

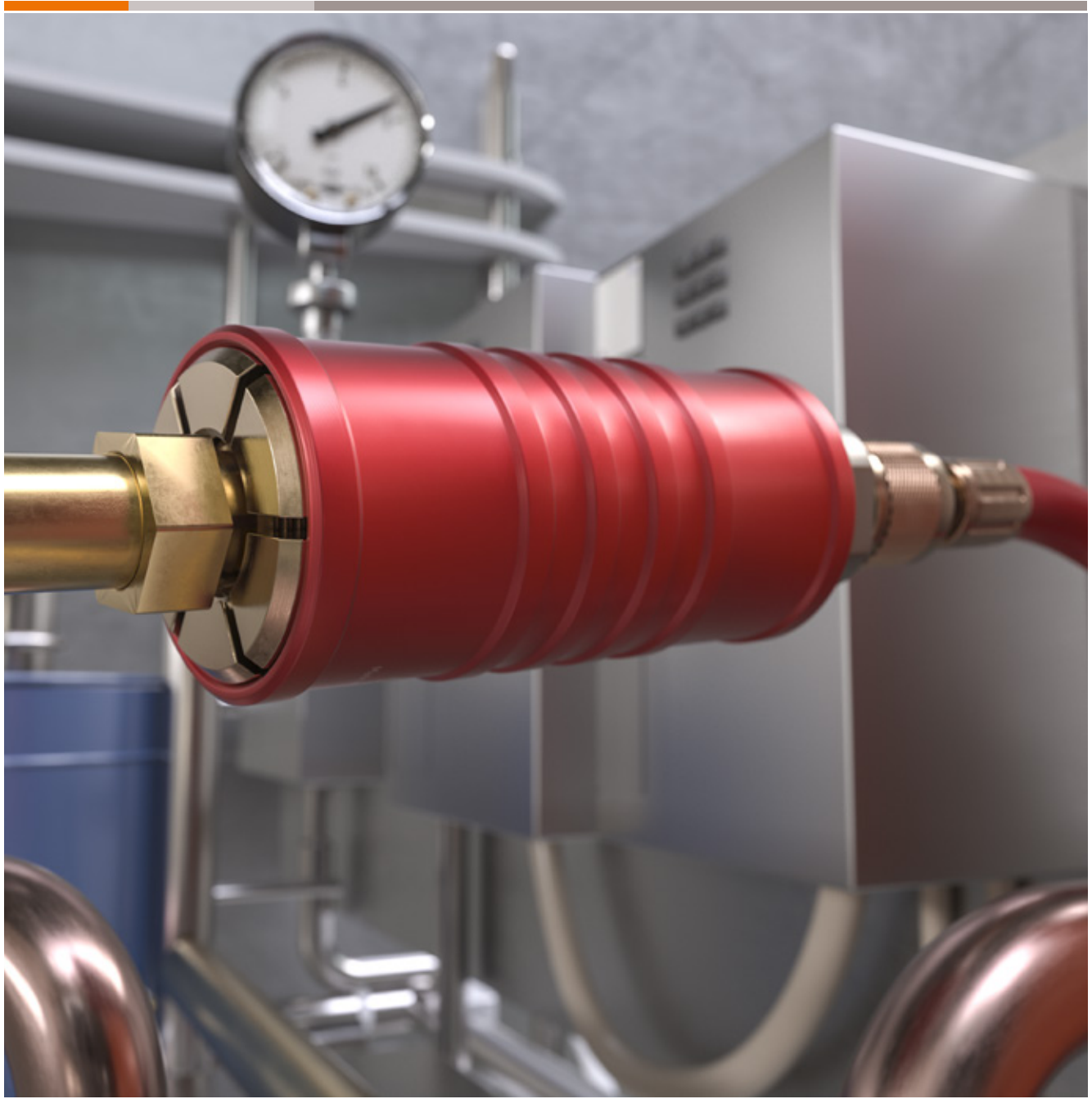
2019

WEH[®] Connectors

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

Refrigeration and air conditioning

Catalog 40 | V1.0



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» Introduction

WEH® – YOUR CONNECTION FOR REFRIGERATING AND AIR CONDITIONING

WEH® HVAC-R Connectors simplify workflows and reduce costs

WEH offers many advanced quick connectors that make connection to fluid lines easier, more reliable and with high integrity sealing. WEH has a suitable quick connector for almost any application whether for refrigerant filling of air conditioning systems, ice machines, refrigerators, water coolers etc. or for pressure and function tests of straight tubes as for example testing of heat exchangers, pressure vessels, compressors, condensers, evaporation coils etc.

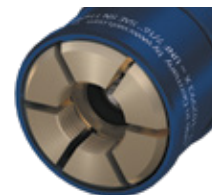
The cost savings during production and servicing resulting from easy, fast connection can be considerable.

Unique WEH® Jaw locking mechanism

All quick connectors have the unique WEH® Jaw locking mechanism developed by WEH.

Hard wearing jaws clamp securely and safely onto the test piece. Jaw designs cater for a variety of different connections, including female and male threads, straight tubes, holes and bores among others.

Laborious screwing and unscrewing of hoses is eliminated. The latest sealing technology provides a pressure-tight connection for your application.



CLIMATE PROTECTION MADE EASY

Using WEH® Connectors can reduce refrigerant loss by up to 99 % when servicing refrigeration and air conditioning units.

The demand for refrigerants continues to grow with the increased use of air conditioning and the demand for chilled drinks, food preservation and industrial chilling. Servicing operations account for almost 16 tonnes of refrigerant per year escaping into the environment as the result of connecting and disconnecting hoses to air conditioning and refrigerating equipment. By using a WEH® TW111 quick connector these losses could be reduced by 99 %. The ingenious device incorporates an integrated shut off valve, which contains the gas inside the hose when connecting and disconnecting. This concept has been endorsed by the German research institute FKW in Hannover.



» Introduction

APPLICATION

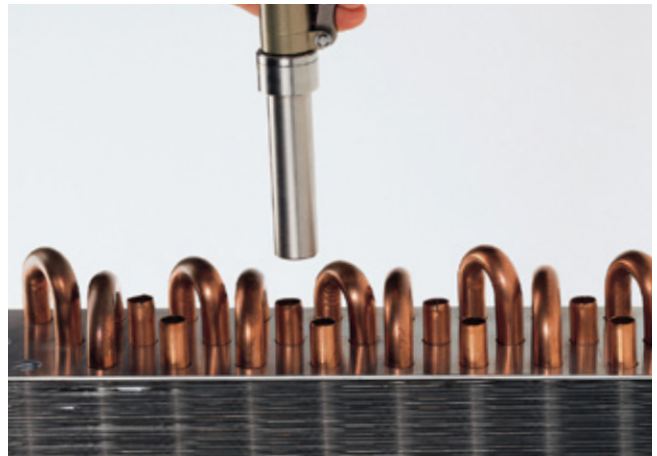
Quick connectors for connection to straight tubes, holes, bores and threads. Evacuating and filling of refrigerators, air conditioners, refrigerating plants etc.
Pressure and function testing of straight tubes, for example on heat exchangers, pressure vessels, compressors, evaporators, etc.

BENEFITS

- ✓ Pressure-tight connection in seconds
- ✓ No hand tightening
- ✓ Easy operation
- ✓ Robust construction
- ✓ Ergonomic design








TW110 | For filling refrigerants in automotive air conditioning equipment during production



TW141L | Testing of difficult-to-access heat exchangers

» Overview

OVERVIEW OF WEH® CONNECTORS

Connection type		TW111	TW111 R410A	TW110	TW108	TW52	TW141	TW141L	TW920
Male thread SAE J513		✓	✓			✓			✓
Beads (outer Ø)				✓	✓				
Straight tubes (outer Ø)							✓	✓	
Straight tubes (inner Ø)									
Bores									

FILLING AND EVACUATING REFRIGERANTS IN REFRIGERATING AND AIR CONDITIONING EQUIPMENT

Refrigeration and air conditioning equipment has to be filled with refrigerants already during production and later on refilled repeatedly for maintenance purposes. WEH can offer suitable filling connectors.

Type	TW111	TW111 R410A	TW110	TW108	TW52	TW920
Application	Filling and maintenance of air conditioning systems with „Schrader valves“		Filling of automotive air conditioning equipment during production	Filling of automotive air conditioning equipment during maintenance	Filling of CO ₂ or refrigerants	Filling of gas cylinders with residual pressure valve (RPV)
Operating pressure PS	Max. 435 psi	Max. 610 psi	Max. 510 psi	Max. 510 psi	Max. 3,600 psi or 2,175 psi with TVCO ₂ linear valve	Max. 580 psi
Medium	Refrigerants	Refrigerant R410A	Refrigerants	Refrigerants	CO ₂ , Refrigerants	Refrigerants
Port A	UNF 7/16"-20 male thread	UNF 1/2"-20 male thread	Tube Ø 11 mm Tube Ø 13 mm	Tube Ø 11 mm Tube Ø 13 mm	W21.8x1/14" male thread G1/2" male thread TR21x4.5 male thread	W21.8x1/14" male thread
Others	Integrated shut-off valve				-	

» Overview

TESTING OF TUBE CONNECTIONS

Simple test procedures speed up operation. Using heat exchanger testing as an example, the tubing must already be tested for leak tightness prior to assembly. WEH offers a variety of quick connectors to suit the different operating requirements of each manufacturer.

Type	TW141	TW141L
Sealing range	Ø 3.5 - Ø 22.5 mm tube OD	Ø 15.0 mm tube OD
Operating pressure PS	Vacuum up to max. 1,450 psi	Vacuum up to max. 1,450 psi
Seals	O-ring sealing	O-ring sealing
Nominal bore DN*	3 to 5 mm	5 mm

* The flow rate directly depends on the inner diameter of the tube

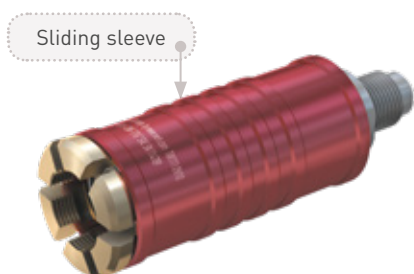
ILLUSTRATIONS



TW141 for testing straight tubes

WEH® Connector TW111

DESCRIPTION



Features

- Connection in seconds
- No hand tightening required
- For connection to 'Schrader valves' acc. to SAE J513
- Small outer diameter
- WEH® Jaw locking mechanism
- Reduces down time and loss of refrigerant
- No frostbitten hands
- Also available with 90° media inlet
- High-grade materials

The WEH® TW111 Quick Connector is now available with a reduced outside diameter of only 25 mm.

It is specifically designed for filling and maintenance of refrigeration and air conditioning systems and plants. Compared to conventional screwed connectors, the escape of refrigerants from the WEH® Connector during connection and disconnection is reduced by 99 %. Thus saving costs - and far more importantly - our environment.

RSI resulting in the inflammation of tendons and abrasion of joints caused by continuous screwing and unscrewing of threaded joints is eliminated. Connection and disconnection is effected by a simple movement of the sliding sleeve. The integrated shut-off valve prevents the escape of refrigerant which remains in the filling tube and can then be correctly disposed of.

The TW111 is equipped with a UNF 7/16"-20 thread (equivalent to 1/4" - SAE tube connection) and is either available for high pressure (red sliding sleeve) or for low pressure (blue sliding sleeve).

WEH® TW111 is also available with 90° media inlet.

Application

Quick connector for filling refrigerants in refrigerating and air conditioning systems with 'Schrader valves'.

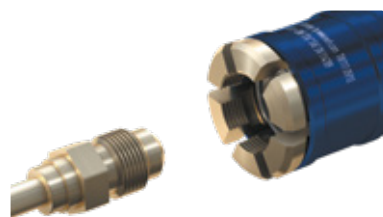
TECHNICAL DATA

Characteristics	Basic version
Operating pressure PS*	Max. 435 psi
Temperature range	+14 °F up to +176 °F
Medium	Refrigerants (please indicate when ordering)
Actuation	Manual actuation via sliding sleeve
Material	Brass, anodized aluminium
Sealing material	Dependant on medium
Design	Incl. 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

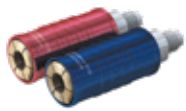
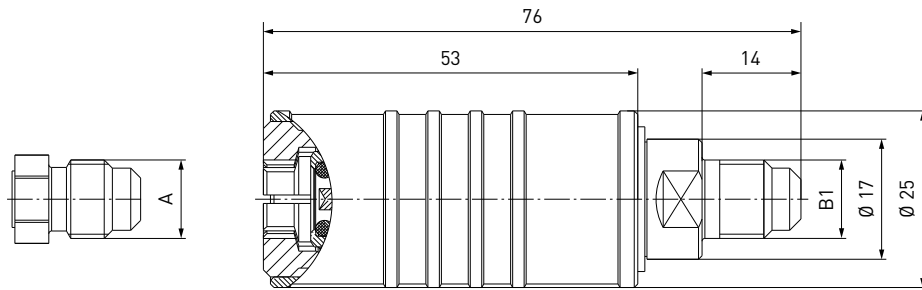
Example of use:



WEH[®] Connector TW111

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

approx. dimensions (mm)

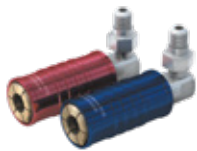
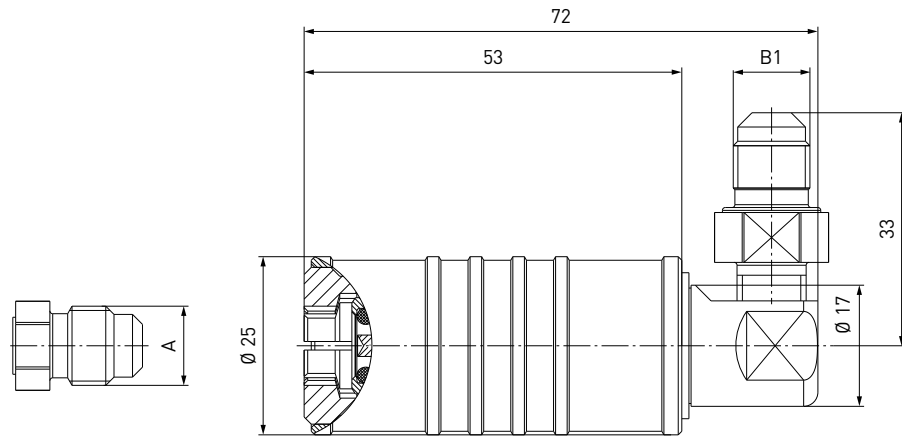


Part No.	Description	Connection A (male thread)	Inlet B1 (male thread)
C1-102991	TW111 - high pressure (red)	UNF 7/16"-20*	UNF 7/16"-20*
C1-102993	TW111 - low pressure (blue)	UNF 7/16"-20*	UNF 7/16"-20*

* acc. to SAE J513 (45°)

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

approx. dimensions (mm)



Part No.	Description	Connection A (male thread)	Inlet B1 (male thread)
C1-102992	TW111 - high pressure (red)	UNF 7/16"-20*	UNF 7/16"-20*
C1-102994	TW111 - low pressure (blue)	UNF 7/16"-20*	UNF 7/16"-20*

* acc. to SAE J513 (45°)

Other connector sizes and versions on request.

WEH® Connector TW111 R410A

DESCRIPTION



Features

- Connection in seconds
- No hand tightening required
- For connection to 'Schrader valves' acc. to SAE J513
- WEH® Jaw locking mechanism
- Reduces down time and loss of refrigerant
- No frostbitten hands
- High-grade materials

The product range for the refrigeration and air conditioning industry has been extended by the addition of a further connector for filling R410A refrigerant. The WEH® TW111 Quick Connector is specifically designed for filling and maintenance of refrigeration and air conditioning systems and plants with 'Schrader valves' which need to be connected and disconnected under pressures up to a maximum of 610 psi.

RSI resulting in the inflammation of tendons and abrasion of joints caused by continuous screwing and unscrewing of threaded joints is eliminated. Connection and disconnection is effected by a simple movement of the sliding sleeve. The integrated shut-off valve prevents the escape of the R410A refrigerant which remains in the filling tube and can then be correctly disposed of. The TW111 for R410A is equipped with an UNF 1/2"-20 (equivalent to 5/16" – SAE tube connection) and is either available for high pressure (red sliding sleeve) or for low pressure (blue sliding sleeve).

Application

Quick connector for filling refrigerant R410A in refrigerating and air conditioning systems with 'Schrader valves'.

TECHNICAL DATA

Characteristics	Basic version
Operating pressure PS	Max. 610 psi
Temperature range	+14 °F up to +176 °F
Medium	Refrigerant R410A
Actuation	Manual actuation via sliding sleeve
Material	Brass, anodized aluminium
Sealing material	Dependant on medium
Design	Incl. integrated shut-off valve

Other designs on request

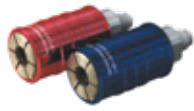
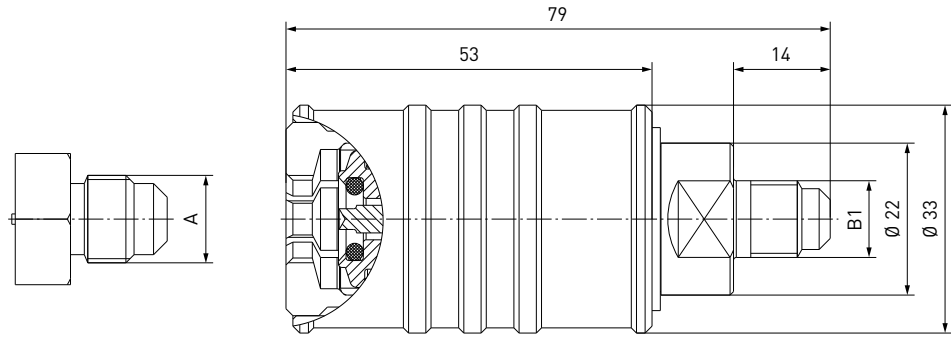
Example of use:



WEH[®] Connector TW111 R410A

ORDERING | WEH[®] TW111 Quick Connector R410A

approx. dimensions (mm)



Part No.	Description	Connection A (male thread)	Inlet B1 (male thread)
C1-30291	TW111 - high pressure (red)	UNF 1/2"-20*	UNF 1/2"-20*
C1-30290	TW111 - low pressure (blue)	UNF 1/2"-20*	UNF 1/2"-20*
C1-34797	TW111 - high pressure (red)	UNF 1/2"-20*	UNF 7/16"-20*
C1-34796	TW111 - low pressure (blue)	UNF 1/2"-20*	UNF 7/16"-20*

* acc. to SAE J513 (45°)

Other connector sizes and versions on request.

» WEH® Connector TW110

DESCRIPTION



Features

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

The WEH® TW110 Quick Connector is specifically designed for filling and evacuating refrigerants in automotive air conditioning equipment.

The integrated shut-off valve and a minimal residual volume give good environmental performance. The TW110 is constructed from corrosion-resistant stainless steel. The connector is ideal for continuous operation due to its compact design.

Application

Quick connector for filling and evacuating refrigerants in automotive air conditioning equipment.

TECHNICAL DATA

Characteristics	Basic version
Operating pressure PS	Max. 510 psi
Temperature range	+14 °F up to +176 °F
Medium	Refrigerants (please indicate when ordering)
Actuation	Manual actuation via sliding sleeve
Material	Corrosion-resistant stainless steel
Sealing material	Dependant on medium
Design	Incl. integrated shut-off valve

Other designs on request

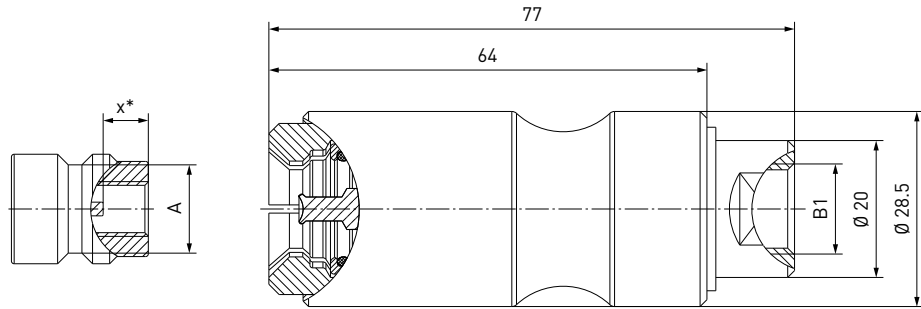
Example of use:



WEH[®] Connector TW110

ORDERING | WEH[®] TW110 Quick Connector

approx. dimensions (mm)



Part No.	Description	Connection A	Inlet B1 (female thread)
C1-1748	TW110	$\text{Ø } 11$	G1/4"
C1-1749	TW110	$\text{Ø } 13$	G1/4"

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

Other connector sizes and versions on request.

WEH® Connector TW108

DESCRIPTION



Features

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

The WEH® TW108 Quick Connector is a good reasonably priced alternative to the WEH® TW110 for connections where continuous use is not required. It is therefore the ideal choice for leak-tight filling during maintenance work. All parts are made of high-grade materials with brass clamping jaws. The integrated shut-off valve prevents the escape of ozone depleting refrigerants to a minimal residual volume.

The TW108 quick connector is available for high pressure (red sliding sleeve) or for low pressure (blue sliding sleeve).

Application

Quick connector for filling and evacuating refrigerants during maintenance of automotive air conditioning equipment.

TECHNICAL DATA

Characteristics	Basic version
Operating pressure PS	Max. 510 psi
Temperature range	+14 °F up to +176 °F
Medium	Refrigerants (please indicate when ordering)
Actuation	Manual actuation via sliding sleeve
Material	Brass, anodized aluminium
Sealing material	Dependant on medium
Design	Incl. integrated shut-off valve

Other designs on request

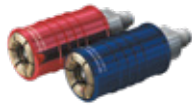
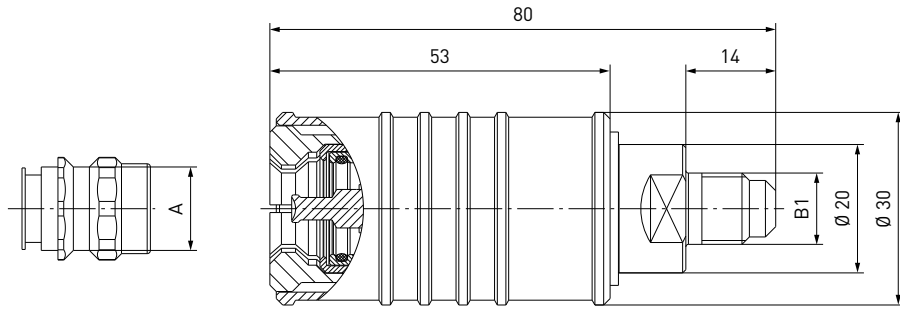
Example of use:



WEH[®] Connector TW108

ORDERING | WEH[®] TW108 Quick Connector

approx. dimensions (mm)



Part No.	Description	Connection A	Inlet B1 (male thread)
C1-14455	TW108 - high pressure (red)	Ø 13	UNF 7/16"-20*
C1-14458	TW108 - low pressure (blue)	Ø 11	UNF 7/16"-20*
C1-14455/1	TW108 - high pressure (red)	Ø 13	UNF 5/8"-18*
C1-14458/1	TW108 - low pressure (blue)	Ø 11	UNF 5/8"-18*

* acc. to SAE J513 (45°)

Other connector sizes and versions on request.

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

The TW52 is optionally available with the TVCO₂ linear valve.

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

Application

Quick connector for filling of gas cylinders with male thread (with or without a residual pressure valve) with CO₂ or refrigerants.

TECHNICAL DATA

Characteristics	Basic version
Nominal bore DN	5 mm
Operating pressure PS	Max. 3,600 psi Max. 2,715 psi (TW52 with TVCO ₂ linear valve)
Temperature range	-40 °F up to +104 °F (CO ₂)
Connection A	Male thread connection acc. to the corresponding national standard e.g. DIN, CGA, BS, NF etc.
Medium	CO ₂ , refrigerants
Actuation	Manual actuation via grip sleeve
Material	Corrosion resistant stainless steel, brass
Sealing material	EPDM
Design	With or without RPV pin

Other designs on request

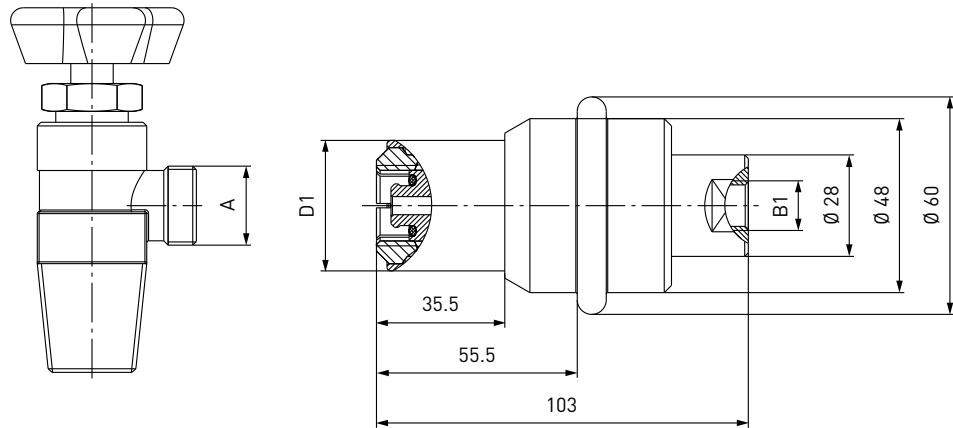
Example of use:



WEH[®] Connector TW52

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

approx. dimensions (mm)

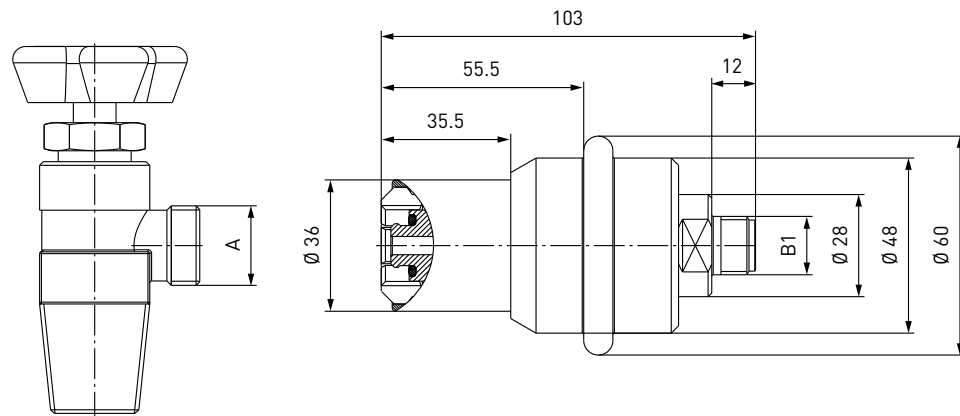


Part No.	Description	Connection A (male thread)	Inlet B1 (female thread)	D1
C1-16560-X01	TW52	G1/2"	G1/4"	38
C1-17069	TW52	TR21x4.5	G1/4"	36
C1-16564-X01	TW52	W21.8x1/14"*	G1/4"	36

* acc. to DIN 477

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

approx. dimensions (mm)



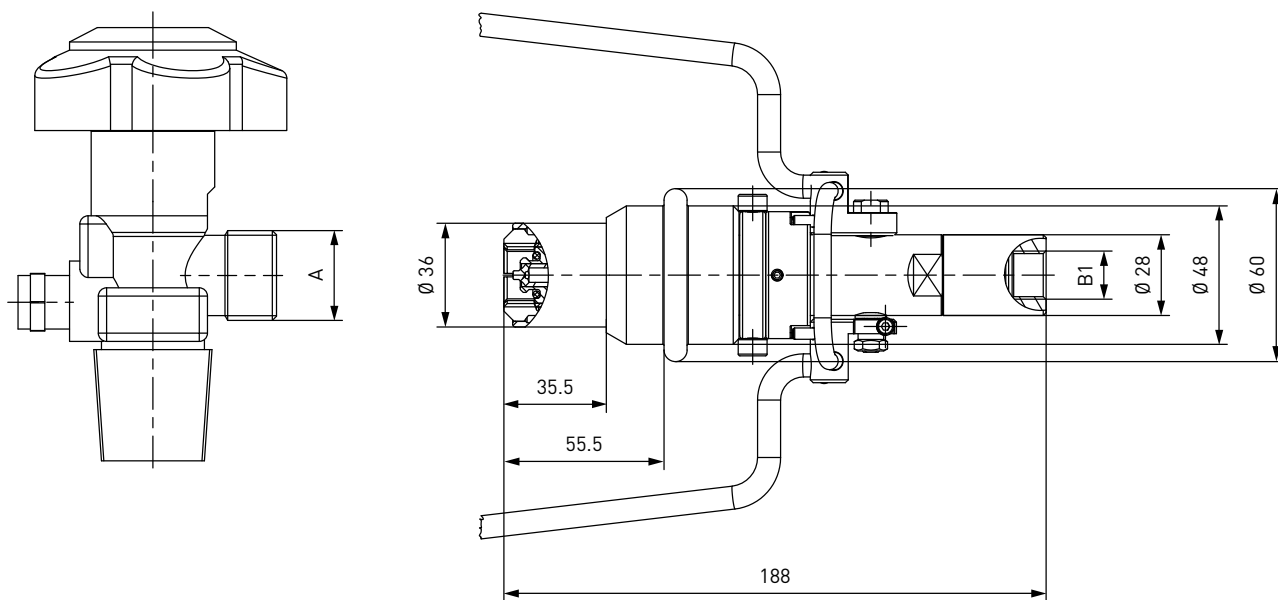
Part No.	Description	Connection A (male thread)	Inlet B1 (male thread)
C1-16563	TW52	W21.8x1/14"*	M16x1.5

* 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	Connection A (male thread)	Inlet B1 (female thread)
C1-68486	TW52	W21.8x1/14"*	G3/8"

* acc. to DIN 477

Other connection sizes and versions on request.

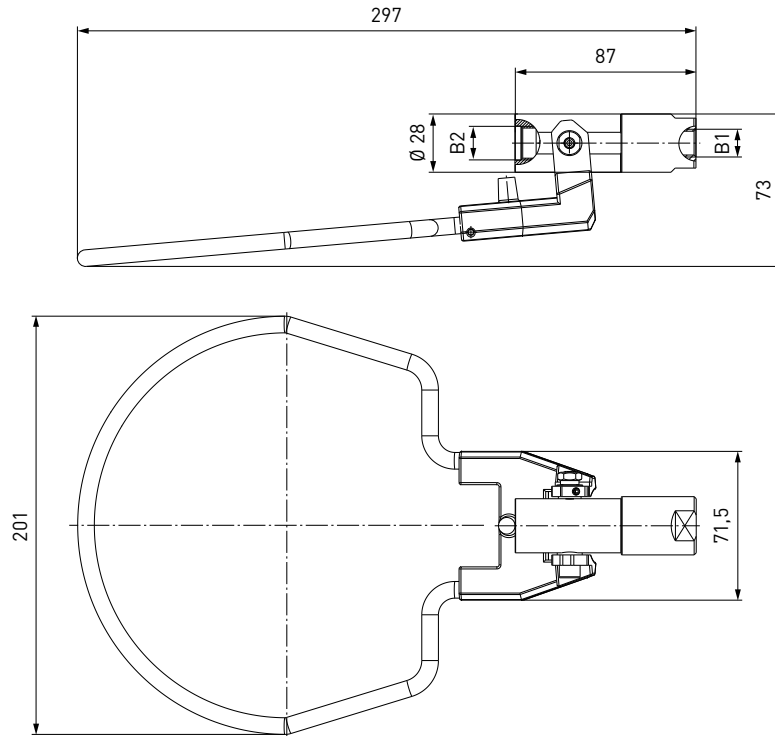
WEH[®] Connector TW52

ACCESSORIES

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

WEH[®] TVCO₂ Linear Valve

The TW52 offers a complete solution for TVCO₂ filling in conjunction with our optional TVCO₂ linear valve. Simply connect the filling hose to our TVCO₂ linear valve and pressurize the system. Filling can then proceed. When disconnecting after filling the TW52 vents automatically. The vented gas can be recirculated via a vent pipe and vented remotely, with minimum environmental impact.

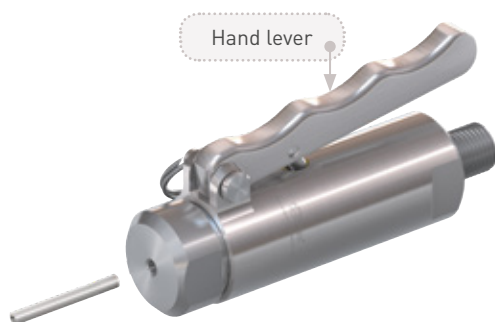


Part No.	Description	Connection B1 (female thread)	Connection B2 (female thread)
C1-34605	TVCO ₂	G1/4"	M16x1.5

Other connection sizes and versions on request.

» 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 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 75 psi is attained.

Application

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

TECHNICAL DATA

Characteristics	Basic version
Operating pressure PS	Vacuum up to max. 1,450 psi
Temperature range	+14 °F up to +176 °F
Leak rate	1×10^{-3} mbar x l/s
Medium	Refrigerants, air, gas, water, oil, etc. (please indicate when ordering)
Actuation	Manual actuation via hand lever
Surface finish of test piece	Roughness \leq Rz8 μ m Surfaces with a roughness greater than Rz8 μ m are not recommended
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

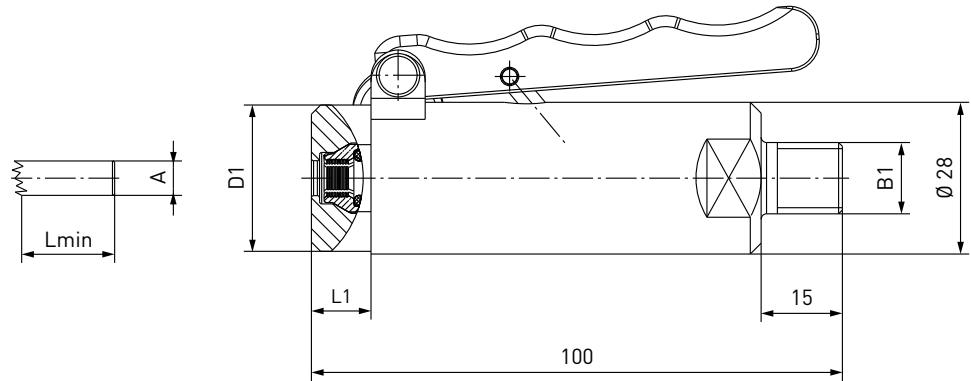
Example of use:



WEH[®] Connector TW141

ORDERING | WEH[®] TW141 Quick Connector – Ø A 4.8 mm up to Ø A 8.0 mm

approx. dimensions (mm)



Part No.	Sealing range external tube Ø A	Tolerance	Inlet B1 (male thread)	D1	L1*	Lmin**
C1-17749	4.8 (3/16")	± 0.2	NPT 1/4"	27	11	19
C1-18575	5.0	± 0.2	NPT 1/4"	27	11	19
C1-14967	6.0	± 0.2	NPT 1/4"	27	11	19
C1-17606	6.35 (1/4")	± 0.2	NPT 1/4"	27	11	19
C1-17750	7.9 (5/16")	± 0.2	NPT 1/4"	27	11	19
C1-14968	8.0	± 0.2	NPT 1/4"	27	11	19

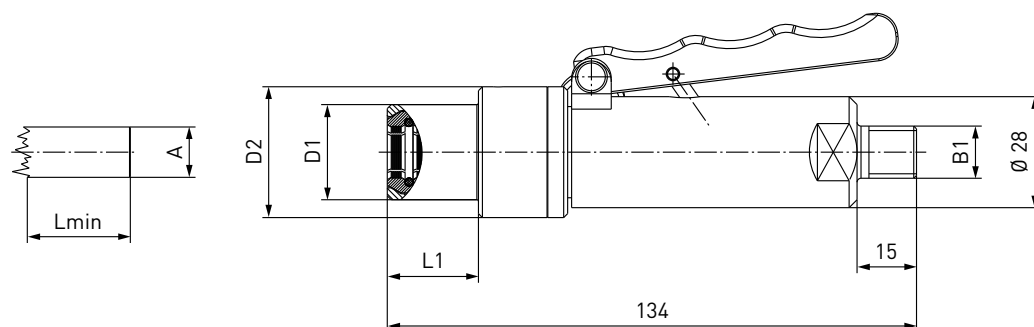
* Due to customers specific applications and pressure ranges, the dimensions can differ.

** Lmin: minimum length required for insertion of test piece

WEH® Connector TW141

ORDERING | WEH® TW141 Quick Connector – Ø A 9.5 mm up to Ø A 22.2 mm

approx. dimensions (mm)



Part No.	Sealing range external tube Ø A	Tolerance	Inlet B1 (male thread)	D1	D2	L1*	Lmin**
C1-17536	9.5 (3/8")	± 0.1	NPT 1/4"	21	33	24	19
C1-16773	10.0	± 0.1	NPT 1/4"	19	33	23	15
C1-16774	12.0	± 0.1	NPT 1/4"	21	33	23	15
C1-17751	12.7 (1/2")	± 0.1	NPT 1/4"	24	33	23	15
C1-16775	15.0	± 0.1	NPT 1/4"	24	33	23	15
C1-17959	15.9 (5/8")	± 0.1	NPT 1/4"	32	49	23	15
C1-16776	16.0	± 0.1	NPT 1/4"	32	49	23	15
C1-16777	18.0	± 0.1	NPT 1/4"	34	49	23	15
C1-18006	19.05 (3/4")	± 0.1	NPT 1/4"	34	49	23	15
C1-16778	22.0	± 0.1	NPT 1/4"	38	49	23	15
C1-17939	22.2 (7/8")	± 0.1	NPT 1/4"	38	49	23	15

* Due to customers specific applications and pressure ranges, the dimensions can differ.

** Lmin: minimum length required for insertion of test piece

Other connector sizes and versions on request.

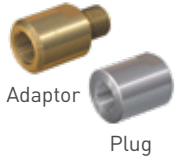
WEH[®] Connector TW141

ACCESSORIES

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

Adaptors / Plugs

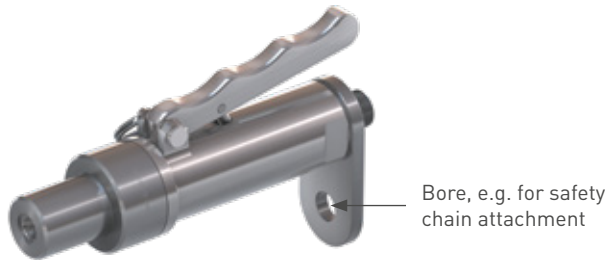
Different adaptors for other media inlets are available. If the connector is to be used as a plug, the media inlet 'B1' can be sealed.



Part No.	Description	Thread
C1-30810	Adaptor	NPT 1/4" female thread - G1/4" female thread
C1-30366	Adaptor	NPT 1/4" female thread - G1/4" male thread
E29-934p	Adaptor	NPT 1/4" female thread - UNF 7/16" male thread
E29-900p	Plug	NPT 1/4" female 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 TW141L

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® TW141L Quick Connector has been developed for difficult to access test pieces. The extended jaws allow connection to difficult to reach tubes in narrow spaces - heat exchangers are a typical example. The design ensures that disconnection is not possible whilst still under pressure.

Application

Quick connector for pressure and function testing 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

Characteristics	Basic version
Operating pressure PS	Vacuum up to max. 1,450 psi
Temperature range	+14 °F up to +176 °F
Leak rate	1×10^{-3} mbar x l/s
Medium	Refrigerants, air, gas, water, oil, etc. (please indicate when ordering)
Actuation	Manual actuation via hand lever
Surface finish of test piece	Roughness \leq Rz8 μ m Surfaces with a roughness greater than Rz8 μ m are not recommended
Material hardness of test piece	Max. hardness 28 HRC Connection to copper tubes
Material	Housing: anodized aluminium Clamping jaw assembly: corrosion-resistant stainless steel
Sealing material	Dependant on medium

Other designs on request

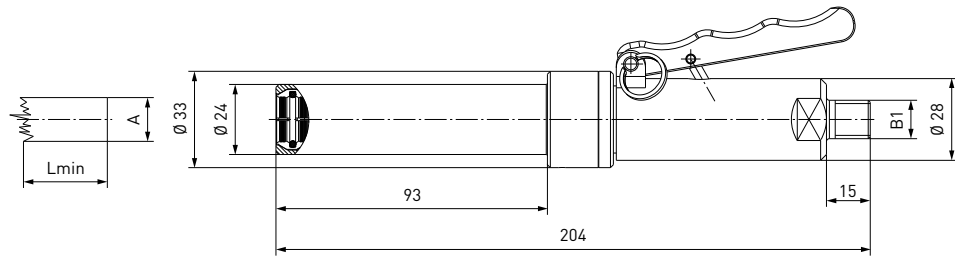
Example of use:



WEH® Connector TW141L

ORDERING | WEH® TW141L Quick Connector

approx. dimensions (mm)



Part No.	Sealing range Ø A	Tolerance	Inlet B1 (male thread)	Lmin*
C1-16422	15.0	± 0.1	NPT 1/4"	15

* Lmin: minimum length required for insertion of test piece

Other connector sizes and versions on request.

ACCESSORIES

The following accessories are available for WEH® TW141L:

Adaptors / Plugs

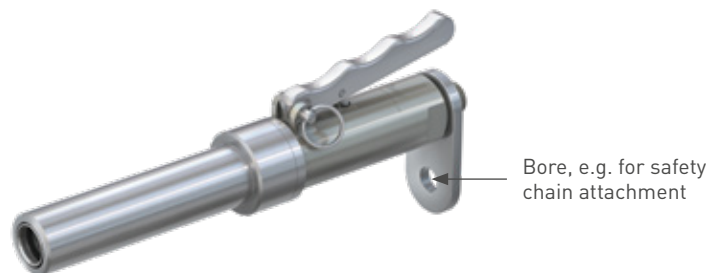
Different adaptors for other media inlets are available. If the connector is to be used as a plug, the media inlet 'B1' can be sealed.



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

Anchor plate

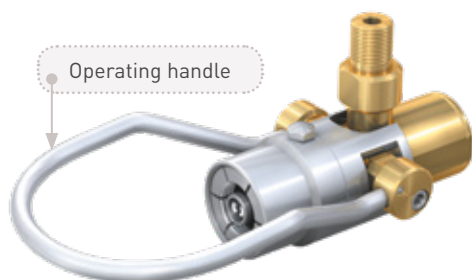
WEH offers an anchor plate to create a safe, secure attachment for the TW141L.



Part No.	Description
C1-45285	Anchor plate for TW141L

WEH® Connector TW920

DESCRIPTION



Features

- For cylinder valves with male 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. The innovative gripper mechanism pulls the valve cartridge pin forward whilst simultaneously providing virtually instant connection to the cylinder valve thread.

The TW920 is equipped with an operating handle.

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.

Application

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

TECHNICAL DATA

Characteristics	Basic version
Operating pressure PS	Max. 580 psi
Pilot pressure	Max. 90 - 120 psi (for opening residual pressure valve)
Temperature range	+14 °F up to +176 °F
Connection A	W21.8x1/14" for cylinder valve with pin
Medium	Refrigerants (please indicate when ordering)
Actuation	Manual actuation via operating handle (handle depending on type of cylinder valve)
Material	Brass, corrosion-resistant stainless steel; protection sleeve (linear valve) in POM
Sealing material	Dependant on medium

Other designs on request

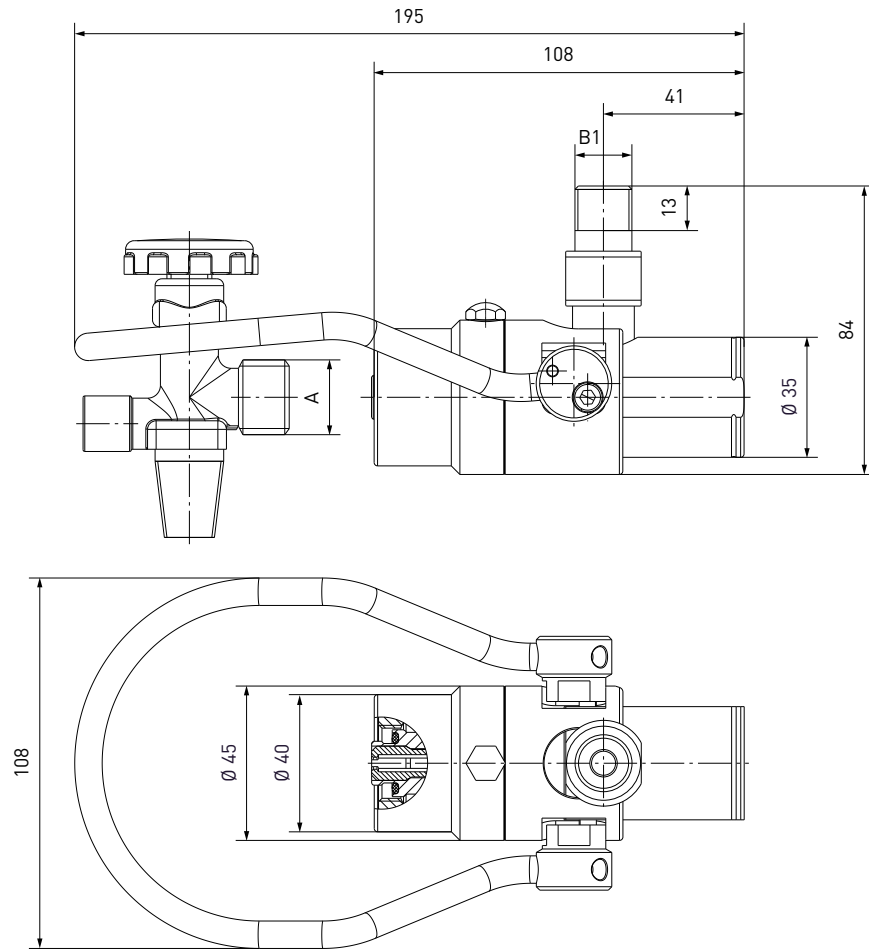
Example of use:



WEH[®] Connector TW920

ORDERING | WEH[®] TW920 Quick Connector – standard version

approx. dimensions (mm)

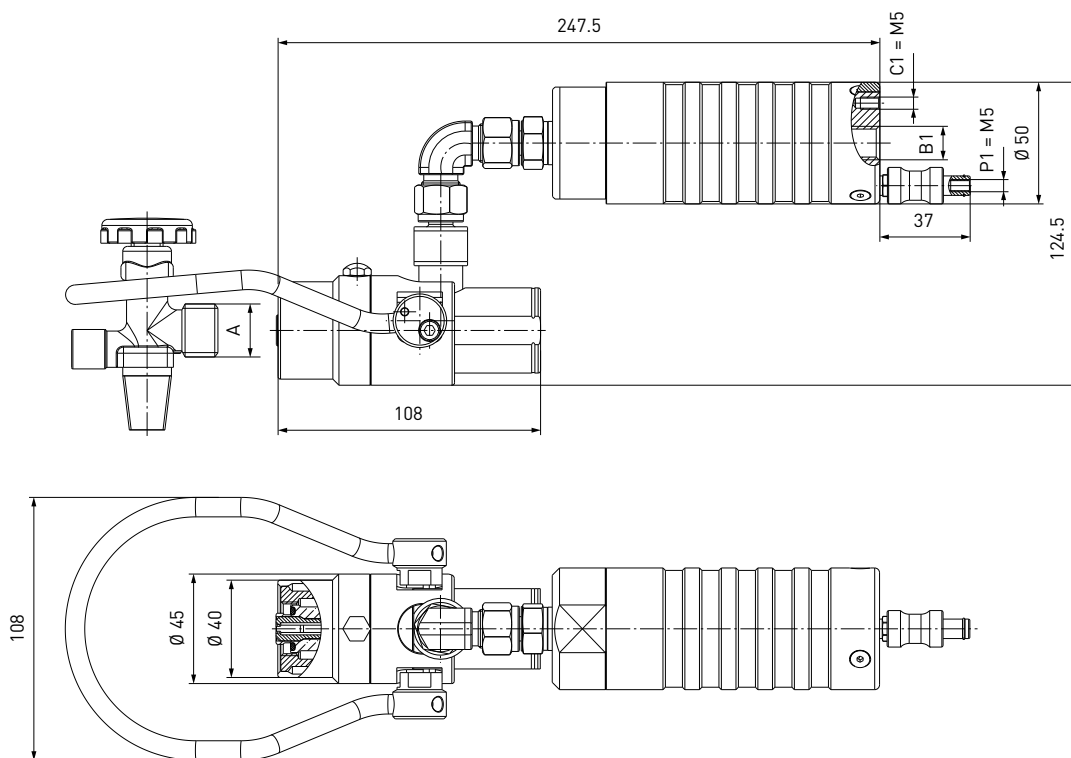


Part No.	Description	Connection A (male thread)	Inlet B1 (male thread)
C1-77826	TW920	W21.8x1/14"	NPT 3/8"

WEH® Connector TW920

ORDERING | WEH® TW920 Quick Connector with pneumatic linear valve

approx. dimensions (mm)



Part No.	Description	Connection A (male thread)	Inlet B1 (female thread)
C1-48037	TW920 incl. linear valve	W21.8x1/14"	G1/4"

Other connector sizes and versions on request.

ACCESSORIES

The following accessories are available for WEH® TW920:

Actuations

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

» Other products

OTHER PRODUCTS OF WEH PRECISION CONNECTORS



Catalog No. 35 - Connector Solutions for industrial applications:

WEH® Connectors for pressure-tight connections in seconds to threads, beads, tubes, etc.



Catalog No. 20 - Connection solutions for the gas industry:

WEH® Connectors for pressure-tight connections in seconds for gaseous applications



Catalog No. 45 - Check Valves:

High performance check valves for liquid and gaseous media

» Technical appendix

Definitions

Abbreviation	Definition	
Pressure specifications		
PN	Nominal pressure	Nominal pressure after temperature compensation at 59 °F
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	Is the max. allowable sum of all external forces that may act on the device under intended use. 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.
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	On request the WEH® Product can be adapted to customer specific applications regarding to the sealing materials used. 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.
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	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.

» Technical appendix

Further explanations

Subject	Definition
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>
External change management	<p>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.</p>

» 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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Only the latest version of our catalogue and other product related documents is valid and applicable. Please ensure that you always use the latest catalogue's and documents' versions. Please feel free to contact WEH at any time and request the latest versions.

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

Address: **WEH GmbH Precision Connectors**
Josef-Henle-Str. 1
89257 Illertissen / Germany

Internet: www.weh.com
Email: sales@weh.com

Phone: +49 7303 9609-0
Fax: +49 7303 9609-9999

» Distributor US



Address: **WEH Technologies Inc.**
24903 Laguna Edge Drive
Katy, TX 77494 / USA

Internet: www.weh.us
Email: sales@weh.us

Phone: +1 832 331 0021
Fax: +1 281 712 2664

For queries and further information, please do not hesitate to contact us.