Catalogue 35

WEH® Connectors

Pressure-tight connections in seconds to threads, beads, tubes, etc.

Connection solutions for industrial applications

Date: 02/2012

FUTURE. **TECHNOLOGY. TODAY.**

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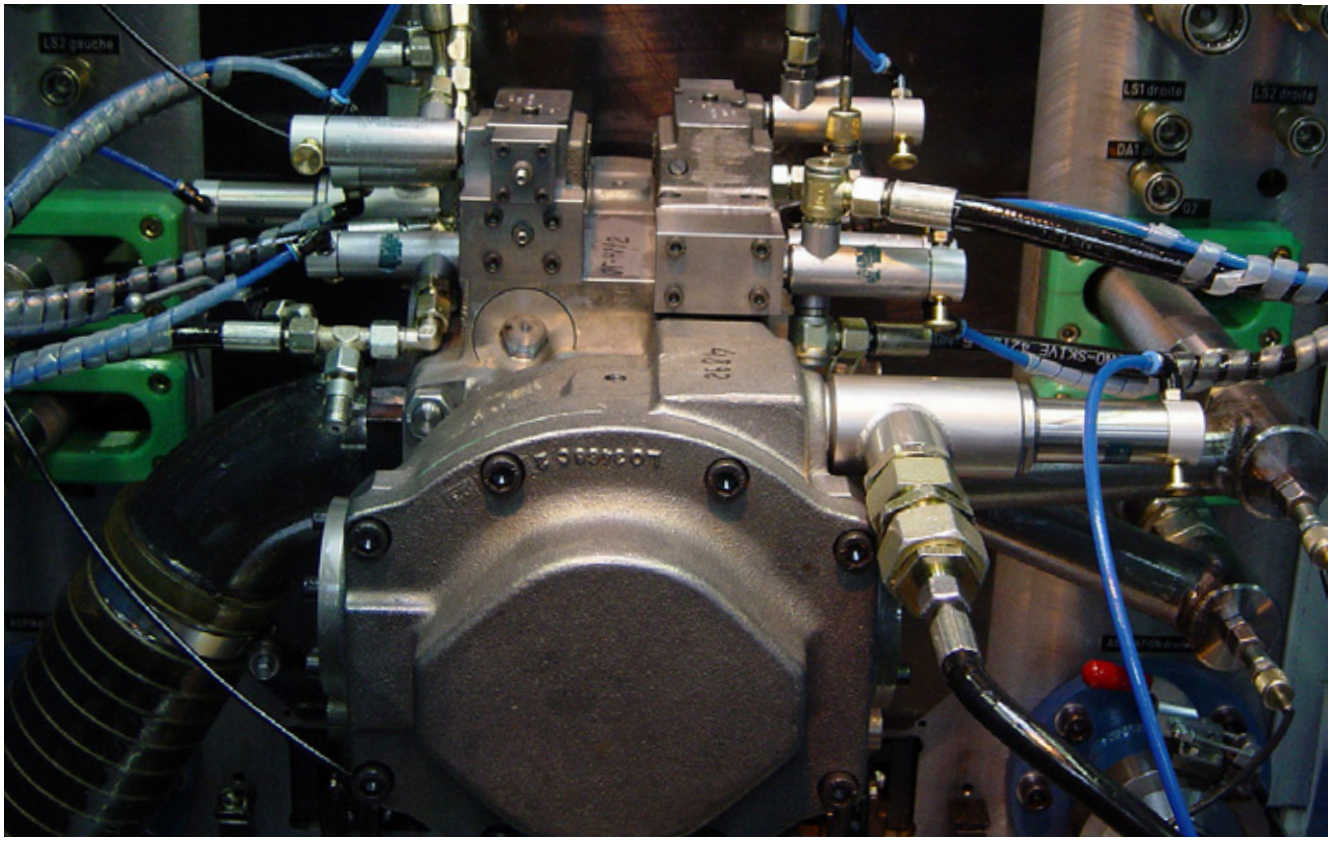

Introduction

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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 has 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 world-wide 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 has two subsidiaries, one in Great Britain and the other one in France and also another subsidiary in the USA.

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. Being the specialist for connection solutions, WEH supplies, besides a wide range of standard quick connectors, also numerous individual and customized 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.

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.

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

PRESSURE-TIGHT CONNECTIONS IN SECONDS

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 offers the optimum solutions with their quick connectors. Pressure- and function-tight connections can be made in seconds.

Unique WEH® Jaw locking mechanism
All quick connectors have the unique WEH® Jaw locking mechanism developed by WEH.
The jaw locking system is superior to ball locking systems in that it tolerates dirt and reduces wear on the test piece.

Connections in seconds
WEH® Connectors are simply placed onto / over or into the inlet of the test piece and the pressure-tight connection is immediate. Laborious thread connections and tightening of pressure test hoses is no longer needed and intricate testing devices are a thing of the past. The connectors are designed for pressures up to several 1000 bar depending on connection type and test piece. In comparison to threaded connections there are significant time and cost reductions due to the efficient design of WEH® Connectors.

Introduction

APPLICATIONS

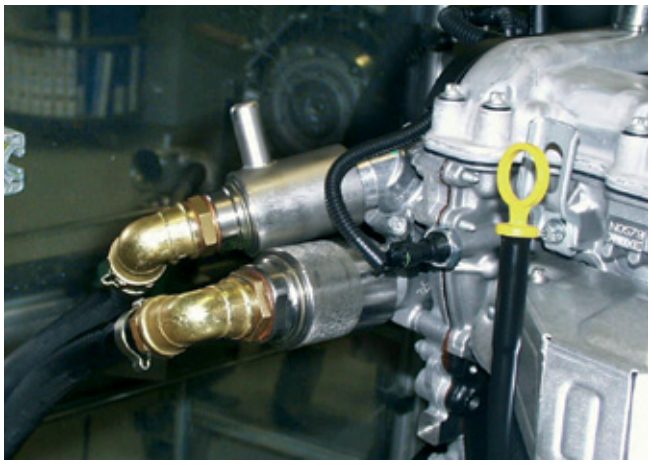
WEH® Quick connectors have become standard in the general industry worldwide. Where all supply lines had to be screwed on engine test benches, now the innovative WEH® Connectors enable pressure-tight connections in seconds.

WEH® Connectors are available for:
- External threads
- Internal threads
- Straight tubes
- Holes and bores
- Flanges, beads, collars, ...

and also for your application!

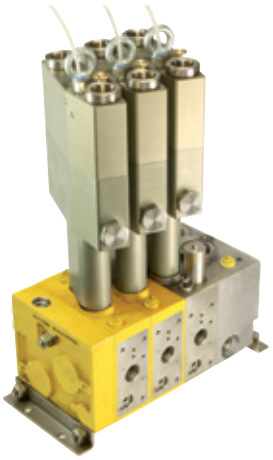
WEH® Connectors can be characterized by:
- Ease of operation
- High durability
- Minimum wear and tear
- Ease of maintenance

TW723 | Testing of engines



TW800 | Testing of engines

TW17 | Testing of injection pumps



TW17 | 3 x twin connector for testing of hydraulic pumps

Overview

Internal or external threads, beads or straight tubes: WEH offers a solution for almost every application where a connection is needed. WEH can offer quick connectors for each type of connection. Customer-tailored solutions can be designed for special applications, even for small quantities.

WEH® Connectors for internal threads

- TW17 *p. 10*

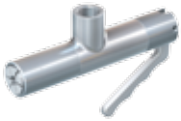
- TW19 *p. 16*

- TW05 *p. 20*

- TW26 *p. 24*

- MIT *p. 26*

WEH® Connectors for external threads


- TW18 *p. 30*

- MET *p. 36*

- TW800 *p. 40*

- TW850 *p. 44*

Universal connectors for threads, beads, tubes, etc.

- TW800 *p. 40*

- TW850 *p. 44*

- TW130 *p. 46*

- TW131 *p. 48*

- TW132 *p. 50*

- TW141 *p. 52*

- FI *p. 56*

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- JNL *p. 66*

- JXL *p. 70*

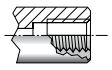
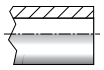
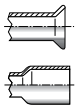
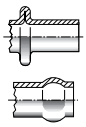
Special connectors

- FUEL CONNECTORS *p. 74*

- SPECIAL SOLUTIONS *p. 75*

As a long standing partner to the international automotive, hydraulic and other manufacturing industries, our experts have developed advanced solutions to make production processes faster, cost effective and more efficient.
If you can't find a suitable connector for your application, please contact us. Our specialists will recommend an appropriate product.

Connection possibilities

Type	External threads	Internal threads	Straight tubes	Holes and bores	Swaged and flared	Beads	Collars	Barbs
								
TW17 *p. 10*		✓						
TW19 *p. 16*		✓						
TW05 *p. 20*		✓						
TW26 *p. 24*		✓						
MIT *p. 26*		✓						
TW18 *p. 30*	✓				✓	✓	✓	✓
MET *p. 36*	✓							
TW800 *p. 40*	✓				✓	✓	✓	✓
TW850 *p. 44*	✓				✓	✓	✓	✓
TW130 *p. 46*	✓*	✓*			✓	✓	✓	✓*
TW131 *p. 48*	✓*	✓*			✓	✓	✓	✓*
TW132 *p. 50*	✓*	✓*			✓	✓	✓	✓*
TW141 *p. 52*			✓		✓	✓		
FI *p. 56*		✓	✓	✓	✓	✓	✓	✓
FE *p. 62*	✓		✓		✓	✓	✓	✓
JNL *p. 66*			✓	✓	✓	✓	✓	✓
JXL *p. 70*			✓		✓	✓		

* The test piece profile must allow a firm grip!

Automation is possible for many types. Please contact us!
Please note the relevant information on page 77, technical notes.

Normally we need the following information when ordering:

1. Part No.
2. Pressure range
3. 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

WEH® Connector **TW17**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- Ergonomic design
- High-grade materials
- Different actuations
- Automation possible
- Testing devices are eliminated

The type TW17 quick connector is designed for sealing standardized internal thread applications. The higher the test pressure the tighter the WEH® Connector will clamp itself into the thread of the test piece and provides a pressure-tight connection in seconds. The front o-ring reliably seals the connection and no additional clamping devices are required. Time-consuming and expensive testing devices are eliminated.

Type TW17 is available with different actuations:
Manually with hand lever, pneumatically with valve head and pneumatically for external manual, semi or fully automatic control systems.
Special versions, e.g. connectors in longer or shorter versions, as a plug or with hydraulic actuation etc. are possible (see page 75 special solutions).

Application
Pneumatic and hydraulic pressure and function tests on components with internal threads, e.g. engines, cylinders, pressure vessels, hoses, fixtures, etc.

Note: For using the WEH® Connectors with pneumatic actuation and clamping jaws in an automated system please observe the technical note on page 77.

TECHNICAL DATA

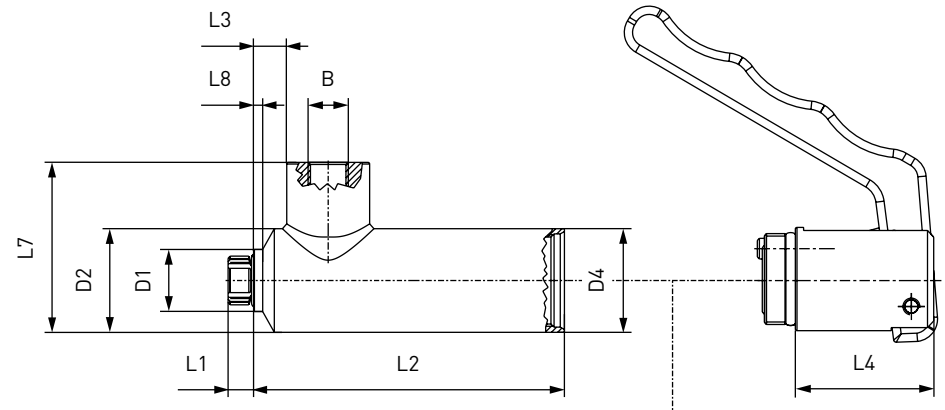
Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 350 bar
Pilot pressure	6 - 12 bar compressed air
Pilot pressure port P1	G1/8" internal thread
Pilot pressure port P2	G1/4" internal thread
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Actuation	H = manual actuation via hand lever V = pneumatic actuation via valve head P = pneumatic actuation for external manual, semi or fully automatic control systems
Material	Corrosion resistant stainless steel, anodized aluminium
Sealing material	NBR

Other designs on request

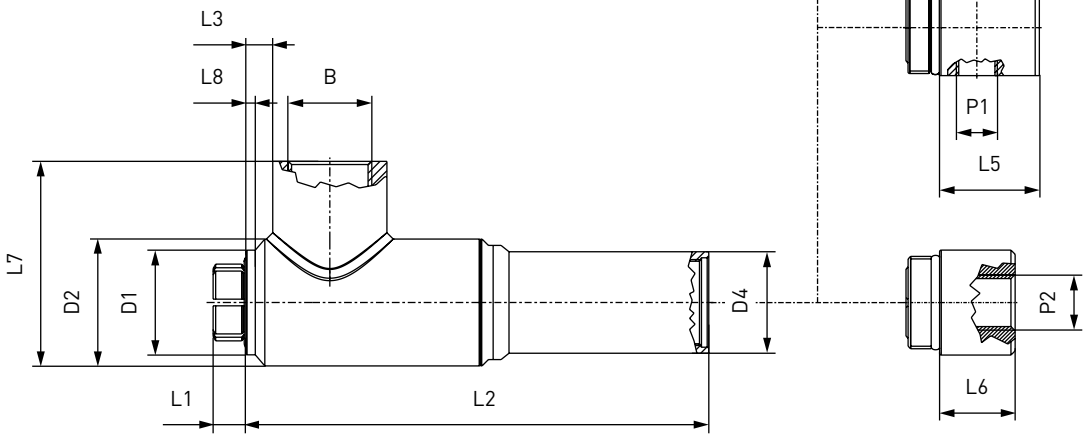
Example of use:

ORDERING | Quick connector TW17

approx. dimensions (mm)



Body size 1 - 4



Body size 5 - 8

H
Manually by depressing the hand 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	Inlet B (internal thread)	D1	D1 SAE*	D2	D2 SAE*	D4	L1	L2	L3	L4	L5	L6	L7	L8	L8 SAE*
1	G1/8"	15.0	15.0	25.0	25.0	25.0	8.0	75.0	8.0	33.5	24.0	18.0	44.0	2.2	2.2
2	G1/4"	19.0	20.5	27.0	27.0	27.0	9.0	75.0	9.0	32.0	18.0	18.0	40.0	2.5	4.7
3	G3/8"	23.0	25.9	32.0	32.0	32.0	12.0	88.0	9.5	35.0	18.0	18.0	50.0	2.0	4.0
4	G1/2"	26.8	28.9	37.0	37.0	37.0	12.0	88.0	8.0	35.0	18.0	18.0	55.0	2.8	4.0
5	G3/4"	33.0	40.5	40.0	45.0	32.0	14.0	145.0	8.0	35.0	18.0	18.0	68.5	3.0	8.0
6	G1"	40.0	46.5	49.0	49.0	32.0	14.0	168.0	18.0	35.0	18.0	18.0	77.0	3.0	5.0
7	G1"	52.0	-	59.0	59.0	32.0	11.0	185.5	18.0	35.0	18.0	18.0	84.0	3.0	-
8	G1"	58.0	-	77.0	69.5	32.0	10.1	202.2	23.0	35.0	18.0	18.0	90.3	4.0	-
8	G1"	70.0	-	77.0	69.5	32.0	9.0	148.5	3.2	35.0	18.0	18.0	102.0	4.0	-

* acc. to ISO 6149

WEH® Connector **TW17**

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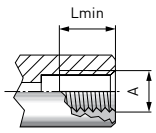
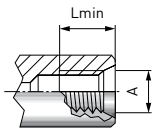
Metric ISO thread to DIN 13 - *acc. to DIN 3852 part 1, form X and Y*



Part No.	Body size	Thread A (internal thread)	Lmin*
TW17...-W9031-025	1	M10x1.0	7.0
TW17...-W9033-045	2	M12x1.0	9.5
TW17...-W9034-045	2	M12x1.5	9.5
TW17...-W9035-045	2	M14x1.5	9.5
TW17...-W9036-065	3	M16x1.5	10.5
TW17...-W9037-065	3	M18x1.5	10.5
TW17...-W9038-085	4	M20x1.5	10.5
TW17...-W9039-085	4	M22x1.5	10.5
TW17...-W9040-125	5	M24x1.5	11.0
TW17...-W9043-125	5	M26x1.5	11.0
TW17...-W9044-125	5	M27x2.0	11.0
TW17...-W9045-165	6	M28x1.5	12.5
TW17...-W9046-165	6	M30x1.5	12.5
TW17...-W9070-165	6	M33x2.0	12.5
TW17...-W9071-165	7	M36x2.0	12.5

* Lmin: minimum thread length

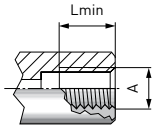
Metric ISO thread to DIN 13 - *acc. to ISO 6149-1*



Part No.	Body size	Thread A (internal thread)	Lmin*
TW17...-W9082-025	1	M10x1.0	7.0
TW17...-W9083-045	2	M12x1.5	9.5
TW17...-W9084-045	2	M14x1.5	9.5
TW17...-W9085-065	3	M16x1.5	10.5
TW17...-W9086-065	3	M18x1.5	10.5
TW17...-W9133-085	4	M20x1.5	10.5
TW17...-W9087-085	4	M22x1.5	10.5
TW17...-W9113-125	5	M24x1.5	11.0
TW17...-W9114-125	5	M26x1.5	11.0
TW17...-W9092-125	5	M27x2.0	11.0
TW17...-W9115-165	6	M30x2.0	12.5

* Lmin: minimum thread length

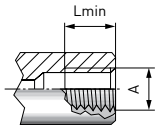
Whitworth tube thread to DIN ISO 228-1 - *acc. to DIN 3852 part 2, form X and Y*



Part No.	Body size	Thread A (internal thread)	Lmin*
TW17...-W9000-025	1	G1/8"	7.0
TW17...-W9001-045	2	G1/4"	9.5
TW17...-W9002-065	3	G3/8"	10.5
TW17...-W9003-085	4	G1/2"	10.5
TW17...-W9004-085	4	G5/8"	10.5
TW17...-W9005-125	5	G3/4"	11.0
TW17...-W9006-165	6	G1"	12.5
TW17...-W9058-165	7	G1 1/4"	11.0
TW17...-W9059-165	8	G1 1/2"	11.0
TW17...-W9094-165	8	G2"	11.0

* Lmin: minimum thread length

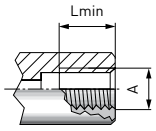
BSPT (tapered Whitworth tube thread) - *acc. to DIN 3852 part 2, form X and Y*



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

* Lmin: minimum thread length

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

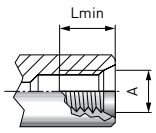


Part No.	Body size	Thread A (internal thread)	Lmin*
TW17...-W9007-025	1	NPT 1/8"	7.0
TW17...-W9008-045	2	NPT 1/4"	9.5
TW17...-W9009-065	3	NPT 3/8"	10.5
TW17...-W9010-085	4	NPT 1/2"	10.5
TW17...-W9012-125	5	NPT 3/4"	11.0
TW17...-W9013-165	6	NPT 1"	12.5

* Lmin: minimum thread length

WEH® Connector **TW17**

SAE-O-Ring Boss - *acc. to SAE J1926 / ISO 11926*



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

* Lmin: minimum thread length

Other connector sizes and versions on request.

Required information for ordering see page 9.

When ordering type TW17 please indicate in addition to the details requested on page 9 the following information:

1. Part No.
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 version (up to 50 bar) or HP = high pressure version (up to 350 bar) at the end of the part number.
*Example: TW17H-W9031-025/**HP***

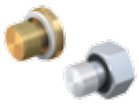
ACCESSORIES

The following accessories are available for type TW17:

Screw plug

If the connector is to be used as a plug, the media inlet 'B' will be sealed with a screw plug of brass (low pressure range) or alternatively stainless steel (high pressure range). It is recommended that the media compatibility of the seal be tested by the customer!

Low pressure

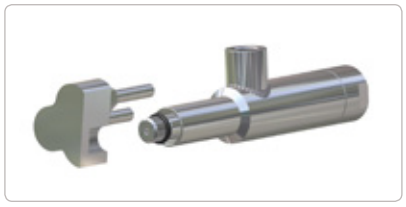


High pressure

Part No.	Description	Thread (external thread)	Pressure range
E69-9200	Screw plug (low pressure)	G1/8"	0 - 50 bar
E69-9210	Screw plug (low pressure)	G1/4"	0 - 50 bar
E69-9220	Screw plug (low pressure)	G3/8"	0 - 50 bar
E69-9230	Screw plug (low pressure)	G1/2"	0 - 50 bar
W9338	Screw plug (low pressure)	G3/4"	0 - 50 bar
W9329	Screw plug (high pressure)	G1/8"	50 - 350 bar
W9330	Screw plug (high pressure)	G1/4"	50 - 350 bar
W9331	Screw plug (high pressure)	G3/8"	50 - 350 bar
W9332	Screw plug (high pressure)	G1/2"	50 - 350 bar
W9333	Screw plug (high pressure)	G3/4"	50 - 350 bar
W9334	Screw plug (high pressure)	G1"	50 - 350 bar
W9335	Screw plug (high pressure)	G1 1/4"	50 - 350 bar

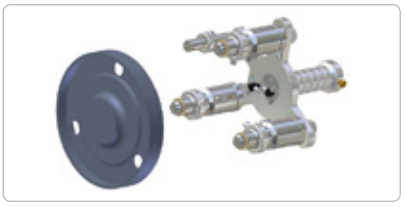
SPECIAL SOLUTIONS

Examples:



TW17 with extension

TW17 twin connector



TW17 triple connector

WEH® Connector **TW19**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- High-grade materials

The type TW19 quick connector is especially designed for sealing hydraulic components with internal threads in high and low pressure applications. The clamping lever actuated connector safely grips into the test piece, even in case of high lateral forces, e.g. heavy or rigid hoses. The higher the test pressure the tighter the WEH® Connector will clamp itself into the thread of the test piece. The front o-ring reliably seals the connection and no additional clamping devices are required. Having only one seal in the interior of the connector, ease of maintenance is provided.

Application
Pneumatic and oil-hydraulic pressure and function tests on components with internal threads, e.g. hydraulic aggregates.

TECHNICAL DATA

Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 350 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Actuation	Manual actuation via clamping lever
Material	Corrosion resistant stainless steel
Sealing material	NBR

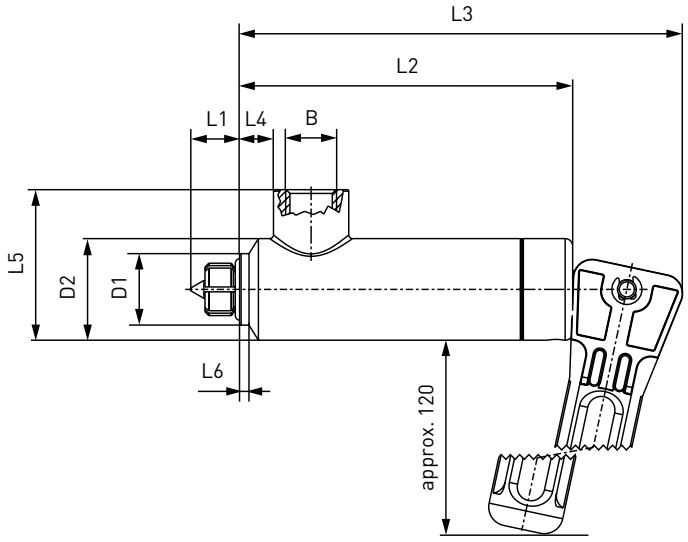
Other designs on request

Note: Please contact us when using corrosive media or water!

Example of use:

ORDERING | Quick connector TW19

approx. dimensions (mm)

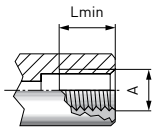


Manual clamping lever operation

Body size	Inlet B (internal thread)	D1	D1 SAE*	D2	D2 SAE*	L1	L2	L3	L4	L5	L6	L6 SAE*
2	G1/4"	19.0	20.5	27.0	27.0	13.0	88.5	118.0	9.0	40.0	2.5	4.7
3	G3/8"	23.0	25.9	32.0	32.0	16.0	101.5	131.0	9.5	50.0	2.0	4.0
4	G1/2"	27.0	28.9	37.0	37.0	17.0	101.5	131.0	8.0	55.0	2.8	4.0
5	G3/4"	33.0	40.5	40.0	45.0	19.5	117.0	146.0	8.0	69.0	3.0	8.0
6	G1"	40.0	46.5	49.0	49.0	17.0	140.0	170.0	18.0	74.0	3.0	8.0

* acc. to ISO 6149

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



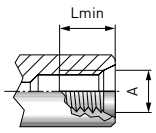
Part No.	Body size	Thread A (internal thread)	Lmin*
C1-16484	2	M12x1.5	9.5
C1-16483	2	M14x1.5	9.5
C1-16590	3	M16x1.5	10.5
C1-16459	3	M18x1.5	10.5
C1-18404	4	M20x1.5	10.5
C1-16460	4	M22x1.5	10.5
C1-12860	5	M24x1.5	11.0
C1-17260	5	M26x1.5	11.0
C1-14605	6	M30x1.5	12.5

* Lmin: minimum thread length

WEH® Connector **TW19**

METALIKA Locking systems KACIN
www.metalika-kacin.com

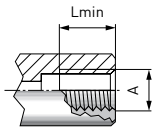
Metric ISO thread to DIN 13 - *acc. to ISO 6149-1*



Part No.	Body size	Thread A (internal thread)	Lmin*
C1-35915	2	M12x1.5	9.5
C1-14940	2	M14x1.5	9.5
C1-48588	3	M16x1.5	10.5
C1-35916	3	M18x1.5	10.5
C1-119114	4	M20x1.5	10.5
C1-33703	4	M22x1.5	10.5
C1-109085	5	M24x1.5	11.0
C1-84472	5	M26x1.5	11.0
C1-41186	5	M27x2.0	11.0
C1-119115	6	M30x1.5	12.5

* Lmin: minimum thread length

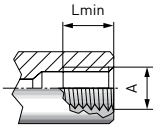
Whitworth tube thread to DIN ISO 228-1 - *acc. to DIN 3852 part 2, form X and Y*



Part No.	Body size	Thread A (internal thread)	Lmin*
C1-16494	2	G1/4"	9.5
C1-16493	3	G3/8"	10.5
C1-16888	4	G1/2"	10.5
C1-14602	4	G5/8"	10.5
C1-15161	5	G3/4"	11.0
C1-18191	6	G1"	12.5

* Lmin: minimum thread length

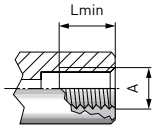
BSPT (tapered Whitworth tube thread) - *acc. to DIN 3852 part 2, form X and Y*



Part No.	Body size	Thread A (internal thread)	Lmin*
C1-14544	2	BSPT 1/4"	9.5
C1-18648	3	BSPT 3/8"	10.5
C1-17275	4	BSPT 1/2"	10.5
C1-14604	4	BSPT 5/8"	10.5
C1-18391	5	BSPT 3/4"	11.0
C1-14547	6	BSPT 1"	12.5

* Lmin: minimum thread length

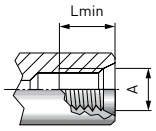
NPT thread (ANSI/ASME B1.20.1-1983) - *acc. to SAE J476a*



Part No.	Body size	Thread A (internal thread)	Lmin*
C1-16565	2	NPT 1/4"	9.5
C1-44258	3	NPT 3/8"	10.5
C1-72165	4	NPT 1/2"	10.5
C1-14603	4	NPT 5/8"	10.5
C1-12851	5	NPT 3/4"	11.0
C1-16874	6	NPT 1"	12.5

* Lmin: minimum thread length

SAE-O-Ring Boss - *acc. to SAE J1926 / ISO 11926*



Part No.	Body size	Thread A (internal thread)	Lmin*
C1-15274	2	UNF 1/2"-20	9.5
C1-16485	2	UNF 9/16"-18	9.5
C1-17618	3	UNF 3/4"-16	10.5
C1-18242	4	UNF 7/8"-14	10.5
C1-18394	5	UN 1 1/16"-12	11.0
C1-118948	6	UN 1 3/16"-12	11.0
C1-16461	6	UN 1 5/16"-12	11.0

* Lmin: minimum thread length

Other connector sizes and versions on request.

Required information for ordering see page 9.

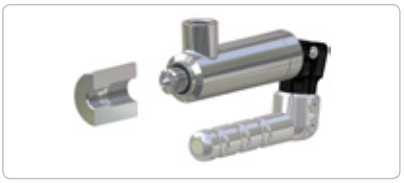
ACCESSORIES

The following accessories are available for type TW19:

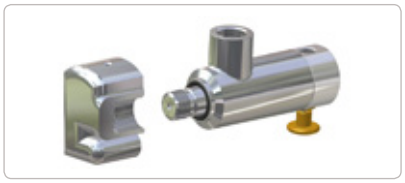
Screw plug *(see page 14)*

SPECIAL SOLUTIONS

Examples:



TW19 with parallel clamping lever



TW19 short version with V-actuation

TW19 with 45° lateral port and location lug

WEH® Connector **TW05**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- Simple seal replacement
- Ergonomic design
- Compact design
- High-grade materials
- Automation possible

With the type TW05 quick connector pneumatic components are tested faster than ever before. Connecting and pressure impacting of the test piece is accomplished in one operation by simple actuation of the sliding sleeve. In this way, costly testing times are shortened and the type TW05 pays for itself in a very short time.

Application
Pneumatic pressure and function tests on components with internal threads, e.g. cylinders, valves, fixtures, pivot drives etc.

Note: For using the WEH® Connectors with pneumatic actuation and clamping jaws in an automated system please observe the technical note on page 77.

TECHNICAL DATA

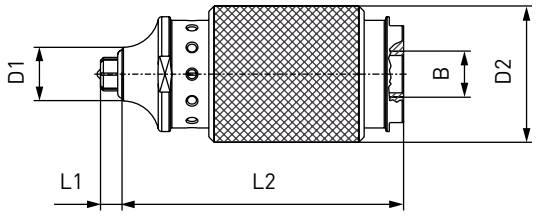
Characteristic	Basic version
Operating pressure PS	5 - 12 bar compressed air
Temperature range	+5 °C bis +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Material	Clamping jaws: Corrosion-resistant stainless steel Outer parts: Anodized aluminium
Sealing material	NBR

Other designs on request

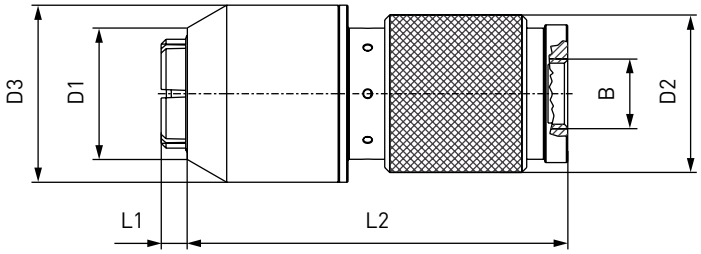
Example of use:

ORDERING | Quick connector TW05

approx. dimensions (mm)



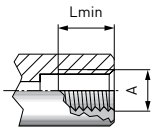
Body size 0 - 4



Body size 5 - 6

Body size	Inlet B (internal thread)	D1	D2	D3	L1	L2
0	G1/4"	8.0	38.0	-	3.6	75.0
1	G1/4"	15.0	38.0	-	10.0	75.0
2	G1/4"	19.0	38.0	-	10.0	75.0
3	G1/2"	23.5	48.0	-	9.0	80.0
4	G1/2"	27.0	48.0	-	9.0	80.0
5	G1/2"	32.0	48.0	54.0	11.0	115.0
6	G1/2"	40.0	48.0	54.0	11.0	115.0

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



Part No.	Body size	Thread A (internal thread)	Lmin*
TW05-W8046-045	0	M5x0.8	7.0
TW05-W8012-045	1	M8x1.0	7.0
TW05-W8013-045	1	M10x1.0	7.0
TW05-W8042-045	1	M10x1.5	7.0
TW05-W8014-045	2	M12x1.0	9.5
TW05-W8015-045	2	M12x1.5	9.5
TW05-W8041-045	2	M12x1.75	9.5
TW05-W8039-045	2	M14x1.0	9.5
TW05-W8016-045	2	M14x1.5	9.5
TW05-W8017-085	3	M16x1.5	10.5
TW05-W8018-085	3	M18x1.5	10.5
TW05-W8019-085	4	M20x1.5	10.5
TW05-W8020-085	4	M22x1.5	10.5
TW05-W8021-085	5	M24x1.5	11.0
TW05-W8040-085	6	M30x1.5	12.5

* Lmin: minimum thread length

WEH® Connector **TW05**

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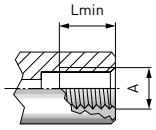
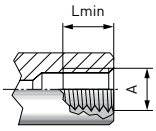
Whitworth tube thread to DIN ISO 228-1 - *acc. to DIN 3852 part 2, form X and Y*



Part No.	Body size	Thread A (internal thread)	Lmin*
TW05-W8000-045	1	G1/8"	7.0
TW05-W8001-045	2	G1/4"	9.5
TW05-W8002-085	3	G3/8"	10.5
TW05-W8003-085	4	G1/2"	10.5
TW05-W8004-085	5	G3/4"	11.0
TW05-W8005-085	6	G1"	12.5

* Lmin: minimum thread length

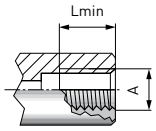
BSPT (tapered Whitworth tube thread) - *acc. to DIN 3852 part 2, form X and Y*



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

* Lmin: minimum thread length

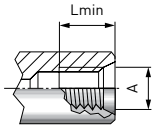
NPT thread (ANSI/ASME B1.20.1-1983) - *acc. to SAE J476a*



Part No.	Body size	Thread A (internal thread)	Lmin*
TW05-W8006-045	1	NPT 1/8"	7.0
TW05-W8007-045	2	NPT 1/4"	9.5
TW05-W8008-065	3	NPT 3/8"	10.5
TW05-W8009-085	4	NPT 1/2"	10.5
TW05-W8010-085	5	NPT 3/4"	11.0
TW05-W8011-085	6	NPT 1"	12.5

* Lmin: minimum thread length

SAE-O-Ring Boss - *acc. to SAE J1926 / ISO 11926*



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

* Lmin: minimum thread length

Other connector sizes and versions on request.

Required information for ordering see page 9.

ACCESSORIES

The following accessories are available for type TW05:

Control housing for automation

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

Part No.	Description
E01-50292	Control housing for automation (body size 1)
E01-50296	Control housing for automation (body size 2 - 6)

SPECIAL SOLUTIONS

Examples:

TW05 with extension

WEH® Connector **TW26**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- Simple, inexpensive seal replacement
- Testing devices are eliminated
- Compact design
- High-grade materials

Special short design
The type TW26 quick connector is ideal for hydraulic and pneumatic pressure and function tests on components with internal threads. The higher the test pressure the tighter the WEH® Connector will clamp itself into the thread of the test piece and provides a pressure-tight connection in seconds. The front o-ring reliably seals the connection and no additional clamping devices are required. Time-consuming and expensive testing devices are eliminated.
The main advantages of the type TW26 connector is its compact construction and ergonomic design.
If the connector is to be used as a plug, the media inlet 'B' can be sealed.

Application
Pneumatic and hydraulic pressure and function tests with liquid and gaseous media on components with internal threads.

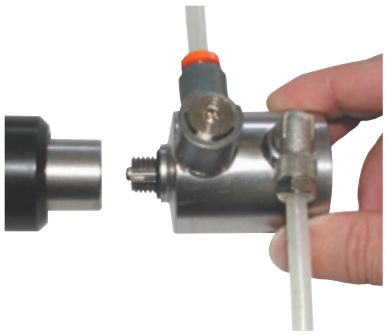
Note: For using the WEH® Connectors with pneumatic actuation and clamping jaws in an automated system please observe the technical note on page 77.

TECHNICAL DATA

Characteristic	Basic version
Operating pressure PS	Max. 50 bar
Pilot pressure	6 - 12 bar air
Pilot pressure port P1	G1/8" internal thread
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Actuation	Pneumatic actuation
Material	Corrosion resistant
Sealing material	NBR
Design	Without fittings

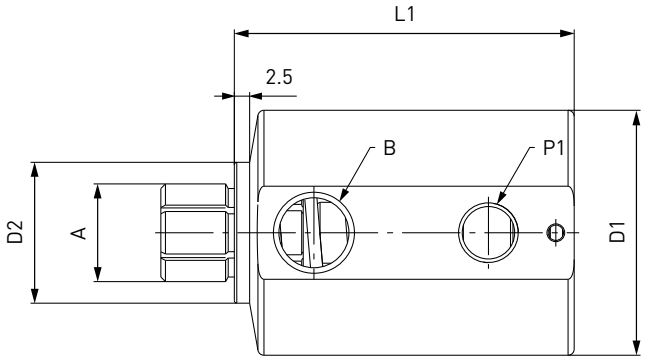
Other designs on request

Example of use:

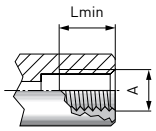


ORDERING | Quick connector TW26

approx. dimensions (mm)

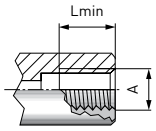


Metric ISO thread to DIN 13 - *acc. to DIN 3852 part 1, form X and Y*



Part No.	Body size	Thread A (internal thread)	Inlet B (internal thread)	Ø D1	Ø D2	L1
C1-34098	1	M10x1.0	G1/4"	40.0	15.0	52.0
C1-119213	2	M12x1.5	G1/4"	40.0	19.0	52.0
C1-119214	2	M14x1.5	G1/4"	40.0	19.0	52.0
C1-119215	3	M16x1.5	G1/4"	40.0	23.0	55.5
C1-16356	3	M18x1.5	G3/8"	40.0	23.0	55.5
C1-11316	4	M20x1.5	G3/8"	40.0	26.0	55.5
C1-66154	5	M26x1.5	G3/8"	60.0	33.0	58.0

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



Part No.	Body size	Thread A (internal thread)	Inlet B (internal thread)	Ø D1	Ø D2	L1
C1-11760	1	G1/8"	G1/4"	40.0	15.0	52.0
C1-11761	2	G1/4"	G1/4"	40.0	19.0	52.0
C1-11762	3	G3/8"	G3/8"	40.0	23.0	55.5
C1-11763	4	G1/2"	G3/8"	40.0	26.0	55.5
C1-103944	5	G3/4"	G3/8"	60.0	33.0	58.0

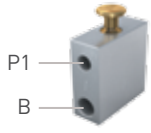
Other connector sizes and versions on request. Required information for ordering see page 9.

ACCESSORIES

The following accessories are available for type TW26:

Actuation and media control valve

The type TW26 is also available with pneumatic actuation for automated applications. We recommend the use of our control valve with push button and inlets for both pilot and test pressures.



Part No.	Body size	Decription	Inlet B
W6441	1 - 3	Control housing with V-valve	G1/4" internal thread
W56201	4 - 5	Control housing with V-valve	G3/8" internal thread

WEH® Connector **MIT**

DESCRIPTION

Features
- Pressure-tight connections by hand-tightening
- Simple seal replacement
- Ergonomic design
- High-grade materials

The type MIT quick connector is especially designed for testing components with internal threads.
Only hand-tighten the connector into the thread until the o-ring seal contacts the test piece. Type MIT seals without wrenches, sealants or tape. NBR seals meet most industrial requirements.
Type MET is available as a connector with media inlet, with or without a swivel joint and as a plug.

Application
Pressure and vacuum tests on components with internal threads, e.g. fittings, fixtures, tubes, boilers, tanks, radiators, etc.

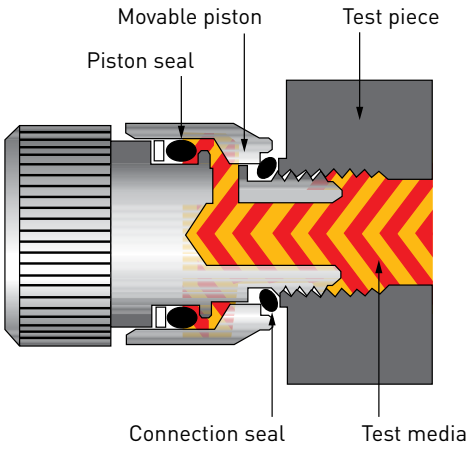
TECHNICAL DATA

Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 345 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Material	Corrosion resistant stainless steel
Sealing material	NBR

Other designs on request

Example of use:

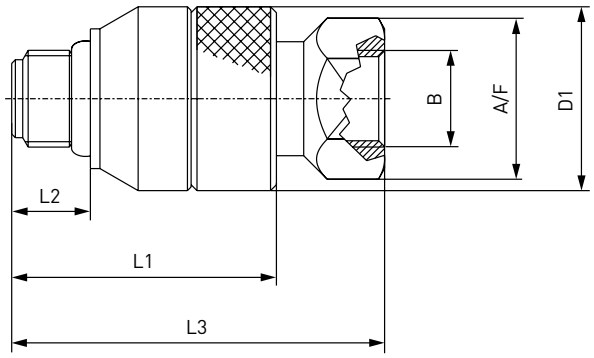
Plugs for internal threads



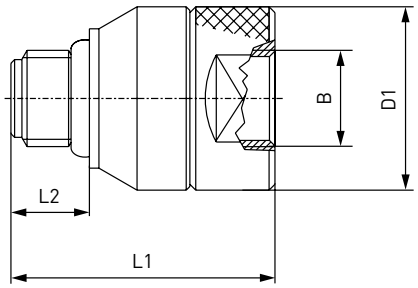
ORDERING | Quick connector MIT

approx. dimensions (mm)

Connector with media inlet and swivel joint



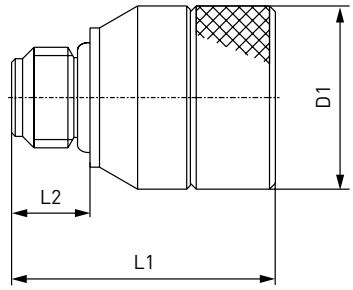
Connector with media inlet



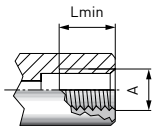
Body size	Inlet B (internal thread)	D1	L1	L2	L3	A/F
1	G1/8"	20.5	33.0	10.5	47.3	17
2	G1/4"	25.0	36.0	10.7	50.7	19
3	G3/8"	30.0*	39.5	11.0	57.3	24
4	G1/2"	35.0	47.5	14.5	70.7	30
5	G3/4"	43.0	50.5	15.6	76.0	36
6	G1"	50.0	60.0	18.0	92.0	41
7	G1 1/4"	60.0	55.0	19.2	84.3	50
8	G1 1/2"	69.5	62.0	19.2	94.4	60
9	G1 1/2"	82.0	70.0	21.0	100.7	75

* exception: D1 = 33.0 for M18x1.5

Plug



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



Part No. Connector with swivel joint	Part No. Connector	Part No. Plug	Body size	Thread A (internal thread)	Allowable test pressure	Lmin*
C1-11822	C1-11821	C1-11820	1	G1/8"	345 bar	7.0
C1-11825	C1-11824	C1-11823	2	G1/4"	345 bar	9.5
C1-11828	C1-11827	C1-11826	3	G3/8"	276 bar	10.5
C1-11831	C1-11830	C1-11829	4	G1/2"	276 bar	10.5
C1-11834	C1-11833	C1-11832	5	G3/4"	276 bar	11.0
C1-11837	C1-11836	C1-11835	6	G1"	276 bar	12.5
C1-11840	C1-11839	C1-11838	7	G1 1/4"	276 bar	19.2
C1-11843	C1-11842	C1-11841	8	G1 1/2"	210 bar	19.2
C1-17163	C1-17162	C1-17161	9	G2"	172 bar	21.0

* Lmin: minimum thread length

WEH® Connector **MIT**

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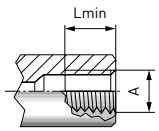
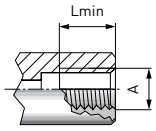
BSPT (tapered Whitworth tube thread) - *acc. to DIN 3852 part 2, form X and Y*



Part No. Connector with swivel joint	Part No. Connector	Part No. Plug	Body size	Thread A (internal thread)	Allowable test pressure	Lmin*
C1-75261	C1-16709	C1-16710	1	BSPT 1/8"	345 bar	7.0
C1-90404	C1-13453	C1-54605	2	BSPT 1/4"	345 bar	9.5
C1-119813	C1-74076	C1-42884	3	BSPT 3/8"	276 bar	10.5
C1-42875	C1-74077	C1-42886	4	BSPT 1/2"	276 bar	10.5
C1-119814	C1-80239	C1-42887	5	BSPT 3/4"	276 bar	11.0
C1-42876	C1-17229	C1-42888	6	BSPT 1"	276 bar	12.5

* Lmin: minimum thread length

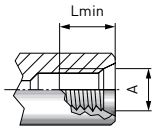
NPT thread (ANSI/ASME B1.20.1-1983) - *acc. to SAE J476a*



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

* Lmin: minimum thread length

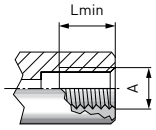
SAE-O-Ring Boss - *acc. to SAE J1926 / ISO 11926*



Part No. Connector with swivel joint	Part No. Connector	Part No. Plug	Body size	Thread A (internal thread)	Allowable test pressure	Lmin*
C1-32200	C1-13181	C1-12485	1	UNF 3/8"-24	345 bar	7.0
C1-32201	C1-13182	C1-12486	1	UNF 7/16"-20	345 bar	7.0
C1-32202	C1-13183	C1-12487	2	UNF 1/2"-20	345 bar	9.5
C1-32203	C1-12392	C1-12488	2	UNF 9/16"-18	345 bar	9.5
C1-32204	C1-12394	C1-12489	4	UNF 3/4"-16	276 bar	10.5
C1-90449	C1-12393	C1-12490	4	UNF 7/8"-14	276 bar	10.5
C1-103895	C1-12395	C1-12493	5	UN 1 1/16"-12	276 bar	11.0
C1-32207	C1-13184	C1-12494	6	UN 1 5/16"-12	276 bar	11.0

* Lmin: minimum thread length

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



Part No. Connector with swivel joint	Part No. Connector	Part No. Plug	Body size	Thread A (internal thread)	Allowable test pressure	Lmin*
C1-12117	C1-12116	C1-12115	1	M10x1.0	345 bar	7.0
C1-12142	C1-12119	C1-12118	1	M10x1.5	345 bar	7.0
C1-12143	C1-12121	C1-12120	2	M12x1.0	345 bar	7.0
C1-12125	C1-12124	C1-12122	2	M12x1.5	345 bar	9.5
C1-12127	C1-12126	C1-11944	2	M14x1.5	345 bar	9.5
C1-12128	C1-12061	C1-12062	3	M16x1.5	276 bar	10.5
C1-12131	C1-12130	C1-12129	3	M18x1.5	276 bar	10.5
C1-12141	C1-12133	C1-12132	4	M20x1.5	276 bar	10.5
C1-12136	C1-12135	C1-12134	4	M22x1.5	276 bar	10.5
C1-12144	C1-12138	C1-12137	5	M24x1.5	276 bar	11.0
C1-12145	C1-12140	C1-12139	5	M26x1.5	276 bar	11.0

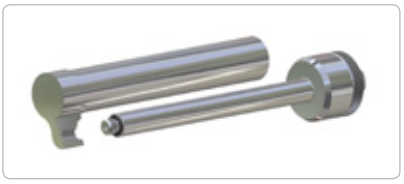
* Lmin: minimum thread length

Other connector sizes and versions on request.

Required information for ordering see page 9.

SPECIAL SOLUTIONS

Examples:

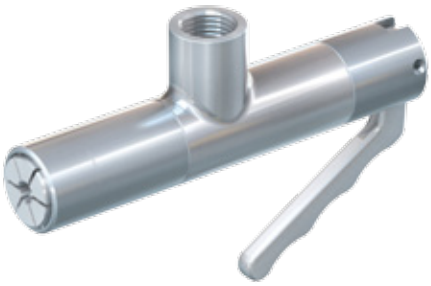


MIT with extension

MIT with 90° lateral port

WEH® Connector **TW18**

DESCRIPTION



Features
- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- Ergonomic design
- High-grade materials
- Different actuations
- Automation possible
- Testing devices are eliminated

The type TW18 quick connector establishes pressure-tight connections to components with external threads within seconds. Only place the connector onto the thread of the test piece, the clamping jaws grip on the thread and a pressure-tight connection is made.

Type TW18 is available with different actuations:
Manually with hand lever, pneumatically with valve head, pneumatically for external manual, semi or fully automatic control systems and pneumatically with central flow and lateral pressure support.

Application
Pneumatic and hydraulic pressure and function tests on components with external threads, e.g. engines, cylinders, pressure vessels, hoses, fixtures, etc.

Note: For using the WEH® Connectors with pneumatic actuation and clamping jaws in an automated system please observe the technical note on page 77.

TECHNICAL DATA

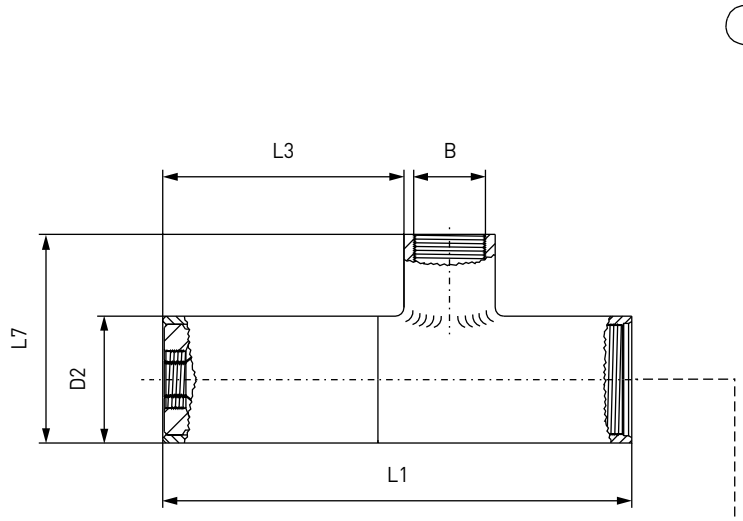
Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 350 bar
Pilot pressure	5 - 12 bar compressed air
Pilot pressure port P1	G1/8" internal thread
Pilot pressure port P2	G1/4" internal thread
Pilot pressure port P3	M5
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Actuation	H = manual actuation via hand lever V = pneumatic actuation via valve head P = pneumatic actuation for external manual, semi or fully automatic control systems Z = With central flow and lateral pressure support otherwise same as P
Material	Corrosion resistant stainless steel, anodized aluminium
Sealing material	NBR

Other designs on request

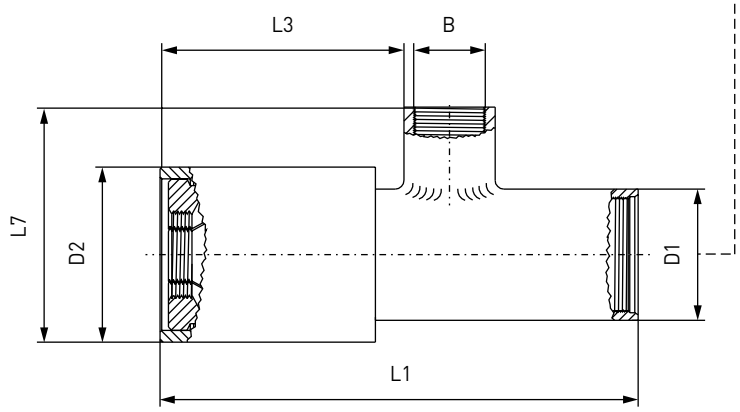
Example of use:

ORDERING | Quick connector TW18

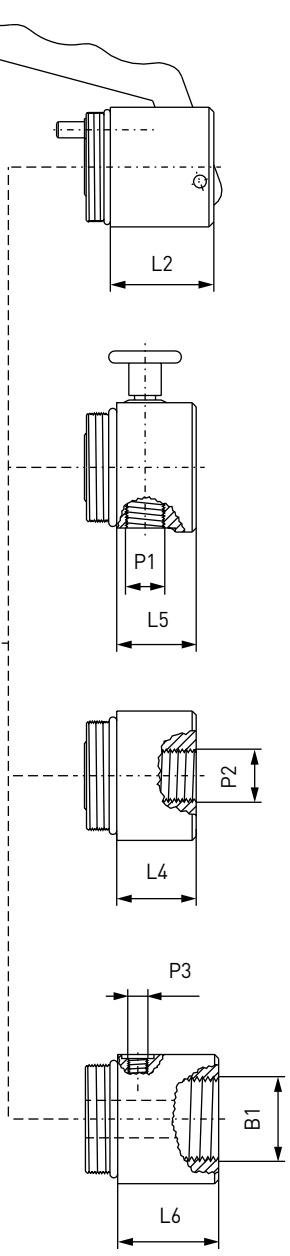
approx. dimensions (mm)



Body size 1 - 2



Body size 3



H
Manually by depressing the hand 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**. Inlet B for lateral pressure support

Body size	Inlet B (internal thread)	Inlet B1 (internal thread)	D1	D2	L1	L2	L3	L4	L5	L6	L7
1	G1/2"	G1/2"	-	32.0	134.0	25.0	65.0	18.0	18.0	25.0	57.5
2	G1/2"	G1/2"	-	39.0	142.0	32.0	71.0	18.0	18.0	32.0	64.5
3	G1/2"	G1/2"	39.0	52.0	142.0	32.0	70.5	18.0	18.0	32.0	64.5

WEH® Connector **TW18**

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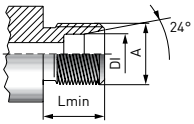
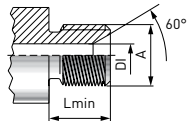
Tube connection to DIN 3902 - *Threaded stem acc. to DIN 3853, boring form W acc. to DIN 3861*



Part No.	Body size	Thread A (external thread)	Allowable test pressure	DI max.	Series	Lmin*
TW18...-W8133-085	1	M8x1.0	100 bar	4.0	LL	8.0
TW18...-W8134-085	1	M10x1.0	100 bar	6.0	LL	8.0
TW18...-W8135-085	1	M12x1.0	100 bar	8.0	LL	9.0
TW18...-W8136-085	1	M12x1.5	250 bar	6.0	L	10.0
TW18...-W8137-085	1	M14x1.5	250 bar	8.0	L	10.0
TW18...-W8138-085	1	M16x1.5	250 bar	10.0	L	11.0
TW18...-W8139-085	2	M18x1.5	250 bar	12.0	L	11.0
TW18...-W8140-085	2	M22x1.5	250 bar	15.0	L	12.0
TW18...-W8141-085	3	M26x1.5	10 bar	18.0	L	12.0
TW18...-W8142-085	3	M30x2.0	10 bar	22.0	L	14.0
TW18...-W8143-085	1	M14x1.5	350 bar	6.0	S	12.0
TW18...-W8144-085	1	M16x1.5	350 bar	8.0	S	12.0
TW18...-W8145-085	2	M18x1.5	350 bar	10.0	S	12.0
TW18...-W8146-085	2	M20x1.5	350 bar	12.0	S	12.0
TW18...-W8147-085	2	M22x1.5	350 bar	14.0	S	14.0
TW18...-W8148-085	3	M24x1.5	350 bar	16.0	S	14.0
TW18...-W8149-085	3	M30x2.0	10 bar	20.0	S	16.0

* Lmin: minimum thread length
** acc. to DIN 2401 part 1

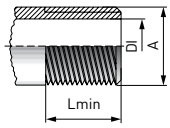
Threaded stem to DIN 7631 / DIN 7647 - *Plane surface burr free*



Part No.	Body size	Thread A** (external thread)	Allowable test pressure	DI max.	Lmin*
TW18...-W8151-085	1	M10x1.0	350 bar	3.0	8.0
TW18...-W8152-085	1	M12x1.5	350 bar	4.0	10.0
TW18...-W8153-085	1	M14x1.5	350 bar	6.0	10.0
TW18...-W8154-085	1	M16x1.5	350 bar	7.0	11.0
TW18...-W8155-085	2	M18x1.5	350 bar	9.0	11.0
TW18...-W8214-085	2	M20x1.5	350 bar	11.0	11.0
TW18...-W8156-085	2	M22x1.5	350 bar	11.0	12.0
TW18...-W8157-085	3	M26x1.5	350 bar	14.0	12.0
TW18...-W8158-085	3	M30x1.5	350 bar	18.0	14.0

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

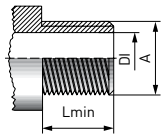
Whitworth tube thread to DIN ISO 228-1 - *Plane surface burr free*



Part No.	Body size	Thread A (external thread)	Allowable test pressure	DI max.	Lmin*
TW18...-W8127-085	1	G1/8"	20 bar	5.0	12.0
TW18...-W8128-085	1	G1/4"	20 bar	6.0	12.0
TW18...-W8129-085	1	G3/8"	20 bar	9.0	12.0
TW18...-W8130-085	2	G1/2"	20 bar	14.5	12.0
TW18...-W8131-085	3	G3/4"	20 bar	18.0	12.0
TW18...-W8132-085	3	G1"	20 bar	18.0	12.0

* Lmin: minimum thread length

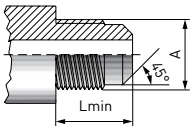
NPT thread (ANSI/ASME B 1.20.1-1983) - *acc. to SAE J476a, plane surface smooth and burr free*



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

* Lmin: minimum thread length

SAE J512 (45° cone), SAE J513



Part No.	Body size	Thread A (external thread)	Allowable test pressure	Lmin*
TW18...-W8100-085	1	UNF 5/16"-24	350 bar	11.0
TW18...-W8101-085	1	UNF 3/8"-24	350 bar	11.2
TW18...-W8102-085	1	UNF 7/16"-20	350 bar	12.7
TW18...-W8103-085	1	UNF 1/2"-20	350 bar	14.2
TW18...-W8104-085	1	UNF 5/8"-18	350 bar	15.7
TW18...-W8105-085	2	UNF 11/16"-16	350 bar	17.5
TW18...-W8106-085	2	UNF 3/4"-16	350 bar	19.0
TW18...-W8107-085	2	UNF 7/8"-14	350 bar	22.4
TW18...-W8108-085	3	UN 1 1/16"-12	350 bar	25.4

* Lmin: minimum thread length

WEH® Connector **TW18**

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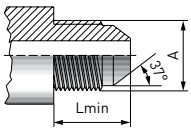
SAE J514 JIC 37°



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

* Lmin: minimum thread length

Other connector sizes and versions on request.

Required information for ordering see page 9.

When ordering type TW18 please indicate in addition to the details requested on page 9 the following information:

1. Part No.
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 version (up to 50 bar) or HP = high pressure version (up to 350 bar) at the end of the part number.
*Example: TW18H-W8133-085/**HP***

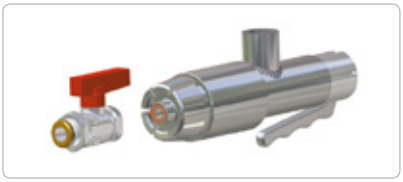
ACCESSORIES

The following accessories are available for type TW18:

Screw plug *(see page 14)*

SPECIAL SOLUTIONS

Examples:



TW18 with extended clamping jaws
for testing of ball valves

WEH® Connector **MET**

DESCRIPTION

Features
- Pressure-tight connections by hand-tightening
- Simple seal replacement
- Ergonomic design
- High-grade materials

The type MET quick connector provides fast leak tight connections to components with external threads for testing, filling, plugging and venting.
Only hand-tighten the connector onto the thread until the o-ring seal contacts the test piece. Type MET seals without wrenches, sealants or tape. NBR seals meet most industrial requirements.
Type MET is available as a connector with media inlet and as a plug.

Application
Pressure and vacuum tests on components with external threads, e.g. fittings, fixtures, tubes, boilers, tanks, radiators, etc.

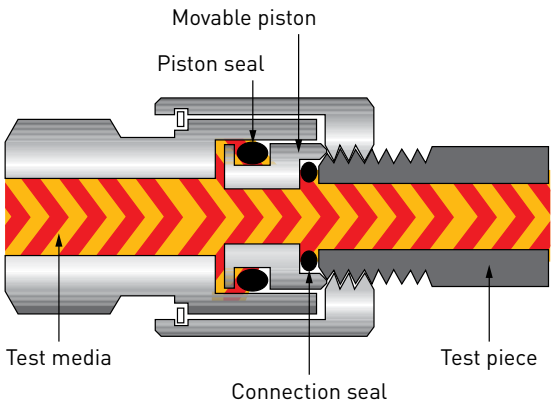
TECHNICAL DATA

Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 345 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Material	Corrosion resistant stainless steel
Sealing material	NBR

Other designs on request

Example of use:

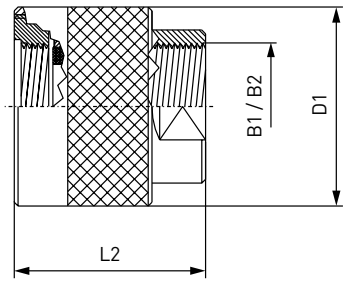
MET for external thread



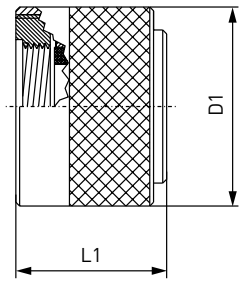
ORDERING | Quick connector MET

approx. dimensions (mm)

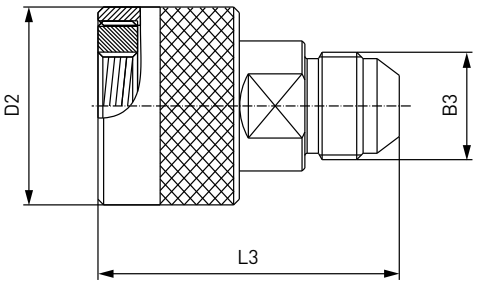
Connector with media inlet



Plug

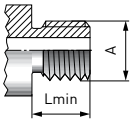


Connector with media inlet
(SAE J512, J513, J514)



Body size	Inlet B1 (internal thread)	Inlet B2 (internal thread)	Inlet B3 (external thread)	D1	D2	L1	L2	L3
1	G1/8"	NPT 1/8"	-	22.0	-	25.2	35.2	-
2	G1/4"	NPT 1/4"	UNF 7/16"-20	27.0	25.0	26.2	40.2	46.3
3	G3/8"	NPT 3/8"	UNF 9/16"-18	32.0	30.0	27.9	37.9	48.0
4	-	-	UNF 3/4"-16	35.0	35.0	27.9	37.9	53.3
5	G1/2"	NPT 1/2"	UNF 7/8"-14	37.0	38.0	32.7	50.7	62.7
6	G3/4"	NPT 3/4"	-	44.0	-	33.7	51.7	-
7	G1"	NPT 1"	UNF 1 1/16"-12	52.0	44.0	39.4	59.9	66.5

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



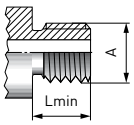
Part No. Connector	Part No. Plug	Body size	Thread A (external thread)	Inlet B1 (internal thread)	Allowable test pressure	Lmin*
C1-12406	C1-12410	1	M10x1.0	G1/8"	50 bar	8.0
C1-12414	C1-12419	2	M12x1.5	G1/4"	50 bar	10.0
C1-12415	C1-12418	2	M14x1.5	G1/4"	50 bar	10.0
C1-12422	C1-12425	3	M16x1.5	G3/8"	50 bar	11.0
C1-12426	C1-12427	4	M18x1.5	G3/8"	50 bar	11.0
C1-12431	C1-12436	5	M20x1.5	G1/2"	50 bar	11.0
C1-12432	C1-12435	5	M22x1.5	G1/2"	50 bar	12.0
C1-12439	C1-12444	6	M24x1.5	G3/4"	50 bar	14.0
C1-12440	C1-12443	6	M26x1.5	G3/4"	50 bar	14.0

* Lmin: minimum thread length

WEH® Connector **MET**

METALIKA Locking systems KACIN
www.metalika-kacin.com

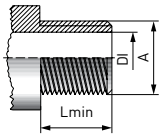
'G'-thread to DIN 259 or ISO 7/1 or DIN ISO 228-1 - *Plane surface smooth and burr free*



Part No. Connector	Part No. Plug	Body size	Thread A (external thread)	Inlet B1 (internal thread)	Allowable test pressure	Lmin*
C1-12405	C1-12409	1	G1/8"	G1/8"	50 bar	12.0
C1-12412	C1-12417	2	G1/4"	G1/4"	50 bar	12.0
C1-12421	C1-12424	3	G3/8"	G3/8"	50 bar	12.0
C1-12429	C1-12434	5	G1/2"	G1/2"	50 bar	12.0
C1-12438	C1-12442	6	G3/4"	G3/4"	50 bar	12.0
C1-12446	C1-12447	7	G1"	G1"	50 bar	12.0

* Lmin: minimum thread length

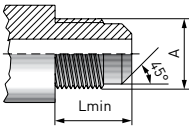
NPT thread (ANSI/ASME B 1.20.1-1983) - *acc. to SAE J476a, plane surface smooth and burr free*



Part No. Connector	Part No. Plug	Body size	Thread A (external thread)	Inlet B2 (internal thread)	Allowable test pressure	DI max.	Lmin*
C1-12404	C1-12408	1	NPT 1/8"	NPT 1/8"	50 bar	5.0	9.7
C1-12411	C1-12416	2	NPT 1/4"	NPT 1/4"	50 bar	7.0	14.0
C1-12420	C1-12423	3	NPT 3/8"	NPT 3/8"	50 bar	10.5	14.0
C1-12428	C1-12433	5	NPT 1/2"	NPT 1/2"	50 bar	14.0	19.0
C1-12437	C1-12441	6	NPT 3/4"	NPT 3/4"	50 bar	18.0	19.0
C1-12445	C1-12448	7	NPT 1"	NPT 1"	50 bar	24.0	20.5

* Lmin: minimum thread length

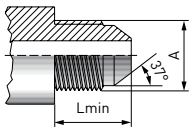
SAE J512 (45° cone), SAE J513



Part No. Connector	Part No. Plug	Body size	Thread A (external thread)	Inlet B3 (internal thread)	Allowable test pressure	Lmin*
C1-11956	C1-119982	2	UNF 7/16"-20	UNF 7/16"-20	345 bar	12.7
C1-65987	C1-119981	3	UNF 9/16"-18	UNF 9/16"-18	345 bar	14.2
C1-11957	C1-119980	4	UNF 3/4"-16	UNF 3/4"-16	276 bar	19.0
C1-11958	C1-119979	5	UNF 7/8"-14	UNF 7/8"-14	276 bar	22.4
C1-12976	C1-119978	7	UN 1 1/16"-12	UN 1 1/16"-12	172 bar	25.4

* Lmin: minimum thread length

SAE J514 JIC 37°



Part No. Connector	Part No. Plug	Body size	Thread A (external thread)	Inlet B3 (internal thread)	Allowable test pressure	Lmin*
C1-35638	C1-119973	2	UNF 7/16"-20	UNF 7/16"-20	345 bar	14.0
C1-32445	C1-96356	3	UNF 9/16"-18	UNF 9/16"-18	345 bar	14.1
C1-32446	C1-17172	4	UNF 3/4"-16	UNF 3/4"-16	276 bar	16.7
C1-17173	C1-119975	5	UNF 7/8"-14	UNF 7/8"-14	276 bar	19.3
C1-32447	C1-119976	7	UN 1 1/16"-12	UN 1 1/16"-12	172 bar	21.9

* Lmin: minimum thread length

Other connector sizes and versions on request.

Required information for ordering see page 9.

WEH® Connector **TW800**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- High-grade materials
- Special versions possible

The type TW800 quick connector simplifies work procedures, shortens test times and improves productivity. Therefore the connector is ideal for pressure and function testing of components with a bead, rim, collar, flange, stub or external thread. In the automotive industry type TW800 is also used for testing of fuel connections, connections for cold and hot water and other supply lines as well as refrigeration and air conditioning components.
By using high quality stainless steel the connectors meet the stringent requirements of industrial testing. The type TW800 quick connector is designed for a pressure range up to max. 50 bar.

Application
Pressure and function tests on components with bead, rim, collar, flange, stub or external threads, e.g. pressure vessels, compressors, heat exchangers, measuring devices, hoses, tubes, tanks, etc.

Note: For using the WEH® Connectors with pneumatic actuation and clamping jaws in an automated system please observe the technical note on page 77.

TECHNICAL DATA

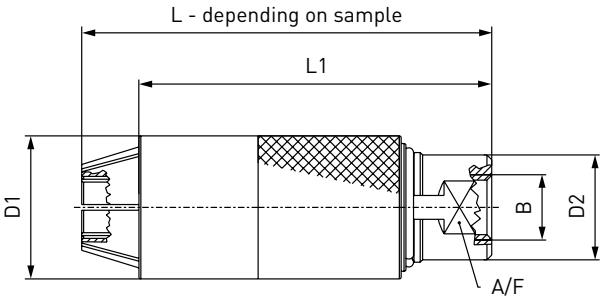
Characteristic	Basic version
Operating pressure PS*	Vacuum up to max. 50 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Material	Corrosion resistant stainless steel
Sealing material	NBR

* depending on application
Other designs on request

Example of use:

ORDERING | Quick connector TW800

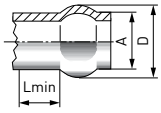
approx. dimensions (mm)



Body size	Inlet B (internal thread)	D1	D2	L1	A/F
1	G1/8"	22.0	14.0	74.0	13
2	G1/8"	25.0	17.0	75.0	15
3	G1/4"	30.0	22.0	74.0	19
4	G3/8"	35.0	27.0	79.0	24
5	G1/2"	40.0	30.0	79.0	27
6	G3/4"	45.0	33.0	90.0	30
7	G3/4"	50.0	37.0	90.0	32
8	G3/4"	55.0	40.0	90.0	36
9	G1"	60.0	46.0	90.0	41
10	G1 1/4"	70.0	55.0	119.0	50

Other body sizes on request

Beads for hose connections to DIN 71550



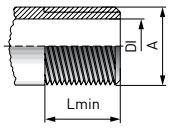
Part No.	Body size	Tube Ø A	Allowable test pressure	D**	Lmin*
TW800B-W8378-025	1	7.0	10 bar	8.0	8.5
TW800B-W8379-025	1	7.5	10 bar	8.5	8.5
TW800B-W8380-025	1	8.0	10 bar	9.0	8.5
TW800B-W8381-025	2	10.0	10 bar	11.0	8.5
TW800B-W8382-045	3	12.0	10 bar	13.0	10.0
TW800B-W8383-045	3	12.5	10 bar	13.5	10.0
TW800B-W8384-045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

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

WEH® Connector **TW800**

METALIKA Locking systems KACIN
www.metalika-kacin.com

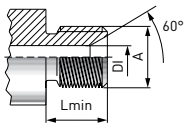
Whitworth tube thread to DIN ISO 228-1 - *Plane surface burr free*



Part No.	Body size	Thread A (external thread)	Allowable test pressure	DI max.	Lmin*
TW800G-W8372-025	2	G1/8"	20 bar	5.0	12.0
TW800G-W8373-045	3	G1/4"	20 bar	8.5	12.0
TW800G-W8374-065	4	G3/8"	20 bar	10.5	12.0
TW800G-W8375-085	5	G1/2"	20 bar	14.5	12.0
TW800G-W8376-125	6	G3/4"	20 bar	20.0	12.0
TW800G-W8377-125	7	G1"	20 bar	25.0	12.0

* Lmin: minimum thread length

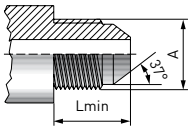
Threaded stem to DIN 7631 / DIN 7647 - *Plane surface burr free*



Part No.	Body size	Thread A** (external thread)	Allowable test pressure	DI max.	Lmin*
TW800G-W8400-025	2	M10x1.0	50 bar	3.0	8.0
TW800G-W8401-045	3	M12x1.5	50 bar	4.0	10.0
TW800G-W8402-045	3	M14x1.5	50 bar	6.0	10.0
TW800G-W8403-065	3	M16x1.5	50 bar	8.0	11.0
TW800G-W8404-065	4	M18x1.5	50 bar	10.0	11.0
TW800G-W8405-085	5	M22x1.5	50 bar	12.0	12.0
TW800G-W8406-125	6	M26x1.5	50 bar	15.0	12.0
TW800G-W8407-125	7	M30x1.5	50 bar	19.0	14.0
TW800G-W8408-125	8	M38x1.5	50 bar	22.0	14.0
TW800G-W8409-165	9	M45x1.5	50 bar	28.0	16.0

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

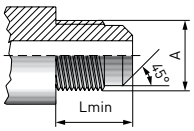
SAE J514 JIC 37°



Part No.	Body size	Thread A (external thread)	Allowable test pressure	Lmin*
TW800G-W8318-025	1	UNF 5/16"-24	50 bar	11.4
TW800G-W8319-025	2	UNF 3/8"-24	50 bar	12.2
TW800G-W8320-025	2	UNF 7/16"-20	50 bar	14.0
TW800G-W8321-045	3	UNF 1/2"-20	50 bar	14.0
TW800G-W8322-045	3	UNF 9/16"-18	50 bar	14.1
TW800G-W8323-085	5	UNF 3/4"-16	50 bar	16.7
TW800G-W8324-085	5	UNF 7/8"-14	50 bar	19.3
TW800G-W8325-125	6	UN 1 1/16"-12	50 bar	21.9
TW800G-W8327-125	8	UN 1 5/16"-12	50 bar	23.1

* Lmin: minimum thread length

SAE J512 (45° cone), SAE J513



Part No.	Body size	Thread A (external thread)	Allowable test pressure	Lmin*
TW800G-W8300-025	1	UNF 5/16"-24	50 bar	9.7
TW800G-W8301-025	2	UNF 3/8"-24	50 bar	11.2
TW800G-W8302-025	2	UNF 7/16"-20	50 bar	12.7
TW800G-W8303-045	3	UNF 1/2"-20	50 bar	14.2
TW800G-W8311-045	3	UNF 9/16"-20	50 bar	**
TW800G-W8304-065	4	UNF 5/8"-18	50 bar	15.7
TW800G-W8305-065	4	UNF 11/16"-16	50 bar	17.5
TW800G-W8306-085	4	UNF 3/4"-16	50 bar	19.0
TW800G-W8307-085	5	UNF 7/8"-14	50 bar	22.4
TW800G-W8308-125	6	UN 1 1/16"-14	50 bar	25.4
TW800G-W8309-125	8	UN 1 1/4"-12	50 bar	28.4
TW800G-W8310-125	8	UN 1 3/8"-12	50 bar	**

* Lmin: minimum thread length
** on request

Other connector sizes and versions on request.

Required information for ordering see page 9.

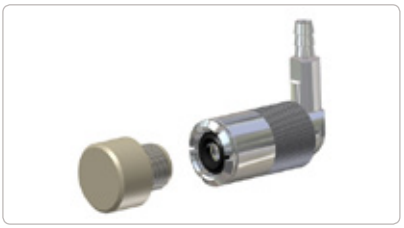
ACCESSORIES

The following accessories are available for type TW800:

Screw plug *(see page 14)*

SPECIAL SOLUTIONS

Examples:



TW800 with 90° lateral port

TW800 with pneumatic actuated grip sleeve

TW800 twin connector

WEH® Connector **TW850**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- WEH® jaw locking mechanism
- High-grade materials
- Special versions possible

The type TW850 quick connector simplifies work procedures, shortens test times and improves productivity. Therefore the connector is ideal for high pressure and function testing of components with a bead, rim, collar, flange, stub or external thread.
By using high quality stainless steel the connectors meet the stringent requirements of industrial testing. The type TW850 quick connector is designed for a pressure range up to max. 630 bar.

Application
Pressure and function tests on components with bead, rim, collar, flange, stub or external threads, e.g. pressure vessels, compressors, heat exchangers, measuring devices, hoses, tubes, tanks, etc.

Note: For using the WEH® Connectors with pneumatic actuation and clamping jaws in an automated system please observe the technical note on page 77.

TECHNICAL DATA

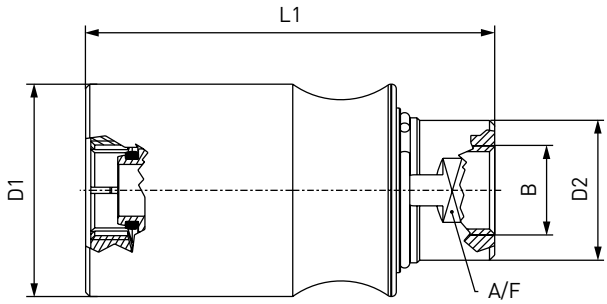
Characteristic	Basic version
Operating pressure PS*	Vacuum up to max. 630 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Material	Corrosion resistant stainless steel
Sealing material	NBR

* depending on application
Other designs on request

Example of use:

ORDERING | Quick connector TW850

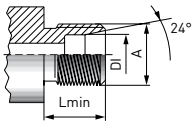
approx. dimensions (mm)



Body size	Inlet B (internal thread)	D1	D2	L1	A/F
1	G1/8"	36.0	22.0	75.0	19
2	G3/8"	41.0	27.0	80.0	24
3	G3/8"	46.0	30.0	80.0	27
4	G1/2"	52.0	33.0	120.0	30

Other body sizes on request

Tube connection to DIN 3902 - *Threaded stem acc. to DIN 3853, boring form W acc. to DIN 3861*



Part No.	Body size	Thread A (external thread)	Allowable test pressure**	DI max.	Series	Lmin*
C1-109849	1	M10x1.0	100 bar	6.0	LL	8.0
C1-109850	1	M12x1.0	100 bar	8.0	LL	9.0
C1-35809	1	M12x1.5	250 bar	6.0	L	10.0
C1-16988	1	M14x1.5	250 bar	8.0	L	10.0
C1-119138	2	M16x1.5	250 bar	10.0	L	11.0
C1-41109	2	M18x1.5	250 bar	12.0	L	11.0
C1-17601	3	M22x1.5	250 bar	15.0	L	12.0
C1-17804	4	M26x1.5	160 bar	18.0	L	12.0
C1-18610	4	M30x2.0	160 bar	22.0	L	14.0
C1-11299	1	M14x1.5	630 bar	6.0	S	12.0
C1-84789	2	M16x1.5	630 bar	8.0	S	12.0
C1-43001	2	M18x1.5	630 bar	10.0	S	12.0
C1-11418	2	M20x1.5	630 bar	12.0	S	12.0
C1-85074	3	M22x1.5	630 bar	14.0	S	14.0
C1-11635	3	M24x1.5	400 bar	16.0	S	14.0
C1-13281	4	M30x2.0	400 bar	20.0	S	16.0

* Lmin: minimum thread length
** acc. to DIN 2401 part 1

Other connector sizes and versions on request.

Required information for ordering see page 9.

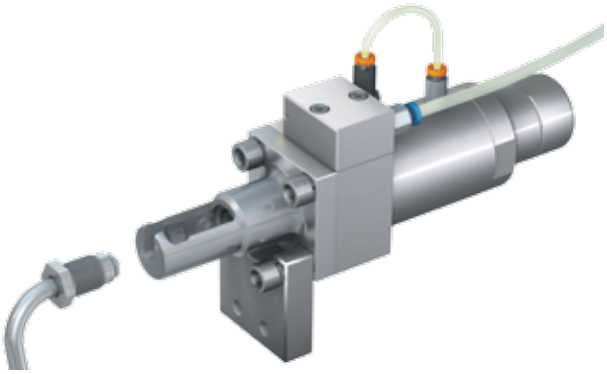
ACCESSORIES

The following accessories are available for type TW850:

Screw plug *(see page 14)*

WEH® Connector **TW130**

DESCRIPTION



Features
- Connection in seconds
- No hand tightening required
- Testing of high quantities
- Suitable for automated testing
- Robust construction
- Ergonomic design

The type TW130 multifunction connector has been developed specially for testing components with banjo tube connections, hose and tube 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 customer-tailored steel sample holder and if required a retaining plate.

The TW130 is rated for a pressure range up to max. 350 bar. Automation is possible.
Special versions, e.g. multi-connectors etc. are also available on request.

Application
Pressure and function tests on components with banjo tube connections, hose and tube connections with sleeve nuts, e.g. for heat exchangers, high pressure hoses etc.

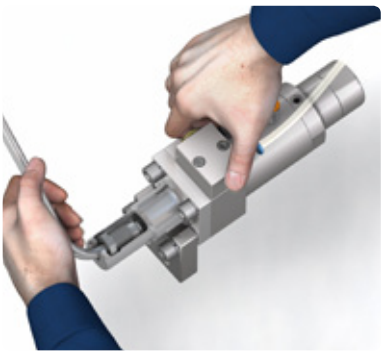
TECHNICAL DATA

Characteristic	Basic version
Operating pressure PS	Max. 350 bar
Pilot pressure	Max. 6 - 8 bar
Pilot pressure port P1	G1/8" internal thread
Temperature range*	-10 °C up to +80 °C
Medium	Air, water, mineral oils, helium
Actuation	Pneumatic actuation, automation is also possible
Material	Base unit: Corrosion resistant stainless steel, anodized aluminium
Sealing material	NBR

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

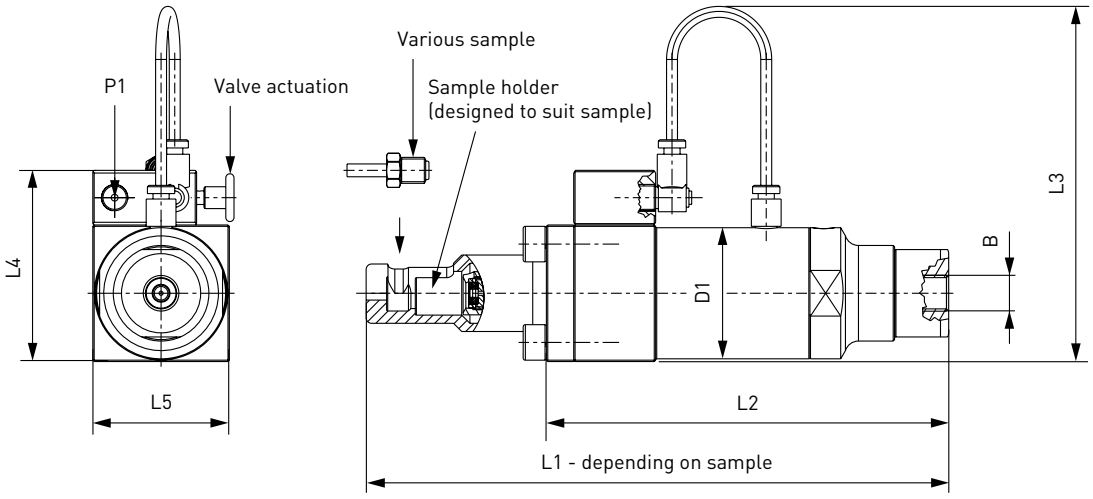
Other designs on request

Example of use:



ORDERING | Quick connector TW130

approx. dimensions (mm)



Part No.	Body size	Inlet B (internal thread)	D1	L2	L3	L4	L5
On request	1	G1/4"	48	137.5	130	70	50
On request	2	G1/4"	62	137.5	140	84	64

Other connector sizes and versions on request.

Required information for ordering see page 9.

ACCESSORIES

The following accessories are available for type TW130:

Fixturing parts

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

WEH® Connector **TW131**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- Testing of high quantities
- Robust construction
- Ergonomic design

The type TW131 quick connector is the manual version of the type TW130 multifunction connector. The connector has been developed specially for testing components with banjo tube connections, hose and tube connections with sleeve nuts and similar configurations.
A further important field of application is the testing of heat exchangers for the refrigeration and air conditioning industry, e.g. for solder connections.
The compact design and ease of operation enables cost-effective testing, even for high quantities. Simply pull back the grip sleeve and release it again to connect the sample.
The sample holder is individually adapted to the customer test piece.

The TW131 is rated for a pressure range up to max. 50 bar.

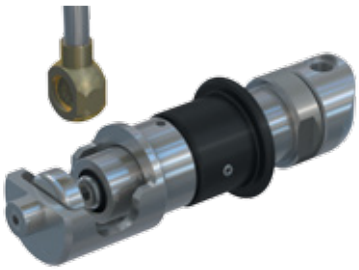
Application
Pressure and function tests on components with banjo tube connections, hose and tube connections, e.g. for heat exchangers, etc.

TECHNICAL DATA

Characteristic	Basic version
Operating pressure PS	Max. 50 bar
Temperature range	-10 °C up to +80 °C
Medium	Helium
Actuation	Manual actuation via grip sleeve
Material	Base unit: Corrosion resistant stainless steel, anodized aluminium
Sealing material	NBR

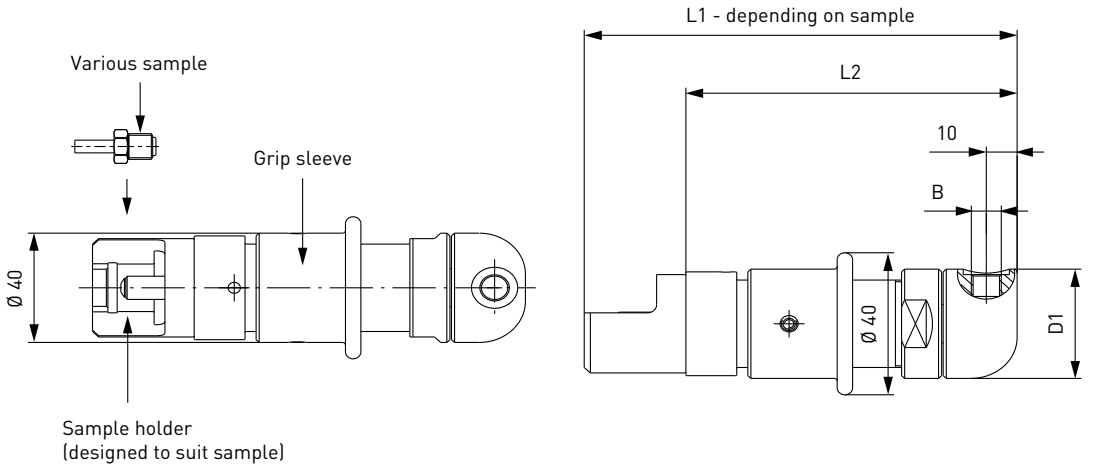
Other designs on request

Example of use:



ORDERING | Quick connector TW131

approx. dimensions (mm)



Part No.	Inlet B (internal thread)	D1	L2
On request	G1/8"	40	108

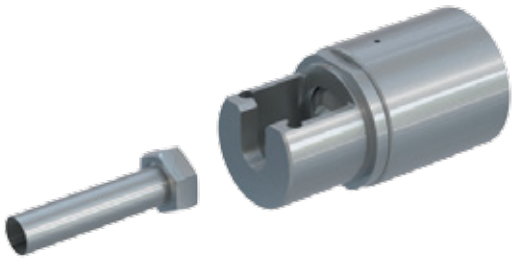
Please send us your enguiry together with the corresponding sample!

Other connector sizes and versions on request.

Required information for ordering see page 9.

WEH® Connector **TW132**

DESCRIPTION



Features
- Connection in seconds
- No hand tightening required
- Testing of high quantities
- Suitable for automated testing
- Robust construction
- Ergonomic design

The type TW132 quick connector is the low pressure version of the type TW130 multifunction connector. The connector has been developed specially for testing components with banjo tube connections, hose and tube connections with sleeve nuts and similar configurations. Underwater applications are possible.
The compact design and ease of operation enables cost-effective testing, even for high quantities. The connector is actuated pneumatically. The sample holder can be adapted to suit the customer sample.

The TW132 is rated for a pressure range up to max. 50 bar. Automation is possible.

Application
Pressure and function tests on components with banjo tube connections, hose and tube connections with sleeve nuts, e.g. for heat exchangers, high pressure hoses etc.

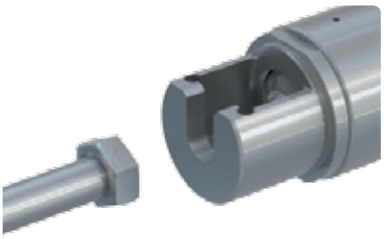
TECHNICAL DATA

Characteristic	Basic version
Operating pressure PS	Max. 50 bar
Pilot pressure	Max. 6 - 8 bar
Pilot pressure port P1	G1/8" internal thread
Temperature range*	-10 °C up to +80 °C
Medium	Air, water, mineral oils, helium
Actuation	Pneumatic actuation, automation is also possible
Material	Base unit: Corrosion resistant stainless steel, anodized aluminium
Sealing material	NBR

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

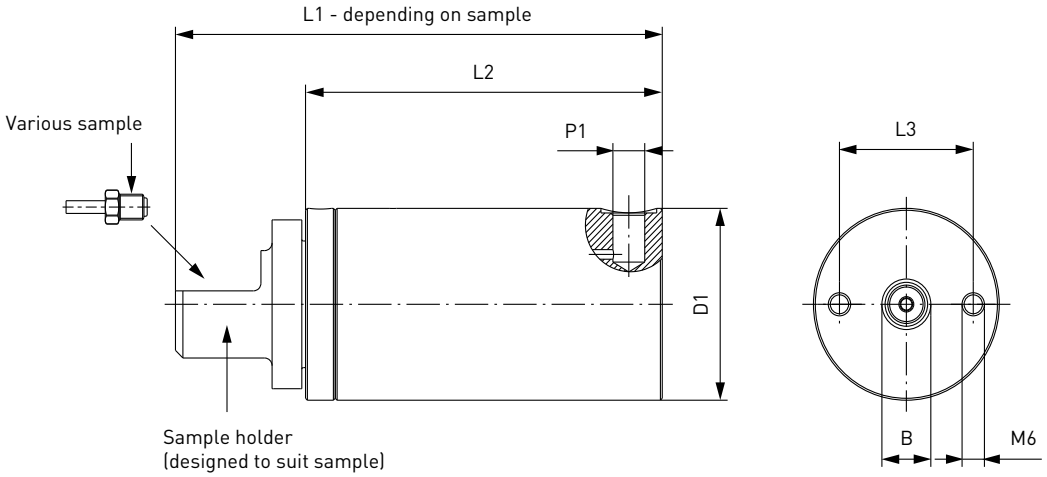
Other designs on request

Example of use:



ORDERING | Quick connector TW132

approx. dimensions (mm)



Part No.	Body size	Ø Sealing range*	Inlet B (internal thread)	D1	L2	L3
On request	1	5 - 15	G1/4"	50	96	36
On request	2	12 - 25	G1/2"	64	96	45

* Depending on the application it is our design department's exclusive responsibility to decide the appropriate sealing position. It is very important that you send a corresponding sample with your enquiry!

Other connector sizes and versions on request.

Required information for ordering see page 9.

ACCESSORIES

The following accessories are available for type TW132:

Fixturing parts

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

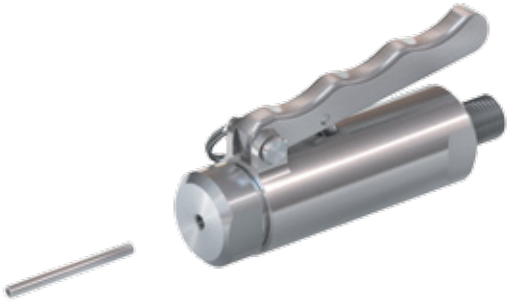
Slide valve

For the type TW132 we also offer a slide valve for manual actuation of the pilot pressure at port 'P1'.

Part No.	Description	Thread (external thread)
C1-48091	Slide valve	G1/8"

WEH® Connector **TW141**

DESCRIPTION



Features
- Connection in seconds
- No hand tightening required
- For connection onto straight tubes, sealing on the exterior diameter
- No lateral forces generated on connection
- WEH® Jaw locking mechanism
- Ergonomic design
- High-grade materials

The type TW141 quick connector provides pressure-tight connections on straight tubes and 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 or filling port 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.

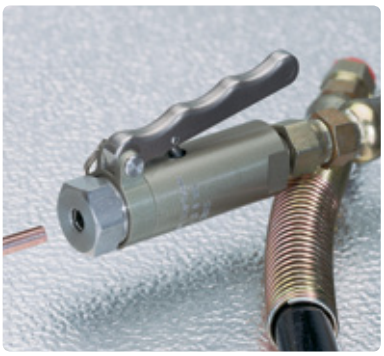
Application
Pressure and function tests of straight tubes, as for example leak testing of heat exchangers, air conditioning components, tube assemblies and automotive fuel systems.
Filling of closed cooling circuits with refrigerants.

TECHNICAL DATA

Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 100 bar
Temperature range	-10 °C up to +80 °C
Leak rate	10^{-4} mbar x l/s
Medium	Refrigerants, air, gas, water, oil, etc. (please indicate when ordering)
Material hardness of test piece	Max. hardness 28 HRC Connection to copper tubes
Material	Clamping jaws: Corrosion resistant stainless steel Housing: Anodized aluminium
Sealing material	Depending on medium

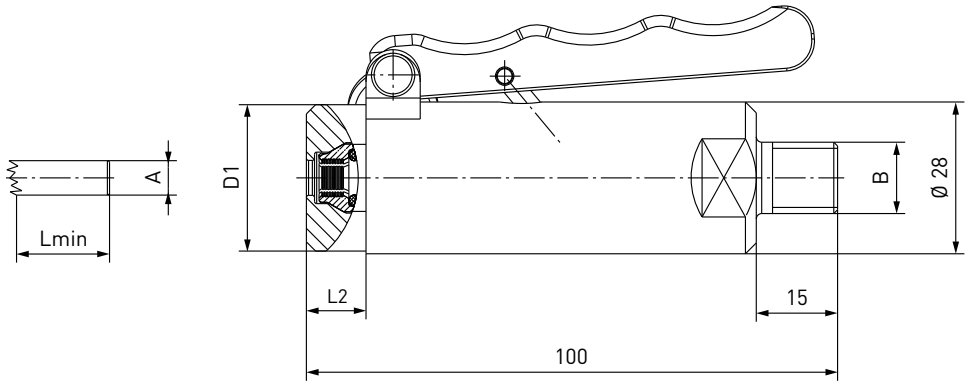
Other designs on request

Example of use:



ORDERING | Quick connector TW141 – Ø A 3.5 mm up to Ø A 8.15 mm

approx. dimensions (mm)



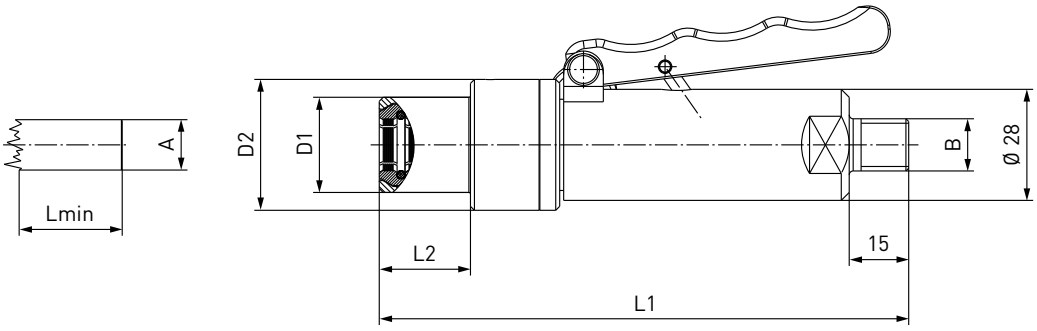
Part No.	Sealing range Ø A	Tolerance	Inlet B (external thread)	L2*	D1	Lmin**
C1-32399	3.5	± 0.2	NPT 1/4"	14.5	27	21
C1-32398	4.0	± 0.2	NPT 1/4"	14.5	27	21
C1-17749	4.8 (3/16")	± 0.2	NPT 1/4"	14.5	27	21
C1-18575	5.0	± 0.2	NPT 1/4"	14.5	27	21
C1-14967	6.0	± 0.2	NPT 1/4"	13.0	27	21
C1-17606	6.35 (1/4")	± 0.2	NPT 1/4"	11.0	27	21
C1-18198	7.0	± 0.2	NPT 1/4"	15.0	27	21
C1-17750	7.9 (5/16")	± 0.2	NPT 1/4"	13.0	27	21
C1-14968	8.0	± 0.2	NPT 1/4"	13.0	27	21
C1-18960	8.15	± 0.2	NPT 1/4"	13.0	27	21

* 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

WEH® Connector **TW141**

ORDERING | Quick connector TW141 – Ø A 9 mm up to Ø A 22.2 mm

approx. dimensions (mm)



Part No.	Sealing range Ø A	Tolerance	Inlet B (external thread)	D1	D2	L1*	L2	Lmin**
C1-32473	9.0	± 0.2	NPT 1/4"	21	33	136.5	26	21
C1-17536	9.5 (3/8")	± 0.1	NPT 1/4"	21	33	136.5	26	21
C1-17808	9.6	± 0.1	NPT 1/4"	21	33	136.5	26	21
C1-16773	10.0	± 0.1	NPT 1/4"	19	33	133.5	23	15
C1-16774	12.0	± 0.1	NPT 1/4"	21	33	134.0	23	15
C1-17751	12.7 (1/2")	± 0.1	NPT 1/4"	24	33	133.5	23	15
C1-16775	15.0	± 0.1	NPT 1/4"	24	33	133.5	23	15
C1-17959	15.9 (5/8")	± 0.1	NPT 1/4"	32	49	133.5	23	15
C1-16776	16.0	± 0.1	NPT 1/4"	32	49	133.5	23	15
C1-16777	18.0	± 0.1	NPT 1/4"	34	49	133.5	23	15
C1-18006	19.05 (3/4")	± 0.1	NPT 1/4"	34	49	133.5	23	15
C1-17687	20.0	± 0.1	NPT 1/4"	34	49	134.0	23	15
C1-16778	22.0	± 0.1	NPT 1/4"	38	49	133.5	23	15
C1-17939	22.2 (7/8")	± 0.1	NPT 1/4"	38	49	133.5	23	15

* 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

Other connector sizes and versions on request.

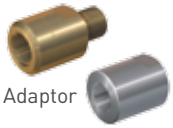
Required information for ordering see page 9.

ACCESSORIES

The following accessories are available for type TW141:

Adaptors / Plugs

Different adaptors for other media inlets are available. If the connector is to be used as a plug, the media inlet 'B' can be sealed.



Adaptor

Plug

Part No.	Description	Connection
C1-30810	Adaptor	NPT 1/4" internal thread - G1/4" internal thread
C1-30366	Adaptor	NPT 1/4" internal thread - G1/4" external thread
E29-934p	Adaptor	NPT 1/4" internal thread - UNF 7/16" external thread
E29-900p	Plug	NPT 1/4" internal thread

Anchor plate

WEH offers an anchor plate to create a safe, secure attachment for the TW141 and which can be used for all sealing ranges.

Part No.	Description
C1-45285	Anchor plate for TW141

WEH® Connector **FI**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- Sealing irregular or rough surfaces
- Simple seal replacement
- Ergonomic design
- High-grade materials

The type FI quick connector reliably and quickly seals inside bores, irregular or rough holes and internally threaded components. Fitted with elastomer seals ideal for sealing out of round and rough surfaces and clearing large tolerances on the test piece. The connector's only means of clamping into the test piece is frictional between seal and surface therefore a fixture must be used.
Because of the pneumatic actuation, the type FI is particularly well suited for automation of test procedures.
Special versions, e.g. twin connectors for sealing ports in close proximity to each other are available on request (see page 75 special solutions). Shaft extensions or shortenings for FI connectors are also available (see accessories).

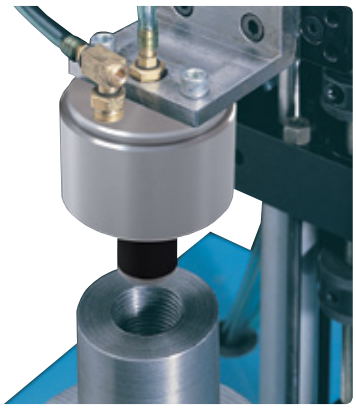
Application
Pressure and vacuum tests of straight tubes, bores and components with internal threads.
Leak testing: Pressure decay, underwater / helium tests.
Other applications: Filling, pressure and function tests, flushing, etc.
Components: Vessels, plastic vessels, medical components, valves, pumps, filter, pressure vessels, tube connections, etc.

TECHNICAL DATA

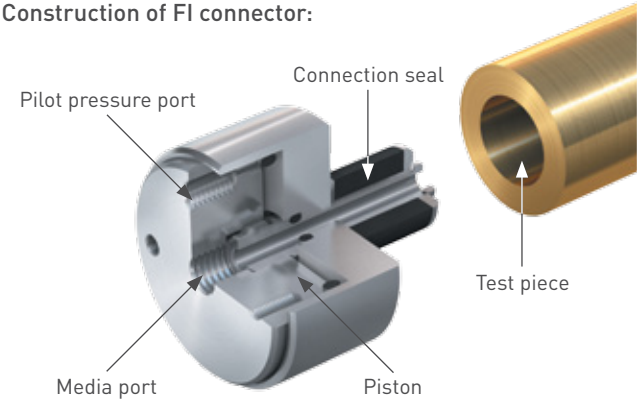
Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 9 bar
Pilot pressure	4 - 12 bar compressed air
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Material	Housing, piston and spacer: Aluminium
Sealing material	Main seal chloroprene / o-rings NBR Urethane seals for high-wear applications are optional, for threaded applications as standard.

Other designs on request

Example of use:



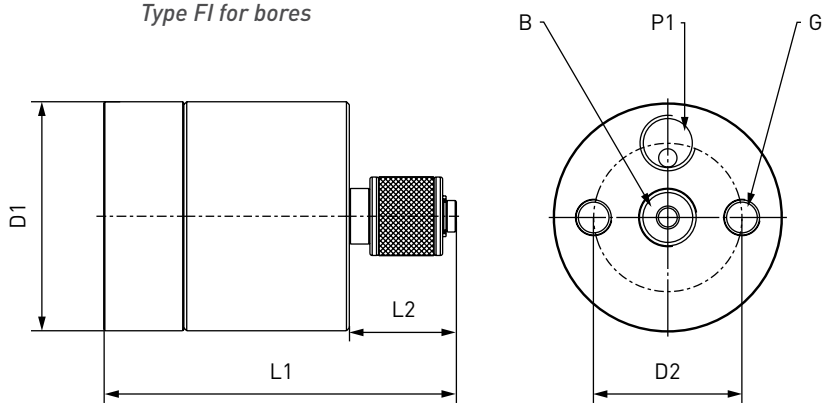
Construction of FI connector:



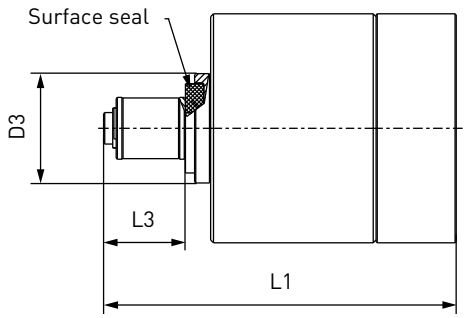
ORDERING | Quick connector FI

approx. dimensions (mm)

Type FI for bores



Type FI for NPT



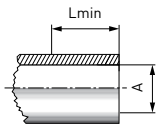
Body size	Inlet B (internal thread)	Pilot pressure port P1 (internal thread)	Mounting G**	D1	D2	D3	L1	L2	L3
01	M5	M5	M5	31.8	20.3	16.0	50.3	17.2	12.2
1	G1/8"	G1/8"	M6	39.9	25.9	19.1	62.0	19.3	14.5
2	G1/8"	G1/8"	M6	39.9	25.9	22.1	62.0	19.3	14.5
3	G1/8"	G1/8"	M6	60.0	40.6	27.4	66.3	31.7	18.0
4	G1/8"	G1/8"	M6	60.0	40.6	32.3	66.3	31.7	18.0
5	G1/2"	G1/8"	M6	88.6	58.7	40.1	93.5	46.7	31.5
6	G1/2"	G1/8"	M6	88.6	58.7	48.0	93.5	46.7	31.5
7	G3/4"	G1/8"	M6	106.7	76.2	54.4	85.3	48.7	*
8	G3/4"	G1/8"	M6	106.7	76.2	-	85.3	48.7	*

* on request
** thread for fixturing device

WEH® Connector **FI**

METALIKA Locking systems KACIN
www.metalika-kacin.com

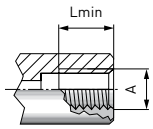
Straight tube



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

* Lmin: minimum length required for insertion in test piece

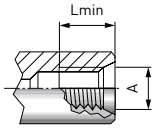
NPT thread (ANSI/ASME B 1.20.1-1983) - *acc. to SAE J476a*



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

* Lmin: minimum length required for insertion in test piece

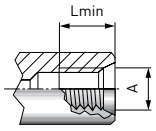
Metric ISO-thread to DIN 13 - *acc. to ISO 6149-1*



Part No. Connector	Part No. Main seal set	Part No. Replacement seals	Body size	Thread A (internal thread)	Lmin*
F-FI01-M10	F-FIS01-M10	F-FIB01-M10	01	M10x1.0	12.2
F-FI1-M12	F-FIS1-M12	F-FIB1-M12	1	M12x1.5	14.5
F-FI1-M14	F-FIS1-M14	F-FIB1-M14	1	M14x1.5	14.5
F-FI1-M16	F-FIS1-M16	F-FIB1-M16	1	M16x1.5	14.5
F-FI2-M18	F-FIS2-M18	F-FIB2-M18	2	M18x1.5	14.5
F-FI2-M20	F-FIS2-M20	F-FIB2-M20	2	M20x1.5	14.5
F-FI2-M22	F-FIS2-M22	F-FIB2-M22	2	M22x1.5	14.5
F-FI3-M24	F-FIS3-M24	F-FIB3-M24	3	M24x1.5	18.0
F-FI3-M26	F-FIS3-M26	F-FIB3-M26	3	M26x1.5	18.0
F-FI3-M27	F-FIS3-M27	F-FIB3-M27	3	M27x2.0	18.0
F-FI3-M28	F-FIS3-M28	F-FIB3-M28	3	M28x1.5	18.0
F-FI4-M30	F-FIS4-M30	F-FIB4-M30	4	M30x1.5	18.0
F-FI4-M33	F-FIS4-M33	F-FIB4-M33	4	M33x2.0	18.0
F-FI4-M36	F-FIS4-M36	F-FIB4-M36	4	M36x2.0	18.0
F-FI5-M42	F-FIS5-M42	F-FIB5-M42	5	M42x2.0	31.4
F-FI6-M48	F-FIS6-M48	F-FIB6-M48	6	M48x2.0	31.4
F-FI7-M60	F-FIS7-M60	F-FIB7-M60	7	M60x2.0	33.8

* Lmin: minimum length required for insertion in test piece

SAE-O-Ring Boss - *acc. to SAE J1926 / ISO 11926*



Part No. Connector	Part No. Main seal set	Part No. Replacement seals	Body size	Thread A (internal thread)	Lmin*
F-FI01-4SAE	F-FIS01-4SAE	F-FIB01-4SAE	01	UNF 7/16"-20	12.2
F-FI1-5SAE	F-FIS1-5SAE	F-FIB1-5SAE	1	UNF 1/2"-20	14.5
F-FI1-6SAE	F-FIS1-6SAE	F-FIB1-6SAE	1	UNF 9/16"-18	14.5
F-FI2-7SAE	F-FIS2-7SAE	F-FIB2-7SAE	2	UNF 3/4"-16	14.5
F-FI3-8SAE	F-FIS3-8SAE	F-FIB3-8SAE	3	UNF 7/8"-14	18.0
F-FI3-9SAE	F-FIS3-9SAE	F-FIB3-9SAE	3	UN 1 1/16"-12	18.0
F-FI4-10SAE	F-FIS4-10SAE	F-FIB4-10SAE	4	UN 1 3/16"-12	18.0
F-FI4-11SAE	F-FIS4-11SAE	F-FIB4-11SAE	4	UN 1 5/16"-12	18.0
F-FI5-12SAE	F-FIS5-12SAE	F-FIB5-12SAE	5	UN 1 5/8"-12	31.4
F-FI6-13SAE	F-FIS6-13SAE	F-FIB6-13SAE	6	UN 1 7/8"-12	31.4
F-FI7-14SAE	F-FIS7-14SAE	F-FIB7-14SAE	7	UN 2 1/2"-12	33.8

* Lmin: minimum length required for insertion in test piece

Other connector sizes and versions on request.

Required information for ordering see page 9.

WEH® Connector **FI**

ACCESSORIES

The following accessories are available for type FI:

Screw plug *(see page 14)*

Shaft extensions / -shortenings

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. Of couse shaft shortenings for FI connectors are available, too. Please contact us!

Control / venting fitting

Fitting with integrated shut-off valve, works in conjunction with pneumatic coupling W9326. For manual applications.
Connection 'A' has to be connected to the pilot pressure port 'P1'.

Part No.	Description	Connection A (external thread)
W9325	Control / venting fitting	G1/8"

Pneumatic coupling for pilot pressure hose

Gives a short pressure pulse to actuate the quick connector, works in conjunction with control / venting fitting W9325.
Connection 'B' has to be connected to the pilot pressure hose.

Part No.	Description	Connection B (internal thread)
W9326	Pneumatic coupling for pilot pressure hose	G1/8"

Hand-sleeve-valve

Connection 'A' has to be connected to the pilot pressure port 'P1' and connection 'B' has to be connected to the pilot pressure hose.

Part No.	Description	Connection A (external thread)	Connection B (internal thread)
W9327	Hand-sleeve-valve	G1/8"	G1/8"

Angle piece 90°

Connection 'A' has to be connected to the pilot pressure port 'P1' and connection 'B' has to be connected to the pilot pressure hose, hand-sleeve-valve or control / venting fitting.

Part No.	Description	Connection A	Connection B
E69-9500	Angle piece 90°	R1/8"*	RP1/8"**

* conical Whitworth tube thread acc. to DIN EN 10226
** cylindrical Whitworth tube thread acc. to DIN/ISO 228

Seal sets

F-FIS main seal sets for non-threaded applications contain the main seal(s), two back-up washers and a locking ring for one seal replacement. **F-FIS main seal sets for threaded applications** contain the main seal(s), a seal mount, a front seal, two back-up washers and a locking ring for one seal replacement.

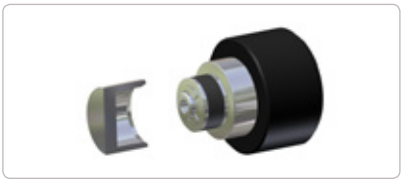
F-FIB replacement seal sets contain five complete main seals with locking rings.

Number of seals inside the FI connector:

Type	Non-threaded	Threaded
FI01	1	2
FI1	1	2
FI2	1	2
FI3	2	2
FI4	2	2
FI5	3	3
FI6	3	3
FI7	3	-
FI8	3	-

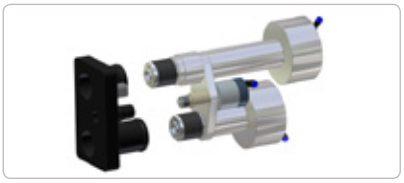
SPECIAL SOLUTIONS

Examples:



FI with spacer for straight tubes

FI twin connector
with manual actuation



FI triple connector

WEH® Connector **FE**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- Sealing irregular or rough surfaces
- Simple seal replacement
- Ergonomic design
- High-grade materials

The type FE quick connector reliably and quickly seals tubes, hoses and externally threaded components. Fitted with elastomer seals ideal for sealing out of round and rough surfaces and clearing large tolerances on the test piece.
Because of the pneumatic actuation, the type FE is particularly well suited for automation of test procedures. The connector's only means of clamping into the test piece is frictional between seal and surface therefore a fixture must be used.
Special version, e.g. twin connectors for sealing ports in close proximity to each other are available on request (see page 75 special solutions).

Application
Pressure and vacuum tests of straight tubes, hoses and components with external threads.
Note: For all threaded applications, the use of a pneumatic hydraulic pressure booster is required.

TECHNICAL DATA

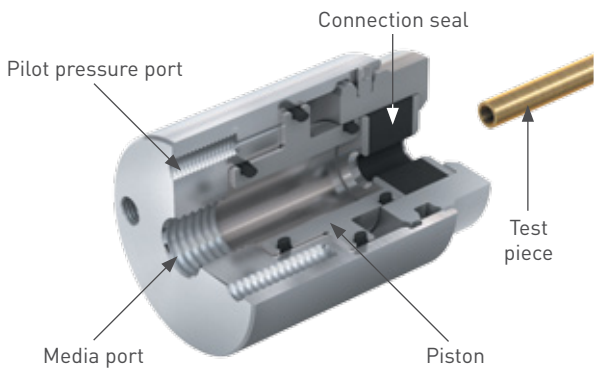
Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 35 bar
Pilot pressure	4 - 12 bar compressed air With pilot pressure booster up to 42 bar hydraulic pressure
Temperature range	+5 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Material	Housing, piston and seal housing: Aluminium
Sealing material	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, e.g. for threaded applications.

Other designs on request

Note: 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.

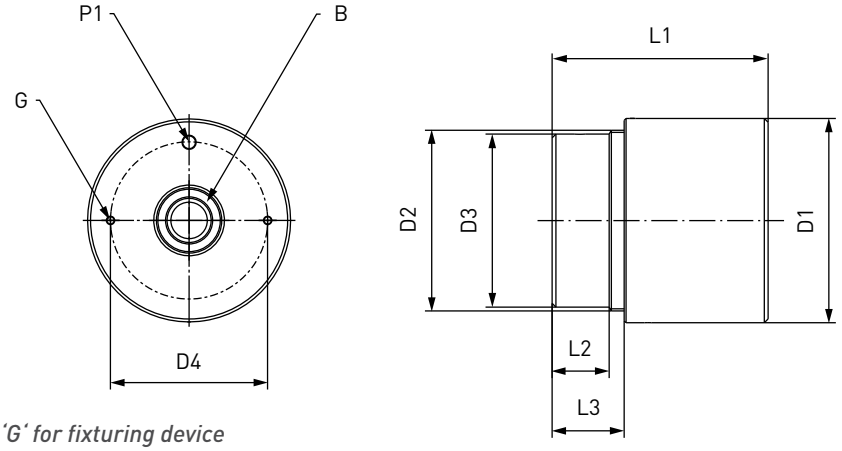
Example of use:

Construction of FE connector:

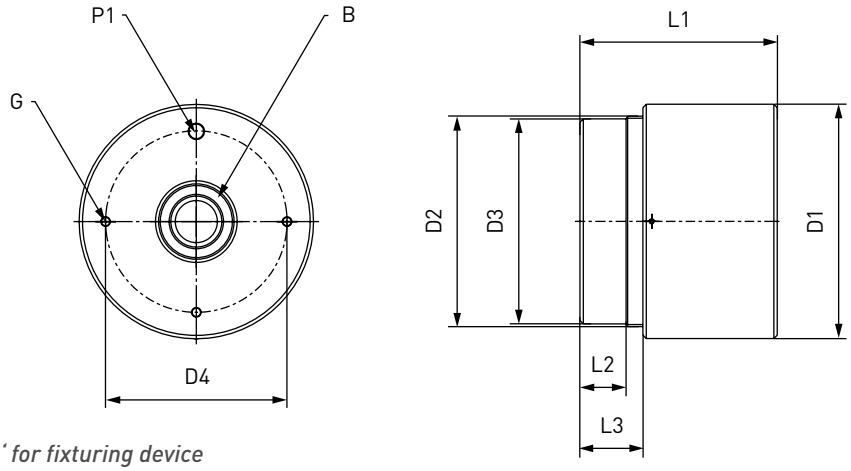


ORDERING | Quick connector FE

approx. dimensions (mm)



FE001 - FE3: 2 threads 'G' for fixturing device



FE4 - FE6: 3 threads 'G' for fixturing device

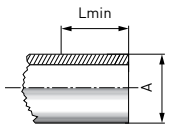
Body size	Inlet B (internal thread)	Pilot pressure port P1 (internal thread)	Mounting G**	D1	D2	D3	D4	L1	L2	L3
001*	G1/8"	M5	M3	21.3	–	–	16.0	43.7	–	–
01	G1/8"	M5	M5	37.8	35.0	32.5	27.9	52.1	8.9	9.6
1	G1/4"	G1/8"	M6	56.4	50.8	46.9	41.1	69.1	8.5	9.6
2	G1/2"	G1/8"	M6	79.0	72.0	68.8	63.5	88.9	14.4	22.6
3	G1"	G1/8"	M6	107.4	95.3	91.0	82.5	113.8	29.5	37.8
4	G1 1/2"	G1/8"	M6	139.2	127.0	122.0	108.0	116.8	27.7	37.8
5	G2"	G1/8"	M10	177.3	165.1	161.8	139.7	116.8	35.1	35.2
6	G2 1/2"	G1/8"	M10	190.0	177.8	174.5	155.4	126.2	35.1	35.2

* for body size 001, 'P1' is located on the diameter of the connector instead of on the face
** thread for fixturing device

WEH® Connector **FE**

METALIKA Locking systems KACIN
www.metalika-kacin.com

Straight tube



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

* Lmin: minimum length required for insertion in test piece

Other connector sizes and versions as well as type FE quick connectors for threaded applications on request.
Note: For all threaded applications, the use of a pneumatic hydraulic pressure booster is required.

Required information for ordering see page 9.

ACCESSORIES

The following accessories are available for type FE:

Screw plug *(see page 14)*

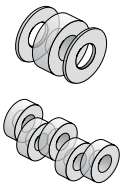
Control / venting fitting *(see page 60)*

Pneumatic coupling for pilot pressure hose *(see page 60)*

Hand-sleeve-valve *(see page 60)*

Angle piece 90° *(see page 60)*

Seal sets



F-FES main seal sets for non-threaded applications contain the elastomer main seal(s) and back-up washers for one seal replacement.
F-FES main seal sets for threaded applications are available on request.

F-FEB replacement seal sets contain five complete main seals.

Number of seals inside the FE connector:

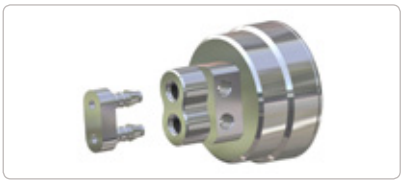
Type	Non-threaded
FE001	1
FE01	1
FE1	1
FE2	2
FE3	3
FE4	3

SPECIAL SOLUTIONS

Examples:

FE for rubber hose testing

FE with extension
for plastic hose nozzles



FE twin connector

WEH® Connector **JNL**

DESCRIPTION

Features
- Connection in seconds
- No hand tightening required
- For connection into straight tubes and bores
- No seal adjustment required
- Wide range of tube tolerances up to ± 0.25 mm
- High-grade materials

The type JNL quick connector is suitable for underwater, pressure decay and helium testing. The connector is 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.

Application
Pressure and vacuum tests of straight tubes and bores, as for example underwater, pressure decay and helium testing, heat exchangers, pressure vessels, valves, transducers, compressors, condensers, evaporation coils, component and tubing systems, air conditioners, heating systems etc.

TECHNICAL DATA

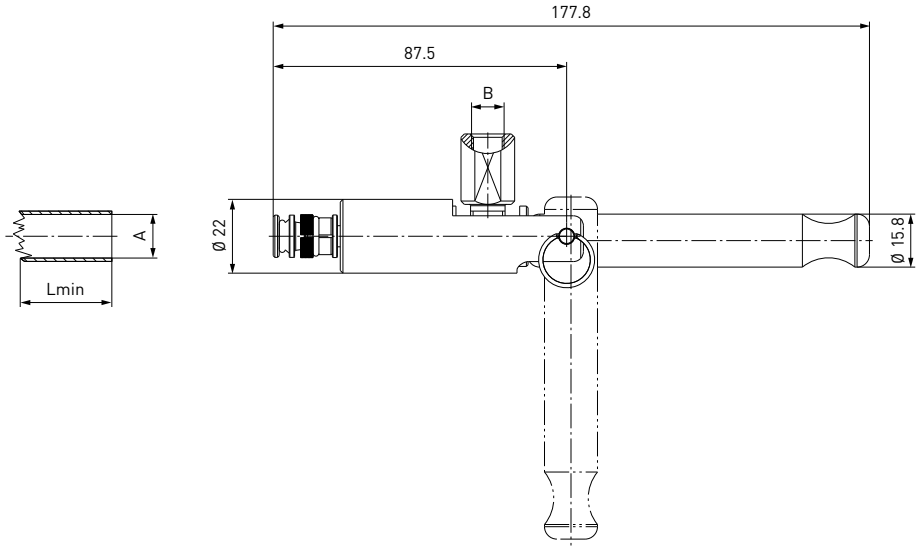
Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 70 bar
Temperature range	-10 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Medium	Water, air, for a large variety of refrigerants and oils (please indicate when ordering)
Surface finish of test piece	> 0,4 µm - a surface finish of 8 rms may be acceptable if the test piece has a hardness no greater than 40 HRB
Material hardness of test piece	Max. hardness 95 HRB Connection to copper tubes
Material	Clamping jaws: Corrosion-resistant stainless steel, hardened Housing: Anodized aluminium
Sealing material	Main seal of chloroprene

Other designs on request

Example of use:

ORDERING | Quick connector JNL – body size 0

approx. dimensions (mm)



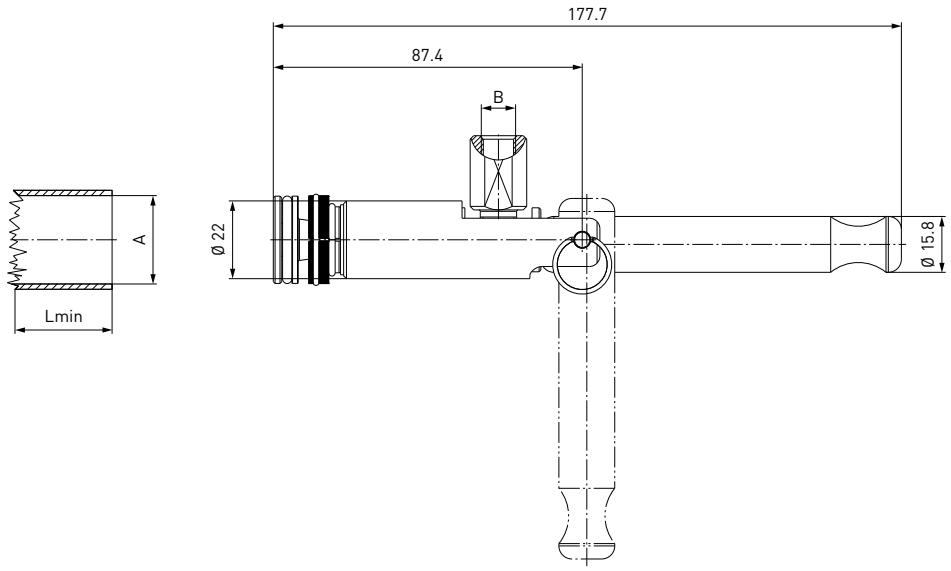
Part No.	Body size	Sealing range Ø A ± 0.25	Inlet B (internal thread)	Lmin*
F-JNL0-0375H	0	9.5 (3/8")	G1/8"	13.5
F-JNL0-M100H	0	10.0	G1/8"	13.5
F-JNL0-M105H	0	10.5	G1/8"	13.5
F-JNL0-M110H	0	11.0 (7/16")	G1/8"	13.5
F-JNL0-M115H	0	11.5	G1/8"	13.5
F-JNL0-M120H	0	12.0	G1/8"	13.5
F-JNL0-M125H	0	12.5	G1/8"	13.5
F-JNL0-0500H	0	12.7 (1/2")	G1/8"	13.5
F-JNL0-M130H	0	13.0	G1/8"	13.5
F-JNL0-M135H	0	13.5	G1/8"	13.5
F-JNL0-M140H	0	14.0	G1/8"	13.5

* Lmin: minimum length required for insertion of test piece
When ordering, please state if testing reinforced fibre glass or plastic test pieces.

WEH® Connector **JNL**

ORDERING | Quick connector JNL – body size 1

approx. dimensions (mm)



Part No.	Body size	Sealing range Ø A ± 0.25	Inlet B (internal thread)	Lmin*
F-JNL1-M145	1	14.5	G1/8"	16.0
F-JNL1-M150	1	15.0	G1/8"	16.0
F-JNL1-M155	1	15.5	G1/8"	16.0
F-JNL1-0625	1	15.9 (5/8")	G1/8"	16.0
F-JNL1-M160	1	16.0	G1/8"	16.0
F-JNL1-M165	1	16.5	G1/8"	16.0
F-JNL1-M170	1	17.0	G1/8"	16.0
F-JNL1-M175	1	17.5	G1/8"	16.0
F-JNL1-M180	1	18.0	G1/8"	16.0
F-JNL1-M185	1	18.5	G1/8"	16.0
F-JNL1-0750	1	19.05 (3/4")	G1/8"	16.0
F-JNL1-M195	1	19.5	G1/8"	16.0
F-JNL1-M200	1	20.0	G1/8"	16.0
F-JNL1-M205	1	20.5	G1/8"	16.0
F-JNL1-M210	1	21.0	G1/8"	16.0
F-JNL1-M215	1	21.5	G1/8"	16.0
F-JNL1-M220	1	22.0	G1/8"	16.0
F-JNL1-0875	1	22.2 (7/8")	G1/8"	16.0

* Lmin: minimum length required for insertion of test piece
Additional sizes are available up to sealing range 40.0 mm.
When ordering, please state if testing reinforced fibre glass or plastic test pieces.

Other connector sizes and versions on request. Required information for ordering see page 9.

Connection sizes
JNL connectors are available in 0.5 mm steps starting from 9.5 mm up to 40.0 mm as well as all standard imperial sizes. Special sizes on request.

For other sizes please add 'M' and the nominal bore (mm) x 10 to the standard part number.
Example: inner tube Ø 11.5 mm ➡ part number: F-JNL0-M115.

ACCESSORIES

The following accessories are available for type JNL:

Screw plug *(see page 14)*

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-SNL1-0687.

WEH® Connector **JXL**

DESCRIPTION

Features
- Connections in seconds
- No hand tightening
- For connection onto straight tubes
- No seal adjustment required
- Wide range of tube tolerances up to ± 0.25 mm
- High-grade materials

The type JXL quick connector is suitable for underwater, pressure decay and helium testing. The connector is equipped with a safety system that prevents the JXL from being inadvertently disconnected whilst under pressure. The internal planar seal gives both durability and high leak test performance.

Application
Pressure and vacuum tests of straight tubes, as for example underwater, pressure decay and helium testing, heat exchangers, pressure vessels, valves, transducers, compressors, condensers, evaporation coils, component and tubing systems, air conditioners, heating systems etc.

TECHNICAL DATA

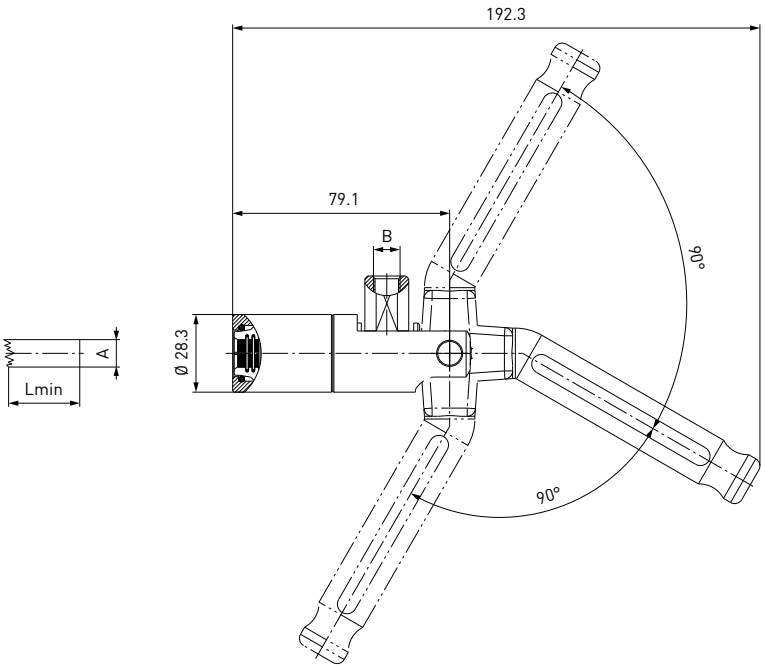
Characteristic	Basic version
Operating pressure PS	Vacuum up to max. 70 bar
Temperature range	-10 °C up to +80 °C
Leak rate	1 x 10^{-3} mbar x l/s
Medium	Water, air, for a large variety of refrigerants and oils (please indicate when ordering)
Surface finish of test piece	> 0.127 µm - surfaces less than 0.127 µm are not recommended
Material hardness of test piece	Min. hardness 20 HRC; max. hardness 30 HRC Connection to copper tubes
Material	Clamping jaws: Corrosion-resistant stainless steel, hardened Housing: Anodized aluminium
Sealing material	Main seal of chloroprene

Other designs on request

Example of use:

ORDERING | Quick connector JXL – body size 0

approx. dimensions (mm)



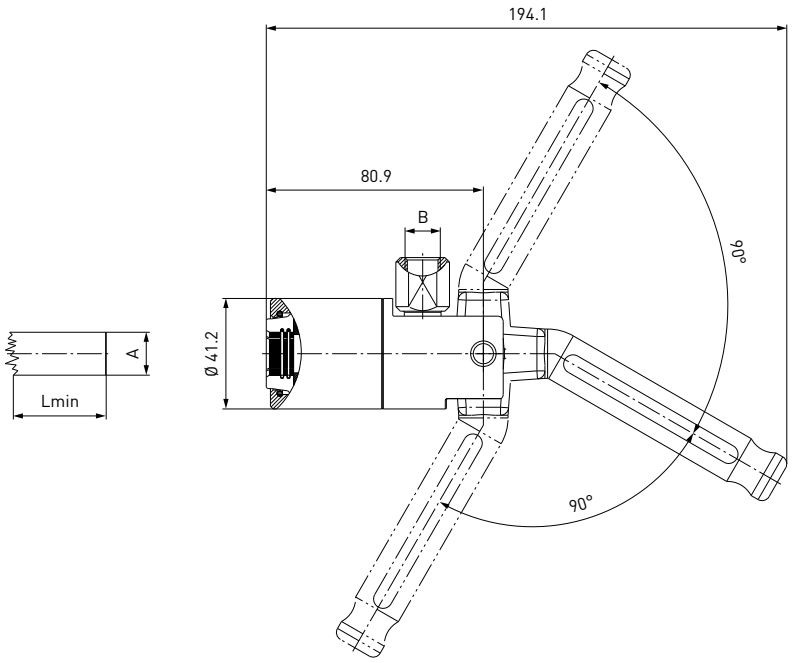
Part No.	Body size	Sealing range Ø A ± 0.25	Inlet B (internal thread)	Lmin*
F-JXL0-0125	0	3.2 (1/8")	G1/8"	20.1
F-JXL0-M040	0	4.0	G1/8"	20.1
F-JXL0-0187	0	4.75 (3/16")	G1/8"	20.1
F-JXL0-M060	0	6.0	G1/8"	20.1
F-JXL0-0250	0	6.35 (1/4")	G1/8"	20.1
F-JXL0-0312	0	7.9 (5/16")	G1/8"	20.1
F-JXL0-0312	0	8.0 +0.2/-0.3	G1/8"	20.1
F-JXL0-0375	0	9.5 (3/8")	G1/8"	20.1
F-JXL0-M100	0	10.0	G1/8"	20.1
F-JXL0-0437	0	11.1 (7/16")	G1/8"	20.1
F-JXL0-M120	0	12.0	G1/8"	20.1
F-JXL0-0500	0	12.7 (1/2")	G1/8"	20.1

* Lmin: minimum length required for insertion of test piece
When ordering, please state if testing reinforced fibre glass or plastic test pieces.

WEH® Connector **JXL**

ORDERING | Quick connector JXL – body size 1

approx. dimensions (mm)



Part No.	Body size	Sealing range Ø A ± 0.25	Inlet B (internal thread)	Lmin*
F-JXL1-0625	1	15.9 (5/8")	G1/4"	20.1
F-JXL1-0750	1	19.05 (3/4")	G1/4"	20.1
F-JXL1-0875	1	22.2 (7/8")	G1/4"	20.1

* Lmin: minimum length required for insertion of test piece
When ordering, please state if testing reinforced fibre glass or plastic test pieces.

Other connector sizes and versions on request.

Required information for ordering see page 9.

ACCESSORIES

The following accessories are available for type JXL:

Screw plug *(see page 14)*

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.

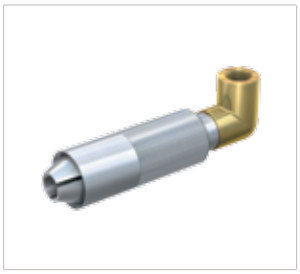
Fuel connectors for the automotive industry

The WEH® Fuel connectors enjoy an international reputation in the automotive industry and are used world-wide. They have been successfully used on engine test facilities for fast and efficient pressure and leak tests on fuel lines while maintaining production rates.

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

Type TW711
Fuel connector with
central test port
for tubes with bead or collar

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



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

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

Type TW723
Fuel connector with
central test port
for tubes with bead, collar
or external thread

Type TW723
Fuel connector for testing of
rubber fuel hoses that are used
on engines

Type TW850
Quick connector for testing of
diesel injectors up to 2600 bar

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

Customer-tailored **solutions**

In addition to their extensive range of products, WEH - a world specialist in connection technology - can also meet customer's special requirements with innovative solutions. Wherever pressure-tight connections have to be established and testing procedures automated, we can supply the right solution for your application. Working in collaboration with our customers on demanding applications is our speciality. Our portfolio of advanced connector solutions provides ample evidence of the innovative technology of WEH® Products.

The following applications provide an exemplary insight into the world of our special developments:

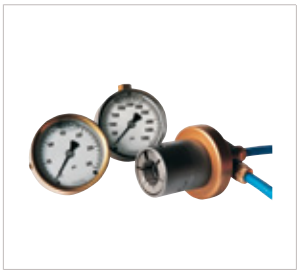
Type TW17 twin connector
Twin connector for pressure testing threaded ports with centres that are very close to each other

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



Type TW751
Testing of pressure gauges up to 1000 bar

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

Technical appendix

Definitions

Abbreviation	Definition	
Pressure specifications		
PN	Nominal pressure	Nominal pressure after temperature compensation at 15 °C
PS	Max. operating pressure	Maximum permissible operating pressure at 15 °C and normal conditions. The values mentioned in this catalogue have been measured at a temperature of 15°C. Note: At higher operating temperatures the permissible operating pressure has to be reduced accordingly to compensate for the effect of heat weakening component materials. Example values see table below: Technical notes → Pressure - temperature - compensation 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. The test is performed at a room temperature of approx. 20 °C.
PT	Test pressure	Test pressure to which the component is tested for structural integrity during acceptance testing (normally PS x 1.43 up to 1.5)
Dimensions		
L1, L2, L3 ...	Length specification	
D1, D2, D3 ...	Diameter specification	
Ports		
A / B	Media ports	
P1, P2, P3 ...	Compressed air ports	
G	Mounting	

Technical notes

Term	Definition
Temperature range	The temperature ranges stated 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.
Leak rate	Leak rate: 1 x 10^{-3} mbar x l/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.
Pressure - temperature - compensation	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 %. In case of doubt, please contact us! When using certain materials, for example plastics, the valves need to be further derated.
Suitability for application	When selecting a component, the total system design must be considered to ensure safe, trouble free performance. The correct selection of a component, material, temperature, pressure range as well as proper installation, operation and maintenance are the responsibility of the customer.
WEH® connectors with pneumatic actuation	The customer has to ensure there is adequate axial movement when pneumatically actuated WEH® Connectors are used in automated systems. Ideally the connectors should be mounted with a floating joint or introduced individually to prevent the clamping jaws getting blocked or jammed in the thread of the test piece. Contact WEH for the relevant installation instructions for pneumatically actuated WEH® Connectors in automated systems.

OVERVIEW SEALING MATERIAL

The WEH® Connectors can be adapted to your specific application. A large variety of sealing materials is available for this purpose. Together with the supplier of the sealing material we choose the right material suitable for your medium. If extremely high temperatures are prevailing we also use metallic seals.
For seals that are not being directly exposed to the media - NBR is used, if not otherwise stated.

Sealing 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.

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.

By the transfer of an up to date brochure or document all precursory versions will run out of validity. As a matter of principle the latest up to date version of brochures and other documents are valid. These versions can be inquired by the WEH company.

Our general terms and conditions and the agreement on protection of know-how and quality assurance are valid for consignments and all other services, unless otherwise agreed. We do not accept general terms and conditions of the purchaser.

OTHER PRODUCTS OF WEH PRECISION CONNECTORS

Catalogue - Products for the gas industry:
Quick connectors for the gas industry, check valves, swivel joints, etc.

Catalogue - Refrigeration and Air Conditioning:
Quick Connectors for filling, evacuating and testing.

Catalogue - Check valves:
WEH is also offering high-performance check valves for use with liquid and gaseous media.

Design and production

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