

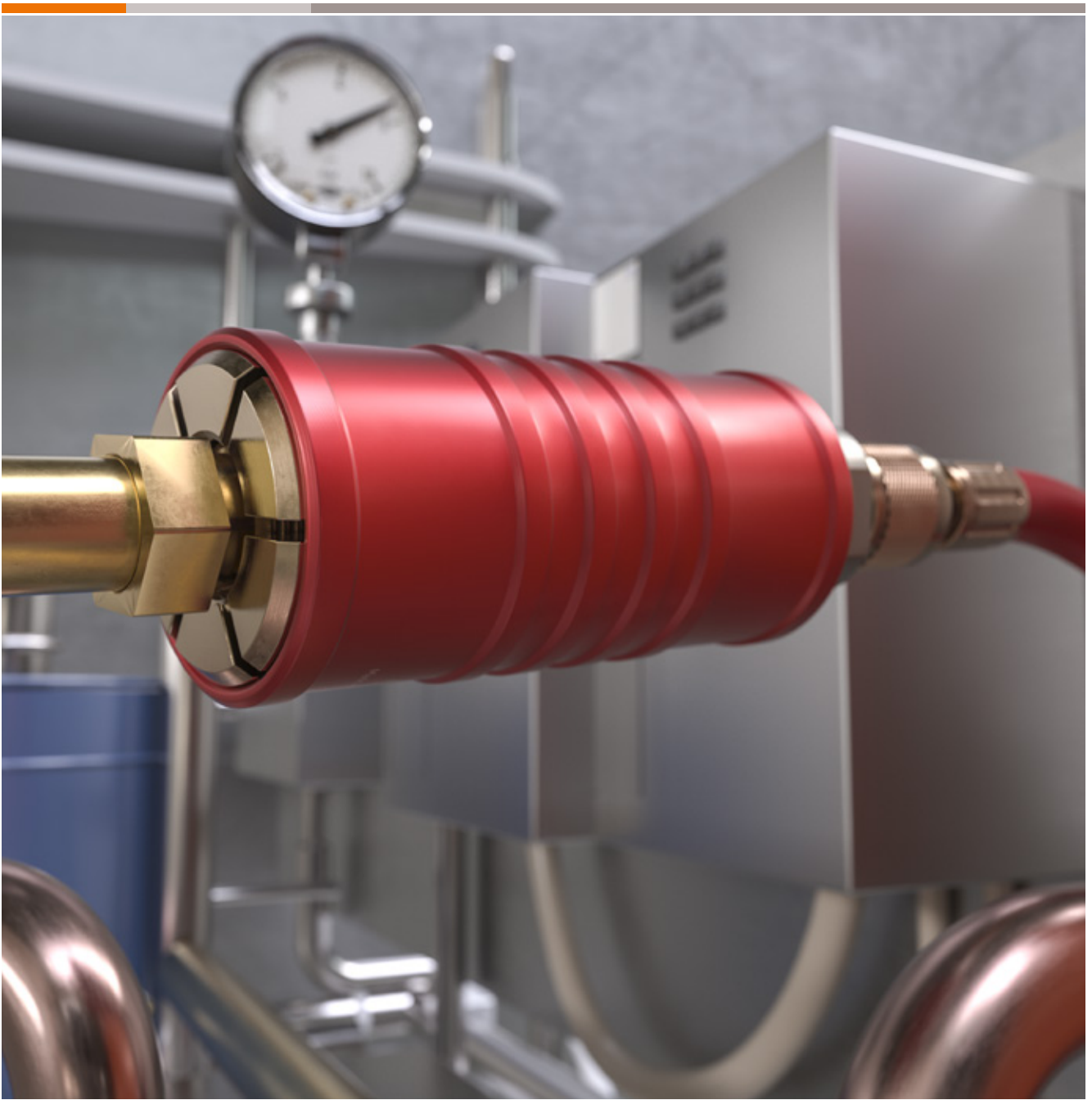
2019

WEH[®] Connectors

for filling, evacuating and testing
of refrigeration and air conditioning components

Refrigeration and air conditioning

Catalogue 40 | V1.0



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» Introduction

WEH® HVAC-R Connectors

simplify workflows and reduce costs

WEH offers a complete product range of advanced quick connectors that make connection to fluid lines easier, more reliable and with high integrity sealing. The cost savings during production and servicing refrigerating and air conditioning systems resulting from easy, fast connection can be considerable.

WEH has a suitable filling or testing connector for almost any application whether for refrigerant filling of refrigerators, ice machines, air conditioning systems, water coolers or other refrigeration and air conditioning components or for pressure and function tests of heat exchangers, pressure vessels, compressors, condensers, evaporation coils etc. with straight tube connections and bores.



The original WEH® Jaw locking mechanism

For a perfect connection in seconds

Almost every connector has the unique WEH® Jaw locking mechanism developed by WEH. Hard wearing jaws clamp securely and safely onto a large variety of different connections, including internal and external threads, straight tubes, tube ends and bores among others.

Laborious screwing and unscrewing of hoses is eliminated and the operators' joints are spared. The latest sealing technology provides a pressure-tight connection for your application.



» Introduction

WEH® Service connectors for filling and evacuating refrigerants



Indispensable tools for refrigerant filling

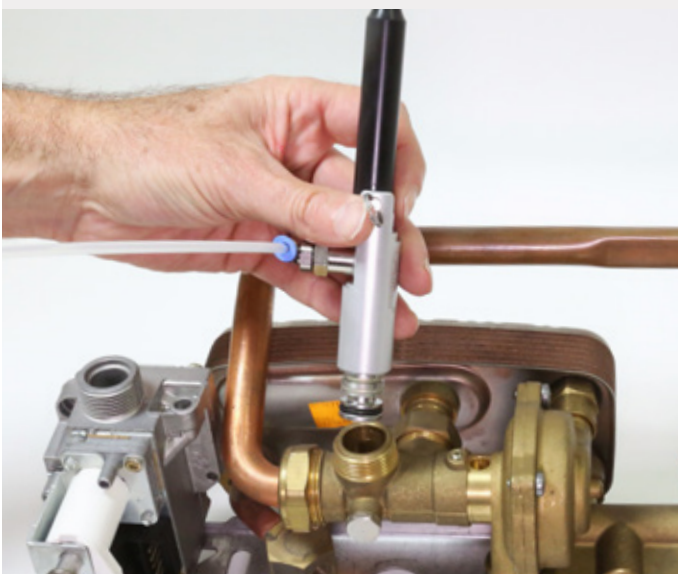
The typical practice when filling and maintaining refrigeration and air conditioning systems is to use screw connectors. When disconnecting these screw connectors, the residual refrigerant in filling hoses escapes into the atmosphere causing considerable environmental damage.

Escaping refrigerants also present a risk of injury to operators and can cause painful frost burns to the hands. Manual screwing and unscrewing is not only time and cost-consuming, but is also very laborious.

Automotive air conditioning equipment as well has to be filled and evacuated with refrigerants firstly during production and later on refilled repeatedly for maintenance purposes.

To minimise the impact on the environment and make connection and disconnection easier and more comfortable for service technicians, WEH has designed quick connectors, that have proven to be indispensable for the refrigeration and air conditioning industry for many years.

WEH® Test connectors for leak testing of straight tubes and bores



Testing tube connections - a child's play

Wherever straight tubes and bores have to be pressure tested or vacuum tested, the WEH® Connectors are the right tool. Testing applications include heat exchangers, pressure vessels, valves, transducers, compressors, condensers, evaporation coils, air conditioners, heating systems and many more HVAC-R components.








In the automotive industry the quick connectors are mainly used for radiator testing. Simplified workflows, shorter operating times and increased productivity can be achieved when using WEH® Connectors. A wide range of quick connectors for connection to bores, straight tubes and formed tube ends is available comprising a wide choice of sealing ranges.

» Overview

Overview of WEH® Connectors

Many connection and application possibilities

CONNECTION POSSIBILITIES

Type	External threads	Straight tubes (outer Ø)	Straight tubes (inner Ø)	Bores	Swaged and flared	Beads	Collars
							
TW111	✓						
TW110 TW108						✓	
TW230			✓	✓			✓
TW221 TW231			✓	✓	✓	✓	✓
TW241		✓					
TW141 TW141L		✓					
TW52 TW920	✓						

FILLING AND EVACUATING REFRIGERANTS

Type	TW111	TW110	TW108	TW52	TW920
Application	Filling and evacuating of industrial refrigerating and air conditioning systems	Filling and evacuating of automotive air conditioning systems during production	Filling and evacuating of automotive air conditioning systems during maintenance	Filling of gas cylinders with / without residual pressure valve	Filling of gas cylinders with residual pressure valve
Connects to	Schrader valve: 1/4" SAE (UNF 7/16"-20) 5/16" SAE (UNF 1/2"-20)	Tube Ø 11 mm Tube Ø 13 mm	Tube Ø 11 mm Tube Ø 13 mm	W21.8x1/14" G1/2" TR21x4.5	W21.8x1/14"
Medium	Refrigerants	Refrigerants	Refrigerants	Refrigerants, CO ₂	Refrigerants
Max. allowable operating pressure PS	42 bar	35 bar	35 bar	250 bar bzw. 150 bar with TVCO ₂ linear valve	40 bar

» Overview

TESTING OF TUBE CONNECTIONS

Type	TW141	TW141L	TW221	TW230	TW231	TW241
Sealing range	4.8 - 22.2 mm tube OD	15.0 mm tube OD	9.5 - 30.4 mm tube ID	9.5 - 22.2 mm tube ID	9.5 - 22.2 mm tube ID	6.0 - 44.0 mm tube OD
Max. allowable operating pressure PS	Vacuum up to 100 bar	Vacuum up to 100 bar	3 bar	Vacuum up to 70 bar	Vacuum up to 70 bar	Vacuum up to 70 bar
Seals	O-ring sealing	O-ring sealing	Special sealing	O-ring sealing	O-ring sealing	Special sealing
Nominal bore DN	3 to 5 mm	5 mm	2 to 4 mm	2 to 5 mm	2 to 5 mm	4 to 19 mm

EXAMPLES OF USE



TW111 | For filling and evacuating of industrial refrigerating and air conditioning systems



TW110 | For filling and evacuating of automotive air conditioning systems during production



TW141L | For testing of difficult-to-access heat exchangers

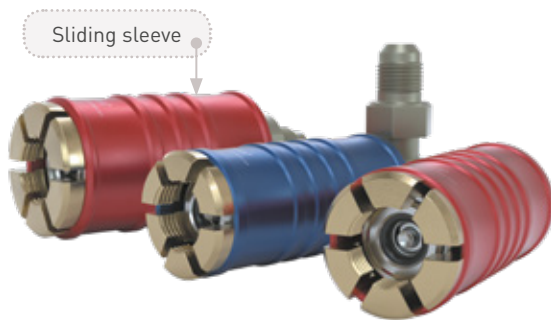
ORDERING

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 with tolerances
8. Test piece

WEH® Connector TW111

DESCRIPTION



Features

- For connection to Schrader valves
- No frostbitten or burned hands
- 99 % less refrigerant loss
- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- Reduces connection times and costs
- Different versions available
- High-grade materials

The WEH® TW111 Quick connector is the ideal tool for filling and evacuating refrigerants when servicing refrigerating and air conditioning systems with Schrader valve (1/4" resp. 5/16" SAE tube connection).

An integrated shut-off valve minimizes the escape of refrigerant into the atmosphere, thus reducing refrigerant loss by up to 99 % compared to conventional screw connectors. This not only cuts costs but also protects the environment.

As with all WEH® Connectors, damage to tendons and joints caused by the continuous screwing and unscrewing of threaded connections is also eliminated with the TW111. Simply push the connector onto the Schrader valve and push the sliding sleeve forwards. A safe and pressure-tight connection is thus established in seconds. Not only does this make work significantly easier, connection times are also reduced, thus cutting costs.

The service connector is rated for a max. operating pressure of 42 bar and suitable for filling a large variety of different refrigerants, for example R134A, R22 or R410A.

The TW111 is optionally available with an inline or 90° media inlet and with colour-coded sliding sleeves in red or blue for high pressure or low pressure connection ports on the customer's system.

The WEH® TW111 is equipped with a chloroprene front seal as standard. For filling of refrigerant R410A an EPDM front seal is used. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for filling and evacuating refrigerants of industrial refrigerating and air conditioning systems with Schrader valve acc. to SAE J513.

TECHNICAL DATA

Characteristic	Basic version
Max. allowable operating pressure PS*	42 bar
Temperature range	-10 °C up to +80 °C
Actuation	Manual actuation via sliding sleeve
Material	Brass and anodized aluminium
Sealing material	Front seal of chloroprene resp. EPDM (R410A)
Design	With integrated shut-off valve

* Please note that the pressure may be higher for some refrigerants, as i.e. R407A, R407B, R410A, R507 in case of high ambient temperatures!

Other designs on request

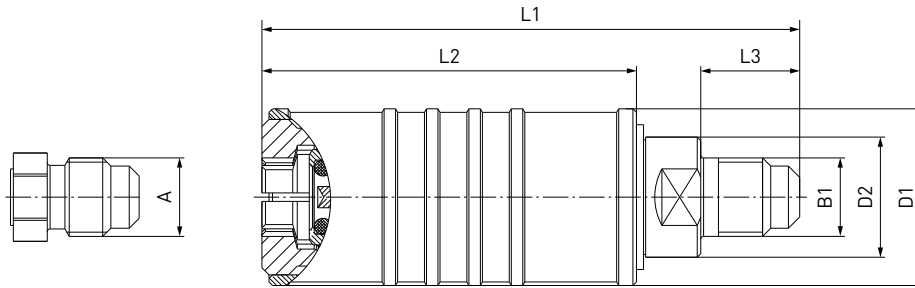
Example of use:



WEH[®] Connector TW111

ORDERING | WEH[®] TW111 Quick connector with inline media inlet

approx. dimensions (mm)

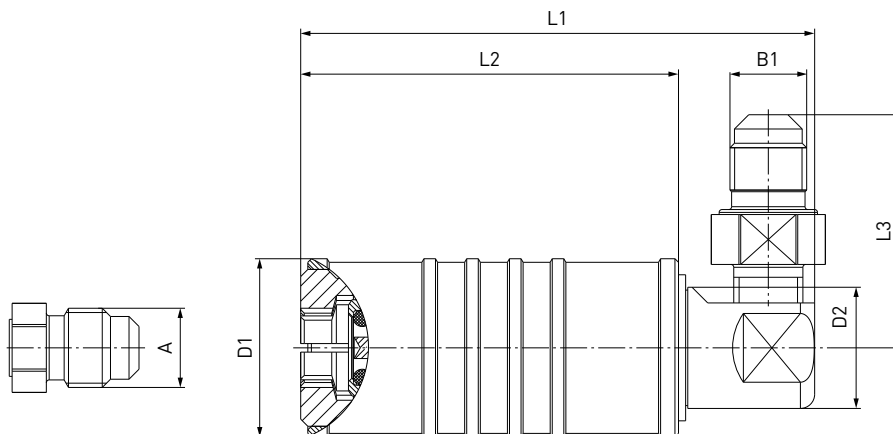


Part No.	Description	A (external thread)	B1 (external thread)	D1	D2	L1	L2	L3
C1-102991	TW111 - high pressure (red)	UNF 7/16"-20*	UNF 7/16"-20*	25	17	76	53	14
C1-102993	TW111 - low pressure (blue)	UNF 7/16"-20*	UNF 7/16"-20*	25	17	76	53	14

* acc. to SAE J513 [45°]

ORDERING | WEH[®] TW111 Quick connector with 90° media inlet

approx. dimensions (mm)



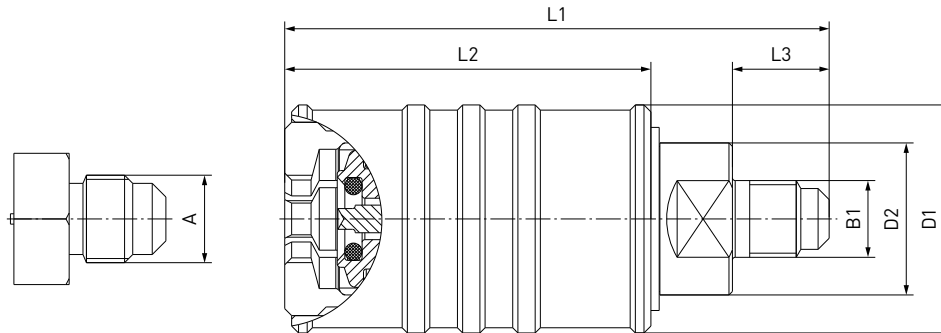
Part No.	Description	A (external thread)	B1 (external thread)	D1	D2	L1	L2	L3
C1-102992	TW111 - high pressure (red)	UNF 7/16"-20*	UNF 7/16"-20*	25	17	72	53	33
C1-102994	TW111 - low pressure (blue)	UNF 7/16"-20*	UNF 7/16"-20*	25	17	72	53	33

* acc. to SAE J513 [45°]

WEH® Connector TW111

ORDERING | WEH® TW111 Quick connector with inline media inlet, for R410A refrigerant

approx. dimensions (mm)



Part No.	Description	A (external thread)	B1 (external thread)	D1	D2	L1	L2	L3
C1-30291	TW111 - high pressure (red)	UNF 1/2"-20*	UNF 1/2"-20*	33	22	79	53	14
C1-30290	TW111 - low pressure (blue)	UNF 1/2"-20*	UNF 1/2"-20*	33	22	79	53	14
C1-34797	TW111 - high pressure (red)	UNF 1/2"-20*	UNF 7/16"-20*	33	22	79	53	14
C1-34796	TW111 - low pressure (blue)	UNF 1/2"-20*	UNF 7/16"-20*	33	22	79	53	14

* acc. to SAE J513 (45°)

Other connector sizes and versions on request.

Required information for ordering see page 7.

» WEH[®] Connector TW111

SPARE PARTS

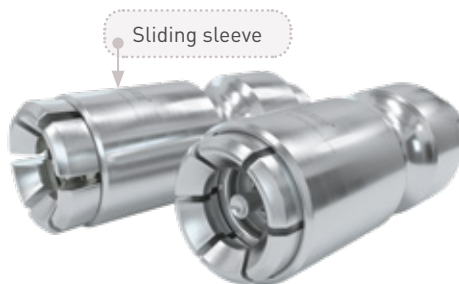
Various parts are available as spares for the TW111 quick connector:

Part No.	Description
On request	Front seal

When ordering the front seal, please indicate the part no. engraved on the connector.

WEH® Connector TW110

DESCRIPTION



Features

- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- Reduces connection times and costs
- High-grade materials

The WEH® TW110 Quick connector is specifically designed for filling and evacuating refrigerants, as for example R134A, of automotive air conditioning equipment acc. to SAE J639. The service connector is rated for a max. operating pressure of 35 bar and is completely made of stainless steel. Therefore, the connector is ideally suited for continuous operation.

The TW110 quick connector has an integrated shut-off valve reducing the release of polluting refrigerants to a minimum. Thanks to the high operating convenience offered by the sliding sleeve, tedious hand tightening causing RSI is a thing of the past. Thus workflows are significantly simplified and considerable time and cost savings are achieved.

The WEH® TW110 is equipped with a HNBR front seal. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for filling and evacuating refrigerants of automotive air conditioning equipment acc. to SAE J639 during production.

TECHNICAL DATA

Characteristic	Basic version
Max. allowable operating pressure PS*	35 bar
Temperature range	-10 °C up to +80 °C
Actuation	Manual actuation via sliding sleeve
Material	Corrosion-resistant stainless steel
Sealing material	Front seal of HNBR
Design	With integrated shut-off valve

* Please note that the pressure may be higher for some refrigerants, as i.e. R407A, R407B, R410A, R507 in case of high ambient temperatures!

Other designs on request

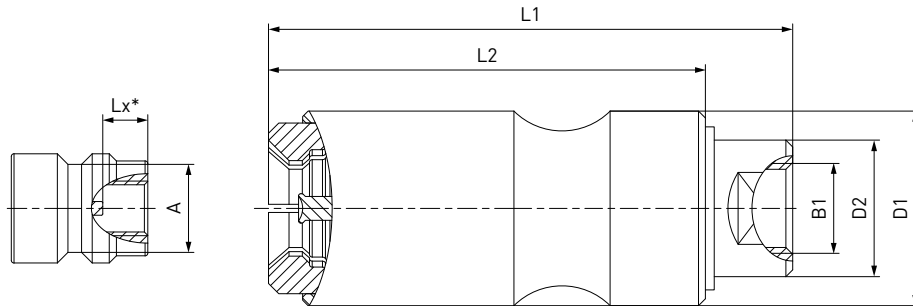
Example of use:



WEH[®] Connector TW110

ORDERING | WEH[®] TW110 Quick connector

approx. dimensions (mm)



Part No.	Description	A**	B1 (internal thread)	D1	D2	L1	L2
C1-1748	TW110	Ø 11	G1/4"	28.5	20	77	64
C1-1749	TW110	Ø 13	G1/4"	28.5	20	77	64

* Lx: the connection depth of each customer's receptacle valve may vary.
Therefore a sample or dimensioned drawing is needed for each order.

** acc. to SAE J639

Other connector sizes and versions on request.

Required information for ordering see page 7.

SPARE PARTS

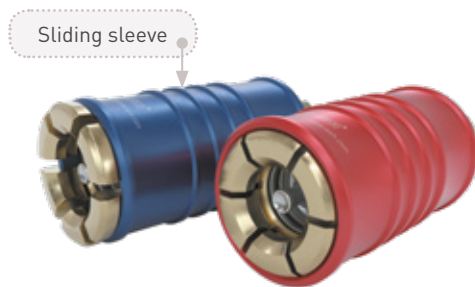
Various parts are available as spares for the TW110 quick connector:

Part No.	Description
On request	Front seal

When ordering the front seal, please indicate the part no. engraved on the connector.

WEH® Connector TW108

DESCRIPTION



Features

- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- Reduces connection times and costs
- Versions for vehicle's high or low pressure connection ports available
- High-grade materials

The WEH® TW108 Quick connector is a good reasonably priced alternative to the WEH® TW110 for filling and evacuating refrigerants, as for example R134A, during maintenance of automotive air conditioning equipment acc. to SAE J639. The connector is the ideal choice for leak-tight connections during maintenance work, continuous operation not requiring.

The TW108 quick connector has an integrated shut-off valve reducing the release of polluting refrigerants to a minimum. Thanks to the high operating convenience offered by the sliding sleeve, tedious hand tightening causing RSI is a thing of the past. Thus workflows are significantly simplified and considerable time and cost savings are achieved.

The service connector is rated for a max. operating pressure of 35 bar and available with colour-coded sliding sleeves in red or blue for high pressure or low pressure connection ports on the customer's system.

The WEH® TW108 is equipped with a HNBR front seal. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for filling and evacuating refrigerants during maintenance of automotive air conditioning equipment acc. to SAE J639.

TECHNICAL DATA

Characteristic	Basic version
Max. allowable operating pressure PS*	35 bar
Temperature range	-10 °C up to +80 °C
Actuation	Manual actuation via sliding sleeve
Material	Brass and anodized aluminium
Sealing material	Front seal of HNBR
Design	With integrated shut-off valve

* Please note that the pressure may be higher for some refrigerants, as i.e. R407A, R407B, R410A, R507 in case of high ambient temperatures!

Other designs on request

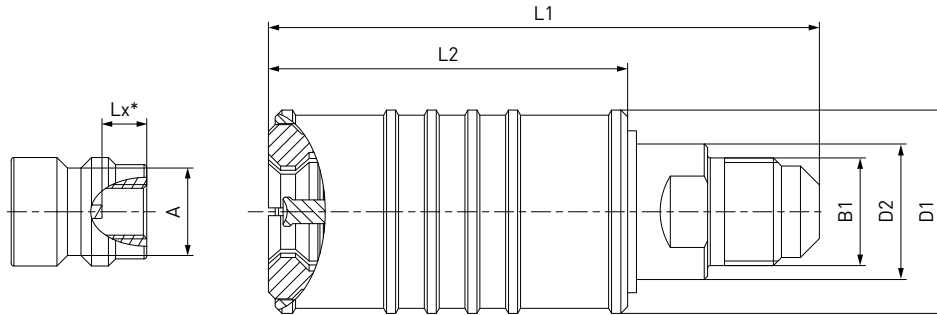
Example of use:



WEH[®] Connector TW108

ORDERING | WEH[®] TW108 Quick connector

approx. dimensions (mm)



Part No.	Description	A**	B1 (external thread)	D1	D2	L1	L2	L3
C1-14455	TW108 - high pressure (red)	∅ 13	UNF 7/16"-20***	30	20	79	53	14.0
C1-14458	TW108 - low pressure (blue)	∅ 11	UNF 7/16"-20***	30	20	79	53	14.0
C1-14455/1	TW108 - high pressure (red)	∅ 13	UNF 5/8"-18***	30	20	81	53	16.5
C1-14458/1	TW108 - low pressure (blue)	∅ 11	UNF 5/8"-18***	30	20	81	53	16.5

* Lx: the connection depth of each customer's receptacle valve may vary.
Therefore a sample or dimensioned drawing is needed for each order.

** acc. to SAE J639

*** acc. to SAE J513 (45°)

Other connector sizes and versions on request.

Required information for ordering see page 7.

SPARE PARTS

Various parts are available as spares for the TW108 quick connector:

Part No.	Description
On request	Front seal

When ordering the front seal, please indicate the part no. engraved on the connector.

WEH® Connector TW52

DESCRIPTION



Features

- Suitable for filling of CO₂ or refrigerants
- Version for **residual pressure valves or non-residual pressure valves** available
- Connection in seconds
- No hand tightening required
- High safety due to pressure-assisted piston
- Environmentally friendly - a vent pipe recirculates the vented gas (in conjunction with TVCO₂)
- WEH® Jaw locking mechanism
- High-grade materials

The WEH® TW52 Quick connector has been developed especially for filling gas cylinders with gaseous and liquid CO₂ or refrigerants. Connection to the cylinder is made within seconds without tedious screwing and unscrewing, thus preventing RSI resulting in the inflammation of tendons and abrasion of joints.

The TW52 is also suitable for filling one litre cylinders, e.g. for soda drinks.

The WEH® TW52 is equipped with a front seal of EPDM resp. polyurethane. Other sealing materials on request.

It is the customer's responsibility to clarify the media compatibility.

The TW52 is optionally available with the WEH® TVCO₂ linear valve (see accessories).

This quick connector is available for gas cylinder valves acc. to DIN, BS, NF, CGA etc.



TW52 with TVCO₂ linear valve

Application

Quick connector for filling and evacuating (except version with TVCO₂ linear valve) of gas cylinders with external thread (with or without a residual pressure valve) with CO₂ or refrigerants.

TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	5 mm
Max. allowable operating pressure PS	250 bar 150 bar (TW52 with TVCO ₂ linear valve)
Temperature range	-40 °C up to +40 °C [CO ₂]
Connection A	External thread connection acc. to the corresponding national standard e.g. DIN, CGA, BS, NF etc.
Actuation	Manual actuation via grip sleeve
Material	Corrosion resistant stainless steel and brass
Sealing material	Front seal of EPDM resp. polyurethane (C1-16560, C1-17069)
Design	With or without RPV pin

Other designs on request

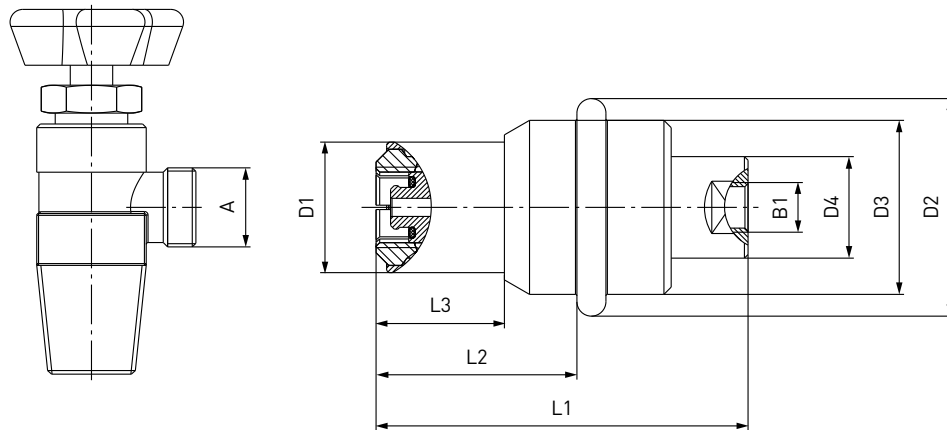
Example of use:



WEH[®] Connector TW52

ORDERING | WEH[®] TW52 Quick connector for non-residual pressure valves

approx. dimensions (mm)

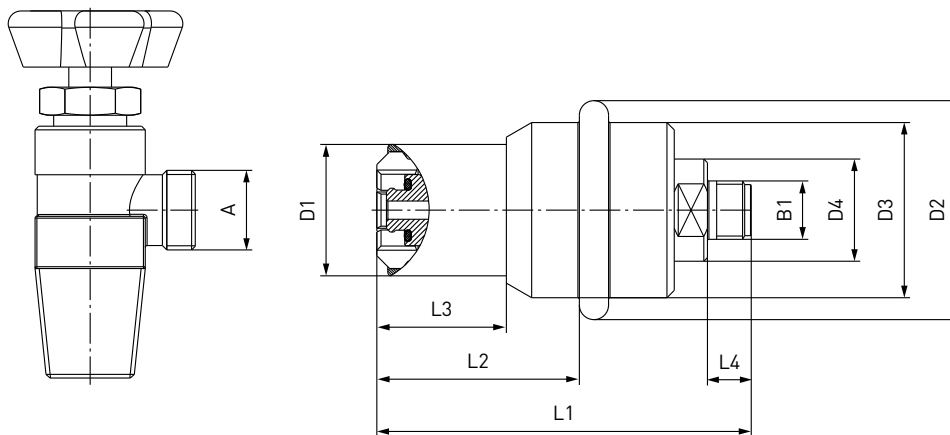


Part No.	Description	A [external thread]	B1 [internal thread]	D1	D2	D3	D4	L1	L2	L3
C1-16560-X01	TW52	G1/2"	G1/4"	38	60	48	28	103	55.5	35.5
C1-17069	TW52	TR21x4.5	G1/4"	36	60	48	28	103	55.5	35.5
C1-16564-X01	TW52	W21.8x1/14"*	G1/4"	36	60	48	28	103	55.5	35.5

* acc. to DIN 477

ORDERING | WEH[®] TW52 Quick connector for non-residual pressure valves (suitable for TVCO₂ linear valve)

approx. dimensions (mm)



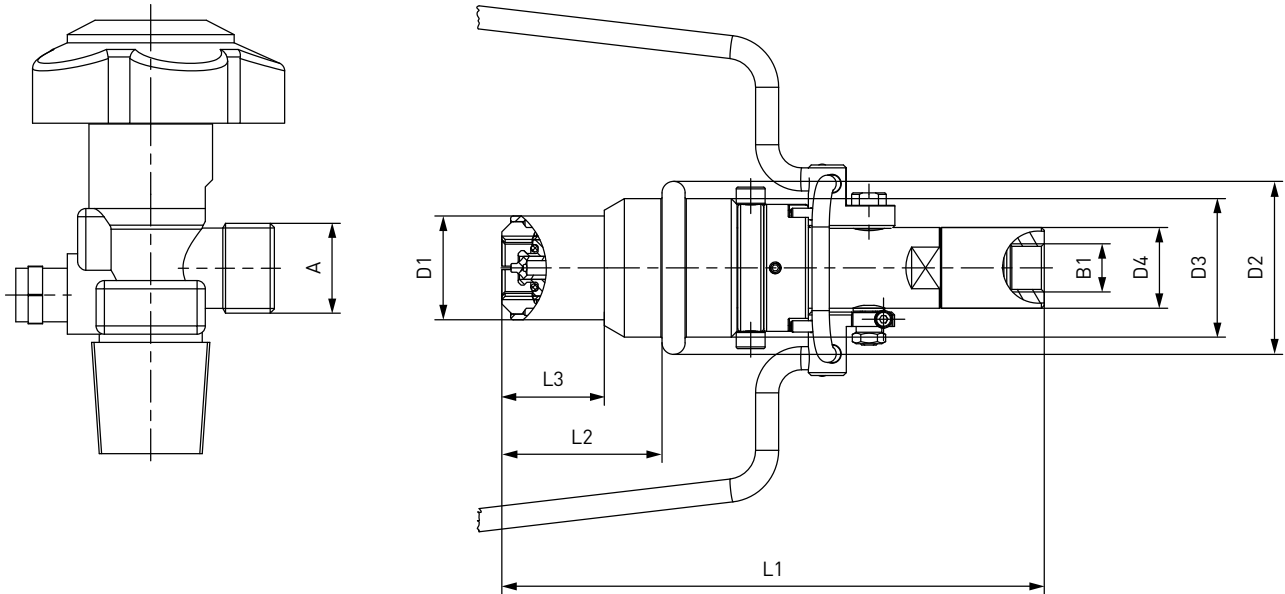
Part No.	Description	A [external thread]	B1 [external thread]	D1	D2	D3	D4	L1	L2	L3	L4
C1-16563	TW52	W21.8x1/14"*	M16x1.5	36	60	48	28	103	55.5	35.5	12

* acc. to DIN 477

WEH® Connector TW52

ORDERING | WEH® TW52 Quick connector for residual pressure valves (incl. linear valve)

approx. dimensions (mm)



Part No.	Description	A (external thread)	B1 (internal thread)	D1	D2	D3	D4	L1	L2	L3
C1-68486	TW52	W21.8x1/14"*	G3/8"	36	60	48	28	188	55.5	35.5

* acc. to DIN 477

Other connector sizes and versions on request.

Required information for ordering see page 7.

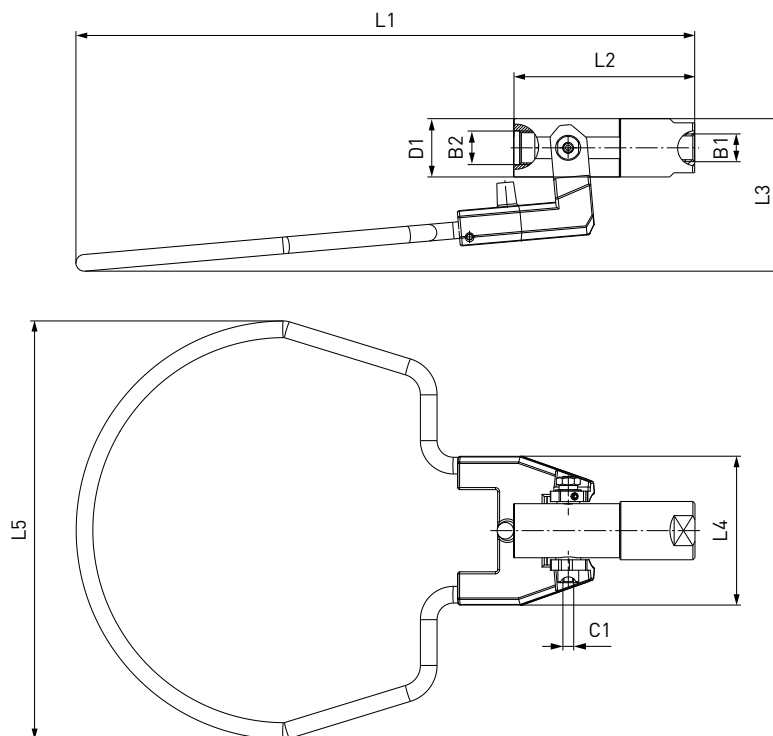
WEH[®] Connector TW52

ACCESSORIES

The following accessories are available for the WEH[®] TW52:

WEH[®] TVCO₂ Linear valve

The WEH[®] TVCO₂ Linear valve enables to start or finish filling. Simply connect the TVCO₂ to the inlet 'B1' of the TW52 quick connector. The residual gas can be vented completely to the system via a recirculation hose. This prevents CO₂ from escaping into the atmosphere (greenhouse effect).



Part No.	Description	B1 (internal thread)	B2 (internal thread)	C1	D1	L1	L2	L3	L4	L5
C1-34605	TVCO ₂	G1/4"	M16x1.5	M5	28	297	87	73	71.5	201

Other connector sizes and versions on request.

SPARE PARTS

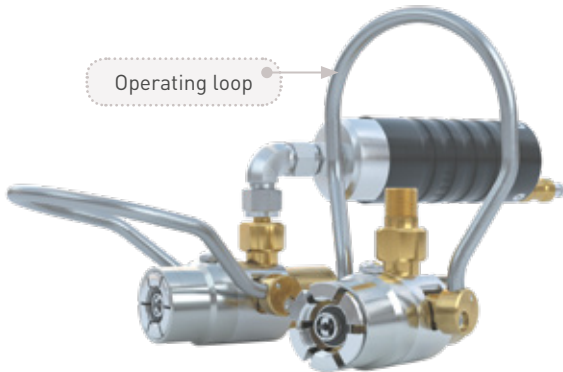
Various parts are available as spares for the TW52 quick connector:

Part No.	Description
On request	Front seal

When ordering the front seal, please indicate the part no. engraved on the connector.

WEH® Connector TW920

DESCRIPTION



Features

- For cylinder valves with external thread and residual pressure valve
- Connection in seconds
- No hand tightening required
- Simplifies the connecting and filling procedure
- Suitable for right or left handed operation
- Pin within the valve is actuated automatically
- RPV is not removed from the valve so it can be used again
- WEH® Jaw locking mechanism

The WEH® TW920 Quick connector for filling refrigerants overcomes the need to remove the cylinder valve cartridge when filling thus facilitating cylinder connection and filling.

When applying pressure, the piston of the WEH® Connector moves forward and pulls out the pin of the residual pressure valve. Then filling procedure can start.

WEH® TW920 with pneumatic linear valve

As an option the TW920 quick connector is available with an integrated pneumatic linear valve with a sliding sleeve valve for the pilot pressure port 'P1' and a venting port 'C1'. In order to vent back the residual gas, a venting line can also be fitted.



TW920 with linear valve

The WEH® TW920 is equipped with a HNBR front seal. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for filling refrigerants of cylinders with external thread and residual pressure valve.

TECHNICAL DATA

Characteristic	Basic version
Max. allowable operating pressure PS	40 bar
Pilot pressure	6 - 8 bar (for opening residual pressure valve)
Temperature range	-10 °C up to +80 °C
Connection A	W21.8x1/14" for special cylinder valve with pin to pull out
Actuation	Manual actuation via operating loop (loop depending on type of cylinder valve)
Material	Brass and corrosion-resistant stainless steel; protection sleeve (linear valve) of POM
Sealing material	Front seal of HNBR

Other designs on request

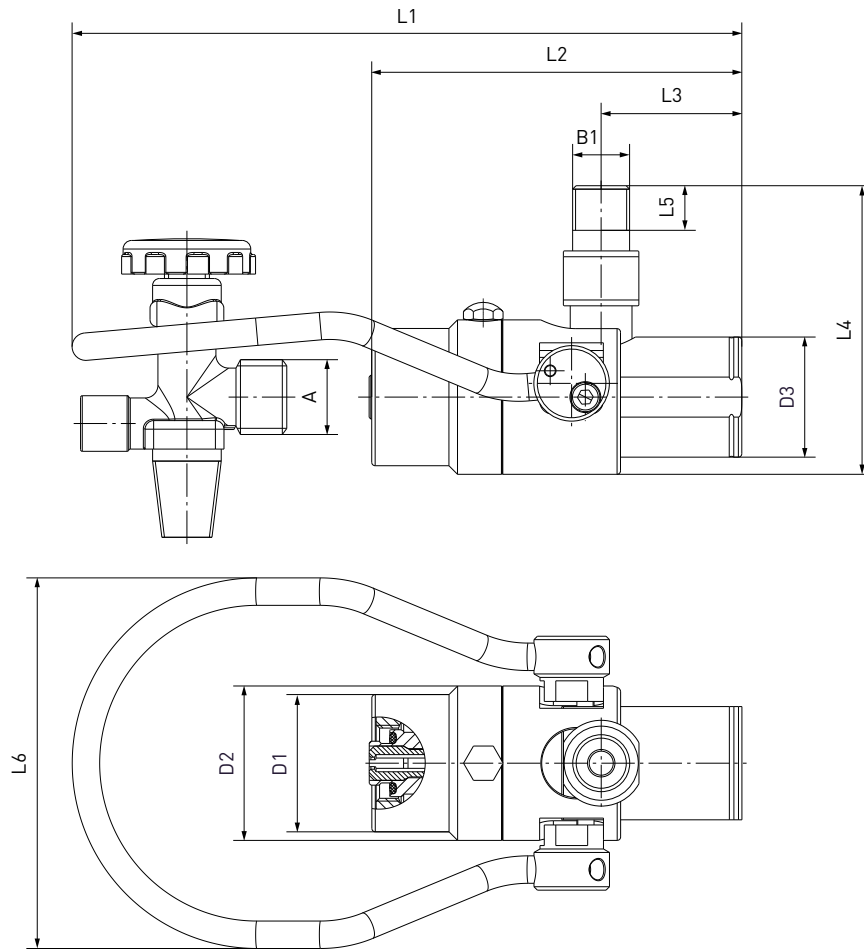
Example of use:



WEH[®] Connector TW920

ORDERING | WEH[®] TW920 Quick connector

approx. dimensions (mm)

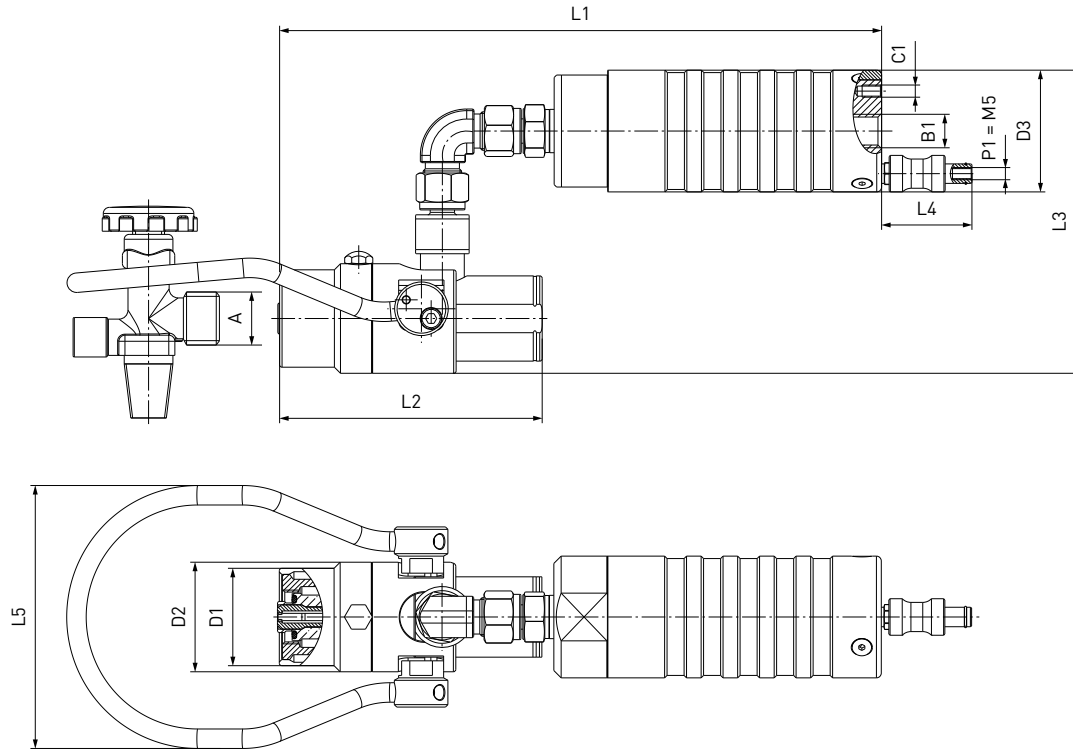


Part No.	Description	A (external thread)	B1 (external thread)	D1	D2	D3	L1	L2	L3	L4	L5	L6
C1-77826	TW920	W21.8x1/14"	NPT 3/8"	40	45	35	195	108	41	84	13	108

WEH® Connector TW920

ORDERING | WEH® TW920 Quick connector with pneumatic linear valve

approx. dimensions (mm)



Part No.	Description	A (external thread)	B1 (internal thread)	C1 (internal thread)	D1	D2	D3	L1	L2	L3	L4	L5
C1-48037	TW920 incl. linear valve	W21.8x1/14"	G1/4"	M5	40	45	50	247.5	108	124.5	37	108

Other connector sizes and versions on request.

Required information for ordering see page 7.

ACCESSORIES

The following accessories are available for the WEH® TW920:

WEH® TD1 Swivel joint

The TD1 swivel joint prevents twisting of the hose and enables the axial aligning of the connector.



Part No.	Description	B1	B2
On request	TD1	On request	On request

» WEH[®] Connector TW920

Actuations

For the TW920 various actuations, e.g. loops, wire ropes etc. are available in different sizes and forms.
Please contact us!

Adaptors

Adaptors for connecting the quick connector to the filling hose are available on request.

SPARE PARTS

Various parts are available as spares for the TW920 quick connector:

Part No.	Description
On request	Front seal

When ordering the front seal, please indicate the part no. engraved on the connector.

WEH® Connector TW141

DESCRIPTION



Features

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

The WEH® TW141 Quick connector provides pressure-tight connections on straight tubes of copper, steel or aluminium 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. WEH® TW141 is fitted with an internal safety feature which prevents the connector from being removed until a pressure lower than 5 bar is attained.

The WEH® TW141 is equipped with a NBR front seal. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for pressure and function testing of straight tubes (sealing on external tube diameter), as for example leak testing of heat exchangers, air conditioning components and tube assemblies.

Filling of closed cooling circuits with refrigerants.

TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	3 to 5 mm, acc. to design
Max. allowable operating pressure PS	Vacuum up to 100 bar
Temperature range	-10 °C up to +80 °C
Leak rate	1×10^{-3} mbar x l/s
Actuation	Manual actuation via hand lever
Surface finish of test piece	Rz8 µm
Material hardness of test piece	28 HRC
Material	Clamping jaws: Corrosion resistant stainless steel Housing: Anodized aluminium
Sealing material	Front seal of NBR

Other designs on request

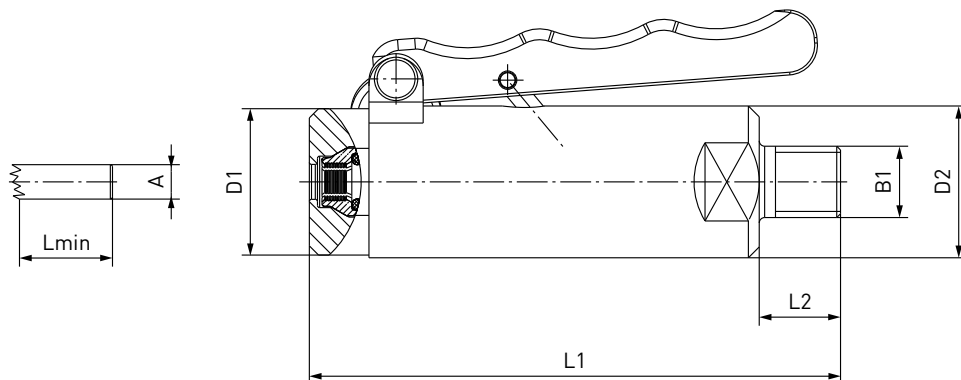
Example of use:



WEH[®] Connector TW141

ORDERING | WEH[®] TW141 Quick connector – body size 1

approx. dimensions (mm)



Part No.	Body size	Sealing range external tube Ø A	Tolerance	B1 (external thread)	D1	D2	L1	L2	Lmin*
C1-17749	1	4.8 (3/16")	± 0.2	NPT 1/4"	27	28	100	15	19
C1-18575	1	5.0	± 0.2	NPT 1/4"	27	28	100	15	19
C1-14967	1	6.0	± 0.2	NPT 1/4"	27	28	100	15	19
C1-17606	1	6.35 (1/4")	± 0.2	NPT 1/4"	27	28	100	15	19
C1-17750	1	7.9 (5/16")	± 0.2	NPT 1/4"	27	28	100	15	19
C1-14968	1	8.0	± 0.2	NPT 1/4"	27	28	100	15	19

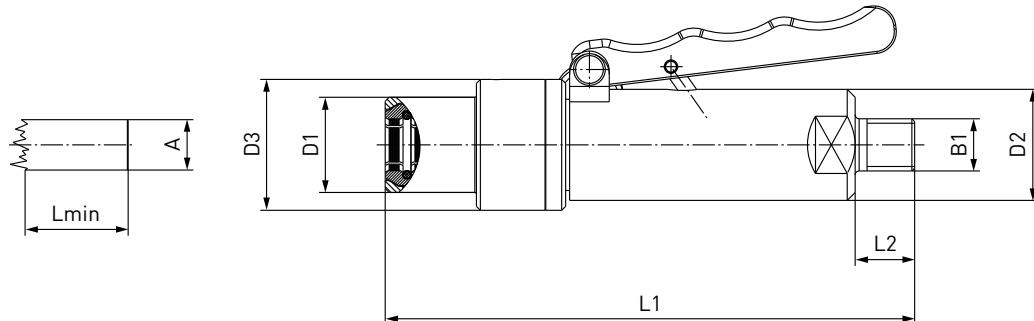
* Lmin: minimum insertion length of test piece

Note: required roundness of external tube diameter max. 0.25 mm

WEH® Connector TW141

ORDERING | WEH® TW141 Quick connector – body size 2 + 3

approx. dimensions (mm)



Part No.	Body size	Sealing range external tube \varnothing A	Tolerance	B1 (external thread)	D1	D2	D3	L1	L2	Lmin*
C1-17536	2	9.5 (3/8")	± 0.1	NPT 1/4"	21	28	33	134	15	19
C1-16773	2	10.0	± 0.1	NPT 1/4"	19	28	33	134	15	15
C1-16774	2	12.0	± 0.1	NPT 1/4"	21	28	33	134	15	15
C1-17751	2	12.7 (1/2")	± 0.1	NPT 1/4"	24	28	33	134	15	15
C1-16775	2	15.0	± 0.1	NPT 1/4"	24	28	33	134	15	15
C1-17959	3	15.9 (5/8")	± 0.1	NPT 1/4"	32	28	49	134	15	15
C1-16776	3	16.0	± 0.1	NPT 1/4"	32	28	49	134	15	15
C1-16777	3	18.0	± 0.1	NPT 1/4"	34	28	49	134	15	15
C1-18006	3	19.05 (3/4")	± 0.1	NPT 1/4"	34	28	49	134	15	15
C1-16778	3	22.0	± 0.1	NPT 1/4"	38	28	49	134	15	15
C1-17939	3	22.2 (7/8")	± 0.1	NPT 1/4"	38	28	49	134	15	15

* Lmin: minimum insertion length of test piece

Note: required roundness of external tube diameter max. 0.25 mm

Other connector sizes and versions on request.

Required information for ordering see page 7.

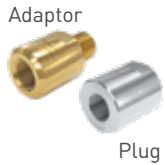
WEH[®] Connector TW141

ACCESSORIES

The following accessories are available for the WEH[®] TW141:

Adaptor / Plug

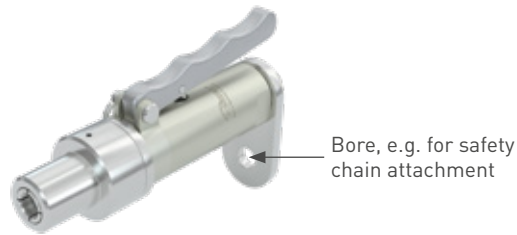
For the TW141 different adaptors for other media inlets are available. If the connector is to be used as a plug, the media inlet 'B1' can be sealed.



Part No.	Description	Connection
E29-30810	Adaptor	NPT 1/4" internal thread - G1/4" internal thread
E201-30366	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
E29-45285	Anchor plate for TW141

SPARE PARTS

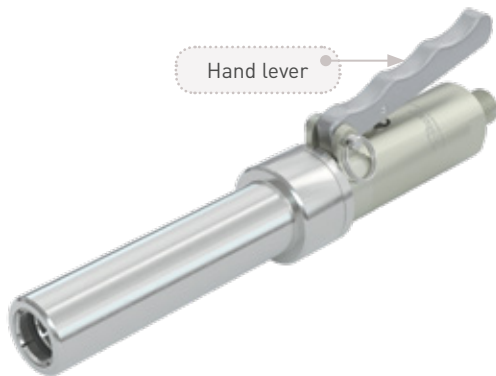
Various parts are available as spares for the TW141 quick connector:

Part No.	Description
On request	Front seal

When ordering the front seal, please indicate the part no. engraved on the connector.

WEH® Connector TW141L

DESCRIPTION



Features

- Extended design for straight tubes that are very close to each other
- Connection in seconds
- No hand tightening required
- For connection onto straight tubes, sealing on the external diameter
- No lateral forces generated on connection
- WEH® Jaw locking mechanism
- Ergonomic design
- High-grade materials

The WEH® TW141L Quick connector has been especially developed for difficult to access test pieces. The extended design allows connection to straight tubes of copper, steel or aluminium that are very close to each other - as for example heat exchangers.

The TW141L is a lever-actuated connector, which creates no lateral forces that can distort the test piece or filling port when connecting and disconnecting. WEH® TW141L is fitted with an internal safety feature which prevents the connector from being removed until a pressure lower than 5 bar is attained.

The WEH® TW141L is equipped with a NBR front seal. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for pressure and function testing of straight tubes (sealing on external tube diameter), as for example leak testing of heat exchangers, air conditioning components and tube assemblies. Filling of closed cooling circuits with refrigerants.

TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	5 mm
Max. allowable operating pressure PS	Vacuum up to 100 bar
Temperature range	-10 °C up to +80 °C
Leak rate	1×10^{-3} mbar x l/s
Actuation	Manual actuation via hand lever
Surface finish of test piece	Rz8 µm
Material hardness of test piece	28 HRC
Material	Clamping jaws: Corrosion resistant stainless steel Housing: Anodized aluminium
Sealing material	Front seal of NBR

Other designs on request

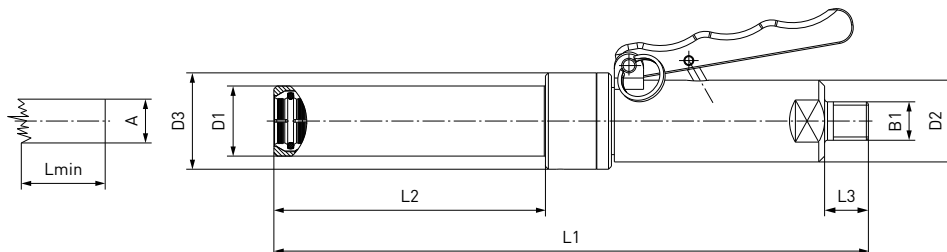
Example of use:



WEH[®] Connector TW141L

ORDERING | WEH[®] TW141L Quick connector

approx. dimensions (mm)



Part No.	Sealing range external tube \varnothing A	Tolerance	B1 (external thread)	D1	D2	D3	L1	L2	L3	Lmin*
C1-16422	15.0	± 0.1	NPT 1/4"	24	28	33	204	93	15	15

* Lmin: minimum insertion length of test piece

Note: required roundness of external tube diameter max. 0.25 mm

Other connector sizes and versions on request.

Required information for ordering see page 7.

WEH® Connector TW141L

ACCESSORIES

The following accessories are available for the WEH® TW141L:

Adaptor / Plug

For the TW141L different adaptors for other media inlets are available.
If the connector is to be used as a plug, the media inlet 'B1' can be sealed.

Adaptor

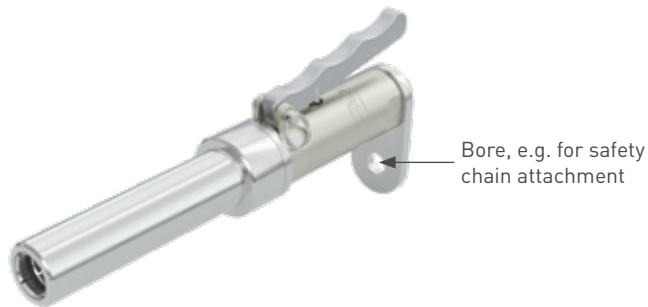


Plug

Part No.	Description	Connection
E29-30810	Adaptor	NPT 1/4" internal thread - G1/4" internal thread
E201-30366	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 TW141L and which can be used for all sealing ranges.



Part No.	Description
E29-45285	Anchor plate for TW141

» WEH[®] Connector TW141L

SPARE PARTS

Various parts are available as spares for the TW141L quick connector:

Part No.	Description
On request	Front seal

When ordering the front seal, please indicate the part no. engraved on the connector.

WEH® Connector TW221

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
- High-grade materials

The WEH® TW221 Quick connector provides a pressure-tight connection to bores and straight tubes of copper, steel or aluminium within seconds. The connector is suitable for pressure and vacuum testing with oil free air or gaseous media. The manually operated connector is secured to the component by its connection seal. In this case it is important that during testing, the test piece and seals have to remain absolutely dry to ensure proper functioning and sealing.

The WEH® TW221 is equipped with a SBR front seal. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for pressure and vacuum testing of straight tubes and bores (sealing the internal tube diameter), as for example pressure vessels, valves, transducers, compressors, condensers, tubing systems etc.

TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	2 to 4 mm, acc. to design
Max. allowable operating pressure PS	3 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1×10^{-3} mbar x l/s
Surface finish of test piece	Rz8 µm
Material	Body size 1 + 2: Anodized aluminium Body size 3: Stainless steel
Sealing material	Front seal of SBR

Other designs on request

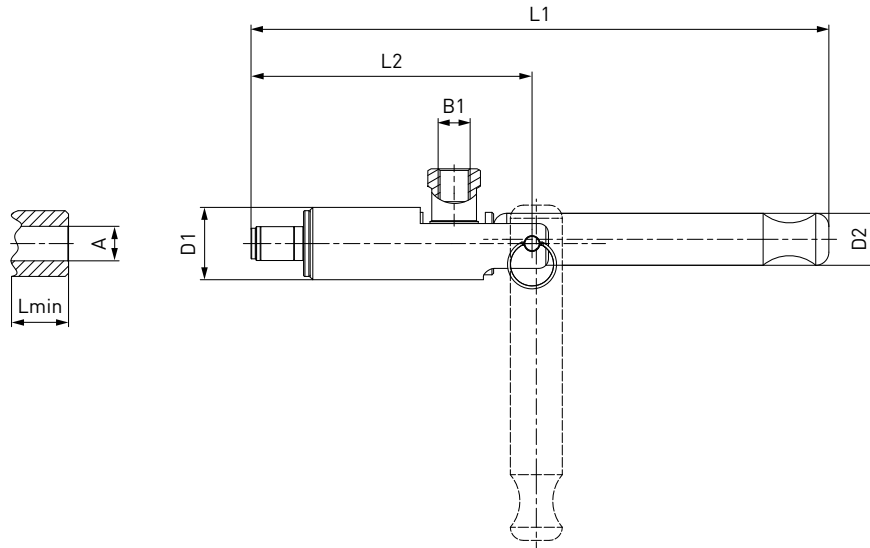
Example of use:



WEH[®] Connector TW221

ORDERING | WEH[®] TW221 Quick connector – body size 1 + 2

approx. dimensions (mm)



Part No.	Body size	Sealing range internal tube Ø A	B1 (internal thread)	D1	D2	L1	L2	Lmin*	Replacement seal set** (consisting of 5 front seals + 5 o-rings)
C1-82309	1	9.5 - 10.4	G1/8"	22	16	176	86	16	B200B-89775
C1-82814	1	10.5 - 11.4	G1/8"	22	16	176	86	16	B200B-97248
C1-82305	1	11.5 - 12.4	G1/8"	22	16	176	86	16	B200B-90418
C1-82304	1	12.5 - 13.4	G1/8"	22	16	176	86	16	B200B-89774
C1-84246	2	13.5 - 14.4	G1/8"	22	16	186	96	29	B200B-91391
C1-84247	2	14.5 - 15.4	G1/8"	22	16	186	96	29	B200B-89737
C1-84248	2	15.5 - 16.4	G1/8"	22	16	186	96	29	B200B-90420
C1-84249	2	16.5 - 17.4	G1/8"	22	16	186	96	29	B200B-98586
C1-84251	2	17.5 - 18.4	G1/8"	22	16	186	96	29	B200B-95777
C1-82300	2	18.5 - 19.4	G1/8"	22	16	186	96	29	B200B-90416
C1-84252	2	19.5 - 20.4	G1/8"	22	16	186	96	29	B200B-90442
C1-82307	2	20.5 - 21.4	G1/8"	22	16	186	96	29	B200B-135789
C1-82308	2	21.5 - 22.4	G1/8"	22	16	186	96	29	B200B-95700
C1-84253	2	22.5 - 23.4	G1/8"	22	16	186	96	29	B200B-95894
C1-83865	2	23.5 - 24.4	G1/8"	22	16	186	96	29	B200B-84806

* Lmin: minimum insertion length of test piece

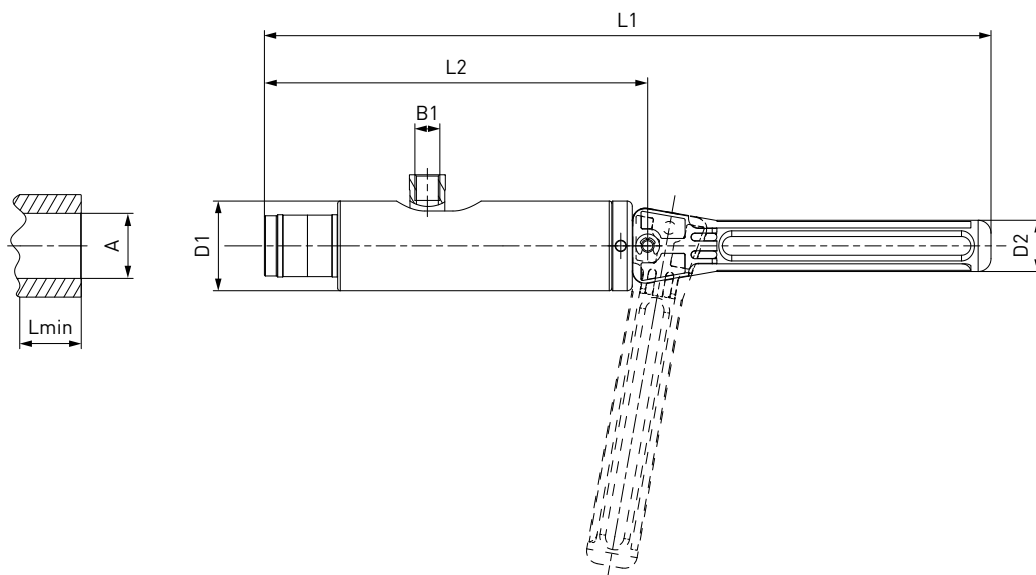
** Replacement seal sets for body size 2 with a sealing range > 13.5 mm always include 10 front seals

Note: required roundness of internal tube diameter max. 0.25 mm

WEH® Connector TW221

ORDERING | WEH® TW221 Quick connector – body size 3

approx. dimensions (mm)



Part No.	Body size	Sealing range internal tube Ø A	B1 [internal thread]	D1	D2	L1	L2	Lmin*	Replacement seal set (consisting of 10 front seals + 5 o-rings)
C1-86878	3	24.5 - 25.4	G1/8"	35	20	285	150	30	B200B-89777
C1-84141	3	25.5 - 26.4	G1/8"	35	20	285	150	30	B200B-91135
C1-88744	3	26.5 - 27.4	G1/8"	35	20	285	150	30	B200B-97374
C1-86190	3	27.5 - 28.4	G1/8"	35	20	285	150	30	B200B-89778
C1-87141	3	28.5 - 29.4	G1/8"	35	20	285	150	30	B200B-135788
C1-86191	3	29.5 - 30.4	G1/8"	35	20	285	150	30	B200B-96452

* Lmin: minimum insertion length of test piece

Note: required roundness of internal tube diameter max. 0.25 mm

Other connector sizes and versions on request.

Required information for ordering see page 7.

» WEH[®] Connector TW221

ACCESSORIES

The following accessories are available for the WEH[®] TW221:

Screw plug

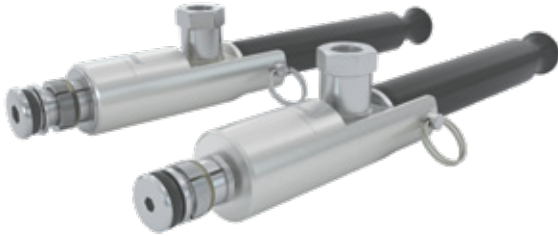
If the WEH[®] Connector is to be used as a plug, the media inlet 'B1' will be sealed with a screw plug of brass (PVC sealing ring) for low pressure range. It is recommended that the media compatibility of the seal be tested by the customer!



Part No.	Description	Connection (external thread)	Pressure range
E69-9200	Screw plug (low pressure)	G1/8"	0 - 50 bar

WEH® Connector TW230

DESCRIPTION



Features

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

With the WEH® TW230 Quick connector straight tubes of copper, steel or aluminium can be easily tested for leak tightness in just seconds. The radial sealing system reliably seals inside tube and bore diameters from 9.5 mm to 22.2 mm and bridges tube tolerances of up to ± 0.25 mm (required roundness of internal tube diameter max. 0.25 mm).

Connection to the straight tube is established by manual actuation of the clamping lever. Thanks to the WEH® Jaw locking mechanism the connector is securely located in the straight tube and the wear of the test piece is minimized as surface pressure is very low.

The TW230 is also suited for underwater, pressure decay and helium tests.

The WEH® TW230 is equipped with a NBR front seal. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

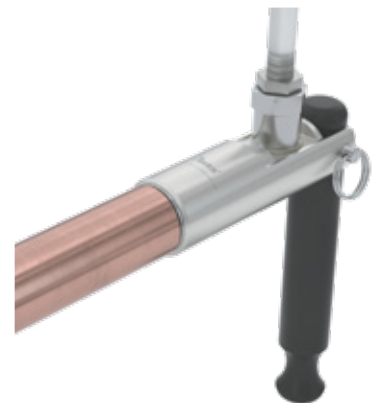
Quick connector for pressure and vacuum testing of straight tubes and bores (sealing the internal tube diameter), as for example heat exchangers, pressure vessels, valves, transducers, compressors, condensers, evaporation coils, component and tubing systems, air conditioners, heating systems etc.

TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	2 to 5 mm, acc. to design
Max. allowable operating pressure PS	Vacuum up to 70 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1×10^{-3} mbar x l/s
Surface finish of test piece	Rz8 μ m
Material hardness of test piece	28 HRC
Material	Clamping jaws: Corrosion-resistant stainless steel, hardened Housing: Anodized aluminium
Sealing material	Front seal of NBR

Other designs on request

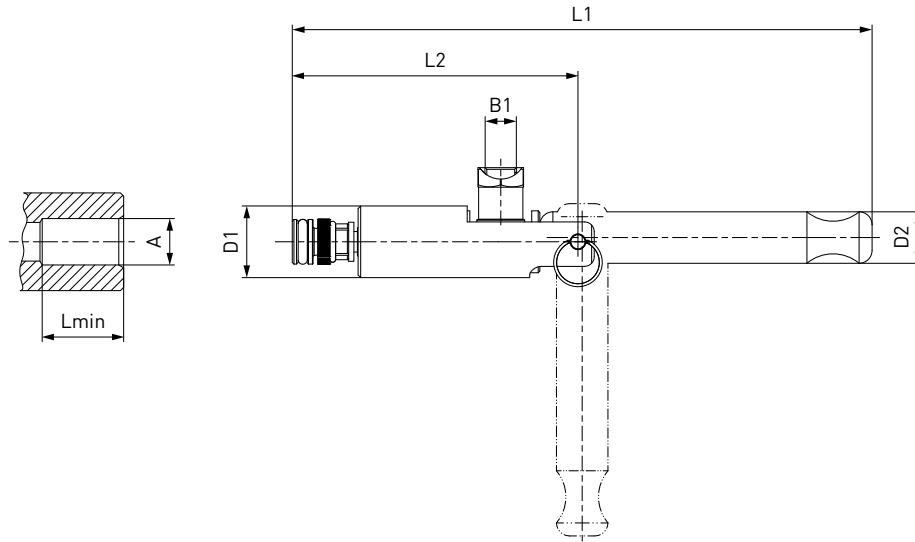
Example of use:



WEH[®] Connector TW230

ORDERING | WEH[®] TW230 Quick connector – body size 1

approx. dimensions (mm)



Part No.	Body size	Sealing range internal tube \varnothing $A \pm 0.25$	B1 (internal thread)	D1	D2	L1	L2	Lmin*	Replacement seal set (consisting of 5 front seals + 1 retaining ring for the clamping jaws)
C1-128668	1	9.5 (3/8")	G1/8"	22	16	178	87.5	13.5	B200B-129358
C1-128734	1	10.0	G1/8"	22	16	178	87.5	13.5	B200B-129364
C1-128432	1	10.5	G1/8"	22	16	178	87.5	13.5	B200B-129369
C1-128742	1	11.0 (7/16")	G1/8"	22	16	178	87.5	13.5	B200B-129373
C1-128745	1	11.5	G1/8"	22	16	178	87.5	13.5	B200B-129376
C1-128750	1	12.0	G1/8"	22	16	178	87.5	13.5	B200B-129381
C1-128754	1	12.5	G1/8"	22	16	178	87.5	13.5	B200B-129385
C1-128756	1	12.7 (1/2")	G1/8"	22	16	178	87.5	13.5	B200B-129387
C1-128758	1	13.0	G1/8"	22	16	178	87.5	13.5	B200B-129389
C1-128763	1	13.5	G1/8"	22	16	178	87.5	13.5	B200B-129394
C1-128767	1	14.0	G1/8"	22	16	178	87.5	13.5	B200B-129398

* Lmin: minimum insertion length of test piece

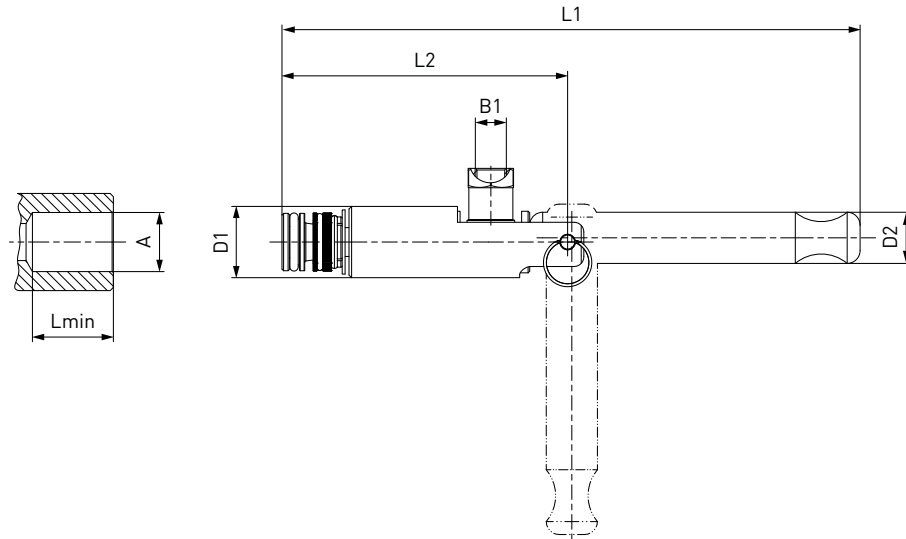
When ordering, please state if testing reinforced fibre glass or plastic test pieces.

Note: required roundness of internal tube diameter max. 0.25 mm

WEH® Connector TW230

ORDERING | WEH® TW230 Quick connector – body size 2

approx. dimensions (mm)



Part No.	Body size	Sealing range internal tube \varnothing $A \pm 0.25$	B1 (internal thread)	D1	D2	L1	L2	Lmin*	Replacement seal set** (consisting of 5 front seals + 2 retaining rings for the clamping jaws)
C1-128770	2	14.5	G1/8"	22	16	178.5	88	16.0	B200B-129401
C1-128774	2	15.0	G1/8"	22	16	178.5	88	16.0	B200B-129405
C1-128778	2	15.5	G1/8"	22	16	178.5	88	16.0	B200B-129409
C1-128782	2	15.9 (5/8")	G1/8"	22	16	178.5	88	16.0	B200B-129414
C1-128783	2	16.0	G1/8"	22	16	178.5	88	16.0	B200B-129415
C1-128789	2	16.5	G1/8"	22	16	178.5	88	16.0	B200B-129421
C1-128792	2	17.0	G1/8"	22	16	178.5	88	16.0	B200B-129424
C1-128796	2	17.5	G1/8"	22	16	178.5	88	16.0	B200B-129434
C1-128798	2	18.0	G1/8"	22	16	178.5	88	16.0	B200B-129436
C1-128802	2	18.5	G1/8"	22	16	178.5	88	16.0	B200B-129441
C1-128805	2	19.05 (3/4")	G1/8"	22	16	178.5	88	16.0	B200B-129445
C1-128809	2	19.5	G1/8"	22	16	178.5	88	16.0	B200B-129449
C1-128810	2	20.0	G1/8"	22	16	178.5	88	16.0	B200B-129450
C1-128813	2	20.5	G1/8"	22	16	178.5	88	16.0	B200B-129453
C1-128816	2	21.0	G1/8"	22	16	178.5	88	16.0	B200B-129456
C1-128818	2	21.5	G1/8"	22	16	178.5	88	16.0	B200B-129458
C1-128820	2	22.0	G1/8"	22	16	178.5	88	16.0	B200B-129460
C1-128821	2	22.2 (7/8")	G1/8"	22	16	178.5	88	16.0	B200B-129461

* Lmin: minimum insertion length of test piece

** Replacement seal sets for body size 2 with a sealing range < 15.9 mm only contain 1 retaining ring for the clamping jaws

Additional sizes are available up to sealing range 40.0 mm.

When ordering, please state if testing reinforced fibre glass or plastic test pieces.

Note: required roundness of internal tube diameter max. 0.25 mm

The TW230 quick connector is available in 0.5 mm steps starting from 9.5 mm up to 40.0 mm as well as all standard imperial sizes. Please contact us!

Other connector sizes and versions on request. Required information for ordering see page 7.

» WEH[®] Connector TW230

ACCESSORIES

The following accessories are available for the WEH[®] TW230:

Screw plug

If the WEH[®] Connector is to be used as a plug, the media inlet 'B1' will be sealed with a screw plug of brass (PVC sealing ring) for low pressure range or alternatively of stainless steel (O-ring of NBR 70° Shore) for high pressure range. It is recommended that the media compatibility of the seal be tested by the customer!

Low pressure

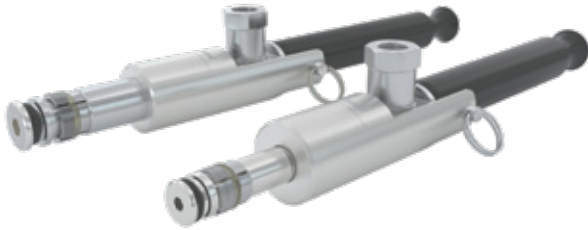


High pressure

Part No.	Description	Connection (external thread)	Pressure range
E69-9200	Screw plug (low pressure)	G1/8"	0 - 50 bar
W9329	Screw plug (high pressure)	G1/8"	50 - 350 bar

WEH® Connector TW231

DESCRIPTION



Features

- Sealing internal diameters of expanded tubes
- Wide range of tube tolerances up to ± 0.25 mm
- Self-retaining up to max. 70 bar
- Connection in seconds
- No hand tightening required
- No seal adjustment required
- WEH® Jaw locking mechanism
- High-grade materials

The WEH® TW231 Quick connector has been specially developed for sealing internal diameters of tubes having expanded end profiles and is the perfect tool for underwater, pressure decay and helium testing of copper, steel or aluminium tubes. Thanks to the extended shaft, the connector reliably seals inside the tube right behind the tube end profile thus avoiding an unsafe connection to the profile itself and ensuring a safe and pressure-tight connection independent from the surface finish of the expanded tube end. Connection to the straight tube is established by actuating the manual clamping lever. The WEH® Jaw locking mechanism ensures that the connector remains securely located in the test piece - even under wet conditions.

The TW231 reliably seals tubes with internal diameters of 9.5 mm to 22.2 mm compensating for tube tolerances of up to ± 0.25 mm (required roundness of internal tube diameter max. 0.25 mm). The WEH® TW231 is equipped with a NBR front seal. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for pressure and vacuum testing of straight tubes with expanded tube ends (sealing the internal tube diameter), as for example copper tubes in tubing and heating systems, heat exchangers, air conditioners, compressors, components with tube connection etc.

TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	2 to 5 mm, acc. to design
Max. allowable operating pressure PS	Vacuum up to 70 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1×10^{-3} mbar x l/s
Surface finish of test piece	Roughness \leq Rz8 μ m
Material hardness of test piece	Max. hardness 28 HRC
Material	Clamping jaws: Corrosion-resistant stainless steel, hardened Housing: Anodized aluminium
Sealing material	Front seal of NBR

Other designs on request

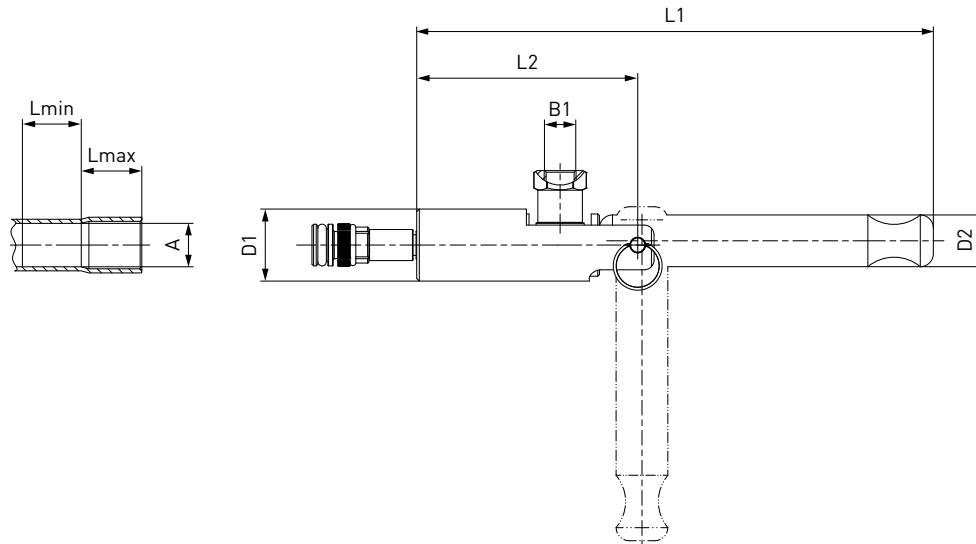
Example of use:



WEH[®] Connector TW231

ORDERING | WEH[®] TW231 Quick connector – Ø A 9.5 mm up to Ø A 14.0 mm

approx. dimensions (mm)



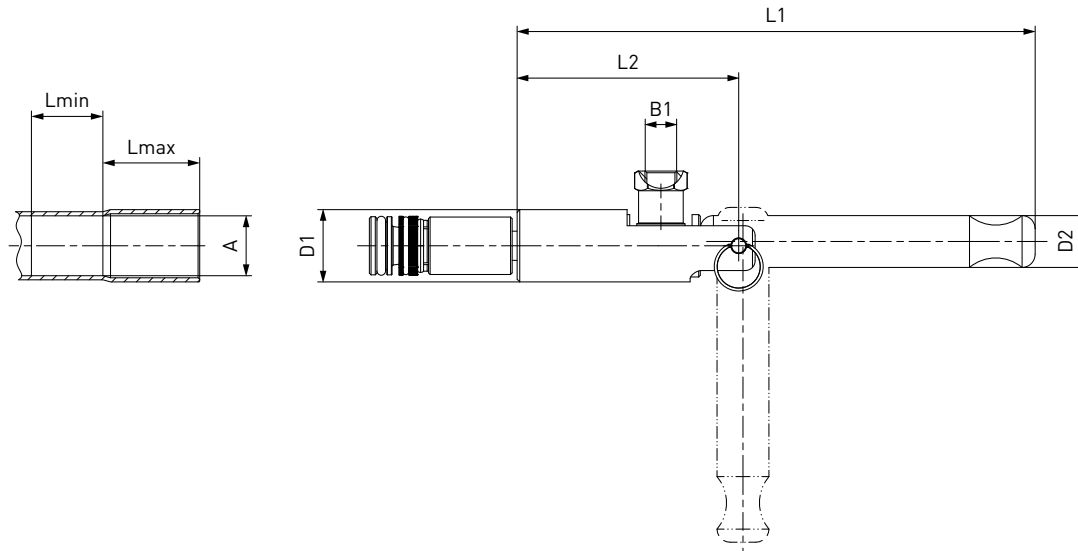
Part No.	Sealing range internal tube Ø A ± 0.25	B1 (internal thread)	D1	D2	L1	L2	Min. length required behind end profile Lmin	Max. allowable length of end profile Lmax	Replacement seal set (consisting of 5 front seals + 1 retaining ring for the clamping jaws)
C1-135770	9.5	G1/8"	22	16	158	67.5	13.5	18.5	B200B-129358
C1-135775	10.0	G1/8"	22	16	158	67.5	13.5	18.5	B200B-129364
C1-135776	11.0	G1/8"	22	16	158	67.5	13.5	18.5	B200B-129373
C1-135777	11.5	G1/8"	22	16	158	67.5	13.5	18.5	B200B-129376
C1-135778	12.0	G1/8"	22	16	158	67.5	13.5	18.5	B200B-129381
C1-135771	12.7	G1/8"	22	16	158	67.5	13.5	18.5	B200B-129387
C1-135779	13.0	G1/8"	22	16	158	67.5	13.5	18.5	B200B-129389
C1-135780	14.0	G1/8"	22	16	158	67.5	13.5	18.5	B200B-129398

Note: required roundness of internal tube diameter max. 0.25 mm

WEH® Connector TW231

ORDERING | WEH® TW231 Quick connector – Ø A 14.5 mm up to Ø A 22.2 mm

approx. dimensions (mm)



Part No.	Sealing range internal tube Ø A ± 0.25	B1 (internal thread)	D1	D2	L1	L2	Min. length required behind end profile Lmin	Max. allowable length of end profile Lmax	Replacement seal set* (consisting of 5 front seals + 2 retaining rings for the clamping jaws)
C1-135781	14.5	G1/8"	22	16	158	67.5	13.5	26.5	B200B-129401
C1-135782	15.0	G1/8"	22	16	158	67.5	13.5	26.5	B200B-129405
C1-135772	15.9	G1/8"	22	16	158	67.5	15.5	24.5	B200B-129414
C1-135783	16.0	G1/8"	22	16	158	67.5	15.5	24.5	B200B-129415
C1-135784	18.0	G1/8"	22	16	158	67.5	15.5	29.5	B200B-129436
C1-135773	19.05	G1/8"	22	16	158	67.5	15.5	29.5	B200B-129445
C1-135785	20.0	G1/8"	22	16	158	67.5	15.5	29.5	B200B-129450
C1-135774	22.2	G1/8"	22	16	158	67.5	15.5	29.5	B200B-129461

* Replacement seal sets with a sealing range < 15.9 mm only contain 1 retaining ring for the clamping jaws

Note: required roundness of internal tube diameter max. 0.25 mm

Other connector sizes and versions on request.

Required information for ordering see page 7.

» WEH[®] Connector TW231

ACCESSORIES

The following accessories are available for WEH[®] TW231:

Screw plug

If the WEH[®] Connector is to be used as a plug, the media inlet 'B1' will be sealed with a screw plug of brass (PVC sealing ring) for low pressure range or alternatively of stainless steel (O-ring of NBR 70° Shore) for 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	Connection (external thread)	Pressure range
E69-9200	Screw plug (low pressure)	G1/8"	0 - 50 bar
W9329	Screw plug (high pressure)	G1/8"	50 - 350 bar

WEH® Connector TW241

DESCRIPTION



Features

- For connection onto straight tubes, sealing on the external diameter
- Available for small and large tube diameters
- Extremely high flow rates (body sizes 4 - 7)
- Self-retaining up to max. 70 bar
- Connection in seconds
- No hand tightening required
- WEH® Jaw locking mechanism
- No seal adjustment required
- Wide range of tube tolerances up to ± 0.25 mm
- High-grade materials

The WEH® TW241 Quick connector enables quick and easy leak testing of straight tubes of copper, steel or aluminium with an outer diameter of 6.0 to 44.0 mm. The connector is available in 7 body sizes and suitable for underwater, pressure decay and helium testing.

The WEH® TW241 seals external diameters of straight tubes within seconds and bridges large tube tolerances of up to ± 0.25 mm (required roundness of external tube diameter max. 0.25 mm) with no operational adjustment of seals.

The WEH® Jaw locking mechanism provides maximum grip with minimum distortion of the test piece. There is no need for additional fixing. Operation is amazingly easy. Plug the WEH® Connector onto the tube, actuate the clamping lever and the pressure tight connection is made. An internal pressure support provides additional safety for the operator ensuring that disconnection is not possible until pressure has decreased to a safe value below 5 bar.

The WEH® TW241 is equipped with a chloroprene front seal. Other sealing materials on request. It is the customer's responsibility to clarify the media compatibility.

Application

Quick connector for pressure and vacuum testing of components with straight tube connection (sealing on external tube diameter) as for example heat exchangers, pressure vessels, valves, transducers, compressors, condensers, evaporation coils, tubing systems, air conditioners, heating systems etc.

TECHNICAL DATA

Characteristics	Basic version
Nominal bore DN	4 to 19 mm, acc. to design
Max. allowable operating pressure PS	Vacuum up to 70 bar
Temperature range	+5 °C up to +80 °C
Leak rate	1×10^{-3} mbar x l/s
Surface finish of test piece	Roughness \leq Rz8 μ m
Material hardness of test piece	Max. hardness 28 HRC
Materials	Clamping jaws: Corrosion-resistant stainless steel, hardened Housing: Anodized aluminium
Sealing materials	Front seal of chloroprene

Other designs on request

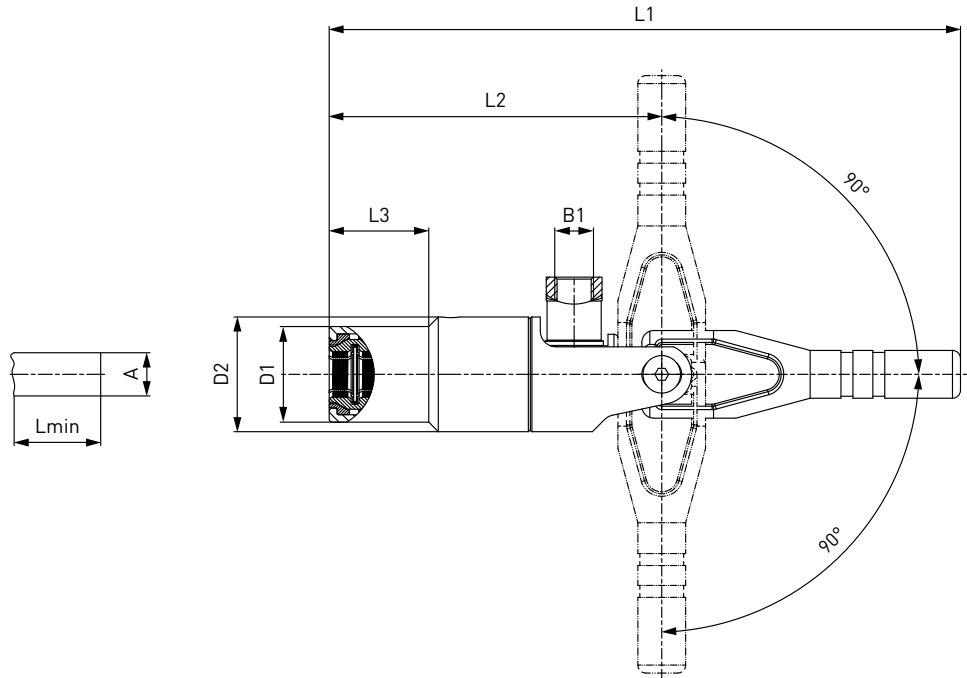
Example of use:



WEH[®] Connector TW241

ORDERING | WEH[®] TW241 Quick connector – body size 1

approx. dimensions (mm)



Part No.	Body size	Sealing range external tube \varnothing A \pm 0.25	B1 (internal thread)	D1	D2	L1	L2	L3	Lmin*	Replacement seal set (consisting of 5 front seals)
C1-130646	1	6.0	G1/8"	24	28.8	158.5	83.5	25	26.5	B202B-130704
C1-130647	1	6.35 (1/4")	G1/8"	24	28.8	158.5	83.5	25	26.5	B202B-130705
C1-130654	1	7.9 (5/16")	G1/8"	24	28.8	158.5	83.5	25	26.5	B202B-130713
C1-130655	1	8.0	G1/8"	24	28.8	158.5	83.5	25	26.5	B202B-130714
C1-130661	1	9.5 (3/8")	G1/8"	24	28.8	158.5	83.5	25	26.5	B202B-130720
C1-130663	1	10.0	G1/8"	24	28.8	158.5	83.5	25	26.5	B202B-130722

* Lmin: minimum insertion length of test piece

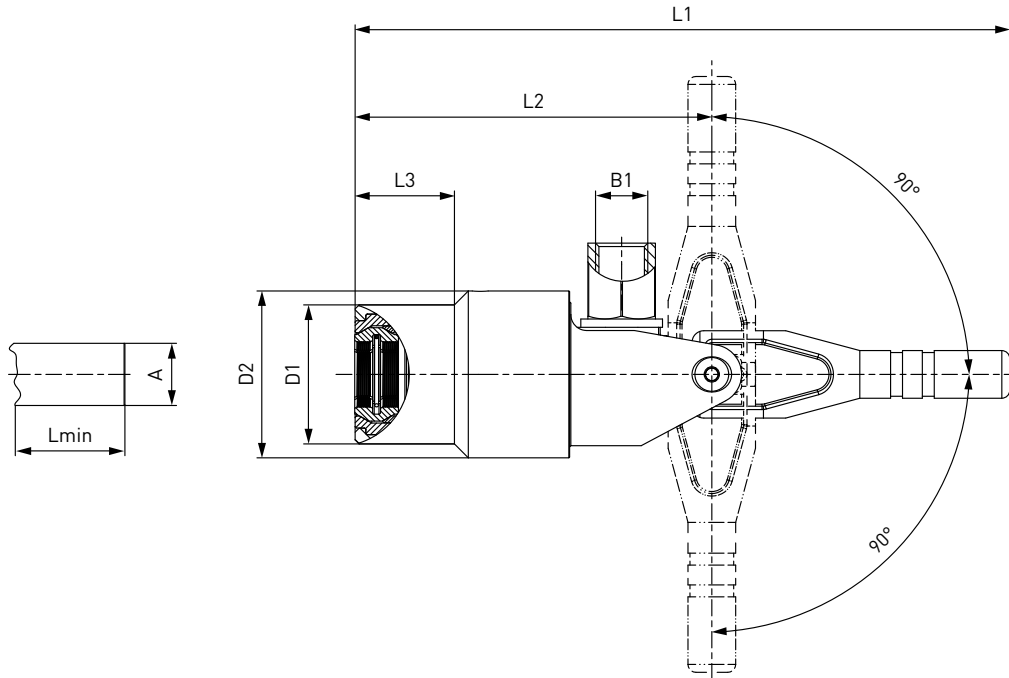
When ordering, please state if testing reinforced fibre glass or plastic test pieces.

Note: required roundness of external tube diameter max. 0.25 mm

WEH® Connector TW241

ORDERING | WEH® TW241 Quick connector – body size 2

approx. dimensions (mm)



Part No.	Body size	Sealing range external tube \varnothing $A \pm 0.25$	B1 (internal thread)	D1	D2	L1	L2	L3	Lmin*	Replacement seal set (consisting of 5 front seals)
C1-130672	2	12.0	G1/4"	35	42	165	90	25	26.5	B202B-130732
C1-130674	2	12.7 (1/2")	G1/4"	35	42	165	90	25	26.5	B202B-130734
C1-130685	2	15.9 (5/8")	G1/4"	35	42	165	90	25	26.5	B202B-130745
C1-130686	2	16.0	G1/4"	35	42	165	90	25	26.5	B202B-130746

* Lmin: minimum insertion length of test piece

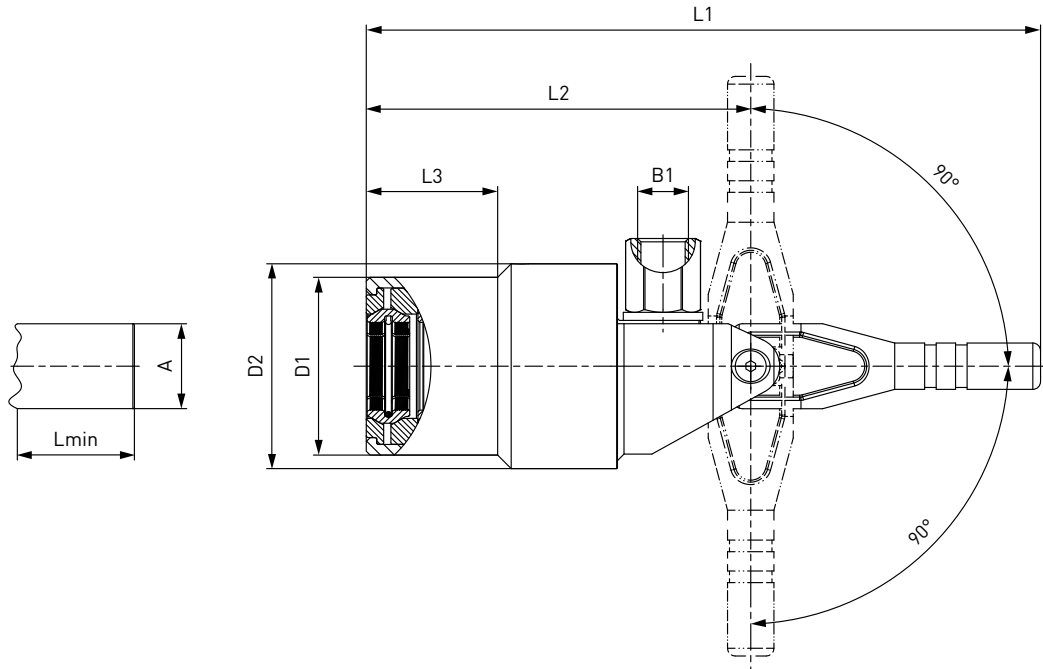
When ordering, please state if testing reinforced fibre glass or plastic test pieces.

Note: required roundness of external tube diameter max. 0.25 mm

WEH[®] Connector TW241

ORDERING | WEH[®] TW241 Quick connector – body size 3

approx. dimensions (mm)



Part No.	Body size	Sealing range external tube Ø A ± 0.25	B1 (internal thread)	D1	D2	L1	L2	L3	Lmin*	Replacement seal set (consisting of 5 front seals)
C1-130691	3	19.05 [3/4"]	G1/4"	46	53	174.5	99.5	34	26.5	B202B-130752
C1-130694	3	22.0	G1/4"	46	53	174.5	99.5	34	26.5	B202B-130755
C1-130695	3	22.2 [7/8"]	G1/4"	46	53	174.5	99.5	34	26.5	B202B-130756

* Lmin: minimum insertion length of test piece

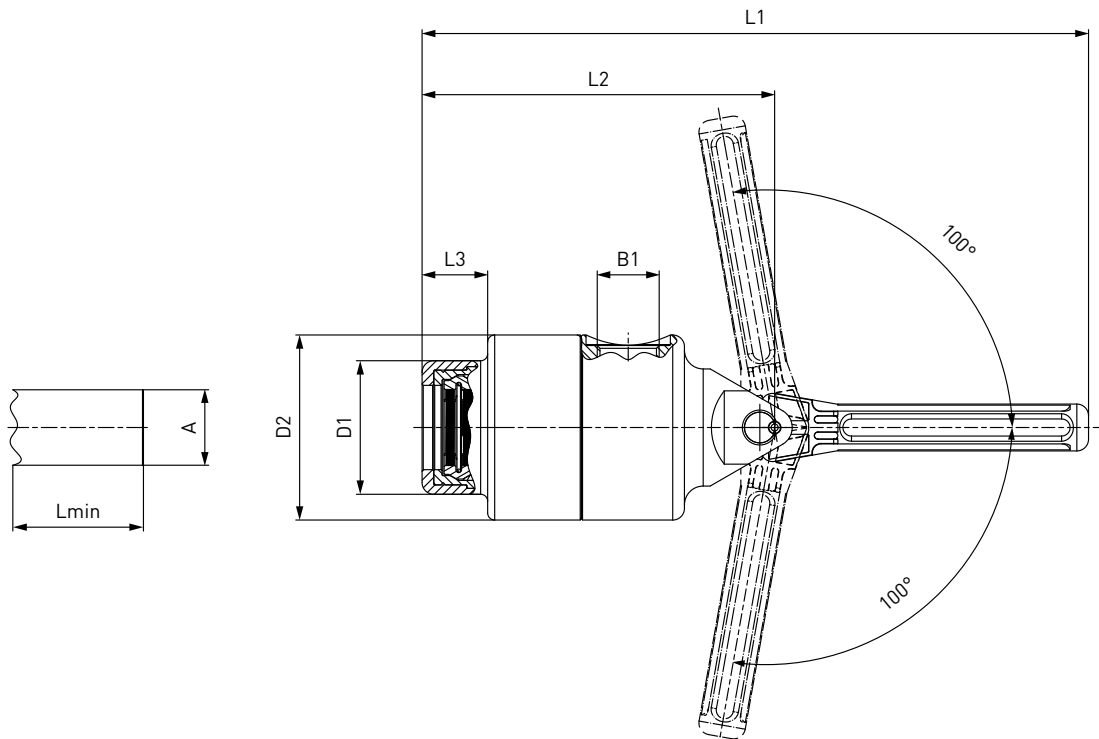
When ordering, please state if testing reinforced fibre glass or plastic test pieces.

Note: required roundness of external tube diameter max. 0.25 mm

WEH® Connector TW241

ORDERING | WEH® TW241 Quick connector – body size 4 - 7

approx. dimensions (mm)



Part No.	Body size	Sealing range external tube Ø A ± 0.2	B1 (internal thread)	D1	D2	L1	L2	L3	Lmin*	Replacement seal set (consisting of 5 front seals)
C1-108200	4	24.0	G3/4"	52	74	285	151	28	39	B202B-145689
C1-145909	4	25.0	G3/4"	52	74	285	151	28	39	B202B-145934
C1-108201	4	25.4 [1"]	G3/4"	52	74	285	151	28	39	B202B-145690
C1-108202	4	26.0	G3/4"	52	74	285	151	28	39	B202B-145691
C1-108203	4	28.0	G3/4"	52	74	285	151	28	39	B202B-145692
C1-108204	4	28.5 [1 1/8"]	G3/4"	52	74	285	151	28	39	B202B-145693
C1-108205	5	30.0	G3/4"	57	79	285	151	28	39	B202B-145694
C1-108206	5	31.75 [1 1/4"]	G3/4"	57	79	285	151	28	39	B202B-145695
C1-108207	5	32.0	G3/4"	57	79	285	151	28	39	B202B-145696
C1-108208	5	34.0	G3/4"	57	79	285	151	28	39	B202B-145697
C1-108209	5	34.9 [1 3/8"]	G3/4"	57	79	285	151	28	39	B202B-145698
C1-145910	5	35.0	G3/4"	57	79	285	151	28	39	B202B-145935
C1-108210	6	36.0	G3/4"	62	84	285	151	29	39	B202B-145699
C1-108211	6	38.0	G3/4"	62	84	285	151	29	39	B202B-145700
C1-108212	6	38.10 [1 1/2"]	G3/4"	62	84	285	151	29	39	B202B-145701
C1-108213	7	40.0	G3/4"	67	89	285	151	29	39	B202B-145702
C1-108214	7	42.0	G3/4"	67	89	285	151	29	39	B202B-145703
C1-108215	7	44.0	G3/4"	67	89	285	151	29	39	B202B-145704

* Lmin: minimum insertion length of test piece

Note: required roundness of external tube diameter max. 0.25 mm

Other connector sizes and versions on request. Required information for ordering see page 7.

WEH[®] Connector TW241

ACCESSORIES

The following accessories are available for WEH[®] TW241:

Screw plug

If the WEH[®] Connector is to be used as a plug, the media inlet 'B1' will be sealed with a screw plug of brass (PVC sealing ring) for low pressure range or alternatively of stainless steel (O-ring of NBR 70° Shore) for 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	Connection (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
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
W9333	Screw plug (high pressure)	G3/4"	50 - 350 bar

Lever extension

As standard the body sizes 1 - 3 of the TW241 quick connector have a short lever for easy connection to components at difficult-to-access ports. For these 3 body sizes a lever extension for applications with no restricted space is optionally available enhancing comfort in operation.



Lever extension



Part No.	Description
E67-137059	Lever extension for TW241 (body size 1 - 3)

Suspension attachment

For applications with balancers, WEH offers a suspension attachment with adaptor and bore for the body sizes 4 - 7 of the quick connector TW241.

Bore, e.g. for safety chain attachment



Part No.	Description	Connection
W115291	Suspension attachment for TW241 (body size 4 - 7)	G3/4" internal thread / G3/4" external thread

» Technical appendix

Definitions

Abbreviation	Definition	
Pressure specifications		
PN	Nominal pressure	Nominal pressure after temperature compensation at 15 °C
PS	Max. allowable operating pressure	Maximum allowable operating pressure acc. to Pressure Equipment Directive 2014/68/EU, Article 2 paragraph 8
PT	Hydrostatic test pressure	Hydrostatic test pressure acc. to Pressure Equipment Directive 2014/68/EU, Annex I no. 7.4
PP	Pilot pressure	Actuation pressure for hydraulic and pneumatic components
PC	Cracking pressure	Pressure at which the check valve opens and the first indication of flow occurs
MAWP	Max. allowable working pressure	Max. allowable operating pressure at which the weakest point of the system or the vessel (e.g. cylinder valve) can operate at a certain temperature during normal operation.
Dimensions		
L1, L2, L3 ...	Length specification	
D1, D2, D3 ...	Diameter specification	
A/F(1), A/F(2) ...	Wrench size specification	
Ports		
A / X	Customer-specific port (test piece, sample, cylinder valve, handwheel respiratory protective equipment)	
B1, B2, B3 ...	Media ports	
C1, C2, C3 ...	Gas recirculation ports	
P1, P2, P3 ...	Pilot pressure ports	
M	Measuring port	
Q	Drain port filter	
G	Mounting bores	
Others		
DN	Nominal bore	
µm	Max. diameter of the filtered particle	
Kv	Is the discharge of water in m ³ /h at a pressure drop of 1 bar, acc. to DIN/EN 60534-2	
Cv	Is the discharge of water in gallons per minute at a pressure drop of 1 psi, acc. to DIN/EN 60534-2	
IR	Infrared data interface	
ENR	Exchangeable data interface (exchangeable nozzle receiver)	
TS	Maximum allowable temperature acc. to Pressure Equipment Directive 2014/68/EU, Article 2 paragraph 9	
Breakaway force	Is the force range, in which the breakaway releases	
NC	Normally closed (initial position of shut-off valve)	
NO	Normally open (initial position of shut-off valve)	

» Technical appendix

Technical explanations

Term	Definition
Temperature range	Is the temperature range in which the WEH® Product can be used.
Media temperature range	Is the temperature range of the medium used, which can flow through the WEH® Product (may change depending on the time of measurement).
Ambient temperature range	Is the temperature range of the environment in which the WEH® Product can be used.
Leak rate	Is the leak rate, which the WEH® Product max. exhibits under intended use.
Max. side load	<p>Is the max. allowable sum of all external forces that may act on the device under intended use.</p> <p>Note: External forces can affect the life time of WEH® Products and can cause damage. Tensile and transverse loads as well as vibrations and pressure impacts need to be considered, e.g. by user side measures such as on site mountings and similar. Therefore, lateral forces such as whipping hoses or other equipment must be avoided. WEH® Products should be installed in such a way, that lateral forces which could lead to leakage or damage can not occur. Special applications require a special consultation before selecting the product.</p>
Products with pneumatic actuation	The customer has to ensure there is adequate axial movement when pneumatically actuated WEH® Products are used in automated systems, see maximum side load. Ideally the products should be mounted with a floating joint or introduced individually to prevent the possibly existing clamping jaws getting blocked or jammed in the thread of the test piece.
Sealing material	<p>On request the WEH® Product can be adapted to customer specific applications regarding to the sealing materials used.</p> <p>The clarification of the media compatibility and suitability of the adapted WEH® Product for the final application is always the responsibility of the end user.</p>
Storage / life time of components	There are certain requirements for every WEH® Product. These are described in the corresponding product documentation.

Further explanations

Subject	Definition
Safe product selection	<p>Our WEH® Products are designed to be operated by qualified professional users (insofar as WEH® Products are also designed to be operated by other users in individual cases, this is explicitly stated in the corresponding operating instructions). You alone are responsible for the selection of WEH® Products and their configuration according to the requirements of your system. In doing so, please particularly consider your intended use, your performance data, your material compatibility, your system concept and your system limits as well as your technical and legal requirements for operation, handling and maintenance. The quality and safety of WEH® Products is our highest priority. For this reason, WEH® Products may not be used outside the specifications in the relevant data sheets and product descriptions. We also strongly recommend that you refrain from using third-party spare parts or a combination of WEH® Products with unsuitable third-party products. You alone are responsible for reviewing the suitability of third-party products. WEH® Products and WEH® Spare parts comply with our quality and safety standards.</p>
Explanation on the Pressure Equipment Directive	<p>In general, WEH® Products with a maximum allowable operating pressure of more than 0.5 bar (PS) fall within the scope of application of the Pressure Equipment Directive 2014/68/EU. These WEH® Products are generally and exclusively classified as pressure accessories for piping in accordance with Article 2 (5) of the Pressure Equipment Directive 2014/68/EU. Based on the conducted classification, the conformity with the Pressure Equipment Directive 2014/68/EU is generally established under Article 4 (3) of the Pressure Equipment Directive 2014/68/EU. In these cases, the application of WEH® Products must correspond to their classification as pressure accessories for piping, and they may not be used either (i) as safety accessories or (ii) for vessels within the meaning of the Pressure Equipment Directive 2014/68/EU.</p> <p>For some products a different classification and/or categorisation is required or can be conducted on request. In these cases, a conformity assessment procedure in accordance with Annex III of the Pressure Equipment Directive 2014/68/EU can and will be conducted (if legally required) and the conformity can be declared by means of an EU Declaration of Conformity in accordance with Annex IV of the Pressure Equipment Directive 2014/68/EU. In these cases, the EU Declaration of Conformity is enclosed with the product.</p>

» Technical appendix

Further explanations

Subject	Definition
External change management	WEH reserves the right to update, optimise and adjust its products continuously. This may result in corresponding changes of the product. Customers will be informed proactively or unsolicited by WEH only in individual cases about product updates, product optimisations and/or product adaptations that have been carried out. You are free to contact WEH at any time to request information about any product updates, product optimisations and/or product adjustments.

»» Brochure data

This catalogue was created diligently and on the basis of decades of experience.

All information/recommendations in this catalogue are non-binding and are particularly subject to possible deviations or changes. For any binding information/recommendations, please refer to the verified information/recommendations in our individual orders. Particularly, due to the wide range of possible applications of WEH® Products and the unknown parameters and operating conditions linked to them, the accuracy and/or completeness of the information/recommendations in this catalogue cannot be guaranteed with respect to certain individual cases. In doing so, we would like to refer once again to the information/recommendations provided in individual orders.

The application limits indicated in this catalogue (e.g. for pressure, temperature, etc.) are generally theoretical values determined in a test environment. As the concrete operating conditions could differ, we cannot ensure that these values apply to a specific customer application. During the practical use, you should particularly consider that the mutual influence of operational parameters could result in changes of the maximum values. Especially, in case of any unusual operating conditions, please contact WEH before using any WEH® Products. We therefore strongly recommend that you also require any necessary binding information/recommendations to be included by us in the individual orders.

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In case of deliveries and other services, our General Terms and Conditions and the Know-How Protection and Quality Assurance Agreement shall apply unless otherwise expressly agreed.

As a general rule, please appreciate that we cannot accept the General Terms and Conditions of our customers or third parties. Thank you for your understanding.



» Design and production

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