35

Quick Connectors

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for testing, filling and plugging

WEH®

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Our general terms and conditions are valid for consignments and all other services, unless otherwise agreed. We do not accept general terms and conditions of the purchaser.

Contents

WEH GmbH Precision Connectors

Innovation is our tradition

WEH is the leading manufacturer of quick connectors for leak and function testing. Since 1973 WEH GmbH have offered an innovative range of test connectors. As a long-standing partner to the international automobile, hydraulic and manufacturing industry, our experts have developed advanced solutions for many applications. Working in collaboration with our customers on demanding applications is a reality for us.
Customer demands for special solutions are an everyday activity for us. WEH-Connectors have vastly improved productivity and enhanced test procedures in both safety and performance. As the worldwide leading manufacturer of test connectors offering a whole range of unique products for connection technology we can also cope with your most difficult tasks successfully.

WEH is a global thinking and acting group of companies whose products are used in all parts of the world. In Europe, WEH GmbH have two subsidiaries, one in Great Britain and the other in France.

Testing laboratory

Modern, unique test equipment guarantees a comprehensive examination of all our products from design to manufacture.

Quality management

For WEH GmbH one of the uppermost company principles is quality. The latest manufacturing facilities and continuous improvement processes guarantee the highest quality standards. WEH GmbH is certified to ISO 9001.

Representatives

For personal advice WEH have worldwide representation. You will find a list of our distributors at www.weh.com.

Postal address	WEH GmbH Precision Connectors Siemensstraße 5, 89257 Illertissen
Phone reception	+49 7303 9609-0
Hotline sales department	+49 7303 9609-60
Fax	+49 7303 9609-9999
E-Mail	sales@weh.com
Homepage	www.weh.com

WEH-Connectors

Examples of application

WEH-Connectors –
Tools for efficient quality assurance

In times of intense cost pressure more and more companies pose the question 'how to organise production processes even faster and cheaper and at the same time increase safety and comfort in the operation?' WEH offer the optimum solutions with our quick connectors. Pressure- and function-tight connections can be made in seconds.

WEH-Quick Connectors have become standard in the automobile industry worldwide. Before WEH-Connectors all supply lines had to be screwed on engine test benches, now the innovative WEH-Connectors enable pressure-tight connections in seconds.

WEH-Connectors can be characterised by:

- Easy operation
- Reliability
- Minimum wear and tear
- Ease of maintenance

Quality is our rule

Numerous tests during production flow are essential in order to guarantee our product quality. The products that we deliver are of first-class quality.

Pressure-tight connections in seconds

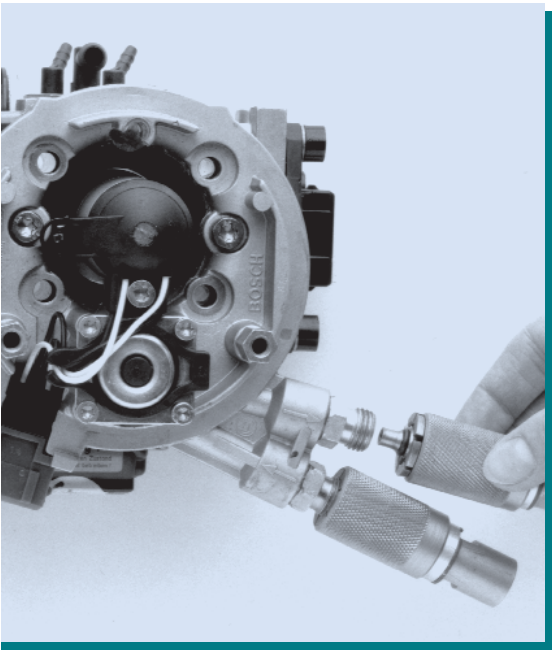
WEH - The clever connection

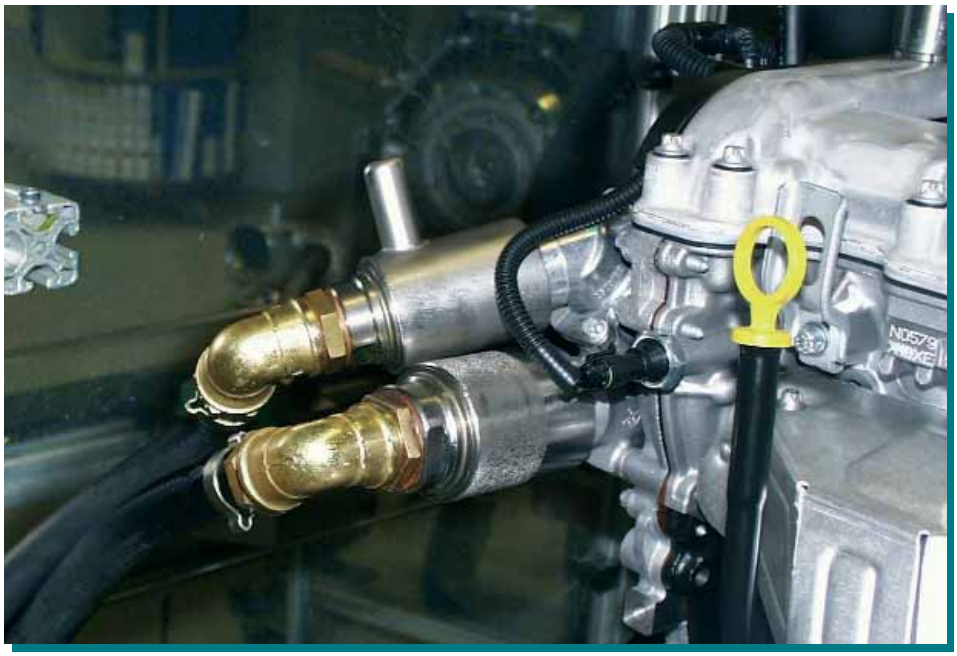
New knowledge, attained from customers requirements, enhance our competence in connecting technology on a daily basis. Therefore, our customers gain inventive and fully developed solutions.
Please send us your inquiry with a drawing and indicate operating conditions such as pressure, medium, temperatures and any other information you may feel necessary. Then our engineers will have an idea for your application.

WEH-Connectors
are available for:

- External threads
- Internal threads
- Straight tubes
- Holes and bores
- Flanges, beads, collars

... and probably
for your application!



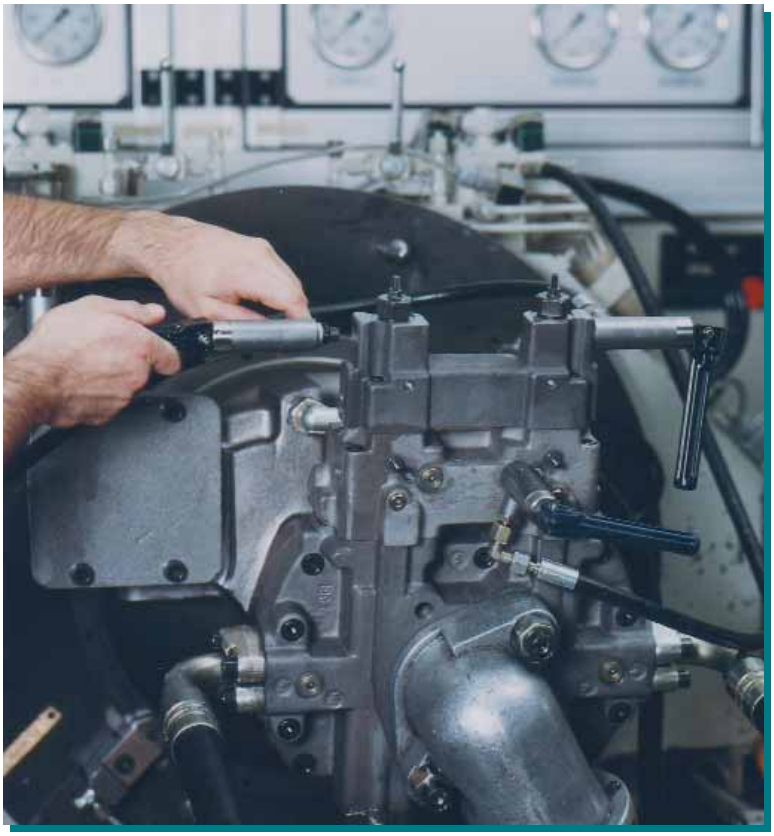


Connections in seconds

WEH-Connectors are simply placed onto/over or into the inlet of the test piece. The jaws clamp positively and safely into or onto the different connections. Laborious screwing and unscrewing of test pressure hoses is no longer needed. A pressure-tight connection for your application is guaranteed with the latest sealing technology.
WEH-Connectors are highly efficient and will self-finance in a very short time.

On new ways ...

We meet customers requirements with innovative solutions. A wide range of special connectors makes WEH-Connectors universally useable precision tools, which will fulfil all of your test requirements.



Overview of Types

Quick Connectors for internal threads

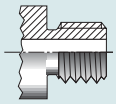
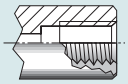
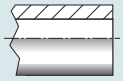
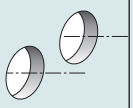
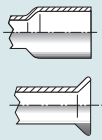
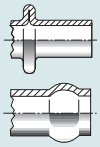
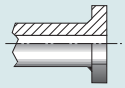
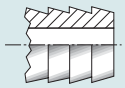
Quick Connectors for external threads

Universal Connectors for threads, beads, tubes

Ordering:

If you can't find a suitable connector for your application, please contact us. Our specialists will recommend an appropriate product.

Connection Possibilities

Connection type:		External threads	Internal threads	Straight tubes	Bores	Flanges	Beads	Collars	Barbs
									
Type	**Page**								
TW17	p. 10		X						
TW19	p. 14		X						
TW05	p. 18		X						
MIT	p. 22		X						
TW18	p. 26	X				X	X	X	X
MET	p. 30	X							
TW800	p. 34	X				X	X	X	X
TW850	p. 34	X				X	X	X	X
TW130	p. 38	X	X		X	X	X	X	X
FE	p. 40	X		X		X	X	X	X
FI	p. 44		X	X	X	X	X	X	X
TW141	p. 48			X		X	X		
JXL	p. 52			X		X	X		
JNL	p. 54			X	X	X	X	X	X

Automation is possible for all types. Please contact us!

Normally we need the following information for each order:

1. Part No.
2. Pressure range
3. Test medium / requested leak rate
4. Description of application
5. Temperature range
6. Space requirement (Interference contours, clearance, etc.)
7. CAD-drawing of customer test piece
8. Test piece

Connector
Type TW17

Patented quick connector for hydraulic, pneumatic function and pressure tests on components with internal threads. The higher the test pressure the tighter the WEH-Connector clamps itself into the thread of the test piece. The front O-ring reliably seals the connection. No additional clamping devices are required. Time-consuming and expensive testing devices are eliminated.
Special applications, e.g. connectors in longer or shorter versions, as a plug or with hydraulic actuation etc. are possible (see page 59, special types).

Test procedure (manual actuation):
Actuate the lever and insert the connector into the thread of the test piece.

Release the lever.
Type TW17 is now connected.

Technical Data Type TW17:

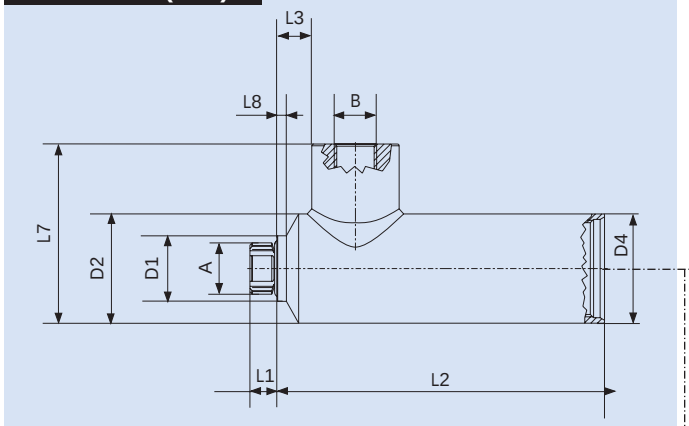
Operating pressure:
Inlet B: from vacuum up to max. 350 bar

Actuation pressure:
Inlet P1, P2: 6 - 12 bar compressed air

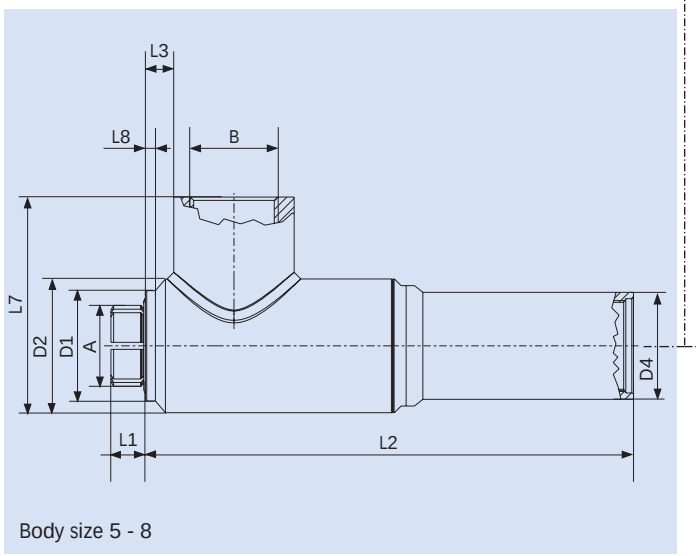
Leak rate:
See page 60

Design:
All parts are corrosion-resistant stainless steel, anodized aluminium.
Seals NBR, other designs are available on request.

Dimensions (mm):

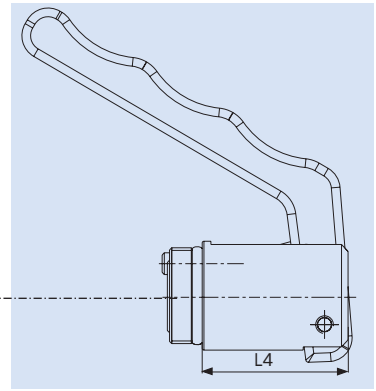


Body size 1 - 4

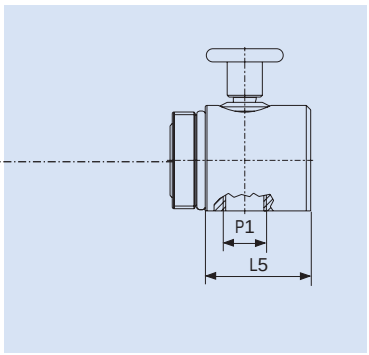


Body size 5 - 8

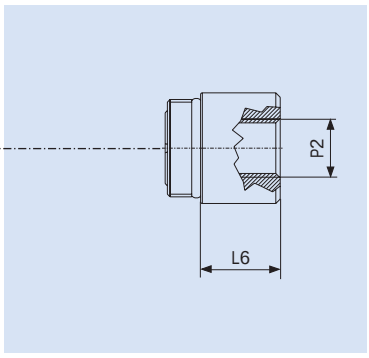
Actuation:



H
Manually by depressing the manual lever.
Medium effort required.



V
Pneumatically by pressing the valve head.
Very little effort required.

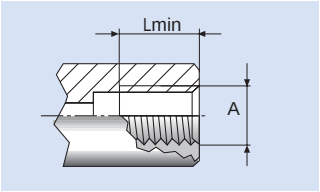


P
Pneumatically for external manual, semi or fully automatic control systems.

Body size	B	D1	D1 SAE*	D2	D2 SAE*	D4	L1	L2	L3	L4	L5	L6	L7	L8	L8 SAE*	P1	P2
1	G 1/8"	15.0	15.0	25	25.0	-	8.0	75.0	8.0	33.5	24	18	44.0	2.2	2.2	G 1/8"	G 1/4"
2	G 1/4"	19.0	20.5	27	27.0	-	9.0	75.0	9.0	32.0	18	18	40.0	2.5	4.7	G 1/8"	G 1/4"
3	G 3/8"	23.0	25.9	32	32.0	-	12.0	88.0	9.5	35.0	18	18	50.0	2.0	4.0	G 1/8"	G 1/4"
4	G 1/2"	26.8	28.9	37	37.0	-	12.0	88.0	8.0	35.0	18	18	55.0	2.8	4.0	G 1/8"	G 1/4"
5	G 3/4"	33.0	40.5	40	45.0	32	14.0	145.0	8.0	35.0	18	18	68.5	3.0	8.0	G 1/8"	G 1/4"
6	G 1"	40.0	46.5	49	49.0	32	14.0	168.0	18.0	35.0	18	18	77.0	3.0	5.0	G 1/8"	G 1/4"
7	G 1"	52.0	-	59	59.0	32	11.0	185.5	18.0	35.0	18	18	84.0	3.0	-	G 1/8"	G 1/4"
8	G 1"	58.0	-	77	69.5	32	10.1	202.2	23.0	35.0	18	18	90.3	4.0	-	G 1/8"	G 1/4"
8	G 1"	70.0	-	77	69.5	32	9.0	148.5	3.2	35.0	18	18	102.0	4.0	-	G 1/8"	G 1/4"

Dimensions in mm * acc. to ISO 6149

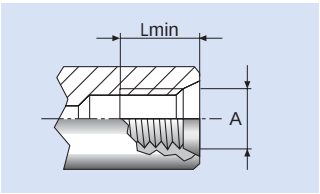
Connection list internal threads
Type TW17



Metric ISO-thread DIN 13
to DIN 3852 part 1, form X and Y

Body size	Thread A	Lmin* (mm)	Part No.
1	M 10 x 1.0	7.0	TW17…-W9031-025
2	M 12 x 1.0	9.5	TW17…-W9033-045
2	M 12 x 1.5	9.5	TW17…-W9034-045
2	M 14 x 1.5	9.5	TW17…-W9035-045
3	M 16 x 1.5	10.5	TW17…-W9036-065
3	M 18 x 1.5	10.5	TW17…-W9037-065
4	M 20 x 1.5	10.5	TW17…-W9038-085
4	M 22 x 1.5	10.5	TW17…-W9039-085
5	M 24 x 1.5	11.0	TW17…-W9040-125
5	M 26 x 1.5	11.0	TW17…-W9043-125
5	M 27 x 2.0	11.0	TW17…-W9044-125
6	M 28 x 1.5	12.5	TW17…-W9045-165
6	M 30 x 1.5	12.5	TW17…-W9046-165
6	M 33 x 2.0	12.5	TW17…-W9070-165
7	M 36 x 2.0	12.5	TW17…-W9071-165

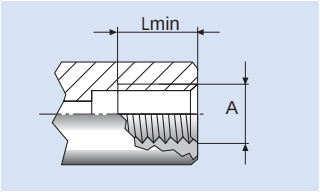
* Lmin: minimum thread length



Metric ISO-thread DIN 13
to ISO 6149-1

Body size	Thread A	Lmin* (mm)	Part No.
1	M 10 x 1.0	7.0	TW17…-W9082-025
2	M 12 x 1.5	9.5	TW17…-W9083-045
2	M 14 x 1.5	9.5	TW17…-W9084-045
3	M 16 x 1.5	10.5	TW17…-W9085-065
3	M 18 x 1.5	10.5	TW17…-W9086-065
4	M 20 x 1.5	10.5	TW17…-W9038-085
4	M 22 x 1.5	10.5	TW17…-W9087-085
5	M 24 x 1.5	11.0	TW17…-W9113-125
5	M 26 x 1.5	11.0	TW17…-W9114-125
5	M 27 x 2.0	11.0	TW17…-W9092-125
6	M 30 x 2.0	12.5	TW17…-W9115-165

* Lmin: minimum thread length

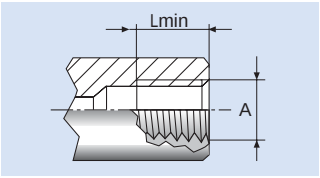


Whitworth tube thread DIN ISO 228-1
to DIN 3852 part 2, form X and Y

Body size	Thread A	Lmin* (mm)	Part No.
1	G 1/8"	7.0	TW17…-W9000-025
2	G 1/4"	9.5	TW17…-W9001-045
3	G 3/8"	10.5	TW17…-W9002-065
4	G 1/2"	10.5	TW17…-W9003-085
4	G 5/8"	10.5	TW17…-W9004-085
5	G 3/4"	11.0	TW17…-W9005-125
6	G 1"	12.5	TW17…-W9006-165
7	G 1 1/4"	**	TW17…-W9058-165
8	G 1 1/2"	**	TW17…-W9059-165
8	G 2"	**	TW17…-W9094-165

* Lmin: minimum thread length ** on request

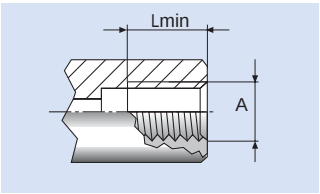
Connection list internal threads
Type TW17



BSPT (tapered Whitworth tube thread)
to DIN 3852 part 2, form X and Y

Body size	Thread A	Lmin* (mm)	Part No.
1	BSPT 1/8"	7.0	TW17...-W9024-025
2	BSPT 1/4"	9.5	TW17...-W9025-045
3	BSPT 3/8"	10.5	TW17...-W9026-065
4	BSPT 1/2"	10.5	TW17...-W9027-085
4	BSPT 5/8"	10.5	TW17...-W9028-085
5	BSPT 3/4"	11.0	TW17...-W9029-125
6	BSPT 1"	12.5	TW17...-W9030-165

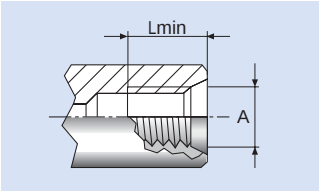
* Lmin: minimum thread length



NPT thread (ANSI/ASME B1.20.1-1983)
SAE J476a

Body size	Thread A	Lmin* (mm)	Part No.
1	NPT 1/8"	7.0	TW17...-W9007-025
2	NPT 1/4"	9.5	TW17...-W9008-045
3	NPT 3/8"	10.5	TW17...-W9009-065
4	NPT 1/2"	10.5	TW17...-W9010-085
5	NPT 3/4"	11.0	TW17...-W9012-125
6	NPT 1"	12.5	TW17...-W9013-165

* Lmin: minimum thread length



SAE-O-ring Boss
SAE J1926 / ISO 11926

Body size	Thread A	Lmin* (mm)	Part No.
1	UNF 3/8"-24	7.0	TW17...-W9078-025
1	UNF 7/16"-20	7.0	TW17...-W9047-025
2	UNF 1/2"-20	9.5	TW17...-W9048-045
2	UNF 9/16"-18	9.5	TW17...-W9049-045
3	UNF 3/4"-16	10.5	TW17...-W9052-065
3	UNF 5/8"-18	10.5	TW17...-W9050-065
4	UNF 7/8"-14	10.5	TW17...-W9053-085
5	UN 1 1/16"-12	11.0	TW17...-W9055-125
6	UN 1 3/16"-12	11.0	TW17...-W9057-165
6	UN 1 5/16"-12	11.0	TW17...-W9056-165

* Lmin: minimum thread length

Ordering:

Other connector sizes and versions on request

When ordering please indicate in addition to the information requested on page 9 the following information:

1. Part Number
   Please insert within the part no. the letter corresponding to the desired type of actuation (H, V or P) in place of the position indicator (....). Example: TW17**H**-W9031-025
2. Pressure range: Please add LP = low pressure (up to 50 bar) or HP = high pressure (up to 350 bar) at the end of the part number. Example: TW17H-W9031-025/**HP**

Accessories:

For detailed information on our screw plug for the type TW17 please see page 56.

Connector
Type TW19

Patented quick connector for hydraulic oils, pneumatic function and pressure tests on components with internal threads, e.g. on hydraulic assemblies. The lever-actuated connector safely grips onto the test piece, even in the case of high lateral forces, e.g. heavy or rigid hoses. The higher the test pressure the tighter TW19 clamps itself into the thread of the test piece. No additional clamping devices are required. Having only one seal in the interior of the connector, ease of maintenance is assured.

Test procedure:
Insert the type TW19 into the test piece and hold in position with one hand.

Actuate the lever through 90° with the other hand.
The type TW19 is now connected.

Technical Data Type TW19:

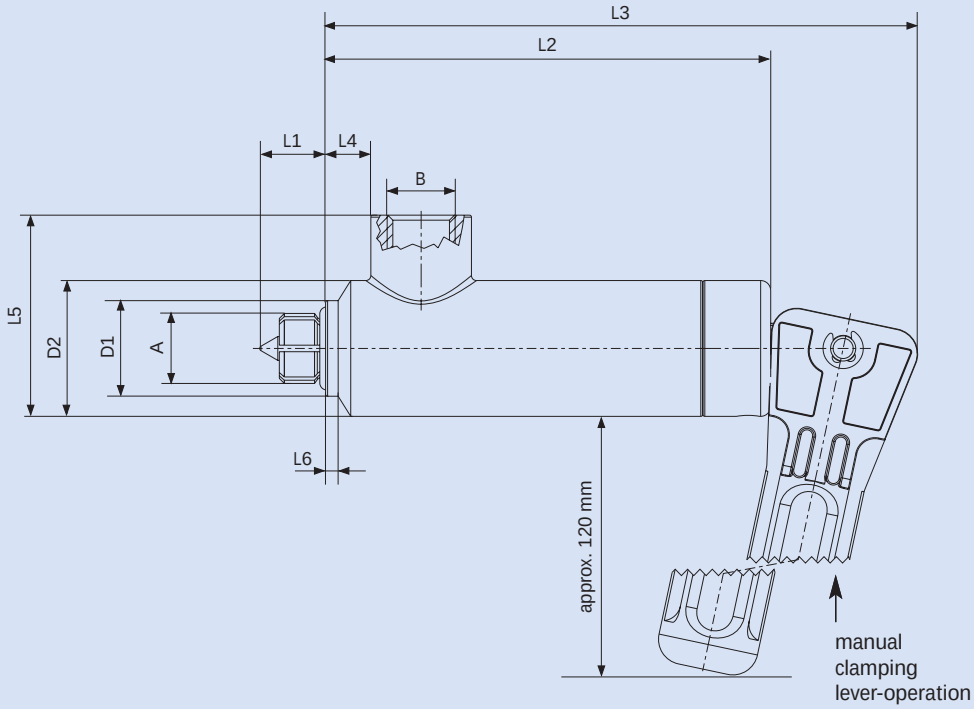
Operating pressure:
Inlet B: from vacuum up to max. 350 bar
Higher pressure ranges are available on request.

Leak rate:
See page 60

Design:
All pressure-impacted parts are corrosion-resistant stainless steel. Seals NBR, others on request.

Please contact us when using corrosive media or water!

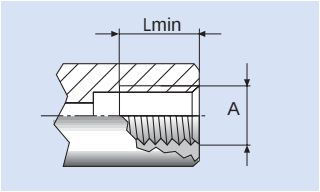
Dimensions (mm):



Body size	B	D1	D1 SAE*	D2	D2 SAE*	L1	L2	L3	L4	L5	L6	L6 SAE*
2	G 1/4"	19	20.5	27	27	13.0	88.5	118	9.0	40	2.5	4.7
3	G 3/8"	23	25.9	32	32	16.0	101.5	131	9.5	50	2.0	4.0
4	G 1/2"	27	28.9	37	37	17.0	101.5	131	8.0	55	2.8	4.0
5	G 3/4"	33	40.5	40	45	19.5	117.0	146	8.0	69	3.0	8.0
6	G 1"	40	46.5	49	49	17.0	140.0	170	18.0	74	3.0	8.0

Dimensions in mm * acc. to ISO 6149

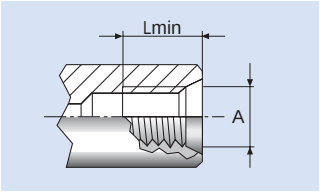
Connection list internal threads
Type TW19



Metric ISO-thread
DIN 13
to DIN 3852 part 1, form X and Y

Body size	Thread A	Lmin* (mm)	Part No.
2	M 12 x 1.5	9.5	TW19M-W9034-045
2	M 14 x 1.5	9.5	TW19M-W9035-045
3	M 16 x 1.5	10.5	TW19M-W9036-065
3	M 18 x 1.5	10.5	TW19M-W9037-065
4	M 20 x 1.5	10.5	TW19M-W9038-085
4	M 22 x 1.5	10.5	TW19M-W9039-085
5	M 24 x 1.5	11.0	TW19M-W9040-125
5	M 26 x 1.5	11.0	TW19M-W9043-125
6	M 30 x 1.5	12.5	TW19M-W9046-165

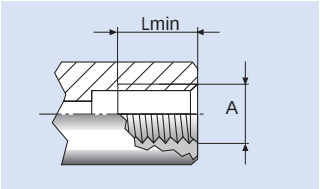
* Lmin: minimum thread length



Metric ISO-thread
DIN 13
to ISO 6149-1

Body size	Thread A	Lmin* (mm)	Part No.
2	M 12 x 1.5	9.5	TW19M-W9500-045
2	M 14 x 1.5	9.5	TW19M-W9501-045
3	M 16 x 1.5	10.5	TW19M-W9502-065
3	M 18 x 1.5	10.5	TW19M-W9503-065
4	M 20 x 1.5	10.5	TW19M-W9509-085
4	M 22 x 1.5	10.5	TW19M-W9504-085
5	M 24 x 1.5	11.0	TW19M-W9505-125
5	M 26 x 1.5	11.0	TW19M-W9506-125
5	M 27 x 2.0	11.0	TW19M-W9507-125
6	M 30 x 1.5	12.5	TW19M-W9508-165

* Lmin: minimum thread length

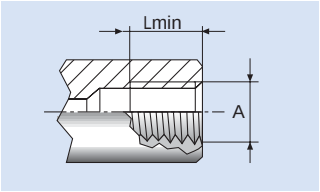


Whitworth tube thread
DIN ISO 228-1
to DIN 3852 part 2, form X and Y

Body size	Thread A	Lmin* (mm)	Part No.
2	G 1/4"	9.5	TW19M-W9001-045
3	G 3/8"	10.5	TW19M-W9002-065
4	G 1/2"	10.5	TW19M-W9003-085
4	G 5/8"	10.5	TW19M-W9004-085
5	G 3/4"	11.0	TW19M-W9005-125
6	G 1"	12.5	TW19M-W9006-165

* Lmin: minimum thread length

Connection list internal threads
Type TW19

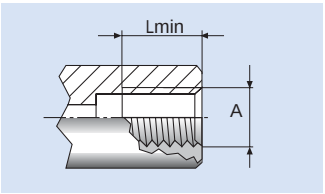


BSPT (tapered Whitworth tube thread)

to DIN 3852 part 2, form X and Y

Body size	Thread A	Lmin* (mm)	Part No.
2	BSPT 1/4"	9.5	TW19M-W9025-045
3	BSPT 3/8"	10.5	TW19M-W9026-065
4	BSPT 1/2"	10.5	TW19M-W9027-085
4	BSPT 5/8"	10.5	TW19M-W9028-085
5	BSPT 3/4"	11.0	TW19M-W9029-125
6	BSPT 1"	12.5	TW19M-W9030-165

* Lmin: minimum thread length

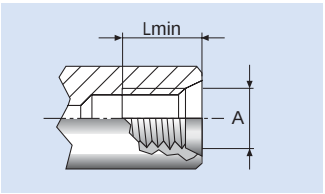


NPT thread (ANSI/ASME B1.20.1-1983)

SAE J476a

Body size	Thread A	Lmin* (mm)	Part No.
2	NPT 1/4"	9.5	TW19M-W9008-045
3	NPT 3/8"	10.5	TW19M-W9009-065
4	NPT 1/2"	10.5	TW19M-W9010-085
4	NPT 5/8"	10.5	TW19M-W9011-085
5	NPT 3/4"	11.0	TW19M-W9012-125
6	NPT 1"	12.5	TW19M-W9013-165

* Lmin: minimum thread length



SAE-O-ring Boss

SAE J1926 / ISO 11926

Body size	Thread A	Lmin* (mm)	Part No.
2	UNF 1/2"-20	9.5	TW19M-W9048-045
2	UNF 9/16"-18	9.5	TW19M-W9049-065
3	UNF 3/4"-16	10.5	TW19M-W9052-085
4	UNF 7/8"-14	10.5	TW19M-W9053-085
5	UN 1 1/16"-12	11.0	TW19M-W9055-125
6	UN 1 3/16"-12	11.0	TW19M-W9057-165
6	UN 1 5/16"-12	11.0	TW19M-W9056-165

* Lmin: minimum thread length

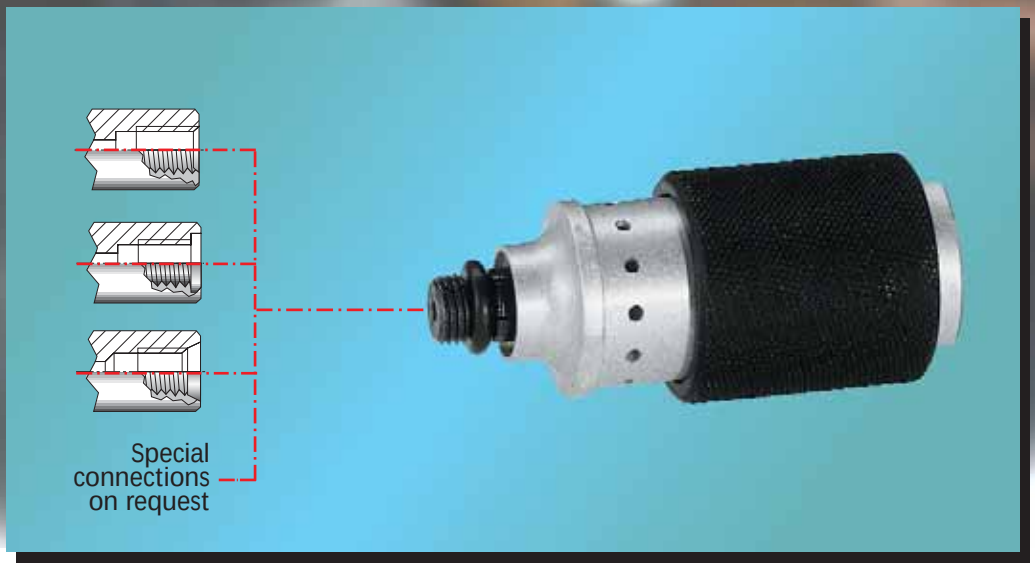
Ordering:

Other connector sizes and versions are available on request.
Required information see page 9.

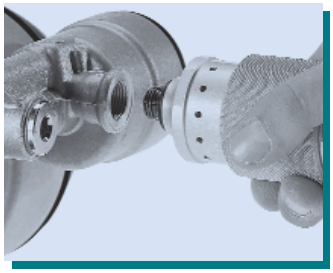
Accessories:

For detailed information on our screw plug for the type TW19 please see page 56.

Connector
Type TW05



Patented quick connector for function and pressure tests on components with internal threads in low pressure ranges up to 12 bar. Connecting and applying pressure to the test piece is accomplished in one operation by simple actuation of the sliding sleeve.



Test procedure:
Pull back the sliding sleeve into the rear position (initial position).
→ the jaws protrude and collapse.
Plug the TW05 straight into the thread of the test piece (figure 1).

Place the sliding sleeve into the middle position (figure 2).
→ the jaws are spread apart and grip into the thread.
Type TW05 is connected and seals properly.

Push the sliding sleeve forward. The test piece is now pressurized.

Pull back the sliding sleeve (middle position).
→ the test pressure is shut off and the test piece vented.
Pull further back the sliding sleeve into the rear position (initial position).
→ the jaws protrude and collapse and the connector can be removed from the thread. (This is a single motion operation).

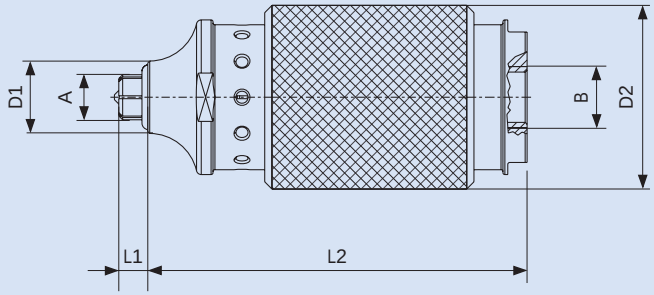
Technical Data Type TW05:

Operating pressure:
Inlet B: 5 - 12 bar compressed air

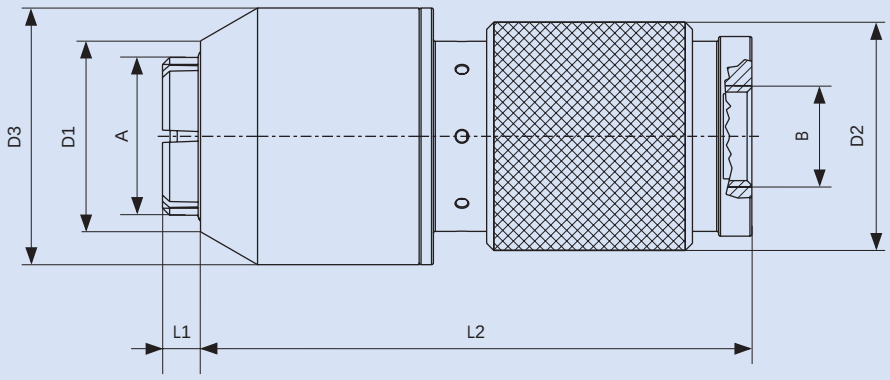
Leak rate:
See page 60

Design:
Clamping jaws are corrosion-resistant stainless steel, outer parts of anodized aluminium.
Seals NBR, other designs are available on request.

Dimensions (mm):



Body size 0 - 4

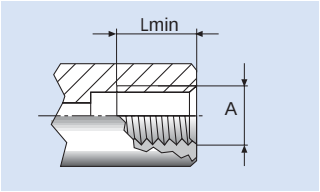


Body size 5 - 6

Body size	B	D1	D2	D3	L1	L2
0	G 1/4"	8.0	38	-	3.6	75
1	G 1/4"	15.0	38	-	10.0	75
2	G 1/4"	19.0	38	-	10.0	75
3	G 1/2"	23.5	48	-	9.0	80
4	G 1/2"	27.0	48	-	9.0	80
5	G 1/2"	32.0	48	54	11.0	115
6	G 1/2"	40.0	48	54	11.0	115

Dimensions in mm

Connection list internal threads
Type TW05

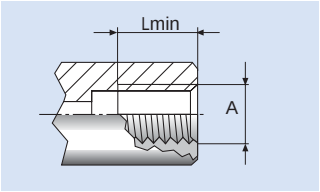


Metric ISO-thread DIN 13

to DIN 3852 part 1, form X and Y

Body size	Thread A	Lmin* (mm)	Part No.
0	M 5 x 0.8	7.0	TW05-W8046-045
1	M 8 x 1.0	7.0	TW05-W8012-045
1	M 10 x 1.0	7.0	TW05-W8013-045
1	M 10 x 1.5	7.0	TW05-W8042-045
2	M 12 x 1.0	9.5	TW05-W8014-045
2	M 12 x 1.5	9.5	TW05-W8015-045
2	M 12 x 1.75	9.5	TW05-W8041-045
2	M 14 x 1.0	9.5	TW05-W8039-045
2	M 14 x 1.5	9.5	TW05-W8016-045
3	M 16 x 1.5	10.5	TW05-W8017-085
3	M 18 x 1.5	10.5	TW05-W8018-085
4	M 20 x 1.5	10.5	TW05-W8019-085
4	M 22 x 1.5	10.5	TW05-W8020-085
5	M 24 x 1.5	11.0	TW05-W8021-085
6	M 30 x 1.5	12.5	TW05-W8040-085

* Lmin: minimum thread length

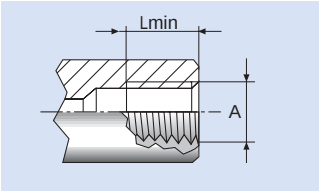


Whitworth tube thread DIN ISO 228-1

to DIN 3852 part 2, form X and Y

Body size	Thread A	Lmin* (mm)	Part No.
1	G 1/8"	7.0	TW05-W8000-045
2	G 1/4"	9.5	TW05-W8001-045
3	G 3/8"	10.5	TW05-W8002-085
4	G 1/2"	10.5	TW05-W8003-085
5	G 3/4"	11.0	TW05-W8004-085
6	G 1"	12.5	TW05-W8005-085

* Lmin: minimum thread length



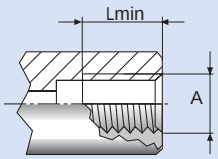
BSPT (tapered Whitworth tube thread)

to DIN 3852 part 2, form X and Y

Bodysize	Thread A	Lmin* (mm)	Part No.
1	BSPT 1/8"	7.0	TW05-W8043-045
2	BSPT 1/4"	9.5	TW05-W8044-045
3	BSPT 3/8"	10.5	TW05-W8038-085
4	BSPT 1/2"	10.5	TW05-W8045-085
5	BSPT 3/4"	11.0	TW05-W8053-085
6	BSPT 1"	12.5	TW05-W8047-085

* Lmin: minimum thread length

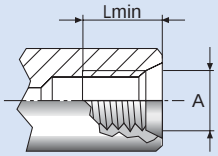
Connection list internal threads
Type TW05



NPT thread (ANSI/ASME B1.20.1-1983)
SAE J476a

Body size	Thread A	Lmin* (mm)	Part No.
1	NPT 1/8"	7.0	TW05-W8006-045
2	NPT 1/4"	9.5	TW05-W8007-045
3	NPT 3/8"	10.5	TW05-W8008-085
4	NPT 1/2"	10.5	TW05-W8009-085
5	NPT 3/4"	11.0	TW05-W8010-085
6	NPT 1"	12.5	TW05-W8011-085

* Lmin: minimum thread length



SAE-O-ring Boss
SAE J1926 / ISO 11926

Body size	Thread A	Lmin* (mm)	Part No.
1	UNF 7/16"-20	7.0	TW05-W8030-045
2	UNF 1/2"-20	9.5	TW05-W8031-045
2	UNF 9/16"-18	9.5	TW05-W8032-045
3	UNF 3/4"-16	10.5	TW05-W8033-085
4	UNF 7/8"-14	10.5	TW05-W8034-085
5	UN 1 1/16"-12	11.0	TW05-W8035-085
6	UN 1 3/16"-12	11.0	TW05-W8036-085
6	UN 1 5/16"-12	11.0	TW05-W8037-085

* Lmin: minimum thread length

Ordering:

Other connector sizes and versions are available on request.
Required information see page 9.

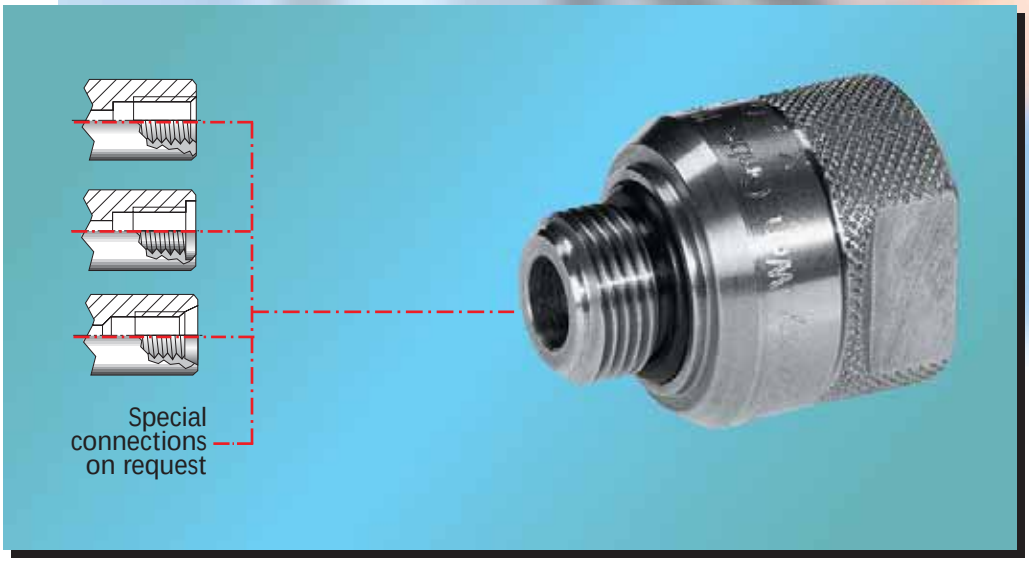
Accessories:

A control housing for automatic testing is also available for type TW05 as an alternative to the sliding sleeve.

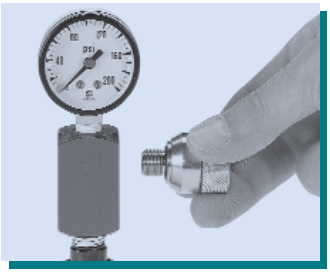
Main control housing for automation

Body size	Part No.
1	E01-50292
2	E01-50296
3	E01-50296
4	E01-50296

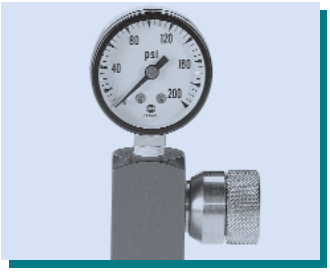
Connector
Type MIT



Patented screw in connector ‘FasTest’ series for pressure and vacuum tests on components with internal threads. Spin the connector finger tight into the thread until the O-ring seal makes contact with the test piece. Seals without wrenches, sealants or tape. The MIT is available as a connector or a plug and with or without a swivel joint.

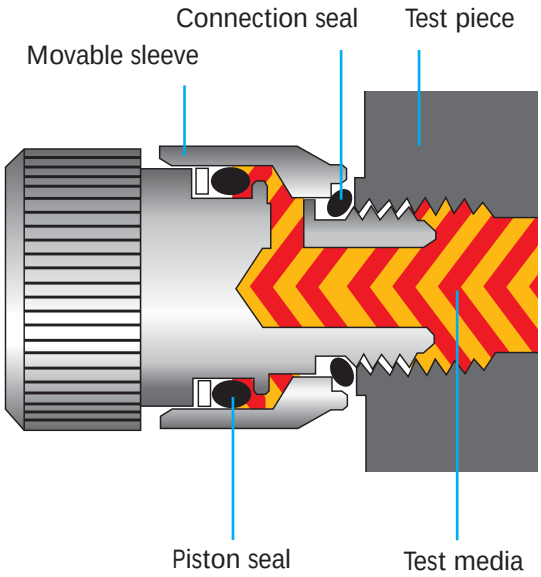


Test procedure:
Screw the MIT finger-tight into the test piece.



Type MIT is now connected.

Plugs for internal threads



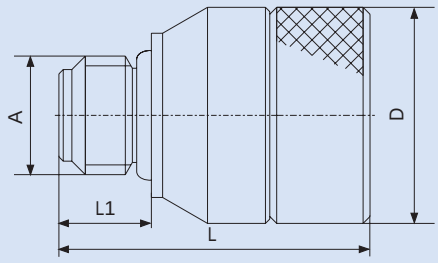
Technical Data Type MIT:

Operating pressure:
Inlet B: from vacuum up to max. 350 bar

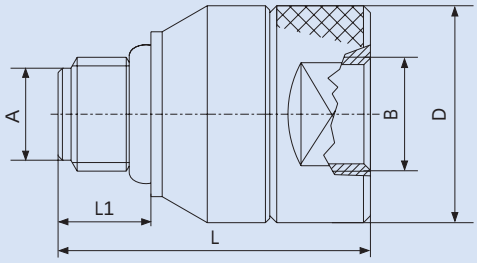
Leak rate:
See page 60

Design:
All parts are corrosion-resistant stainless steel.
Seals NBR, other designs are available on request.

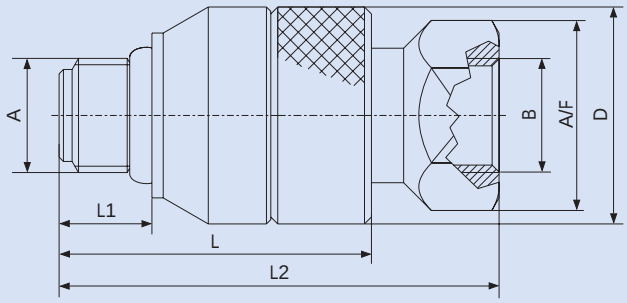
Dimensions (mm):



Plug



Connector with media inlet

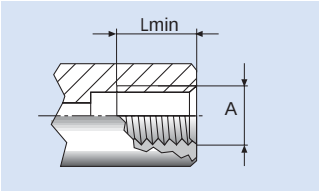


Connector with media inlet and swivel joint

Body size	B	D	L	L1	L2	A/F
1	G 1/8"	20.5	33.0	10.5	47.3	17
2	G 1/4"	25.0	36.0	10.7	50.7	19
3	G 3/8"	30.0	39.5	11.0	57.3	24
4	G 1/2"	35.0	47.5	14.5	70.7	30
5	G 3/4"	43.0	50.5	15.6	76.0	36
6	G 1"	50.0	60.0	18.0	*	*
7	*	60.0	55.0	19.2	84.3	50
8	*	69.5	62.0	19.2	94.4	60
9	*	82.0	70.0	21.0	100.7	75

Dimensions in mm * on request

Connection list internal threads
Type MIT

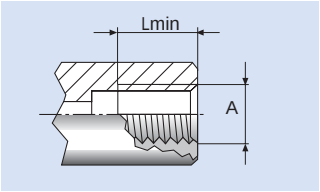


Metric ISO-thread DIN 13

to DIN 3852 part 1, form X and Y

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector	Part No. Connector with swivel joint
1	M 5 x 0.8	7.0	**	**	C1-32934	C1-32935
1	M 6 x 1.0	7.0	**	C1-17499	**	C1-11716
1	M 8 x 1.0	7.0	**	C1-30164	C1-11813	C1-18919
1	M 10 x 1.0	7.0	345 bar	C1-12115	C1-12116	C1-12117
1	M 10 x 1.5	7.0	345 bar	C1-12118	C1-12119	C1-12142
2	M 12 x 1.0	7.0	345 bar	C1-12120	C1-12121	C1-12143
2	M 12 x 1.5	9.5	345 bar	C1-12122	C1-12124	C1-12125
2	M 12 x 1.75	9.5	345 bar	**	C1-40030	**
2	M 14 x 1.5	9.5	345 bar	C1-11944	C1-12126	C1-12127
3	M 16 x 1.5	10.5	276 bar	C1-12062	C1-12061	C1-12128
3	M 18 x 1.5	10.5	276 bar	C1-12129	C1-12130	C1-12131
4	M 20 x 1.5	10.5	276 bar	C1-12132	C1-12133	C1-12141
4	M 22 x 1.5	10.5	276 bar	C1-12134	C1-12135	C1-12136
5	M 24 x 1.5	11.0	276 bar	C1-12137	C1-12138	C1-12144
5	M 26 x 1.5	11.0	276 bar	C1-12139	C1-12140	C1-12145

* Lmin: minimum thread length ** on request

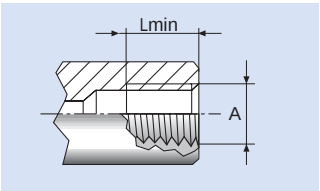


Whitworth tube thread DIN ISO 228-1

to DIN 3852 part 2, form X and Y

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector	Part No. Connector with swivel joint
1	G 1/8"	7.0	345 bar	C1-11820	C1-11821	C1-11822
2	G 1/4"	9.5	345 bar	C1-11823	C1-11824	C1-11825
3	G 3/8"	10.5	276 bar	C1-11826	C1-11827	C1-11828
4	G 1/2"	10.5	276 bar	C1-11829	C1-11830	C1-11831
5	G 3/4"	11.0	276 bar	C1-11832	C1-11833	C1-11834
6	G 1"	12.5	276 bar	C1-11835	C1-11836	C1-11837
7	G 1 1/4"	**	276 bar	C1-11838	C1-11839	C1-11840
8	G 1 1/2"	**	210 bar	C1-11841	C1-11842	C1-11843
9	G 2"	**	172 bar	C1-17161	C1-17162	C1-17163

* Lmin: minimum thread length ** on request



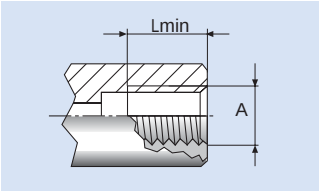
BSPT (tapered Whitworth tube thread)

to DIN 3852 part 2, form X and Y

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector	Part No. Connector with swivel joint
1	BSPT 1/8"	7.0	345 bar	**	**	**
2	BSPT 1/4"	9.5	345 bar	**	**	**
3	BSPT 3/8"	10.5	276 bar	**	**	**
4	BSPT 1/2"	10.5	276 bar	C1-42886	**	C1-42875
5	BSPT 3/4"	11.0	276 bar	C1-42887	**	**
6	BSPT 1"	12.5	276 bar	C1-42888	**	C1-42876

* Lmin: minimum thread length ** on request

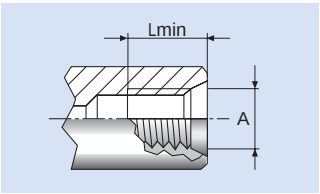
Connection list internal threads
Type MIT



NPT thread (ANSI/ASME B1.20.1-1983)
SAE J476a

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector	Part No. Connector with swivel joint
1	NPT 1/8"	7.0	345 bar	C1-12223	C1-12224	C1-17152
2	NPT 1/4"	9.5	345 bar	C1-12234	C1-12233	C1-17153
3	NPT 3/8"	10.5	276 bar	C1-12236	C1-12235	C1-17154
4	NPT 1/2"	10.5	276 bar	C1-12238	C1-12239	C1-17155
5	NPT 3/4"	11.0	276 bar	C1-12243	C1-12240	C1-17156
6	NPT 1"	12.5	276 bar	C1-12244	C1-12242	C1-17157
7	NPT 1 1/4"	**	276 bar	**	F-MIT202201X	**
8	NPT 1 1/2"	**	210 bar	**	F-MIT242241X	**
9	NPT 2"	**	172 bar	**	F-MIT322161X	**

* Lmin: minimum thread length ** on request



SAE-O-ring Boss
SAE J1926 / ISO 11926

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector	Part No. Connector with swivel joint
1	UNF 3/8"-24	7.0	345 bar	C1-12485	C1-13181	**
1	UNF 7/16"-20	7.0	345 bar	C1-12486	C1-13182	**
2	UNF 1/2"-20	9.5	345 bar	C1-12487	C1-13183	**
2	UNF 9/16"-18	9.5	345 bar	C1-12488	C1-12392	C1-32203
3	UNF 3/4"-16	10.5	276 bar	C1-12489	C1-12394	C1-32204
4	UNF 7/8"-14	10.5	276 bar	C1-12490	C1-12393	-
5	UN 1 1/16"-12	11.0	276 bar	C1-12493	C1-12395	-
6	UN 1 5/16"-12	11.0	276 bar	C1-12494	C1-13184	-

* Lmin: minimum thread length ** on request

Ordering:

Other connector sizes and versions are available on request.
Required information see page 9.

Connector
Type TW18

Patented quick connector for hydraulic, pneumatic function and pressure tests on components with external threads. Type TW18 is used on engines, cylinders, pressure vessels, hoses, fixtures etc. The clamping jaws grip onto the thread and a pressure-tight connection is made.

Test procedure (manual actuation):
Actuate the lever and place the connector onto the connection thread.

Release the lever.
Type TW18 is now connected.

Technical Data Type TW18:

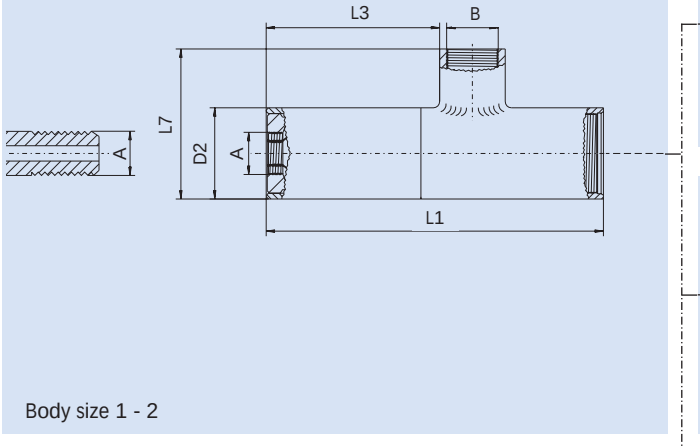
Operating pressure:
Inlet B, B1: from vacuum up to max. 350 bar

Actuation pressure:
Inlet P1, P2, P3: 5 - 12 bar compressed air

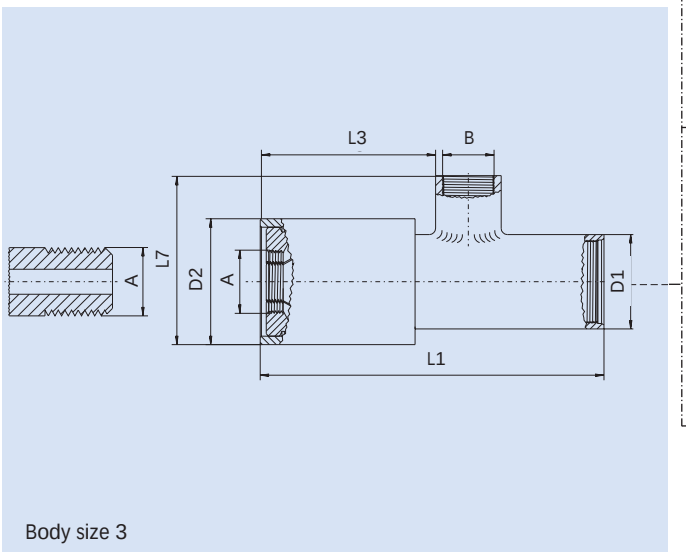
Leak rate:
See page 60

Design:
All parts are corrosion-resistant stainless steel, anodized aluminium.
Seals NBR, other designs are available on request.

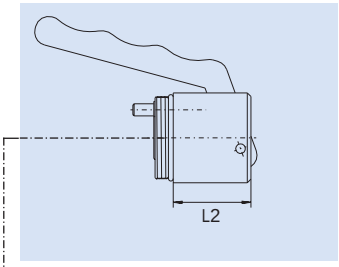
Dimensions (mm):

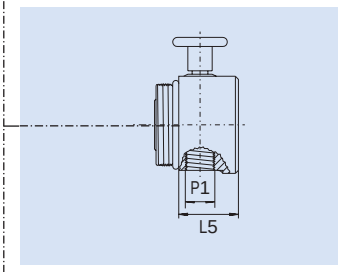


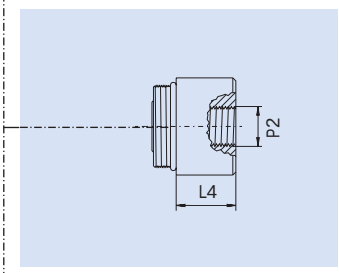
Body size 1 - 2

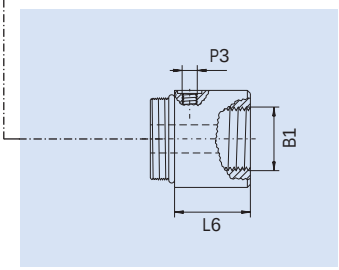


Body size 3









Actuation:

H
Manually by depressing the manual lever.
Medium effort required.

V
Pneumatically by pressing the valve head.
Very little effort required.

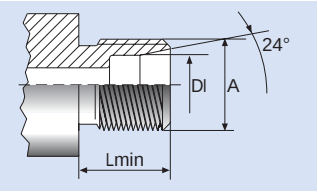
P
Pneumatically for external manual, semi or fully automatic control systems.

Z
With central flow, otherwise same as P.
Connection B for lateral pressure support.

Body size	B	B1	D1	D2	L1	L2	L3	L4	L5	L6	L7	P1	P2	P3
1	G 1/2"	G 1/2"	-	32	134	25	65.0	18	18	25	57.5	G 1/8"	G 1/4"	M 5
2	G 1/2"	G 1/2"	-	39	142	32	71.0	18	18	32	64.5	G 1/8"	G 1/4"	M 5
3	G 1/2"	G 1/2"	39	52	142	32	70.5	18	18	32	64.5	G 1/8"	G 1/4"	M 5

Dimensions in mm

Connection list external threads
Type TW18

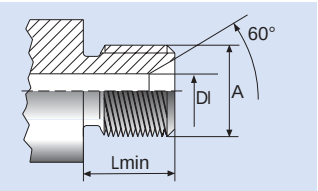


Tube connection to DIN 3902

Threaded stem to DIN 3853, boring form W to DIN 3861

Body size	Thread A	Dl max. (mm)	Series	Lmin* (mm)	Allowable test pressure	Part No.
1	M 8 x 1.0	4	LL	8	100 bar	TW18...-W8133-085
1	M 10 x 1.0	6	LL	8	100 bar	TW18...-W8134-085
1	M 12 x 1.0	8	LL	9	100 bar	TW18...-W8135-085
1	M 12 x 1.5	6	L	10	250 bar	TW18...-W8136-085
1	M 14 x 1.5	8	L	10	250 bar	TW18...-W8137-085
1	M 16 x 1.5	10	L	11	250 bar	TW18...-W8138-085
2	M 18 x 1.5	12	L	11	250 bar	TW18...-W8139-085
2	M 22 x 1.5	15	L	12	250 bar	TW18...-W8140-085
3	M 26 x 1.5	18	L	12	10 bar	TW18...-W8141-085
3	M 30 x 2.0	22	L	14	10 bar	TW18...-W8142-085
1	M 14 x 1.5	6	S	12	350 bar	TW18...-W8143-085
1	M 16 x 1.5	8	S	12	350 bar	TW18...-W8144-085
2	M 18 x 1.5	10	S	12	350 bar	TW18...-W8145-085
2	M 20 x 1.5	12	S	12	350 bar	TW18...-W8146-085
2	M 22 x 1.5	14	S	14	350 bar	TW18...-W8147-085
3	M 24 x 1.5	16	S	14	350 bar	TW18...-W8148-085
3	M 30 x 2.0	20	S	16	10 bar	TW18...-W8149-085

* Lmin: minimum thread length

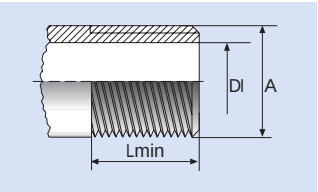


Threaded stem to DIN 7631 / DIN 7647

Plane surface burr free

Body size	Thread A	Dl max. (mm)	Lmin* (mm)	Allowable test pressure	Part No.
1	M 10 x 1.0	3	8	350 bar	TW18...-W8151-085
1	M 12 x 1.5	4	10	350 bar	TW18...-W8152-085
1	M 14 x 1.5	6	10	350 bar	TW18...-W8153-085
1	M 16 x 1.5	7	11	350 bar	TW18...-W8154-085
2	M 18 x 1.5	9	11	350 bar	TW18...-W8155-085
2	M 20 x 1.5	11	11	350 bar	TW18...-W8214-085
2	M 22 x 1.5	11	12	350 bar	TW18...-W8156-085
3	M 26 x 1.5	14	12	350 bar	TW18...-W8157-085
3	M 30 x 1.5	18	14	350 bar	TW18...-W8158-085

* Lmin: minimum thread length ** acc. to DIN 3853



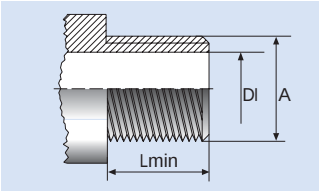
Whitworth tube thread DIN ISO 228-1

Plane surface burr free

Body size	Thread A	Dl max. (mm)	Lmin* (mm)	Allowable test pressure	Part No.
1	G 1/8"	5.0	12	20 bar	TW18...-W8127-085
1	G 1/4"	6.0	12	20 bar	TW18...-W8128-085
1	G 3/8"	9.0	12	20 bar	TW18...-W8129-085
2	G 1/2"	14.5	12	20 bar	TW18...-W8130-085
3	G 3/4"	18.0	12	20 bar	TW18...-W8131-085
3	G 1"	18.0	12	20 bar	TW18...-W8132-085

* Lmin: minimum thread length

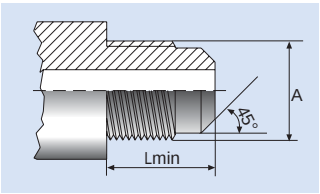
Connection list external threads
Type TW18



NPT-Thread (ANSI/ASME B 1.20.1-1983)
SAE J476a
Plane surface smooth and burr free

Body size	Thread A	Dl max. (mm)	Lmin* (mm)	Allowable test pressure	Part No.
1	NPT 1/8"	5.0	9.7	350 bar	TW18...-W8208-085
1	NPT 1/4"	7.0	14.0	350 bar	TW18...-W8207-085
1	NPT 3/8"	10.5	14.0	350 bar	TW18...-W8209-085
2	NPT 1/2"	14.0	19.0	350 bar	TW18...-W8210-085
3	NPT 3/4"	18.0	19.0	350 bar	TW18...-W8211-085
3	NPT 1"	24.0	20.5	350 bar	TW18...-W8212-085

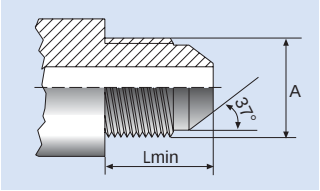
* Lmin: minimum thread length



SAE J512 (45° cone), SAE J513

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No.
1	UNF 5/16"-24	**	350 bar	TW18...-W8100-085
1	UNF 3/8"-24	11.2	350 bar	TW18...-W8101-085
1	UNF 7/16"-20	12.7	350 bar	TW18...-W8102-085
1	UNF 1/2"-20	14.2	350 bar	TW18...-W8103-085
1	UNF 5/8"-18	15.7	350 bar	TW18...-W8104-085
2	UNF 11/16"-16	17.5	350 bar	TW18...-W8105-085
2	UNF 3/4"-16	19.0	350 bar	TW18...-W8106-085
2	UNF 7/8"-14	22.4	350 bar	TW18...-W8107-085
3	UN 1 1/16"-12	25.4	350 bar	TW18...-W8108-085

* Lmin: minimum thread length ** on request



SAE J514 JIC 37°

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No.
1	UNF 5/16"-24	11.4	350 bar	TW18...-W8117-085
1	UNF 3/8"-24	12.2	350 bar	TW18...-W8118-085
1	UNF 7/16"-20	14.0	350 bar	TW18...-W8119-085
1	UNF 1/2"-20	14.0	350 bar	TW18...-W8120-085
1	UNF 9/16"-18	14.1	350 bar	TW18...-W8121-085
2	UNF 3/4"-16	16.7	350 bar	TW18...-W8122-085
2	UNF 7/8"-14	19.3	350 bar	TW18...-W8123-085
3	UN 1 1/16"-12	21.9	350 bar	TW18...-W8124-085

* Lmin: minimum thread length

Ordering:

Other connector sizes and versions on request

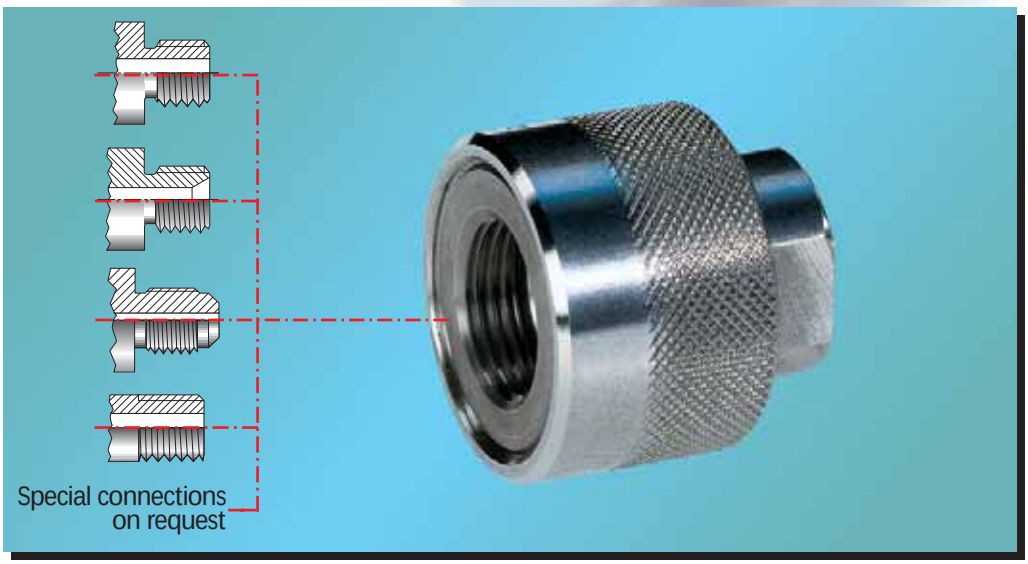
When ordering please indicate in addition to the information requested on page 9 of the catalogue the following information:

1. Part Number
   Please insert within the part no. the letter corresponding to the desired type of actuation (H, V, P or Z) in place of the position indicator (....). Example: TW18**H**-W8133-085
2. Pressure range: Please add LP = low pressure (up to 50 bar) or HP = high pressure (up to 350 bar) at the end of the part number. Example: TW18H-W8133-085/**HP**

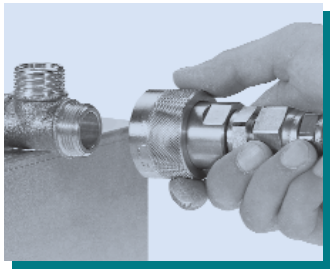
Accessories:

For detailed information on our screw plug for type TW18 please see page 56**.**

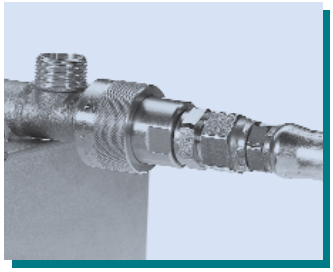
Connector
Type MET



Patented quick screw connector ‘FasTest’ series for pressure and vacuum tests on components with external threads, for testing, filling, plugging, venting etc. Spin the connector finger-tight into the thread until the O-ring seal makes contact with the test piece. Seals without wrenches, sealants or tape. NBR-seals meet most industrial requirements. The MET is available as a connector with media inlet and as a plug.

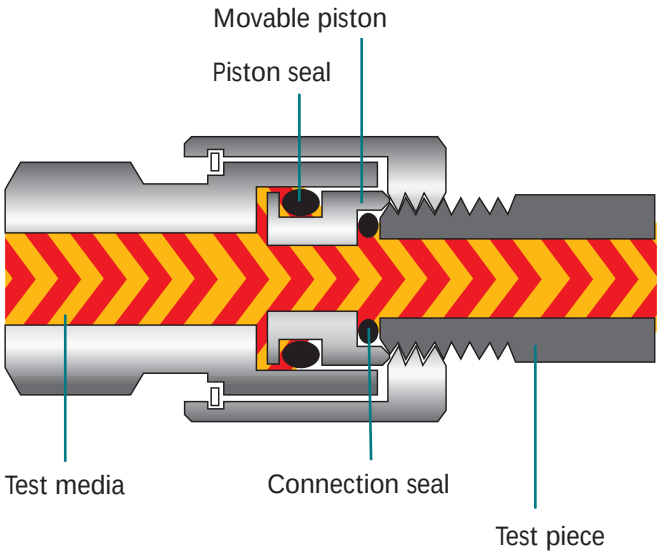


Test procedure:
Screw the MET finger-tight onto the test piece.



The MET is now connected.

MET for external thread



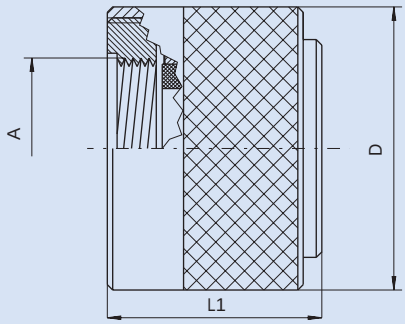
Technical Data Type MET:

Operating pressure:
Inlet B: from vacuum up to max. 345 bar

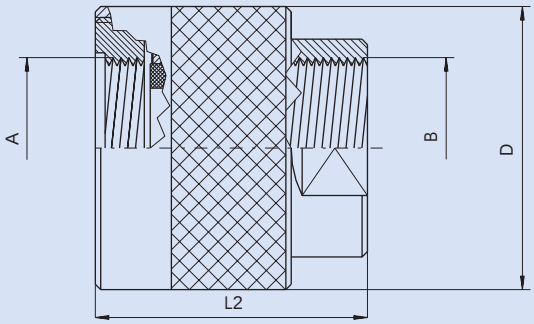
Leak rate:
See page 60

Design:
All parts are corrosion-resistant.
Seals: Connection and internal seals are NBR.
Other designs are available on request.

Dimensions (mm):



Plug

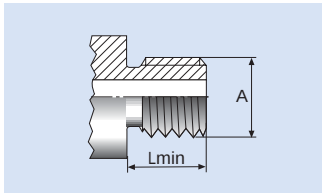


Connector with media inlet

Body size	B	D	L1	L2
1	G 1/8"	22.0	25.2	35.2
2	G 1/4"	27.0	26.2	40.2
3	G 3/8"	32.0	27.9	37.9
4	G 3/8"	35.0	27.9	37.9
5	G 1/2"	37.0	32.7	50.7
6	G 3/4"	44.0	33.7	51.7
7	G 1"	52.0	39.4	59.9

Dimensions in mm

Connection list external threads
Type MET



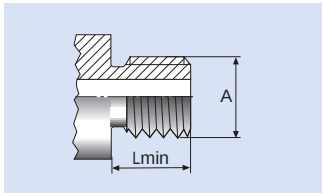
Metric ISO-thread DIN 13

to DIN 3852 part 1, form X and Y

These connectors may have to be modified to suit your specific application.
Please contact us!

Body size	Thread A**	B	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector
1	M 10 x 1.0	G 1/8"	8	50 bar	C1-12410	C1-12406
2	M 12 x 1.5	G 1/4"	10	50 bar	C1-12419	C1-12414
2	M 14 x 1.5	G 1/4"	10	50 bar	C1-12418	C1-12415
3	M 16 x 1.5	G 3/8"	11	50 bar	C1-12425	C1-12422
4	M 18 x 1.5	G 3/8"	11	50 bar	C1-12427	C1-12426
5	M 20 x 1.5	G 1/2"	**	50 bar	C1-12436	C1-12431
5	M 22 x 1.5	G 1/2"	12	50 bar	C1-12435	C1-12432
6	M 24 x 1.5	G 3/4"	14	50 bar	C1-12444	C1-12439
6	M 26 x 1.5	G 3/4"	**	50 bar	C1-12443	C1-12440

* Lmin: minimum thread length ** others on request



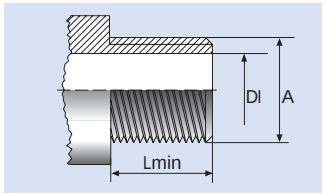
'G'-thread to DIN 259 or ISO 7/1 or DIN ISO 228-1

Plane surface smooth and burr free

These connectors may have to be modified to suit your specific application.
Please contact us!

Body size	Thread A	B	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector
1	G 1/8"	G 1/8"	12	50 bar	C1-12409	C1-12405
2	G 1/4"	G 1/4"	12	50 bar	C1-12417	C1-12412
3	G 3/8"	G 3/8"	12	50 bar	C1-12424	C1-12421
5	G 1/2"	G 1/2"	12	50 bar	C1-12434	C1-12429
6	G 3/4"	G 3/4"	12	50 bar	C1-12442	C1-12438
7	G 1"	G 1"	12	50 bar	C1-12447	C1-12446

* Lmin: minimum thread length



NPT thread (ANSI/ASME B 1.20.1-1983)

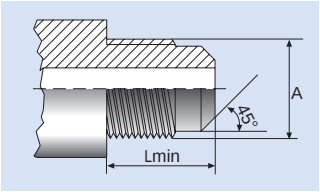
SAE J476a
Plane surface smooth and burr free

These connectors may have to be modified to suit your specific application.
Please contact us!

Body size	Thread A	Dl max. (mm)	B	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector
1	NPT 1/8"	5.0	G 1/8"	9.7	50 bar	C1-12408	C1-18169
2	NPT 1/4"	7.0	G 1/4"	14.0	50 bar	C1-12416	**
3	NPT 3/8"	10.5	G 3/8"	14.0	50 bar	C1-12423	**
5	NPT 1/2"	14.0	G 1/2"	19.0	50 bar	C1-12433	**
6	NPT 3/4"	18.0	G 3/4"	19.0	50 bar	C1-12441	**
7	NPT 1"	24.0	G 1"	20.5	50 bar	C1-12448	**

* Lmin: minimum thread length ** others on request

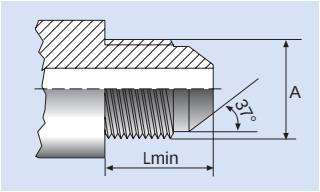
Connection list external threads
Type MET



SAE J512 (45° cone), SAE J513

Body size	Thread A	Inlet B	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector
2	UNF 3/8"-24	UNF 3/8"-24	11.2	345 bar	**	C1-16188
2	UNF 7/16"-20	UNF 7/16"-20	12.7	345 bar	**	C1-11956
3	UNF 9/16"-18	UNF 9/16"-18	14.2	345 bar	**	C1-65987
4	UNF 5/8"-18	UNF 5/8"-18	15.7	276 bar	**	C1-11901
4	UNF 3/4"-16	UNF 3/4"-16	19.0	276 bar	**	C1-11957
5	UNF 7/8"-14	UNF 7/8"-14	22.4	276 bar	**	C1-11958
7	UN 1 1/16"-12	UN 1 1/16"-12	25.4	172 bar	**	C1-12976
7	UN 1 1/16"-14	UN 1 1/16"-14	25.4	172 bar	**	C1-18931

* Lmin: minimum thread length ** others on request



SAE J514 JIC 37°

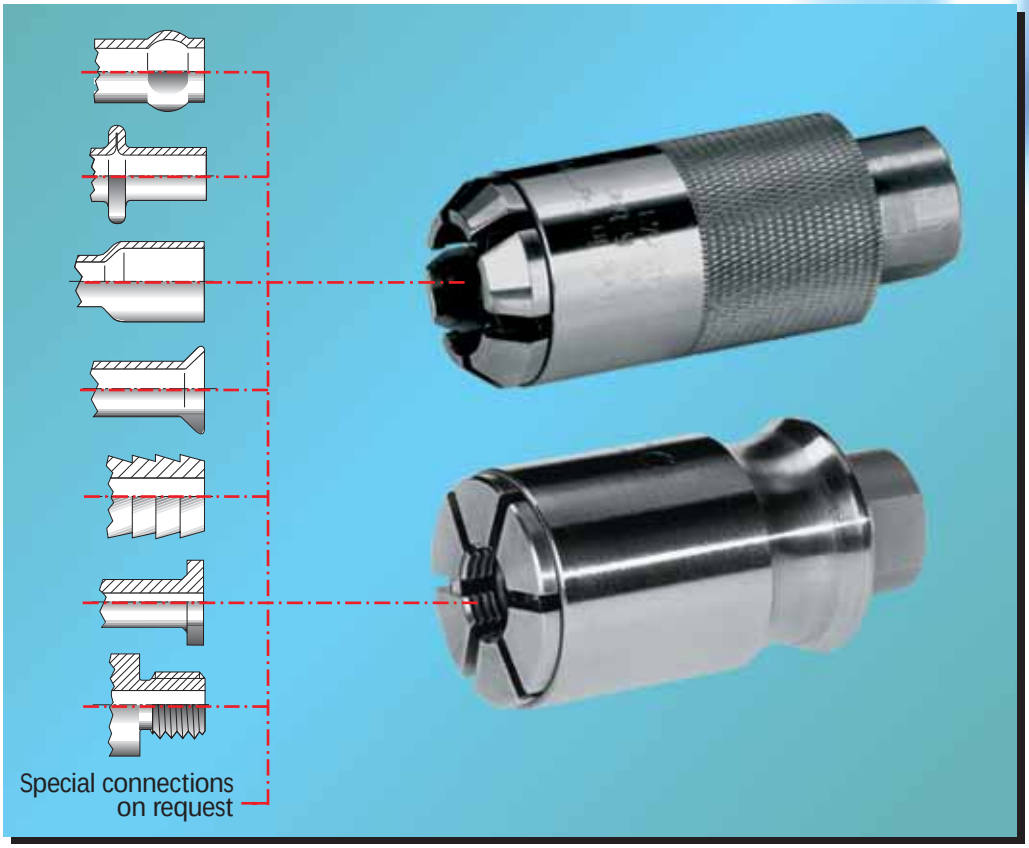
Body size	Thread A	Inlet B	Lmin* (mm)	Allowable test pressure	Part No. Plug	Part No. Connector
2	UNF 7/16"-20	UNF 7/16"-20	14.0	345 bar	**	C1-35638
3	UNF 9/16"-18	UNF 9/16"-18	14.1	345 bar	**	C1-32445
4	UNF 3/4"-16	UNF 3/4"-16	16.7	276 bar	C1-17172	C1-32446
5	UNF 7/8"-14	UNF 7/8"-14	19.3	276 bar	**	C1-17173
7	UN 1 1/16"-12	UN 1 1/16"-12	21.9	172 bar	**	C1-32447
8	UN 1 5/16"-12	UN 1 5/16"-12	**	172 bar	**	C1-32448

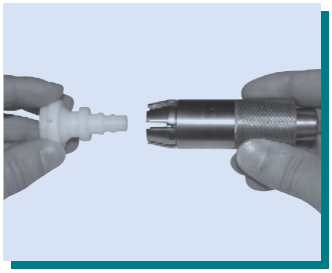
* Lmin: minimum thread length ** others on request

Ordering:

Other connector sizes and versions are available on request.
Required information see page 9.

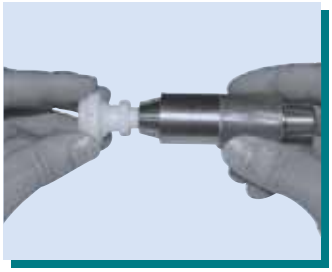
Connector
Type TW800/TW850





Patented quick connector for function and pressure tests on components with a bead, rim, collar, flange, stub or external thread. Type TW800 and TW850 are used for testing pressure vessels, compressors, cooling systems, hose ends, tubes and pipelines etc. By using high quality stainless steel the connectors meet the stringent requirements of industrial testing.

Test procedure (TW800):
Pull back the grip sleeve and push the WEH-Connector onto the test piece.



Push the grip sleeve forward as far as the stop.

Type TW800 is now connected.

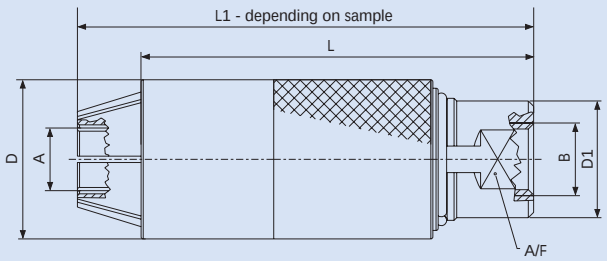
Technical data Type TW800/TW850:

Operating pressure:
Inlet B: type TW800 vacuum up to max. 50 bar
type TW850 vacuum up to max. 630 bar
depending on the application.
Higher pressures are available on request.

Leak rate:
See page 60

Design:
All parts are corrosion-resistant stainless steel.
Seals NBR, other designs are available on request.

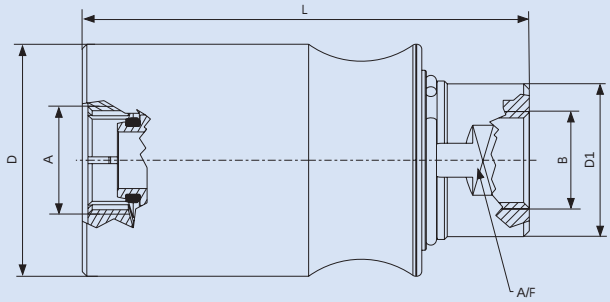
Dimensions (mm) TW800:



Body size	A* (mm)	B	D (mm)	D1 (mm)	L (mm)	A/F
1	6 - 7.9	G 1/8"	22	14	74	13
2	8 - 10.9	G 1/8"	25	17	75	15
3	11 - 14.9	G 1/4"	30	22	74	19
4	15 - 19.9	G 3/8"	35	27	79	24
5	20 - 24.9	G 1/2"	40	30	79	27
6	25 - 29.9	G 3/4"	45	33	90	30
7	30 - 35.9	G 3/4"	50	37	90	32
8	36 - 39.9	G 3/4"	55	40	90	36
9	40 - 46.9	G 1"	60	46	90	41
10	47 - 52.0	G 1 1/4"	70	55	90	50

* Clamping diameter — Other body sizes are available on request

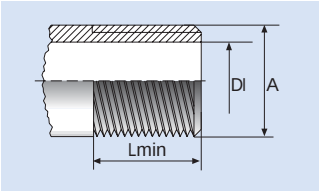
Dimensions (mm) TW850:



Body size	A* (mm)	B	D (mm)	D1 (mm)	L (mm)	A/F
1	up to M14	G 1/8"	36	22	75	19
2	up to M20	G 3/8"	41	27	80	24
3	up to M24	G 3/8"	46	30	80	27
4	up to M30	G 1/2"	52	33	120	30

* Clamping diameter — Other body sizes are available on request

Connection list
Type TW800

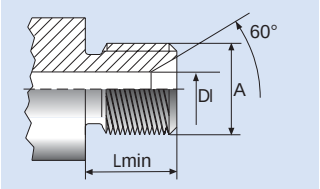


Whitworth tube thread DIN ISO 228-1

Plane surface burr free

Body size	Thread A	Dl max. (mm)	Lmin* (mm)	Allowable test pressure	Part No.
2	G 1/8"	5.0	12	20 bar	TW800G-W8372-025
3	G 1/4"	8.5	12	20 bar	TW800G-W8373-045
4	G 3/8"	10.5	12	20 bar	TW800G-W8374-065
5	G 1/2"	14.5	12	20 bar	TW800G-W8375-085
6	G 3/4"	20.0	12	20 bar	TW800G-W8376-125
7	G 1"	25.0	12	20 bar	TW800G-W8377-125
8/9	G 1 1/4"	**	**	20 bar	TW800G-W8397-165
10	G 1 1/2"	**	**	20 bar	TW800G-W8398-205

* Lmin: minimum thread length ** on request

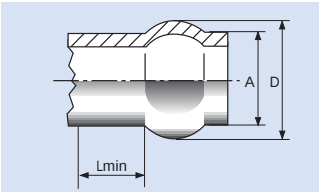


Threaded stem in accordance with DIN 7631 / DIN 7647

Plane surface burr free

Body size	Thread A**	Dl max. (mm)	Lmin* (mm)	Allowable test pressure	Part No.
2	M 10 x 1.0	3	8	50 bar	TW800G-W8400-025
3	M 12 x 1.5	4	10	50 bar	TW800G-W8401-045
3	M 14 x 1.5	6	10	50 bar	TW800G-W8402-045
4	M 16 x 1.5	8	11	50 bar	TW800G-W8403-065
4	M 18 x 1.5	10	11	50 bar	TW800G-W8404-065
5	M 22 x 1.5	12	12	50 bar	TW800G-W8405-085
6	M 26 x 1.5	15	12	50 bar	TW800G-W8406-125
7	M 30 x 1.5	19	14	50 bar	TW800G-W8407-125
8	M 38 x 1.5	22	14	50 bar	TW800G-W8408-125
9	M 45 x 1.5	28	16	50 bar	TW800G-W8409-165
11	M 52 x 1.5	35	16	50 bar	TW800G-W8410-205

* Lmin: minimum thread length ** acc. to DIN 3853

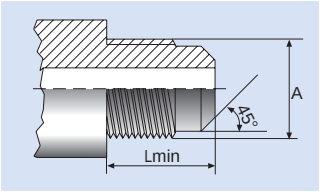


Beads for hose connections DIN 71550

Body size	Tube Ø A (mm)	D** (mm)	Lmin* (mm)	Allowable test pressure	Part No.
1	7.0	8.0	8.5	10 bar	TW800B-W8378-025
1	7.5	8.5	8.5	10 bar	TW800B-W8379-025
1	8.0	9.0	8.5	10 bar	TW800B-W8380-025
2	10.0	11.0	8.5	10 bar	TW800B-W8381-025
3	12.0	13.0	10.0	10 bar	TW800B-W8382-045
3	12.5	13.5	10.0	10 bar	TW800B-W8383-045
3	15.0	16.0	10.5	10 bar	TW800B-W8384-045
4	16.0	17.0	10.5	10 bar	TW800B-W8385-065
4	18.0	19.0	10.5	10 bar	TW800B-W8386-065
4	20.0	21.0	14.5	10 bar	TW800B-W8387-065
5	22.0	23.0	14.5	10 bar	TW800B-W8388-085
5	25.0	26.0	14.5	10 bar	TW800B-W8389-085
6	28.0	30.0	16.5	10 bar	TW800B-W8390-125
6	30.0	32.0	16.5	10 bar	TW800B-W8391-125
7	32.0	34.0	16.5	10 bar	TW800B-W8392-125
7	35.0	37.0	16.0	10 bar	TW800B-W8393-125
8	38.0	40.0	16.5	10 bar	TW800B-W8394-125
8	40.0	42.0	16.5	10 bar	TW800B-W8395-125
8	42.0	44.0	16.5	10 bar	TW800B-W8396-125

* Lmin: minimum thread length ** Nominal bore tolerance + 0.5 / - 0

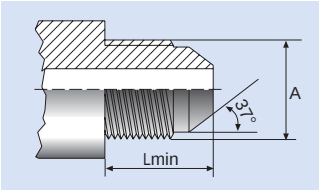
Connection list
Type TW800



SAE J512 (45° cone), SAE J513

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No.
1	UNF 5/16"-24	9.7	50 bar	TW800G-W8300-025
2	UNF 3/8"-24	11.2	50 bar	TW800G-W8301-025
2	UNF 7/16"-20	12.7	50 bar	TW800G-W8302-025
3	UNF 1/2"-20	14.2	50 bar	TW800G-W8303-045
3	UNF 9/16"-20	**	50 bar	TW800G-W8311-045
4	UNF 5/8"-18	15.7	50 bar	TW800G-W8304-065
4	UNF 11/16"-16	17.5	50 bar	TW800G-W8305-065
5	UNF 3/4"-16	19.0	50 bar	TW800G-W8306-085
5	UNF 7/8"-14	22.4	50 bar	TW800G-W8307-085
7	UN 1 1/16"-14	25.4	50 bar	TW800G-W8308-125
8	UN 1 1/4"-12	28.4	50 bar	TW800G-W8309-125
9	UN 1 3/8"-12	**	50 bar	TW800G-W8310-125

* Lmin: minimum thread length ** on request

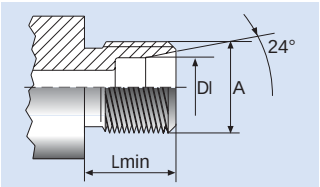


SAE J514 JIC 37°

Body size	Thread A	Lmin* (mm)	Allowable test pressure	Part No.
1	UNF 5/16"-24	11.4	50 bar	TW800G-W8318-025
2	UNF 3/8"-24	12.2	50 bar	TW800G-W8319-025
2	UNF 7/16"-20	14.0	50 bar	TW800G-W8320-025
3	UNF 1/2"-20	14.0	50 bar	TW800G-W8321-045
3	UNF 9/16"-18	14.1	50 bar	TW800G-W8322-045
5	UNF 3/4"-16	16.7	50 bar	TW800G-W8323-085
5	UNF 7/8"-14	19.3	50 bar	TW800G-W8324-085
7	UN 1 1/16"-12	21.9	50 bar	TW800G-W8325-125
8	UN 1 5/16"-12	23.1	50 bar	TW800G-W8327-125

* Lmin: minimum thread length

Connection list type TW850



Tube Connection to DIN 3902

Threaded stem to DIN 3853, boring form W to DIN 3861

Body size	Thread A	DI max. (mm)	Series	Lmin* (mm)	Allowable test pressure	Part No.
1	M 10 x 1.0	6	LL	8	100 bar	TW850G-W8348-025
1	M 12 x 1.0	8	LL	9	100 bar	TW850G-W8349-025
1	M 12 x 1.5	6	L	10	250 bar	TW850G-W8350-025
1	M 14 x 1.5	8	L	10	250 bar	TW850G-W8351-025
2	M 16 x 1.5	10	L	11	250 bar	TW850G-W8352-065
2	M 18 x 1.5	12	L	11	250 bar	TW850G-W8353-065
3	M 22 x 1.5	15	L	12	250 bar	TW850G-W8354-065
4	M 26 x 1.5	18	L	12	160 bar	TW850G-W8355-085
4	M 30 x 2.0	22	L	14	160 bar	TW850G-W8356-085
1	M 14 x 1.5	6	S	12	630 bar	TW850G-W8360-025
2	M 16 x 1.5	8	S	12	630 bar	TW850G-W8361-065
2	M 18 x 1.5	10	S	12	630 bar	TW850G-W8362-065
2	M 20 x 1.5	12	S	12	630 bar	TW850G-W8363-065
3	M 22 x 1.5	14	S	14	630 bar	TW850G-W8364-065
3	M 24 x 1.5	16	S	14	400 bar	TW850G-W8365-065
4	M 30 x 2.0	20	S	16	400 bar	TW850G-W8366-085

* Lmin: minimum thread length

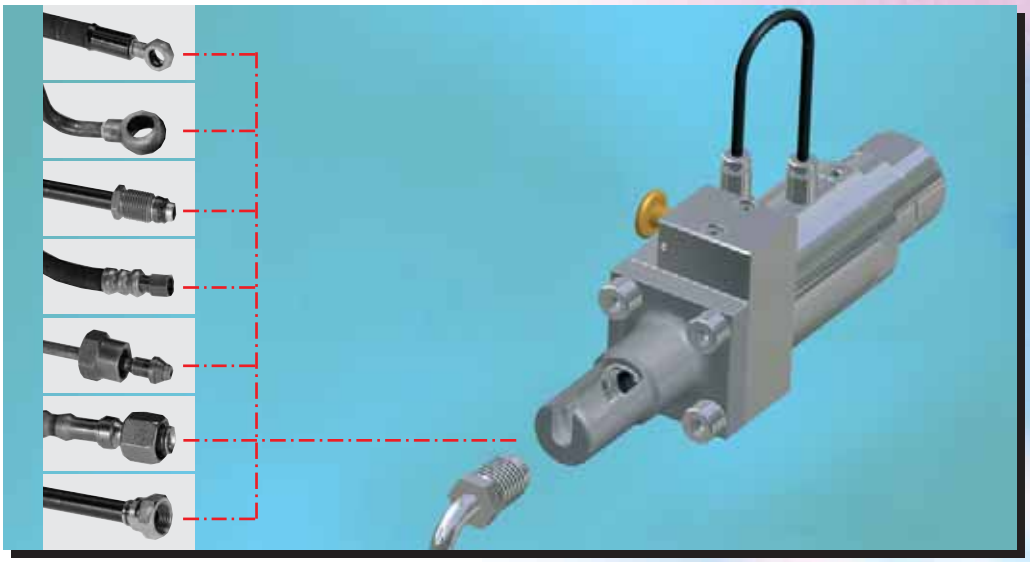
Ordering:

Other connector sizes and versions are available on request.
Required information see page 9.

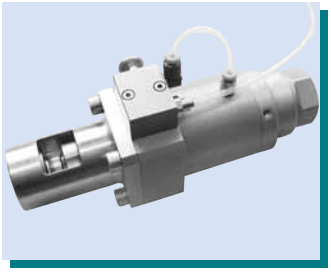
Accessories:

For detailed information on our screw plug for the type TW800/TW850 please see page 56.

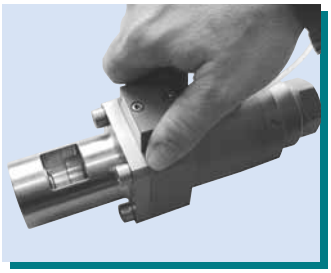
Connector
Type TW130



The round-bodied TW130 connector has been developed specially for testing components with banjo tube connections, hose connections with sleeve nuts and similar configurations.
The compact design and ease of operation enables cost effective testing, even for high quantities. The connector is equipped with pneumatic valve actuation, a steel test receptacle and if required, a retaining plate. The TW130 is available in several sizes.
Other versions, e.g. a 4-station fixture are also available on request.

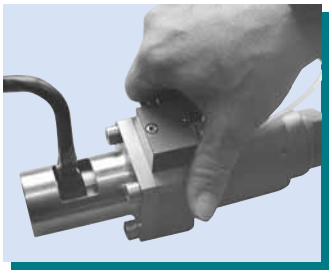


Initial position



Test procedure:
Press the actuation button.
→ the sealing piston retracts to allow the test piece to be loaded.

Place the test piece into the TW130.



Release the button.
→ the sealing piston returns to clamp the test piece.
Testing can now proceed.

Technical Data Type TW130:

Operating pressure:
Max. 350 bar, others on request

Pilot pressure:
Max. 6 - 8 bar

Actuation:
Pneumatic, automation is also possible

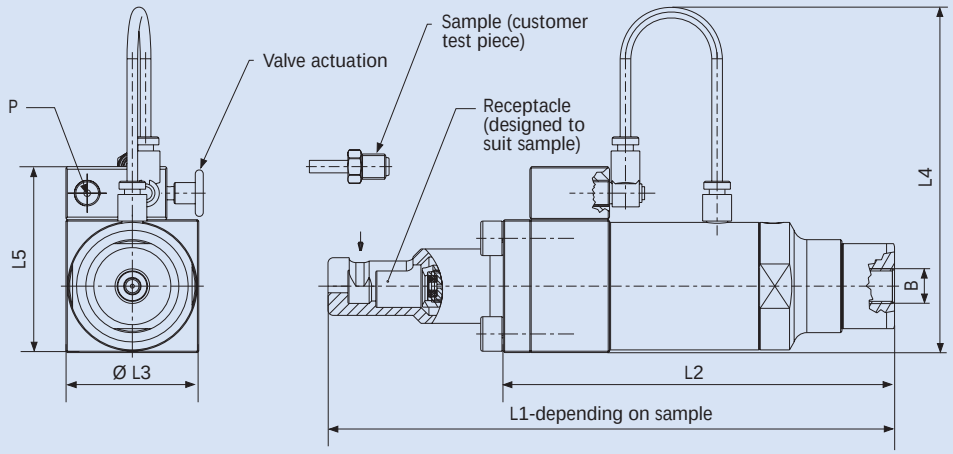
Media:
Air, water, mineral oils, helium

Helium leak rate:
Standard: 10 - 4 mbar x l / sec,
others possible. Please contact us!

Design:
Anodized aluminium and corrosion-resistant stainless steel.
Standard seal: Slide ring with NBR seal, others on request.

Fixturing parts:
A retaining plate is also available for ease of clamping the TW130 to test bench. Please contact us!

Dimensions (mm):



* The values of the temperature ranges quoted apply for common hydraulic oils, for other media please contact us!

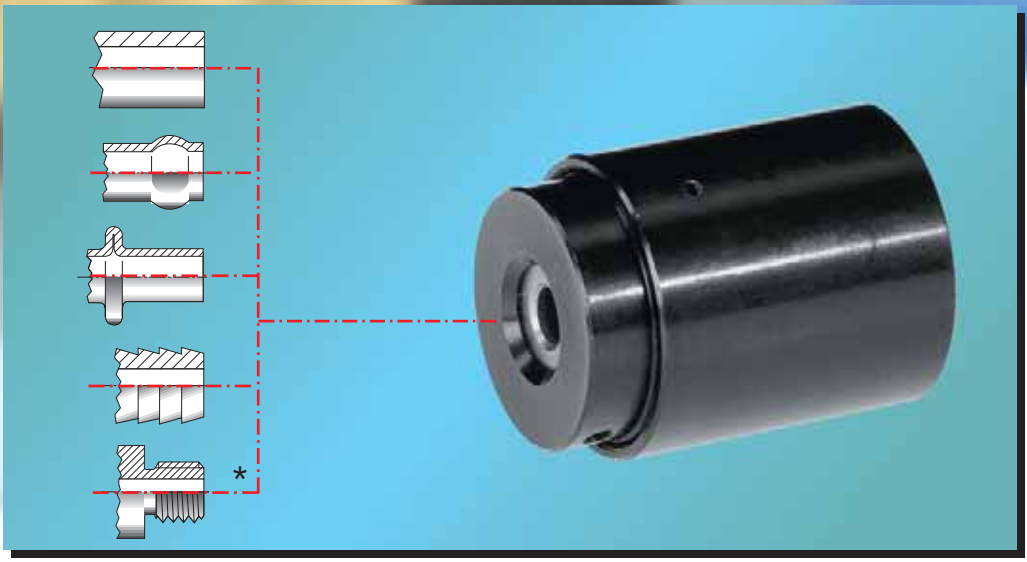
Body size*	Inlet B	Pilot pressure P	L2	L3	L4	L5
1	G1/4"	G1/8"	137.5	50	130	70
2	G1/4"	G1/8"	137.5	64	140	118.5

Dimensions in mm * others on request

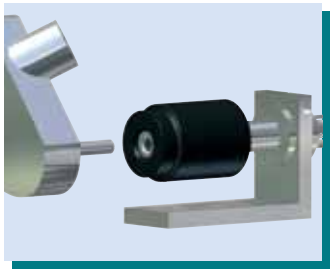
Ordering:

Other connector sizes and versions are available on request.
Required information see page 9.

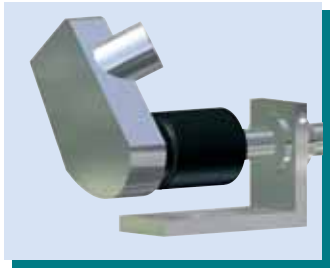
Connector
Type FE



Patented quick connector ‘FasTest’ series for pressure and vacuum tests on straight tubes, hoses and components with external threads. Fitted with elastomer seals ideal for sealing out of round and rough surfaces and clearing large tolerances on the test piece.
Pneumatic actuation offers automated testing.
The FE does not produce axial compression / clamping forces on the test piece.
Special twin connectors are available on request for sealing ports in close proximity to each other (see page 59, special types).



Test procedure:
Place the type FE onto the test piece.
The connector must be secured with a fixture.
Activate pilot pressure.
Type FE is now connected.
Apply the test pressure.



For disconnection always release the test pressure first.
Release pilot pressure.
Remove connector from the fixture.

* Connection types are possible, please contact us!

Technical Data Type FE:

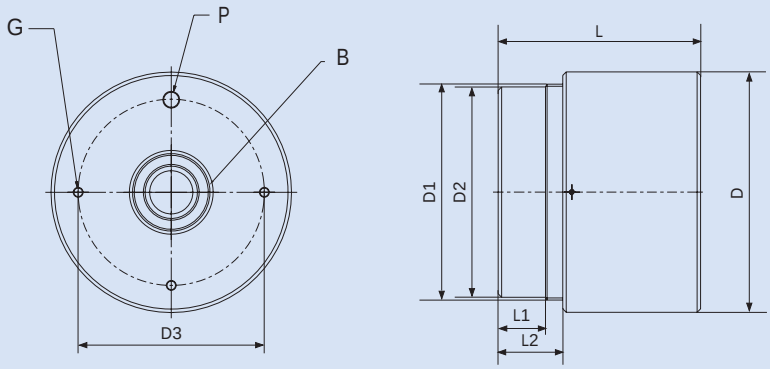
Operating pressure:
Inlet B: from vacuum up to max. 35 bar,
other pressure ranges are available on request.
For pressurized applications the FE must be secured by a fixturing device. On vacuum applications the FE does not need to be secured. For threaded applications or operating pressures above 10 bar we recommend urethane seals. The pilot pressure must be increased accordingly, e.g. using a pilot pressure booster (see page 43).

Pilot pressure: Inlet P: 4 - 12 bar compressed air, with pilot pressure booster up to 42 bar hydraulic pressure.

Leak rate: See page 60

Design: Housing, piston and seal housing made of aluminium.
Seals: main seal chloroprene / O-rings NBR. For body size 001 main seal and O-rings are NBR. Urethane seals for high-wear applications are optional.

Dimensions (mm):

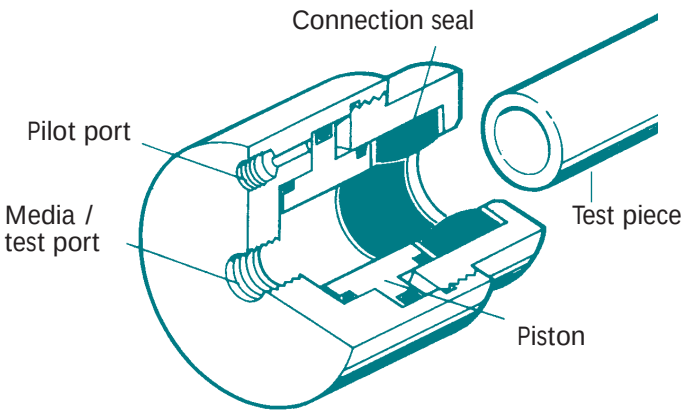


FE001 - FE3: 2 bores
FE4 - FE6: 3 bores

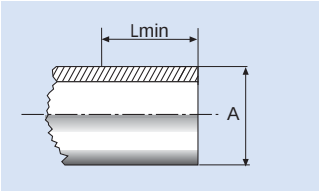
Body size	Inlet B	Actuation P	Mounting G	D	D1	D2	D3	L	L1	L2
001*	G 1/8"	M5	M3	21.3	–	–	16.0	43.7	–	–
01	G 1/8"	M5	M5	37.8	35.0	32.5	27.9	52.1	8.9	9.6
1	G 1/4"	G 1/8"	M6	56.4	50.8	46.9	41.1	69.1	8.5	9.6
2	G 1/2"	G 1/8"	M6	79.0	72.0	68.8	63.5	88.9	14.4	22.6
3	G 1"	G 1/8"	M6	107.4	95.3	91.0	82.5	113.8	29.5	37.8
4	G 1 1/2"	G 1/8"	M6	139.2	127.0	122.0	108.0	116.8	27.7	37.8
5	G 2"	G 1/8"	M10	177.3	165.1	161.8	139.7	116.8	35.1	35.2
6	G 2 1/2"	G 1/8"	M10	190.0	177.8	174.5	155.4	126.2	35.1	35.2

Dimensions in mm

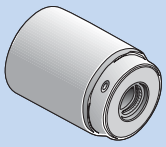
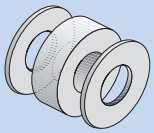
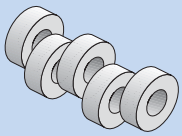
* For body size 001, 'P' is located on the diameter of the connector instead of on the face.



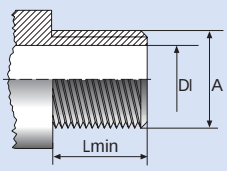
Other applications for type FE



Straight tube

Type FE			
			

Body size	Sealing range A (mm)	Lmin* (mm)	Part No. Type FE Content: Connector and one seal set	Part No. Main seal set Content: Seal(s) and back-up washers for one seal replacement	Number of seals	Part No. Replacement seals Content: sufficient for five seal replacements
001	0.80 - 1.30	4.0	F-FE001-0050	F-FES001-0050	1	F-FEB001-0050
001	1.30 - 2.00	4.0	F-FE001-001	F-FES001-001	1	F-FEB001-001
001	2.00 - 3.30	4.0	F-FE001-002	F-FES001-002	1	F-FEB001-002
01	2.50 - 4.60	14.7	F-FE01-01	F-FES01-01	1	F-FEB01-01
01	4.60 - 6.60	14.7	F-FE01-02	F-FES01-02	1	F-FEB01-02
01	6.60 - 8.60	14.7	F-FE01-03	F-FES01-03	1	F-FEB01-03
01	8.60 - 10.7	14.7	F-FE01-04	F-FES01-04	1	F-FEB01-04
01	10.7 - 13.0	14.7	F-FE01-05	F-FES01-05	1	F-FEB01-05
1	11.0 - 13.0	15.5	F-FE1-15	F-FES1-15	1	F-FEB1-15
1	13.0 - 15.0	15.5	F-FE1-16	F-FES1-16	1	F-FEB1-16
1	15.0 - 17.0	15.5	F-FE1-17	F-FES1-17	1	F-FEB1-17
1	17.0 - 19.0	15.5	F-FE1-18	F-FES1-18	1	F-FEB1-18
1	19.0 - 21.0	15.5	F-FE1-19	F-FES1-19	1	F-FEB1-19
2	20.0 - 22.0	26.9	F-FE2-21	F-FES2-21	2	F-FEB2-21
2	22.0 - 24.0	26.9	F-FE2-22	F-FES2-22	2	F-FEB2-22
2	24.0 - 26.0	26.9	F-FE2-23	F-FES2-23	2	F-FEB2-23
2	26.0 - 28.0	26.9	F-FE2-24	F-FES2-24	2	F-FEB2-24
2	28.0 - 30.0	26.9	F-FE2-25	F-FES2-25	2	F-FEB2-25
2	30.0 - 32.0	26.9	F-FE2-26	F-FES2-26	2	F-FEB2-26
2	32.0 - 34.0	26.9	F-FE2-27	F-FES2-27	2	F-FEB2-27
2	34.0 - 36.0	26.9	F-FE2-28	F-FES2-28	2	F-FEB2-28
2	36.0 - 38.0	26.9	F-FE2-29	F-FES2-29	2	F-FEB2-29
3	38.0 - 41.0	41.7	F-FE3-31	F-FES3-31	3	F-FEB3-31
3	41.0 - 44.0	41.7	F-FE3-32	F-FES3-32	3	F-FEB3-32
3	44.0 - 47.0	41.7	F-FE3-33	F-FES3-33	3	F-FEB3-33
3	47.0 - 49.8	41.7	F-FE3-34	F-FES3-34	3	F-FEB3-34
4	49.8 - 53.0	41.7	F-FE4-41	F-FES4-41	3	F-FEB4-41
4	53.0 - 56.0	41.7	F-FE4-42	F-FES4-42	3	F-FEB4-42
4	56.0 - 59.0	41.7	F-FE4-43	F-FES4-43	3	F-FEB4-43
4	59.0 - 62.0	41.7	F-FE4-44	F-FES4-44	3	F-FEB4-44
4	62.0 - 65.0	41.7	F-FE4-45	F-FES4-45	3	F-FEB4-45
4	65.0 - 68.0	41.7	F-FE4-46	F-FES4-46	3	F-FEB4-46
4	68.0 - 71.0	41.7	F-FE4-47	F-FES4-47	3	F-FEB4-47
4	71.0 - 74.0	41.7	F-FE4-48	F-FES4-48	3	F-FEB4-48
4	74.0 - 77.0	41.7	F-FE4-49	F-FES4-49	3	F-FEB4-49



NPT thread (ANSI/ASME B 1.20.1-1983)

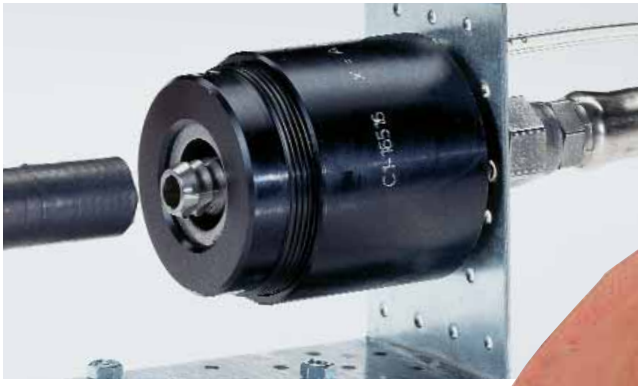
SAE J476a
Plane surface smooth and burr free

Body size	Sealing range A	DI max. (mm)	Lmin* (mm)	Part No. Type FE	Part No. Main seal set	Number of seals	Part No. Replacement seals
01	NPT 1/8"	5.0	14.7	F-FE01-1/8 NPT	F-FES01-1/8 NPT	1	F-FEB01-1/8 NPT
1	NPT 1/4"	7.0	15.5	F-FE1-1/4 NPT	F-FES1-1/4 NPT	1	F-FEB1-1/4 NPT
1	NPT 3/8"	10.5	15.5	F-FE1-3/8 NPT	F-FES1-3/8 NPT	1	F-FEB1-3/8 NPT
2	NPT 1/2"	14.0	17.5	F-FE2-1/2 NPT	F-FES2-1/2 NPT	2	F-FEB2-1/2 NPT
2	NPT 3/4"	18.0	17.5	F-FE2-3/4 NPT	F-FES2-3/4 NPT	2	F-FEB2-3/4 NPT
2	NPT 1"	24.0	17.5	F-FE2-1 NPT	F-FES2-1 NPT	2	F-FEB2-1 NPT
3	NPT 1 1/4"	32.0	22.6	F-FE3-1 1/4 NPT	F-FES3-1 1/4 NPT	3	F-FEB3-1 1/4 NPT
3	NPT 1 1/2"	37.0	22.6	F-FE3-1 1/2 NPT	F-FES3-1 1/2 NPT	3	F-FEB3-1 1/2 NPT
4	NPT 2"	49.0	22.6	F-FE4-2 NPT	F-FES4-2 NPT	3	F-FEB4-2 NPT
4	NPT 2 1/2"	59.0	22.6	F-FE4-2 1/2 NPT	F-FES4-2 1/2 NPT	3	F-FEB4-2 1/2 NPT

* Lmin: minimum length required for insertion of test piece
Other connector sizes and shapes are available on request.

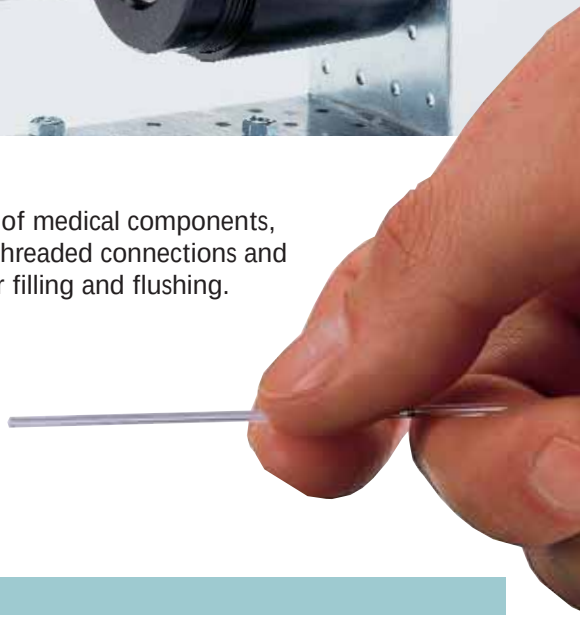
Other applications for type FE

Testing of rubber hoses



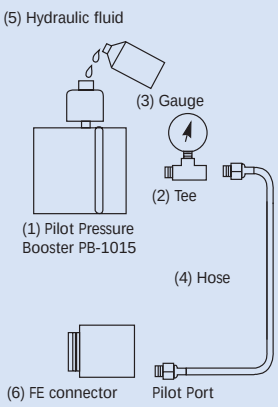
Applications for type FE mini

Type FE001 is particularly suitable for testing of medical components, such as valves, catheter hoses, mini pumps, threaded connections and copper capillary tubes. It can also be used for filling and flushing.



Accessories:

Part No.	Description
C1-17302	Pneumatic hydraulic pressure booster (1) up to 42 bar output pressure For pressure tests above 35 bar and for all threaded applications, the use of the pneumatic hydraulic pressure booster is required. It can be simply installed to standard FE-Connector. Hereby the simultaneous piloting of several FE-Connectors is possible. The pressure booster is available complete with installation accessories and is designed for a pneumatic input pressure of 2 - 4.5 bar and a hydraulic output pressure up to 42 bar. Its compact design and light construction (115 mm x 115 mm housing size) facilitates the installation.

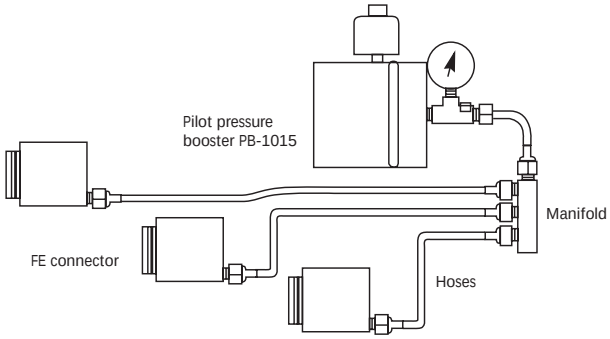


W9300	Accessory for using FE quick connector body size 01
W9301	Accessory for using FE quick connector body size 1 – 6
W9302	Tee 1/8" NPT (2)
W9307	Gauge from 0 – 42 bar (3)
W9308	Hose assembly (10-32 x 1/8" NPT x 914 mm) (4)
W9309	Hose assembly (10-32 x 1/8" NPT x 1828 mm) (4)
W9310	Hose assembly (1/8" NPT x 1/8" NPT x 457 mm) (4)
W9311	Hose assembly (1/8" NPT x 1/8" NPT x 914 mm) (4)
W9312	Hose assembly (1/8" NPT x 1/8" NPT x 1828 mm) (4)
W9306	Replacement oil (5)

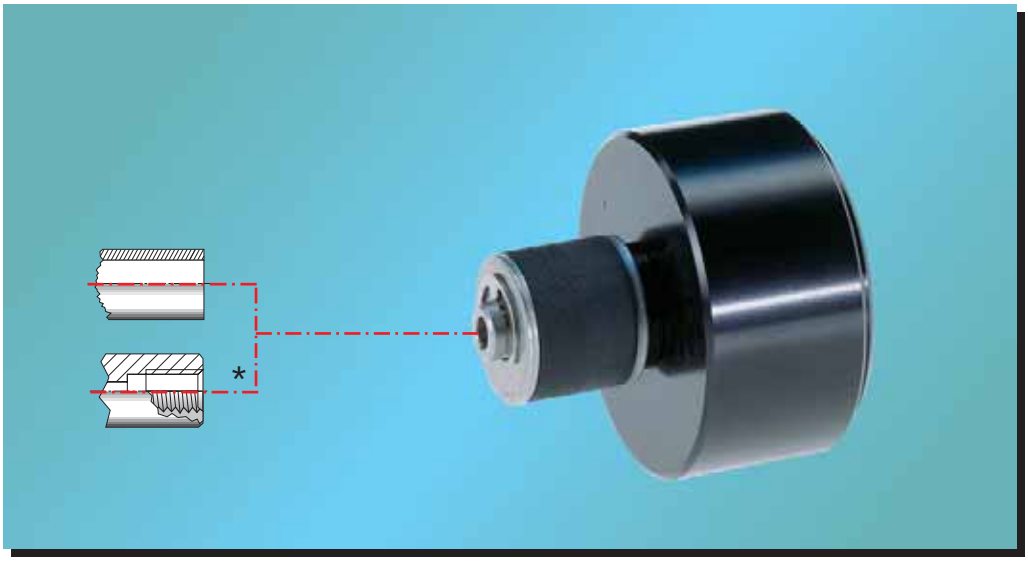
FE01	8 FE connectors
FE1	4 FE connectors
FE2	2 FE connectors
FE3	1 FE connectors
FE4	1 FE connectors

Number of FE connectors piloted by one booster

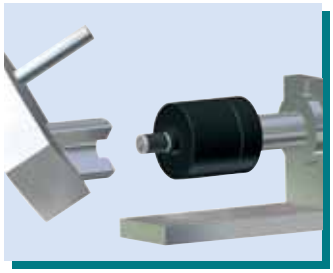
W9304	Manifold with 1/8" NPT inlet thread and 3 x 1/8" NPT output
W9305	Manifold with 1/8" NPT inlet thread and 5 x 1/8" NPT output



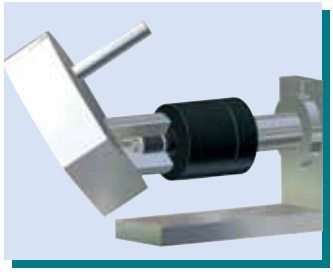
Connector
Type FI



Patented quick connector ‘FasTest’ series for pressure and vacuum tests on straight tubes, bores and components with internal threads. Fitted with elastomer seals ideal for sealing out of round and rough surfaces and clearing large tolerances on the test piece. Pneumatic actuation offers automated testing. The connector's only means of clamping into the test piece is frictional between seal and surface therefore a fixture must be used.
The FI does not produce axial compression / clamping forces on the test piece. Special twin connectors are available on request for sealing ports in close proximity to each other (see page 59, special types). Shaft extensions for FI connectors are also available (see page 47).



Test procedure:
Place type FI into the test piece.
The connector must be secured with a fixture.
Activate pilot pressure.
Type FI is now connected.
Apply the test pressure.



For disconnection always release the test pressure first.
Release pilot pressure.
Remove connector from the fixture.

* Connection types are possible, please contact us!

Technical Data Type FI:

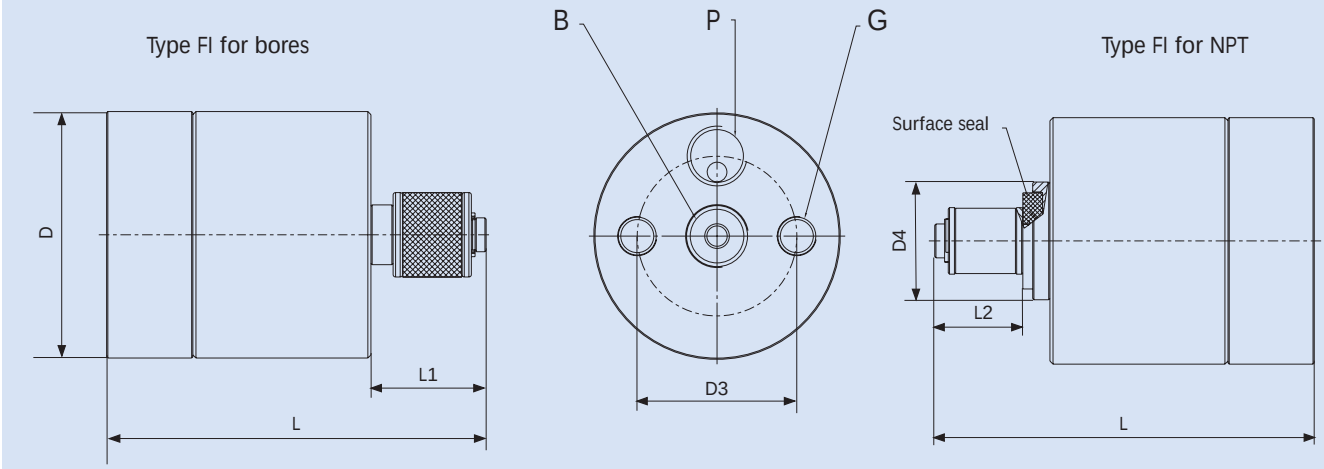
Operating pressure:
Inlet B: from vacuum up to max. 9 bar, other pressure ranges are available on request.
For pressurized applications the type FI must be secured by a fixturing device. Only on vacuum applications a fixturing device is not needed.

Pilot pressure: Inlet P: 4 - 12 bar compressed air

Leak rate: See page 60

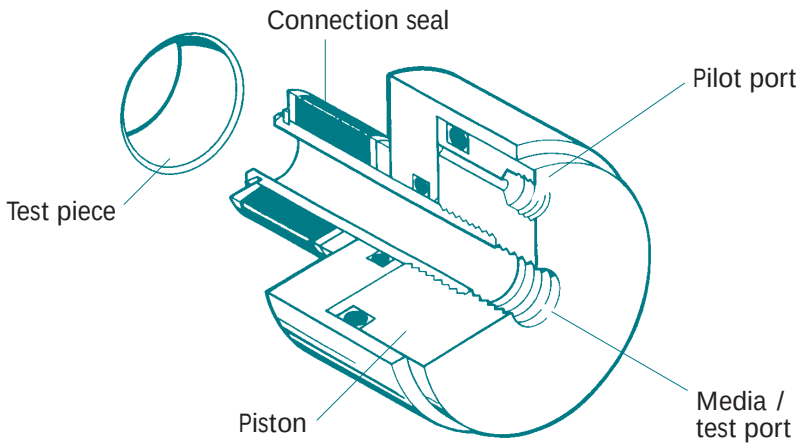
Design:
Housing, piston and spacer made of aluminium.
Seals: main seal chloroprene / O-rings NBR.
For body size 001 main seal and O-rings are NBR.
Urethane seals for high-wear applications are optional, for threaded applications as standard.
Other designs are available on request.

Dimensions (mm):

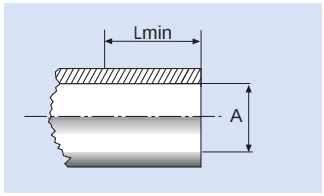


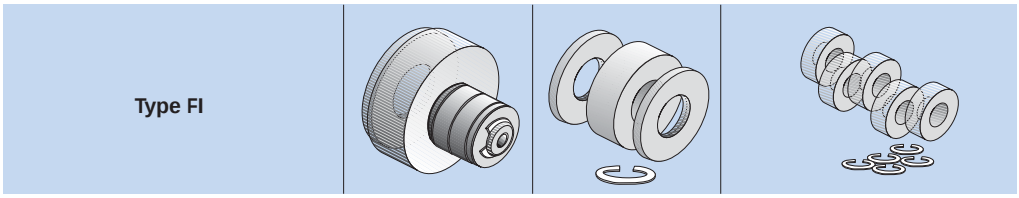
Body size	Inlet B	Actuation P	Mounting G	D	D3	D4	L	L1	L2
01	M5	M5	M5	31.8	20.3	16.0	50.3	17.2	12.2
1	G 1/8"	G 1/8"	M6	39.9	25.9	19.1	62.0	19.3	14.5
2	G 1/8"	G 1/8"	M6	39.9	25.9	22.1	62.0	19.3	14.5
3	G 1/8"	G 1/8"	M6	60.0	40.6	27.4	66.3	31.7	18.0
4	G 1/8"	G 1/8"	M6	60.0	40.6	32.3	66.3	31.7	18.0
5	G 1/2"	G 1/8"	M6	88.6	58.7	40.1	93.5	46.7	31.5
6	G 1/2"	G 1/8"	M6	88.6	58.7	48.0	93.5	46.7	31.5
7	G 3/4"	G 1/8"	M6	106.7	76.2	54.4	85.3	48.7	*
8	G 3/4"	G 1/8"	M6	106.7	76.2	----	85.3	48.7	*

Dimensions in mm * on request



Connection list
Type FI

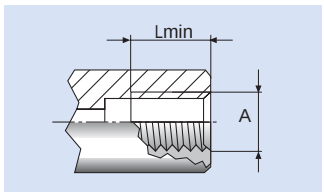




Straight tube

Body size	Sealing range A (mm)	Lmin* (mm)	Part No. Type FI Content: Connector and one seal set	Part No. Main seal set Content: seal(s) and back-up washers or one seal replacement	Number of seals	Part No. Replacement seals Content: sufficient for five seal replacements
01	7.7 - 8.3	13.4	F-FI01-0300	F-FIS01-0300	1	F-FIB01-0300
01	8.4 - 10.0	13.4	F-FI01-01	F-FIS01-01	1	F-FIB01-01
1	10.0 - 12.0	15.0	F-FI1-11	F-FIS1-11	1	F-FIB1-11
1	12.0 - 14.0	15.0	F-FI1-12	F-FIS1-12	1	F-FIB1-12
1	14.0 - 16.0	15.0	F-FI1-13	F-FIS1-13	1	F-FIB1-13
2	16.0 - 18.0	15.0	F-FI2-21	F-FIS2-21	1	F-FIB2-21
2	18.0 - 20.0	15.0	F-FI2-22	F-FIS2-22	1	F-FIB2-22
2	20.0 - 22.0	15.0	F-FI2-23	F-FIS2-23	1	F-FIB2-23
3	22.0 - 24.0	27.8	F-FI3-31	F-FIS3-31	2	F-FIB3-31
3	24.0 - 26.0	27.8	F-FI3-32	F-FIS3-32	2	F-FIB3-32
3	26.0 - 28.0	27.8	F-FI3-33	F-FIS3-33	2	F-FIB3-33
4	28.0 - 30.0	27.8	F-FI4-41	F-FIS4-41	2	F-FIB4-41
4	30.0 - 32.0	27.8	F-FI4-42	F-FIS4-42	2	F-FIB4-42
4	32.0 - 34.0	27.8	F-FI4-43	F-FIS4-43	2	F-FIB4-43
5	34.0 - 37.0	40.9	F-FI5-51	F-FIS5-51	3	F-FIB5-51
5	37.0 - 40.0	40.9	F-FI5-52	F-FIS5-52	3	F-FIB5-52
5	40.0 - 43.0	40.9	F-FI5-53	F-FIS5-53	3	F-FIB5-53
6	43.0 - 47.0	40.9	F-FI6-61	F-FIS6-61	3	F-FIB6-61
6	47.0 - 51.0	40.9	F-FI6-62	F-FIS6-62	3	F-FIB6-62
6	51.0 - 55.0	40.9	F-FI6-63	F-FIS6-63	3	F-FIB6-63
7	55.0 - 58.5	41.4	F-FI7-71	F-FIS7-71	3	F-FIB7-71
7	58.5 - 62.1	41.4	F-FI7-72	F-FIS7-72	3	F-FIB7-72
7	62.1 - 65.6	41.4	F-FI7-73	F-FIS7-73	3	F-FIB7-73
8	65.6 - 69.2	41.4	F-FI8-81	F-FIS8-81	3	F-FIB8-81
8	69.2 - 72.7	41.4	F-FI8-82	F-FIS8-82	3	F-FIB8-82
8	72.7 - 76.0	41.4	F-FI8-83	F-FIS8-83	3	F-FIB8-83

* Lmin: minimum length required for insertion in test piece
Other connector sizes and shapes are available on request.



NPT thread (ANSI/ASME B 1.20.1-1983)

SAE J476a

Body size	Sealing range A	Lmin* (mm)	Part No. Type FI	Part No. Main seal set	Number of seals	Part No. Replacement seals
01	NPT 1/8"	12.2	F-FI01-1/8 NPT	F-FIS01-1/8 NPT	1	F-FIB01-1/8 NPT
1	NPT 1/4"	14.5	F-FI1-1/4 NPT	F-FIS1-1/4 NPT	1	F-FIB1-1/4 NPT
2	NPT 3/8"	14.5	F-FI2-3/8 NPT	F-FIS2-3/8 NPT	1	F-FIB2-3/8 NPT
2	NPT 1/2"	14.5	F-FI2-1/2 NPT	F-FIS2-1/2 NPT	1	F-FIB2-1/2 NPT
3	NPT 3/4"	18.0	F-FI3-3/4 NPT	F-FIS3-3/4 NPT	1	F-FIB3-3/4 NPT
4	NPT 1"	18.0	F-FI4-1 NPT	F-FIS4-1 NPT	1	F-FIB4-1 NPT
5	NPT 1 1/4"	31.4	F-FI5-1 1/4 NPT	F-FIS5-1 1/4 NPT	2	F-FIB5-1 1/4 NPT
6	NPT 1 1/2"	31.4	F-FI6-1 1/2 NPT	F-FIS6-1 1/2 NPT	2	F-FIB6-1 1/2 NPT

* Lmin: minimum length required for insertion in test piece
Other connector sizes and shapes are available on request.

Other connectors for Metric ISO-thread DIN 13 acc. to ISO 6149-1 and SAE-O-ring Boss acc. to SAE J1926 / ISO 11926 are also available.

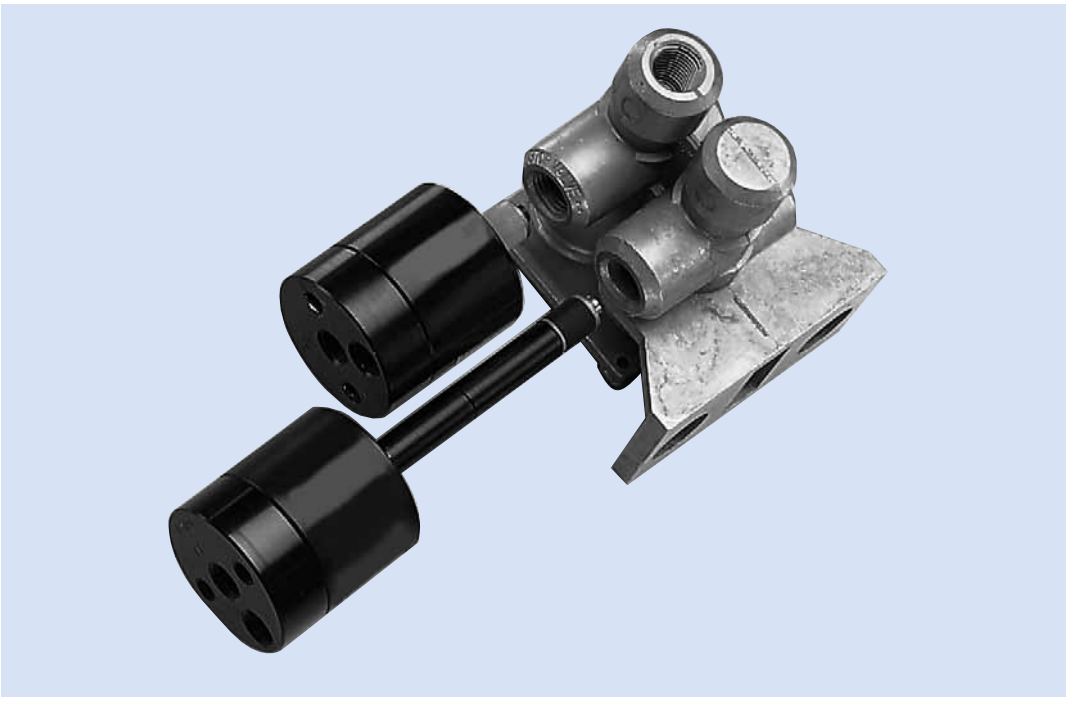
Applications
Type FI

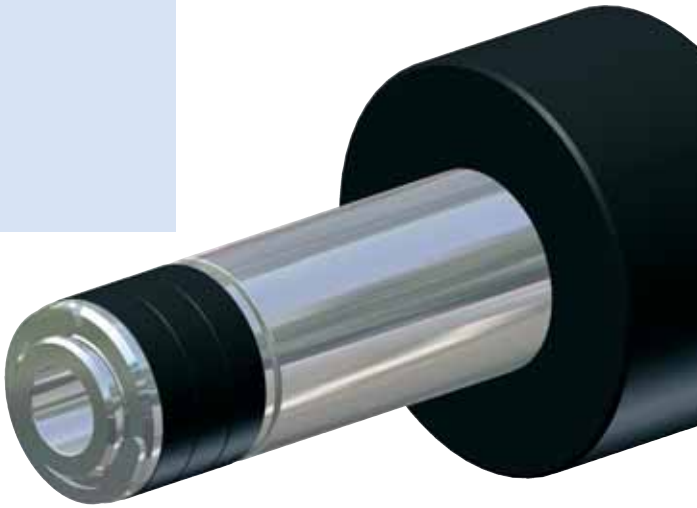
Leak testing: pressure decay,
underwater / helium tests.
Other applications: filling, pressure
and function tests, flushing, etc.
Components: vessels, plastic vessels, medical components,
valves, pumps, filter, pressure vessels, tube connections, etc.

Replacement seals:

F-FIS main seal set for non-threaded
applications contains the main seal(s) with
back-up washer(s) and locking ring.

F-FIS main seal set for threaded applications
contains the main seal(s), a seal mount,
a front seal, back-up washer(s) and a locking ring.





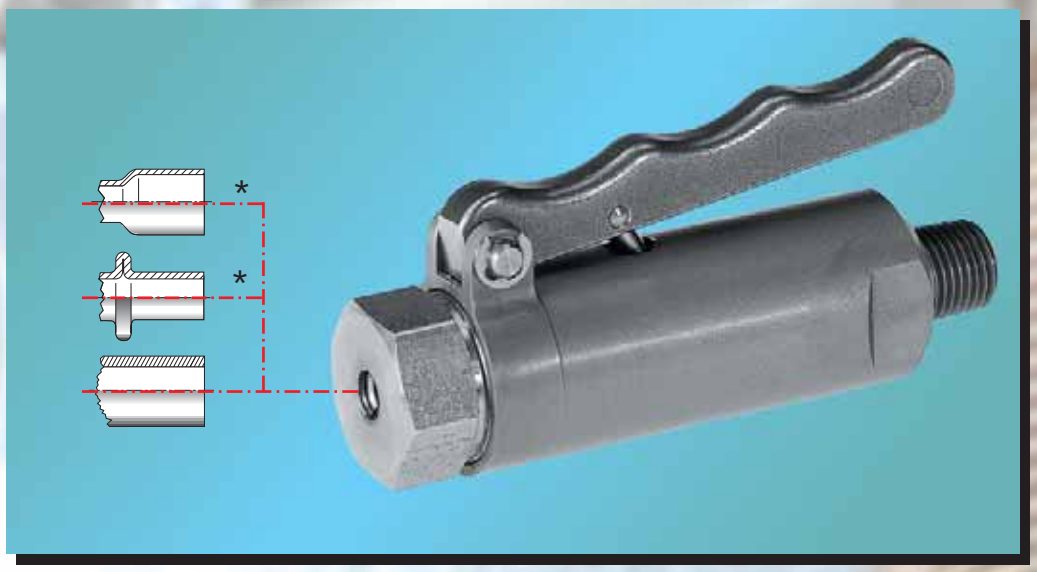
Shaft extension:

Shaft extensions of 25.4 mm
or 50.8 mm for FI connectors
are available to seal surfaces
which are inaccessible to
standard FI connectors.

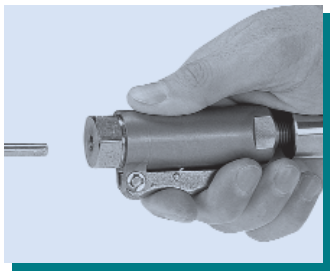
Ordering:

Other connector sizes, versions and extensions are available
on request. Required information see page 9.

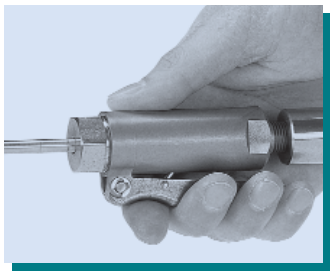
Connector
Type TW141



Patented quick connector for pressure-tight connections on straight tubes. The TW141 has earned a reputation for ease of operation. The TW141 is a lever-actuated connector, which creates no lateral forces, that can distort the test piece when connecting and disconnecting. The TW141 is fitted with an internal safety feature which prevents the connector from being removed until a pressure lower than 5 bar is attained.



Test procedure:
Actuate the hand lever and push directly onto the straight tube.



Release hand lever.
The TW141 is now connected.

* Connection types are available on request, please contact us!

Technical Data Type TW141:

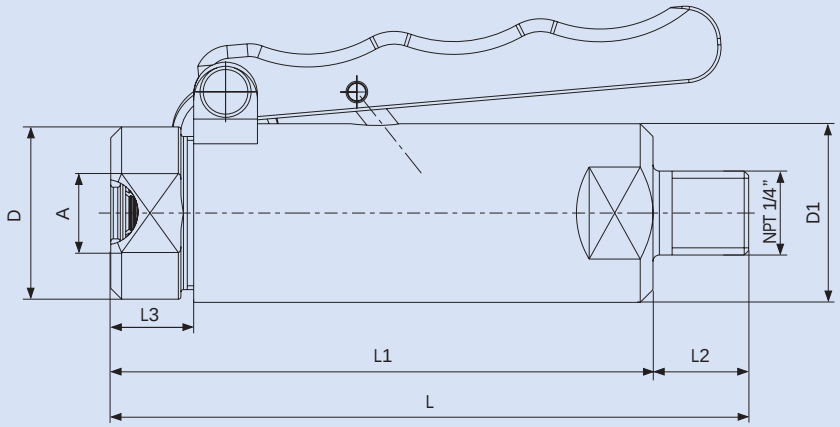
Operating pressure:
Inlet B: from vacuum up to max. 100 bar

Material hardness of test piece:
Min. hardness 20 HRC, max. hardness 28 HRC.
Connection to copper tubes and other tube materials.

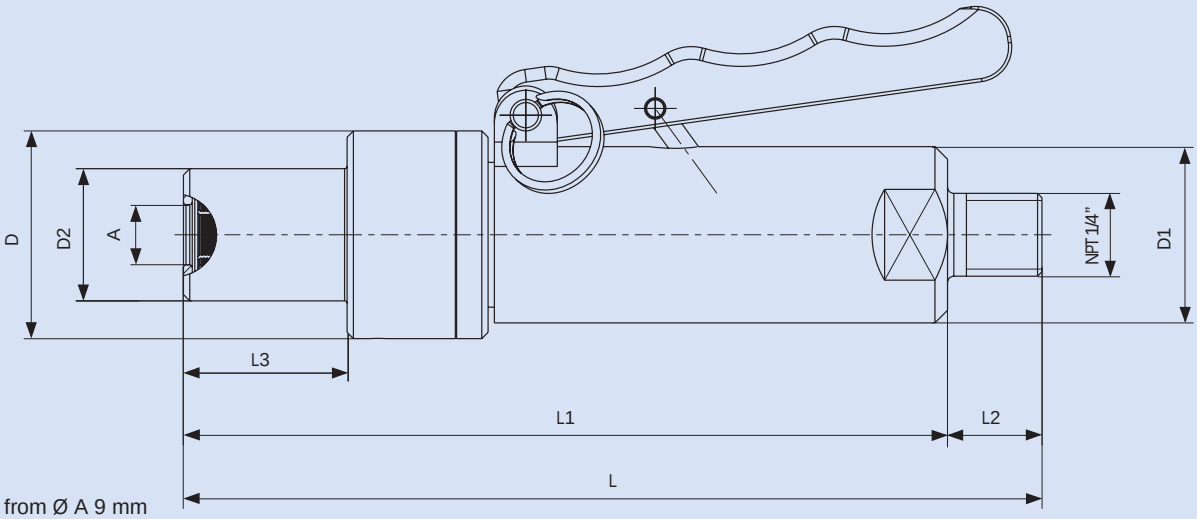
Leak rate:
See page 60

Design:
Housing: anodized aluminium.
Clamping jaw assembly: corrosion-resistant stainless steel.
Seals material dependant on media, others on request.

Dimensions (mm):

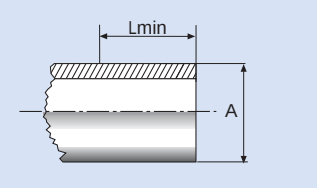


TW141 up to Ø A 8 mm



TW141 from Ø A 9 mm

Connection list
Type TW141



Straight tube

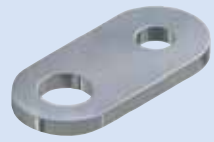
Sealing range A	Tolerance	D	D1	D2	L	L1	L2	L3*	Lmin**	Part No.
3.5	± 0.2	27	28		100.0	85.0	15	14.5	21	C1-32399
4.0	± 0.2	27	28		100.0	85.0	15	14.5	21	C1-32398
4.8 (3/16")	± 0.2	27	28		100.0	85.0	15	14.5	21	C1-17749
5.0	± 0.2	27	28		100.0	85.0	15	14.5	21	C1-18575
6.0	± 0.2	27	28		100.0	85.0	15	13.0	21	C1-14967
6.35 (1/4")	± 0.2	27	28		100.0	85.0	15	13.0	21	C1-17606
6.95	± 0.2	22	28		100.0	85.0	15	13.0	21	C1-18961
7.0	± 0.2	22	28		100.0	85.0	15	13.0	21	C1-18198
7.9 (5/16")	± 0.2	27	28		100.0	85.0	15	13.0	21	C1-17750
8.0	± 0.2	27	28		100.0	85.0	15	13.0	21	C1-14968
8.15	± 0.2	27	28		100.0	85.0	15	13.0	21	C1-18960
9.0	± 0.2	33	28	21	136.5	121.5	15	26.0	21	C1-32473
9.5 (3/8")	± 0.1	33	28	21	136.5	121.5	15	26.0	21	C1-17536
9.6	± 0.1	33	28	21	136.5	121.5	15	26.0	21	C1-17808
10.0	± 0.1	33	28	19	133.5	118.5	15	23.0	15	C1-16773
12.0	± 0.1	33	28	21	133.5	118.5	15	23.0	15	C1-16774
12.7 (1/2")	± 0.1	33	28	24	133.5	118.5	15	23.0	15	C1-17751
15.0	± 0.1	33	28	24	133.5	118.5	15	23.0	15	C1-16775
15.9 (5/8")	± 0.1	49	28	32	133.5	118.5	15	23.0	15	C1-17959
16.0	± 0.1	49	28	32	133.5	118.5	15	23.0	15	C1-16776
18.0	± 0.1	49	28	34	133.5	118.5	15	23.0	15	C1-16777
19.05 (3/4")	± 0.1	49	28	34	133.5	118.5	15	23.0	15	C1-18006
20.0	± 0.1	49	28	34	133.5	118.5	15	23.0	15	C1-17687
22.0	± 0.1	49	28	38	133.5	118.5	15	23.0	15	C1-16778
22.2 (7/8")	± 0.1	49	28	38	133.5	118.5	15	23.0	15	C1-17939

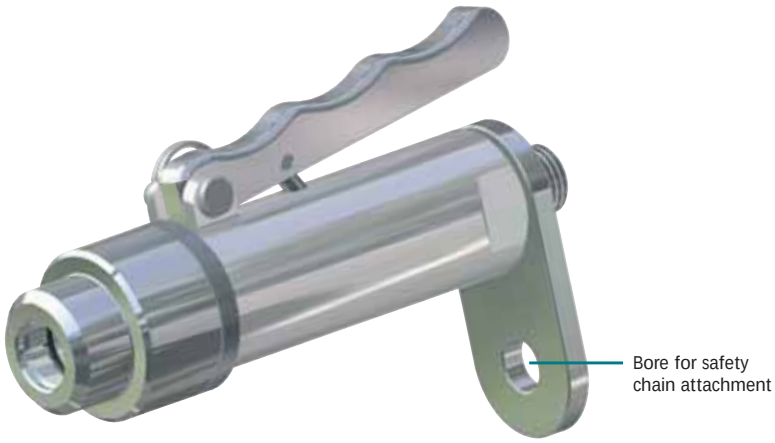
Dimensions in mm
* Due to customers specific applications and pressure ranges the dimensions can differ from the stated standard sizes.
** Lmin: minimum length required for insertion of test piece

Ordering:

Other connector sizes and versions are available on request.
Required information see page 9.

Accessories

	Part No.	Description
	E29-30810	Adaptor NPT 1/4" internal thread - G1/4" internal thread
	E29-30366	Adaptor NPT 1/4" internal thread - G1/4" external thread
	E29-900p	Plug NPT 1/4" internal thread
	E29-934p	Adaptor NPT 1/4" internal thread - UNF 7/16" external thread
	E29-45285	Anchor plate for TW141



TW141 with anchor plate

Connector
Type JXL

Patented quick connector ‘FasTest’ series for pressure and vacuum tests on straight tubes. The type JXL is suitable for underwater, pressure decay and helium testing. Equipped with a safety system that prevents the JXL from being inadvertently disconnected whilst under pressure. The internal planar seal give both durability and high leak test performance.

Test procedure:
Place type JXL onto the test piece.

Turn the hand lever through 90°.
Type JXL is now connected.

Technical Data Type JXL:

Operating pressure:
Inlet B: from vacuum up to 70 bar

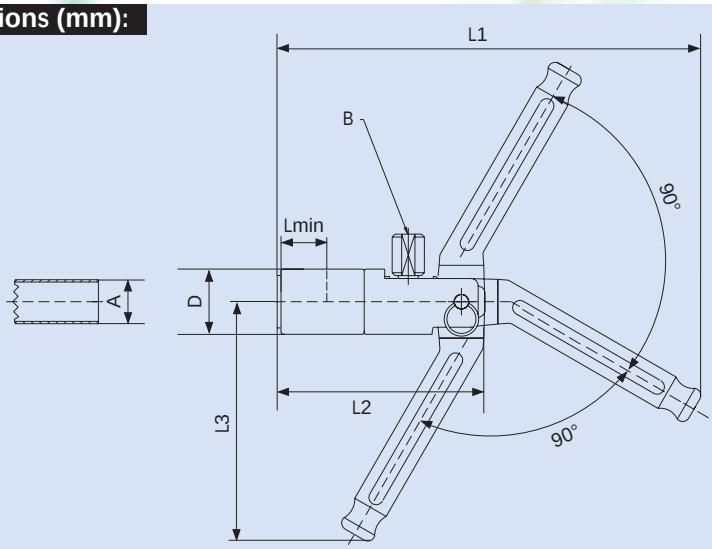
Material hardness of test piece:
Min. hardness 20 HRC, max. hardness 30 HRC.
Connection to copper tubes, other tube materials are available on request.

Leak rate:
See page 60

Surface finish of the test piece:
Surface must be greater than 0.127 µm. Surfaces less than 0.127 µm are not recommended.

Design:
Housing: anodized aluminium.
Clamping jaw assembly: corrosion-resistant stainless steel, hardened. Main seal chloroprene.
Other designs are available on request.

Dimensions (mm):



Body size	B	D	Sealing range A ± 0.25*	L1	L2	L3	Lmin** (mm)	Part No.
0	G 1/8"	28.4	3.2 (1/8")	184.2	92.7	104.9	20.1	F-JXL0-0125
0	G 1/8"	28.4	4.0	184.2	92.7	104.9	20.1	F-JXL0-M040
0	G 1/8"	28.4	4.75 (3/16")	184.2	92.7	104.9	20.1	F-JXL0-0187
0	G 1/8"	28.4	6.0	184.2	92.7	104.9	20.1	F-JXL0-M060
0	G 1/8"	28.4	6.35 (1/4")	184.2	92.7	104.9	20.1	F-JXL0-0250
0	G 1/8"	28.4	7.9 (5/16")	184.2	92.7	104.9	20.1	F-JXL0-0312
0	G 1/8"	28.4	8.0* +0.2/-0.3	184.2	92.7	104.9	20.1	F-JXL0-0312
0	G 1/8"	28.4	9.5 (3/8")	184.2	92.7	104.9	20.1	F-JXL0-0375
0	G 1/8"	28.4	10.0	184.2	92.7	104.9	20.1	F-JXL0-M100
0	G 1/8"	28.4	11.1 (7/16")	184.2	92.7	104.9	20.1	F-JXL0-0437
0	G 1/8"	28.4	12.0	184.2	92.7	104.9	20.1	F-JXL0-M120
0	G 1/8"	28.4	12.7 (1/2")	184.2	92.7	104.9	20.1	F-JXL0-0500
1	G 1/4"	41.1	15.9 (5/8")	184.2	90.9	107.2	20.1	F-JXL1-0625
1	G 1/4"	41.1	19.05 (3/4")	184.2	90.9	107.2	20.1	F-JXL1-0750
1	G 1/4"	41.1	22.2 (7/8")	184.2	90.9	107.2	20.1	F-JXL1-0875

Dimensions in mm
Please note the special tolerances for sizes marked thus *.
** Lmin: minimum length required for insertion of test piece

Ordering:

Other connector sizes and versions are available on request.
Required information see page 9.
When ordering, please state, if you use fiber-reinforced, plastic test pieces.

Replacement main seals:
To order main seal sets replace 'J' in standard part number with a 'S', e.g. part number of seal set for F-JXL0-0312 is F-**S**XL0-0312.

Connector
Type JNL

Patented quick connector ‘FasTest’ series for pressure and vacuum testing straight tubes and bores. The JNL is suitable for underwater, pressure decay and helium testing. Equipped with a safety system that prevents the type JNL from being inadvertently disconnected whilst under pressure. The radial sealing system works reliably and effectively.

Test procedure:
Place the JNL into the test piece.

Turn the hand lever through 90°.
The JNL is now connected.

Technical Data Type JNL:

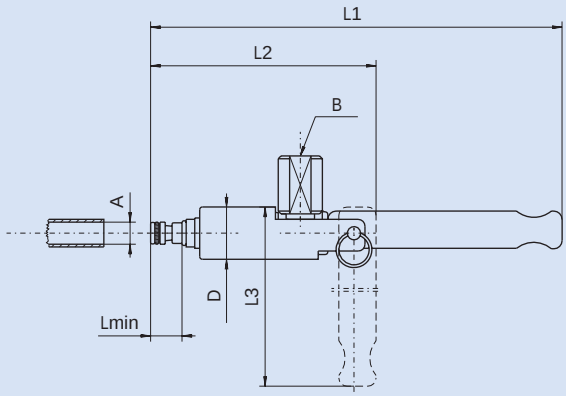
Operating pressure:
Inlet B: from vacuum up to max. 70 bar

Leak rate:
See page 60

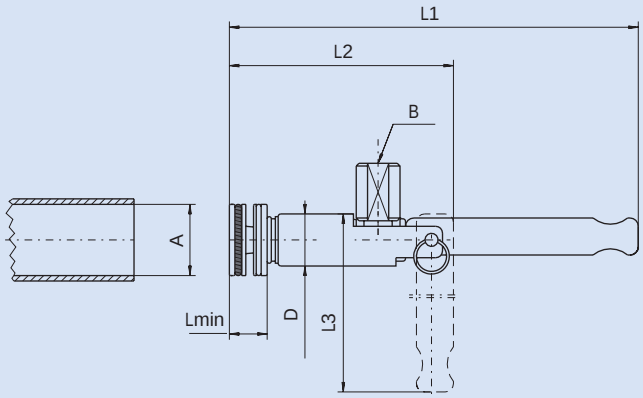
Design:
Housing: anodized aluminium.
Clamping jaw assembly: corrosion-resistant stainless steel, hardened. Main seal chloroprene.
Other designs are available on request.

Surface finish / material hardness of the test piece:
The test piece must have a surface finish greater than 16 rms and a hardness of no more than 95 R_b (Rockwell B hardness), to grip and seal at the rated pressure. A surface finish of 8 rms may be acceptable if the test piece has a hardness no greater than 40 R_b. Connection to copper tubes, other tube materials are available on request.

Dimensions (mm):



Body size 0
Inlet B: G1/8"



Body size 1
Inlet B: G1/8"

Body size	B	D	Sealing range A ± 0.25*	L1	L2	L3	Lmin** (mm)	Part No.
0	G 1/8"	22.1	9.5 (3/8")	177.8	94.5	101	13.5	F-JNL0-0375H
0	G 1/8"	22.1	10.0	177.8	94.5	101	13.5	F-JNL0-M100H
0	G 1/8"	22.1	10.5	177.8	94.5	101	13.5	F-JNL0-M105H
0	G 1/8"	22.1	11.0 (7/16")	177.8	94.5	101	13.5	F-JNL0-M110H
0	G 1/8"	22.1	11.5	177.8	94.5	101	13.5	F-JNL0-M115H
0	G 1/8"	22.1	12.0	177.8	94.5	101	13.5	F-JNL0-M120H
0	G 1/8"	22.1	12.5	177.8	94.5	101	13.5	F-JNL0-M125H
0	G 1/8"	22.1	12.7 (1/2")	177.8	94.5	101	13.5	F-JNL0-0500H
0	G 1/8"	22.1	13.0	177.8	94.5	101	13.5	F-JNL0-M130H
0	G 1/8"	22.1	13.5	177.8	94.5	101	13.5	F-JNL0-M135H
0	G 1/8"	22.1	14.0	177.8	94.5	101	13.5	F-JNL0-M140H
1	G 1/8"	22.1	14.5	177.8	94.5	101	16.0	F-JNL1-M145
1	G 1/8"	22.1	15.0	177.8	94.5	101	16.0	F-JNL1-M150
1	G 1/8"	22.1	15.5	177.8	94.5	101	16.0	F-JNL1-M155
1	G 1/8"	22.1	15.9 (5/8")	177.8	94.5	101	16.0	F-JNL1-0625
1	G 1/8"	22.1	16.0* +0.2/-0.3	177.8	94.5	101	16.0	F-JNL1-M160
1	G 1/8"	22.1	16.5	177.8	94.5	101	16.0	F-JNL1-M165
1	G 1/8"	22.1	17.0	177.8	94.5	101	16.0	F-JNL1-M170
1	G 1/8"	22.1	17.5	177.8	94.5	101	16.0	F-JNL1-M175
1	G 1/8"	22.1	18.0	177.8	94.5	101	16.0	F-JNL1-M180
1	G 1/8"	22.1	18.5	177.8	94.5	101	16.0	F-JNL1-M185
1	G 1/8"	22.1	19.05 (3/4")	177.8	94.5	101	16.0	F-JNL1-0750
1	G 1/8"	22.1	19.5	177.8	94.5	101	16.0	F-JNL1-M195
1	G 1/8"	22.1	20.0	177.8	94.5	101	16.0	F-JNL1-M200
1	G 1/8"	22.1	20.5	177.8	94.5	101	16.0	F-JNL1-M205
1	G 1/8"	22.1	21.0	177.8	94.5	101	16.0	F-JNL1-M210
1	G 1/8"	22.1	21.5	177.8	94.5	101	16.0	F-JNL1-M215
1	G 1/8"	22.1	22.0* + 0.45/-0.05	177.8	94.5	101	16.0	F-JNL1-M220
1	G 1/8"	22.1	22.2 (7/8")	177.8	94.5	101	16.0	F-JNL1-0875

Additional sizes are available up to sealing range 40.0.
Please note the special tolerances for sizes marked thus *
** Lmin: minimum length required for insertion of test piece

Dimensions in mm

Available sizes:
JNL connectors are available in 0.5 mm steps starting from 9.5 up to 40.0 mm as well as all standard inch sizes. Special sizes on demand.

Replacement main seals:
To order main seal sets replace 'J' in standard part number with a 'S', e.g. part number of seal set for F-JNL1-0687 is F-**S**NL1-0687.

Ordering:
For other sizes please add 'M' and the nominal bore (mm) x 10 to the standard part number.
Example: Interior tube Ø 11.5 mm → part number F-JNL0-**M**-115.
When ordering, please state, if you use fiber-reinforced, plastic test pieces.

Accessories

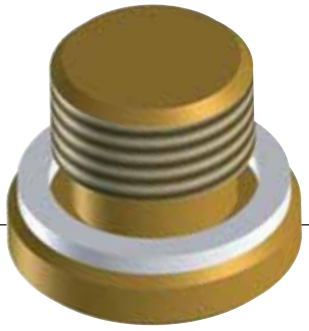
If a connector is to be used as a plug, connection B will be sealed with a screw plug. Please see the technical data of each type for the appropriate thread size. The screw plug can be used for the types TW17, TW18, TW19, TW800, TW850, MET, MIT, FE, FI, JXL and JNL.

Screw plug - low pressure version 0 - 50 bar

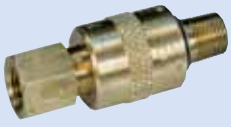
Part No.	Description
E69-9200	G 1/8" external thread
E69-9210	G 1/4" external thread
E69-9220	G 3/8" external thread
E69-9230	G 1/2" external thread
W9338	G 3/4" external thread

Screw plug - high pressure version 50 - 350 bar

Part No.	Description
W9329	G 1/8" external thread
W9330	G 1/4" external thread
W9331	G 3/8" external thread
W9332	G 1/2" external thread
W9333	G 3/4" external thread
W9334	G 1" external thread
W9335	G 1 1/4" external thread



Accessories

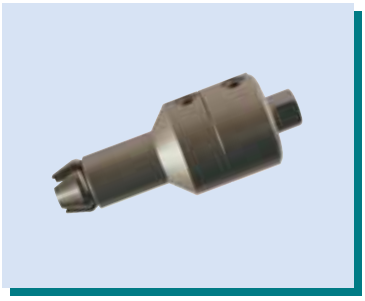
For inlet 'pilot pressure'	Part No.	Description
	W9325	Control / venting valve Push button charging adapter with integrated shut-off valve works in conjunction with connector W9326. For manual applications. Thread 'B' screws into pilot pressure connection
	W9326	Pilot charging connector with integrated shut-off valve works in conjunction with control / venting valve W9325. Gives a short pressure pulse to actuate the quick connector. Inlet 'A': G1/8" external thread
	W9327	Sleeve valve Inlet 'A': G1/8" internal thread Outlet 'B': G1/8" external thread Thread 'B' screws into pilot pressure connection.

Fuel Connectors
for the automotive industry

Type TW710
Fuel connector for tubes with bead, collar or thread with lateral test port (very short version)

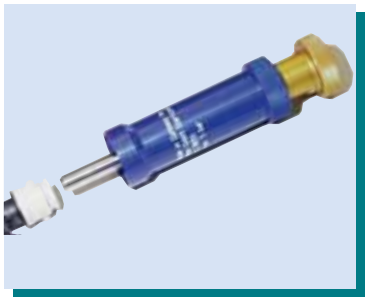
Type TW711
Fuel connector for tubes with bead, collar or thread with central flow and test port

Type TW712
Fuel connector for tubes with bead, collar or thread with lateral test port



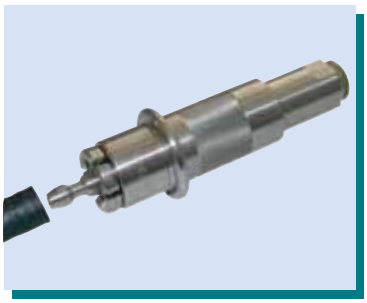
Type TW713
Fuel connector for tubes with bead, collar or thread with central flow and lateral test port and pneumatic actuation for automated application

Type TW714
Fuel connector for 'John-Guest-Connections' with central flow and test port



Type TW723
Fuel connector for tubes with bead, collar or thread with central flow

Type TW723
Fuel connector for rubber hoses



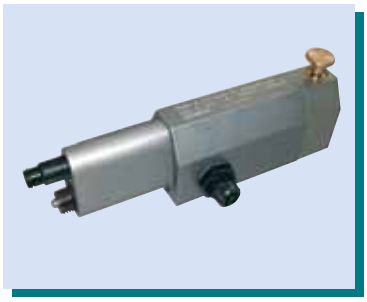
We will also develop a suitable solution for your specific needs, please contact us!

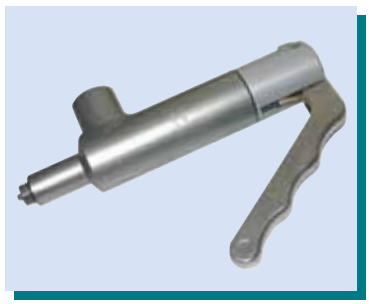
Special Connector Types

Type TW26
Patented quick connector for pressure testing components with internal threads

Type TW751
Testing of pressure gauges up to 1000 bar

Type TW17 twin connector
Twin connector for pressure testing threaded ports with centres that are very close to each other



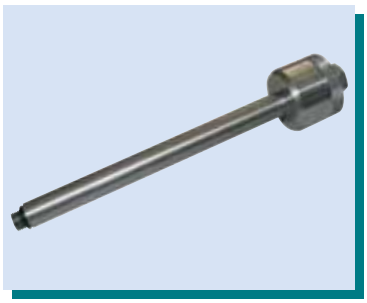


Type TW17 with extension
Quick connector with extension for pressure testing components with internal threads

Type FE twin connector
Twin connector for pressure and flow testing straight tubes that are very close to each other

Type FI twin connector
Twin connector for pressure testing bores that are very close to each other

Type MIT with extension
Quick connector with extension for pressure testing components with internal threads that have space envelope restraints



Technical Information

Pressure definition:

Abbreviation	Pressure type	Description / Explanation
PN	Nominal pressure	This is a standardised term
PS	Operating pressure	The max. pressure to which the component is subjected (1.25 x PN)
PT	Test pressure	The pressure to which the component is tested by the manufacturer ('once only' test, 1.43 – 1.5 x PS)
P1, P2, P3	Pilot pressure	For pneumatically actuated connectors. P1 – P3 is normally air pressure.

Admissible operating pressure:
The admissible operating pressure has been determined as follows: 100.000 x cycles impacting the component with 125 % of PN.
The pressure wave is sinusoidal.

Pressure/Temperature:
For higher temperatures the max. operating pressure needs to be reduced dependant on the application.
Possible values therefore are: 50 °C – 5 %, 100 °C – 10 %, 150 °C – 20 %.

Brochure data:

Maximum care has been taken compiling this catalogue based on many years of experience.
However we must point out, that all catalogue data is only valid, if it was expressly confirmed in the individual order. We cannot guarantee the veracity of the data and the introductions in individual cases due to the large variety of applications for WEH products, and the unknown parameters and conditions of use. We have to refer to the individual order.
The limits of use for pressure, temperature etc. in this catalogue are theoretical data calculated on the basis of tests. Because of different operating conditions we cannot guarantee that the data do accord with the special use of the client. It has to be considered, that in the practical use interactive interferences of data parameters can cause the change of the maximum values. Especially if the operating conditions are extreme, the WEH Company must be consulted before the use of the products.
Therefore the requested values should be stated in the individual order, especially for extreme operating conditions.
Furthermore we point out, that we cannot guarantee for misprints, uncompleted data or misinterpretation.
The illustration of the products is for demonstration only.
The exact form and design of the product is only defined by the individual order. The brochure is only an integral part of the contract, if it is agreed expressly. Dimensions and other technical data in this catalogue are without obligation.
Our general terms and conditions are valid for consignments and all other services, unless otherwise agreed. We do not accept general terms and conditions of the purchaser.

Leak rate:

Leak rate: 1 x 10 - 3 mbar x 1/s
This is the minimum leak rate. We are able to offer units with significantly lower leak rates on request. This depends on the customers specifications (test mode, test temperature, test pressure) and the quality of the customer's sample (e.g. surface finish and dimensional tolerances).

Max. side load:

External forces can considerably shorten the lifetime of the connector, or cause malfunctions. Tensile and transverse loads need to be considered such as mounted technical devices etc. as well as vibrations and pressure impacts. Lateral forces such as whipping hoses or other equipment must be avoided. WEH-Connectors should be installed in such a way, that lateral forces which could lead to leakage can not occur. Special applications require a special consultation before selecting the connector.

Technical Information

Temperature ranges:
(if no other values indicated)

Standard range:
+5 °C up to +80 °C, special range: on request

The temperatures stated as standard cover most common applications. The seal material used has higher or lower temperature limits dependant on material (e.g. NBR –30 °C up to +100 °C, FKM –20 °C up to +200 °C, EPDM –40 °C up to +150 °C).
Under such extreme temperature conditions the suitability of WEH products to the application has to be checked specifically. If necessary, we can develop special solutions.

Seals:

The seal materials are stated with each type. For seals that are not being directly exposed to the media - NBR is used, if not otherwise stated.

Seal material	suited for	Note
NBR (e.g. Perbunan)	Mineral oils, air, water	Not for water over 80 °C!
FPM, FKM	Mineral oils, petrol, super petrol, diesel oils, air	
EPDM	Hot water, steam, brake fluid	Not resistant for mineral oils!
Urethane	Mineral oils, air	Not for water over 50 °C

This list only contains a small selection of suitable media. If your media is not listed, please contact us.
Other seal materials can be specified on request.

Conversion table of temperature ranges:

Unit abbreviation	Conversion to K	Conversion to °C	Conversion to °F	Conversion to °R
Kelvin (K)	1	Kelvin temperature - 273.15	(Kelvin temperature - 273.15) x 1.8 + 32	Kelvin temperature x 1.8
Celsius (°C)	Celsius temperature + 273.15	1	(Celsius temperature x 1.8) + 32	(Celsius temperature + 273.15) x 1.8
Fahrenheit (°F)	(Fahrenheit temperature - 32) x 5/9 + 273.15	(Fahrenheit temperature - 32) x 5/9	1	Fahrenheit temperature + 459.67
Rankine (°R)	Rankine temperature x 5/9	Rankine temperature x 5/9 - 273.15	Rankine temperature - 459.67	1

Notes

Fax reply

Quick Connectors

Name		Position	
Company		Department	
Address		Phone	
Postcode/City		Fax	
Country		E-Mail	

We are manufacturers of: _____

Yes, I want to have more details

- ❑ Offer (Please describe your application)
- ❑ Please contact us
- ❑ Visit

Remarks _____

_____

_____

_____

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