WEH® H_2 Refueling

High-performance components for hydrogen vehicles and fueling stations

ORIGINAL WEH® QUALITY since 1973

WEH® - We Engineer Hightech

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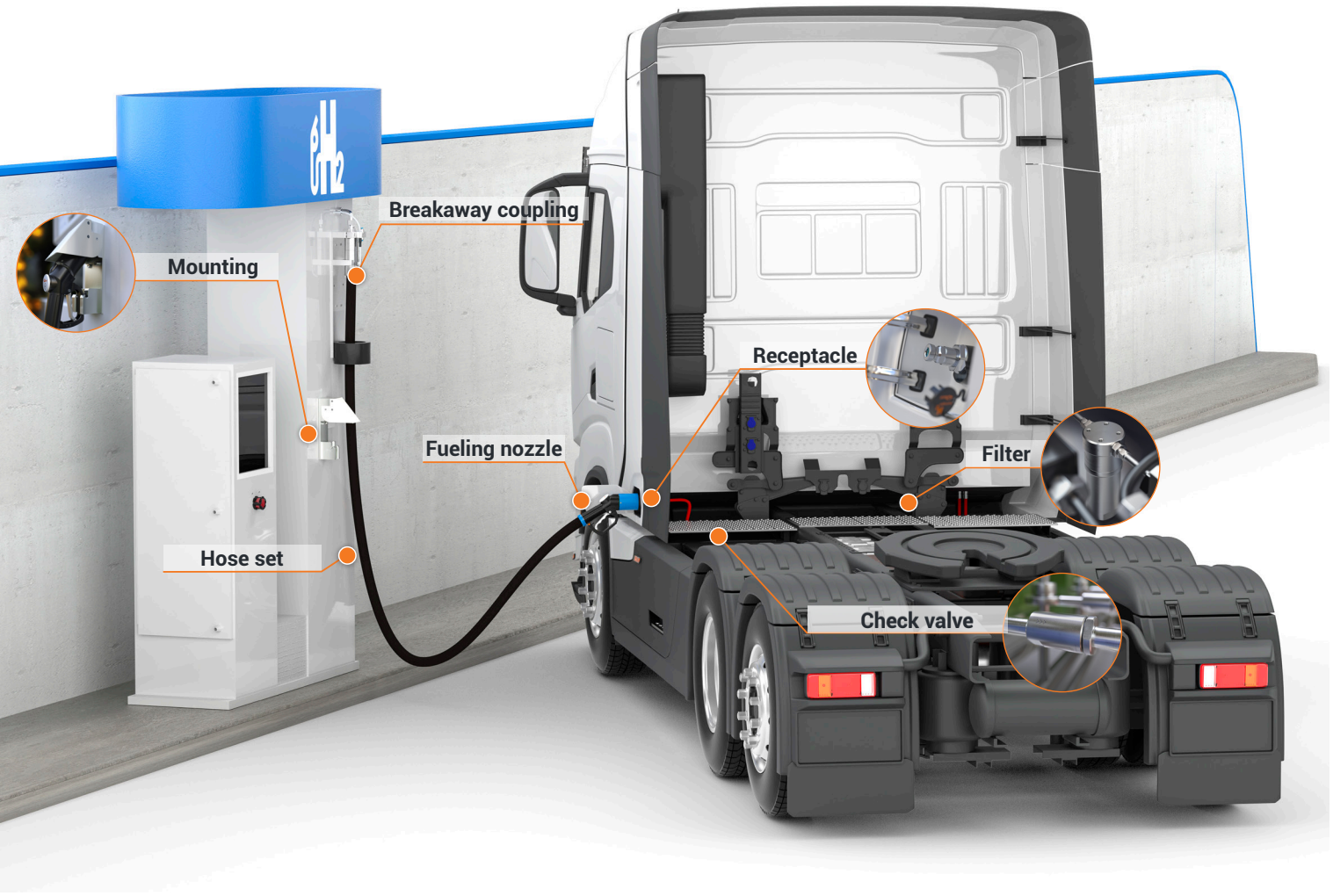
WEH® H_2 Fueling components

Excellent quality for maximum reliability



WEH & Hydrogen
Passion with experience

WEH recognized early on that the regenerative energy source hydrogen has a future and developed the first hydrogen refueling components more than 25 years ago.
As a pioneer, WEH set international standards.
Today, hydrogen fueling stations and fuel cell vehicles all over the world are almost exclusively equipped with WEH® refueling components.

We are a reliable partner to many industries
Thanks to intensive research and development, WEH has become a reliable and highly valued partner to the automotive industry in this cutting-edge technology. Our products can easily withstand pressures of up to 1,000 bar. Because high pressure has always been our passion.

WEH high-pressure components also impress with their reliability and safety in many other sectors, such as mechanical engineering, the chemical and gas industry, refrigeration and air conditioning technology.

Everything from a single source with WEH
Today, WEH develops, produces and distributes a complete product line for hydrogen refueling. From filling couplings, breakaway couplings, filling hoses and filters at the filling station to tank nipples and non-return valves in the vehicle.
WEH's innovative refueling solutions have contributed to a much better acceptance in society. Our product solutions are a healthy mix of innovation and tradition and ensure that the driver has a familiar refueling experience.

We focus on the future
Driven by our passion, intensive research and extensive investments, we continue to work on innovative products for the future market of hydrogen refueling.

Our **Mission**

For more than 25 years, we have been developing future-oriented H_2 refueling technology solution. Pioneering is deep in our DNA, so when it comes to hydrogen: we lead at the frontier.

Our **Goal**

We strive to meet (and delightfully exceed) our customers' expectations--from design to service. By consistently delivering high-quality, safe and user-friendly products, this goal has grown to become our promise.

Innovative H_2 Products
for real-world applications

Our product solutions touch all aspects of the refueling process. Receptacles, check valves and filters for vehicles. H_2 systems, 'up to fueling' nozzles, breakaway couplings, filters, check valves and hoses for fueling stations. Whatever your hydrogen need, we have you covered.

WEH® H_2 Components
Your benefits

- Balanced design
- Unique user-friendliness
- Highest functionality and safety
- Reliability & efficiency
- High flow rate
- Short filling times
- Optimum protection for operators and components
- Minimal downtime
- Low maintenance requirements
- Robust & durable

Our
Core Competencies

- **Global Sales Network**
  Active in 60+ countries
- **Passion for High-Pressure**
  Components for multiple industries
- **World-Class Engineering**
  To meet specific product needs on request
- **In-house Test Center**
  Extensive testing during development
- **Pioneers – We set the Standard**
  Trailblazing product solutions
- **Goods Issue Inspection**
  We inspect each product individually
- **50+ years Experience**
  More than 25 of those spent innovating in the hydrogen sector
- **Quality – Made in Germany**
  ISO 9001:2015
  ISO 14001:2015
  Pressure Equipment Directive 2014/68/EU Annex III, Module H
- **Environmental Management**
  Sustainable products and actions
- **Service & Maintenance**
  Directly from the manufacturer
- **Maximum Safety**
  Through exceptional products and high-quality materials

Sophisticated systems
for a demanding application
The WEH® hydrogen product line was developed to meet the requirements of high pressures in the refueling area. All components are designed to withstand extreme flow rates and temperature conditions.

Test laboratory
Modern testing facilities guarantee comprehensive testing of our products from the design phase through to series production. Our 100 % quality assurance is second to none.

Unique jaw locking mechanism
All filling couplings have the jaw locking mechanism developed by WEH. The collets are insensitive to contamination and the low surface pressure minimizes wear.

More safety through filter technology
Our integrated dirt filter prevents dirt particles ingress of dirt particles from the outside in order to leaks as far as possible.

The right decision with certainty
WEH® hydrogen products have a high safety standard. This is the only way self-service operation is even possible.

» Overview

FUELING NOZZLES / BREAKAWAY COUPLINGS

And their common uses:

Overview fueling nozzles			
Product family	Page	Car	Bus/truck
TK20-S1 H_2 70 MPa ENR	14	✓	✓
TK17 H_2 70 MPa	20	✓	
TSA30-S1 H_2 70 MPa	24	✓	
TK17 H_2 35 MPa ENR with data interface	34	✓	
TK17 H_2 35 MPa	38	✓	
TK16 H_2 35 MPa ENR	42	✓	
TK16 H_2 35 MPa	46	✓	
TK16 H_2 High-Flow with data interface	50		✓
TK16 H_2 High-Flow	54		✓
TK25 H_2	70		✓

Overview defueling nozzles		
Product family	Page	Discharging of H_2 fuel tanks - car
TK6 H_2	102	✓

Overview breakaway couplings					
Product family	Page	Car	Car - Inline	Bus/truck	Bus/truck - Inline
TSA30-S1 H_2 70 MPa	24	✓			
TSA1 H_2	58	✓		✓	
TSA2 H_2	66		✓		✓*
TSA5 H_2	74			✓	
TSA6 H_2	78				✓

* except TK16 H_2 / TK16 H_2 High-Flow fueling nozzles with data interface

OVERVIEW FILTERS

Overview filters					
Product family	Page	Car	Bus/truck	Car fueling station	Bus/truck fueling station
TSF2 H_2	94	✓	✓	✓	✓
TSF2 H_2 Koaleszenz	98	✓	✓	✓	✓
TSF4 H_2	100	✓	✓	✓	✓

» Overview

PRESSURE RANGE / CODING

All WEH® Fueling nozzles and receptacles have a coding for gas type and the pressure range thus not allowing connection to natural gas vehicles and other pressure ranges. The following connection possibilities are permissible:

OVERVIEW	Receptacle	TN1 H_2	TN1 H_2 TN1 H_2 for IR*	TN1 H_2 High-Flow TN1 H_2 High-Flow for IR*	TN1 H_2 70 MPa TN1 H_2 70 MPa for IR*	TN5 H_2	**TN5 H_2**
Fueling nozzle	***Druck PN***	*25 MPa*	*35 MPa*	*35 MPa*	*70 MPa*	*25 MPa*	*35 MPa*
TK16 H_2	*25 MPa*	✓	✓	✓	✓		
TK16 H_2 35MPa TK16 H_2 35 MPa ENR	*35 MPa*		✓	✓	✓		
TK16 H_2 High-Flow TK16 H_2 High-Flow with IR*	*35 MPa*			✓			
TK17 H_2 35 MPa TK17 H_2 35 MPa ENR**	*35 MPa*		✓	✓	✓		
TK17 H_2 70 MPa TK20 H_2 70 MPa ENR**	*70 MPa*				✓		
TK25 H_2	*25 MPa*					✓	✓
TK25 H_2	*35 MPa*						✓

*IR = infrared data interface / ** ENR = exchangeable infrared data interface

INTERNATIONAL STANDARDS AND APPROVALS

The following overview shows the standards for which WEH® Products can be certified. For detailed information see respective product.

- Regulation (EC) No. 79/2009*
- Tests acc. to SAE J2600:2002
- SAE J2799
- SAE J2601
- ATEX
- NEC
- KTL
- CCC

** All products with EC79 approval are also suitable for use in stationary systems. When using the products in stationary systems, please check the necessity of a conformity assessment procedure acc. to the Pressure Equipment Directive 2014/68/EU and contact us if corresponding documentation is required. Please also refer to the note on page 114, Explanation on the Pressure Equipment Directive.*

For reasons of precaution, we'd like to point out that

a) regarding the delivery of each article acc. to the respective order confirmation - in particular concerning ECE / EC79 articles - WEH does not confirm the fulfilment of additional requirements of the concerned end customer,
b) WEH is not subject to any external reporting obligation with regard to external change management (see page 114) and
c) WEH does not confirm the replacement of the product in the form of a regular series delivery.
Exclusions acc. to a) - c) can be agreed with the conclusion of a customer-specific project with corresponding special conditions.

» Overview

CERTIFIED QUALITY MANAGEMENT

Our high quality standards are achieved by a practiced quality management and confirmed by certification according to international quality standards.

Quality Management System
DIN EN ISO 9001:2015

Environmental Management System
DIN EN ISO 14001:2015

MEMBERSHIPS

WEH is a member of the German Hydrogen and Fuel Cell Association and the Hydrogen.Bavaria Center (H2.B).

Deutscher Wasserstoff- und Brennstoffzellen-Verband

ZENTRUM WASSERSTOFF BAYERN

» Projects

OUR COMMITMENT TO AN EMISSION-FREE FUTURE

Today, WEH is the global market leader with its refueling systems and a partner to the automotive industry. In addition, WEH is involved in numerous national and international projects worldwide to promote alternative drives and is therefore also a driving force for a mobile society with a future.

We present three of these exciting projects here. They are examples of numerous inquiries and our commitment, which we are happy to continue.

Full throttle on the race track
We are involved in numerous projects around the world to promote alternative fuels in order to realize a climate-neutral future and environmentally friendly mobility.

Among other things, we support the Forze racing team of the Dutch University of Delft with 70 MPa components for a hydrogen-powered powered racing car.

Hydrogen on the water
The Dutch HydroMotion team at Delft University has developed the first hydrogen boat “Flying Hydrogen Boat”. As a leading manufacturer of refueling components for hydrogen, we were delighted to support the student project.

We have provided these WEH® products free of charge:
- WEH® Check Valve TVR1 H_2
- WEH® Receptacle TN1 H_2

The Yacht Club has awarded the HydroMotion team the “Next Generation Prize” for this innovative and progressive project.

With pressure on the rails
The world‘s first hydrogen train for regional transportation was unveiled in 2016. It runs near Bremerhaven.

The “Coradia iLint” train developed by the French train manufacturer Alstom is equipped with WEH® TN1 H_2 35 MPa receptacle. On the roof of the train, the fuel cells convert the hydrogen carried in the tank hydrogen into electrical energy and thus provide the propulsion. The train is of course refueled using the WEH® TK16 H_2 35 MPa fueling nozzle.

» Fueling nozzle **TK20-S1 H_2 70 MPa ENR**

NEW

DESCRIPTION

Features
- Type C nozzle acc. to SAE J2600 resp. ISO 17268
- Very high flow rate
- Easy operation / single-handed operation
- Max. allowable operating pressure (MAWP according to ISO 19880-1:2020)
- Exchangeable data interface (ENR)
- Integrated purging line for nitrogen flushing
- Prepared for dispenser mounting with purging system
- WEH® EASY-TURN 250° swivel joint
- Protecion against impact and cold
- Plastic thermal protection
- Hand grip with magnet
- Compatible with pressure stage H70 according to ISO 17268 (see table below)

The WEH® TK20-S1 H_2 70 MPa ENR Fueling nozzle with exchangeable data interface (ENR = exchangeable nozzle receiver) was developed for fast filling of cars with compressed, gaseous hydrogen (CGH_2). Through to the larger nominal width, refueling with 90 g/s or higher is possible. In addition, this filling coupling is designed for a maximum operating pressure of 96.25 MPa (= MAWP according to ISO 19880-1:2020).

In addition, the new TK20-S1 H_2 70 MPa ENR has the same tried and tested features as the already well-known TK17 H_2 70 MPa ENR.
The fueling nozzleis additionally equipped with a purging line that allows purging with nitrogen during and after refueling process. This can prevent ingress of moisture and the formation of ice crystals during filling with precooled.

The WEH® TK20-S1 H_2 70 MPa ENR offers optimum safety for the operator thanks to the locking mechanism. The Fueling nozzle remains connected to the receptacle until the locking mechanism is released by the operator.

TK20-S1 H_2 70 MPa ENR	TN1 H_2				
		25 MPa	35 MPa	35 MPa HF*	70 MPa
70 MPa					✓

* HF = High-Flow

Application
Fueling nozzle for hydrogen fast filling of cars at self-service fueling stations.

» Fueling nozzle **TK20-S1 H_2 70 MPa ENR**

TECHNICAL DATA

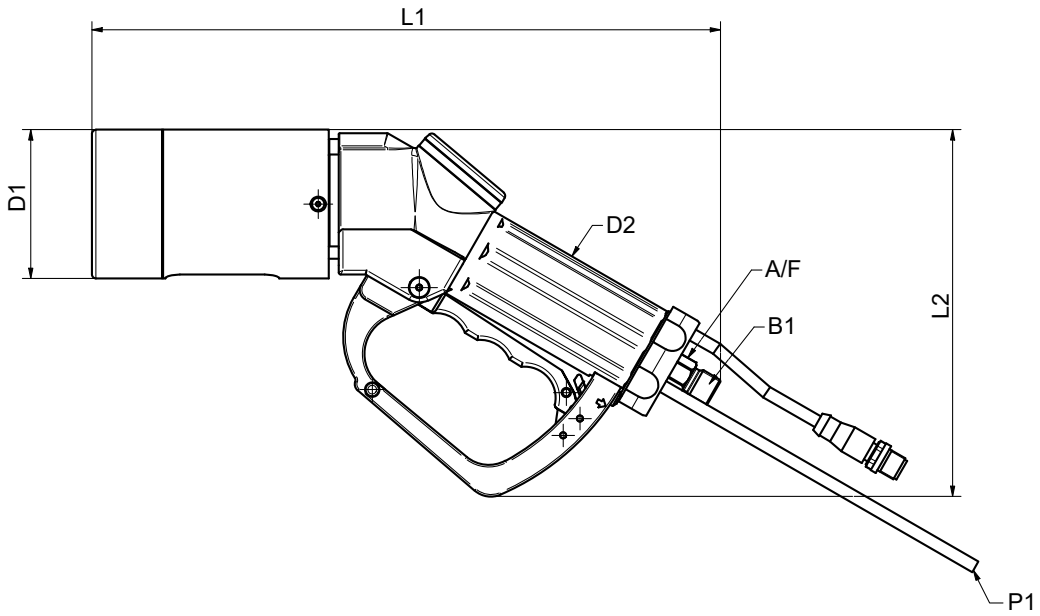
Characteristics	Basic version
Nominal Bore (DN) Filling coupling	5 mm
Nominal Bore (DN) Purging Line	4 mm
Nominal Pressure	PN = 70 MPa
Max. Allowable Operating Pressure	MAWP = 96.25 MPa according to ISO 17268 (PS = 962.5 bar)
Media Temperature Range	-40 °C up to +85 °C
Ambient Temperature Range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing Material	Hydrogen resistant
Nozzle Type	Type C acc. to SAE J2600:2015 and previous resp. ISO 17268:2020 and previous
Design	With plastic thermal protection, cold protection, hand grip with magnet, exchangeable data interface acc. to SAE J2799 and integrated purging line
Weight	Approx. 2.65 kg
Medium for Purging*	Nitrogen
Media Temperature Range Purging Medium*	-40 °C (preferably -20 °C) to +85 °C
Hydrogen flow rate	90 g/s at 8 MPa pressure drop (F90-P8) Pressure drop values for 120 g/s on request
Flow Rate During Purging	500 Nl/h at max. 12 bar purging pressure
Conformity / Tests / Approvals	IR data interface: SAE J2799 and ATEX, NEC, KTL or CCC Design validation based on ISO 17268-1:2025

* The efficiency of the purging line has been successfully tested in compliance with the freezing test 7,26 from ISO 17268

» Fueling nozzle **TK20-S1 H_2 70 MPa ENR**

ORDERING | WEH® TK20-S1 H_2 70 MPa ENR Fueling nozzle

approx. dimensions (mm)



Part no.	Description	Pressure (MAWP)	B1 (male thread)	P1	L1	L2	D1	D2	A/F
C1-186104	TK20-S1 H_2 70 MPa ENR	96.25 MPa	UNF 9/16"-18*	Ø 6	304	177	72	46	15

* 60° inner cone

Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

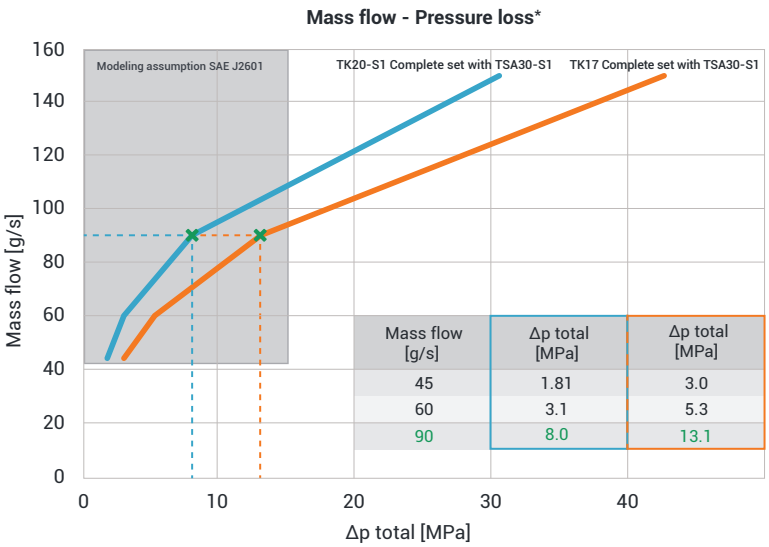
ACCESSORIES

The following accessories are available for the WEH® TK20-S1 H_2 70 MPa ENR Fueling nozzle:

Complete set consisting of Fueling nozzle TK20-S1, Breakaway coupling TSA30-S1 and Hose set

The TK20-S1 Complete set set new standards: thanks to improved flow characteristics, it offers a 40 % lower pressure drop at a flow rate of 90 g/s.

Part. no.	Description
On request	Complete set TK20-S1

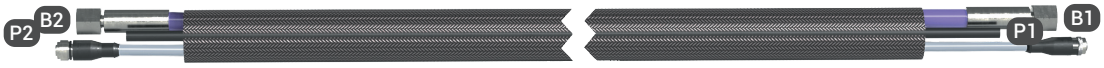


*Values may vary depending on the test setup (e.g. Hose length, receptacle).

» Fueling nozzle **TK20-S1 H_2 70 MPa ENR**

Hose set

Hose set for connecting fueling nozzle and TSA30 H_2 70 MPa breakaway coupling, complete with filling hose, data cable, purging line and braided protection hose as cover.
Design filling hose: max. operating pressure PS: 96.25 MPa / nominal bore (DN): 4.5 mm / media temperature range: -40 °C up to +85 °C



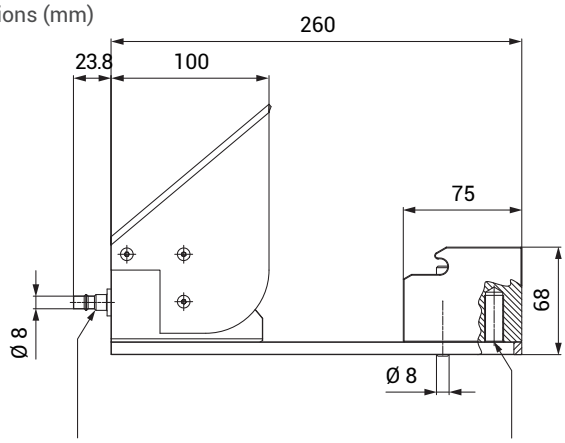
Part no.	B1/B2 (female thread)	P1/P2	Hose length
E68-161886	UNF 9/16"-18*	Ø 6	3 m
E68-161887	UNF 9/16"-18*	Ø 6	4 m
E68-161888	UNF 9/16"-18*	Ø 6	5 m

* DKJ 58°

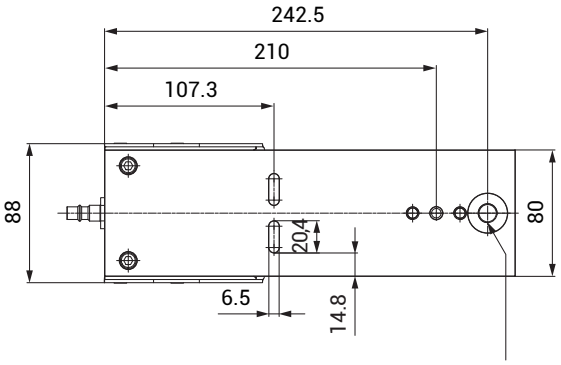
Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser. The mounting is equipped with a port for purging operations, that allows purging of the fueling nozzle whilst not in use. Optionally a magnetic field sensor can be installed.

approx. dimensions (mm)



Port for purging operations



Installation possibility for optionally available magnetic field sensor

Part no.	Description
C1-122121	Dispenser mounting (switch actuated) with weather protection, special cover for impact protection sleeve and purging system
E68-123980	Magnetic field sensor with 2 m cable, explosion-proof acc. to ATEX

» Fueling nozzle **TK20-S1 H_2 70 MPa ENR**

WEH® TNS1 H_2 Service receptacle

To prevent damage in the fueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-148079	TNS1 H_2 Service receptacle incl. protection cap

WEH® Breakaway coupling

For the suitable TSA30-S1 H_2 70 MPa breakaway coupling, please see page 34 in catalog no. 50.

Data cable

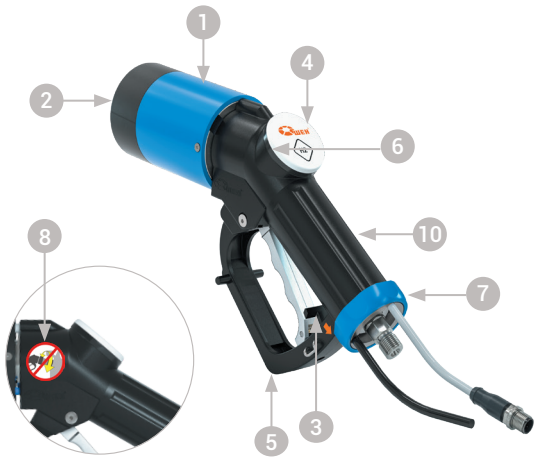
Part no.	Description	Hose length
E68-96194	Data cable suitable for 4 m hose set	4.45 m
E68-96193	Data cable for connecting with the converter	3.45 m

Other lengths on request

» Fueling nozzle **TK20-S1 H_2 70 MPa ENR**

SPARE PARTS

Various parts are available as spares for the WEH® TK20-S1 H_2 70 MPa ENR Fueling nozzle.



Part No.	Description
W186127	1 Impact protection sleeve
W172310	2 IR data interface ATEX, NEC, KTL or CCC
E80-84030	3 Locking lever
E69-161748	4 Logo cap
W124542	5 Hand grip
E80-59738	6 Logo plate
W186082	7 Clamping nut for protective hose
E69-157491	8 Label
C1-161187	10 Handle protector
On request	Maintance spray

When ordering please specify the part no. engraved on the fueling nozzle.

» Fueling nozzle **TK17 H_2 70 MPa**

DESCRIPTION

Features
- Type C nozzle acc. to SAE J2600 resp. ISO 17268
- Left or right single-handed operation
- Compatible with WEH® TN1 H_2 70 MPa Receptacle profile
- WEH® EASY-TURN 250° swivel joint
- Easy operation
- High flow rate short filling times
- Protecion against impact and cold
- Plastic thermal protection
- Hand grip with magnet
- WEH® Jaw locking mechanism
- High-grade materials
- Coding for pressure range / gas type (acc. to table below)

The WEH® TK17 H_2 70 MPa Fueling nozzle was developed for fast filling of cars with compressed, gaseous hydrogen (CGH_2). The fueling nozzle with single-handed operation is just as quick and easy to use as the common petrol nozzle and has a similar look and feel.

Simply lift the nozzle from the dispenser mounting and place it onto the vehicle's receptacle. The integrated swivel joint allows a free rotation of the coupling by approx. 250°. Then pull back the actuation lever and the refueling process can begin. The gaseous hydrogen only flows through the line if there is a safe connection. After the refueling process is completed, the fueling nozzle is disconnected by actuating the locking lever. Of course, refueling may be stopped or paused at any time. The hand grip has a magnet for actuation of the magnet switch for activation of the dispenser.
The internal coding for pressure range and gas type ensures that the TK17 H_2 70 MPa can be connected to the compatible WEH® Receptacles acc. to the opposite table and also prevents the risk of confusion with natural gas.

TK17 H_2 70 MPa	TN1 H_2				
		25 MPa	35 MPa	35 MPa HF*	70 MPa
70 MPa					✓

* HF = High-Flow

The WEH® TK17 H_2 70 MPa offers optimum safety for the operator thanks to the locking mechanism. The fueling nozzle remains connected to the receptacle until the locking mechanism is released by the operator.

Application
Fueling nozzle for hydrogen fast filling of cars at self-service fueling stations.

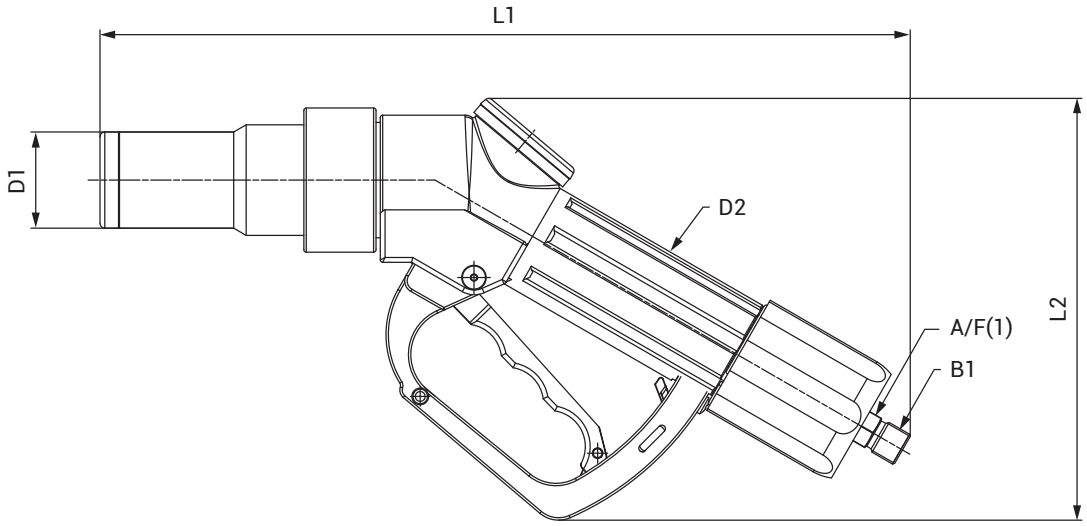
TECHNICAL DATA

Characteristics	Basic version
Nominal bore (DN)	4 mm
Nominal Pressure	PN = 70 MPa
Max. allowable operating Pressure	MAWP = 87.5 MPa according to ISO 17268 (PS = 875 bar)
Media temperature range	-40 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Nozzle type	Type C acc. to SAE J2600:2015 and previous resp. ISO 17268:2012 and previous
Design	With plastic thermal protection, cold protection and hand grip with magnet
Weight	Approx. 1.9 kg
Conformity / Tests / Approvals	Tests acc. to SAE J2600:2002

» Fueling nozzle **TK17 H_2 70 MPa**

ORDERING | WEH® TK17 H_2 70 MPa Fueling nozzle

approx. dimensions (mm)



Part no.	Description	Pressure (MAWP)	B1 (male thread)	L1	L2	D1	D2	A/F(1)
C1-162708	TK17 H_2 70 MPa	87.5 MPa	UNF 9/16“-18*	337	175	40	46	14

* 60° inner cone

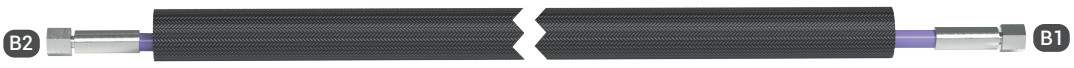
Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

ACCESSORIES

The following accessories are available for the WEH® TK17 H_2 70 MPa Fueling nozzle:

Hose set

Hose set for connecting fueling nozzle and TSA1 H_2 70 MPa breakaway coupling, complete with filling hose and braided protection hose as cover.
Design filling hose: max. operating pressure PS: 96.25 MPa / nominal bore (DN): 4.5 mm / media temperature range: -40 °C up to +85 °C



Part no.	B1/B2 (female thread)	Hose length
E68-163061	UNF 9/16“-18*	3 m
E68-163062	UNF 9/16“-18*	4 m
E68-163063	UNF 9/16“-18*	5 m

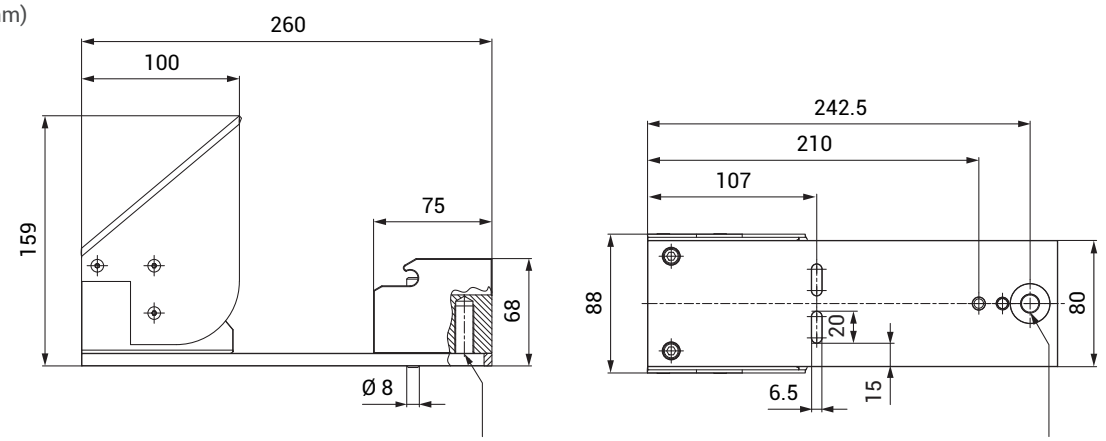
* DKJ 58°

» Fueling nozzle **TK17 H_2 70 MPa**

Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser. Optionally a magnetic field sensor can be installed.

approx. dimensions (mm)



Mounting possibility for optionally available magnetic field sensor

Part no.	Description
C1-143641	Dispenser mounting (switch actuated) with weather protection and special cover for impact protection
E68-123980	Magnetic field sensor with 2 m cable, explosion-proof acc. to ATEX

WEH® TNS1 H_2 Service receptacle

To prevent damage in the fueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-148079	TNS1 H_2 Service receptacle incl. protection cap

WEH® Breakaway coupling

For the suitable TSA30-S1 H_2 70 MPa or TSA1 H_2 70 MPa breakaway coupling, please see page 35 resp. 39.

» Fueling nozzle **TK17 H_2 70 MPa**

SPARE PARTS

Various parts are available as spares for the WEH® TK17 H_2 70 MPa Fueling nozzle.

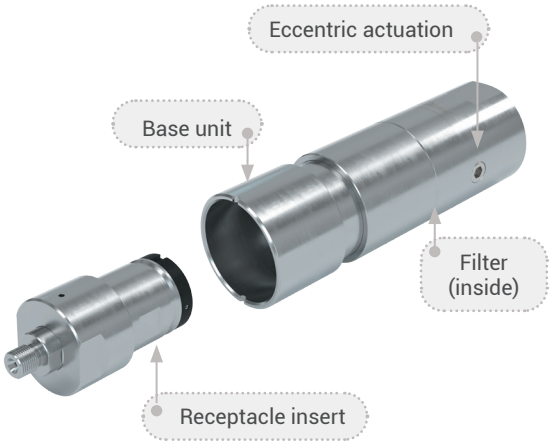
Part No.	Description
E80-80187	1 Impact protection
E80-84030	2 Locking lever
E69-161748	3 Logo cap
E80-59738	3 Label plate
E80-162272	4 Plastic thermal protection (cold protection)
On request	Maintenance spray

When ordering please specify the part no. engraved on the fueling nozzle.

» Breakaway coupling **TSA30-S1 H_2 70 MPa**

NEW

DESCRIPTION



Features
- Enhanced safety ➡ operating pressure up to max. 96.25 MPa
- Integrated filter (5 µm) ➡ for clean filtered hydrogen
- Short and compact design
- Enhanced breakaway force acc. to ISO 19880-3
- Base unit can be reused after breakaway ➡ no factory servicing necessary
- Receptacle insert available as a spare part ➡ no downtime after a breakaway
- Easy installation directly on the dispenser

More safety at hydrogen fueling stations with the new WEH® TSA30-S1 H_2 70 MPa Breakaway coupling.
The breakaway coupling is installed directly on the dispenser. In the event of unexpected tensile forces, such as a vehicle driving away with a connected fueling nozzle, the TSA30-S1 H_2 70 MPa separates the connection between the dispenser and hose in a controlled manner. Both sides are sealed pressure-tight directly after breakaway and therefore damage to the vehicle and the dispenser can be prevented as far as possible.

The max. operating pressure of 96.25 MPa offers even more safety. If there is a malfunction, the safety valve of the dispenser opens at a pressure of 96.25 MPa. This high pressure can also reach the breakaway coupling, but the TSA30-S1 H_2 70 MPa can withstand this pressure perfectly.

In the event of a breakaway, the base unit can be reused - no factory servicing is necessary. Only the receptacle insert needs to be replaced or serviced. Therefore we offer a replacement receptacle insert, to avoid downtime at the dispenser.

The WEH® Breakaway coupling consists of a base unit and a receptacle insert. The integrated filter ensures clean filtered hydrogen and thus prevents damage caused by dirt ingress.
The TSA30-S1 H_2 70 MPa is suitable for use with pre-cooled hydrogen.

Application
Breakaway coupling for hydrogen fueling stations for direct installation at the dispenser.

TECHNICAL DATA

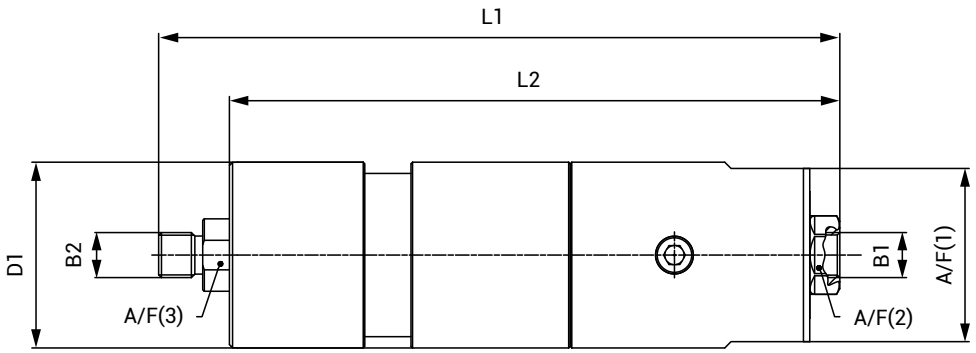
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal Pressure	PN = 70 MPa
Max. allowable operating Pressure	MAWP = 96.25 MPa according to ISO 19880-1 (PS = 962.5 bar)
Media temperature range	-40 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Breakaway force	220 - 1,000 N
Material	Corrosion resistant stainless steel
Sealing material	Hydrogen resistant
Design	With filter (5 µm)
Conformity / Tests / Approvals	Tested acc. to ISO 19880-3

Other designs on request

» Breakaway coupling **TSA30-S1 H_2 70 MPa**

ORDERING | WEH® TSA30-S1 H_2 70 MPa Breakaway coupling

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B1 (female thread)	B2 (male thread)	L1	L2	D1	A/F(1)	A/F(2)	A/F(3)
C1-163690	TSA30-S1 H_2 70 MPa	8	96.25 MPa	UNF 9/16"-18*	UNF 9/16"-18**	216	194	59	55	22	21

* MP-fitting, 60° inner cone
** 60° inner cone

» Breakaway coupling **TSA30-S1 H_2 70 MPa**

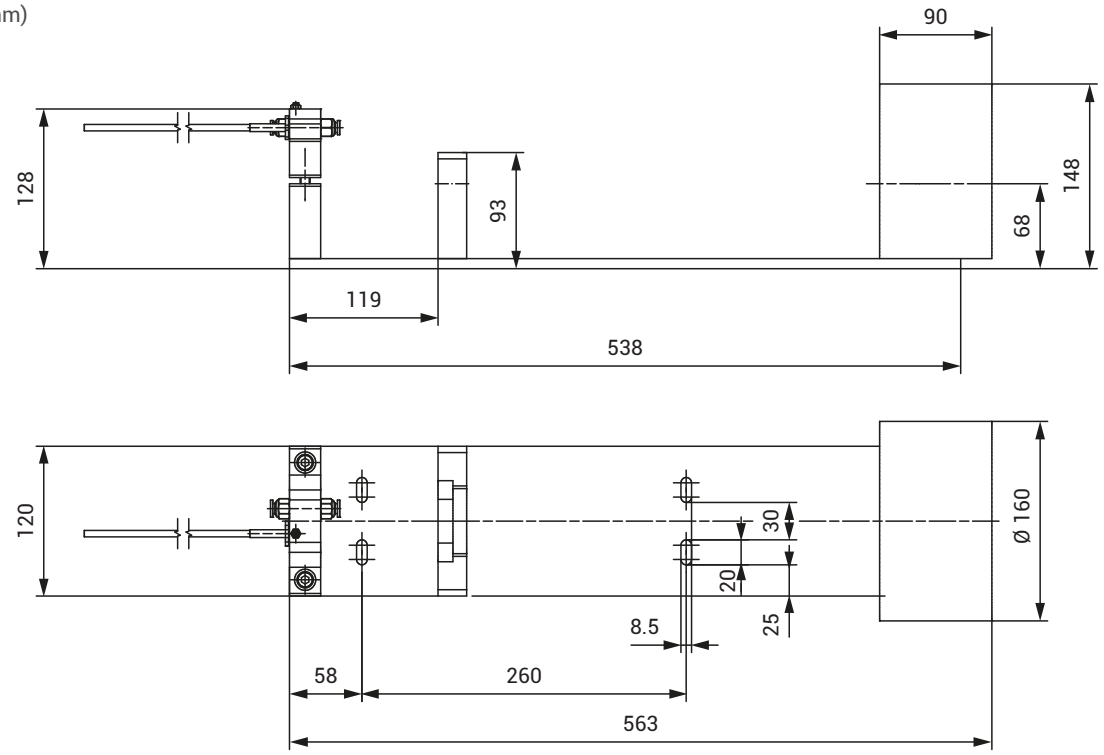
ACCESSORIES

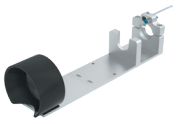
The following accessories are available for the WEH® TSA30-S1 H_2 70 MPa Breakaway coupling:

Dispenser mounting

Mounting for safe attachment of the breakaway coupling to the dispenser. An integrated guide ring in the mounting ensures a straight breakaway force.

approx. dimensions (mm)





Part no.	Description
C1-183156	Dispenser mounting for TSA30-S1 H_2 70 MPa incl. data cable

Hoses

Suitable hoses for the TSA30-S1 H_2 70 MPa breakaway coupling are available on request.

» Breakaway coupling **TSA30-S1 H_2 70 MPa**

SPARE PARTS

Various parts are available as spares for the WEH® TSA30-S1 H_2 70 MPa Breakaway coupling.

Part No.	Description
C1-168931	Receptacle insert for TSA30-S1 H_2 70 MPa

» Receptacle **TN1 H_2 70 MPa**

DESCRIPTION

Features
- Low-noise refueling
- Integrated self-cleaning particle filter (20 µm)
- Integrated high-flow check valve
- Sealing-friendly design
- Coding for pressure range / gas type (acc. to table below)

For refueling cars with hydrogen at a pressure range of 700 bar, the WEH® TN1 H_2 70 MPa Receptacle is available.
Due to the aerodynamic design of the internal shapes of the receptacle, noise during refueling process is mostly eliminated, while at the same time maximum flow rate is enabled. The internal seals are arranged to largely prevent damage to the sealing components. That is why the WEH® TN1 H_2 70 MPa proves to be extremely robust and durable, minimizing downtimes due to low maintenance.
The receptacle is equipped with an integrated check valve and has a coding for pressure range / gas type.

Enhanced safety by integrated particle filter
The use of an integrated particle filter prevents the ingress of dirt particles from the outside and therefore leakage at the receptacle is almost eliminated.

Application
Receptacle for hydrogen refueling / filling of cars and fork-lift trucks or other industrial applications, to be used with WEH® Fueling nozzles acc. to opposite table.

TN1 H_2 70 MPa	TK17 H_2 / TK16 H_2 25 MPa	35 MPa	35 MPa HF*	70 MPa
70 MPa	✓	✓	✓**	✓

* HF = High-Flow
** except TK16 H_2 High-Flow

TECHNICAL DATA

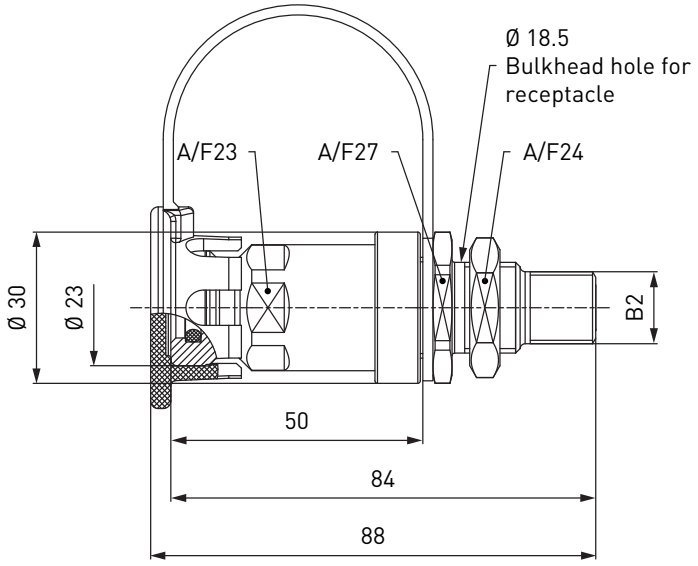
Characteristics	Basic version
Nominal bore (DN)	3 mm
Nominal Pressure	PN = 70 MPa
Max. allowable operating Pressure	MAWP = 87.5 MPa according to ISO 17168 (PS = 875 bar)
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Design	With protection cap, integrated particle filter (20 µm) and integrated check valve
Conformity / Tests / Approvals	e 1 00 0010 (Regulation (EC) No. 79/2009) Tests acc. to SAE J2600:2002 SAE J2799 GB/T 26779-2021

Other designs on request

» Receptacle **TN1 H_2 70 MPa**

ORDERING | WEH® TN1 H_2 70 MPa Receptacle with male thread

approx. dimensions (mm)

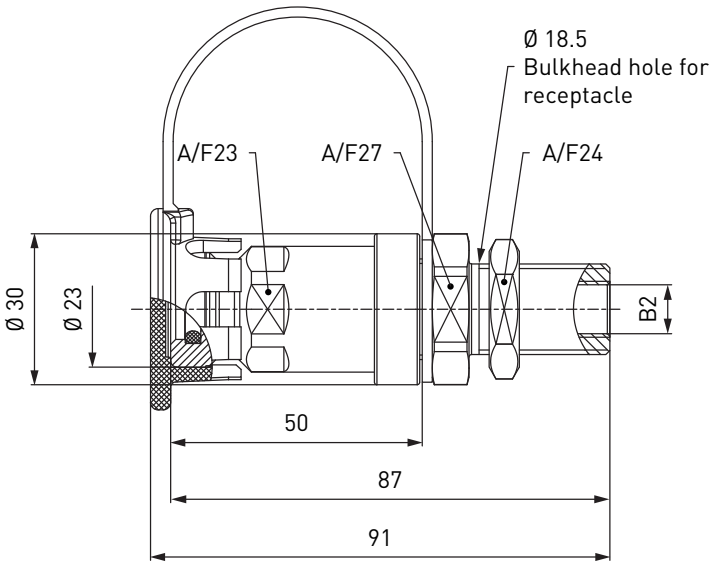


Part No.	Description	DN	Pressure (MAWP)	B2 (male thread)
C1-84087	TN1 H_2 70 MPa (EC79)	3	87.5 MPa	UNF 9/16“-18 for sealing with O-Lok® Face Seal* for tube Ø 6 (1/4“)

* Face Seal acc. to SAE J1453

ORDERING | WEH® TN1 H_2 70 MPa Receptacle with female thread (autoclave)

approx. dimensions (mm)



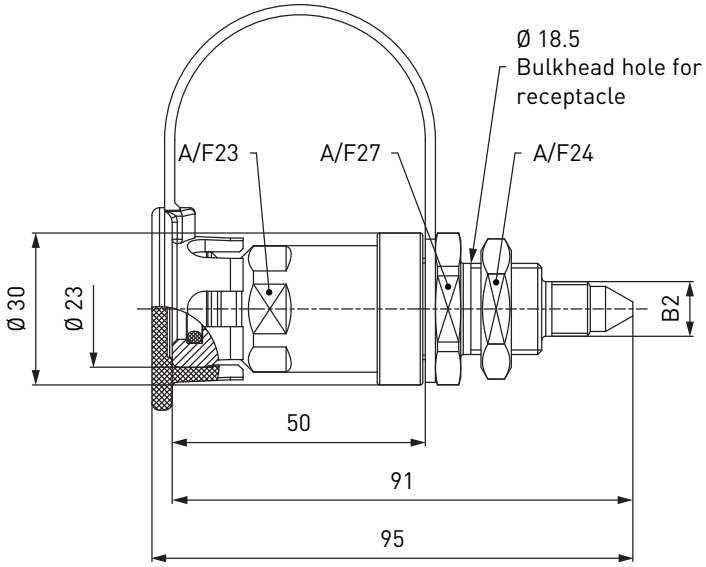
Part No.	Description	DN	Pressure (MAWP)	B2 (female thread)
C1-87745	TN1 H_2 70 MPa (EC79)	3	87.5 MPa	UNF 7/16“-20*

* MP-fitting, 60° inner cone

» Receptacle **TN1 H_2 70 MPa**

ORDERING | WEH® TN1 H_2 70 MPa Receptacle with male thread (autoclave)

approx. dimensions (mm)



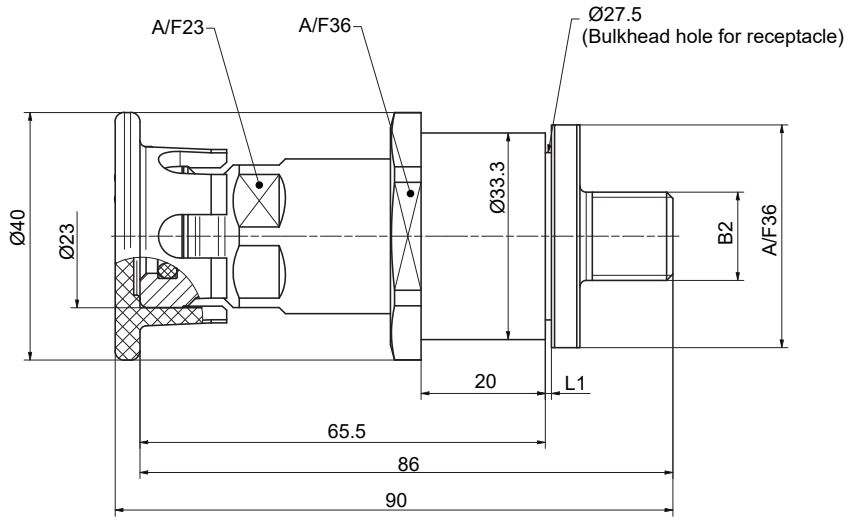
Part No.	Description	DN	Pressure (MAWP)	B2 (male thread)
C1-88565	TN1 H_2 70 MPa (EC79)	3	87.5 MPa	UNF 7/16"-20*

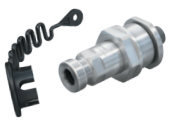
* 60° outer cone

» Receptacle TN1 H_2 70 MPa

ORDERING | WEH® TN1 H_2 70 MPa Receptacle with male thread, prepared for data interface

approx. dimensions (mm)





Part No.	Description	DN	Pressure (MAWP)	L1	B2 (male thread)
C1-172492	TN1 H_2 70 MPa (EC79)	3	87.5 MPa	1**	UNF 9/16"-18 for sealing with O-Lok® Face Seal* for tube Ø 6 (1/4")

* Face Seal acc. to SAE J1453
** Please indicate when ordering if thicker sheet metals are needed!
Data interface not included!

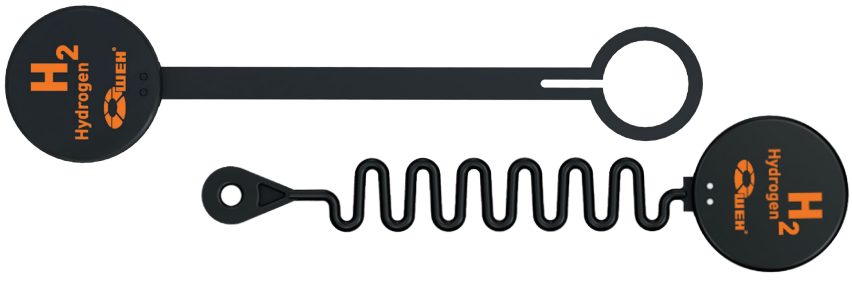
Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*^{40}) on request.

SPARE PARTS

Various parts are available as spares for the WEH® TN1 H_2 70 MPa Receptacle.

Protection cap

Protection cap with a strap to protect the receptacle from dirt ingress.



Part No.	Description
W87803	Protection cap
W85984	Protection cap for receptacles prepared for data interface

» Check valve **TVR1 H_2 70 MPa**

DESCRIPTION

Features
- Robust construction
- Low-noise opening and closing
- Corrosion resistant stainless steel
- High leak tightness

With the TVR1 H_2 70 MPa WEH offers a high-performance check valve for use in hydrogen cars or hydrogen fueling stations of the latest generation.
The WEH® TVR1 H_2 70 MPa check valves provide a reliable function wherever hydrogen should only flow in one direction within a pipe system and must be prevented from a return flow.

The seals in the valve are arranged to prevent them from being damaged by dirt particles in the gas flow. The WEH® TVR1 H_2 70 MPa Check valve is made of corrosion-resistant stainless steel achieving a very durable unit due to its robust internal structure.

Application
Check valve for cars, also suitable for installation in hydrogen fueling stations.
The WEH® TVR1 H_2 70 MPa product family is offered as a return flow prevention acc. to DIN EN 736-1 for installation in H2 systems and pipelines.

TECHNICAL DATA

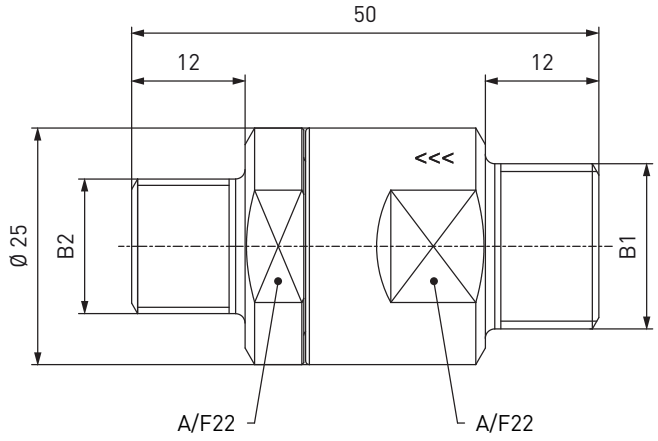
Characteristics	Basic version
Nominal bore (DN)	Depending on design
Nominal Pressure	PN = 70 MPa
Max. allowable operating Pressure	MAWP = 87.5 MPa according to ISO 17168 (PS = 875 bar)
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant stainless steel
Sealing material	Hydrogen resistant
Design	With or without integrated particle filter (20 µm)
Conformity / Tests / Approvals	e 1 00 0009 (Regulation (EC) No. 79/2009)

Other designs on request

» Check valve **TVR1 H_2 70 MPa**

ORDERING | WEH® TVR1 H_2 70 MPa Check valve with male thread on both sides (Face Seal on both sides)

approx. dimensions (mm)

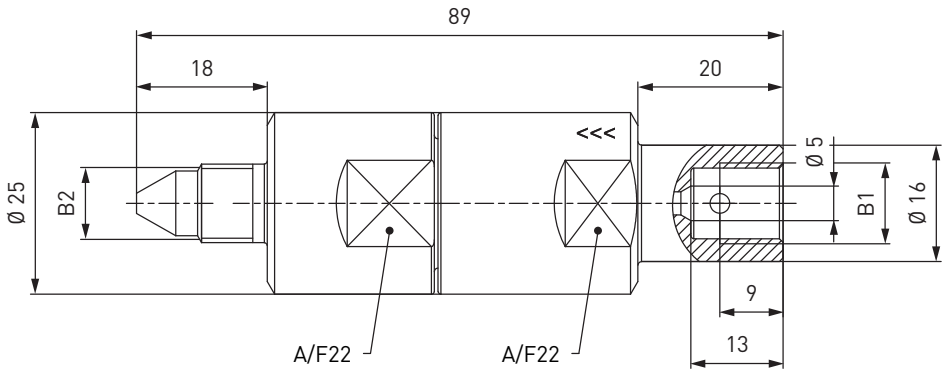


Part No.	Description	DN	Pressure (MAWP)	B1 (male thread)	B2 (male thread)
C1-76959	TVR1 H_2 70 MPa (EC79)	4	87.5 MPa	UN 11/16“-16 for sealing with O-Lok® Face Seal* for tube Ø 10 (3/8“)	UNF 9/16“-18 for sealing with O-Lok® Face Seal* for tube Ø 6 (1/4“)

* Face Seal acc. to SAE J1453

ORDERING | WEH® TVR1 H_2 70 MPa Check valve with female thread / male thread and filter (20 µm)

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B1 (female thread)	B2 (male thread)
C1-87743	TVR1 H_2 70 MPa (EC79)	2.5	87.5 MPa	UNF 7/16“-20*	UNF 7/16“-20**

* MP-fitting, 60° inner cone
** MP-fitting, 59° outer cone

Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*[40]) on request.

» Fueling nozzle **TK17 H_2 35 MPa ENR**

DESCRIPTION

Features
- Type C nozzle acc. to SAE J2600 resp. ISO 17268
- Left or right single-handed operation
- Compatible with WEH® TN1 H_2 Receptacle profile
- Exchangeable data interface (ENR)
- Integrated purging line for nitrogen purging
- Prepared for dispenser mounting with purging system
- WEH® EASY-TURN 250° swivel joint
- Increased robustness in case of improper handling
- Easy operation
- High flow rate short filling times
- Protecion against impact and cold
- Plastic thermal protection
- Hand grip with magnet
- WEH® Jaw locking mechanism
- High-grade materials
- Coding for pressure range / gas type (acc. to table below)

The WEH® TK17 H_2 35 MPa ENR Fueling nozzle with exchangeable data interface (ENR = exchangeable nozzle receiver) was developed for fast filling of cars with compressed, gaseous hydrogen (CGH_2).

Equipped with the same outstanding features as the WEH® TK17 H_2 35 MPa without ENR, the fueling nozzle with ENR also has an interface (infrared) for data transfer between vehicle and fueling station, as well as a purging line for purging the nozzle with nitrogen during and after refueling process. This can prevent ingress of moisture and formation of ice crystals. The internal coding for pressure range and gas type ensures that the TK17 H_2 35 MPa ENR can be connected to the compatible WEH® Receptacles acc. to the opposite table and also prevents the risk of confusion with natural gas.

TK17 H_2 35 MPa ENR	TN1 H_2			
	25 MPa	35 MPa	35 MPa HF*	70 MPa
35 MPa		✓	✓	✓

* HF = High-Flow

The WEH® TK17 H_2 35 MPa ENR offers optimum safety for the operator thanks to the locking mechanism. The fueling nozzle remains connected to the receptacle until the locking mechanism is released by the operator.

Application
Fueling nozzle for hydrogen fast filling of cars at self-service fueling stations.

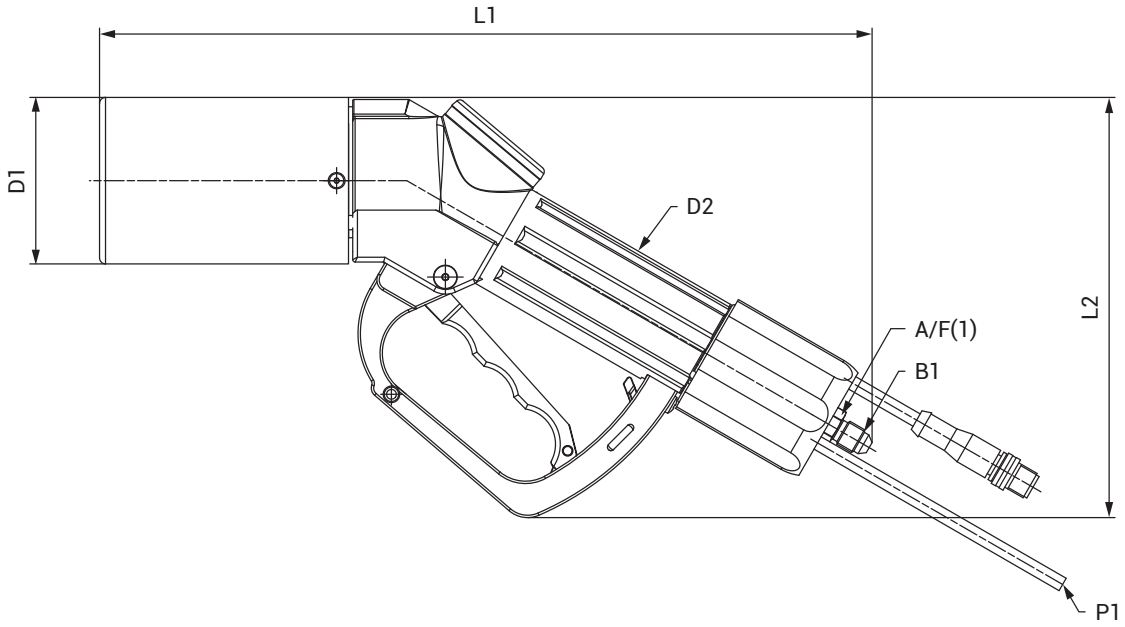
TECHNICAL DATA

Characteristics	Basic version
Nominal bore (DN)	4 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 49 MPa according to ISO 17268 (PS = 490 bar)
Media temperature range	-40 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Nozzle type	Type C acc. to SAE J2600:2015 and previous resp. ISO 17268:2012 and previous
Design	With plastic thermal protection, cold protection, hand grip with magnet, exchangeable data interface acc. to SAE J2799 and integrated purging line
Weight	Approx. 2.4 kg
Medium for purging	Nitrogen
Nominal bore (DN) purging line	4 mm
Media temperature range purging medium	-20 °C up to +85 °C
Flow rate during purging	500 Nl/h at max. 12 bar purging pressure
Conformity / Tests / Approvals	Fueling nozzle: tests acc. to SAE J2600:2002 IR data interface: SAE J2799 and ATEX, NEC or KTL

» Fueling nozzle **TK17 H_2 35 MPa ENR**

ORDERING | WEH® TK17 H_2 35 MPa ENR Fueling nozzle

approx. dimensions (mm)



Part no.	Description	Pressure (MAWP)	B1 (male thread)	L1	L2	D1	D2	A/F(1)
C1-174293	TK17 H_2 35 MPa ENR (ATEX IR data interface)	49 MPa	UNF 7/16"-20*	324	177	70	46	14
C1-174294	TK17 H_2 35 MPa ENR (NEC IR data interface)	49 MPa	UNF 7/16"-20*	324	177	70	46	14
C1-174295	TK17 H_2 35 MPa ENR (KTL IR data interface)	49 MPa	UNF 7/16"-20*	324	177	70	46	14

* acc. to SAE J514, 37° cone

Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

ACCESSORIES

The following accessories are available for the WEH® TK17 H_2 35 MPa ENR Fueling nozzle:

Hose set

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling hose, data cable, purging line and braided protection hose as cover.
Design filling hose: max. operating pressure PS: 49 MPa / nominal bore (DN): 4.5 mm / media temperature range: -40 °C up to +85 °C

Part no.	B1/B2 (female thread)	P1/P2	Hose length
E68-174299	UNF 7/16"-20*	Ø 6	3 m
E68-174300	UNF 7/16"-20*	Ø 6	4 m
E68-174301	UNF 7/16"-20*	Ø 6	5 m

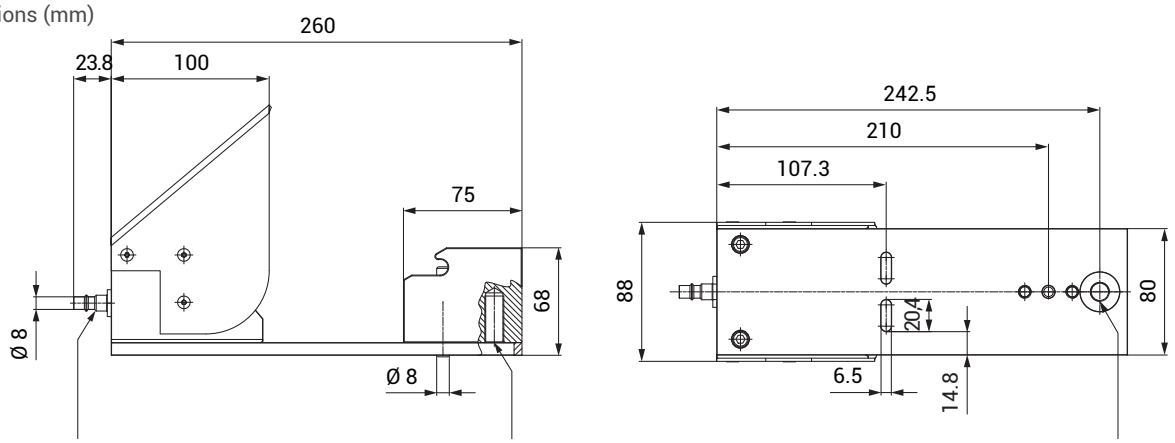
* acc. to SAE JIC, 37° sealing cone

» Fueling nozzle **TK17 H_2 35 MPa ENR**

Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser. The mounting is equipped with a port for purging operations, that allows purging of the fueling nozzle whilst not in use. Optionally a magnetic field sensor can be installed.

approx. dimensions (mm)



Port for purging operations

Installation possibility for optionally available magnetic field sensor

Part no.	Description
C1-143641	Dispenser mounting (switch actuated) with weather protection, special cover for impact protection sleeve and purging system
E68-123980	Magnetic field sensor with 2 m cable, explosion-proof acc. to ATEX

WEH® TNS1 H_2 Service receptacle

To prevent damage in the fueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-148079	TNS1 H_2 Service receptacle incl. protection cap

WEH® Breakaway couplings

For the suitable TSA1 H_2 breakaway coupling or TSA2 H_2 inline breakaway coupling, please see page 44 resp. 53.

Data cable

Part no.	Description	Hose length
E68-96194	Data cable suitable for 4 m hose set	4.45 m
E68-96193	Data cable for connecting with the converter	3.45 m

Other lengths on request

» Fueling nozzle **TK17 H_2 35 MPa ENR**

SPARE PARTS

Various parts are available as spares for the WEH® TK17 H_2 35 MPa ENR Fueling nozzle.

Part No.	Description
W176899	1 Impact protection sleeve (incl. 3 countersunk screws)
W137969	2 ATEX IR data interface (incl. 3 cylinder screws, 3 countersunk screws and o-ring)
W140915	2 NEC IR data interface (incl. 3 cylinder screws, 3 countersunk screws and o-ring)
W166319	2 KTL IR data interface (incl. 3 cylinder screws, 3 countersunk screws and o-ring)
E80-84030	3 Locking lever
E69-161748	4 Logo cap
E80-59738	4 Label plate
E80-162272	5 Plastic thermal protection (cold protection)
E69-157491	6 Label
On request	Maintenance spray

When ordering please specify the part no. engraved on the fueling nozzle.

» Fueling nozzle **TK17 H_2 35 MPa**

DESCRIPTION

Features
- Type C nozzle acc. to SAE J2600 resp. ISO 17268
- Left or right single-handed operation
- Compatible with WEH® TN1 H_2 Receptacle profile
- WEH® EASY-TURN 250° swivel joint
- Easy operation
- High flow rate short filling times
- Protecion against impact and cold
- Plastic thermal protection
- Hand grip with magnet
- WEH® Jaw locking mechanism
- High-grade materials
- Coding for pressure range / gas type (acc. to table below)

The WEH® TK17 H_2 35 MPa Fueling nozzle was developed for fast filling of cars with compressed, gaseous hydrogen (CGH_2).

It is equipped with the same outstanding features as all other WEH® TK17 H_2 Fueling nozzles:
The integrated swivel joint allows a free rotation of the coupling by approx. 250° and the hand grip has a magnet for actuation of the magnet switch for activation of the dispenser.

The internal coding for pressure range and gas type ensures that the TK17 H_2 35 MPa can be connected to the compatible WEH® Receptacles acc. to the opposite table and also prevents the risk of confusion with natural gas.

TK17 H_2 35 MPa	TN1 H_2 25 MPa	TN1 H_2 35 MPa	TN1 H_2 35 MPa HF*	TN1 H_2 70 MPa
35 MPa		✓	✓	✓

* HF = High-Flow

The WEH® TK17 H_2 35 MPa offers optimum safety for the operator thanks to the locking mechanism. The fueling nozzle remains connected to the receptacle until the locking mechanism is released by the operator.

Application
Fueling nozzle for hydrogen fast filling of cars at self-service fueling stations.

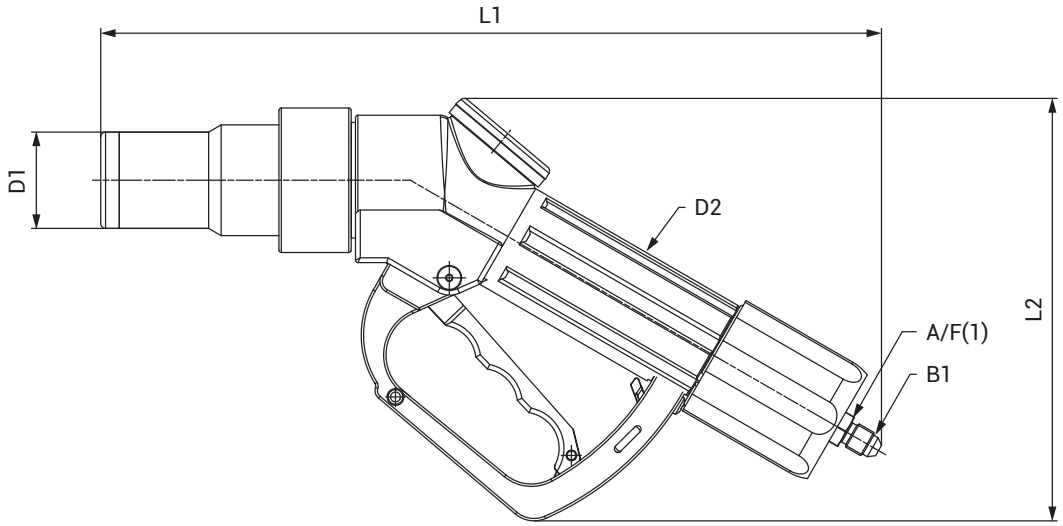
TECHNICAL DATA

Characteristics	Basic version
Nominal bore (DN)	4 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 49 MPa according to ISO 17268 (PS = 490 bar)
Media temperature range	-40 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Nozzle type	Type C acc. to SAE J2600:2015 and previous resp. ISO 17268:2012 and previous
Design	With plastic thermal protection, cold protection and hand grip with magnet
Weight	Approx. 1.8 kg
Conformity / Tests / Approvals	Tests acc. to SAE J2600:2002

» Fueling nozzle **TK17 H_2 35 MPa**

ORDERING | WEH® TK17 H_2 35 MPa Fueling nozzle

approx. dimensions (mm)



Part no.	Description	Pressure (MAWP)	B1 (male thread)	L1	L2	D1	D2	A/F(1)
C1-174292	TK17 H_2 35 MPa	49 MPa	UNF 7/16“-20*	324	175	40	46	14

* acc. to SAE J514, 37° cone

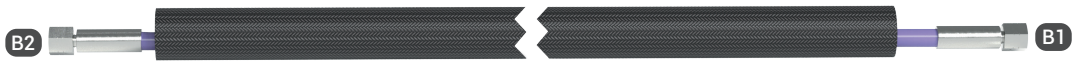
Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

ACCESSORIES

The following accessories are available for the WEH® TK17 H_2 35 MPa Fueling nozzle:

Hose set

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling hose and braided protection hose as cover. Design filling hose: max. operating pressure PS: 49 MPa / nominal bore (DN): 4.5 mm / media temperature range: -40 °C up to +85 °C



Part no.	B1/B2 (female thread)	Hose length
E68-174296	UNF 7/16“-20*	3 m
E68-174297	UNF 7/16“-20*	4 m
E68-174298	UNF 7/16“-20*	5 m

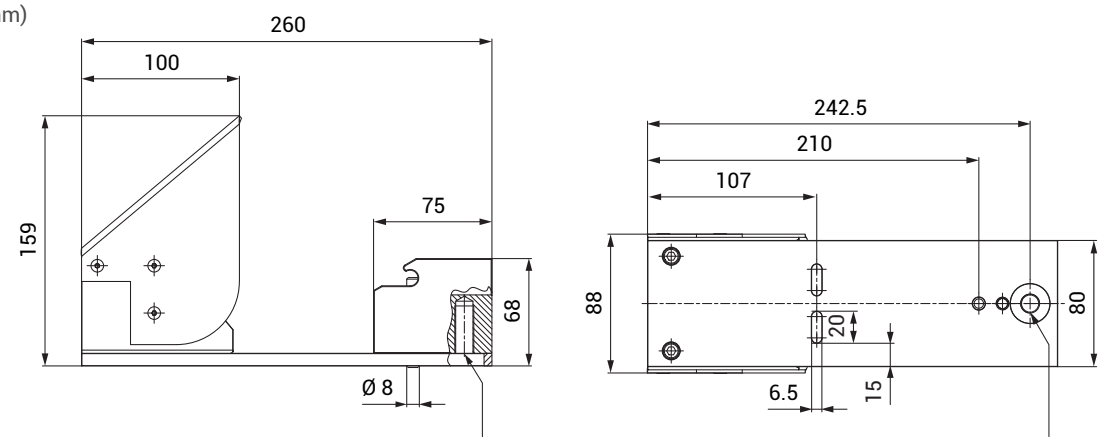
* acc. to SAE JIC, 37° sealing cone

» Fueling nozzle **TK17 H_2 35 MPa**

Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser. Optionally a magnetic field sensor can be installed.

approx. dimensions (mm)



Mounting possibility for optionally available magnetic field sensor

Part no.	Description
C1-143641	Dispenser mounting (switch actuated) with weather protection and special cover for impact protection
E68-123980	Magnetic field sensor with 2 m cable, explosion-proof acc. to ATEX

WEH® TNS1 H_2 Service receptacle

To prevent damage in the fueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-148079	TNS1 H_2 Service receptacle incl. protection cap

WEH® Breakaway couplings

For the suitable TSA1 H_2 breakaway coupling or TSA2 H_2 inline breakaway coupling, please see page 43 resp. 53.

» Fueling nozzle **TK17 H_2 35 MPa**

SPARE PARTS

Various parts are available as spares for the WEH® TK17 H_2 35 MPa Fueling nozzle.

Part No.	Description
E80-80187	1 Impact protection
E80-84030	2 Locking lever
E69-161748	3 Logo cap
E80-59738	3 Label plate
E80-162272	4 Plastic thermal protection (cold protection)
On request	Maintenance spray

When ordering please specify the part no. engraved on the fueling nozzle.

» Fueling nozzle **TK16 H_2 35 MPa ENR**

DESCRIPTION

Features
- Type A acc. to SAE J2600 resp. ISO 17268
- Compatible with WEH® TN1 H_2 Receptacle profile
- Exchangeable data interface (ENR)
- WEH EASY-TURN® 240° swivel joint for actuation lever
- Easy operation
- High flow rate short filling times
- Recirculation of the vented gas
- Plastic thermal protection
- WEH® Jaw locking mechanism
- High-grade materials
- Coding for pressure range / gas type (acc. to table below)

With the WEH® TK16 H_2 35 MPa ENR the user has a fueling nozzle for hydrogen that makes refueling cars with compressed gaseous hydrogen (CGH_2) even easier than before. The fueling nozzle with exchangeable data interface is easy to operate and thus increases operator comfort.
The integrated swivel joint is located directly on the actuation lever, making it easy to rotate the fueling nozzle to the optimum connection position. The actuating lever can be switched with little effort when connecting and disconnecting.

The internal coding for pressure range and gas type ensures that the TK16 H_2 35 MPa ENR can be connected to the compatible WEH® Receptacles acc. to the opposite table and also prevents the risk of confusion with natural gas.
Furthermore, the fueling nozzle has an exchangeable interface (infrared) for data transfer between the vehicle and the fueling station.

TK16 H_2 IR**	TN1 H_2				
		25 MPa	35 MPa	35 MPa HF*	70 MPa
35 MPa			✓	✓	✓

* HF = High-Flow
** IR =infrared data interface

The WEH® TK16 H_2 35 MPa ENR offers optimum safety for the operator.
The fueling nozzle remains connected to the receptacle until the gas between inlet valve and receptacle is depressurized.

Application
Fueling nozzle for hydrogen fast filling of cars at self-service fueling stations.

TECHNICAL DATA

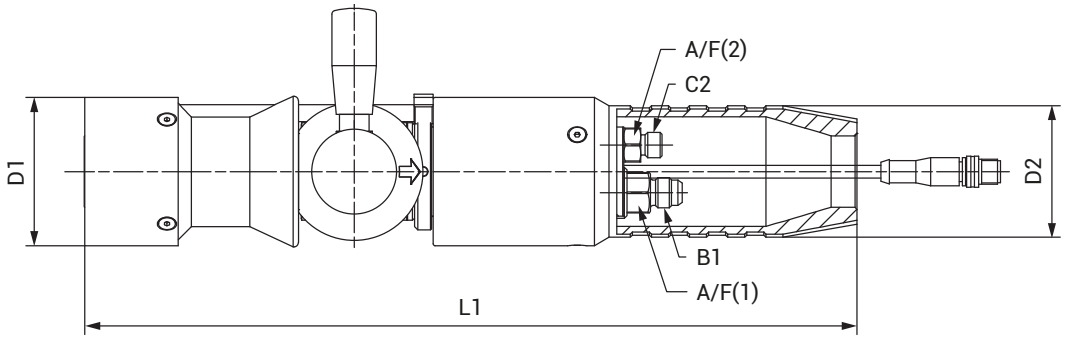
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 17168 (PS = 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Nozzle type	Type A acc. to SAE J2600:2015 and previous resp. ISO 17268:2012 and previous
Design	With plastic thermal protection, gas recirculation and exchangeable data interface acc. to SAE J2799
Weight	Approx. 2.4 kg
Conformity / Tests / Approvals	Fueling nozzle: tests acc. to SAE J2600:2002 IR data interface: SAE J2799 and ATEX, NEC, KTL and CCC

Other designs on request

» Fueling nozzle **TK16 H_2 35 MPa ENR**

ORDERING | WEH® TK16 H_2 35 MPa ENR

approx. dimensions (mm)



Part No.	Description	Pressure (MAWP)	B1 (male thread)	C2 (male thread)	L1	D1	D2	A/F(1)	A/F(2)
C1-103471-X01	TK16 H_2 35 MPa ENR	45 MPa	UNF 9/16"-18*	M12x1.5	364	70	62	19	16

* acc. to SAE J514, 37° cone

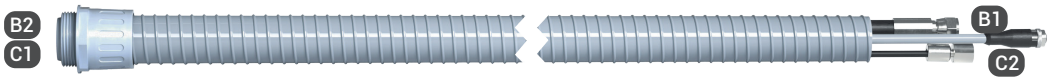
Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

ACCESSORIES

The following accessories are available for the WEH® TK16 H_2 35 MPa ENR Fueling nozzle:

Hose set

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling and venting hose, hose fittings, plastic spiral hose and cable for data interface. Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design filling/venting hose: max. operating pressure PS: 45 MPa / nominal bore (DN): 4.5 mm (filling hose)
resp. 2 mm (venting hose) / media temperature range: -20 °C up to +90 °C



Part No.	B1/B2 (female thread)	C1/C2 (female thread)	Hose length
C1-90698	UNF 9/16"-18*	M12x1.5	3 m
C1-94428	UNF 9/16"-18*	M12x1.5	4 m
C1-94429	UNF 9/16"-18*	M12x1.5	5 m

* acc. to SAE JIC, 37° cone

» Fueling nozzle **TK16 H_2 35 MPa ENR**

Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser.

Part no.	Description
On request	Dispenser mounting

WEH® TNS1 H_2 Service receptacle

To prevent damage in the fueling nozzle while purging or leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-148079	TNS1 H_2 Service receptacle incl. protection cap

WEH® Breakaway coupling

For the suitable TSA1 H_2 breakaway coupling, please see page 43.

Data cable

Part no.	Description	Hose length
E68-96194	Data cable suitable for 4 m hose set	4.45 m
E68-96193	Data cable for connecting with the converter	3.45 m

Other lengths on request

» Fueling nozzle **TK16 H_2 35 MPa ENR**

SPARE PARTS

Various parts are available as spares for the WEH® TK16 H_2 35 MPa ENR Fueling nozzle.

Part No.	Description
W180567	1 Impact protection (incl. 4 countersunk screws)
W180569	2 IR data interface (incl. o-ring and grub screw)
W72504	3 Actuation lever
E80-163068	4 Cover plate
W150340	5 Protection sleeve (incl. 3 countersunk screws)
On request	Maintenance spray

» Fueling nozzle **TK16 H_2 35 MPa**

DESCRIPTION

Features
- Type A acc. to SAE J2600 resp. ISO 17268
- Compatible with WEH® TN1 H_2 Receptacle profile
- WEH EASY-TURN® 360° swivel joint for actuation lever
- Easy operation
- High flow rate short filling times
- Recirculation of the vented gas
- Plastic thermal protection
- WEH® Jaw locking mechanism
- High-grade materials
- Coding for pressure range / gas type (acc. to table below)

The WEH® TK16 H_2 Fueling nozzle makes refueling cars with compressed gaseous hydrogen (CGH_2) so much easier. The TK16 H_2 is very light in weight and therefore easy to operate.
The integrated swivel joint is located directly on the actuation lever, making it easy to rotate the fueling nozzle to the optimum connection position. The actuating lever can be switched with little effort when connecting and disconnecting.

The internal coding for pressure range and gas type ensures that the TK16 H_2 can be connected to the compatible WEH® Receptacles acc. to the opposite table and also prevents the risk of confusion with natural gas.

TK16 H_2 \ TN1 H_2	25 MPa	35 MPa	35 MPa HF*	70 MPa
25 MPa	✓	✓	✓	✓
35 MPa		✓	✓	✓

* HF = High-Flow

The WEH® TK16 H_2 offers optimum safety for the operator.
The fueling nozzle remains connected to the receptacle until the gas between inlet valve and receptacle is depressurized.

Application
Fueling nozzle for hydrogen fast filling of cars at self-service fueling stations.

TECHNICAL DATA

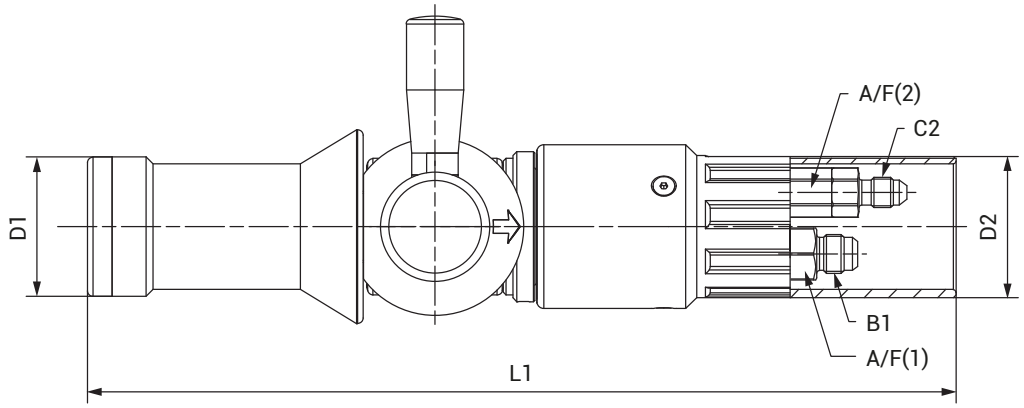
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal Pressure	PN = 25 MPa PN = 35 MPa
Max. allowable operating Pressure	MAWP = 35 MPa, 45 MPa according to ISO 17268 (PS = 350 bar, 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Nozzle type	Type A acc. to SAE J2600:2015 and previous resp. ISO 17268:2012 and previous
Design	With plastic thermal protection and gas recirculation
Weight	Approx. 1.8 kg
Conformity / Tests / Approvals	Tests acc. to SAE J2600:2002

Other designs on request

» Fueling nozzle **TK16 H_2 35 MPa**

ORDERING | WEH® TK16 H_2 Fueling nozzle

approx. dimensions (mm)



Part No.	Description	Pressure (MAWP)	B1 (male thread)	C2 (male thread)	L1	D1	D2	A/F(1)	A/F(2)
C1-45695-X4-X01	TK16 H_2	35 MPa	UNF 9/16“-18*	UNF 7/16“-20*	318	51	52	19	16
C1-45696-X5-X01	TK16 H_2	45 MPa	UNF 9/16“-18*	UNF 7/16“-20*	318	51	52	19	16

* acc. to SAE J514, 37° cone

Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

ACCESSORIES

The following accessories are available for the WEH® TK16 H_2 Fueling nozzle:

Hose set

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling and venting hose, fittings and press-fittings supported by coil spring stubs. Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design filling/venting hose:
max. operating pressure PS: 45 MPa / nominal bore (DN): 4.5 mm / media temperature range: -20 °C up to +90 °C

Part No.	B1/B2 (female thread)	C1/C2 (female thread)	Hose length
C1-60917	UNF 9/16“-18*	UNF 7/16“-20*	3 m
C1-60920	UNF 9/16“-18*	UNF 7/16“-20*	4 m
C1-60923	UNF 9/16“-18*	UNF 7/16“-20*	5 m

* acc. to SAE JIC, 37° cone

» Fueling nozzle **TK16 H_2 35 MPa**

Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser.

Part No.	Description
On request	Dispenser mounting

WEH® TNS1 H_2 Service receptacle

To prevent damage in the fueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-148079	TNS1 H_2 Service receptacle incl. protection cap

WEH® Breakaway couplings

For the suitable TSA1 H_2 breakaway coupling or TSA2 H_2 inline breakaway coupling, please see page 44 - 46 resp. 51.

» Fueling nozzle **TK16 H_2 35 MPa**

SPARE PARTS

Various parts are available as spares for the WEH® TK16 H_2 Fueling nozzle.

Part No.	Description
E80-176344	1 Impact protection
W72504	2 Actuation lever
E80-163068	3 Cover plate
W136178	4 Protection sleeve (incl. 3 countersunk screws)
On request	Maintenance spray

» Fueling nozzle **TK16 H_2 High-Flow with data interface**

DESCRIPTION

Features
- Type A acc. to SAE J2600 resp. ISO 17268
- Compatible with WEH® TN1 H_2 High-Flow Receptacle profile
- Integrated infrared data interface
- WEH EASY-TURN® 240° swivel joint for actuation lever
- Easy operation
- Increased flow rate ➡ even shorter filling times
- Recirculation of the vented gas
- Plastic thermal protection
- WEH® Jaw locking mechanism
- High-grade materials
- Coding for pressure range / gas type (acc. to table below)

The WEH® TK16 H_2 High-Flow fueling nozzle with data interface enables an even faster filling of buses and trucks with hydrogen. Due to the increased flow rate, the already short filling times have been shortened even further.
The integrated swivel joint is located directly on the actuation lever, making it easy to rotate the fueling nozzle to the optimum connection position. The actuating lever can be switched with little effort when connecting and disconnecting.

The internal coding for pressure range and gas type ensures that the TK16 H_2 High-Flow with data interface can be connected to the compatible WEH® Receptacles acc. to the opposite table and also prevents the risk of confusion with natural gas.
Furthermore, the fueling nozzle has an interface (infrared) for data transfer between the vehicle and the fueling station.

TK16 H_2 HF* IR** \ TN1 H_2	25 MPa	35 MPa	35 MPa HF*	70 MPa
35 MPa HF*			✓	

* HF = High-Flow
** IR = infrared data interface

The WEH® TK16 H_2 High-Flow with data interface offers optimum safety for the operator. The fueling nozzle remains connected to the receptacle until the gas between inlet valve and receptacle is depressurized.

Application
Fueling nozzle for hydrogen fast filling of buses and trucks at self-service fueling stations.

TECHNICAL DATA

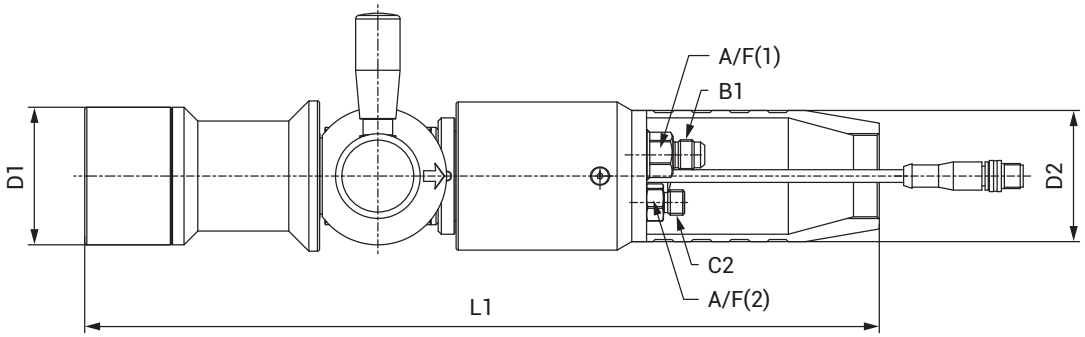
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 17268 (PS = 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Nozzle type	Type A acc. to SAE J2600:2015 and previous resp. ISO 17268:2012 and previous
Design	With plastic thermal protection, gas recirculation and data interface acc. to SAE J2601
Weight	Approx. 2.4 kg
Conformity / Tests / Approvals	Fueling nozzle: tests acc. to SAE J2600:2002 IR data interface: ATEX; NEC on request

Other designs on request

» Fueling nozzle **TK16 H_2 High-Flow with data interface**

ORDERING | WEH® TK16 H_2 High-Flow Fueling nozzle with data interface

approx. dimensions (mm)



Part No.	Description	Pressure (MAWP)	B1 (male thread)	C2 (male thread)	L1	D1	D2	A/F(1)	A/F(2)
C1-94315-X01	TK16 H_2 High-Flow (ATEX IR data interface)	45 MPa	UNF 9/16"-18*	M12x1.5	376	65	62	19	16

* acc. to SAE J514, 37° cone

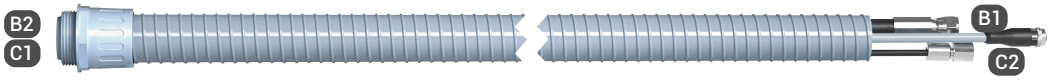
On request the TK16 H_2 High-Flow fueling nozzle with data interface is also available with NEC approval.
Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

ACCESSORIES

The following accessories are available for the WEH® TK16 H_2 High-Flow Fueling nozzle with data interface:

Hose set

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling and venting hose, hose fittings, plastic spiral hose and cable for data interface. Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design filling/venting hose: max. operating pressure PS: 45 MPa / nominal bore (DN): 4.5 mm (filling hose)
resp. 2 mm (venting hose) / media temperature range: -20 °C up to +90 °C



Part No.	B1/B2 (female thread)	C1/C2 (female thread)	Hose length
C1-90698	UNF 9/16"-18*	M12x1.5	3 m
C1-94428	UNF 9/16"-18*	M12x1.5	4 m
C1-94429	UNF 9/16"-18*	M12x1.5	5 m

* acc. to SAE JIC, 37° cone

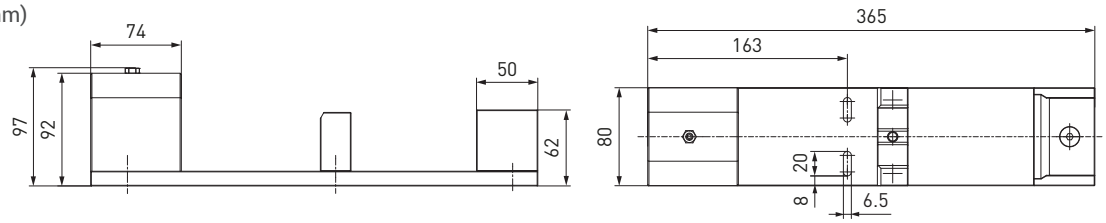
» Fueling nozzle **TK16 H_2 High-Flow with data interface**

Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser.

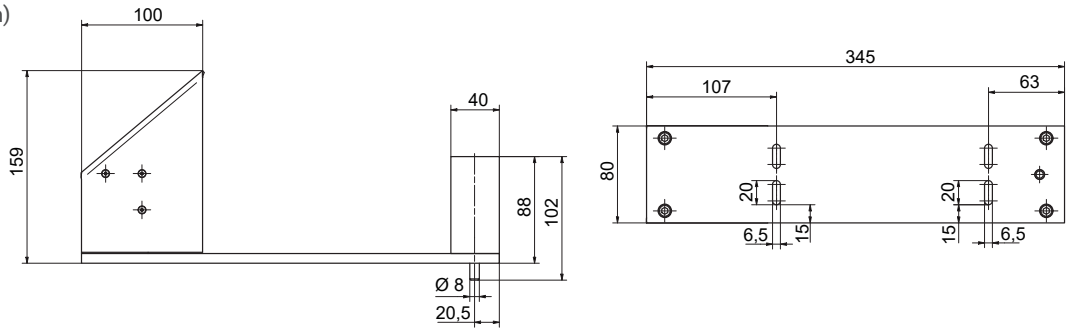
Not switch actuated dispenser mounting with protection of front sleeve

approx. dimensions (mm)



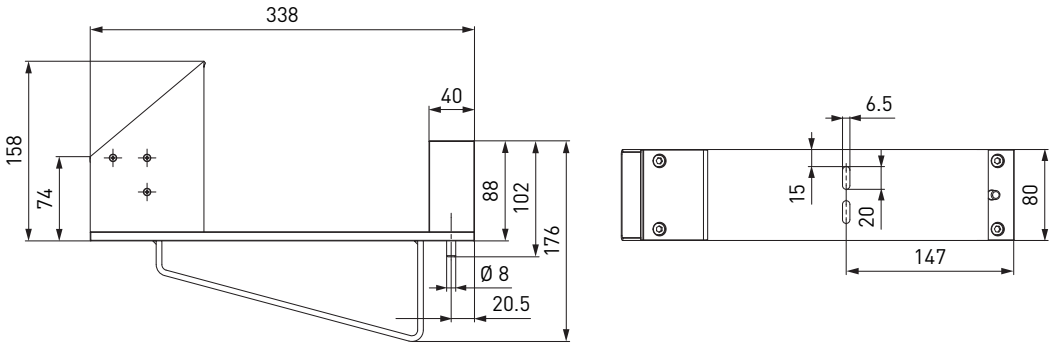
Switch actuated dispenser mounting with weather protection

approx. dimensions (mm)



Switch actuated dispenser mounting with weather protection and angle plate 15°

approx. dimensions (mm)



Part No.	Description
C1-94671	Dispenser mounting (not switch actuated) with protection of front sleeve
C1-175692	Dispenser mounting (switch actuated) with weather protection
C1-114632	Dispenser mounting (switch actuated) with weather protection and angle plate 15°

» Fueling nozzle **TK16 H_2 High-Flow with data interface**

WEH® TNS1 H_2 Service receptacle

To prevent damage in the fueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-148079	TNS1 H_2 Service receptacle incl. protection cap

WEH® Breakaway coupling

For the suitable TSA1 H_2 breakaway coupling, please see page 47.

Data cable

Part no.	Description	Hose length
E68-96194	Data cable suitable for 4 m hose set	4.45 m
E68-96193	Data cable for connecting with the converter	3.45 m

Other lengths on request

SPARE PARTS

Various parts are available as spares for the WEH® TK16 H_2 High-Flow Fueling nozzle with data interface.

Part No.	Description
W72504	1 Actuation lever
E80-163068	2 Cover plate
W150340	3 Protection sleeve (incl. 3 countersunk screws)
E99-44923	Maintenance spray

» Fueling nozzle **TK16 H_2 High-Flow**

DESCRIPTION

Features
- Type A acc. to SAE J2600 resp. ISO 17268
- Compatible with WEH® TN1 H_2 High-Flow Receptacle profile
- WEH EASY-TURN® 360° swivel joint for actuation lever
- Easy operation
- Increased flow rate ➡ even shorter filling times
- Recirculation of the vented gas
- Plastic thermal protection
- WEH® Jaw locking mechanism
- High-grade materials
- Coding for pressure range / gas type (acc. to table below)

The WEH® TK16 H_2 High-Flow Fueling nozzle enables an even faster filling of buses and trucks with hydrogen. Due to the increased flow rate, the already short filling times have been shortened even further.
The integrated swivel joint is located directly on the actuation lever, making it easy to rotate the fueling nozzle to the optimum connection position. The actuating lever can be switched with little effort when connecting and disconnecting.

The internal coding for pressure range and gas type ensures that the TK16 H_2 High-Flow can be connected to the compatible WEH® Receptacles acc. to the opposite table and also prevents the risk of confusion with natural gas.

TK16 H_2 HF* \ TN1 H_2	25 MPa	35 MPa	35 MPa HF*	70 MPa
35 MPa HF*			✓	

* HF = High-Flow

The WEH® TK16 H_2 High-Flow offers optimum safety for the operator.
The fueling nozzle remains connected to the receptacle until the gas between inlet valve and receptacle is depressurized.

Application
Fueling nozzle for hydrogen fast filling of buses and trucks at self-service fueling stations.

TECHNICAL DATA

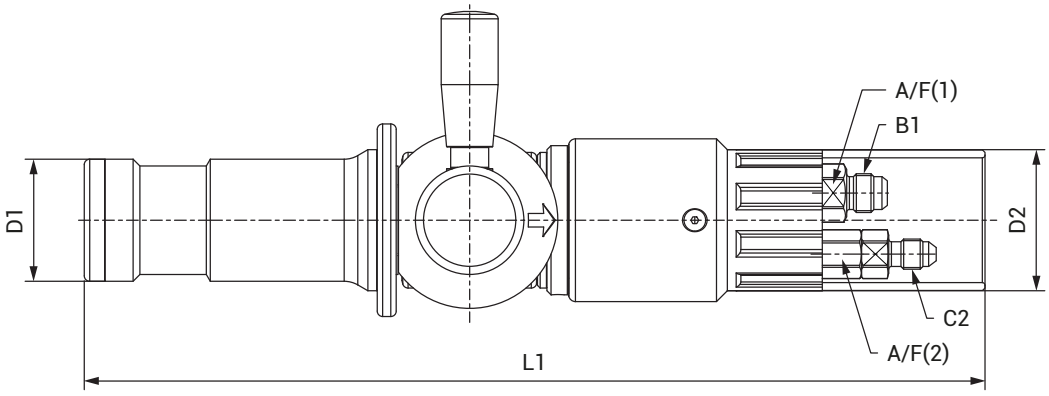
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 17268 (PS = 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Nozzle type	Type A acc. to SAE J2600:2015 and previous resp. ISO 17268:2012 and previous
Design	With plastic thermal protection and gas recirculation
Weight	Approx. 1.8 kg
Conformity / Tests / Approvals	Tests acc. to SAE J2600:2002

Other designs on request

» Fueling nozzle **TK16 H_2 High-Flow**

ORDERING | WEH® TK16 H_2 High-Flow Fueling nozzle

approx. dimensions (mm)



Part No.	Description	Pressure (MAWP)	B1 (male thread)	C2 (male thread)	L1	D1	D2	A/F(1)	A/F(2)
C1-85042-X01	TK16 H_2 High-Flow	45 MPa	UNF 9/16“-18*	UNF 7/16“-20*	332	45	52	19	16

* acc. to SAE J514, 37° cone

Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

ACCESSORIES

The following accessories are available for the WEH® TK16 H_2 High-Flow Fueling nozzle:

Hose set

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling and venting hose, fittings and press-fittings supported by coil spring stubs. Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design filling/venting hose:
max. operating pressure PS: 45 MPa / nominal bore (DN): 4.5 mm / media temperature range: -20 °C up to +90 °C

Part No.	B1/B2 (female thread)	C1/C2 (female thread)	Hose length
C1-60917	UNF 9/16“-18*	UNF 7/16“-20*	3 m
C1-60920	UNF 9/16“-18*	UNF 7/16“-20*	4 m
C1-60923	UNF 9/16“-18*	UNF 7/16“-20*	5 m

* acc. to SAE JIC, 37° cone

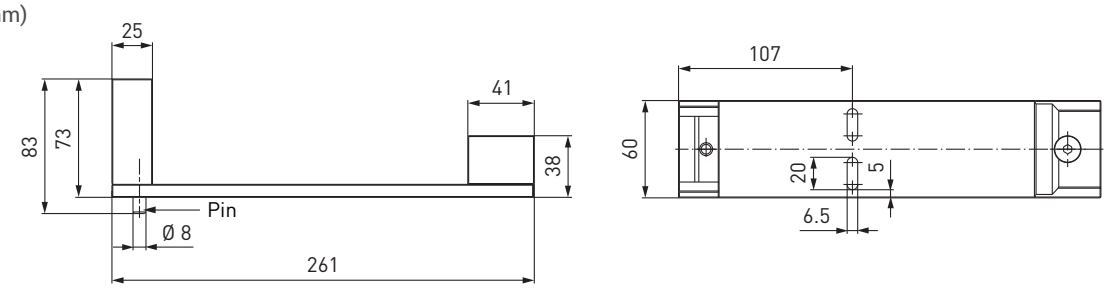
» Fueling nozzle **TK16 H_2 High-Flow**

Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser.

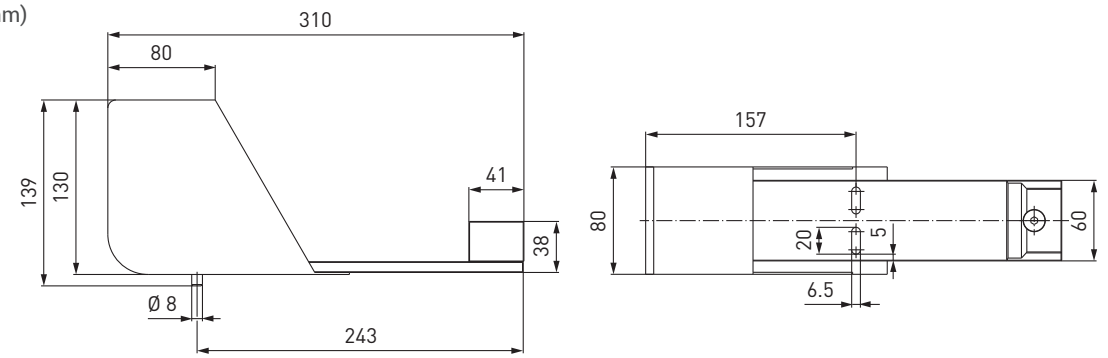
Switch actuated (with pin) resp. not switch actuated dispenser mounting

approx. dimensions (mm)



Switch actuated dispenser mounting with weather protection

approx. dimensions (mm)



Part No.	Description
C1-86860	Dispenser mounting (switch actuated)
C1-109880	Dispenser mounting (not switch actuated)
C1-109678	Dispenser mounting (switch actuated) with weather protection

WEH® TNS1 H_2 Service receptacle

To prevent damage in the fueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-148079	TNS1 H_2 Service receptacle incl. protection cap

WEH® Breakaway couplings

For the suitable TSA1 H_2 breakaway coupling or TSA2 H_2 inline breakaway coupling, please see page 61.

» Fueling nozzle **TK16 H_2 High-Flow**

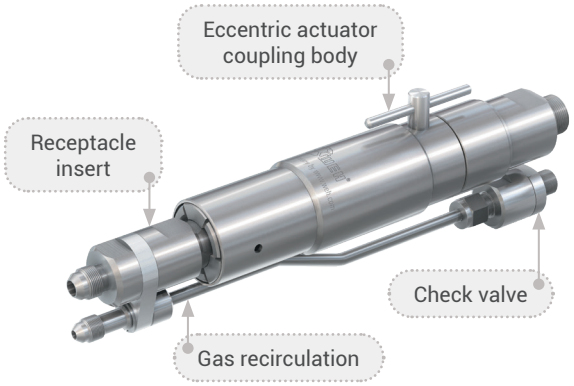
SPARE PARTS

Various parts are available as spares for the WEH® TK16 H_2 High-Flow Fueling nozzle.

Part No.	Description
E80-172676	1 Impact protection
W72504	2 Actuation lever
E80-163068	3 Cover plate
W136178	4 Protection sleeve (incl. 3 countersunk screws)
On request	Maintenance spray

» Breakaway coupling **TSA1 H_2**

DESCRIPTION



Features
- Reusable without factory servicing
- Installation at the dispenser
- Small compact design
- Version with and without gas recirculation
- Integrated cleanable filter (20 µm or 40 µm)
- Check valve at venting line
- No additional tool necessary

The WEH® TSA1 H_2 Breakaway coupling provieds additional safety for your car fueling station. The breakaway is installed between the dispenser and the filling hose or dispenser and filling/venting hose.

In the event of unexpected tensile forces, e.g. a vehicle driving away with a connected fueling nozzle, the breakaway separates the connections between dispenser and hose(s) in a controlled manner while sealing both ends.
Damage to the vehicule's receptacle, the fueling nozzle and the dispenser can thus be prevented as far as possible.
The breakaway coupling can be reused after a functional test.
The integrated filter cleans the hydrogen from dirt ingress and can be cleaned easily and quickly during maintenance.

The WEH® TSA1 H_2 Breakaway coupling consists of a coupling body, a receptacle insert and, depending on the version, of a gas recirculation with check valve.
The TSA1 H_2 for fueling nozzles with data interface additionally contain a dispenser mounting incl. data cable for the data interface.

On request we also offer fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling.

Application
Breakaway coupling for car hydrogen fueling stations for direct installation at the dispenser.

TECHNICAL DATA

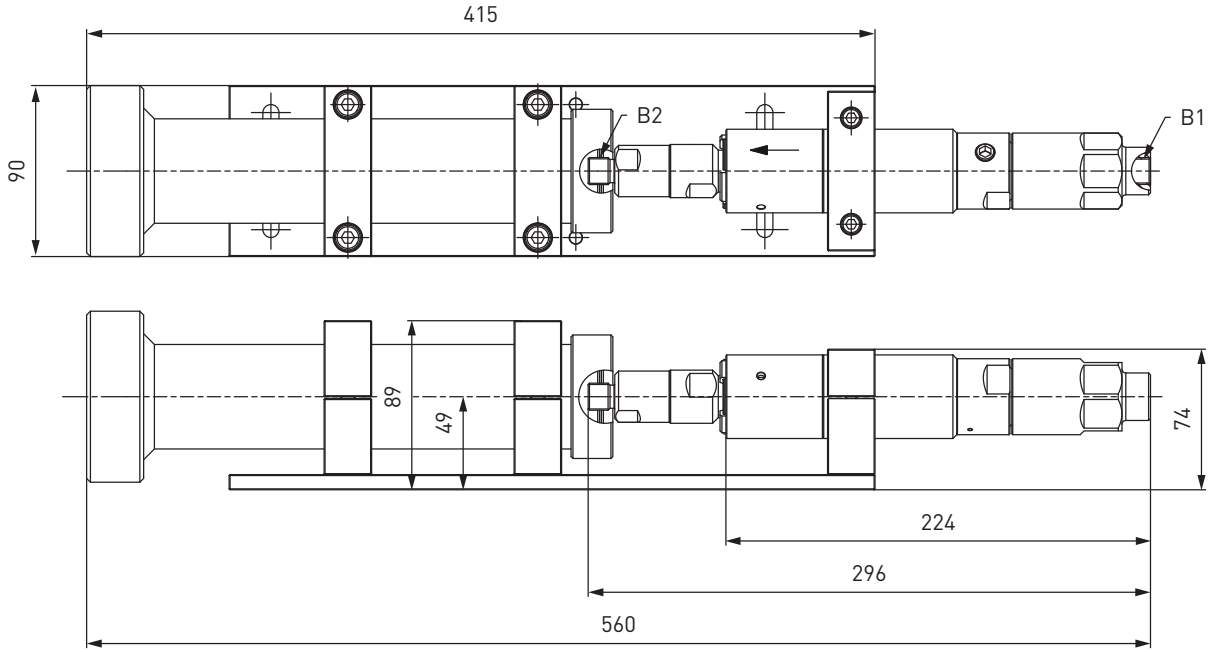
Characteristics	Basic version
Nominal bore (DN)	Depending on design
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 49 MPa, 45 MPa according to ISO 19880-1 (PS = 490 bar, 450 bar)
Media temperature range	TSA1 H_2 for TK17 H_2 fueling nozzles: -40 °C up to +85 °C TSA1 H_2 for TK16 H_2 fueling nozzles: -20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Breakaway force	222 - 667 N
Material	Corrosion resistant stainless steel, aluminum
Sealing material	Hydrogen resistant
Design	Depending on design: With filter (20 µm or 40 µm) With or without gas recirculation With or without dispenser mounting With dispenser mounting and data cable (only versions for fueling nozzles with data interface)

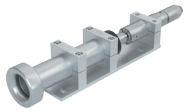
Other designs on request

» Breakaway coupling **TSA1 H_2**

ORDERING | WEH® TSA1 H_2 Breakaway coupling (with dispenser mounting) for TK17 H_2 35 MPa

approx. dimensions (mm)



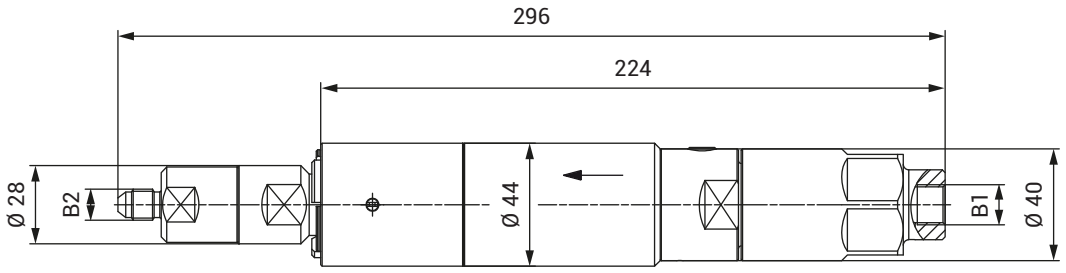


Part No.	Description	DN	Pressure (MAWP)	B1 (female thread)	B2 (male thread)
C1-174446	TSA1 H_2 with filter (20 µm)	4	49 MPa	UNF 9/16“-18*	UNF 7/16“-20**

* MP-fitting, 60° inner cone
** acc. to SAE J514, 37° cone

ORDERING | WEH® TSA1 H_2 Breakaway coupling for TK17 H_2 35 MPa

approx. dimensions (mm)



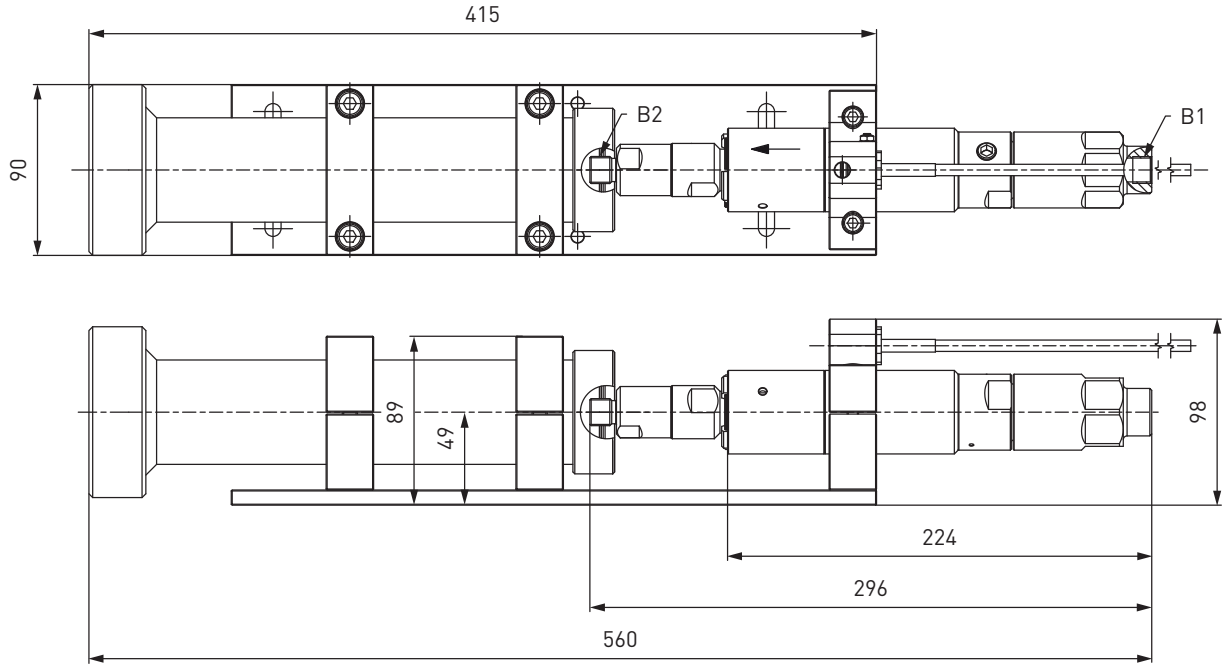
Part No.	Description	DN	Pressure (MAWP)	B1 (female thread)	B2 (male thread)
C1-174444	TSA1 H_2 with filter (20 µm)	4	49 MPa	UNF 9/16“-18*	UNF 7/16“-20**

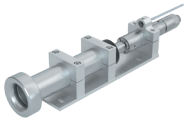
* MP-fitting, 60° inner cone
** acc. to SAE J514, 37° cone

» Breakaway coupling **TSA1 H_2**

ORDERING | WEH® TSA1 H_2 Breakaway coupling for TK17 H_2 35 MPa ENR

approx. dimensions (mm)





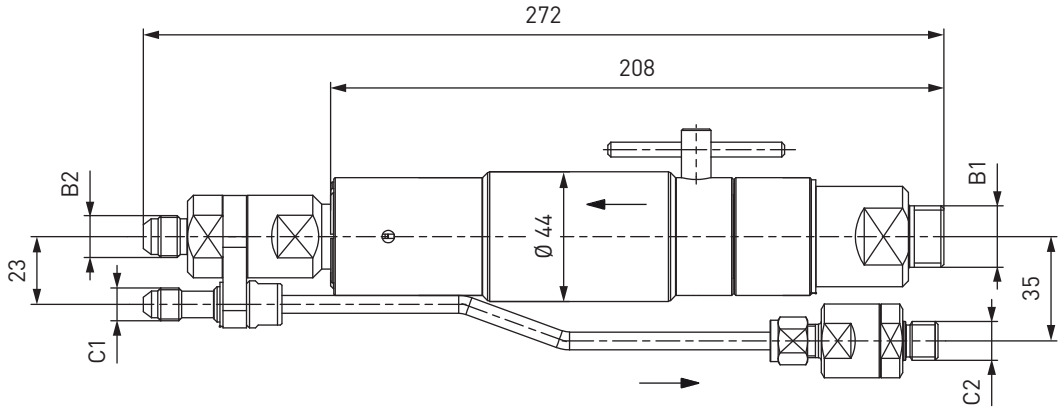
Part No.	Description	DN	Pressure (MAWP)	B1 (female thread)	B2 (male thread)
C1-174456	TSA1 H_2 with filter (20 µm)	4	49 MPa	UNF 9/16“-18*	UNF 7/16“-20**

* MP-fitting, 60° inner cone
** acc. to SAE J514, 37° cone

» Breakaway coupling **TSA1 H_2**

ORDERING | WEH® TSA1 H_2 Breakaway coupling with male thread for TK16 H_2 + High-Flow

approx. dimensions (mm)

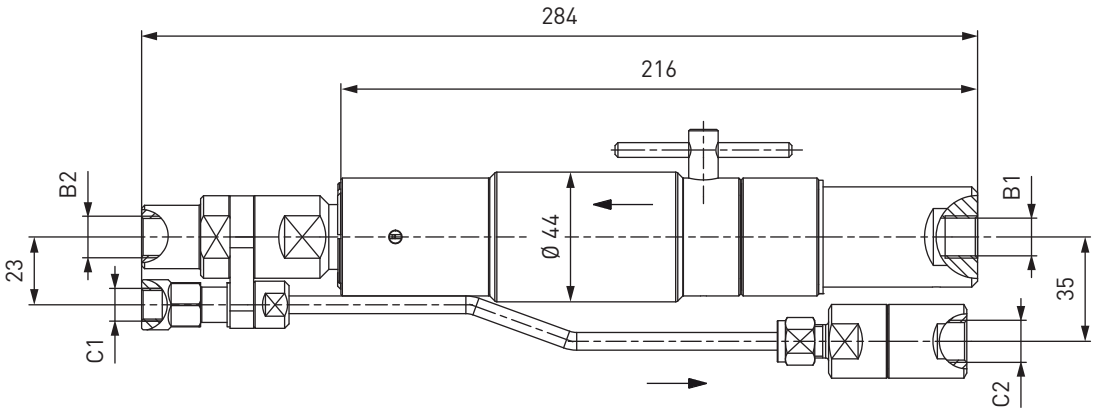


Part No.	Description	DN	Pressure (MAWP)	B1 (male thread)	B2 (male thread)	C1 (male thread)	C2 (male thread)
C1-18834-X7-X01	TSA1 H_2 with filter (40 µm)	8	45 MPa	G1/2"*	UNF 9/16"-18**	UNF 7/16"-20**	G1/4"*
C1-67741-X1-X01	TSA1 H_2 with filter (20 µm)	8	45 MPa	G1/2"*	UNF 9/16"-18**	UNF 7/16"-20**	G1/4"*

* acc. to DIN EN ISO 228-1
** acc. to SAE J514, 37° cone

ORDERING | WEH® TSA1 H_2 Breakaway coupling with female thread for TK16 H_2 + High-Flow

approx. dimensions (mm)



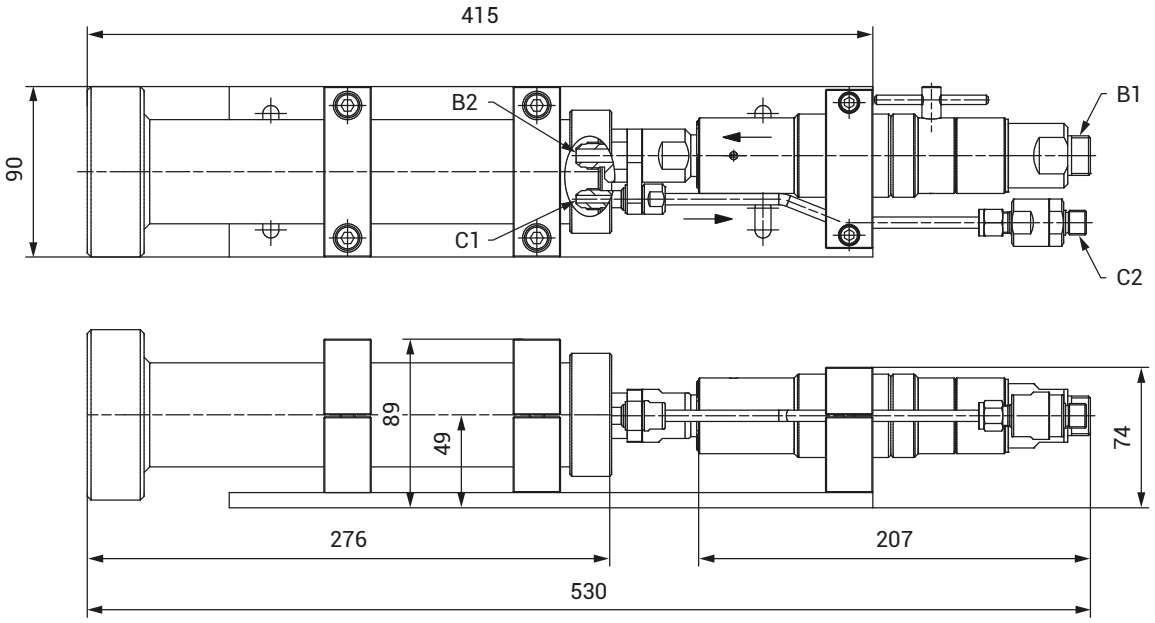
Part No.	Description	DN	Pressure (MAWP)	B1/B2 (female thread)	C1 (female thread)	C2 (female thread)
C1-99345-X01	TSA1 H_2 with filter (40 µm)	5	45 MPa	UNF 9/16"-18*	UNF 7/16"-20*	UNF 9/16"-18*

* MP-fitting, 60° inner cone

» Breakaway coupling **TSA1 H_2**

ORDERING | WEH® TSA1 H_2 Breakaway coupling (with dispenser mounting) for TK16 H_2 + High-Flow

approx. dimensions (mm)



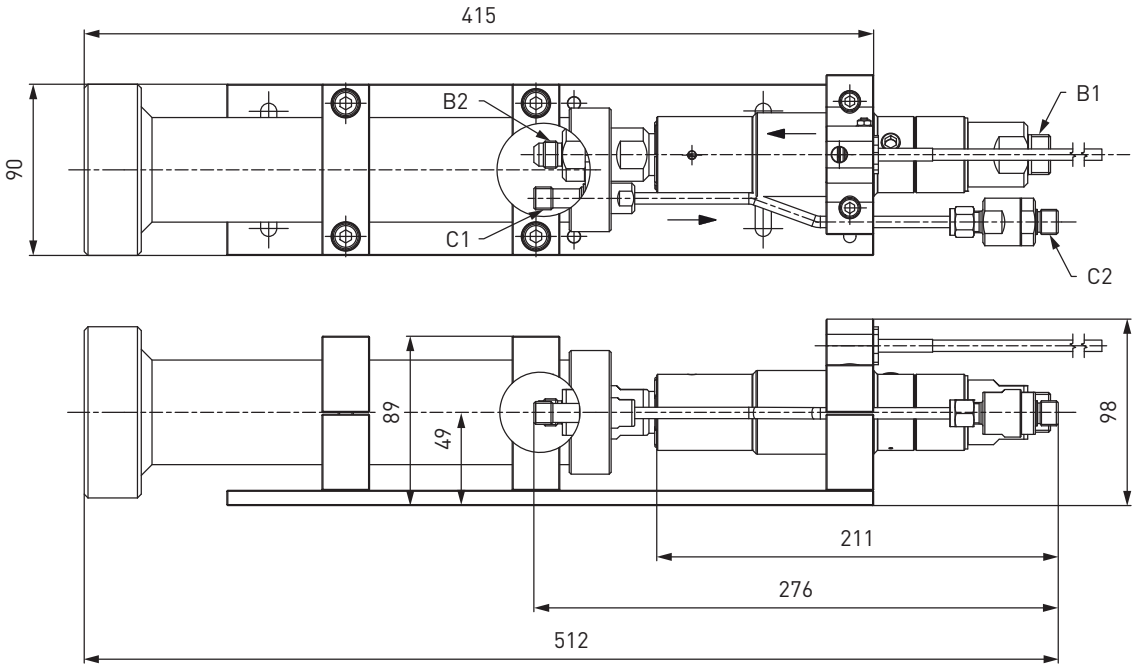
Part No.	Description	DN	Pressure (MAWP)	B1 (male thread)	B2 (male thread)	C1 (male thread)	C2 (male thread)
C1-129553-X01	TSA1 H_2 with filter (40 µm)	8	45 MPa	G1/2"*	UNF 9/16"-18**	UNF 7/16"-20**	G1/4"*
C1-150775-X01	TSA1 H_2 with filter (20 µm)	8	45 MPa	G1/2"*	UNF 9/16"-18**	UNF 7/16"-20**	G1/4"*

* acc. to DIN EN ISO 228-1
** acc. to SAE J514, 37° cone

» Breakaway coupling **TSA1 H_2**

ORDERING | WEH® TSA1 H_2 Breakaway coupling for TK16 H_2 with data interface + High-Flow

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B1 (male thread)	B2 (male thread)	C1 (male thread)	C2 (male thread)
C1-90679-X01	TSA1 H_2 with filter (40 µm)	8	45 MPa	G1/2"*	UNF 9/16"-18**	M12x1.5***	G1/4"*

* acc. to DIN EN ISO 228-1
** acc. to SAE J514, 37° cone
*** 24° inner cone

» Breakaway coupling **TSA1 H_2**

ACCESSORIES

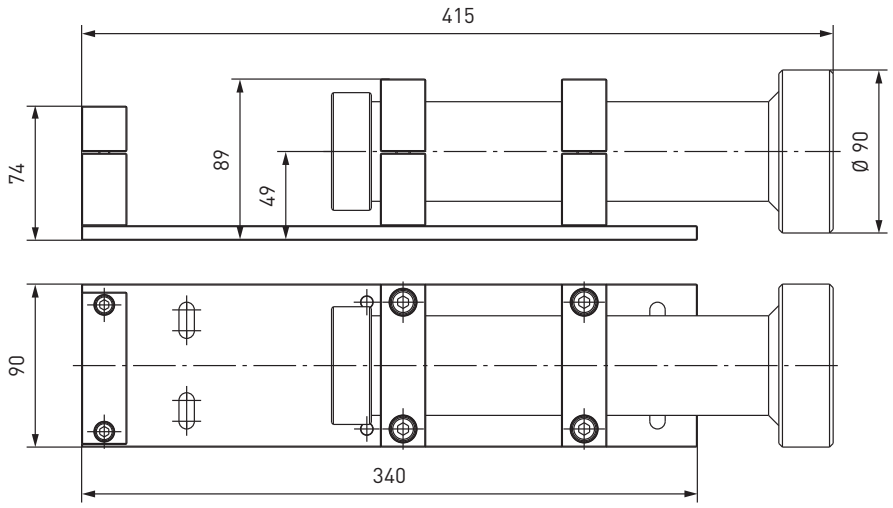
The following accessories are available for the WEH® TSA1 H_2 Breakaway coupling:

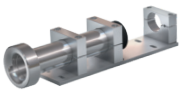
Dispenser mounting

The breakaway coupling can also be used with a dispenser mounting. The mounting is firmly attached to the dispenser. The integrated guide tube provides a straight pull-off force.

Dispenser mounting for fueling nozzles without data interface

approx. dimensions (mm)





Part No.	Description
C1-69275	Dispenser mounting for TSA1 H_2 for fueling nozzles TK16 H_2 without data interface
C1-93824	Dispenser mounting for TSA1 H_2 for fueling nozzles TK17 H_2 without data interface

Hoses

Suitable hoses for the TSA1 H_2 breakaway coupling are available on request.

Mounting for braided protection hose

Mounting for attachment of the braided protection hose to the TSA1 H_2 without gas recirculation.

Part No.	Description
C1-171845	Mounting for braided protection hose (suitable for C1-174444, C1-174446, C1-174456)

» Breakaway coupling **TSA1 H_2**

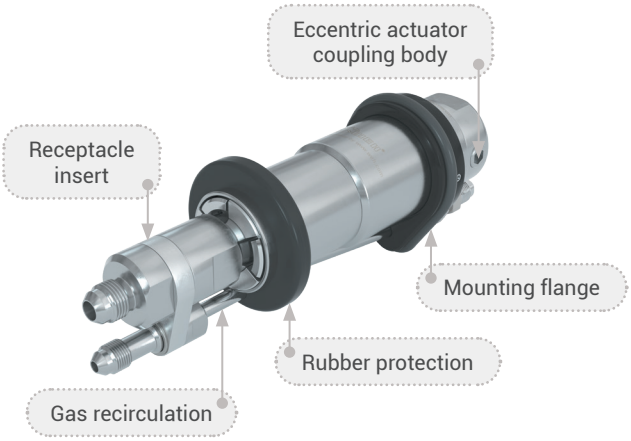
SPARE PARTS

Various parts are available as spares for the WEH® TSA1 H_2 Breakaway coupling.

Part No.	Description
W159176	Receptacle insert for TSA1 H_2 without gas recirculation (C1-174444, C1-174446, C1-174456)
W94249	Receptacle insert for TSA1 H_2 with gas recirculation (C1-18834-X7-X01, C1-67741-X1-X01)
W108401	Receptacle insert for TSA1 H_2 with gas recirculation (C1-99345-X01)
W108154	Receptacle insert for TSA1 H_2 with gas recirculation (C1-90679-X01)
B200B-123477	Spare seals set for receptacle insert W159176
B200B-119056	Spare seals set for receptacle insert W94249, W108401, W108154
W139032	Spare parts set consisting of a gas recirculation tube (length: approx. 195 mm) and a firmly mounted check valve (C1-18834-X7-X01, C1-67741-X1-X01, C1-90679-X01)
W140024	Spare parts set consisting of a gas recirculation tube (length: approx. 195 mm) and a firmly mounted check valve (C1-99345-X01)
E69-9061	Wire filter insert 40 µm (incl. spring and o-ring)
W67754	Wire filter insert 20 µm (incl. spring and o-ring)

» Inline breakaway coupling **TSA2 H_2**

DESCRIPTION



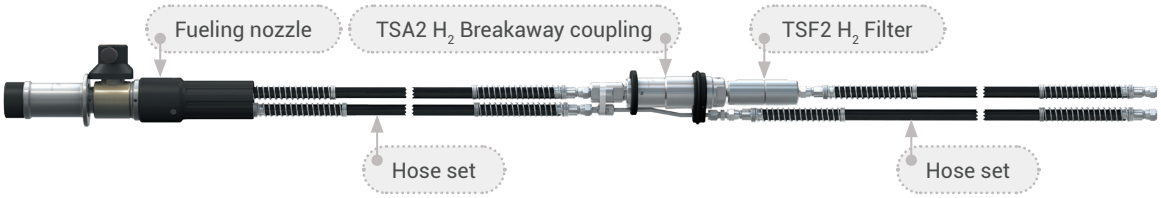
Features
- Reusable without factory servicing
- Installation between the filling and venting hoses
- Small compact design
- Rubber protection and mounting flange incl. impact proctection
- Eccentric actuation via Allen wrench

With the WEH® TSA2 H_2 Breakaway coupling, an inline breakaway coupling is also available for car refueling stations which is installed between the filling and venting hoses.

In the event of unexpected tensile forces, e.g. a vehicle driving away with a connected fueling nozzle, the breakaway separates the connections between dispenser and hoses in a controlled manner while sealing both ends.
Damage to the vehicule's receptacle, the fueling nozzle and the dispenser can thus be prevented as far as possible.
The breakaway coupling can be reused after a functional test.

The WEH® Breakaway coupling consists of a coupling body, a receptacle insert and a gas recirculation.

When using a TSA2 H^2 inline breakaway coupling, we additionally recommend the WEH® TSF2 H_2 Filter (see page 94).
The filter protects the breakaway coupling and fueling nozzle from dirt ingress.



On request we also offer fueling assemblies consisting of fueling nozzle, hose set and inline breakaway coupling.

Application
Inline breakaway coupling for car hydrogen fueling stations for installation between the filling and venting hoses.

TECHNICAL DATA

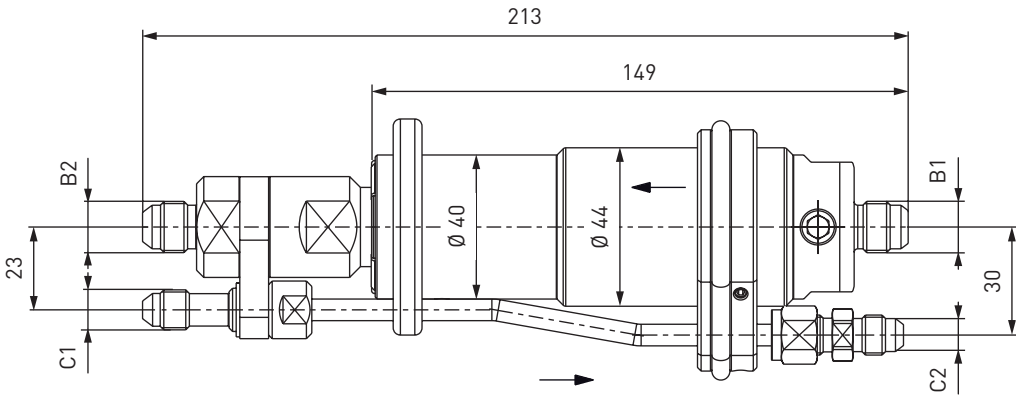
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 19880-1 (PS = 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Breakaway force	222 - 667 N
Material	Corrosion resistant stainless steel, aluminum
Sealing material	Hydrogen resistant
Design	With gas recirculation

Other designs on request

» Inline breakaway coupling **TSA2 H_2**

ORDERING | WEH® TSA2 H_2 Inline breakaway coupling for TK16 H_2 (+ High-Flow)

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B1/B2 (male thread)	C1/C2 (male thread)
C1-77240-X01	TSA2 H_2	8	45 MPa	UNF 9/16"-18*	UNF 7/16"-20*

* acc. to SAE J514, 37° cone

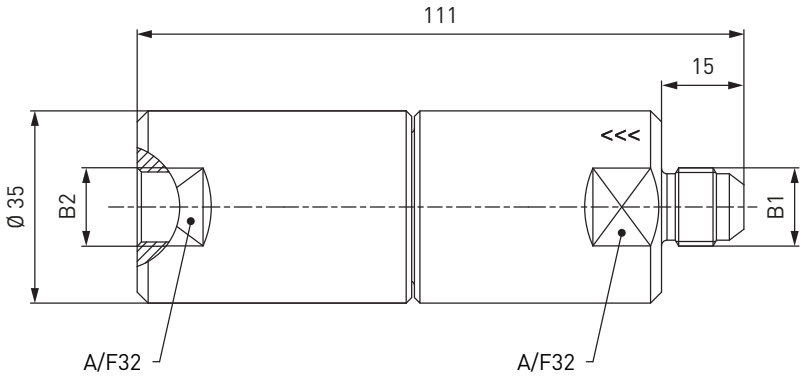
» Inline breakaway coupling **TSA2 H_2**

ACCESSORIES

The following accessories are available for the WEH® TSA2 H_2 Inline breakaway coupling:

WEH® TSF2 H_2 Filter

When using a TSA2 H_2 inline breakaway coupling, we additionally recommend the WEH® TSF2 H_2 Filter (see page 90). The filter protects the breakaway coupling and fueling nozzle from dirt ingress. The TSF2 H_2 is installed as a prefilter in the media inlet between the inline breakaway coupling and the filling hose.



Part No.	Description	Filter (µm)	DN	Pressure (MAWP)	B1 (male thread)	B2 (female thread)
C1-134710-X01	TSF2 H_2	40	8	45 MPa	UNF 9/16“-18*	UNF 9/16“-18*
C1-134711-X01	TSF2 H_2	20	8	45 MPa	UNF 9/16“-18*	UNF 9/16“-18*

* acc. to SAE J514, 37° cone

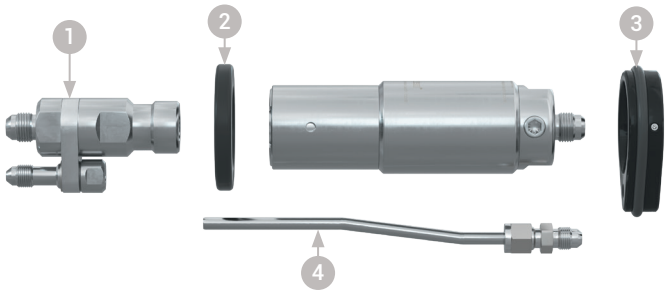
Hoses

Suitable hoses for the TSA2 H_2 inline breakaway coupling are available on request.

» Inline breakaway coupling **TSA2 H_2**

SPARE PARTS

Various parts are available as spares for the WEH® TSA2 H_2 Inline breakaway coupling.



Part No.	Description
W94249	1 Receptacle insert for TSA2 H_2
B200B-119056	Spare seals set for receptacle insert W94249
E80-71324	2 Front rubber protection
W150599	3 Mounting flange incl. impact protection
W139030	4 Spare part sets consisting of a gas recirculation tube and a firmly mounted fitting

» Fueling nozzle **TK25 H_2**

DESCRIPTION

Features
- Type A nozzle acc. to SAE J2600 resp. ISO 17268
- Compatible with WEH® TN5 H_2 receptacle profile
- Safe handling due to special safety function when disconnecting
- High flow rate short filling times
- Recirculation of the vented gas
- Plastic thermal protection
- WEH® Jaw locking mechanism
- High-grade materials
- Coding for pressure range / gas type (acc. to table below)

The WEH® TK25 H_2 Fueling nozzle enables easy refueling of buses and trucks
Simply place the TK25 H_2 fueling nozzle onto the receptacle, turn the operating lever by 180° and the vehicle is refueled.

The internal coding for pressure range and gas type ensures that the WEH® TK25 H_2 can be connected to the compatible WEH® Receptacles acc. to the opposite table and also prevents the risk of confusion with natural gas.

TK25 H_2 \ TN5 H_2	25 MPa	35 MPa
35 MPa		✓

The WEH® TK25 H_2 offers optimum safety for the operator.
The fueling nozzle remains connected to the receptacle until the gas between inlet valve and receptacle is depressurized.

Application
Fueling nozzle for hydrogen fast filling of buses and trucks at self-service fueling stations.

TECHNICAL DATA

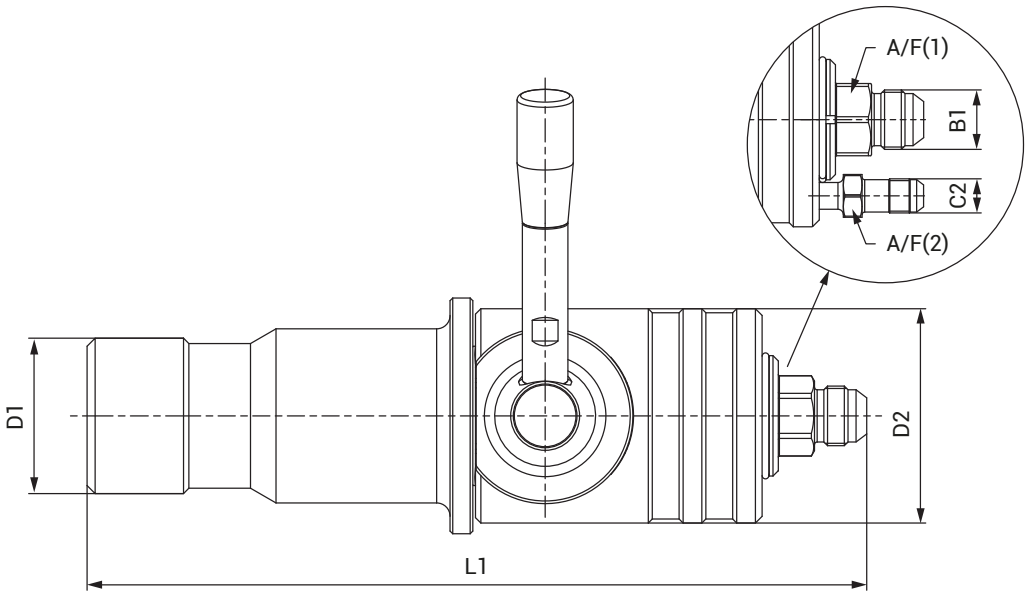
Characteristics	Basic version
Nominal bore (DN)	12 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 17268 (PS = 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Nozzle type	Type A acc. to SAE J2600:2015 and previous resp. ISO 17268:2012 and previous
Design	With plastic thermal protection and gas recirculation
Weight	Approx. 4.6 kg

Other designs on request

» Fueling nozzle **TK25 H_2**

ORDERING | WEH® TK25 H_2 Fueling nozzle

approx. dimensions (mm)



Part No.	Description	Pressure (MAWP)	B1 (male thread)	C2 (male thread)	L1	D1	D2	A/F(1)	A/F(2)
C1-62527-X1-X01	TK25 H_2	45 MPa	UNF 7/8"-14*	UNF 9/16"-18*	297	58	80	27	16

* acc. to SAE J514, 37° cone

Fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling are available on request.

ACCESSORIES

The following accessories are available for the WEH® TK25 H_2 Fueling nozzle:

Hose set

Hose set for connecting fueling nozzle and TSA5 H_2 breakaway coupling, complete with filling and venting hose, fittings and press-fittings supported by coil spring stubs. Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design filling/venting hose: max. operating pressure PS: 45 MPa / nominal bore (DN): 5.6 mm (filling hose)
resp. 4.5 mm (venting hose) / media temperature range: -20 °C up to +90 °C

Part No.	B1/B2 (female thread)	C1/C2 (female thread)	Hose length
C1-152556	UNF 7/8"-14*	UNF 9/16"-18*	3 m
C1-152557	UNF 7/8"-14*	UNF 9/16"-18*	4 m
C1-152558	UNF 7/8"-14*	UNF 9/16"-18*	5 m

* acc. to SAE JIC, 37° cone

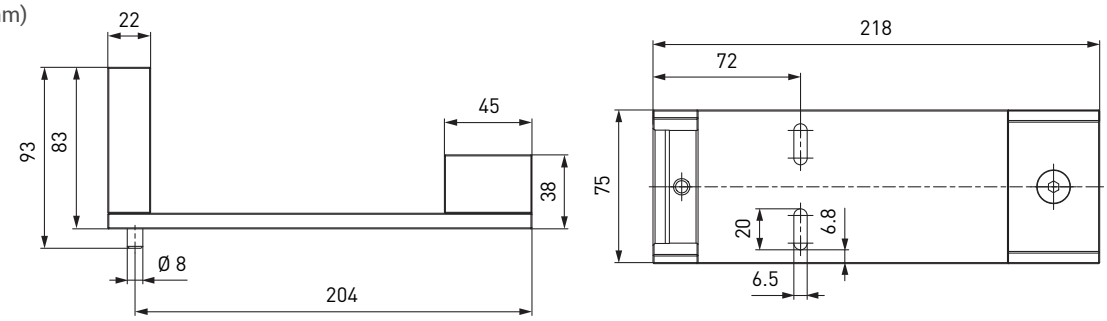
» Fueling nozzle **TK25 H_2**

Dispenser mounting

Mounting for safe attachment of the fueling nozzle to the dispenser.

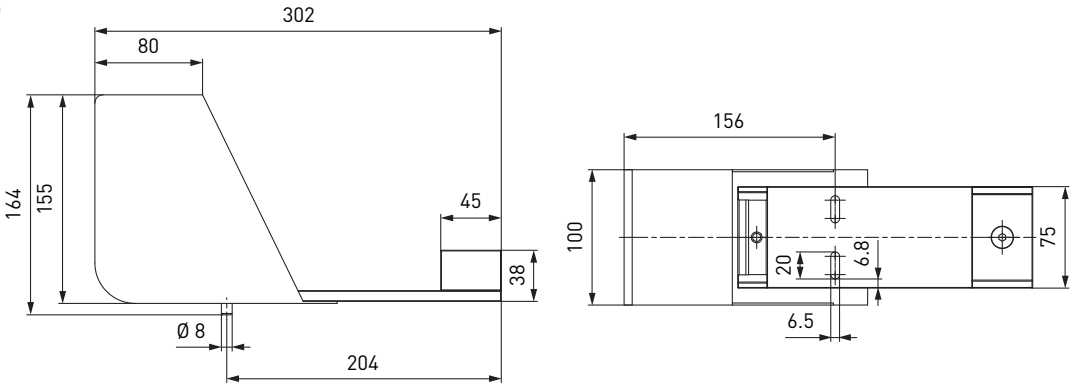
Switch actuated dispenser mounting

approx. dimensions (mm)



Switch actuated dispenser mounting with weather protection

approx. dimensions (mm)



Part No.	Description
C1-83005	Dispenser mounting (switch actuated)
C1-82153	Dispenser mounting (switch actuated) and weather protection

WEH® TNS5 H_2 Service receptacle

To prevent damage in the fueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the fueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-157347	TNS5 H_2 Service receptacle incl. protection cap

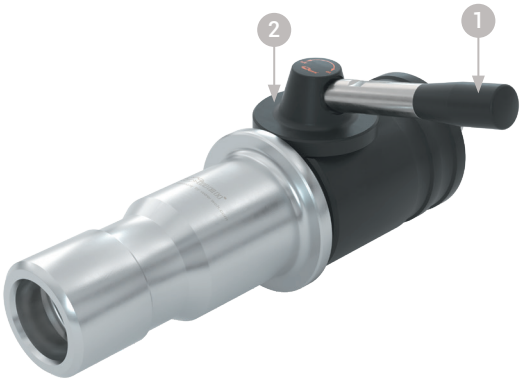
WEH® Breakaway couplings

For the suitable TSA5 H_2 breakaway coupling or TSA6 H_2 inline breakaway coupling, please see page 74 resp. 78.

» Fueling nozzle **TK25 H_2**

SPARE PARTS

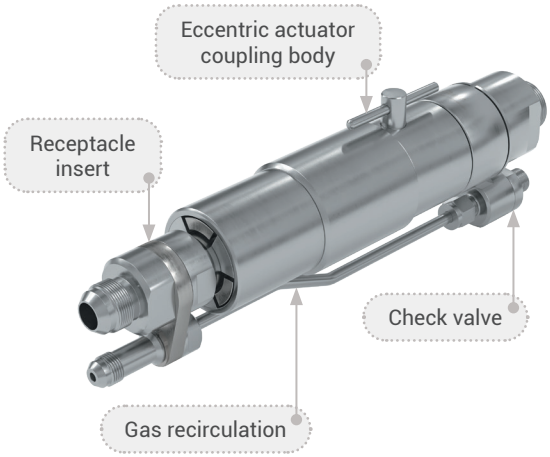
Various parts are available as spares for the WEH® TK25 H_2 Fueling nozzle.



Part No.	Description
W6631	1 Actuation lever
E80-397S401	2 Cover plate
On request	Maintenance spray

» Breakaway coupling **TSA5 H_2**

DESCRIPTION



Features
- Reusable without factory servicing
- Installation at the dispenser
- Small compact design
- Integrated cleanable filter (40 µm)
- Check valve at venting line
- No additional tool necessary

The WEH® TSA5 H_2 Breakaway coupling provieds additional safety for your bus and truck fueling station. The breakaway is installed between the dispenser and the filling/venting hose.

In the event of unexpected tensile forces, e.g. a vehicle driving away with a connected fueling nozzle, the breakaway separates the connections between dispenser and hoses in a controlled manner while sealing both ends.
Damage to the vehicule‘s receptacle, the fueling nozzle and the dispenser can thus be prevented as far as possible.
The breakaway coupling can be reused after a functional test.
The integrated filter cleans the hydrogen from dirt ingress and can be cleaned easily and quickly during maintenance.

The WEH® Breakaway coupling consists of a coupling body, a receptacle insert and a gas recirculation with check valve.

On request we also offer fueling assemblies consisting of fueling nozzle, hose set and breakaway coupling.

Application
Breakaway coupling for bus and truck hydrogen fueling stations for direct installation at the dispenser.

TECHNICAL DATA

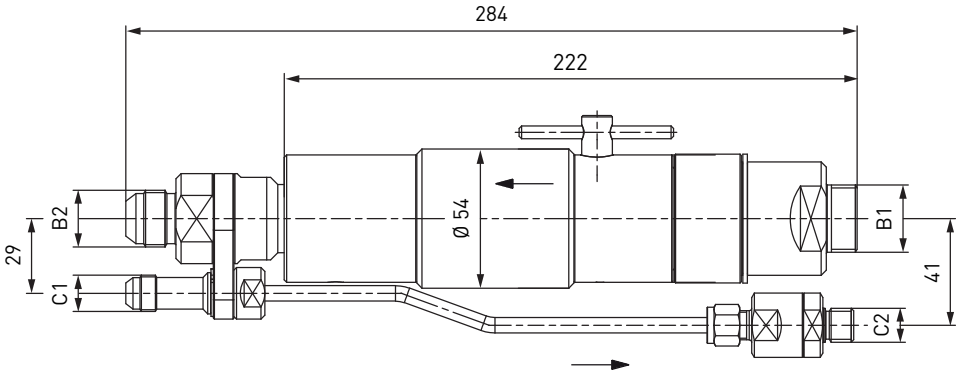
Characteristics	Basic version
Nominal bore (DN)	12 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 19880-1 (PS = 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Breakaway force	222 - 667 N
Material	Corrosion resistant stainless steel, aluminum
Sealing material	Hydrogen resistant
Design	With gas recirculation and filter (40 µm)

Other designs on request

» Breakaway coupling **TSA5 H_2**

ORDERING | WEH® TSA5 H_2 Breakaway coupling for TK25 H_2

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B1 (male thread)	B2 (male thread)	C1 (male thread)	C2 (male thread)
C1-17941-X7-X01	TSA5 H_2 with filter (40 µm)	12	45 MPa	G3/4"*	UNF 7/8"-14**	UNF 9/16"-18**	G1/4"*

* acc. to DIN EN ISO 228-1
** acc. to SAE J514, 37° cone

» Breakaway coupling **TSA5 H_2**

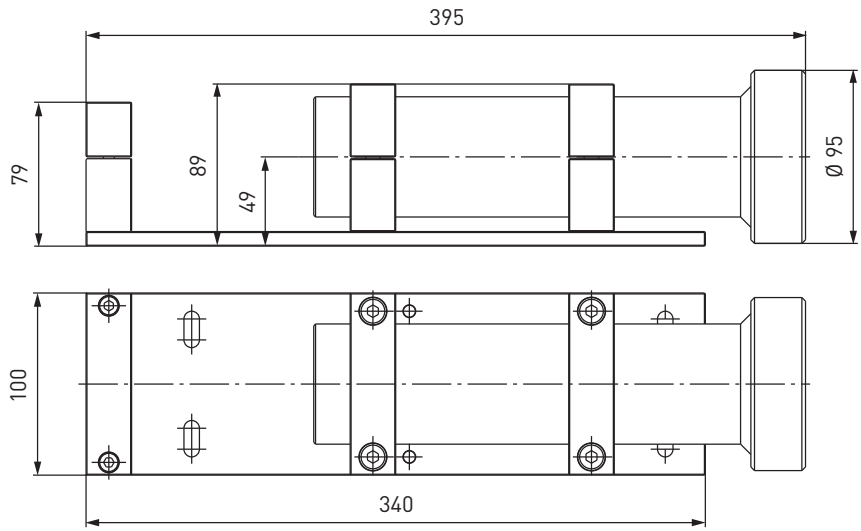
ACCESSORIES

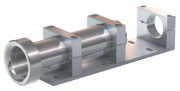
The following accessories are available for the WEH® TSA5 H_2 Breakaway coupling:

Dispenser mounting

The breakaway coupling can also be used with a dispenser mounting. The mounting is firmly attached to the dispenser. The integrated guide tube provides a straight pull-off force.

approx. dimensions (mm)





Part No.	Description
C1-82110	Dispenser mounting for TSA5 H_2

Hoses

Suitable hoses for the TSA5 H_2 breakaway coupling are available on request.

» Breakaway coupling **TSA5 H_2**

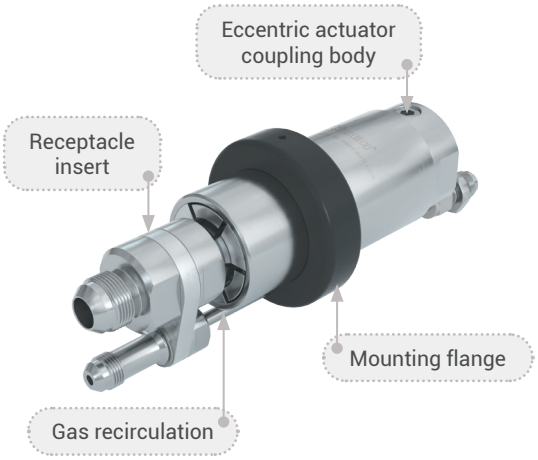
SPARE PARTS

Various parts are available as spares for the WEH® TSA5 H_2 Breakaway coupling.

Part No.	Description
W83706	Receptacle insert for TSA5 H_2
B200B-119726	Spare seals set for receptacle insert W83706
W139034	Spare parts set consisting of a gas recirculation tube (length: approx. 195 mm) and a firmly mounted check valve
W9062	Wire filter insert 40 µm

» Inline breakaway coupling **TSA6 H_2**

DESCRIPTION



Features
- Reusable without factory servicing
- Installation between the filling and venting hoses
- Small compact design
- Mounting flange
- Eccentric actuation via Allen wrench

With the WEH® TSA6 H_2 Breakaway coupling, an inline breakaway coupling is also available for bus and truck refueling stations which is installed between the filling and venting hoses.

In the event of unexpected tensile forces, e.g. a vehicle driving away with a connected fueling nozzle, the breakaway separates the connections between dispenser and hoses in a controlled manner while sealing both ends.
Damage to the vehicule‘s receptacle, the fueling nozzle and the dispenser can thus be prevented as far as possible.
The breakaway coupling can be reused after a functional test.

The WEH® Breakaway coupling consists of a coupling body, a receptacle insert and a gas recirculation.

On request we also offer fueling assemblies consisting of fueling nozzle, hose set and inline breakaway coupling.

Application
Inline breakaway coupling for bus and truck hydrogen fueling stations for installation between the filling and venting hoses.

TECHNICAL DATA

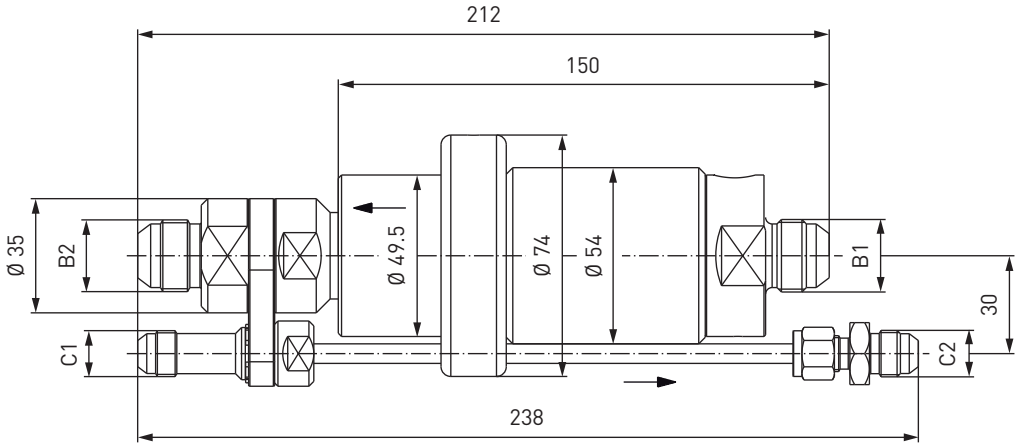
Characteristics	Basic version
Nominal bore (DN)	12 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 19880-1 (PS = 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Breakaway force	222 - 667 N
Material	Corrosion resistant stainless steel, aluminum
Sealing material	Hydrogen resistant
Design	With gas recirculation

Other designs on request

» Inline breakaway coupling **TSA6 H_2**

ORDERING | WEH® TSA6 H_2 Inline breakaway coupling for TK25 H_2

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B1/B2 (male thread)	C1/C2 (male thread)
C1-82323-X01	TSA6 H_2	12	45 MPa	UNF 7/8"-14*	UNF 9/16"-18*

* acc. to SAE J514, 37° cone

ACCESSORIES

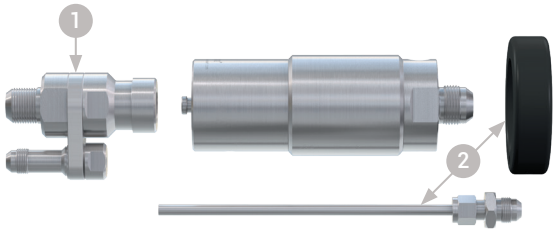
The following accessories are available for the WEH® TSA6 H_2 Inline breakaway coupling:

Hoses

Suitable hoses for the TSA6 H_2 inline breakaway coupling are available on request.

SPARE PARTS

Various parts are available as spares for the WEH® TSA6 H_2 Inline breakaway coupling.



Part No.	Description
W83706	1 Receptacle insert for TSA6 H_2
B200B-119726	Spare seals set for receptacle insert W83706
W139031	2 Spare parts set consisting of a mounting flange, a gas recirculation tube and a firmly mounted fitting

» Receptacle **TN1 H_2**

DESCRIPTION

Features
- Low-noise refueling
- Version with and without integrated self-cleaning particle filter (40 µm or 50 µm)
- Integrated high-flow check valve
- Sealing-friendly design
- Coding for pressure range / gas type (acc. to table below)

The WEH® TN1 H_2 Receptacle was specially designed for refueling cars with hydrogen.
Due to the aerodynamic design of the internal shapes of the receptacle, noise during refueling process is mostly eliminated, while at the same time maximum flow rate is enabled. The internal seals are arranged to largely prevent damage to the sealing components. That is why the WEH® TN1 H_2 proves to be extremely robust and durable, minimizing downtimes due to low maintenance.
The receptacle is equipped with an integrated check valve and has a coding for pressure range / gas type.

Enhanced safety by integrated particle filter
The use of an integrated particle filter prevents the ingress of dirt particles from the outside and therefore leakage at the receptacle is almost eliminated.

Application
Receptacle for hydrogen refueling / filling of cars and fork-lift trucks or other industrial applications, to be used with WEH® Fueling nozzles acc. to opposite table.

TN1 H_2 \ TK17 H_2 / TK16 H_2	25 MPa	35 MPa	35 MPa HF*	70 MPa
25 MPa	✓			
35 MPa	✓	✓		

* HF = High-Flow

TECHNICAL DATA

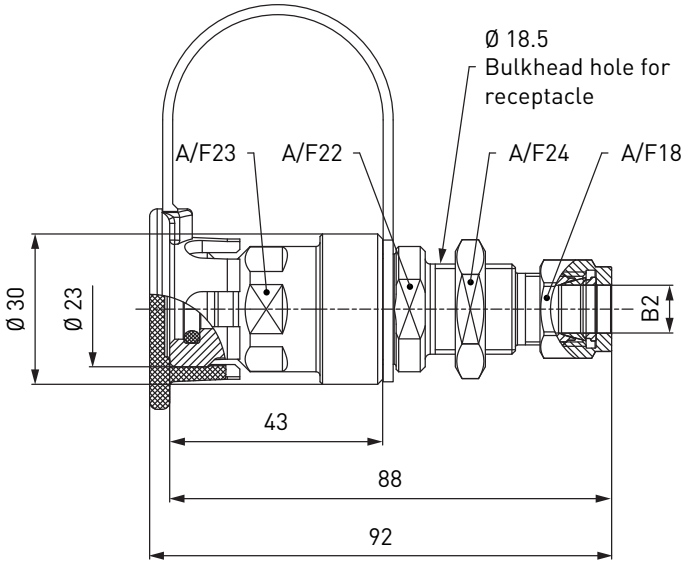
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal Pressure	PN = 250 bar, 350 bar
Max. allowable operating Pressure	PS = 350 bar MAWP = 45 MPa according to ISO 17268 (PS = 450 bar)
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Design	With protection cap, with integrated particle filter (40 µm or 50 µm), integrated check valve and fittings (only for receptacles with tube fitting)
Conformity / Tests / Approvals	e 1 00 0008 (Regulation (EC) No. 79/2009) Leak tests acc. to SAE J2600:2002 GB/T 26779-2021 (only applies to EC79 articles)

Other designs on request

» Receptacle **TN1 H_2**

ORDERING | WEH® TN1 H_2 Receptacle with tube fitting and filter (50 µm)

approx. dimensions (mm)



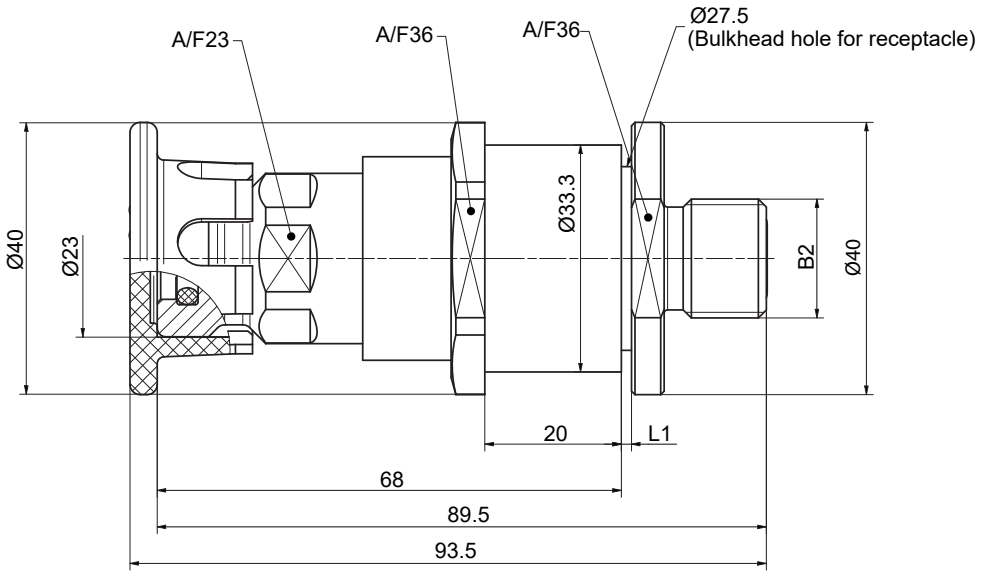
Part No.	Description	DN	Pressure (MAWP)	B2
C1-31315-X1-X01	TN1 H_2	8	35 MPa	Tube Ø 3/8"*
C1-31316	TN1 H_2 (EC79)	8	45 MPa	Tube Ø 3/8"*
C1-70661-X01	TN1 H_2	8	35 MPa	Tube Ø 10*
C1-35426	TN1 H_2 (EC79)	8	45 MPa	Tube Ø 10*

* double ferrule fitting

» Receptacle **TN1 H_2**

ORDERING | WEH® TN1 H_2 Receptacle prepared for data interface, with filter (40 µm)

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	L1	B2 (male thread)
C1-172510	TN1 H_2 (EC79)	8	45 MPa	1.5**	UN 11/16"-16 for sealing with O-Lok® Face Seal* or tube Ø 10 (3/8")

* Face Seal acc. to SAE J1453
** Please indicate when ordering if thicker sheet metals are needed!
Data interface not included!

Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*^{40}) on request.

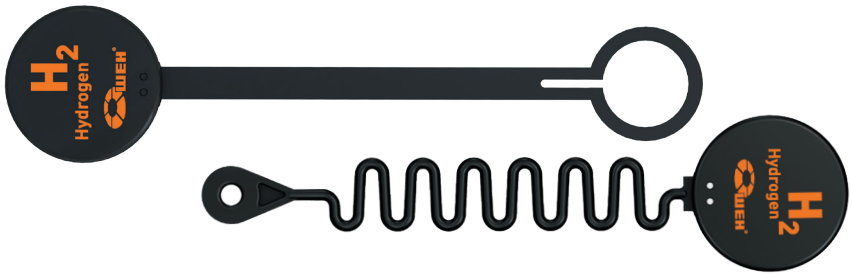
» Receptacle **TN1 H_2**

SPARE PARTS

Various parts are available as spares for the WEH® TN1 H_2 Receptacle.

Protection cap

Protection cap with a strap to protect the receptacle from dirt ingress.



Part No.	Description
W87803	Protection cap
W85984	Protection cap for receptacles prepared for data interface

» Receptacle **TN1 H_2 High-Flow**

DESCRIPTION

Features
- Low-noise refueling
- Integrated self-cleaning particle filter (40 µm)
- Integrated high-flow check valve
- Sealing-friendly design
- Coding for pressure range / gas type (acc. to table below)

The WEH® TN1 H_2 High-Flow Receptacle was developed to fit the WEH® TK16 H_2 High-Flow Fueling nozzle. This enables buses and trucks to be refueled from now on at car fueling stations.
Refueling is done either with a TK16 H_2 or with a TK16 H_2 High-Flow fueling nozzle with increased flow rate. Due to the aerodynamic design of the internal shapes of the receptacle, noise during refueling process is mostly eliminated, while at the same time maximum flow rate is enabled. The internal seals are arranged to largely prevent damage to the sealing components. That is why the WEH® TN1 H_2 High-Flow proves to be extremely robust and durable, minimizing downtimes due to low maintenance.
The receptacle is equipped with an integrated check valve and has a coding for pressure range / gas type.

Enhanced safety by integrated particle filter
The use of an integrated particle filter prevents the ingress of dirt particles from the outside and therefore leakage at the receptacle is almost eliminated.

Application
Receptacle for hydrogen refueling / filling of buses, trucks and fork-lift trucks or other industrial applications, to be used with WEH® Fueling nozzles acc. to opposite table.

TN1 H_2 HF* \ TK17 H_2 / TK16 H_2	25 MPa	35 MPa	35 MPa HF*	70 MPa
35 MPa	✓	✓	✓	

* HF = High-Flow

TECHNICAL DATA

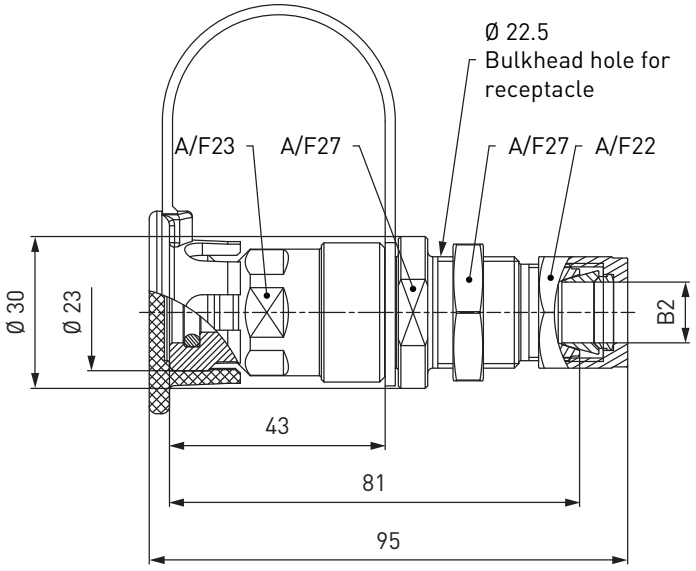
Characteristics	Basic version
Nominal bore (DN)	Depending on design
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 17268 (PS = 450 bar)
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Design	With protection cap, integrated particle filter (40 µm), integrated check valve and fittings (only for receptacles with tube fitting)
Conformity / Tests / Approvals	e 1 00 0003 (Regulation (EC) No. 79/2009)

Other designs on request

» Receptacle TN1 H_2 High-Flow

ORDERING | WEH® TN1 H_2 High-Flow Receptacle with tube fitting

approx. dimensions (mm)



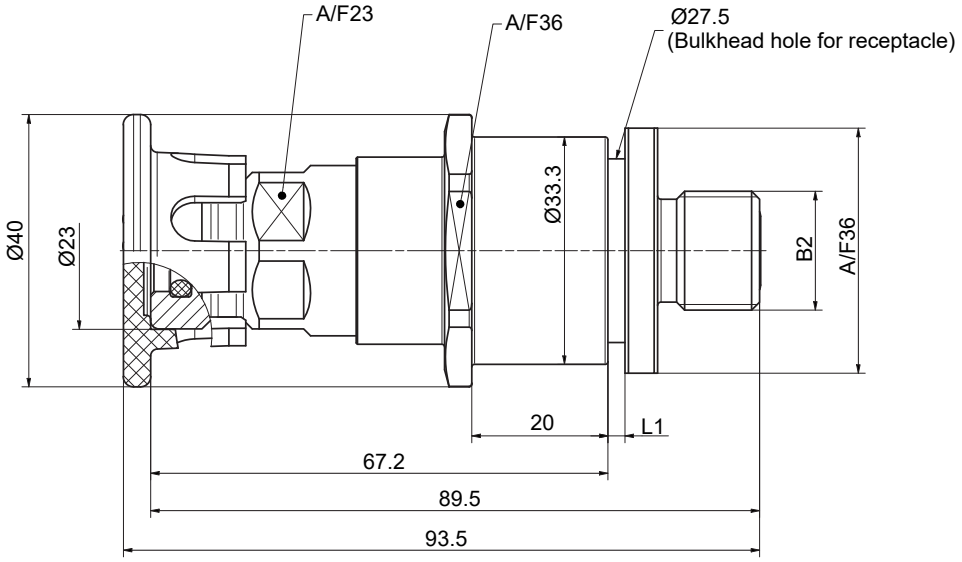
Part No.	Description	DN	Pressure (MAWP)	B2
C1-85040	TN1 H_2 High-Flow (EC79)	8	45 MPa	Tube Ø 12*

* double ferrule fitting

» Receptacle **TN1 H_2 High-Flow**

ORDERING | WEH® TN1 H_2 High-Flow Receptacle with male thread, prepared for data interface

approx. dimensions (mm)



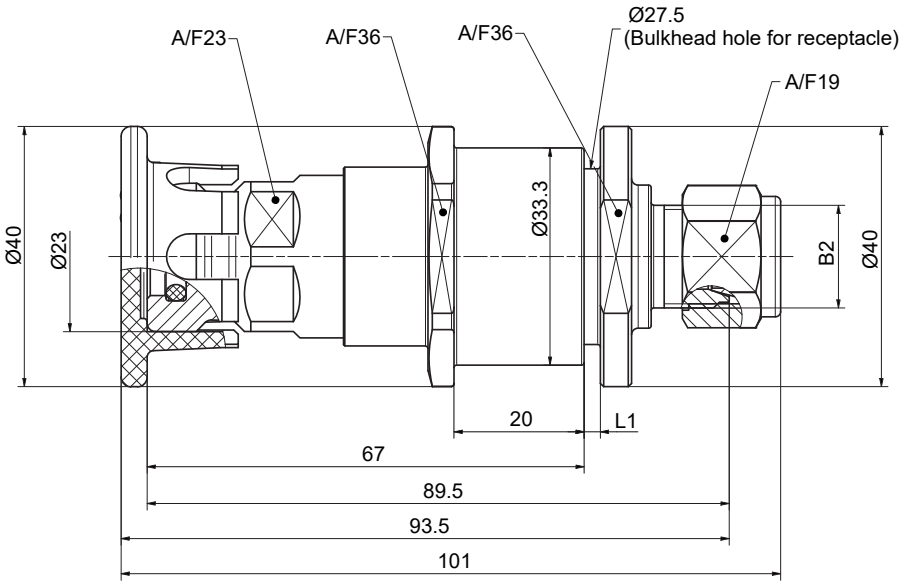
Part No.	Description	DN	Pressure (MAWP)	L1	B2 (male thread)
C1-172524	TN1 H_2 High-Flow (EC79)	6	45 MPa	2.5**	UN 11/16"-16 for sealing with O-Lok® Face Seal* for tube Ø 10 (3/8")
C1-172525	TN1 H_2 High-Flow (EC79)	8	45 MPa	2.5**	UN 13/16"-16 for sealing with O-Lok® Face Seal* for tube Ø 12.7 (1/2")

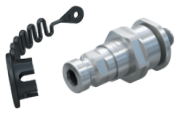
* Face Seal acc. to SAE J1453
** Please indicate when ordering if thicker sheet metals are needed!
Data interface not included!

» Receptacle TN1 H_2 High-Flow

ORDERING | WEH® TN1 H_2 High-Flow Receptacle with tube fitting, prepared for data interface

approx. dimensions (mm)





Part No.	Description	DN	Pressure (MAWP)	L1	B2 (male thread)
C1-172526	TN1 H_2 High-Flow (EC79)	6	45 MPa	2.5**	Tube Ø 10*

* Face Seal acc. to SAE J1453
** Please indicate when ordering if thicker sheet metals are needed!
Data interface not included!

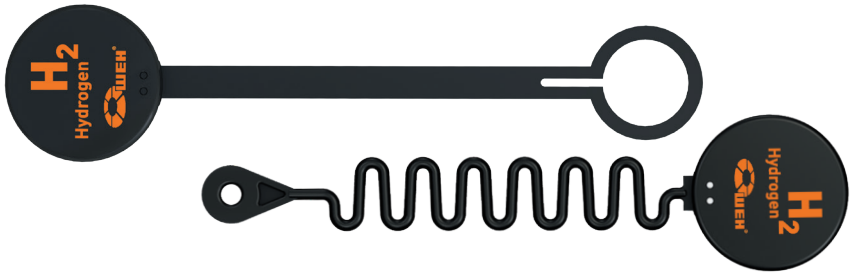
Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*^{40}) on request.

SPARE PARTS

Various parts are available as spares for the WEH® TN1 H_2 High-Flow Receptacle.

Protection cap

Protection cap with a strap to protect the receptacle from dirt ingress.



Part No.	Description
W87803	Protection cap
W85984	Protection cap for receptacles prepared for data interface

» Receptacle **TN5 H_2**

DESCRIPTION

Features
- Low-noise refueling
- Integrated self-cleaning particle filter (50 µm)
- Integrated high-flow check valve
- Sealing-friendly design
- Coding for pressure range / gas type (acc. to table below)

The WEH® TN5 H_2 Receptacle was specially designed for refueling buses and trucks with hydrogen.
Due to the aerodynamic design of the internal shapes of the receptacle, noise during refueling process is mostly eliminated, while at the same time high flow rate is enabled. The internal seals are arranged to largely prevent damage to the sealing components. That is why the WEH® TN5 H_2 proves to be extremely robust and durable, minimizing downtimes due to low maintenance.
The receptacle is equipped with an integrated check valve and has a coding for pressure range / gas type.

Enhanced safety by integrated particle filter
The use of an integrated particle filter prevents the ingress of dirt particles from the outside and therefore leakage at the receptacle is almost eliminated.

Application
Receptacle for hydrogen refueling / filling of buses, trucks and fork-lift trucks or other industrial applications, to be used with WEH® TK25 H_2 Fueling nozzle.

TN5 H_2 \ TK25 H_2	25 MPa	35 MPa
35 MPa	✓	✓

TECHNICAL DATA

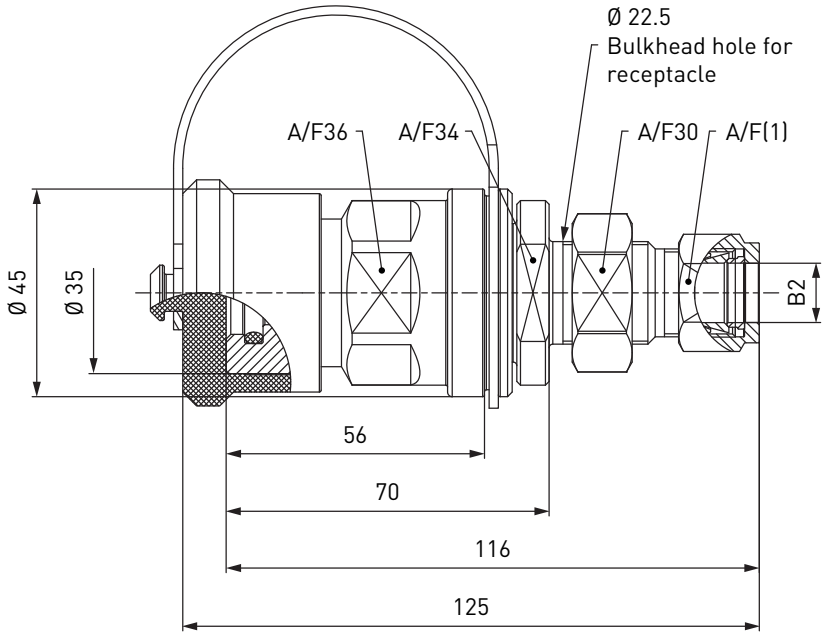
Characteristics	Basic version
Nominal bore (DN)	Depending on design
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 17268 (PS = 450 bar)
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Design	With protection cap, integrated particle filter (50 µm), integrated check valve and fittings
Conformity / Tests / Approvals	GB/T 26779-2021

Other designs on request

» Receptacle **TN5 H_2**

ORDERING | WEH® TN5 H_2 Receptacle with tube fitting

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B2	A/F(1)
C1-49772-X1-X01	TN5 H_2	8	45 MPa	Tube Ø 12*	22
C1-174547	TN5 H_2	10	45 MPa	Tube Ø 1/2"*	22
C1-19136-X1-X01	TN5 H_2	12	45 MPa	Tube Ø 16*	25

* double ferrule fitting

Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*[40]) on request.

SPARE PARTS

Various parts are available as spares for the WEH® TN5 H_2 Receptacle.

Protection cap

Protection cap with a strap to protect the receptacle from dirt ingress.

Part No.	Description
E80-134306	Protection cap

» Check valve **TVR1 H_2**

DESCRIPTION

Features
- Robust construction
- Low-noise opening and closing
- Corrosion resistant stainless steel
- High leak tightness

With the TVR1 H_2 WEH offers a high-performance check valve for use with gaseous hydrogen.
The WEH® TVR1 H_2 check valves provide a reliable function wherever hydrogen should only flow in one direction within a pipe system and must be prevented from a return flow.

The seals in the valve are arranged to prevent them from being damaged by dirt particles in the gas flow. The WEH® TVR1 H_2 Check valve is made of corrosion-resistant stainless steel achieving a very durable unit due to its robust internal structure.

Application
Check valve for cars, also suitable for installation in hydrogen fueling stations.
The WEH® TVR1 H_2 product family is offered as a return flow prevention acc. to DIN EN 736-1 for installation in H2 systems and pipelines.

TECHNICAL DATA

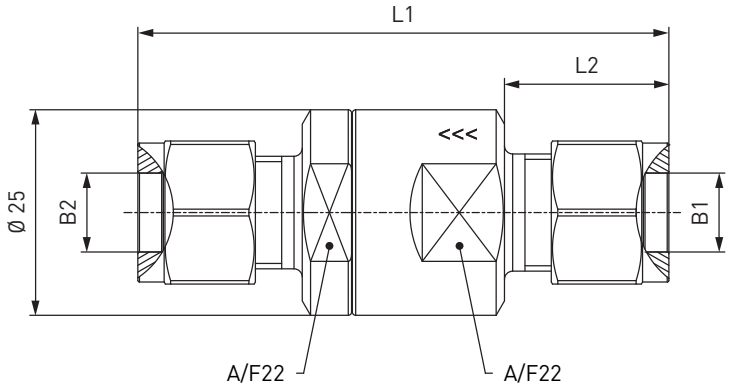
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	MAWP = 45 MPa according to ISO 17268 (PS = 450 bar)
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant stainless steel (inner components partially made of brass: C1-18485/4)
Sealing material	Hydrogen resistant
Design	Incl. fittings (only for check valves with tube fitting) With integrated particle filter on request
Conformity / Tests / Approvals	e 1 00 0005 (Regulation (EC) No. 79/2009)

Other designs on request

» Check valve **TVR1 H_2**

ORDERING | WEH® TVR1 H_2 Check valve with tube fitting on both sides

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B1	B2	L1	L2
C1-18485/4	TVR1 H_2 (EC79)	8	45 MPa	Tube Ø 3/8"*	Tube Ø 3/8"*	65.0	20.0
C1-43215	TVR1 H_2 (EC79)	8	45 MPa	Tube Ø 10*	Tube Ø 10*	65.0	20.0

* double ferrule fitting

Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*[40]) on request.

» Check valve **TVR5 H_2**

DESCRIPTION

Features
- Robust construction
- Low-noise opening and closing
- Corrosion resistant stainless steel
- High leak tightness

With the TVR5 H_2 WEH offers a high-performance check valve especially for hydrogen buses and trucks.
The WEH® TVR5 H_2 check valves provide a reliable function wherever hydrogen should only flow in one direction within a pipe system and must be prevented from a return flow.

The seals in the valve are arranged to prevent them from being damaged by dirt particles in the gas flow. The WEH® TVR5 H_2 Check valve is made of corrosion-resistant stainless steel achieving a very durable unit due to its robust internal structure.

Application
Check valve for buses and trucks, also suitable for installation in hydrogen fueling stations.
The WEH® TVR5 H_2 product family is offered as a return flow prevention acc. to DIN EN 736-1 for installation in H2 systems and pipelines.

TECHNICAL DATA

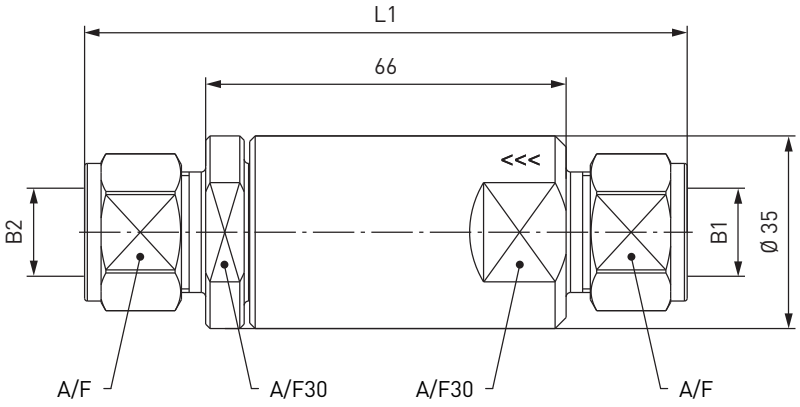
Characteristics	Basic version
Nominal bore (DN)	Depending on design
Nominal Pressure	PN = 35 MPa
Max. allowable operating Pressure	PS = 450 bar
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant stainless steel
Sealing material	Hydrogen resistant
Design	Incl. fittings (only for check valves with tube fitting)
Conformity / Tests / Approvals	On request

Other designs on request

» Check valve **TVR5 H_2**

ORDERING | WEH® TVR5 H_2 Check valve with tube fitting on both sides

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PS)	B1	B2	L1	A/F
C1-30216-X1-X01	TVR5 H_2	11	437,5 bar	Tube Ø 12*	Tube Ø 12*	110	22
C1-30215-X1-X01	TVR5 H_2	14	437,5 bar	Tube Ø 16*	Tube Ø 16*	111	25

* double ferrule fitting

Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*[40]) on request.

» Filter **TSF2 H_2**

DESCRIPTION

Features
- For clean filtered hydrogen
- Filter insert can be cleaned
- For installation onboard H_2 vehicles and in H_2 fueling stations
- Also suitable as prefilter for inline breakaway couplings

When refueling hydrogen, it can often happen that hydrogen with dirt particles is fueled. These contaminated particles in the gas may cause damage to the sealing components. WEH therefore offers the WEH® TSF2 H_2 Filter for clean filtered hydrogen. Solid particles are reliably captured.
The filter element can be removed and can be reused after cleaning.

The WEH® TSF2 H_2 Filter is mainly used in fueling stations and plants.
To meet the different requirements of dispenser manufacturers, a wide variety of connection configurations are available - tube fitting / female thread on both ends or female and male thread.

For use as a prefilter with WEH® TSA2 H_2 Inline breakaway coupling, WEH offers a special design with male and female thread.

Application
Filter for installation in hydrogen vehicles and fueling stations.

TECHNICAL DATA

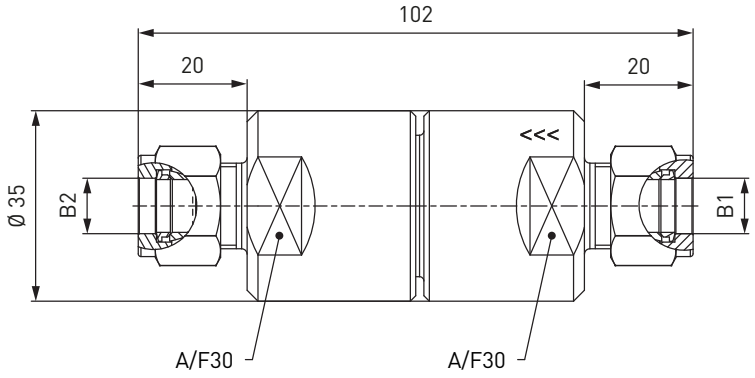
Characteristics	Basic version
Nominal bore (DN)	Depending on design
Nominal pressure	PN = 35 MPa
Max. allowable operating pressure	PS = 450 bar
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant stainless steel
Sealing material	Hydrogen resistant
Filter element	40 µm or 20 µm
Design	Incl. fittings (only for filters with tube fitting)
Conformity / Tests / Approvals	On request

Other designs on request

» Filter **TSF2 H_2**

ORDERING | WEH® TSF2 H_2 Filter with tube fitting on both sides

approx. dimensions (mm)

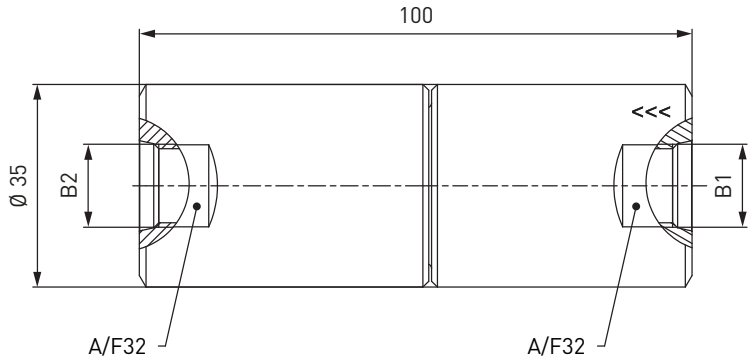


Part No.	Description	Filter (µm)	DN	Pressure (PS)	B1	B2
C1-18487-X01	TSF2 H_2	40	8	450 bar	Rohr Ø 3/8"*	Rohr Ø 3/8"*
C1-36033-X01	TSF2 H_2	40	8	450 bar	Rohr Ø 10*	Rohr Ø 10*

* double ferrule fitting

ORDERING | WEH® TSF2 H_2 Filter with female thread on both sides

ca.-Maße (mm)



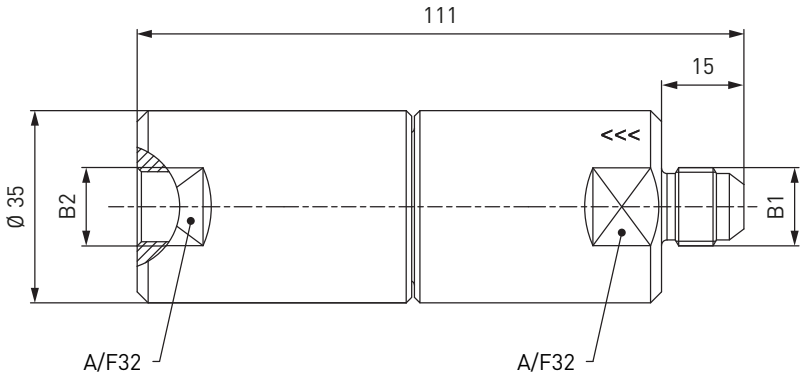
Part No.	Description	Filter (µm)	DN	Pressure (PS)	B1 (female thread)	B2 (female thread)
C1-34576-X01	TSF2 H_2	40	8	450 bar	UNF 9/16"-18*	UNF 9/16"-18*

* acc. to SAE J1926-1

» Filter TSF2 H_2

ORDERING | WEH® TSF2 H_2 Filter with male and female thread (also suitable as prefilter for TSA2 H_2)

approx. dimensions (mm)



Part No.	Description	Filter (µm)	DN	Pressure (PS)	B1 (male thread)	B2 (female thread)
C1-134710-X01	TSF2 H_2	40	8	450 bar	UNF 9/16"-18*	UNF 9/16"-18*
C1-134711-X01	TSF2 H_2	20	8	450 bar	UNF 9/16"-18*	UNF 9/16"-18*

* acc. to SAE J514, 37° cone

Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*[40]) on request.

» Filter **TSF2 H_2**

SPARE PARTS

Various parts are available as spares for the WEH® TSF2 H_2 Filter.

Part No.	Description
E69-9061	Wire filter insert 40 µm (incl. spring and o-ring)
W67754	Wire filter insert 20 µm (incl. spring and o-ring)

» Coalescing filter **TSF2 H_2**

NEW

DESCRIPTION

Features
- Fine filter with high particle retention capacity (efficiency of approx. 99.9 % > 0.3 µm)
- Operating pressure (PS) up to 490 bar
- For installation in H2 vehicles and fueling stations
- Protection of critical components in the fuel system
- Wear resistant and corrosion resistant
- Ease of maintenance

When refueling with hydrogen, clean, filtered gases are a basic prerequisite for the proper functioning of the vehicle and fueling station components. The WEH® TSF2 H_2 coalescence filter cleans the gas flow of contaminants.

Coalescence filters are even more effective than normal particle filters due to their high particle retention capacity. more effective. The TSF2 H_2 filters the gas flow and reliably and safely removes the contaminants contained in the gas, such as oil, water aerosols and dirt particles. These impurities are separated by the coalescence filter. The hydrogen flows through the filter, whereby the slower-flowing components such as oil, water and other liquid aerosols form droplets, sink to the bottom of the filter and can be removed via the oil outlet.

The WEH® TSF2 H_2 is easy to maintain and can also be retrofitted in vehicles and fueling stations.

Application
Coalescence filters for installation in hydrogen vehicles and fueling stations.

TECHNICAL DATA

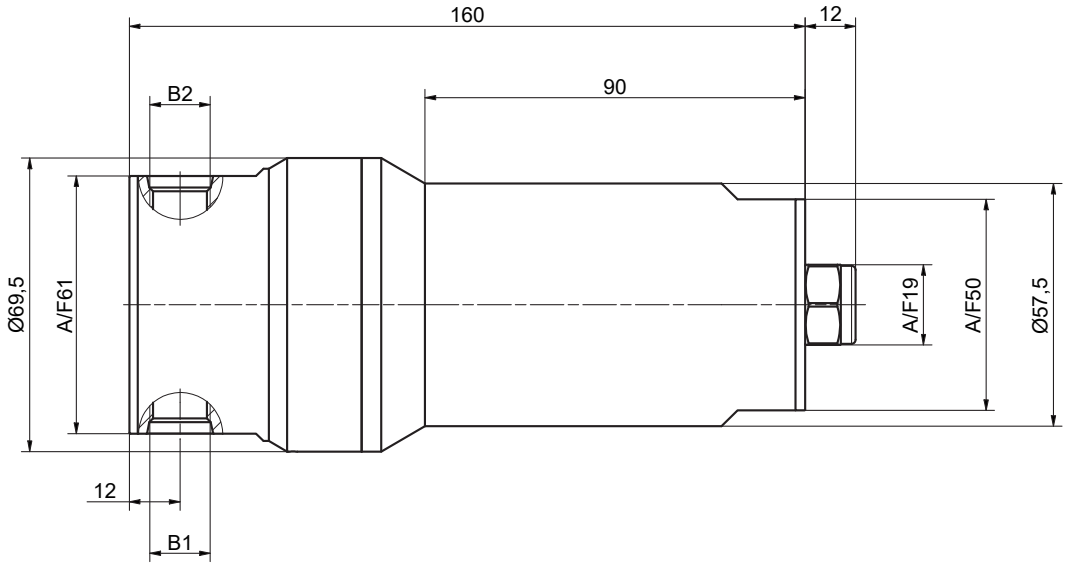
Characteristics	Basic version
Nominal bore (DN)	8 mm
Nominal pressure	PN = 35 MPa
Max. allowable operating pressure	MAWP = 43.75 MPa according to ISO 17268; PS =490 bar
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Filterelement	< 0,3 µm
Ausführung	Incl. Plug
Konformitäten / Prüfungen / Zulassungen	e 1 00 0004 (Ordinance (EG) Nr. 79/2009)

Other designs on reques

» Coalescing filter **TSF2 H_2**

ORDERING | Coalescing filter WEH® TSF2 H_2 with filter cartridge Ø 38 mm

approx. dimensions (mm)



Part No.	Description	Pressure	B1 (female thread)	B2 (female thread)
C1-181946	TSF2 H_2 (EG79)	MAWP= 43.75 MPa	UNF 9/16"-18*	UNF 9/16"-18*
C1-181949	TSF2 H_2	PS= 490 bar	UNF 9/16"-18*	UNF 9/16"-18*

* according to SAE J1926-1

Other connections (e.g. Cone and Thread Fittings or VOSSLok40) on request.

SPARE PARTS / ACCESSORIES

Various spare parts are available for the WEH® TSF2 H_2 coalescence filter.

Plug

Plug with matching O-ring (made of polyurethane) to close the oil outlet "Q" (filter end).

Part No.	Description	Connection (male thread)
E69-93336	Plug with O-Ring	UNF 9/16"-18*

* according to SAE J1926-1

Spare parts set

Suitable for coalescence filter TSF2 H_2.

Part No.	Description
B200B-168192	Spare parts set consisting of filter cartridge Ø 38 mm, support ring and 2 O-rings

Screw-in fittings for connections B1/B2

Part No.	Description
E69-135408	Swagelok UNF 9/16*-18* AG RV Ø10mm
E69-155000	Swagelok UNF 9/16*-18* AG RV Ø8mm

* according to SAE J1926-1
Tightening torque 45 Nm + 10%

» Filter **TSF4 H_2**

DESCRIPTION

Features
- For clean filtered hydrogen
- Filter insert can be cleaned
- For installation onboard H_2 vehicles and in H_2 fueling stations

When refueling hydrogen, it can often happen that hydrogen with dirt particles is fueled. These contaminated particles in the gas may cause damage to the sealing components. WEH therefore offers the WEH® TSF4 H_2 Filter for clean filtered hydrogen. Solid particles are reliably captured.
The filter element can be removed and can be reused after cleaning.

The particle filter is specially designed for installation in vehicles, but can also be installed in fueling stations and plants, depending on the application.

Application
Filter for installation in hydrogen vehicles and fueling stations.

TECHNICAL DATA

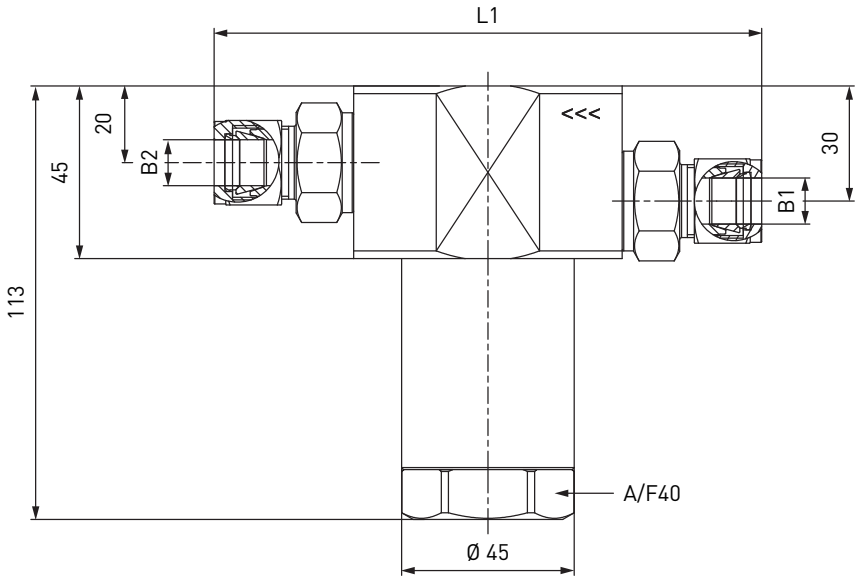
Characteristics	Basic version
Nominal bore (DN)	10 mm
Nominal pressure	PN = 35 MPa
Max. allowable operating pressure	PS = 450 bar
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant stainless steel
Sealing material	Hydrogen resistant
Filter element	10 µm
Design	Incl. fittings (only for filters with tube fitting)
Conformity / Tests / Approvals	On request

Other designs on request

» Filter **TSF4 H_2**

ORDERING | WEH® TSF4 H_2 T-Filter with tube fitting on both sides

approx. dimensions (mm)



Part No.	Description	Filter (µm)	DN	Pressure (PS)	B1	B2	L1
C1-58026-X01	TSF4 H_2	10	10	450 bar	Tube Ø 12*	Tube Ø 12*	145
C1-73987-X01	TSF4 H_2	10	10	350 bar	Tube Ø 1/2"*	Tube Ø 1/2"*	145

* double ferrule fitting

Other connection sizes and types (e.g. Cone and Thread Fittings or VOSS*Lok*[40]) on request.

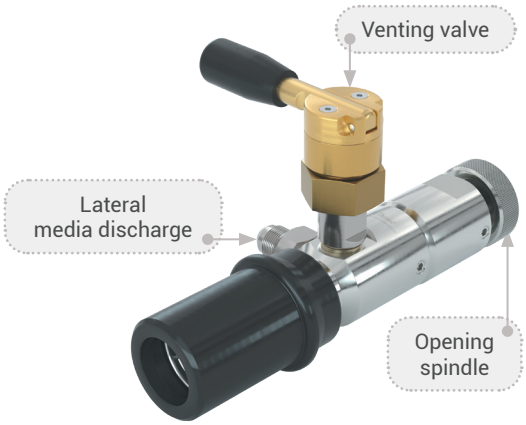
SPARE PARTS

Various parts are available as spares for the WEH® TSF4 H_2 Filter.

Part No.	Description
W9063	Wire filter insert 10 µm
E51-47589	O-ring for filter insert (only T-filter)

» Defueling nozzle **TK6 H_2**

DESCRIPTION



Features
- Discharge via filling port
- Actuation with opening spindle
- With venting valve (optionally also without venting valve)
- No additional shut-off device required
- Plastic thermal protection on vehicle-side connection
- Only suitable for WEH® TN1 H_2 Receptacles without filter

The WEH® TK6 H_2 Defueling nozzle is used for maintenance and inspection of hydrogen vehicles.
For maintenance, all pressure or fuel tanks must be discharged. WEH has designed the TK6 H_2 for easy connection and discharging of the hydrogen tanks.

The defueling nozzle is simply placed onto the receptacle in the car and the knurled spindle is screwed in until it stops. Then, the WEH® TN1 H_2 Receptacle is opened and the fuel tanks can be discharged via the lateral media discharge.

Application
Defueling nozzle for discharging hydrogen fuel tanks of cars via filling receptacle, only to be used with WEH® TN1 H_2 Receptacles without filter. Operation only by specially trained personnel. Not for self-service operation!
Attention: The TK6 H_2 may not be used for filling!

TECHNICAL DATA

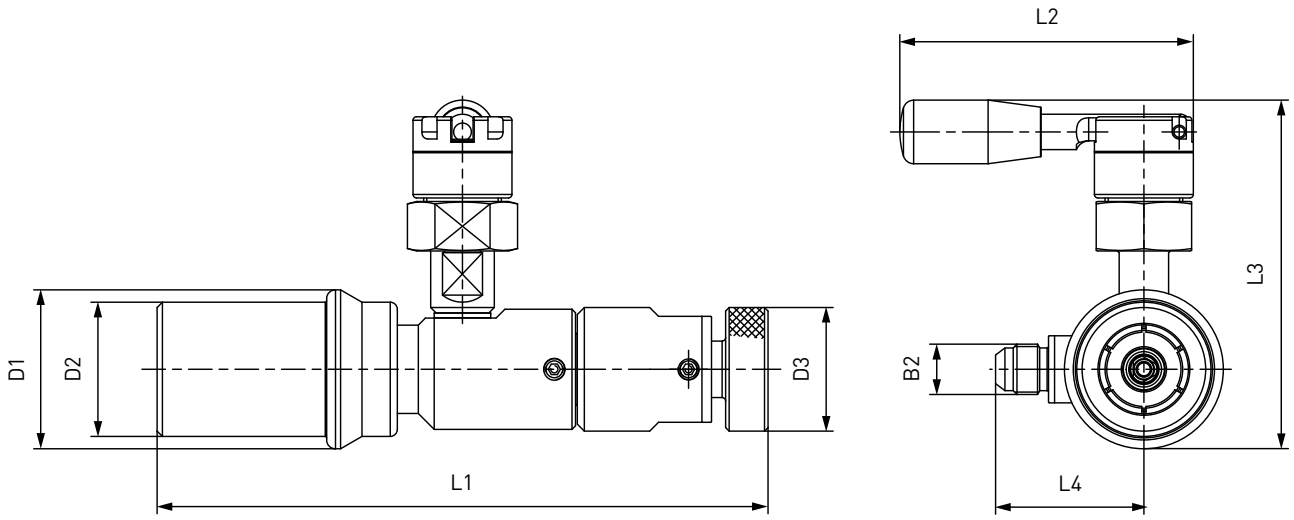
Characteristics	Basic version
Nominal bore (DN)	6 mm
Nominal pressure	PN = 35 MPa
Max. allowable operating pressure	MAWP = 43,75 MPa according to ISO 17168 (PS = 450 bar)
Media temperature range	-20 °C up to +85 °C
Ambient temperature range	-40 °C up to +85 °C
Material	Corrosion resistant
Sealing material	Hydrogen resistant
Design	With plastic thermal protection on vehicle-side connection, opening spindle and venting valve
Weight	Approx. 1.2 kg

Other designs on request

» Defueling nozzle **TK6 H_2**

ORDERING | WEH® TK6 H_2 Defueling nozzle with venting valve

approx. dimensions (mm)



Part No.	Description	Pressure (MAWP)	B2 (male thread)	L1	L2	L3	L4	D1	D2	D3
C1-104732-X01	TK6 H_2	43,75 MPa	UNF 9/16“-18*	min. 173 / max. 180	83	99	42	45	38	35

* acc. to SAE J514, 37° cone

» Defueling nozzle **TK6 H_2**

ACCESSORIES

The following accessories are available for the WEH® TK6 H_2 Defueling nozzle:

Pressure hose

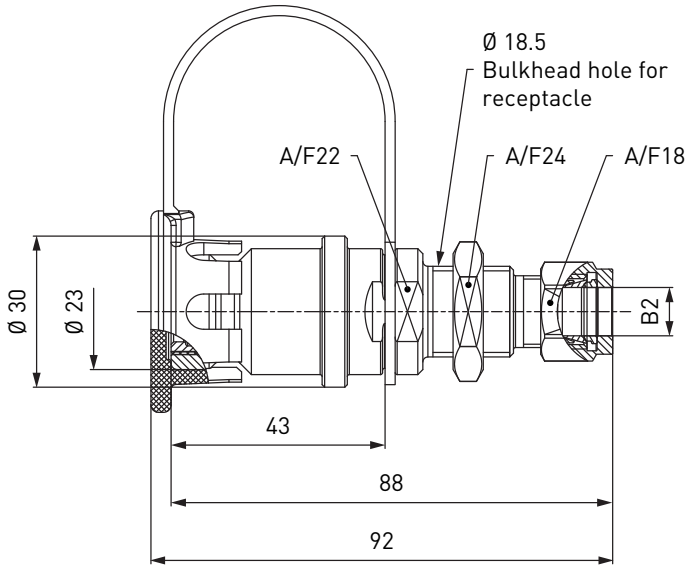
Pressure hose for connection to the defueling nozzle, complete with fittings and press-fittings supported by coil spring stubs.
Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design hose: max. operating pressure PS: 45 MPa / nominal bore (DN): 4.5 mm / media temperature range: -20 °C up to +90 °C

Part No.	B1/B2 (female thread)	Hose length
E68-60809	UNF 9/16“-18*	3 m
E68-60812	UNF 9/16“-18*	4 m
E68-60813	UNF 9/16“-18*	5 m

* acc. to SAE JIC, 37° cone

WEH® TN1 H_2 Receptacle with tube fitting, without filter

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B2
C1-18481/4-X01	TN1 H_2	8	43,75 MPa	Tube Ø 3/8“*
C1-32456	TN1 H_2 (EC79)	8	43,75 MPa	Tube Ø 10*

* double ferrule fitting

» Defueling nozzle **TK6 H_2**

WEH® TNS1 H_2 Service receptacle

To prevent damage in the defueling nozzle while leak testing during maintenance in the course of which pressure is applied, we recommend the use of a service receptacle. The receptacle also protects the defueling nozzle from dirt ingress whilst not in use.

Part no.	Description
C1-157639	TNS1 H_2 Service receptacle incl. protection cap

SPARE PARTS

Various parts are available as spares for the WEH® TK6 H_2 Defueling nozzle.

Part no.	Description
E80-111760	1 Sliding sleeve
On request	Maintenance spray

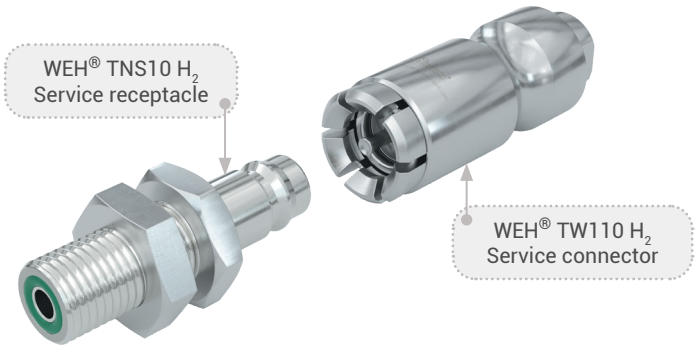
» Service receptacle **TNS10 H_2**

DESCRIPTION

Features
- Integrated shut-off valve
- Low-noise discharging
- Sealing-friendly design
- Incl. protection cap

Vehicles running on hydrogen have to be serviced and checked regularly. Therefore it is necessary that all pressure vessels or fuel tanks are discharged. The WEH® TNS10 H_2 Service receptacle has been specially developed for this purpose.
It is mounted on the body panel of the hydrogen vehicle and enables easy discharging of the fuel tank.

For the WEH® TNS10 H_2 the suitable WEH® TW110 H_2 Service connector is also available.
The TW110 is simply connected to the service receptacle and discharging can begin. When discharging is complete, the service connector can be disconnected again.



Application
Service receptacle for discharging hydrogen fuel tanks.
Operation only by specially trained service personnel. Not for self-service operation!
Attention: The TNS10 H_2 may not be used for filling!

Note:
The TNS10 H_2 may only be used in conjunction with a suitable upstream shut-off device or valve (e.g. ball valve)!

TECHNICAL DATA

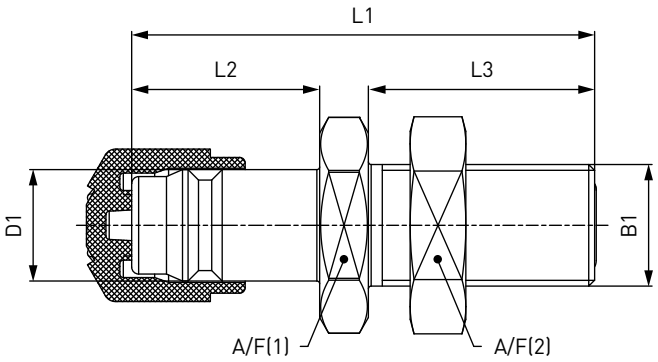
Characteristics	Basic version
Nominal bore (DN)	6 mm
Nominal pressure	PN = 1.6 MPa
Max. allowable operating pressure	MAWP = 2 MPa according to ISO 17168 (PS = 20 bar)
Temperature range	-40 °C up to +85 °C
Material	Corrosion resistant stainless steel
Sealing material	Hydrogen resistant
Design	Incl. integrated shut-off valve, bulkhead fitting and protection cap

Other designs on request

» Service receptacle **TNS10 H_2**

ORDERING | WEH® TNS10 H_2 Service receptacle

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B1 (male thread)	L1	L2	L3	D1	A/F(1) / A/F(2)
C1-151481	TNS10 H_2	6	2 MPa	UN 11/16"-16 for sealing with O-Lok® Face Seal* for tube Ø 10 (3/8")	66.5	27	32.5	16	27

* Face Seal acc. to SAE J1453

» Service receptacle **TNS10 H_2**

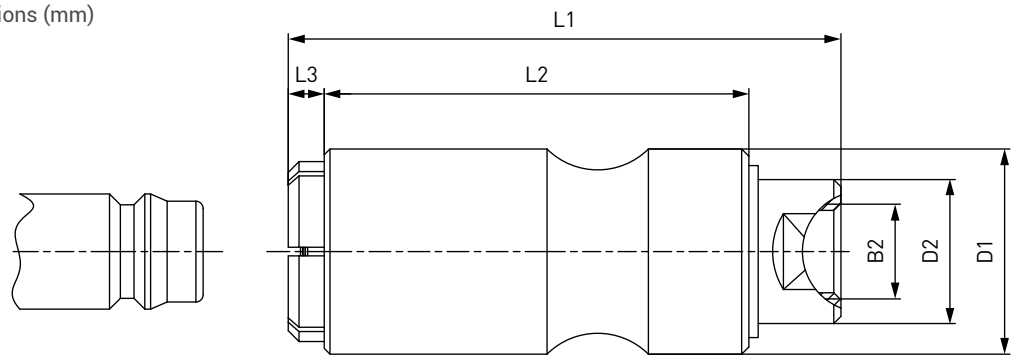
ACCESSORIES

The following accessories are available for the WEH® TNS10 H_2 Service receptacle:

WEH® TW110 H_2 Service connector

Service connector with integrated shut-off valve for discharging the pressure vessels and fuel tanks of hydrogen-powered vehicles.

approx. dimensions (mm)



Part No.	Description	DN	Pressure (MAWP)	B2 (female thread)	L1	L2	L3	D1	D2
C1-84461	TW110 H_2	8	2 MPa	G1/4“	77	59	5	28.5	20

» Service receptacle **TNS10 H_2**

SPARE PARTS

Various parts are available as spares for the WEH® TNS10 H_2 Service receptacle.

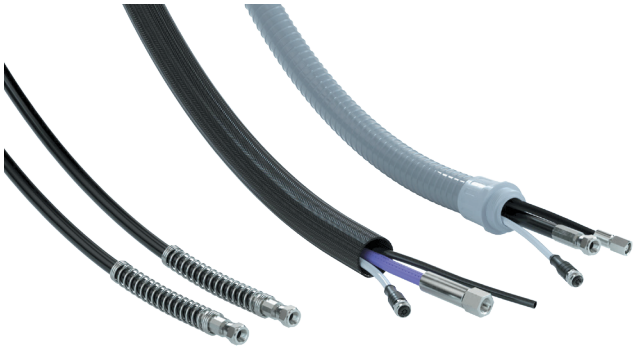
Protection cap

To protect the TNS10 H_2 service receptacle from dirt ingress and damage whilst not in use.

Part No.	Description
E80-83726	Protection cap

» H_2 Hoses

DESCRIPTION



Features
- Different lengths available
- Tailor-made according to customers‘ specifications

We offer hydrogen hoses for connecting our fueling nozzles to the breakaway coupling or fueling station. The hoses are available with suitable fittings. The hoses or hose sets can be delivered in different standard sizes. On request the hydrogen hoses are also available in other lengths.

Application
Hydrogen hoses / hose sets for installation at the fueling station.

TECHNICAL DATA

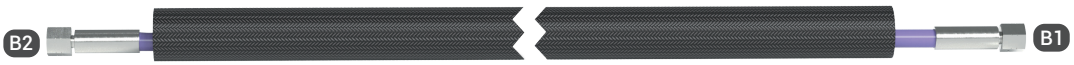
Characteristics	Basic version
Max. allowable operating pressure PS	45 MPa (hoses for TK16 H_2, TK16 H_2 High-Flow, TK25 H_2, TK6 H_2) 49 MPa (hoses for TK17 H_2 35 MPa) 87.5 MPa (hoses for TK17 H_2 70 MPa)
Media temperature range	-20 °C up to +90 °C* (hoses for TK16 H_2, TK16 H_2 High-Flow, TK25 H_2, TK6 H_2) -40 °C up to +85 °C (hoses for TK17 H_2 70 MPa, TK17 H_2 35 MPa)
Ambient temperature range	-40 °C up to +85 °C
Sealing material	Hydrogen resistant

* not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601

» H_2 Hoses

ORDERING | Hose set for TK17 H_2 70 MPa

Hose set for connecting fueling nozzle and TSA1 H_2 70 MPa breakaway coupling, complete with filling hose and braided protection hose as cover.
Design filling hose:
max. operating pressure PS: 96.25 MPa / nominal bore (DN): 4.5 mm / media temperature range: -40 °C up to +85 °C

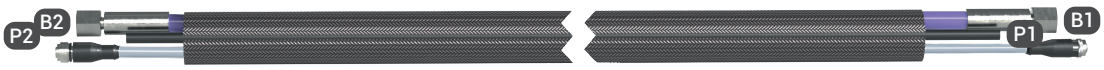


Part no.	B1/B2 (female thread)	Hose length
E68-163061	UNF 9/16“-18*	3 m
E68-163062	UNF 9/16“-18*	4 m
E68-163063	UNF 9/16“-18*	5 m

* DKJ 58°

ORDERING | Hose set for TK17 H_2 70 MPa ENR

Hose set for connecting fueling nozzle and TSA1 H_2 70 MPa breakaway coupling, complete with filling hose, data cable, purging line and braided protection hose as cover.
Design filling hose:
max. operating pressure PS: 96.25 MPa / nominal bore (DN): 4.5 mm / media temperature range: -40 °C up to +85 °C

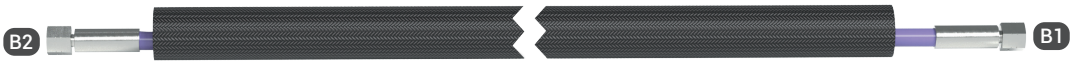


Part no.	B1/B2 (female thread)	P1/P2	Hose length
E68-161886	UNF 9/16“-18*	Ø 6	3 m
E68-161887	UNF 9/16“-18*	Ø 6	4 m
E68-161888	UNF 9/16“-18*	Ø 6	5 m

* DKJ 58°

ORDERING | Hose set for TK17 H_2 35 MPa

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling hose and braided protection hose as cover.
Design filling hose:
max. operating pressure PS: 49 MPa / nominal bore (DN): 4.5 mm / media temperature range: -40 °C up to +85 °C



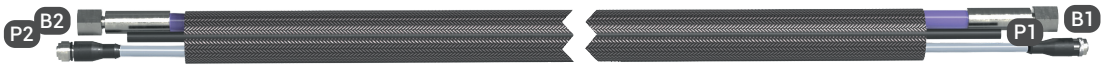
Part no.	B1/B2 (female thread)	Hose length
E68-174296	UNF 7/16“-20*	3 m
E68-174297	UNF 7/16“-20*	4 m
E68-174298	UNF 7/16“-20*	5 m

* acc. to SAE JIC, 37° sealing cone

» H_2 Hoses

ORDERING | Hose set for TK17 H_2 35 MPa ENR

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling hose, data cable, purging line and braided protection hose as cover.
Design filling hose:
max. operating pressure PS: 49 MPa / nominal bore (DN): 4.5 mm / media temperature range: -40 °C up to +85 °C



Part no.	B1/B2 (female thread)	P1/P2	Hose length
E68-174299	UNF 7/16“-20*	Ø 6	3 m
E68-174300	UNF 7/16“-20*	Ø 6	4 m
E68-174301	UNF 7/16“-20*	Ø 6	5 m

* acc. to SAE JIC, 37° sealing cone

ORDERING | Hose set for TK16 H_2 (25 MPa / 35 MPa) and TK16 H_2 High-Flow (35 MPa)

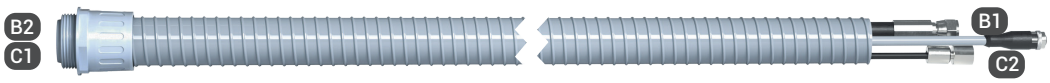
Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling and venting hose, fittings and press-fittings supported by coil spring stubs. Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design filling/venting hose:
max. operating pressure PS: 45 MPa / nominal bore (DN): 4.5 mm / media temperature range: -20 °C up to +90 °C

Part No.	B1/B2 (female thread)	C1/C2 (female thread)	Hose length
C1-60917	UNF 9/16“-18*	UNF 7/16“-20*	3 m
C1-60920	UNF 9/16“-18*	UNF 7/16“-20*	4 m
C1-60923	UNF 9/16“-18*	UNF 7/16“-20*	5 m

* acc. to SAE JIC, 37° cone

ORDERING | Hose set for TK16 H_2 (35 MPa) and TK16 H_2 High-Flow (35 MPa) with data interface

Hose set for connecting fueling nozzle and TSA1 H_2 breakaway coupling, complete with filling and venting hose, hose fittings, plastic spiral hose and cable for data interface.
Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design filling/venting hose: max. operating pressure PS: 45 MPa / nominal bore (DN): 4.5 mm (filling hose)
resp. 2 mm (venting hose) / media temperature range: -20 °C up to +90 °C



Part No.	B1/B2 (female thread)	C1/C2 (female thread)	Hose length
C1-90698	UNF 9/16“-18*	M12x1.5	3 m
C1-94428	UNF 9/16“-18*	M12x1.5	4 m
C1-94429	UNF 9/16“-18*	M12x1.5	5 m

* acc. to SAE JIC, 37° cone

» H_2 Hoses

ORDERING | Hose set for TK25 H_2 (25 MPa / 35 MPa)

Hose set for connecting fueling nozzle and TSA5 H_2 breakaway coupling, complete with filling and venting hose, fittings and press-fittings supported by coil spring stubs. Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design filling/venting hose: max. operating pressure PS: 45 MPa / nominal bore (DN): 5.6 mm (filling hose)
resp. 4.5 mm (venting hose) / media temperature range: -20 °C up to +90 °C

Part No.	B1/B2 (female thread)	C1/C2 (female thread)	Hose length
C1-152556	UNF 7/8“-14*	UNF 9/16“-18*	3 m
C1-152557	UNF 7/8“-14*	UNF 9/16“-18*	4 m
C1-152558	UNF 7/8“-14*	UNF 9/16“-18*	5 m

* acc. to SAE JIC, 37° cone

ORDERING | Pressure hose for TK6 H_2 (35 MPa)

Pressure hose for connecting to the defueling nozzle, complete with fittings and press-fittings supported by coil spring stubs. Not suitable for refueling with pre-cooled hydrogen acc. to SAE J2601.
Design hose:
max. operating pressure PS: 45 MPa / nominal bore (DN): 4.5 mm / media temperature range: -20 °C up to +90 °C

Part No.	B1/B2 (female thread)	Hose length
E68-60809	UNF 9/16“-18*	3 m
E68-60812	UNF 9/16“-18*	4 m
E68-60813	UNF 9/16“-18*	5 m

* acc. to SAE JIC, 37° cone

» Technical appendix

Definitions

Abbreviation	Definition	
Pressure specifications	*(all pressure data is to be understood as overprint, unless otherwise stated)*	
PN	Nominal pressure	Nominal pressure after temperature compensation at 15 °C (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 pessure	Actuation pressure for hydraulic and pneumatic components
PC	Cracking pressure	Pressure at which the check valve opens and the first indication of flow occurs
WP	Working pressure	'Working pressure' means the maximum pressure to which a component is designed to be subjected to and which is the basis for determining the strength of the component under consideration
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	
MA1, MA2 ...	Measuring ports	
Q	Drain port filter	
G	Mounting bores	
Others		
DN	Nominal size (DN) acc. to Pressure Equipment Directive 2014/68/EU, whereby the largest, pressurized diameter of the media or pilot pressure connections of the WEH® Device (A, B1, B2, B3 or C1, C2, C3 and P1, P2, P3) which faces the customer's pipe system, is relevant.	
µm	Max. diameter of the filtered particle	
Kv	Is the discharge of water in m^3/h at a pressure drop of 1 bar (14.5 psi), 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	

» Technical appendix

Definitions

Abbreviation	Definition
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 explanations

Term	Definition
Temperature range	Is the temperature range in which the WEH® Product can be used. If no explicit information on medium and ambient temperature is given, this temperature range applies to both medium and environment.
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 maximum external leak rate, which the WEH® Product exhibits in delivery condition.
Internal leak rate	The internal leak rate depends, among other things, on type of application, medium and pressure difference on the WEH® Product. On request it can be specified more precisely.
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.
Corrosion resistant	WEH® Products are designed for use in temperate climate zones - with low levels of humidity and salinity in the air. An accelerated formation of rust or corrosion may occur at or near the sea. Therefore, reduce the inspection interval recommended for normal use and send in the WEH® Product for maintenance immediately if you notice increased soot, rust or corrosion.
Storage / life time of components	There are certain requirements for every WEH® Product. WEH® Products are generally products which may be subject to wear and fatigue during operation and depending on your individual application/use. For details - in particular regarding the corresponding minimum inspection and maintenance intervals – please refer to the respective operating instructions for the WEH® Product.

» Technical appendix

Further explanations

Subject	Definition
Technical data	Unless otherwise stated, the technical data in catalogs, data sheets and operating instructions are based on tests with nitrogen that are in the development phase or at the end of development. Leakage data are based on measurements with helium.
Intended use	For the intended use of WEH® Products, please refer to the respective operating instructions. The following applications are generally excluded for WEH® H_2 and CNG products, unless these are expressly permitted in the operating instructions: • aerospace applications, e.g. in aircrafts • shipping applications • applications offshore and in littoral areas • applications within defense and weapons technology
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). Please note that WEH does not know your system and therefore - also due to the large number of different potential applications of WEH® Products - cannot perform tests on all potential types of application. You alone are responsible for the selection, configuration and suitability of WEH® Products, especially according to the requirements of your system. Before purchasing WEH® Products, please particularly ensure that our products are compatible with your intended use, your performance data, your material and fluids, your system concept and your system limits according to our product specifications. Please also consider 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. If you are not sure whether the WEH® Product is suitable for your system and intended use, please contact us in advance. 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.
Explanation on the Pressure Equipment Directive	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, are generally classified as pressure accessories in accordance with Article 2 (5) of the same and are considered to be similar to piping. These WEH® Products may not be used as safety accessories. Furthermore, it is pointed out, that these WEH® Products are designed and placed on the market in accordance with the requirements of Article 4 (3) of the Pressure Equipment Directive 2014/68/EU. For some products a different classification and/or categorisation is required or can be conducted on request. In these cases, if legally required, a conformity assessment procedure in accordance with Annex III of the Pressure Equipment Directive 2014/68/EU can and will also be conducted 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.
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 catalog was created diligently and on the basis of decades of experience.

All information/recommendations in this catalog 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 catalog 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 catalog (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.

Furthermore, we point out that we cannot assume any warranty or accept any responsibility for printing errors, incomplete information or misinterpretations. Illustrations and/or images are particularly provided for illustrative purposes only and may differ in some details from the actual product. Moreover, dimensions and other technical details in this catalog are non-binding information and are provided for illustrative purposes only. The product's exact form and design result exclusively from the specific individual order. In particular, certain information/recommendations in the catalog only become integral part of the contract if they have been expressly contractually agreed.

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

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More questions? – Great! Don't hesitate to contact our experts.

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