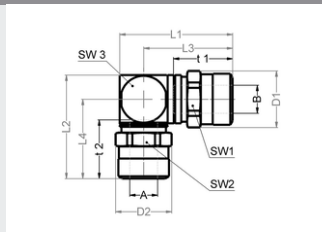


Part no.	G	for tube	SW1	SW2	i	L1	L2	L3	B	D1	D2	t	NW	g/piece
VT2598-0202	G1/8	OD4	13	10	5,5	32	11,5	16,6	8,5	11,1	14,2	13	3	16
VT2598-0204	G1/8	OD6	13	12	5,5	35,3	13	18,3	11	13,1	14,2	15	4,5	21
VT2598-0206	G1/8	OD8	13	15	5,5	41	16,7	21	12	16,4	15,2	17	5,5	37
VT2598-0402	G1/4	OD4	17	10	7,5	34	11,5	16,7	8,5	11,1	18,5	13	3	23
VT2598-0404	G1/4	OD6	17	12	7,5	36,2	12	18,3	11	13,1	18,5	15	4,5	27
VT2598-0406	G1/4	OD8	17	15	7,5	41,8	14,7	21	14	16,4	18,5	17	6,5	38
VT2598-0408	G1/4	OD10	17	17	7,5	48	18,8	23,6	16	18,5	18,5	18	8,5	52
VT2598-0409	G1/4	OD12	17	22	7,5	51	20,3	23	20	23,5	18,5	20	8,5	78
VT2598-0604	G3/8	OD6	20	12	7,5	36,3	12	18,3	11	13,1	21,8	15	4,5	35
VT2598-0606	G3/8	OD8	20	15	7,5	40,3	13,2	21	14	16,4	21,8	17	6,5	45
VT2598-0608	G3/8	OD10	20	17	7,5	45	15,8	23,6	16	18,5	21,8	18	8,5	54
VT2598-0804	G1/2	OD6	24	12	9,5	39,7	13,5	18,3	11	13,1	26,2	15	4,5	55
VT2598-0806	G1/2	OD8	24	15	9,5	43,8	14,7	21	14	16,4	26,2	17	6,5	65
VT2598-0808	G1/2	OD10	24	17	9,5	48	16,3	23,6	16	18,5	26,2	18	8,5	75

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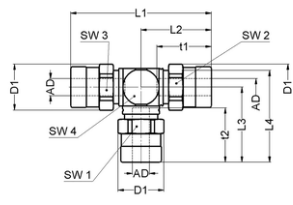
## Elbow connector

- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)



Part no.	for tube A	for tube B	SW1	SW2	SW3	L1	L2	L3	L4	D1	D2	t1	t2	NW	g/piece
VT2577-0200	OD4	OD4	10	10	9	22,5	22	18	17	11	11	13	13	2,5	16
VT2577-0400	OD6	OD6	12	12	11	27	25	21	20	13,1	13,1	15	15	4,5	25
VT2577-0600	OD8	OD8	15	15	14	33	30	26	23	16,4	16,4	17	17	6,5	41
VT2577-0800	OD10	OD10	17	17	16	36	33,1	28	25,1	18,5	18,5	18,5	18,5	8,5	59
VT2577-0900	OD12	OD12	22	22	21	39,5	43,5	29	33	23,5	23,5	20	20	9,5	131
VT2577-1100	OD14	OD14	24	24	22	43,1	45,7	31,5	34,7	25,5	25,5	21,7	21,7	11,5	150

## T-connector

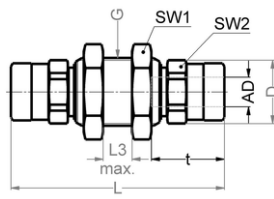


- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	for tube	SW1	SW2	SW3	SW4	L1	L2	L3	L4	D	t1	t2	NW	g/piece
VT2578-0200	"OD4 (5/32")"	10	10	10	9	34	17	18	22,5	11	13	13	2,5	22
VT2578-0400	OD6	12	12	12	11	39,6	19,8	21,3	27,8	13,1	15,3	15,3	4,5	33
VT2578-0600	"OD8 (5/16")"	15	15	15	14	46	23	26	33	16,4	17	17	6,5	58
VT2578-0800	OD10	17	17	17	16	50,1	25,1	28	36	18,5	18,5	18,5	8,5	74
VT2578-0900	OD12	22	22	22	21	58,4	29	33	43,5	23,5	20	20	9,5	163
VT2578-1100	OD14	24	24	24	22	63	31,5	34,7	45,7	25,5	21,7	21,7	11,5	186
VT2578-1200	OD16	27	27	27	24	81	40,6	52,8	40,8	29,8	30	30	12,5	288

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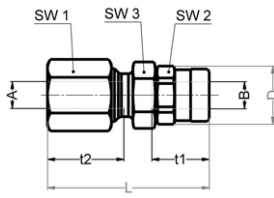
## Bulkhead connector



- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	G	for tube	SW1	SW2	L	L3	D	t	NW	g/piece
VT2580-0202	14x1	OD4	14	10	37,2	4	11	12,8	3	26
VT2580-0404	14x1	OD6	17	12	44,2	6	13,1	15,1	4,5	43
VT2580-0606	16x1	OD8	19	15	48	6	16,4	17	6,5	58
VT2580-0808	18x1	OD10	22	17	51,6	7	18,5	18,5	8,5	78
VT2580-0909	24x1	OD12	30	22	57	9	23,5	20	9,5	164
VT2580-1111	25x1	OD8	30	24	59,4	9	22,5	21,7	11,5	171

## Double screw-joint, adapter for pipe/tube

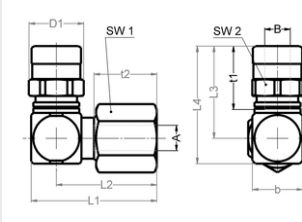


- Combination of cutting ring screw joint and plug connector
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

Part no.	for pipe A	for tube B	SW1	SW2	SW3	L	D	t1	t2	NW	g/piece
VT2547-0604	6	OD6	14	10	12	40,5	13,2	15	17	4,5	32
VT2547-0606	6	OD8	14	15	14	41	16,4	17	17	4,5	38
VT2547-0608	6	OD10	14	17	17	39	18,5	18,5	17	4,5	43
VT2547-0804	8	OD6	17	10	12	41	13,2	15	17	4,5	41
VT2547-0806	8	OD8	17	15	14	42	16,4	17	17	6,5	50
VT2547-0808	8	OD10	17	17	17	43	18,5	18,5	17	6,5	52
VT2547-1006	10	OD8	19	15	14	43	16,4	17	18	6,5	59
VT2547-1008	10	OD10	19	17	17	43	18,5	18,5	18	8,5	60

## Elbow connector, adapter for pipe/tube

- Combination of cutting ring screw joint and plug connector
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

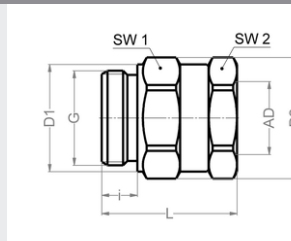


Part no.	for pipe A	for tube B	SW1	SW2	L1	L2	L3	L4	b	D1	t1	t2	NW	g/piece
VT2546-0604	6	OD6	14	12	30	24	21,8	27,8	12	13,2	15	15	4,5	39
VT2546-0606	6	OD8	14	15	32	25	26	33	14	16,4	17	15	4,5	52
VT2546-0608	6	OD10	17	17	34	26	28	36	16	18,5	18,5	15	4,5	63
VT2546-0804	8	OD6	17	12	33	26	22,8	29,8	14	13,2	15	16	4,5	54
VT2546-0806	8	OD8	17	15	33	26	26	33	14	16,4	17	16	6,5	59
VT2546-0808	8	OD10	17	17	53	27	28	36	16	18,5	18,5	16	6,5	70
VT2546-1006	10	OD8	19	15	36	28	27	35	16	16,4	17	16	6,5	76
VT2546-1008	10	OD10	19	17	36	28	28	36	16	18,5	18,5	16	8,5	78

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## Push-through screw joint with clamping ring and protective tube connection

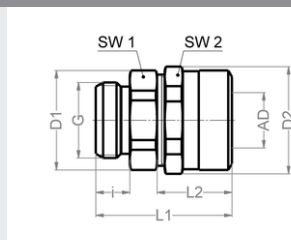
- Whitworth pipe thread DIN ISO 228
- Hold mechanism: clamping ring
- **Material:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -0.95 to 16 bar



Part no.	G	for tube	SW1	SW2	i	L	D1	D2	NW	g/piece
SA1547-1019	G3/4	OD19	30	30	10	38	29,8	33,7	19	124
SA1547-1020	G3/4	OD20	30	30	10	38	29,8	33,7	20	115
SA1547-1022	G3/4	OD22	30	30	10	38	29,8	33,7	22	89
SA1547-1224	G1	OD24	36	32	12	40	35,8	39,7	24	152

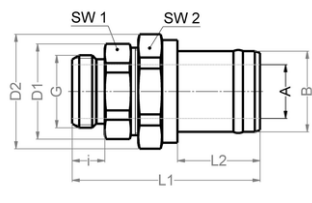
## Push-through screw joint with collet

- Whitworth pipe thread DIN ISO 228
- Hold mechanism: collet
- **Material:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -0.95 to 16 bar



Part no.	G	for tube	SW1	SW2	i	L1	L2	D1	D2	NW	g/piece
SA1617-0608	G3/8	OD10	20	17	7,5	29	15,5	21,8	18,5	10	37
SA1617-0609	G3/8	OD12	20	22	7,5	30	16,5	21,8	23,5	12	48
SA1617-0811	G1/2	OD14	24	24	9,5	33,2	17,7	26,2	25,5	14	68

## Push-through screw joint with collet and protective tube connection

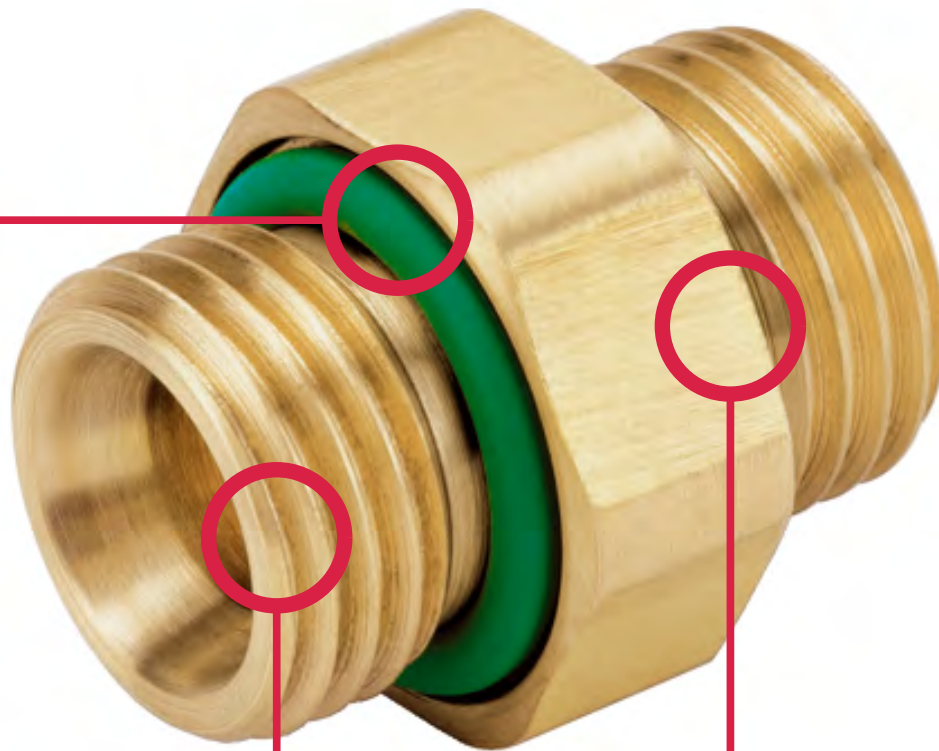


- Whitworth pipe thread DIN ISO 228
- Hold mechanism: collet or clamping ring
- Protective tube connection possible
- **Material:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -0.95 to 16 bar

2500

Part no.	G	for tube A	for tube B	SW1	SW2	i	L1	L2	D1	D2	NW	g/piece
SA1616-0608	G3/8	OD10	ID18,5	20	24	7,5	40,5	19	21,8	26,2	10	55
SA1616-0609	G3/8	OD12	ID18,5	20	24	7,5	42,5	19	21,8	26,2	12	60
SA1616-0811	G1/2	OD14	ID18,5	24	24	9,5	45,2	19	26,2	26,2	14	64
SA1616-08150	G1/2	OD15	ID20	24	24	9,5	46,5	19	26,2	26,2	15	88
SA1616-1014	G3/4	OD18	ID26	30	30	10	53	20	33,7	33,7	18	154
SA1616-1019	G3/4	OD19	ID26	30	30	10	59	20	33,7	33,7	19	151
SA1616-1020	G3/4	OD20	ID26	30	30	10	59	20	33,7	33,7	20	140
SA1616-1022	G3/4	OD22	ID26	30	30	10	59	20	33,7	33,7	22	125
SA1616-1224	G1	OD24	ID30	36	36	12	66	25	39,7	39,7	24	204
SA1616-1225	G1	OD25	ID30	36	36	12	66	25	39,7	39,7	25	197

## Series 2300 - Accessories for the Eisele LIQUIDLINE



### All metal body

- Dezincification-resistant brass, suitable for almost all applications with water
- High-quality seals made of FPM; optional NBR, EPDM or other materials

### High flexibility due to many types

- Reductions
- Closure screw
- Removable double nipple
- Lots of standardized connection solutions

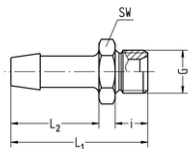
### Proved quality

- Cylindric thread as a standard
- All types of threads are possible
- Customized connection solutions on request

The ideal supplement for the Eisele LIQUIDLINE connections.

2300

## Screw-in tube spigot

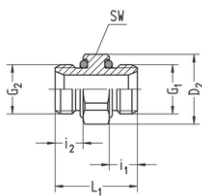


- Whitworth pipe thread DIN ISO 228
- With inner cone according to DIN EN 560
- Tube connection removable
- **Material with media contact:** Brass, dezincification resistant
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Matching tube clamps Type 10 and 11

2300

Part no.	G	for tube inside Ø	SW	i	L1	L2	NW	g/piece
2344-0204	G1/8	4	14	8	34	21	3,5	12
2344-0206	G1/8	6	14	8	34	21	4,5	12
2344-0209	G1/8	9	14	8	34	21	4,5	17
2344-0404	G1/4	4	17	10	42	27	3,5	21
2344-0406	G1/4	6	17	10	42	27	4,5	21
2344-0408	G1/4	8	17	10	42	27	6,5	23
2344-0409	G1/4	9	17	10	42	27	7,5	21
2344-0411	G1/4	11	17	10	42	27	7,5	34
2344-0413	G1/4	13	17	10	42	27	7,5	31
2344-0604	G3/8	4	19	10	43	27	3,5	31
2344-0606	G3/8	6	19	10	43	27	4,5	29
2344-0608	G3/8	8	19	10	43	27	6,5	32
2344-0609	G3/8	9	19	10	43	27	7,5	29
2344-0611	G3/8	11	19	10	43	27	10	33
2344-0613	G3/8	13	19	10	43	27	10	37
2344-0806	G1/2	6	24	12	45	27	4,5	50
2344-0808	G1/2	8	24	12	45	27	6,5	53
2344-0809	G1/2	9	24	12	45	27	7,5	50
2344-0811	G1/2	11	24	12	45	27	10	54
2344-0813	G1/2	13	24	12	45	27	11	52
2344-0814	G1/2	14	24	12	58	36	11,5	76
2344-0818	G1/2	18	24	12	58	36	13,5	90
2344-0819	G1/2	19	24	12	58	36	14,5	85
2344-1013	G3/4	13	32	16	60	36	10,5	117
2344-1019	G3/4	19	32	16	60	36	16	113
2344-1222	G1	22	41	16	62	36	20	187
2344-5002	M5	2	8	4,5	16	8	2	2
2344-5003	M5	3	8	4,5	18	10	2,2	2

## Double nipple



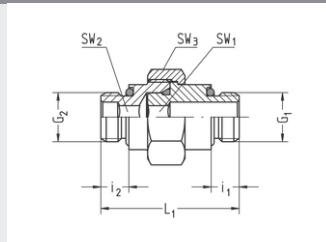
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- With inner cone according to DIN EN 560
- Seals FPM
- **Material:** Brass, dezincification resistant
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)

Part no.	G1	G2	SW	D2	i1	i2	L1	NW	g/piece
VT2342-0202	G1/8	G1/8	13	14,2	5,5	5,5	17	5	9
VT2342-0404	G1/4	G1/4	17	18,5	7,5	7,5	22	7,5	17
VT2342-0606	G3/8	G3/8	20	21,8	7,5	7,5	22,5	10	26
VT2342-0808	G1/2	G1/2	24	26,2	9,5	9,5	27,5	12,5	48
VT2342-1010	G3/4	G3/4	32	37	10,5	10,5	34	18	99
VT2342-1212	G1	G1	41	47,4	12,5	12,5	40	22	189
VT2343-0402	G1/4	G1/8	17	18,2	7,5	5,5	20	5	16
VT2343-0604	G3/8	G1/4	20	21,8	7,5	7,5	22,5	7,5	23
VT2343-0806	G1/2	G3/8	24	26,2	9,5	7,5	25,5	10	40



## Double nipple, removable

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Constant clearance
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- **Material without media contact:** Brass
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

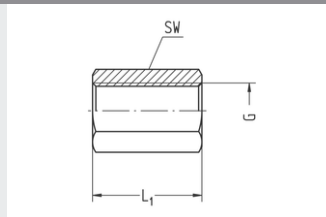


Part no.	G1	G2	SW1	SW2	SW3	i1	i2	L1	NW	M max. (Ncm)	g/piece
VT2376-0202	G1/8	G1/8	5	5	19	5,5	5,5	30	5,1	700	31
VT2376-0404	G1/4	G1/4	6	6	22	7,5	7,5	37	6,1	1500	55
VT2376-0606	G3/8	G3/8	8	8	27	7,5	7,5	39,5	8,2	2200	95
VT2376-0808	G1/2	G1/2	12	12	30	9,5	9,5	46	12,3	4000	117
VT2376-1010	G3/4	G3/4	14	14	41	10,5	10,5	59	14,3	6000	382
VT2376-1212	G1	G1	19	19	50	12,5	12,5	69	19,4	8000	530

2300

## Sleeve

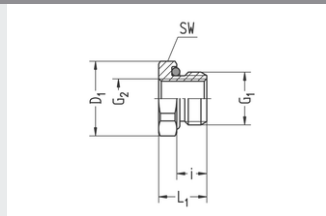
- Whitworth pipe thread DIN ISO 228
- **Material with media contact:** Brass, dezincification resistant
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)



Part no.	G	SW	L1	g/piece
2359-0100	G1/8	14	18	15
2359-0300	G1/4	17	26	28
2359-0500	G3/8	22	26	47
2359-0700	G1/2	27	30	79
2359-0900	G3/4	32	28	98
2359-1100	G1	41	33	199

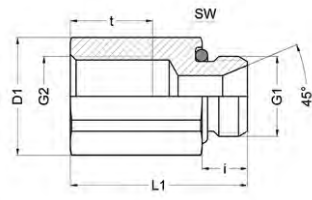
## Thread adapter

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)



Part no.	G1	G2	SW	D1	i	L1	g/piece
VT2370-0249	G1/8	M5	13	14,2	5,5	9,5	6
VT2370-0401	G1/4	G1/8	17	18,5	7,5	12	8
VT2370-0449	G1/4	M5	17	18,5	7,5	12	13
VT2370-0601	G3/8	G1/8	20	21,8	7,5	13	19
VT2370-0603	G3/8	G1/4	20	21,8	7,5	13	13
VT2370-0803	G1/2	G1/4	24	26,2	9,5	15,5	31
VT2370-0805	G1/2	G3/8	24	26,2	9,5	15,5	20
VT2370-1005	G3/4	G3/8	32	34,8	10,5	21	80
VT2370-1007	G3/4	G1/2	32	34,8	10,5	21	59
VT2370-1207	G1	G1/2	41	44,7	12,5	25	150
VT2370-1209	G1	G3/4	41	44,7	12,5	25	115

## Thread adapter

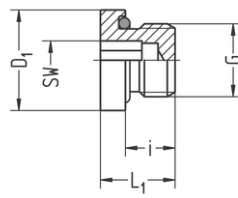


- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)

Part no.	G1	G2	SW	i	L1	t	D1	NW	g/piece
VT2366-0201	G1/8	G1/8	13	5,5	21,5	10	14,2	5	14
VT2366-0403	G1/4	G1/4	17	7,5	27	12	18,5	7,5	29
VT2366-0605	G3/8	G3/8	20	7,5	27,5	12	21,8	10	37
VT2366-0805	G1/2	G3/8	24	9,5	30,5	10	26,9	12,5	71
VT2366-0807	G1/2	G1/2	24	9,5	32,5	14	26,2	12,5	60
VT2366-5049	M5	M5	8	4	12,5	4,5	-	2,2	3

2300

## Closure screw



- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- With hexagon socket
- Seals FPM
- **Material with media contact:** Brass, dezincification resistant
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 348 psi (-0.95 to 24 bar)

Part no.	G	SW	i	L1	D1	g/piece
VT2323-0200	G1/8	5	5,5	9	13,9	6
VT2323-0400	G1/4	6	7,5	12	17,9	13
VT2323-0600	G3/8	8	7,5	12	21,9	20
VT2323-0800	G1/2	10	9,5	14	24,9	32
VT2323-1000	G3/4	12	10,5	16,5	31,9	70
VT2323-1200	G1	17	12,5	19	39,8	117

## Color coding

- Material aluminum anodized
- Fits all Eisele plug connectors

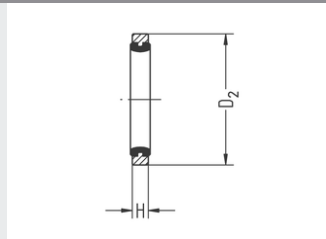


Part no.	for tube	Color	g/piece
SA1394-1102	OD4	red	1
SA1394-1104	OD6	red	1
SA1394-1106	OD8	red	1
SA1394-1108	OD10	red	1
SA1394-1109	OD12	red	1
SA1394-1111	OD14	red	1
SA1394-1112	OD16	red	1
SA1394-1202	OD4	green	1
SA1394-1204	OD6	green	1
SA1394-1206	OD8	green	1
SA1394-1208	OD10	green	1
SA1394-1209	OD12	green	1
SA1394-1211	OD14	green	1
SA1394-1212	OD16	green	1
SA1394-1302	OD4	blue	1
SA1394-1304	OD6	blue	1
SA1394-1306	OD8	blue	1
SA1394-1308	OD10	blue	1
SA1394-1309	OD12	blue	1
SA1394-1311	OD14	blue	1
SA1394-1312	OD16	blue	1

2300

## VS seal ring

- For whitworth pipe thread, metric threads
- Sealing material FPM, FDA compliant according to 21 CFR 177.2600
- Spacer ring brass
- Large torque possible
- Undetachable
- Temperature range -4 to 248 °F (-20 to +120 °C)
- Working pressure range -14 to 435 psi (-0.95 to 30 bar)



Part no.	for thread	D2	H	g/piece
VT2315-0122	G1/8 and M10x1	14,7	2,2	1
VT2315-0322	G1/4	17,7	2,2	1
VT2315-0522	G3/8	21,8	2,2	1,56
VT2315-0722	G1/2	26,3	2,2	2,04

## FITTINGS MADE OF **ALUMINUM** FOR **COOLING-WATER** APPLICATIONS

### 1. Flow optimization

The flow-optimized connections of EISELE LIQUIDLINE are preferably suitable for applications with closed fluid circuits and for use in aqueous, aggressive media. They are used particularly in cooling water circuits with aluminum heatsinks.

### 2. Efficient corrosion protection

The connectors are made of aluminum with the highest corrosion resistance. Distributors of Eisele are made of this special aluminum which avoids electrolytic corrosion and thus leaks on aluminum heat sinks.

### 3. Patent-registered assembly technique

Due to EISELE's patent-registered release sleeve, the assembly and disassembly of the tubes can be done easily, fast and without using any tools. This is a cost-saving method and ensures a flexible and reliable connection solution, even if the plug connectors are frequently used.

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EISELE LIQUIDLINE

## AN OVERVIEW OF THE **ALUMINUM-SERIES** AND THEIR RANGE OF APPLICATIONS

### SERIES 5500

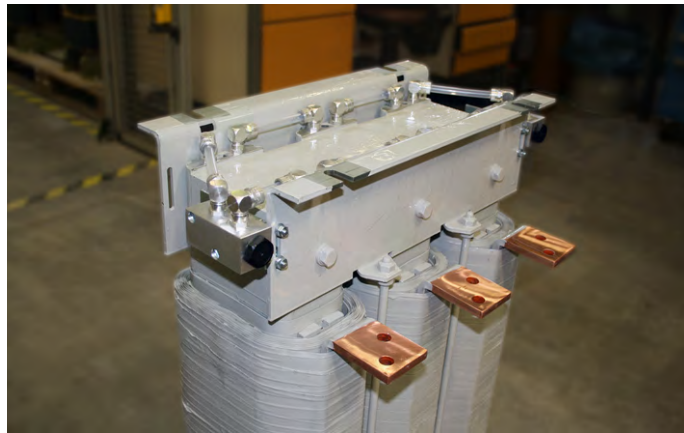


#### Screw joints with larger nominal width

Screw joints for applications with special requirements on the tube

#### Application examples:

Especially in combination with aluminum heat sinks and other cooling water circuits with aluminum components for example at offshore installations. Particularly suitable for systems with movement and with additional tensile load on the tube. High security against loosening tube even under strong pressure fluctuations.



Water-cooled transformer

5500

### REFERENCE

Other connection components such as distributors see the Eisele MANIFOLDS.



Manifolds with and without fittings

## Material properties - Aluminum

### What are suitable aluminum connections?

In circuits that work with aluminum heat sinks, connections made of aluminum are necessary to avoid electrolytic corrosion on aluminum chiller. Chillers, which work with liquids, are often, due to the high thermal conductivity, made of aluminum. To have a secure and long term connection mutually compatible materials must be ensured. The 2500 series of Eisele LIQUIDLINE is available for these applications also from corrosion resistant aluminum.

### Which solution offers Eisele?

Eisele is processing the corrosion-resistant special material EN AW 6082 - AlSi1MgMn. Conventional aluminum alloys such EN AW 2011 - AlCuBiPb do not achieve the desired water resistance, which is why manufacturers of chillers increasingly use the new material, which is good against seawater and very well protected against the weather influences. Expressed for the orientation in school grades AlCuBiPb has a corrosion resistance of C to D, while AlSi1MgMn reaches the score A to B.

### What should be considered?

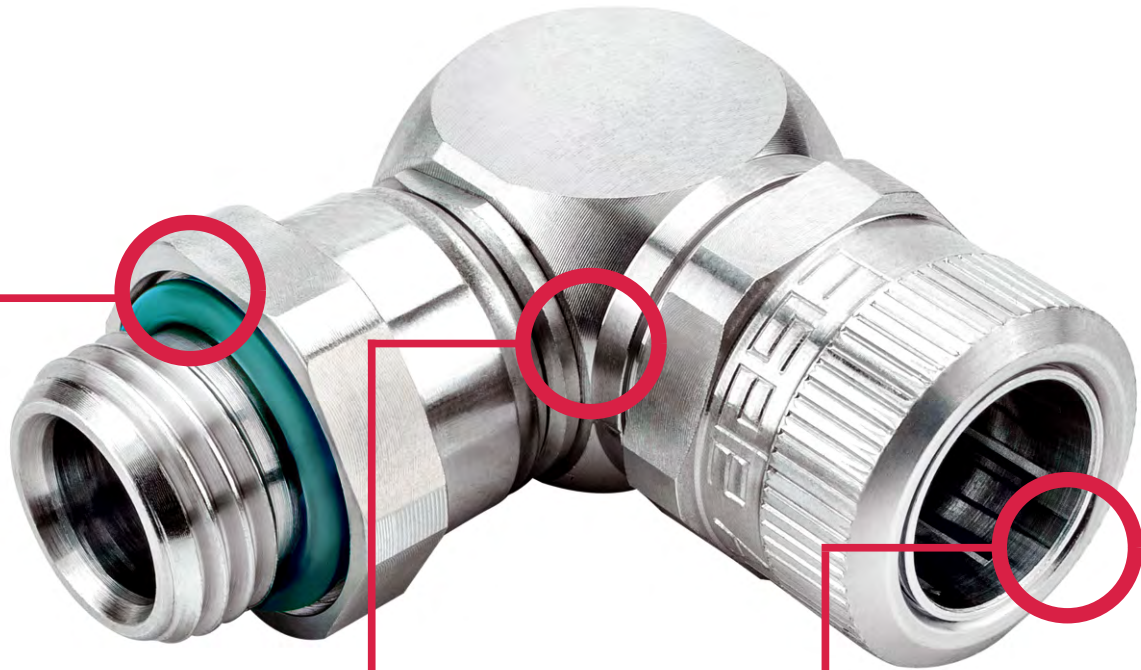
Eisele recommends checking the use of the fittings under the actual specific conditions. When choosing the right material not only the media that are used, but also the ambient conditions such as temperature and atmosphere must be observed.

The experts at Eisele will be glad to assist you in selecting suitable adaptive insets.



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## Series 5500 - Screw joints with larger nominal width



### Classical Screw-in connector

- Patented screw-in connector with o-ring
- Corrosion resistant aluminum, suitable for continuous contact with aluminum heatsinks
- High quality FKM seals

### Outstanding retention ability

- Maximum tube retention force
- Even after a long time the tube can still be released and screwed together

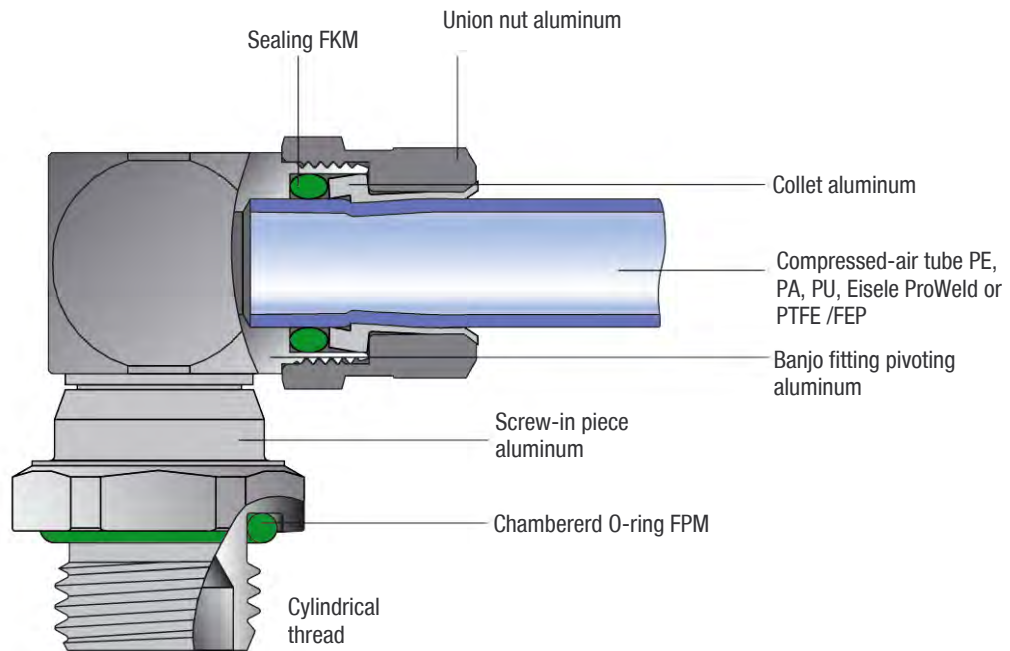
### Intuitive handling and assembly

- Full tube passage
- Intuitive assembly through touchable end stop
- Closed position viewable

Modern screw joints for applications with high requirements regarding the retention form.

5500

## Functional principle



Insert the union nut over the tube. Then the tube is plugged-in in the pre-assembled screw-joint. The collet securely holds the tube after the union nut is tightened. Even after a long time the union nut with tube can still be released and screwed together without any damage.

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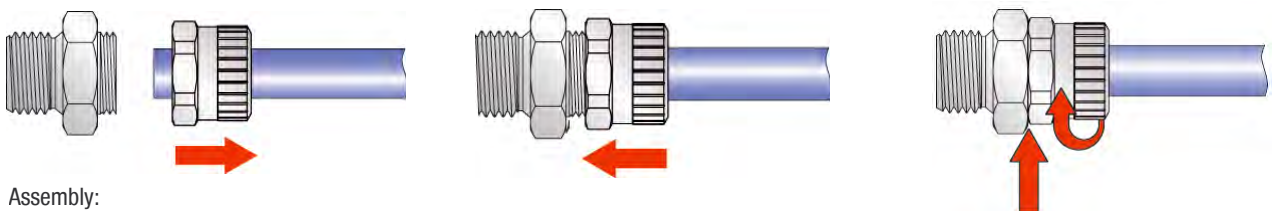
## Range of application

- Cooling water circuits with aluminum heat sinks or other aluminum components
- Connections with high requirements regarding the retention force
- Connections with tube movement
- Moveable systems with high dynamics
- Strong fluctuating pressures and pressure surges

## Service conditions

- Temperature range: -4 to 248 °F (-20 to +120°C) (VTT seals with extended temperature range on request)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar), depending on the used tube
- Acceptable media: cooling water, air
- Suitable for vacuum
- Full tube passage
- Flow-rate optimized
- Disassembly without tube damage possible
- Intuitive handling through touchable end stop
- Closed position is visible from the outside

## Handling



Assembly:

1. Insert the union nut over the tube

2. Press tube fully into the fitting, a slight twisting movement facilitates insertion

3. Tighten union nut to stop by hand or with an open-end wrench

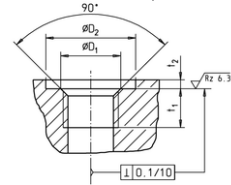


## Connection thread, cylindrical

Thread	Thread depth t1 min. (mm)	Thread counterbore ØD1 max. (mm)	Counterbore <sup>1)</sup>		Torque <sup>2)</sup>			Thread standards
			ØD2 min. (mm)	t2 max. (mm)	min. (Nm)	max. (Nm)	recommen- dation (Nm)	
G1/8	5.5	11	15.3	0,5	5,5	9	7	Pipe thread G: DIN ISO 228
G1/4	7.5	14.2	19	0,5	7	18	12	
G3/8	7.5	17.5	23	0,5	10	25	15	
G1/2	9.5	22	27	0,5	15	34	20	

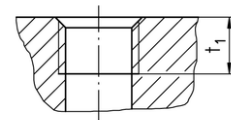
<sup>1)</sup> A counterbore is not necessary. However, the indicated values apply if a counterbore is applied.

<sup>2)</sup> Information about torques for hexagon socket on demand (assembly instructions 800 00 / 00-1)



## Connection thread, conical

Thread	Thread depth t1 min. (mm)	Torque			Thread standard
		min. (Nm)	max. (Nm)	recommendation (Nm)	
NPT1/8, R1/8	7,4	5,5	10	7	Pipe thread ISO 7-1 / EN 10226-1
NPT1/4, R1/4	11	7,5	15	12	
NPT3/8, R3/8	11,4	12,5	20	16	
NPT1/2, R1/2	15	20	30	25	
NPT3/4, R3/4	16,3	30	50	40	



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## Tubes

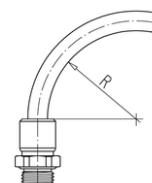
Tube dimension		Polyethylene (PE) Temperature range 14 to 104°F (-10 to +40°C)		Polyamide (PA) Temperature range -76 to 212°F (-60 to +100°C)		Polyurethane (PU) Temperature range -31 to 158°F (-35 to +70°C)		ProWeld (PUR) <sup>1)</sup> Temperature range -31 to 194°F (-35 to +90°C)		Teflon (PTFE) /FEP <sup>2)</sup> Temperature range -31 to 248°F (-35 to +120°C)	
Outside-Ø	Inside-Ø	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)
4 (±0,1)	(2)	20	290 psi (20 bar)	20	435 psi (30 bar)	10	145 psi (10 bar)	10	290 psi (20 bar)	16	362 psi (25 bar)
4,3 (±0,1)	(3)	20	188 psi (13 bar)	20	290 psi (20 bar)	10	145 psi (10 bar)	-	-	35	145 psi (10 bar)
5 (±0,1)	(3)	25	217 psi (15 bar)	25	362 psi (25 bar)	11	145 psi (10 bar)	-	-	25	290 psi (20 bar)
6 (±0,1)	(4)	30	188 psi (13 bar)	30	290 psi (20 bar)	15	145 psi (10 bar)	15	159 psi (11 bar)	35	217 psi (15 bar)
8 (±0,15)	(6)	40	116 psi (8 bar)	40	217 psi (15 bar)	20	130 psi (9 bar)	20	130 psi (9 bar)	65	159 psi (11 bar)
10 (±0,15)	(8)	60	87 psi (6 bar)	60	174 psi (12 bar)	40	116 psi (8 bar)	25	203 psi (14 bar)	100	130 psi (9 bar)
12 (±0,15)	(9)	60	130 psi (9 bar)	85	217 psi (15 bar)	50	145 psi (10 bar)	30	145 psi (10 bar)	100	130 psi (9 bar)
14 (±0,15)	(11)	90	116 psi (8 bar)	80	174 psi (12 bar)	60	109 psi (7,5 bar)	45	130 psi (9 bar)	140	130 psi (9 bar)
16 (±0,15)	(12)	90	87 psi (6 bar)	90	159 psi (11 bar)	45	145 psi (10 bar)	50	130 psi (9 bar)	-	-
20 (±0,2)	(14)	-	-	-	-	-	-	-	116 psi (8 bar)	-	-
1/4" (6,3±0,1)	(4)	-	-	23	290 psi (20 bar)	-	-	10	145 psi (10 bar)	-	-
3/8" (9,5±0,15)	(6)	-	-	32	275 psi (19 bar)	-	-	25	130 psi (9 bar)	-	-
1/2" (12,7±0,15)	(8)	-	-	60	260 psi (19 bar)	-	-	23	130 psi (9 bar)	-	-
5/8" (15,9±0,15)	(11)	-	-	-	-	-	-	-	-	-	-

The mounted compressed-air tubes are not to be exposed to tensile loading.

<sup>1)</sup> In the case of Eisele ProWeld tubes a smaller inside diameter results from a partially larger wall thickness.

<sup>2)</sup> Important notes for the use of compressed-air tubes made of PTFE (Teflon) and FEP:

- The outside diameter of compressed-air tubes must be free of grooves and other damages (e.g. damage from installation tools).
- Prior to assembly, use the Eisele tube cutter Art. No. 99605-0014 or Art. No. 99606-0022 to cut compressed-air tubes at a right angle. Ensure that tubes are not being deformed or damaged during the cutting process.
- During assembly, compressed-air tubes must be pressed until the bottom of the plug connectors to achieve proper tightness.



## Threaded connectors

starting on page 59



Straight threaded connectors

page 59



Screw-in connector with female thread

page 59



Angled threaded connectors

page 60



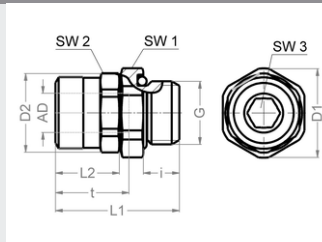
T-screw-in connector swiveling

page 60

5500

## Screw-in connector

- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- Material: AL
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)

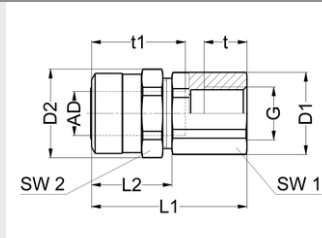


Part no.	G	for tube	SW1	SW2	SW3	i	L1	L2	D1	D2	t	NW	g/piece
VT5528-0202	G1/8	OD4	13	10	3	5,5	22	11,6	14,2	11,2	13	3	2
VT5528-0204	G1/8	OD6	13	12	4	5,5	23,8	13	14,2	13,1	15	4,5	2
VT5528-0206	G1/8	OD8	14	15	5	5,5	25,5	15	15,2	16,4	17	5,5	4
VT5528-0402	G1/4	OD4	17	10	3	7,5	24,3	11,8	18,5	11,2	13	3	2
VT5528-0404	G1/4	OD6	17	12	4	7,5	25,8	13	18,5	13,1	15	4,5	3
VT5528-0406	G1/4	OD8	17	15	6	7,5	27,5	15	18,5	16,4	17	6,5	5
VT5528-0408	G1/4	OD10	17	17	8	7,5	28,8	15	18,5	18,5	18	8,5	7
VT5528-0409	G1/4	OD12	20	22	8	7,5	32	16,5	21,8	23,5	20	8,5	9
VT5528-0606	G3/8	OD8	20	15	6	7,5	27,5	15	21,8	16,4	17	6,5	6
VT5528-0608	G3/8	OD10	20	17	8	7,5	28	15	21,8	18,5	18	8,5	7
VT5528-0609	G3/8	OD12	22	22	8	7,5	32	16,5	23,8	23,5	20	8,5	10
VT5528-0611	G3/8	OD14	22	24	10	7,5	33,2	17,7	23,8	25,5	21,7	10,5	11
VT5528-0808	G1/2	OD10	24	17	8	9,5	31	15	26,2	18,5	18	8,5	7
VT5528-0809	G1/2	OD12	24	22	10	9,5	32	16,5	26,2	23,5	20	10,5	11
VT5528-0811	G1/2	OD14	24	24	12	9,5	33,2	17,7	26,2	25,5	21,7	12,5	12
VT5528-0812	G1/2	OD16	27	27	13	9,5	42,3	22,8	29,8	29,8	30	13,5	18
VT5528-0815	G1/2	OD20	30	32	14	9,5	42,3	22,8	33,5	35	30	14,5	22

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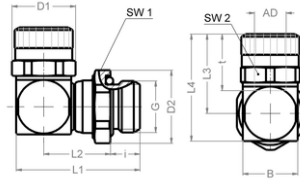
## Straight screw-in connector with female thread

- Whitworth pipe thread DIN ISO 228
- Seals FPM
- Material: Aluminum
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)



Part no.	G	for tube	SW1	SW2	L1	L2	D1	D2	t	t1	NW	g/piece
VT5517-0106	G1/8	OD8	14	15	29	15	15,2	16,4	8	17,5	6,5	10

## Elbow screw-in connector, swiveling

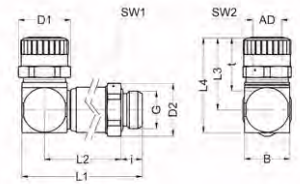


- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- Material: AL
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

Part no.	G	for tube	SW1	SW2	i	L1	L2	L3	L4	D1	D2	t	B	NW	g/piece
VT5504-0202	G1/8	OD4	13	10	5,5	23	13	17	21	11,2	14,2	13	9	3	5
VT5504-0204	G1/8	OD6	14	12	5,5	26	15	20	25	13,1	14,2	15	11	4,5	6
VT5504-0206	G1/8	OD8	14	15	5,5	31,5	19	23	30	16,4	15,2	17	14	5,5	10
VT5504-0402	G1/4	OD4	17	10	7,5	25	13	17	21	11,2	18,5	13	9	3	16
VT5504-0404	G1/4	OD6	17	12	7,5	27	14	20	25	13,1	18,5	15	11	4,5	16
VT5504-0406	G1/4	OD8	17	15	7,5	31,5	17	23	30	16,4	18,5	17	14	6,5	17
VT5504-0408	G1/4	OD10	17	17	7,5	36,3	20,8	25	33	18,5	18,5	18	16	8,5	18
VT5504-0604	G3/8	OD6	20	12	7,5	27	14	20	25	13,1	21,8	15	11	4,5	11
VT5504-0606	G3/8	OD8	20	15	7,5	30	15,5	23	30	16,4	21,8	17	14	6,5	16
VT5504-0608	G3/8	OD10	20	17	7,5	33,3	17,8	25	33	18,5	21,8	18	16	8,5	20
VT5504-0609	G3/8	OD12	20	22	7,5	41,3	23,3	29	39,5	23,5	21,8	20	21	9	34
VT5504-0611	G3/8	OD14	20	24	7,5	43,5	25	31,5	43,1	25,5	21,8	21,7	22	11	38
VT5504-0808	G1/2	OD10	24	17	9,5	35,8	18,3	25	33	18,5	26,2	18	16	8,5	25
VT5504-0809	G1/2	OD12	24	22	9,5	40,8	20,8	29	39,5	23,5	26,2	20	21	9	39
VT5504-0811	G1/2	OD14	24	24	9,5	42,5	22	31,5	43,1	25,5	26,2	21,7	22	11	42
VT5504-0812	G1/2	OD16	24	27	9,5	47,5	26	53	41	29,8	26,2	30	24	12,5	65
VT5504-0815	G1/2	OD20	24	32	9,5	60,8	36,3	42,5	56	35	25,8	30	30	13,5	87

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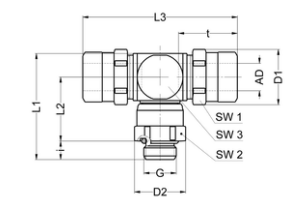
## Elbow screw-in connector, swiveling, long



- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- Material: AL
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

Part no.	G	for tube	SW1	SW2	i	L1	L2	L3	L4	D1	D2	t	B	NW	g/piece
VT5582-0408	G1/4	OD10	17	17	7,5	54,3	38,8	25	33	18,5	18,5	18	16	8,5	25

## T-screw-in connector, swiveling



- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- Material: AL
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

Part no.	G	for tube	SW1	SW2	SW3	i	L1	L2	L3	D1	D2	t	NW	g/piece
VT5588-0206	G1/8	OD8	15	14	14	5,5	31,5	19	46	16,4	15,2	17,5	5	15



## FITTINGS MADE OF **STAINLESS-STEEL** FOR **COOLING-WATER** APPLICATIONS

### 1. Flow optimization

The flow-optimized connections of EISELE LIQUIDLINE are preferably suitable for applications with closed fluid circuits and for use in aqueous, aggressive media. In areas where other materials reach their limits, the cooling water connections made of stainless steel are the first choice.

### 2. Efficient corrosion protection

The connections are made of stainless and acid-resistant steel AISI 316L (1.4404). Thanks to the use of FKM seals they are resistant to many substances. Stainless steel also resists pH values below 5, ammonia and very high nitrate and chloride concentrations in the cooling water.

### 3. Patent-registered assembly technique

Due to EISELE's patent-registered release sleeve, the assembly and disassembly of the tubes can be done easily, fast and without using any tools. This is a cost-saving method and ensures a flexible and reliable connection solution, even if the plug connectors are frequently used.

4600

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## AN OVERVIEW ABOUT THE **STAINLESS STEEL SERIES** AND THEIR RANGE OF APPLICATIONS

### SERIES 4600



**Plug connectors with release sleeve and 1 seal**  
High reliability up to 232 psi (16 bar); suitable for most applications

**Application examples:**

Areas with industrial cooling water connections, welding operations, robotics



Welding robot in action

### SERIES 4500

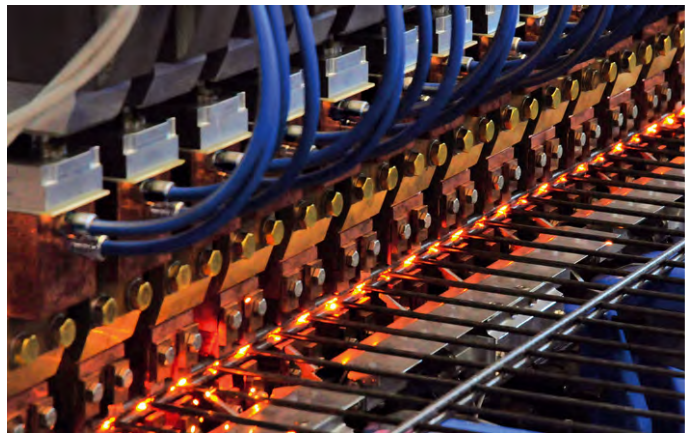


**Screw joints with larger nominal width**

Screw joints for applications with special requirements on the tube

**Application examples:**

Especially in combination with aluminum heat sinks and other cooling water circuits with aluminum components for example at offshore installations. Particularly suitable for systems with movement and with additional tensile load on the tube. High security against loosening tube even under strong pressure fluctuations.



Welding application with fittings for cooling

### REFERENCE

Other connection components such as plug connectors, and accessories, see the Eisele INOXLINE.



Various stainless steel fittings

4600

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## Material properties - Stainless steel

### What are suitable applications for stainless steel fittings?

Wherever standard materials such as plastic, brass and aluminum reach their limits in connection technology, stainless steel provides an economical solution. Stainless steel features excellent protection against corrosion even with aggressive media and at high temperatures. Stainless steel connection components are therefore very durable and reliable. They can also easily be combined with all other materials. They are also easy to clean, which makes them ideal for use in hygienic areas.

### What areas of application exist?

The fittings of the LIQUIDLINE-series are also available as stainless steel version. Stainless steel is especially resistant to acidic media and aggressive cleaners. Fittings of the INOXLINE series are manufactured primarily of the materials 1.4301, 1.4307 or 1.4404. FKM (Viton®) is used as the seal material. For food applications we recommend use of the material 1.4404 in combination with FDA-compliant FKM seals.

When choosing the right material not only the media that are used, but also the ambient conditions such as temperature and atmosphere must be observed. In particular at pH values below 5 stainless steel connections are required. The same applies if in the medium itself, in detergents that are used or in the installation environment ammonia or very high nitrate and chloride contents are present.

Eisele recommends checking the use of the fittings under the actual specific conditions.

The experts at Eisele will be glad to assist you in selecting suitable adaptive insets.

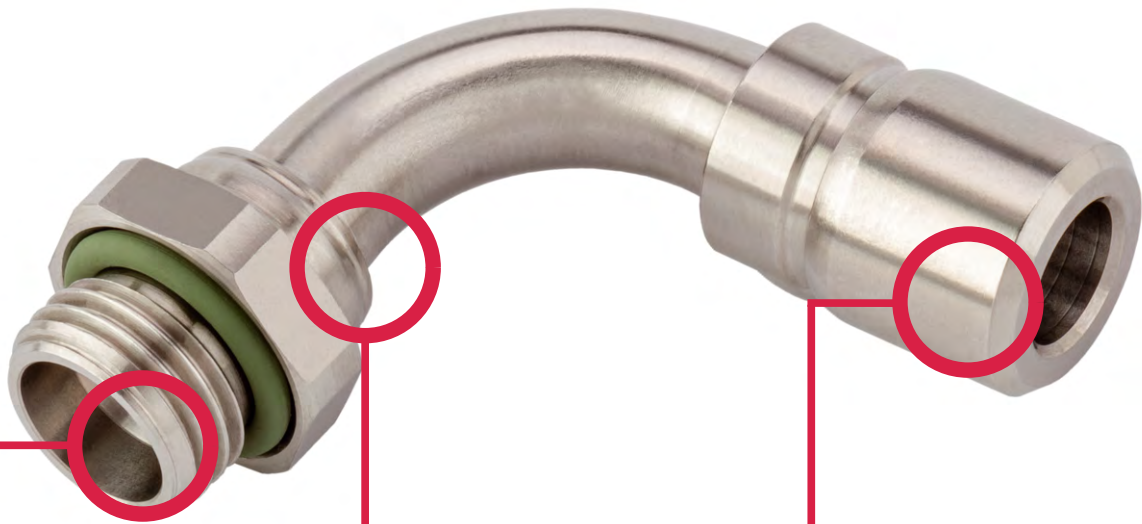


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## Plug connectors with release sleeve and 1 seal



### Media-resistant materials

- For applications in the food industry
- High material quality. Use of non-corrosive and acid-proof stainless steel AISI 316L (1.4404)

### Efficient handling

- Quick and secure assembly and disassembly of tubes
- Handling does not require any tools

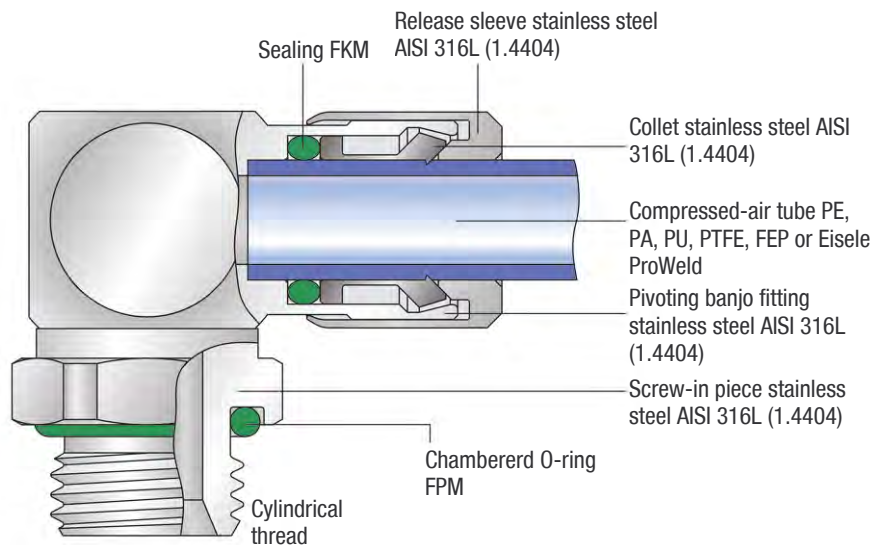
### With patented release sleeve

- The collet is located well protected from the release sleeve in the casing
- Even when the connectors have been exposed to heavy soiling, dirt cannot enter the system
- Easy cleaning of connectors possible

Also suitable for vacuum applications.

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## Functional principle



The collet guarantees the secure clamp of the plugged in tube. The external release sleeve protects the connector of dirt and makes it possible to release the tube without any tools. Simple assembly and operation.

## Range of application

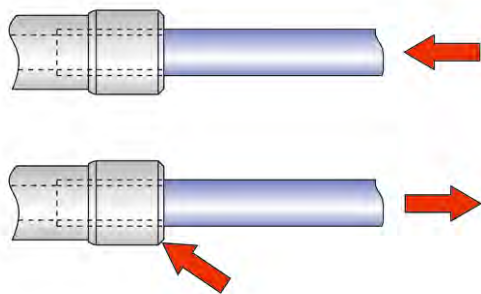
- Cooling water systems with low pressure from -14 to 232 psi (-0.95 to 16 bar)
- Robotics, welding technology
- Plant construction

## Service conditions

- Temperature range: -4 to 248 °F (-20 to +120°C)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar), depending on the used tube
- Suitable for vacuum
- Full tube passage
- Flow-rate optimized
- Dirt-repellent design
- Fast assembly
- Disassembly without tools possible
- Thread with chambered O-Ring

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## Handling



Assembly: Push tube into the connector up to the limit stop

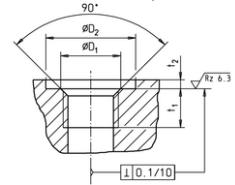
Disassembly: Fully push back release sleeve, pull out tube

## Connection thread, cylindrical

Thread	Thread depth t1 min. (mm)	Thread counterbore ØD1 max. (mm)	Counterbore <sup>1)</sup>		Torque <sup>2)</sup>			Thread standards
			ØD2 min. (mm)	t2 max. (mm)	min. (Nm)	max. (Nm)	recommen- dation (Nm)	
G1/8	5.5	11	15.3	0,5	5,5	9	7	Pipe thread G: DIN ISO 228
G1/4	7.5	14.2	19	0,5	7	18	12	
G3/8	7.5	17.5	23	0,5	10	25	15	
G1/2	9.5	22	27	0,5	15	34	20	

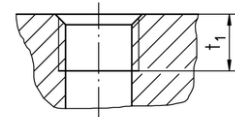
<sup>1)</sup> A counterbore is not necessary. However, the indicated values apply if a counterbore is applied.

<sup>2)</sup> Information about torques for hexagon socket on demand (assembly instructions 800 00 / 00-1)



## Connection thread, conical

Thread	Thread depth t1 min. (mm)	Torque			Thread standard
		min. (Nm)	max. (Nm)	recommendation (Nm)	
NPT1/8, R1/8	7,4	5,5	10	7	Pipe thread ISO 7-1 / EN 10226-1
NPT1/4, R1/4	11	7,5	15	12	
NPT3/8, R3/8	11,4	12,5	20	16	
NPT1/2, R1/2	15	20	30	25	
NPT3/4, R3/4	16,3	30	50	40	



## Tubes

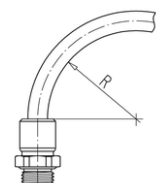
Tube dimension		Polyethylene (PE) Temperature range 14 to 104°F (-10 to +40°C)		Polyamide (PA) Temperature range -76 to 212°F (-60 to +100°C)		Polyurethane (PU) Temperature range -31 to 158°F (-35 to +70°C)		ProWeld (PUR) <sup>1)</sup> Temperature range -31 to 194°F (-35 to +90°C)		Teflon (PTFE) /FEP <sup>2)</sup> Temperature range -31 to 248°F (-35 to +120°C)	
Outside-Ø	Inside-Ø	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)
4 (±0,1)	(2)	20	290 psi (20 bar)	20	435 psi (30 bar)	10	145 psi (10 bar)	10	290 psi (20 bar)	16	362 psi (25 bar)
4,3 (±0,1)	(3)	20	188 psi (13 bar)	20	290 psi (20 bar)	10	145 psi (10 bar)	-	-	35	145 psi (10 bar)
5 (±0,1)	(3)	25	217 psi (15 bar)	25	362 psi (25 bar)	11	145 psi (10 bar)	-	-	25	290 psi (20 bar)
6 (±0,1)	(4)	30	188 psi (13 bar)	30	290 psi (20 bar)	15	145 psi (10 bar)	15	159 psi (11 bar)	35	217 psi (15 bar)
8 (±0,15)	(6)	40	116 psi (8 bar)	40	217 psi (15 bar)	20	130 psi (9 bar)	20	130 psi (9 bar)	65	159 psi (11 bar)
10 (±0,15)	(8)	60	87 psi (6 bar)	60	174 psi (12 bar)	40	116 psi (8 bar)	25	203 psi (14 bar)	100	130 psi (9 bar)
12 (±0,15)	(9)	60	130 psi (9 bar)	85	217 psi (15 bar)	50	145 psi (10 bar)	30	145 psi (10 bar)	100	130 psi (9 bar)
14 (±0,15)	(11)	90	116 psi (8 bar)	80	174 psi (12 bar)	60	109 psi (7,5 bar)	45	130 psi (9 bar)	140	130 psi (9 bar)
16 (±0,15)	(12)	90	87 psi (6 bar)	90	159 psi (11 bar)	45	145 psi (10 bar)	50	130 psi (9 bar)	-	-
20 (±0,2)	(14)	-	-	-	-	-	-	-	116 psi (8 bar)	-	-
1/4" (6,3±0,1)	(4)	-	-	23	290 psi (20 bar)	-	-	10	145 psi (10 bar)	-	-
3/8" (9,5±0,15)	(6)	-	-	32	275 psi (19 bar)	-	-	25	130 psi (9 bar)	-	-
1/2" (12,7±0,15)	(8)	-	-	60	260 psi (19 bar)	-	-	23	130 psi (9 bar)	-	-
5/8" (15,9±0,15)	(11)	-	-	-	-	-	-	-	-	-	-

The mounted compressed-air tubes are not to be exposed to tensile loading.

<sup>1)</sup> In the case of Eisele ProWeld tubes a smaller inside diameter results from a partially larger wall thickness.

<sup>2)</sup> Important notes for the use of compressed-air tubes made of PTFE (Teflon) and FEP:

- The outside diameter of compressed-air tubes must be free of grooves and other damages (e.g. damage from installation tools).
- Prior to assembly, use the Eisele tube cutter Art. No. 99605-0014 or Art. No. 99606-0022 to cut compressed-air tubes at a right angle. Ensure that tubes are not being deformed or damaged during the cutting process.
- During assembly, compressed-air tubes must be pressed until the bottom of the plug connectors to achieve proper tightness.



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## Threaded connectors

starting on page 69



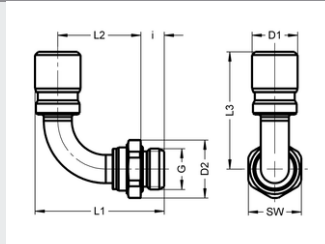
Angled threaded connectors

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## Swept screw-in elbow 90°, swiveling

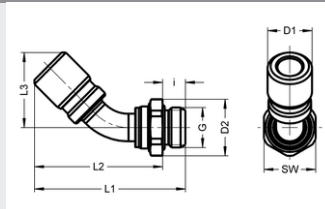
- Whitworth pipe thread DIN ISO 228
- chambered O-ring
- Seals FPM
- Material AISI 316L (1.4404)
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube



Part no.	G	for tube	SW	i	L1	L2	L3	D1	D2	NW	g/piece
VT4603-020490	G1/8	OD6	13	5,5	36	25	30	11,5	14,2	4	20
VT4603-020690	G1/8	OD8	14	5,5	43	30	36	14,5	15,2	5,5	33
VT4603-040490	G1/4	OD6	17	7,5	37	24	30	11,5	18,5	4	26
VT4603-040690	G1/4	OD8	17	7,5	43	28	36	14,5	18,5	6	35
VT4603-040890	G1/4	OD10	17	7,5	50	34	43	16,6	18,5	8	46
VT4603-040990	G1/4	OD12	17	7,5	58,5	41	53	19,9	18,5	9	73
VT4603-060490	G3/8	OD6	20	7,5	37	24	30	11,5	21,8	4	34
VT4603-060690	G3/8	OD8	20	7,5	41	26	36	14,5	21,8	6	41
VT4603-060890	G3/8	OD10	20	7,5	46	31	43	16,6	21,8	8	49
VT4603-060990	G3/8	OD12	20	7,5	56	39	53	19,9	21,8	9	75
VT4603-061190	G3/8	OD14	20	7,5	62	44	58	21,9	21,8	11	88
VT4603-061290	G3/8	OD16	20	7,5	68	47	66	24,9	21,8	11,5	116
VT4603-080690	G1/2	OD8	24	9,5	45	27	36	14,5	26,2	6	62
VT4603-080890	G1/2	OD10	24	9,5	50	32	43	16,6	26,2	8	69
VT4603-080990	G1/2	OD12	24	9,5	57,5	37	53	19,9	26,2	9	89
VT4603-081190	G1/2	OD14	24	9,5	60,5	40	58	21,9	26,2	11	99
VT4603-081290	G1/2	OD16	24	9,5	68	46	66	24,9	26,2	12	125

## Swept screw-in elbow 45°, swiveling

- Whitworth pipe thread DIN ISO 228
- chambered O-ring
- Seals FPM
- Material AISI 316L (1.4404)
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube

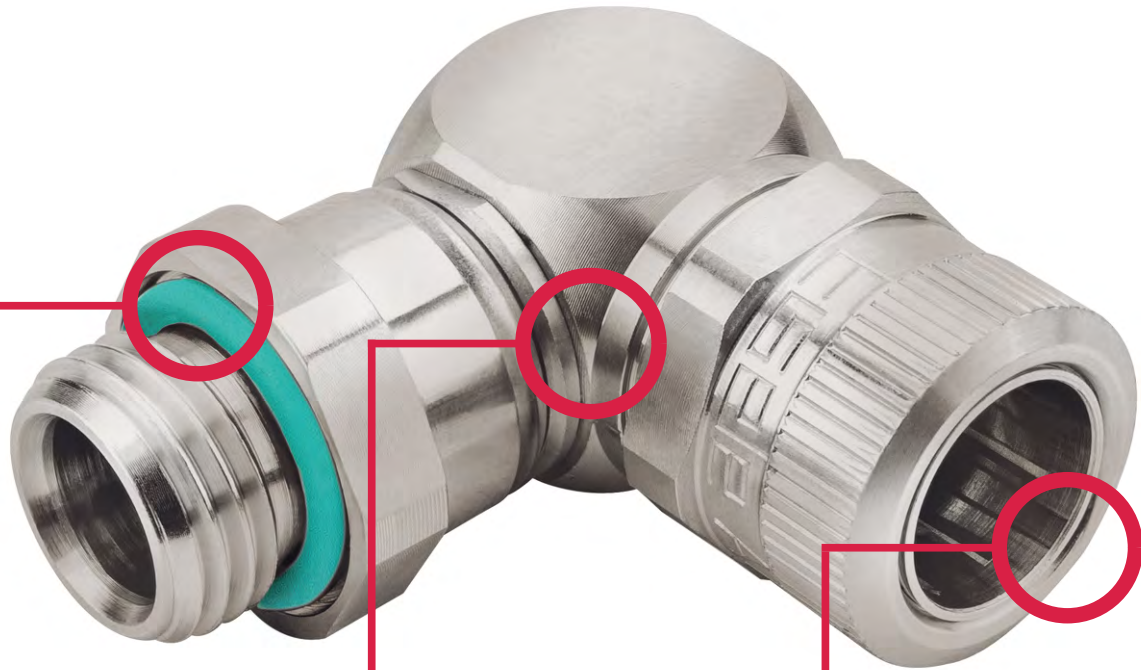


Part no.	G	for tube	SW	i	L1	L2	L3	D1	D2	NW	g/piece
VT4603-020445	G1/8	OD6	13	5,5	41,1	35,6	20,2	11,5	14,2	4	20
VT4603-020645	G1/8	OD8	14	5,5	49,6	44,1	24,5	14,5	15,2	5,5	33
VT4603-040445	G1/4	OD6	17	7,5	42,1	34,6	20,2	11,5	18,5	4	26
VT4603-040645	G1/4	OD8	17	7,5	49,6	42,1	24,5	14,5	18,5	6	35
VT4603-040845	G1/4	OD10	17	7,5	57,8	50,3	28,5	16,6	18,5	8	46
VT4603-040945	G1/4	OD12	17	7,5	69,2	62,7	34,1	19,9	18,5	9	73
VT4603-060445	G3/8	OD6	20	7,5	42,1	34,6	20,2	11,5	21,8	4	34
VT4603-060645	G3/8	OD8	20	7,5	48,1	40,6	24,5	14,5	21,8	6	41
VT4603-060845	G3/8	OD10	20	7,5	54,8	47,3	28,5	16,6	21,8	8	49
VT4603-060945	G3/8	OD12	20	7,5	67,2	59,7	34,1	19,9	21,8	9	75
VT4603-061145	G3/8	OD14	20	7,5	71,7	64,2	37,6	21,9	21,8	11	88
VT4603-061245	G3/8	OD16	20	7,5	75,9	68,4	42,4	24,9	21,8	11,5	116
VT4603-080645	G1/2	OD8	24	9,5	51,6	42,1	24,5	14,5	26,2	6	62
VT4603-080845	G1/2	OD10	24	9,5	57,3	47,8	28,5	16,6	26,2	8	69
VT4603-080945	G1/2	OD12	24	9,5	66,7	57,2	34,1	19,9	26,2	9	89
VT4603-081145	G1/2	OD14	24	9,5	70,7	61,2	37,6	21,9	26,2	11	99
VT4603-081245	G1/2	OD16	24	9,5	79,9	70,4	42,4	24,9	26,2	12	125

4600



## Series 4500 - Screw joints with larger nominal width



### Classical Screw-in connector

- Patented screw-in connector with O-ring
- Stainless steel, suitable for almost all media
- High quality FPM seals

### Outstanding retention ability

- Maximum tube retention force
- Even after a long time the tube can still be released and screwed together

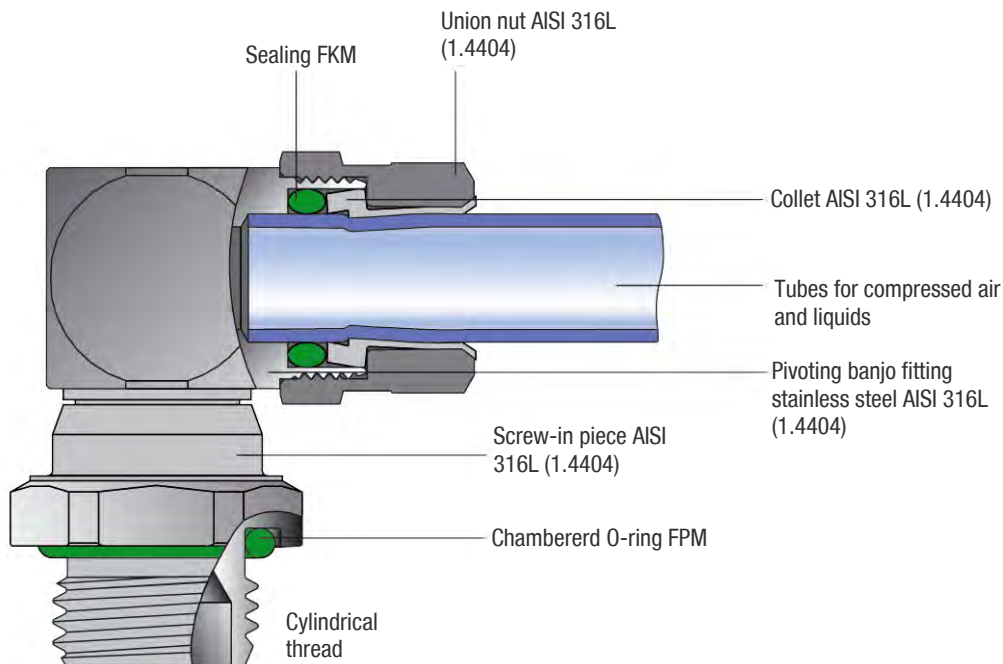
### Intuitive handling and assembly

- Full tube passage
- Intuitive assembly through touchable end stop
- Closed position viewable

4500

Modern screw joints for applications with high requirements regarding the retention form.

## Functional principle



Insert the union nut over the tube. Then the tube is plugged-in in the pre-assembled screw-joint. The collet securely holds the tube after the union nut is tightened. Even after a long time the union nut with tube can still be released and screwed together without any damage.

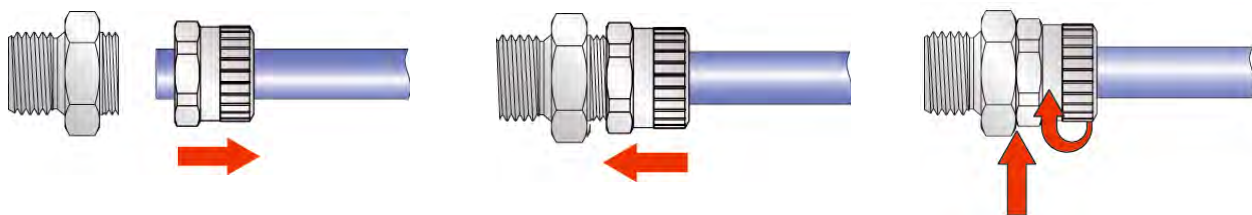
## Range of application

- Deionized water
- Cleaning-intensive environment
- Connections with high demands on the retention capacity
- Connections with tube movements
- Moveable systems with high dynamics
- Strongly fluctuating pressures and pressure surges

## Service conditions

- Temperature range -4 to 248 °F (-20 to +120°C)  
(VTT seals with extended temperature range on request)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar), depending on the used tube
- Acceptable media: cooling water, air
- Suitable for vacuum
- Full tube passage
- Flow-rate optimized
- Intuitive handling through touchable end stop
- Closed position is visible from the outside

## Handling



Assembly:

1. Insert the union nut over the tube

2. Press tube fully into the fitting, a slight twisting movement facilitates insertion

3. Tighten union nut to stop by hand or with an open-end wrench

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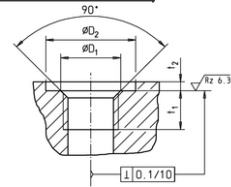


## Connection thread, cylindrical

Thread	Thread depth t1 min. (mm)	Thread counterbore ØD1 max. (mm)	Counterbore <sup>1)</sup>		Torque <sup>2)</sup>			Thread standards
			ØD2 min. (mm)	t2 max. (mm)	min. (Nm)	max. (Nm)	recommen- dation (Nm)	
G1/8	5.5	11	15.3	0,5	5,5	9	7	Pipe thread G: DIN ISO 228
G1/4	7.5	14.2	19	0,5	7	18	12	
G3/8	7.5	17.5	23	0,5	10	25	15	
G1/2	9.5	22	27	0,5	15	34	20	

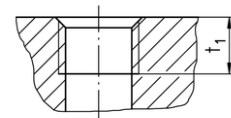
<sup>1)</sup> A counterbore is not necessary. However, the indicated values apply if a counterbore is applied.

<sup>2)</sup> Information about torques for hexagon socket on demand (assembly instructions 800 00 / 00-1)



## Connection thread, conical

Thread	Thread depth t1 min. (mm)	Torque			Thread standard
		min. (Nm)	max. (Nm)	recommendation (Nm)	
NPT1/8, R1/8	7,4	5,5	10	7	Pipe thread ISO 7-1 / EN 10226-1
NPT1/4, R1/4	11	7,5	15	12	
NPT3/8, R3/8	11,4	12,5	20	16	
NPT1/2, R1/2	15	20	30	25	
NPT3/4, R3/4	16,3	30	50	40	



## Tubes

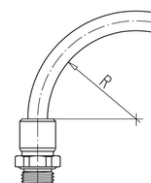
Tube dimension		Polyethylene (PE) Temperature range 14 to 104°F (-10 to +40°C)		Polyamide (PA) Temperature range -76 to 212°F (-60 to +100°C)		Polyurethane (PU) Temperature range -31 to 158°F (-35 to +70°C)		ProWeld (PUR) <sup>1)</sup> Temperature range -31 to 194°F (-35 to +90°C)		Teflon (PTFE) /FEP <sup>2)</sup> Temperature range -31 to 248°F (-35 to +120°C)	
Outside-Ø	Inside-Ø	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)	R min.	p max. (bar)
4 (±0,1)	(2)	20	290 psi (20 bar)	20	435 psi (30 bar)	10	145 psi (10 bar)	10	290 psi (20 bar)	16	362 psi (25 bar)
4,3 (±0,1)	(3)	20	188 psi (13 bar)	20	290 psi (20 bar)	10	145 psi (10 bar)	-	-	35	145 psi (10 bar)
5 (±0,1)	(3)	25	217 psi (15 bar)	25	362 psi (25 bar)	11	145 psi (10 bar)	-	-	25	290 psi (20 bar)
6 (±0,1)	(4)	30	188 psi (13 bar)	30	290 psi (20 bar)	15	145 psi (10 bar)	15	159 psi (11 bar)	35	217 psi (15 bar)
8 (±0,15)	(6)	40	116 psi (8 bar)	40	217 psi (15 bar)	20	130 psi (9 bar)	20	130 psi (9 bar)	65	159 psi (11 bar)
10 (±0,15)	(8)	60	87 psi (6 bar)	60	174 psi (12 bar)	40	116 psi (8 bar)	25	203 psi (14 bar)	100	130 psi (9 bar)
12 (±0,15)	(9)	60	130 psi (9 bar)	85	217 psi (15 bar)	50	145 psi (10 bar)	30	145 psi (10 bar)	100	130 psi (9 bar)
14 (±0,15)	(11)	90	116 psi (8 bar)	80	174 psi (12 bar)	60	109 psi (7,5 bar)	45	130 psi (9 bar)	140	130 psi (9 bar)
16 (±0,15)	(12)	90	87 psi (6 bar)	90	159 psi (11 bar)	45	145 psi (10 bar)	50	130 psi (9 bar)	-	-
20 (±0,2)	(14)	-	-	-	-	-	-	-	116 psi (8 bar)	-	-
1/4" (6,3±0,1)	(4)	-	-	23	290 psi (20 bar)	-	-	10	145 psi (10 bar)	-	-
3/8" (9,5±0,15)	(6)	-	-	32	275 psi (19 bar)	-	-	25	130 psi (9 bar)	-	-
1/2" (12,7±0,15)	(8)	-	-	60	260 psi (19 bar)	-	-	23	130 psi (9 bar)	-	-
5/8" (15,9±0,15)	(11)	-	-	-	-	-	-	-	-	-	-

The mounted compressed-air tubes are not to be exposed to tensile loading.

<sup>1)</sup> In the case of Eisele ProWeld tubes a smaller inside diameter results from a partially larger wall thickness.

<sup>2)</sup> Important notes for the use of compressed-air tubes made of PTFE (Teflon) and FEP:

- The outside diameter of compressed-air tubes must be free of grooves and other damages (e.g. damage from installation tools).
- Prior to assembly, use the Eisele tube cutter Art. No. 99605-0014 or Art. No. 99606-0022 to cut compressed-air tubes at a right angle. Ensure that tubes are not being deformed or damaged during the cutting process.
- During assembly, compressed-air tubes must be pressed until the bottom of the plug connectors to achieve proper tightness.



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## Threaded connectors

starting on page 75



Straight threaded connectors

page 75



Angled threaded connectors

page 75

## Adapter pipe/tube

starting on page 76



Double screw joints

page 76

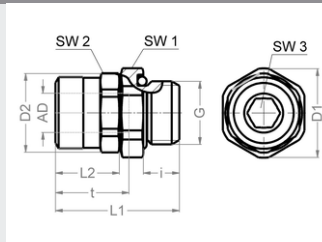


Elbow screw joints

page 76

## Screw-in connector

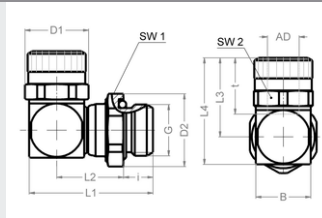
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- Material: 1.4404
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)



Part no.	G	for tube	SW1	SW2	SW3	i	L1	L2	D1	D2	t	NW	g/piece
VT4528-0202	G1/8	OD4	13	10	3	5,5	22	11,6	14,2	11,2	13	3	2
VT4528-0204	G1/8	OD6	13	12	4	5,5	23,8	13	14,2	13,1	15	4,5	2
VT4528-0206	G1/8	OD8	14	15	5	5,5	25,5	15	15,2	16,4	17	5,5	4
VT4528-0402	G1/4	OD4	17	10	3	7,5	24,3	11,8	18,5	11,2	13	3	2
VT4528-0404	G1/4	OD6	17	12	4	7,5	25,8	13	18,5	13,1	15	4,5	3
VT4528-0406	G1/4	OD8	17	15	6	7,5	27,5	15	18,5	16,4	17	6,5	5
VT4528-0408	G1/4	OD10	17	17	8	7,5	28,8	15	18,5	18,5	18	8,5	7
VT4528-0409	G1/4	OD12	20	22	8	7,5	32	16,5	21,8	23,5	20	8,5	9
VT4528-0606	G3/8	OD8	20	15	6	7,5	27,5	15	21,8	16,4	17	6,5	6
VT4528-0608	G3/8	OD10	20	17	8	7,5	28	15	21,8	18,5	18	8,5	7
VT4528-0609	G3/8	OD12	22	22	8	7,5	32	16,5	23,8	23,5	20	8,5	10
VT4528-0611	G3/8	OD14	22	24	10	7,5	33,2	17,7	23,8	25,5	21,7	10,5	11
VT4528-0808	G1/2	OD10	24	17	8	9,5	31	15	26,2	18,5	18	8,5	7
VT4528-0809	G1/2	OD12	24	22	10	9,5	32	16,5	26,2	23,5	20	10,5	11
VT4528-0811	G1/2	OD14	24	24	12	9,5	33,2	17,7	26,2	25,5	21,7	12,5	12
VT4528-0812	G1/2	OD16	27	27	13	9,5	42,3	22,8	29,8	29,8	30	13,5	18
VT4528-0815	G1/2	OD20	30	32	14	9,5	42,3	22,8	33,5	35	30	14,5	22

## Elbow screw-in connector, swiveling

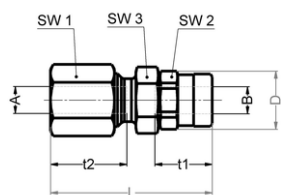
- Whitworth pipe thread DIN ISO 228
- Chambered O-ring
- Seals FPM
- Material: 1.4404
- Temperature range: -4 to 248 °F (-20 to +120 °C)
- Working pressure range: -14 to 232 psi (-0.95 to 16 bar)
- Not designed for steady motion of the tube



Part no.	G	for tube	SW1	SW2	i	L1	L2	L3	L4	D1	D2	t	B	NW	g/piece
VT4504-0202	G1/8	OD4	13	10	5,5	23	13	17	21	11,2	14,2	13	9	3	5
VT4504-0204	G1/8	OD6	14	12	5,5	26	15	20	25	13,1	14,2	15	11	4,5	6
VT4504-0206	G1/8	OD8	14	15	5,5	31,5	19	23	30	16,4	15,2	17	14	5,5	10
VT4504-0402	G1/4	OD4	17	10	7,5	25	13	17	21	11,2	18,5	13	9	3	16
VT4504-0404	G1/4	OD6	17	12	7,5	27	14	20	25	13,1	18,5	15	11	4,5	16
VT4504-0406	G1/4	OD8	17	15	7,5	31,5	17	23	30	16,4	18,5	17	14	6,5	17
VT4504-0408	G1/4	OD10	17	17	7,5	36,3	20,8	25	33	18,5	18,5	18	16	8,5	18
VT4504-0604	G3/8	OD6	20	12	7,5	27	14	20	25	13,1	21,8	15	11	4,5	11
VT4504-0606	G3/8	OD8	20	15	7,5	30	15,5	23	30	16,4	21,8	17	14	6,5	16
VT4504-0608	G3/8	OD10	20	17	7,5	33,3	17,8	25	33	18,5	21,8	18	16	8,5	20
VT4504-0609	G3/8	OD12	20	22	7,5	41,3	23,3	29	39,5	23,5	21,8	20	21	9	34
VT4504-0611	G3/8	OD14	20	24	7,5	43,5	25	31,5	43,1	25,5	21,8	21,7	22	11	38
VT4504-0808	G1/2	OD10	24	17	9,5	35,8	18,3	25	33	18,5	26,2	18	16	8,5	25
VT4504-0809	G1/2	OD12	24	22	9,5	40,8	20,8	29	39,5	23,5	26,2	20	21	9	39
VT4504-0811	G1/2	OD14	24	24	9,5	42,5	22	31,5	43,1	25,5	26,2	21,7	22	11	42
VT4504-0812	G1/2	OD16	24	27	9,5	47,5	26	53	41	29,8	26,2	30	24	12,5	65
VT4504-0815	G1/2	OD20	24	32	9,5	60,8	36,3	42,5	56	35	25,8	30	30	13,5	87

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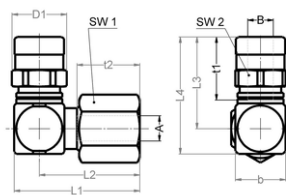
## Double screw-joint, adapter for pipe/tube



- Combination of cutting ring screw joint and plug connector
- Seals FPM
- Material: 1.4404
- Temperature range -4 to 248 °F (-20 to +120 °C)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar)

Part no.	for pipe A	for tube B	SW1	SW2	SW3	L	D	t1	t2	NW	g/piece
VT4547-0804	8	OD6	17	10	12	39	13,2	15	17	4,5	41
VT4547-0806	8	OD8	17	15	14	41	16,4	17	17	6,5	50
VT4547-0808	8	OD10	17	17	17	42	18,5	18,5	17	6,5	52
VT4547-1006	10	OD8	19	15	14	43	16,4	17	18	6,5	59
VT4547-1008	10	OD10	19	17	17	43	18,5	18,5	18	8,5	60

## Elbow connector, adapter for pipe/tube



- Combination of cutting ring screw joint and plug connector
- Seals FPM
- Material: 1.4404
- Temperature range -4 to 248 °F (-20 to +120 °C)
- Working pressure range -14 to 232 psi (-0.95 to 16 bar)

Part no.	for pipe A	for tube B	SW1	SW2	L1	L2	L3	L4	b	D1	t1	t2	NW	g/piece
VT4546-0804	8	OD6	17	12	33	26	22,8	29,8	14	13,2	15	16	4,5	54
VT4546-0806	8	OD8	17	15	33	26	26	33	14	16,4	17	16	6,5	59
VT4546-0808	8	OD10	17	17	53	27	28	36	16	18,5	18,5	16	6,5	70
VT4546-1006	10	OD8	19	15	36	28	27	35	16	16,4	17	16	6,5	76
VT4546-1008	10	OD10	19	17	36	28	28	36	16	18,5	18,5	16	8,5	78

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## Customized connection solutions



You will find more information about the pipe/tube adapter screw-joints on page 24 and 44

### We master your individual specifications

- Combination of the different connection and screw joint series
- Individual types, e.g. extensions, arches
- Special threaded connections, e.g. female thread, fine thread, NPT
- Adaption of other systems, e.g. pipe screw joints, copper profiles, fabric lining tube
- Other sealing materials available, e.g. NBR, EPDM, FFKM
- Integrated valve technology, e.g. flow control, barriers, pressure reading
- Color coding
- Pre-assembled structural components
- Multiple couplings

CLIENT

## Customized connection solutions

### Screw-in connector

as a reduction for a smaller thread



### Screw-in connector

as an extension



### Screw-in connector

with special thread sealing



### Screw-in spigot

for fabric lining tube with special thread



### Double nipple removable

with a maximum flow



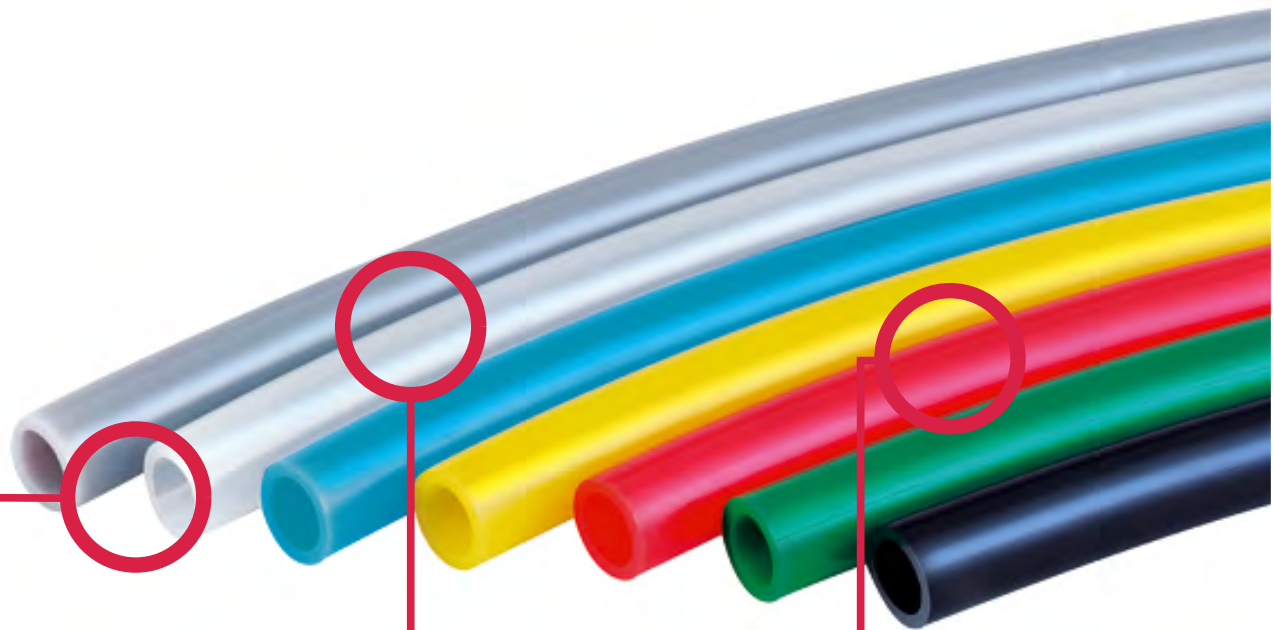
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EISELE LIQUIDLINE





## Plastic tubes



### Versatile range of tubes

- Standard compressed-air tubes as well as tubes for special applications and appropriate accessories
- Different tube materials for different application areas

### Color and code versions possible

- Tubes can be delivered in many common colors, e.g. to indicate different fluids
- Labeling of tubes for coding is also possible

### Package solutions of connectors and tubes

- Secure combinations of EISELE connectors and their matching tubes
- Very suitable for applications due to limited tolerances and a high demand for no leakage

On request we also offer tube solutions in other colors, sizes and materials.

## Tube types

### Kind of calibration:

- Tubes for push-in fittings - external calibration, OD produced with narrow tolerances. Typical structure: single-layered, not reinforced with fabric lining.
- Tubes for spigots – internal calibration. Partly reinforced.

### Kind of flexibility:

- Furthermore, a distinction is made between tubes which are resistant and nonresistant to buckling. Polyurethane tubes (e.g. PU, HYDRO Eisele, Eisele ProWeld) or PVC tubes are permanently flexible and relatively impervious to buckling! All other tubes have a clearly visible deformation (e.g. whitening) after buckling; replacement should be done.

## Resistance

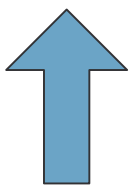
Type of tube	Damage by weak acids/bases or water	Stress crack by polar solvents	Microbial/fungal damage	Physical radiation damage
Polyurethane (PU)	-	0	-	+*
Eisele Hydro/ProWeld	+	0	++	+
Polyamide (PA)	0/+	+	+	0
PFA	++	++	++	(UV) +

++	Excluded damage
+	Damage rarely
0	Damage occasionally
-	Damage often

\*PU bilged stronger than Eisele Hydro

## Temperatures

### Temperature - Material



302 °F (150°C)	- PFA, PTFE (Teflon) at zero pressure up to 500 °F (260°C)
248 °F (120°C)	- FEP
212 °F (100°C)	- PA
194 °F (90°C)	- PU-Ether-based (Eisele ProWeld)
158 °F (70°C)	- PU-Ester-based (PU), NBR
140 °F (60°C)	- PE, PVC, PU-Ether-based (Eisele Hydro)
104 °F (40°C)	- PE

## Working pressure

The operating pressure is obtained by dividing the burst pressure by a safety factor. Safety factors are between 2 to 4 depending on the application.

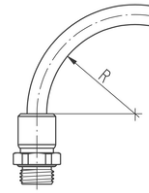
### Example:

- 435 psi (30 bar) burst pressure at 20 ° C results in an operating pressure of
- 145 psi (10 bar) with a safety factor of 3,
  - 217 psi (15 bar) with a safety factor of 2

Eisele usually provides the burst pressure. Every customer can choose his required safety factor.

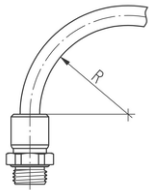
## Plastic tube Eisele ProWeld

- Made of polyether-polyurethane
- Color black (red, blue, green, white)
- External calibration; for use with Eisele plug connectors
- Operating temperature -31 to 194 °F (-35 to +90 °C)
- Suitable for compressed air, water
- Free of plasticizers, PWIS, halogen, copper and PTFE
- Impervious to buckling and drag chain compliant
- Resistant to UV, hydrolysis and microbes
- Flame-retardant according to UL94 V0 to V2
- Suitable for employment in welding
- Suitable for vacuum



Part no.	Outside Ø / Inside Ø	Minimum burst pressure at 68°F (20°C)	Minimum burst pressure at 140°F (60°C)	min. allowable bend radius	g/m
99118-0201	2 / 1	ca. 507 psi (35 bar)	-	-	-
99118-0302	3 / 2	652 psi (45 bar)	-	-	-
99118-0402	4 / 2	1348 psi (93 bar)	580 psi (40 bar)	8	12
99118-3902	5/32" (4/2)	1348 psi (93 bar)	580 psi (40 bar)	8	12
99118-4303	4,3/3	551 psi (38 bar)	232 psi (16 bar)	-	-
99118-0603	6 / 3	1348 psi (93 bar)	580 psi (40 bar)	10	27,5
99118-0604	6 / 4	580 psi (40 bar)	319 psi (22 bar)	14	22
99118-6343	1/4" (6,35/4,32)	464 psi (32 bar)	-	-	-
99118-0804	8 / 4	913 psi (63 bar)	536 psi (37 bar)	10	48
99118-7904	5/16" (8/4)	913 psi (63 bar)	536 psi (37 bar)	10	48
99118-0855	8 / 5,5	493 psi (34 bar)	260 psi (18 bar)	21	33
99118-7955	5/16" (8/5,5)	493 psi (34 bar)	260 psi (18 bar)	21	33
99118-9563	3/8" (9,53/6,35)	623 psi (43 bar)	-	-	-
99118-1006	10 / 6	710 psi (49 bar)	406 psi (28 bar)	20	65
99118-1208	12 / 8	493 psi (34 bar)	304 psi (21 bar)	33	81
99118-2781	1/2" (12,7/8,13)	681 psi (47 bar)	-	-	-
99118-1410	14 / 10	478 psi (33 bar)	260 psi (18 bar)	41	98
99118-1611	16 / 11	536 psi (37 bar)	275 psi (19 bar)	47	137
99118-2014	20 / 14	ca. 507 psi (35 bar)	ca. 232 psi (16 bar)	70	ca. 200

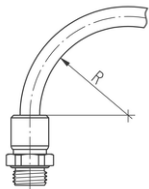
## Plastic tube Eisele Hydro



- Made of polyether-polyurethane (PU-H)
- Color imbued: black, blue, red
- External calibration; for use with Eisele plug connectors
- Temperature range -31 to 140 °F (-35 to +60 °C)
- Free of halogen, plasticizers, PWIS, copper and PTFE
- Impervious to buckling and drag chain compliant
- Resistant to UV, hydrolysis and microbes
- FDA compliant according to 21 CFR 177.2600
- Suitable for vacuum

Part no.	Outside Ø / Inside Ø	Minimum burst pressure at 68°F (20°C)	Minimum burst pressure at 140°F (60°C)	min. allowable bend radius	g/m
99150-2785	1/2" (12,7/8,5)	420 psi (29 bar)	224 psi (15,5 bar)	23	84
99150-6341	1/4" (6,35/4,1)	464 psi (32 bar)	224 psi (15,5 bar)	10	22
99150-9565	3/8" (9,53/6,5)	406 psi (28 bar)	195 psi (13,5 bar)	25	46
99150-0425	4 / 2,5	478 psi (33 bar)	232 psi (16 bar)	8	9
99150-3925	5/32" (4/2,5)	478 psi (33 bar)	232 psi (16 bar)	8	9
99150-5908	5/8" (15,9/10,8)	435 psi (30 bar)	210 psi (14,5 bar)	38	133
99150-7906	5/16" (8/6)	391 psi (27bar)	188 psi (13 bar)	21	29
99150-0604	6 / 4	464 psi (32 bar)	217 psi (15 bar)	10	18
99150-0806	8 / 6	391 psi (27bar)	188 psi (13 bar)	21	29
99150-1007	10 / 7	406 psi (28 bar)	188 psi (13 bar)	28	47
99150-1208	12 / 8	464 psi (32 bar)	232 psi (16 bar)	33	73
99150-1410	14 / 10	393 psi (27,1 bar)	190 psi (13,2 bar)	33	73
99150-1611	16 / 11	435 psi (30 bar)	203 psi (14 bar)	38	123
99150-2014	20 / 14	417 psi (28,8 bar)	203 psi (14 bar)	-	ca. 187

## Plastic tube Eisele Hydro, translucent

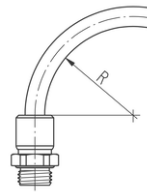


- Made of polyether-polyurethane (PU-H)
- Color transparent: natural, red, blue
- External calibration; for use with Eisele plug connectors
- Temperature range -31 to 140 °F (-35 to +60 °C)
- Free of halogen, plasticizers, PWIS, copper and PTFE
- Impervious to buckling and drag chain compliant
- Resistant to hydrolysis and microbes
- FDA compliant according to 21 CFR 177.2600
- Suitable for vacuum

Part no.	Outside Ø / Inside Ø	Minimum burst pressure at 68°F (20°C)	Minimum burst pressure at 140°F (60°C)	min. allowable bend radius	g/m
99151-0425	4 / 2,5	478 psi (33 bar)	232 psi (16 bar)	8	9
99151-3925	5/32" (4/2,5)	478 psi (33 bar)	232 psi (16 bar)	8	9
99151-0604	6 / 4	464 psi (32 bar)	217 psi (15 bar)	10	18
99151-6341	1/4" (6,35/4,1)	464 psi (32 bar)	224 psi (15,5 bar)	10	22
99151-0806	8 / 6	391 psi (27bar)	188 psi (13 bar)	21	29
99151-7906	5/16" (8/6)	391 psi (27bar)	188 psi (13 bar)	21	29
99151-9565	3/8" (9,53/6,5)	406 psi (28 bar)	195 psi (13,5 bar)	25	46
99151-1007	10 / 7	406 psi (28 bar)	188 psi (13 bar)	28	47
99151-1208	12 / 8	464 psi (32 bar)	232 psi (16 bar)	33	73
99151-2785	1/2" (12,7/8,5)	420 psi (29 bar)	224 psi (15,5 bar)	23	84
99151-1410	14 / 10	393 psi (27,1 bar)	190 psi (13,2 bar)	33	73
99151-5908	5/8" (15,9/10,8)	435 psi (30 bar)	210 psi (14,5 bar)	38	133
99151-1611	16 / 11	435 psi (30 bar)	203 psi (14 bar)	38	123
99151-2014	20 / 14	417 psi (28,8 bar)	203 psi (14 bar)	-	ca. 187

## Plastic tube PA

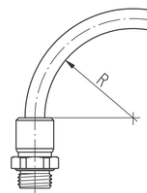
- Made of polyamide (PA)
- Color black (red, blue, green, yellow, natural, brown, orange and grey: specify when placing order; subject to extra charge)
- External calibration; for use with Eisele plug connectors
- Temperature range -76 to 212 °F (-60 to +100 °C)
- Suitable for vacuum
- Free of PWIS and halogen
- Suitable for fuel
- For automotive industry according to DIN 73378
- Drag chain compliant



Part no.	Outside Ø / Inside Ø	Minimum burst pressure at 68°F (20°C)	Minimum burst pressure at 140°F (60°C)	min. allowable bend radius	g/m
99005-0302	3 / 1,7	1523 psi (105 bar)	-	20	5
99005-0402	4 / 2	2103 psi (145 bar)	1189 psi (82 bar)	20	10
99005-4303	4,3 / 3	1102 psi (76 bar)	623 psi (43 bar)	20	8
99005-0503	5 / 3	1624 psi (112 bar)	928 psi (64 bar)	25	13
99005-0604	6 / 4	1290 psi (89 bar)	739 psi (51 bar)	30	16
99005-0805	8 / 5	1348 psi (93 bar)	768 psi (53 bar)	40	32
99005-0806	8 / 6	1348 psi (93 bar)	521 psi (36 bar)	40	23
99005-0906	9 / 6	1290 psi (89 bar)	739 psi (51 bar)	45	36
99005-1008	10 / 8	710 psi (49 bar)	406 psi (28 bar)	60	29
99005-1209	12 / 9	913 psi (63 bar)	521 psi (36 bar)	60	51
99005-1210	12 / 10	565 psi (39 bar)	319 psi (22 bar)	85	36
99005-1411	14 / 11	768 psi (53 bar)	435 psi (30 bar)	80	61
99005-1512	15 / 12	710 psi (49 bar)	406 psi (28 bar)	90	66
99005-1613	16 / 13	667 psi (46 bar)	377 psi (26 bar)	90	70
99005-1814	18 / 14	739 psi (51 bar)	420 psi (29 bar)	100	104
99005-2016	20 / 16	710 psi (49 bar)	406 psi (28 bar)	120	117

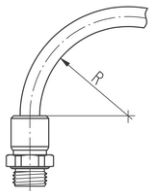
## Plastic tube PTFE

- Made of polytetrafluoroethylene (PTFE, Teflon)
- Color natural
- External calibration; for use with Eisele plug connectors
- Temperature range -310 to 500 °F (-190 to +260 °C)
- Free of plasticizers, PWIS and copper
- Resistant to UV and solvents
- FDA compliant according to 21 CFR 177.2600
- Flame-retardant according to UL94 V0 to V2



Part no.	Outside Ø / Inside Ø	Minimum burst pressure at 68°F (20°C)	Minimum burst pressure at 122°F (50°C)	min. allowable bend radius	g/m
99001-0335	3 / 0,35	290 psi (20 bar)	250 psi (17,5 bar)	35	-
99001-0305	3 / 0,5	-	-	-	-
99001-0307	3 / 0,7	-	-	-	-
99001-0310	3 / 1	-	-	-	-
99001-0315	3 / 1,5	217 psi (15 bar)	188 psi (13 bar)	25	-
99001-0402	4 / 2	1160 psi (80 bar)	1000 psi (69 bar)	16	20
99001-4303	4,3 / 3	522 psi (36 bar)	449 psi (31 bar)	35	16
99001-0503	5 / 3	870 psi (60 bar)	754 psi (52 bar)	25	27
99001-0604	6 / 4	696 psi (48 bar)	594 psi (41 bar)	35	34
99001-0805	8 / 5	812 psi (56 bar)	696 psi (48 bar)	-	-
99001-0806	8 / 6	522 psi (36 bar)	449 psi (31 bar)	65	47
99001-0906	9 / 6	696 psi (48 bar)	594 psi (41 bar)	55	76
99001-1008	10 / 8	406 psi (28 bar)	348 psi (24 bar)	100	61
99001-1209	12 / 9	580 psi (40 bar)	493 psi (34 bar)	100	106
99001-1210	12 / 10	304 psi (21 bar)	261 psi (18 bar)	100	-
99001-1411	14 / 11	406 psi (28 bar)	348 psi (24 bar)	140	127
99001-1613	16 / 13	348 psi (24 bar)	304 psi (21 bar)	175	152

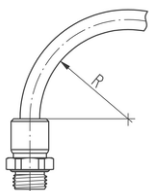
## Plastic tube FEP



- Made of fluorinated ethylene-propylene copolymer (FEP)
- Color natural, transparent
- External calibration; for use with Eisele plug connectors
- Temperature range -31 to 248 °F (-35 to +120 °C)
- Very flexible
- Free of plasticizer and copper
- Flame-retardant according to UL94 V0 to V2
- Resistant to UV, hydrolysis and microbes
- Stabilized against thermal degradation and light
- FDA compliant according to 21 CFR 177.2600
- Suitable for vacuum

Part no.	Outside Ø / Inside Ø	Minimum burst pressure at 68°F (20°C)	Minimum burst pressure at 140°F (60°C)	min. allowable bend radius	g/m
99501-0402	4 / 2	1218 psi (84 bar)	1015 psi (70 bar)	25	21
99501-0503	5 / 3	870 psi (60 bar)	754 psi (52 bar)	35	28
99501-0604	6 / 4	725 psi (50 bar)	580 psi (40 bar)	40	35
99501-0806	8 / 6	522 psi (36 bar)	420 psi (29 bar)	65	49
99501-0906	9 / 6	-	-	55	79
99501-1008	10 / 8	406 psi (28 bar)	319 psi (22 bar)	100	63
99501-1209	12 / 9	-	-	100	110

## Plastic tube PFA



- Made of Perfluoro Alkoxyalkane (PFA)
- Color natural
- External calibration; for use with Eisele plug connectors
- Temperature range -4 to 302 °F (-20 to +150 °C)
- Free of plasticizer and PWIS
- Resistant to UV, hydrolysis, microbes and solvents
- Stable against thermal degradation
- Resistant to weld spatter
- FDA compliant according to 21 CFR 177.2600
- Suitable for vacuum

Part no.	Outside Ø / Inside Ø	Minimum burst pressure at 68°F (20°C)	Minimum burst pressure at 140°F (60°C)	min. allowable bend radius	g/m
99221-2795	1/2" (12,7/8,5)	580 psi (40 bar)	478 psi (33 bar)	110	125
99221-6339	1/4" (6,35/3,9)	884 psi (61 bar)	725 psi (50 bar)	40	34
99221-9563	3/8" (9,53/6,38)	768 psi (53 bar)	609 psi (42 bar)	65	49
99221-0403	4 / 3	464 psi (32 bar)	493 psi (34 bar)	35	12
99221-0425	4 / 2,5	884 psi (61 bar)	725 psi (50 bar)	25	12
99221-3925	5/32" (4/2,5)	884 psi (61 bar)	725 psi (50 bar)	25	12
99221-7906	5/16 (8/6)	464 psi (32 bar)	493 psi (34 bar)	70	49
99221-0604	6 / 4	783 psi (54 bar)	638 psi (44 bar)	40	34
99221-0806	8 / 6	464 psi (32 bar)	493 psi (34 bar)	70	49
99221-0906	9 / 6	783 psi (54 bar)	638 psi (44 bar)	65	49
99221-1007	10 / 7	710 psi (49 bar)	580 psi (40 bar)	75	87
99221-1209	12 / 9	464 psi (32 bar)	493 psi (34 bar)	100	125
99221-1210	12 / 10	391 psi (27bar)	319 psi (22 bar)	150	-
99221-1412	14 / 12	333 psi (23 bar)	246 psi (17 bar)	-	-
99221-1614	16 / 14	290 psi (20 bar)	217 psi (15 bar)	-	-

## Tube cutter

- For compressed-air tubes with outer- $\varnothing$  14 mm
- Material plastic black / steel
- Packaging unit 1 piece



### Part no.

g/piece

99605-0014	Tube cutter for outer diameter up to 14	30
99605-00149	Spare blade for outer diameter up to 14	1

## Tube cutter

- For compressed-air tubes with outer- $\varnothing$  22 mm
- Material zinc die-casting / steel
- Packaging unit 1 piece



### Part no.

g/piece

99606-0022	Tube cutter for outer diameter up to 22 (with bag)	240
99606-00229	Spare blade for outer diameter up to 22	2

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## MANY SOLUTIONS FROM ONE MODULAR SYSTEM:

### EISELE BASICLINE

#### Standard components for pneumatics

EISELE **BASICLINE** gives our customers a wide choice of our stock of approximately 5,000 standardized connection components. We can therefore deliver at very short notice a complete range of screw joints, plug connectors, matching tubes and a wide spectrum of accessories.

Many of these EISELE products are authorized for use by major automotive manufacturers like Audi, Daimler or Volkswagen.

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#### Stainless steel connection solutions

Stainless steel connections are frequently called for systems in the food and pharmaceutical sectors – and they are essential for many applications.

Based on the design of our tried-and-tested standard components, we supply a broad range of media-resistant connections made of corrosion-proof and acid-resistant stainless steel. The connections are equally tough enough for aggressive production environments and cleaning products.





## FROM STANDARDIZED TO HIGHLY INDIVIDUAL

### EISELE LIQUIDLINE

#### Connections for cooling water

The through-flow-optimized connections in the EISELE **LIQUIDLINE** are perfectly suited for applications with closed cooling-water cycles.

All parts in contact with media are made of a brass alloy not susceptible to dezincification. When combined with the tubes, connections with FKM seals are resistant to many media as well as high temperatures.

### EISELE MULTILINE

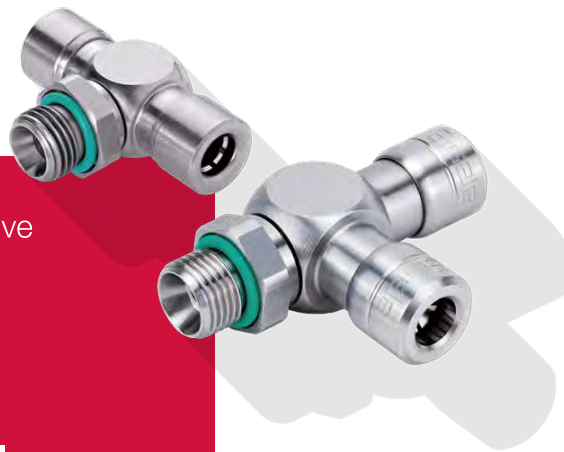
#### Multiple couplings for multiple media connections

From plant installations, to maintenance and repair, the couplings in the EISELE **MULTILINE** join separate components or complete modules in a safe, efficient and space-saving way with the simple, centralized, plug and screw joint connectors. In machines with combined air and liquid inlets, the connections discourage assembly mistakes. They can also be coupled and uncoupled under pressure thanks to the integrated shut-off valves.



Connectors made of non-corrosive  
and acid-resistant stainless steel

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Around 4000 connection  
components for pneumatics  
and vacuum

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and electronics

## MULTILINE



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LIQUIDS, ELECTRICS AND ELECTRONICS