2019

CNG Refuelling

High-Performance Components for Natural Gas Vehicles and Fuelling Stations

Fuelling technology for natural gas

Catalogue 15 | V1.0

WEH® - We Engineer Hightech

Table of contents

1 | CNG fuelling products 6

1.1 | Introduction 6

1.2 | Overview 8

2 | Products for car fuelling stations 10

2.1 | Fuelling nozzle TK17 CNG 10

2.2 | Hose assembly TK17 CNG 14

2.3 | Fuelling nozzle TK16 CNG 16

2.4 | Hose assembly TK16 CNG 20

2.5 | Fuelling nozzle TK10 CNG 22

2.6 | Hose assembly TK10 CNG 28

2.7 | Fuelling nozzle TK4 CNG 30

2.8 | Fuelling nozzle TK4i CNG 34

2.9 | Fuelling nozzle TK1 CNG 38

2.10 | Breakaway coupling TSA1 CNG 42

2.11 | Inline breakaway coupling TSA2 CNG 46

3 | Products for cars (and fuelling stations) 50

3.1 | Receptacle TN1 CNG 50

3.2 | Fuelling system TS50 CNG 54

3.3 | Check valve TVR1 CNG 58

4 | Products for bus and truck fuelling stations 62

4.1 | Fuelling nozzle TK26 CNG 62

4.2 | Hose assembly TK26 CNG 66

4.3 | Fuelling nozzle TK22 CNG 68

4.4 | Fuelling nozzle TK24 CNG 72

4.5 | Breakaway coupling TSA5 CNG 76

4.6 | Inline breakaway coupling TSA6 CNG 80

Table of contents

5 | Products for buses and trucks (and fuelling stations) 84

5.1 | Receptacle TN5 CNG 84

5.2 | Fuelling system TS55 CNG 90

5.3 | Check valve TVR5 CNG 92

6 | Accessories 94

6.1 | Filter TSF1 CNG 94

6.2 | Filter TSF2 CNG 98

6.3 | Coalescing filter TSF2 CNG 100

6.4 | Filter TSF4 CNG 104

6.5 | Filter TSF5 CNG 108

6.6 | Defuelling nozzle TK23 CNG 110

6.7 | Service nozzle TK6 CNG 114

6.8 | Service nozzle TK21 CNG 118

6.9 | Emergency fuelling set TZ21 CNG 122

6.10 | Emergency fuelling set TZ22 CNG 124

6.11 | Filling and venting hoses 126

6.12 | Fittings 130

7 | Adaptor nozzles and receptacles 132

7.1 | Italian standard 132

7.2 | NZ/GOST standard - adaptor nozzles 136

7.3 | NZ/GOST standard - adaptor receptacles 138

7.4 | Buses and trucks 140

8 | Further information 142

8.1 | Technical appendix 142

8.2 | Brochure data 145

Introduction

ILLUSTRATIONS

Car refuelling with TK17 CNG

Source: www.erdgas-mobil.de

CNG fuelling station

Source: www.erdgas-mobil.de

Introduction

A VISION FOR A GLOBAL CHALLENGE

With great foresight for a future global challenge, WEH Gas Technology has been a pioneer in the field of alternative fuels since 1986. The aim was to develop their own CNG fuelling system with maximum safety and outstanding functionality. For acceptability reasons the system should give the operator the 'feel' of a conventional refuelling system despite the highly complex technology. Today the WEH® CNG fuelling system has become the worldwide NGV1 standard thus rewarding WEH's entrepreneurial courage and foresight.

A complete range of products for NGV refuelling is available - from fuelling nozzles, hoses, breakaway couplings and filters for fuelling stations to receptacles and check valves in vehicles.
All components are protected by a patent and cover all applications for refuelling cars, buses and trucks.
The well proven design, ease of operation, safety and reliability of all WEH® Products has led to widespread customer acceptance of alternative fuels and play a major part in the development of refuelling systems for alternative fuels.

Today WEH is world market leader in the field of alternative refuelling systems and partner to the international automobile industry. Furthermore WEH has been committed in a number of projects worldwide promoting alternative drive systems thus also being an initiator for a mobile society with a future.

An advanced product for a high performance application
WEH's NGV product line has been designed expressly for the demanding applications of natural gas high-pressure refuelling systems. All products suit the extreme flow and temperature conditions found in practical operation. Naturally all WEH® Products are constructed of high-quality materials. Throughout many years of experience and numerous tests special seal designs and sealing materials have been developed, which meet the demands of the medium and the application.

Unique WEH® Jaw locking mechanism
All fuelling nozzles have the unique WEH® Jaw locking mechanism developed by WEH. The jaw locking system is superior to ball locking systems in that it tolerates dirt and reduces wear on the receptacle of the vehicle.

Enhanced safety by integrating a dirt particle filter
Using an integrated particle filter avoids dirt ingress and therefore leakage from the receptacle which gives enhanced safety and reliability - essential features for the volatile nature of CNG products.

Technically advanced safety features
Natural gas refuelling can be dangerous if unsuitable products are used. WEH® Products have a very high safety standard to reduce risk factors. Effective safety systems feature in all WEH® NGV products especially in the fuelling nozzles and achieve the necessary safety standards for use at self-service fuelling stations.

Introduction

COLOR CODING FOR INSTANT IDENTIFICATION OF PRESSURE RANGE

All 250 bar (3,600 psi) fuelling nozzles have a yellow color coding for operator's ease of use to visually identify the requested pressure range immediately.

A yellow impact protection characterizes all 250 bar (3,600 psi) versions of the fuelling nozzles:
- TK16 CNG
- TK17 CNG
- TK22 CNG
- TK24 CNG
- TK26 CNG

The impact protections of the 200 bar (3,000 psi) versions remain black.

A yellow sliding sleeve characterizes all 250 bar (3,600 psi) versions of the fuelling nozzles:
- TK1 CNG
- TK4 CNG
- TK10 CNG

The sliding sleeves of the 200 bar (3,000 psi) versions remain black.

All fuelling nozzles comply with ANSI and CSA NGV1 standard.

System overview

OVERVIEW OF TYPES

Overview of fuelling nozzles					
Type	Page	Car (NGV1)	Car (Italy)	Bus/truck (NGV2*)	Self-Service
TK17 CNG	10	✓			✓
TK16 CNG	16	✓			✓
TK10 CNG	22	✓			
TK4 CNG	30	✓			
TK4i CNG	34		✓		
TK1 CNG	38	✓			
TK26 CNG	62			✓	✓
TK22 CNG	68			✓	
TK24 CNG	72			✓	
Overview of service nozzles / defuelling nozzles					
Type	Page	Discharging of CNG fuel tanks – car	Discharging of CNG fuel tanks – bus/truck	Discharging of trailers	
TK6 CNG	114	✓			
TK21 CNG	118		✓		
TK23 CNG	110			✓	
Overview of breakaway couplings					
Type	Page	Car (NGV1)	Car (NGV1) – inline	Bus/truck (NGV2*)	Bus/truck (NGV2*) – inline
TSA1 CNG	42	✓			
TSA2 CNG	46		✓		
TSA5 CNG	76			✓	
TSA6 CNG	80				✓

* non standardized denomination for ISO 14469-2

Standards, approvals and memberships

INTERNATIONAL STANDARDS AND APPROVALS

The following overview shows the standards and approvals of WEH® Products. For detailed information see the respective product.

- NGV1 standard
- Products comply with ANSI NGV1
- ECE R110
- ISO 14469
- ISO 15500
- ISO 15501

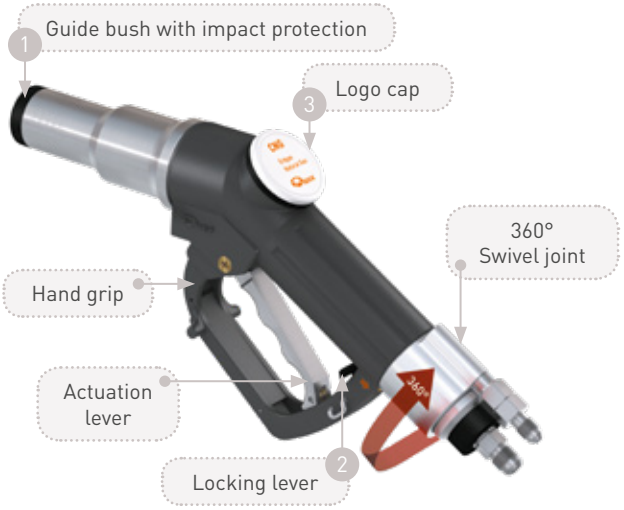
WEH is certified to ISO 9001:2015

MEMBERSHIPS

WEH is member of the IANGV, the NGVA Europe and the NGV America.

Fuelling nozzle **TK17 CNG**

DESCRIPTION



Features

- Left or right single-handed operation
- Compatible with receptacles acc. to NGV1 standard and ISO 14469-1 and 3
- WEH® EASY-TURN 360° swivel joint
- Easy operation
- Extremely high flow rate ➡ short filling times
- Recirculation of the vented gas
- Plastic thermal protection
- Hand grip with magnet
- WEH® Jaw locking mechanism
- Colour coded impact protection (200 bar / 3,000 psi black, 250 bar / 3,600 psi yellow)
- High-grade materials
- Coding for pressure range / gas type

The first WEH user friendly 'Pistol grip' CNG fuelling nozzle has been introduced - now redesigned in the pistol grip style familiar to all fuelling station users. Retaining the same outstanding technical functionality as our TK16 CNG fuelling nozzle, the type TK17 CNG has been remodelled with a sleek new look. The new nozzle is just as quick and easy to use as the common petrol/diesel nozzle and has a similar look and feel. Simply lift the nozzle from the dispenser and place it onto the vehicle's receptacle. Full 360° rotation makes for easy engagement with the vehicle's fuel receptacle. Compress the actuation lever until locking lever engages and the fuelling procedure begins. The natural gas can only flow through the line if there is a safe connection. After refuelling disengage the nozzle's locking lever and disconnect. Please note that refuelling 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.

Safety
The TK17 CNG offers optimum safety to the operator.
The fuelling nozzle remains connected to the receptacle until the gas between inlet valve and receptacle is depressurized. To achieve optimum performance it is recommended that the TK17 CNG fuelling nozzle is used with the WEH® TN1 CNG receptacle.

Application
Fuelling nozzle for CNG fast filling of cars at self-service fuelling stations to be used with WEH® TN1 CNG receptacles acc. to NGV1 standard and ISO 14469-1 and 3.

TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	8 mm	On request
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection, gas recirculation and hand grip with magnet	On request
Weight	2 kg (4.41 lbs.)	
Registration	The products comply with ANSI NGV1	

Fuelling nozzle **TK17 CNG**

ORDERING | Fuelling nozzle TK17 CNG

approx. dimensions (mm)

Part No.	Description	Pressure (PN)	Inlet B (external thread)	Gas recirculation C (external thread)
C1-100529-X01	TK17 CNG	200 bar / 3,000 psi (black)	UNF 9/16"-18*	UNF 7/16"-20*
C1-100077	TK17 CNG	250 bar / 3,600 psi (yellow)	UNF 9/16"-18*	UNF 7/16"-20*

* acc. to SAE J514, 37°

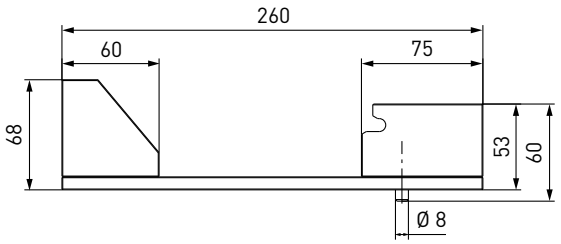
Please see page 14 onwards for complete hose assemblies consisting of fuelling nozzle, hose set and breakaway coupling.

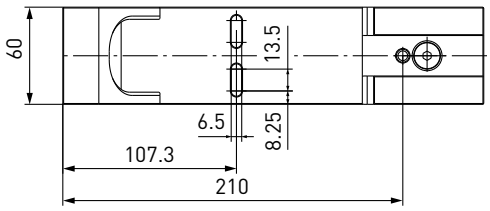
ACCESSORIES

The following accessories are available for type TK17 CNG:

Dispenser mounting

Mounting for safe attachment of the fuelling nozzle to the dispenser. Optionally with or without switch actuation.
Design: Aluminium, stainless steel



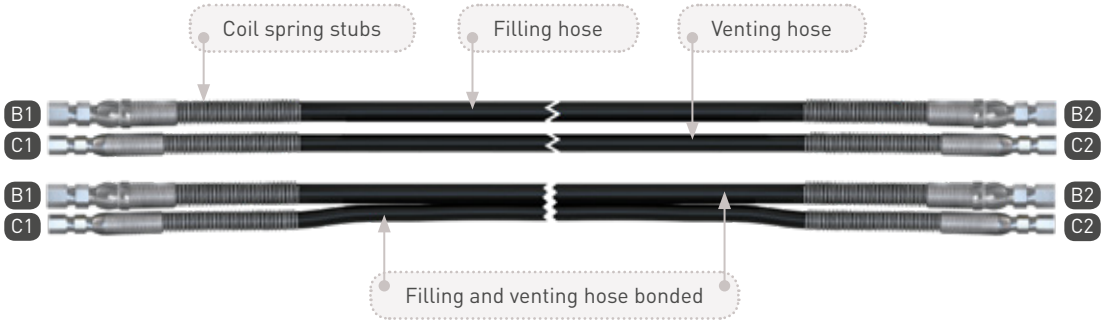


Part No.	Description
C1-66775	Mounting (switch actuated)
C1-65643	Mounting (not switch actuated)

Fuelling nozzle **TK17 CNG**

Hose sets TK17 CNG - TSA1 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle and type TSA1 CNG breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs. Available as single or twin hoses (permanently bonded).



Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-50487	UNF 9/16"-18*	UNF 7/16"-20*	3 m
C1-42304	UNF 9/16"-18*	UNF 7/16"-20*	4 m
C1-58587	UNF 9/16"-18*	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°
All designs also available with permanently bonded filling and venting hose. Please contact us!

Hose sets TK17 CNG - TSA2 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle / dispenser and type TSA2 CNG inline breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
On request	UNF 9/16"-18*	UNF 7/16"-20*	2.5 | 0.5 m
On request	UNF 9/16"-18*	UNF 7/16"-20*	3.5 | 0.5 m
On request	UNF 9/16"-18*	UNF 7/16"-20*	4.5 | 0.5 m

* acc. to SAE J514, 37°
All designs also available with permanently bonded filling and venting hose. Please contact us!

Fuelling nozzle **TK17 CNG**

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
C1-79538	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18** internal thread
C1-65592	Fitting	UNF 9/16"-18* internal thread	NPT 1/4" internal thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

Spare parts

Various parts are available as spares for type TK17 CNG:

Part No.	Description
E80-78628	1 Impact protection (200 bar / 3,000 psi, black)
E80-106830	1 Impact protection (250 bar / 3,600 psi, yellow)
E80-84030	2 Locking lever
W81541	3 Logo cap
E99-44923	Maintenance spray

When ordering please quote the part no. imprinted on the fuelling nozzle.

Hose assembly **TK17 CNG**

We also offer complete sets assembled and pressure tested for installation at fuelling stations. The hose assemblies consist of a fuelling nozzle, a hose set and a breakaway coupling. All hose assemblies are available with different hose lengths and can either be delivered with a type TSA1 CNG breakaway coupling directly mounted at the dispenser or a type TSA2 CNG inline breakaway coupling mounted inbetween the hoses.

Application
Hose assembly for CNG fast filling of cars at self-service fuelling stations.

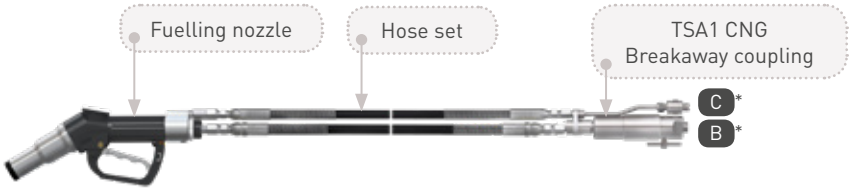
TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	8 mm
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar
Temperature range	On request
Material	Corrosion resistant
Sealing material	Natural gas compatible
Design	TK17 CNG fuelling nozzle, hose set and breakaway coupling fully assembled and pressure tested

Hose assembly **TK17 CNG**

ORDERING | Hose assembly TK17 CNG with TSA1 CNG breakaway coupling

Complete hose assembly consisting of a TK17 CNG (200 bar / 3,000 psi) fuelling nozzle, a hose set and a TSA1 CNG breakaway coupling (with filter 40 micron).

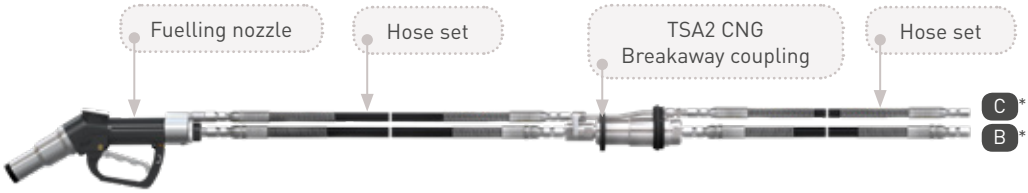


Part No.	Description	Hose length
C1-80265	Hose assembly with TSA1 CNG breakaway coupling	3 m
C1-106328	Hose assembly with TSA1 CNG breakaway coupling	4 m
C1-106329	Hose assembly with TSA1 CNG breakaway coupling	5 m

All designs are also available with a type TK17 CNG - 250 bar (3,600 psi) fuelling nozzle or with permanently bonded filling and venting hose. Please contact us!
* For connection sizes 'B' and 'C' see page 42, TSA1 CNG breakaway coupling.

ORDERING | Hose assembly TK17 CNG with TSA2 CNG inline breakaway coupling

Complete hose assembly consisting of a TK17 CNG (200 bar / 3,000 psi) fuelling nozzle, a hose set and a TSA2 CNG inline breakaway coupling.

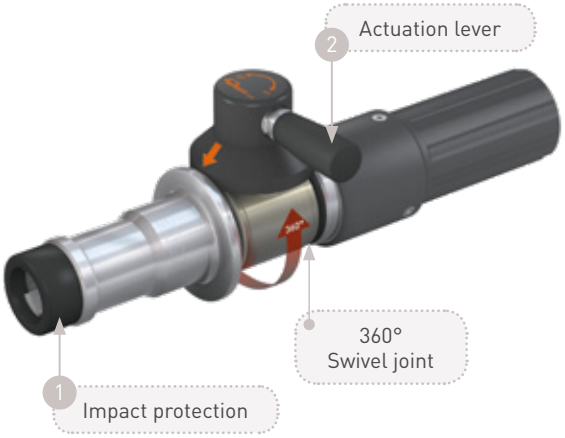


Part No.	Description	Hose length
C1-96368	Hose assembly with TSA2 CNG inline breakaway coupling	2.5 | 0.5 m
C1-106331	Hose assembly with TSA2 CNG inline breakaway coupling	3.5 | 0.5 m
C1-106332	Hose assembly with TSA2 CNG inline breakaway coupling	4.5 | 0.5 m

All designs are also available with a type TK17 CNG - 250 bar (3,600 psi) fuelling nozzle or with permanently bonded filling and venting hose. Please contact us!
* For connection sizes 'B' and 'C' see page 126, TK17 CNG hose set.

Fuelling nozzle **TK16 CNG**

DESCRIPTION



Features
- Super light ➡ only 1,750 grams
- Compatible with receptacles acc. to NGV1 standard and ISO 14469-1 and 3
- WEH® EASY-TURN 360° swivel joint for actuation lever
- Easy operation
- Extremely high flow rate ➡ short filling times
- Recirculation of the vented gas
- Plastic thermal protection
- WEH® Jaw locking mechanism
- Colour coded impact protection (200 bar / 3,000 psi black, 250 bar / 3,600 psi yellow)
- High-grade materials
- Coding for pressure range / gas type

TK16 CNG, the world's most popular NGV1 fuelling nozzle.
Type TK16 CNG is very light in weight and therefore easy to operate. The actuation lever is located on the integrated swivel joint making it easy to rotate into the optimal actuating position. The compact actuation lever needs less effort to actuate the nozzle.

Safety
The TK16 CNG offers optimum safety to the operator.
The fuelling nozzle remains connected to the receptacle until the gas between inlet valve and receptacle is depressurized. To achieve optimum performance it is recommended that the TK16 CNG fuelling nozzle is used with the WEH® TN1 CNG receptacle.

Application
Fuelling nozzle for CNG fast filling of cars at self-service fuelling stations to be used with WEH® TN1 CNG receptacles acc. to NGV1 standard and ISO 14469-1 and 3.

TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	8 mm	On request
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection and gas recirculation	On request
Weight	1.75 kg (3.86 lbs.)	
Registration	The products comply with ANSI NGV1	

Fuelling nozzle **TK16 CNG**

ORDERING | Fuelling nozzle TK16 CNG

approx. dimensions (mm)

Part No.	Description	Pressure (PN)	Inlet B (external thread)	Gas recirculation C (external thread)
C1-35299-X5-X01	TK16 CNG	200 bar / 3,000 psi (black)	UNF 9/16"-18*	UNF 7/16"-20*
C1-101084	TK16 CNG	250 bar / 3,600 psi (yellow)	UNF 9/16"-18*	UNF 7/16"-20*

* acc. to SAE J514, 37°

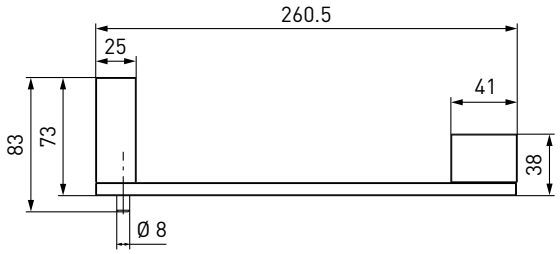
Please see page 20 onwards for complete hose assemblies consisting of fuelling nozzle, hose set and breakaway coupling.

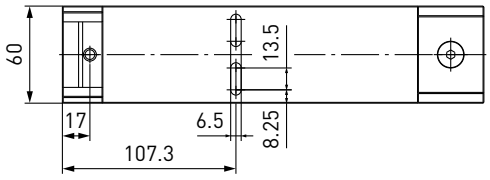
ACCESSORIES

The following accessories are available for type TK16 CNG:

Dispenser mounting

Mounting for safe attachment of the fuelling nozzle to the dispenser. Optionally with or without switch actuation.
Design: Aluminium, stainless steel



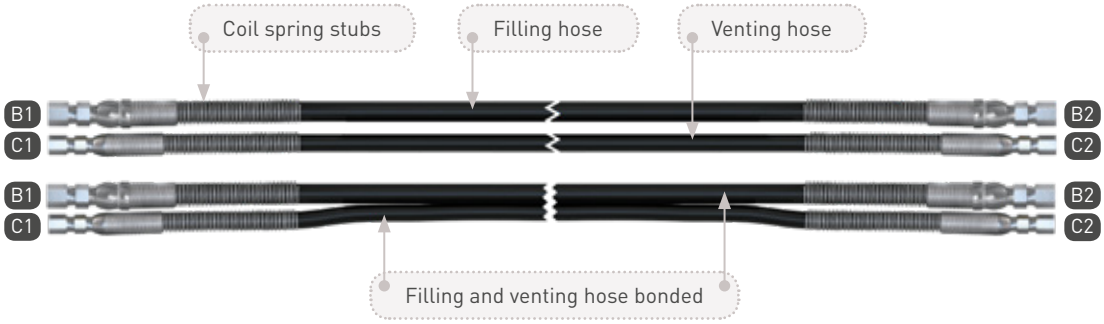


Part No.	Description
C1-51233	Mounting (switch actuated)
C1-51236	Mounting (not switch actuated)

Fuelling nozzle **TK16 CNG**

Hose sets TK16 CNG - TSA1 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle and type TSA1 CNG breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs. Available as single or twin hoses (permanently bonded).



Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-50487	UNF 9/16"-18*	UNF 7/16"-20*	3 m
C1-42304	UNF 9/16"-18*	UNF 7/16"-20*	4 m
C1-58587	UNF 9/16"-18*	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°
All designs also available with permanently bonded filling and venting hose. Please contact us!

Hose sets TK16 CNG - TSA2 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle / dispenser and type TSA2 CNG inline breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
On request	UNF 9/16"-18*	UNF 7/16"-20*	2.5 | 0.5 m
On request	UNF 9/16"-18*	UNF 7/16"-20*	3.5 | 0.5 m
On request	UNF 9/16"-18*	UNF 7/16"-20*	4.5 | 0.5 m

* acc. to SAE J514, 37°
All designs also available with permanently bonded filling and venting hose. Please contact us!

Conversion Kit

We also offer a conversion kit to fit fuelling hoses with older fittings. The conversion kit consists of one fitting each for the filling and the venting line. The existing TK16 CNG fuelling nozzle fittings must be removed and replaced by the conversion kit fittings.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
W59444	Conversion Kit	UNF 9/16"-18* internal thread	Tube Ø 6
C1-86380	Conversion Kit	UNF 9/16"-18* internal thread	Tube Ø 1/4"

* acc. to SAE J514, 37°

Fuelling nozzle **TK16 CNG**

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

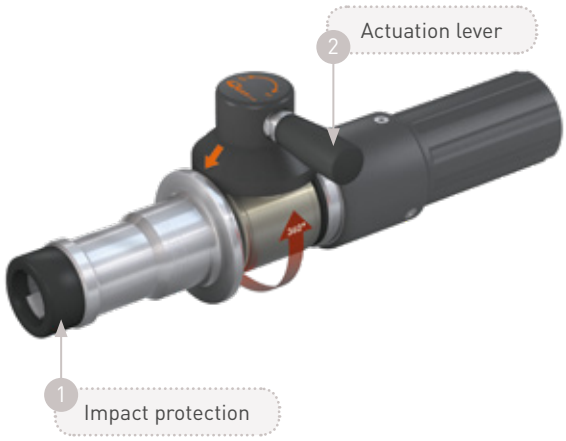
Part No.	Description	Connection fuelling nozzle	Connection filling hose
C1-79538	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18** internal thread
C1-65592	Fitting	UNF 9/16"-18* internal thread	NPT 1/4" internal thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

Spare parts

Various parts are available as spares for type TK16 CNG:



Part No.	Description
E80-65895	1 Impact protection (200 bar / 3,000 psi, black)
E80-106824	1 Impact protection (250 bar / 3,600 psi, yellow)
W72504	2 Actuation lever
E99-44923	Maintenance spray

Hose assembly **TK16 CNG**

We also offer complete sets assembled and pressure tested for installation at fuelling stations. The hose assemblies consist of a fuelling nozzle, a hose set and a breakaway coupling. All hose assemblies are available with different hose lengths and can either be delivered with a type TSA1 CNG breakaway coupling directly mounted at the dispenser or a type TSA2 CNG inline breakaway coupling mounted inbetween the hoses.

Application
Hose assembly for CNG fast filling of cars at self-service fuelling stations.

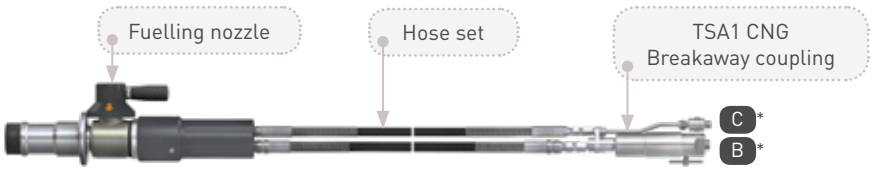
TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	8 mm
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar
Temperature range	On request
Material	Corrosion resistant
Sealing material	Natural gas compatible
Design	TK16 CNG fuelling nozzle, hose set and breakaway coupling fully assembled and pressure tested

Hose assembly **TK16 CNG**

ORDERING | Hose assembly TK16 CNG with TSA1 CNG breakaway coupling

Complete hose assembly consisting of a TK16 CNG (200 bar / 3,000 psi) fuelling nozzle, a hose set and a TSA1 CNG breakaway coupling (with filter 40 micron).



Part No.	Description	Hose length
C1-81365	Hose assembly with TSA1 CNG breakaway coupling	3 m
C1-117123	Hose assembly with TSA1 CNG breakaway coupling	4 m
C1-106333	Hose assembly with TSA1 CNG breakaway coupling	5 m

All designs are also available with a type TK16 CNG - 250 bar (3,600 psi) fuelling nozzle or with permanently bonded filling and venting hose. Please contact us!
* For connection sizes 'B' and 'C' see page 42, TSA1 CNG breakaway coupling.

ORDERING | Hose assembly TK16 CNG with TSA2 CNG inline breakaway coupling

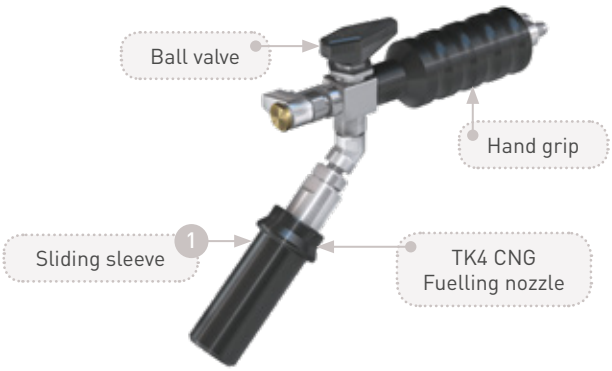
Complete hose assembly consisting of a TK16 CNG (200 bar / 3,000 psi) fuelling nozzle, a hose set and a TSA2 CNG inline breakaway coupling.

Part No.	Description	Hose length
C1-106330	Hose assembly with TSA2 CNG inline breakaway coupling	2.5 | 0.5 m
C1-106334	Hose assembly with TSA2 CNG inline breakaway coupling	3.5 | 0.5 m
C1-106335	Hose assembly with TSA2 CNG inline breakaway coupling	4.5 | 0.5 m

All designs are also available with a type TK16 CNG - 250 bar (3,600 psi) fuelling nozzle or with permanently bonded filling and venting hose. Please contact us!
* For connection sizes 'B' and 'C' see page 126, TK16 CNG hose set.

Fuelling nozzle **TK10 CNG**

DESCRIPTION



Features

- Compatible with receptacles acc. to NGV1 standard and ISO 14469-1 and 3
- Push-to-connect
- Integrated shut-off valve
- Plastic thermal protection
- Grip position available at 45° or 90°
- Ergonomic design
- WEH® Jaw locking mechanism
- Colour coded sliding sleeve (200 bar / 3,000 psi black, 250 bar / 3,600 psi yellow)
- High-grade materials
- Option: without gas recirculation

The TK10 CNG fuelling nozzle combines user comfort with maximum convenience. The integrated TK4 CNG fuelling nozzle features 'push-to-connect' jaw locking system which automatically moves the sliding sleeve back when making a connection. The ergonomic design of the hand grip enables an easy connection to the receptacle. The hand grip is slightly angled to prevent stresses on the high pressure hose and hose damage due to chafing on the ground. Refuelling starts after opening the ball valve. Closing the ball valve finishes refuelling and the integrated gas recirculation automatiacly depressurizes the system. The nozzle can then be disconnected by pulling back the sliding sleeve of the TK4 CNG.

On request the type TK10 CNG fuelling nozzle is also available without gas recirculation. The grip position can either be 45° or 90°. The extended construction of the integrated TK4 CNG fuelling nozzle helps in refuelling difficult-to-access receptacles. WEH® Jaws grip symmetrically, avoiding damage to the receptacle profile which could result in leakage. To achieve optimum performance it is recommended that the TK10 CNG fuelling nozzle is used with the WEH® TN1 CNG receptacle.

Application
Fuelling nozzle for CNG fast filling of cars to be used with WEH® TN1 CNG receptacles acc. to NGV1 standard and ISO 14469-1 and 3. Operation only by specially trained service personnel. Not for self-service operation!

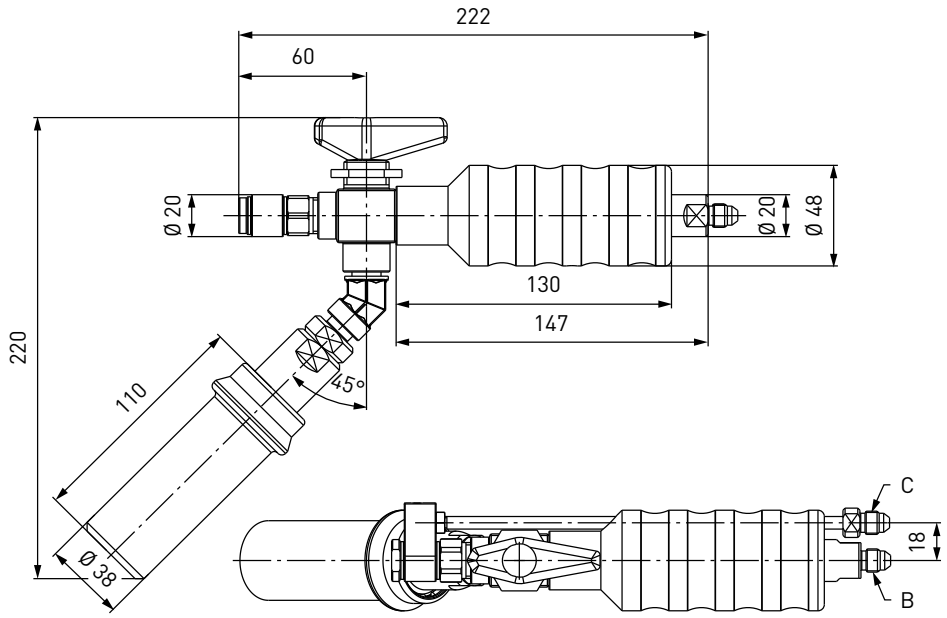
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	4 mm	On request
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection, grip position 45° and gas recirculation	Grip position 45° without gas recirculation Grip position 90° without gas recirculation Grip position 90° with gas recirculation
Weight	Approx. 1.3 kg (2.87 lbs.)	
Registration	The products comply with ANSI NGV1 (TK4 CNG)	

Fuelling nozzle **TK10 CNG**

ORDERING | Fuelling nozzle TK10 CNG with grip position 45°

approx. dimensions (mm)



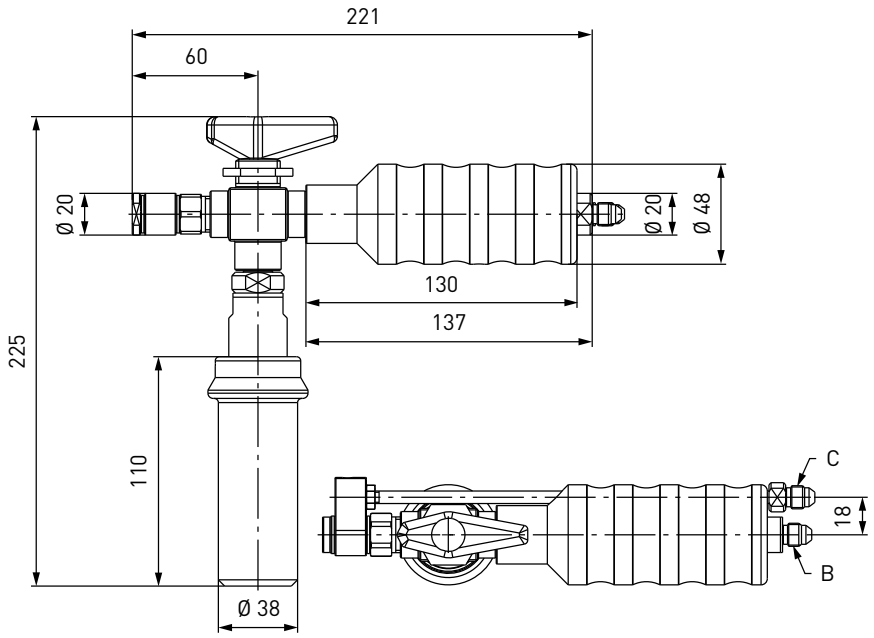
Part No.	Description	Pressure (PN)	Inlet B (external thread)	Gas recirculation C (external thread)
C1-15973	TK10 CNG with gas recirculation	200 bar / 3,000 psi (black)	UNF 7/16"-20*	UNF 7/16"-20*
C1-88401	TK10 CNG with gas recirculation	250 bar / 3,600 psi (yellow)	UNF 7/16"-20*	UNF 7/16"-20*
C1-15971	TK10 CNG without gas recirculation	200 bar / 3,000 psi (black)	UNF 7/16"-20*	-
C1-106697	TK10 CNG without gas recirculation	250 bar / 3,600 psi (yellow)	UNF 7/16"-20*	-

* acc. to SAE J514, 37°
On request inlet port 'B' is also available with other thread sizes.

Fuelling nozzle **TK10 CNG**

ORDERING | Fuelling nozzle TK10 CNG with grip position 90°

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Inlet B (external thread)	Gas recirculation C (external thread)
C1-15974	TK10 CNG with gas recirculation	200 bar / 3000 psi (black)	UNF 7/16"-20*	UNF 7/16"-20*
C1-101090	TK10 CNG with gas recirculation	250 bar / 3600 psi (yellow)	UNF 7/16"-20*	UNF 7/16"-20*
C1-15972	TK10 CNG without gas recirculation	200 bar / 3000 psi (black)	UNF 7/16"-20*	-
C1-106007	TK10 CNG without gas recirculation	250 bar / 3600 psi (yellow)	UNF 7/16"-20*	-

* acc. to SAE J514, 37°
On request inlet port 'B' is also available with other thread sizes.

Please see page 28 onwards for complete hose assemblies consisting of fuelling nozzle, hose set and breakaway coupling.

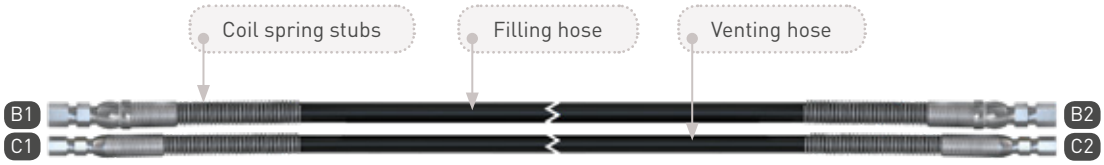
Fuelling nozzle **TK10 CNG**

ACCESSORIES

The following accessories are available for type TK10 CNG:

Hose sets TK10 CNG - TSA1 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle and type TSA1 CNG breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs.



Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-106385	UNF 7/16"-20*	UNF 7/16"-20*	3 m
C1-106386	UNF 7/16"-20*	UNF 7/16"-20*	4 m
C1-106387	UNF 7/16"-20*	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°

Hose sets TK10 CNG - TSA2 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle / dispenser and type TSA2 CNG inline breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-106395	UNF 7/16"-20*	UNF 7/16"-20*	2.5 | 0.5 m
C1-106396	UNF 7/16"-20*	UNF 7/16"-20*	3.5 | 0.5 m
C1-106397	UNF 7/16"-20*	UNF 7/16"-20*	4.5 | 0.5 m

* acc. to SAE J514, 37°

Fuelling nozzle **TK10 CNG**

Filling hoses

Filling hoses for connecting fuelling nozzle (without gas recirculation) and dispenser, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1032-3000	UNF 7/16"-20*	3 m
E68-1032-4000	UNF 7/16"-20*	4 m
E68-1032-5000	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
E80-648P	Fitting	UNF 7/16"-20* internal thread	UNF 9/16"-18* external thread
C1-32692	Fitting	UNF 7/16"-20* internal thread	UNF 7/16"-20* external thread
C1-62138	Fitting	UNF 7/16"-20* internal thread	NPT 1/4" internal thread

* acc. to SAE J514, 37°

Please see page 130 onwards for a detailed overview on all available fittings.

Fuelling nozzle **TK10 CNG**

Spare parts

Various parts are available as spares for type TK10 CNG:

Part No.	Description
C1-127959	1 Spare parts set 200 bar / 3000 psi (black sliding sleeve incl. metal sleeve and circlip)
C1-127961	1 Spare parts set 250 bar / 3600 psi (yellow sliding sleeve incl. metal sleeve and circlip)
E99-44923	Maintenance spray

Hose assembly **TK10 CNG**

We also offer complete sets assembled and pressure tested for installation at fuelling stations. The hose assemblies consist of a fuelling nozzle, a hose set and a breakaway coupling. All hose assemblies are available with different hose lengths and can either be delivered with a type TSA1 CNG breakaway coupling directly mounted at the dispenser or a type TSA2 CNG inline breakaway coupling mounted inbetween the hoses.

Application
Hose assembly for CNG fast filling of cars.
Operation only by specially trained service personnel. Not for self-service operation!

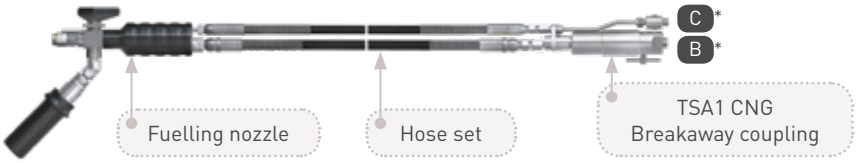
TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	4 mm
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3000 psi) | PS = 300 bar | PT = 450 bar B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3600 psi) | PS = 350 bar | PT = 525 bar
Temperature range	On request
Material	Corrosion resistant
Sealing material	Natural gas compatible
Design	TK10 CNG fuelling nozzle, hose set and breakaway coupling fully assembled and pressure tested

Hose assembly **TK10 CNG**

ORDERING | Hose assembly TK10 CNG with gas recirculation and TSA1 CNG breakaway coupling

Complete hose assembly consisting of a TK10 CNG (200 bar / 3000 psi) fuelling nozzle with gas recirculation and grip position 45°, a hose set and a TSA1 CNG breakaway coupling (with filter 40 micron).

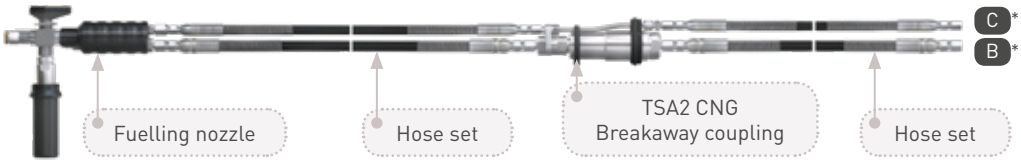


Part No.	Description	Hose length
C1-106384	Hose assembly with TSA1 CNG breakaway coupling	3 m
C1-106389	Hose assembly with TSA1 CNG breakaway coupling	4 m
C1-106390	Hose assembly with TSA1 CNG breakaway coupling	5 m

All designs are also available with a type TK10 CNG - 250 bar (3600 psi) fuelling nozzle and/or grip position 90°. Please contact us!
* For connection sizes 'B' and 'C' see page 42, TSA1 CNG breakaway coupling.

ORDERING | Hose assembly TK10 CNG with gas recirculation and TSA2 CNG inline breakaway coupling

Complete hose assembly consisting of a TK10 CNG (200 bar / 3000 psi) fuelling nozzle with gas recirculation and grip position 90°, a hose set and a TSA2 CNG inline breakaway coupling.

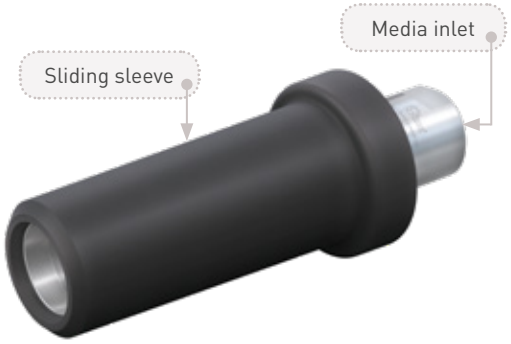


Part No.	Description	Hose length
C1-106391	Hose assembly with TSA2 CNG inline breakaway coupling	2.5 | 0.5 m
C1-106393	Hose assembly with TSA2 CNG inline breakaway coupling	3.5 | 0.5 m
C1-106394	Hose assembly with TSA2 CNG inline breakaway coupling	4.5 | 0.5 m

All designs are also available with a type TK10 CNG - 250 bar (3600 psi) fuelling nozzle and/or grip position 45°. Please contact us!
* For connection sizes 'B' and 'C' see page 126, TK10 CNG hose set.

Fuelling nozzle **TK4 CNG**

DESCRIPTION



Features
- Compatible with receptacles acc. to NGV1 standard and ISO 14469-1 and 3
- Push-Pull actuation
- Integrated shut-off valve
- Plastic thermal protection
- WEH® Jaw locking mechanism
- Colour coded sliding sleeve (200 bar / 3,000 psi black, 250 bar / 3,600 psi yellow)
- High-grade materials
- Compact design

The TK4 CNG fuelling nozzle is designed specifically for fast filling of vehicles having an NGV1 receptacle at fuelling stations with NGV1 standard and is best suited for this application.
The TK4 CNG is now even easier to operate. The clamping jaws are opened when the nozzle is disconnected and the sliding sleeve need not be pulled back to connect the nozzle. Just push the nozzle straight onto the receptacle and the TK4 CNG jaws clamp tightly. Once the fuelling nozzle is connected, the shut-off valve in the nozzle opens and the pressure-tight connection is established.
The extended construction of the fuelling nozzle allows easy refuelling of difficult-to-access receptacles.

Application
Fuelling nozzle for CNG fast filling of cars to be used with WEH® TN1 CNG receptacles acc. to NGV1 standard and ISO 14469-1 and 3.
Operation only by specially trained service personnel. Not for self-service operation!

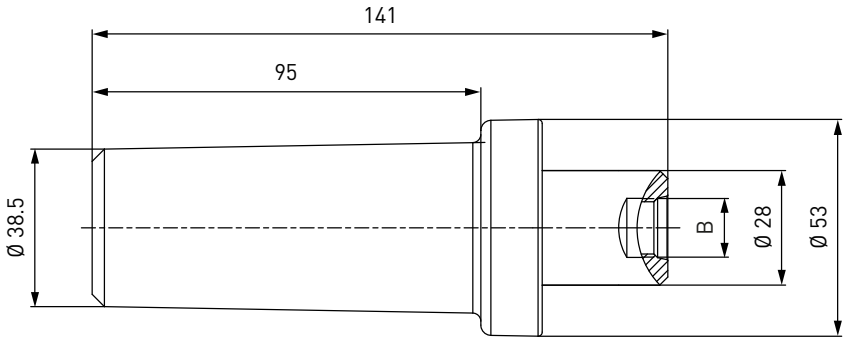
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection	On request
Weight	Approx. 0.4 kg (0.88 lbs.)	
Registration	The products comply with ANSI NGV1	

Fuelling nozzle **TK4 CNG**

ORDERING | Fuelling nozzle TK4 CNG

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)
C1-112765-X01	TK4 CNG	8	200 bar / 3,000 psi (black)	UNF 9/16"-18*
C1-112764-X01	TK4 CNG	8	250 bar / 3,600 psi (yellow)	UNF 9/16"-18*
C1-125996-X01	TK4 CNG	8	200 bar / 3,000 psi (black)	UNF 9/16"-18* LH
C1-125997-X01	TK4 CNG	8	200 bar / 3,000 psi (black)	G3/8"

* acc. to SAE J1926

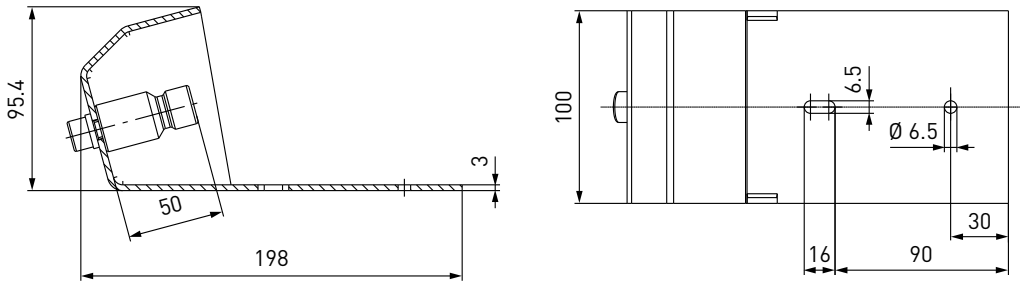
On request inlet port 'B' is also available with other thread sizes.

ACCESSORIES

The following accessories are available for type TK4 CNG:

Dispenser mounting

Mounting for safe attachment of the fuelling nozzle to the dispenser. Design: Stainless steel



Part No.	Description
C1-100205	Mounting (not switch actuated)

Fuelling nozzle **TK4 CNG**

Filter TSF1 CNG (40 micron)

We recommend the installation of a type TSF1 CNG filter (see page 94) between the nozzle and the filling hose. The filter protects your system from damage due to dirt ingress.

Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A
C1-94070-X01	TSF1 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18* internal thread	UNF 9/16"-18* external thread
C1-106854-X01	TSF1 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18** external thread	UNF 9/16"-18* external thread

* acc. to SAE J1926
** acc. to SAE J514, 37°

Filling hoses

Filling hoses for connecting fuelling nozzle and dispenser, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1031-3000	UNF 9/16"-18*	3 m
E68-1031-4000	UNF 9/16"-18*	4 m
E68-1031-5000	UNF 9/16"-18*	5 m

* acc. to SAE J514, 37°

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
W6702	Fitting	UNF 9/16"-18** external thread	UNF 9/16"-18* external thread
W6705	Fitting	UNF 9/16"-18** external thread	UNF 7/16"-20* external thread
W6927	Fitting	UNF 9/16"-18** external thread	UNF 7/8"-14* external thread
E80-561P	Fitting	UNF 9/16"-18** external thread	NPT 1/4" external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

Fuelling nozzle **TK4 CNG**

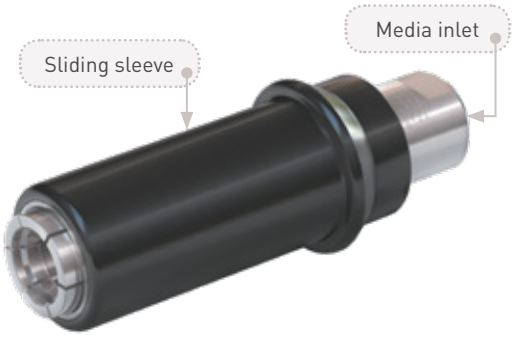
Spare parts

Various parts are available as spares for type TK4 CNG:

Part No.	Description
C1-132266	1 Spare parts set 200 bar / 3,000 psi (black sliding sleeve incl. disk and 3 screws)
C1-132267	1 Spare parts set 250 bar / 3,600 psi (yellow sliding sleeve incl. disk and 3 screws)
E99-44923	Maintenance spray

Fuelling nozzle **TK4i CNG**

DESCRIPTION



Features
- Compatible with the Italian receptacle profile
- Push-Pull actuation
- Integrated shut-off valve
- Plastic thermal protection
- WEH® Jaw locking mechanism
- High-grade materials
- Compact design

The type TK4i CNG fuelling nozzle has been designed especially for the Italian NGV market enabling connection to Italian receptacles with a push-pull nozzle.
The TK4i CNG is now even easier to operate. The clamping jaws are opened when the nozzle is disconnected and the sliding sleeve need not be pulled back to connect the nozzle. Just push the nozzle straight onto the receptacle and the jaws clamp tightly. Once the fuelling nozzle is connected, the shut-off valve in the nozzle opens and the pressure-tight connection is established.
The jaws of the TK4i CNG are constructed to avoid compression marks on the receptacle that result from connectors using the ball valve locking principle.
The extended construction of the fuelling nozzle allows easy refuelling of difficult-to-access receptacles.

WEH also offers an adaptor nozzle with the new Italian standard for Italian vehicles needing to refuel in Germany (see page 132).

Application
Fuelling nozzle for CNG fast filling of cars to be used with WEH® TN1 CNG receptacles acc. to Italian receptacle profile.
Operation only by specially trained service personnel. Not for self-service operation!

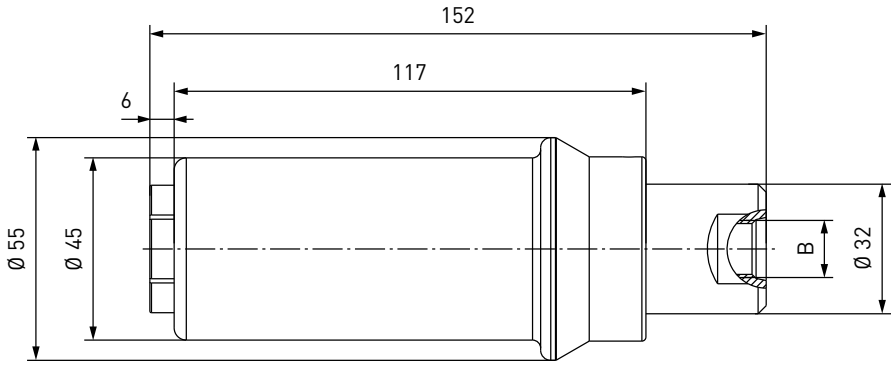
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection	On request
Weight	Approx. 0.7 kg (1.54 lbs.)	

Fuelling nozzle **TK4i CNG**

ORDERING | Fuelling nozzle TK4i CNG

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)
C1-17901-X5-X01	TK4i CNG for vehicles with Italian receptacle profile	5	200 bar / 3,000 psi (black)	UNF 9/16"-18*

* acc. to SAE J1926

On request inlet port 'B' is also available with other thread sizes.

ACCESSORIES

The following accessories are available for type TK4i CNG:

Filter TSF1 CNG (40 micron)

We recommend the installation of a type TSF1 CNG filter (see page 94) between the nozzle and the filling hose. The filter protects your system from damage due to dirt ingress.

Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A
C1-94070-X01	TSF1 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18* internal thread	UNF 9/16"-18* external thread
C1-106854-X01	TSF1 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18** external thread	UNF 9/16"-18* external thread

* acc. to SAE J1926
** acc. to SAE J514, 37°

Fuelling nozzle **TK4i CNG**

Filling hoses

Filling hoses for connecting fuelling nozzle and dispenser, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1031-3000	UNF 9/16"-18*	3 m
E68-1031-4000	UNF 9/16"-18*	4 m
E68-1031-5000	UNF 9/16"-18*	5 m

* acc. to SAE J514, 37°

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
W6702	Fitting	UNF 9/16"-18** external thread	UNF 9/16"-18* external thread
W6705	Fitting	UNF 9/16"-18** external thread	UNF 7/16"-20* external thread
W6927	Fitting	UNF 9/16"-18** external thread	UNF 7/8"-14* external thread
E80-561P	Fitting	UNF 9/16"-18** external thread	NPT 1/4" external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

Fuelling nozzle **TK4i CNG**

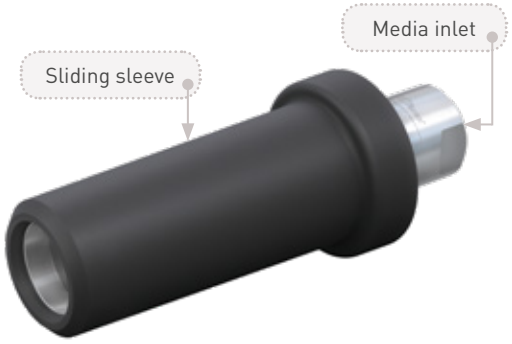
Spare parts

Various parts are available as spares for type TK4i CNG:

Part No.	Description
C1-128103	1 Spare parts set (sliding sleeve incl. metal sleeve and circlip)
E99-44923	Maintenance spray

Fuelling nozzle **TK1 CNG** for Slow-Fill

DESCRIPTION



Features
- Compatible with receptacles acc. to NGV1 standard and ISO 14469-1 and 3
- Push-Pull actuation
- Integrated shut-off valve
- Plastic thermal protection
- WEH® Jaw locking mechanism
- Colour coded sliding sleeve (200 bar / 3,000 psi black, 250 bar / 3,600 psi yellow)
- High-grade materials
- Compact design

The TK1 CNG fuelling nozzle is designed specifically for time filling of vehicles with 'Fuelmaker' compressors and is best suited for this application.
The TK1 CNG is now even easier to operate. The clamping jaws are opened when the nozzle is disconnected and the sliding sleeve need not being pulled back to connect the nozzle. Only push the nozzle straight onto the receptacle. The jaws of the TK1 CNG clamp onto the receptacle. While the fuelling nozzle is connected, the shut-off valve in the nozzle will open - the pressure-tight connection is established. Even difficult-to-access receptacles can easily be refuelled due to the extended construction of the fuelling nozzle.

Application
Fuelling nozzle for CNG time filling of cars to be used with WEH® TN1 CNG receptacles acc. to NGV1 standard and ISO 14469-1 and 3. Operation only by specially trained service personnel. Not for self-service operation!

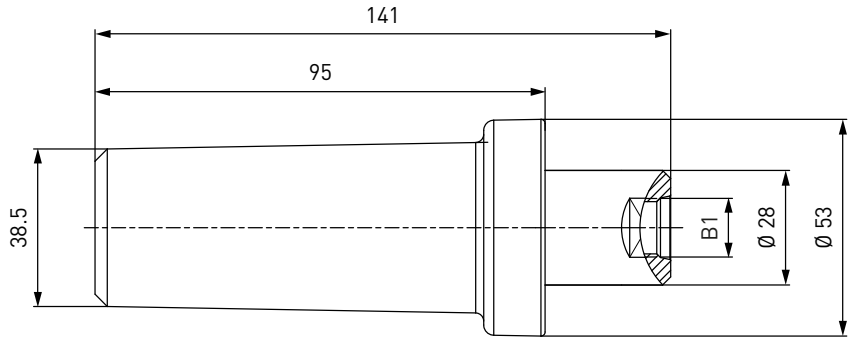
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	4 mm	On request
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) B250 acc. to ISO 14469-3 (P36 acc. to ANSI NGV1) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection	On request
Weight	Approx. 0.4 kg (0.88 lbs.)	
Registration	The products comply with ANSI NGV1	

Fuelling nozzle **TK1 CNG** for Slow-Fill

ORDERING | Fuelling nozzle TK1 CNG

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Inlet B1 (internal thread)
C1-126000-X01	TK1 CNG	200 bar / 3,000 psi (black)	UNF 9/16"-18*
C1-126001-X01	TK1 CNG	200 bar / 3,000 psi (black)	UNF 9/16"-18* LH
C1-126003-X01	TK1 CNG	250 bar / 3,600 psi (yellow)	UNF 7/16"-20* LH

* acc. to SAE J1926

On request inlet port 'B1' is also available with other thread sizes.

Fuelling nozzle **TK1 CNG** for Slow-Fill

ACCESSORIES

The following accessories are available for type TK1 CNG:

Filter TSF1 CNG (40 micron)

We recommend the installation of a type TSF1 CNG filter (see page 94) between the nozzle and the filling hose. The filter protects your system from damage due to dirt ingress.

Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A
C1-100700-X01	TSF1 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18* internal thread LH	UNF 9/16"-18* external thread LH

* acc. to SAE J1926

Filling hoses

Filling hoses for connecting fuelling nozzle and dispenser, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1031-3000	UNF 9/16"-18*	3 m
E68-1031-4000	UNF 9/16"-18*	4 m
E68-1031-5000	UNF 9/16"-18*	5 m

* acc. to SAE J514, 37°

Fittings

Stainless steel fittings for connecting the media inlet 'B1' to the filling hose.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
W6702	Fitting	UNF 9/16"-18** external thread	UNF 9/16"-18* external thread
W6705	Fitting	UNF 9/16"-18** external thread	UNF 7/16"-20* external thread
W6927	Fitting	UNF 9/16"-18** external thread	UNF 7/8"-14* external thread
E80-561P	Fitting	UNF 9/16"-18** external thread	NPT 1/4" external thread
C1-59695	Fitting	UNF 9/16"-18* external thread LH	UNF 9/16"-18** external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

Fuelling nozzle **TK1 CNG** for Slow-Fill

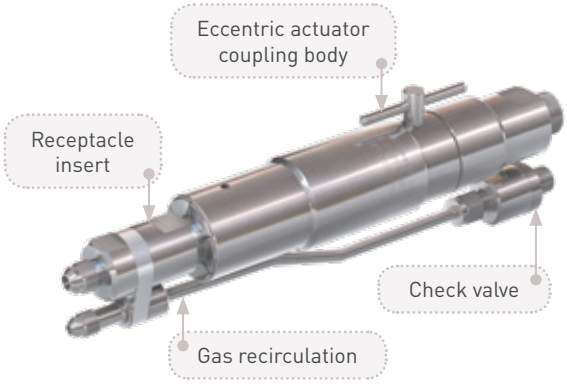
Spare parts

Various parts are available as spares for type TK1 CNG:

Part No.	Description
C1-132266	1 Spare parts set 200 bar / 3,000 psi (black sliding sleeve incl. disk and 3 screws)
C1-132267	1 Spare parts set 250 bar / 3,600 psi (yellow sliding sleeve incl. disk and 3 screws)
E99-44923	Maintenance spray

Breakaway coupling **TSA1 CNG**

DESCRIPTION



Features
- Re-usable without factory reservicing
- Installation at the dispenser
- Small compact design
- Integrated cleanable filter (40 micron)
- Check valve at venting line
- No additional tool necessary
- Option: without filter; without gas recirculation

The type TSA1 CNG breakaway coupling offers additional safety for your car fuelling station. The breakaway is installed between the dispenser and the filling/venting hose. In the event of accidental deployment, e.g. driving a vehicle from the dispenser with the nozzle remaining in the vehicle fuel port, the coupling will separate the connections between dispenser and hose sealing both ends. This protects largely the receptacle, the fuelling nozzle and the dispenser against damage. The detached coupling can be easily reattached and placed back in service after having been function tested.
We recommend to use breakaways with integrated filter. The filter provides clean natural gas and is easy to maintain.
Of course we also offer breakaway couplings without filter.

The breakaway device consists of a coupling body, a receptacle insert and a gas recirculation with check valve. The breakaway is also available without gas recirculation.

We also offer complete hose assemblies consisting of a fuelling nozzle, a hose set and a breakaway coupling (for complete hose assemblies see respective fuelling nozzle).

Application
Breakaway coupling for car fuelling stations for installation between the dispenser and the filling/venting hose.

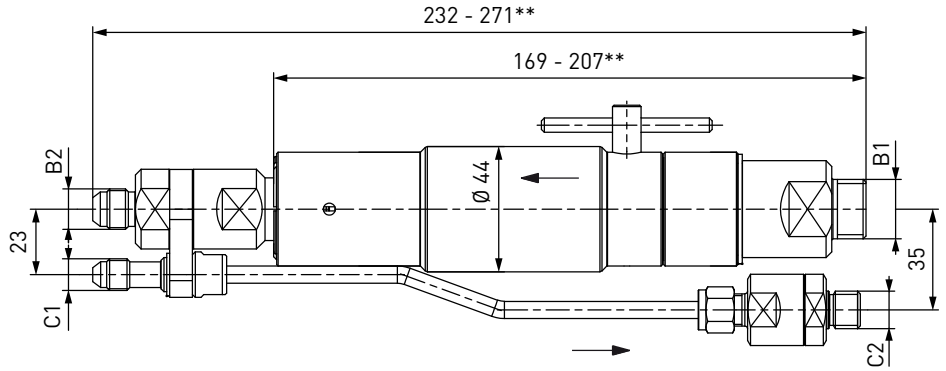
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Max. 8 mm	4 mm (C1-101108), others on request
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Breakaway force	300 - 600 N	On request
Material	Corrosion resistant stainless steel, aluminium	On request
Sealing material	Natural gas compatible	On request
Design	With gas recirculation and filter (40 micron)	Without gas recirculation Without filter

Breakaway coupling **TSA1 CNG**

ORDERING | Breakaway coupling TSA1 CNG with gas recirculation

approx. dimensions (mm)

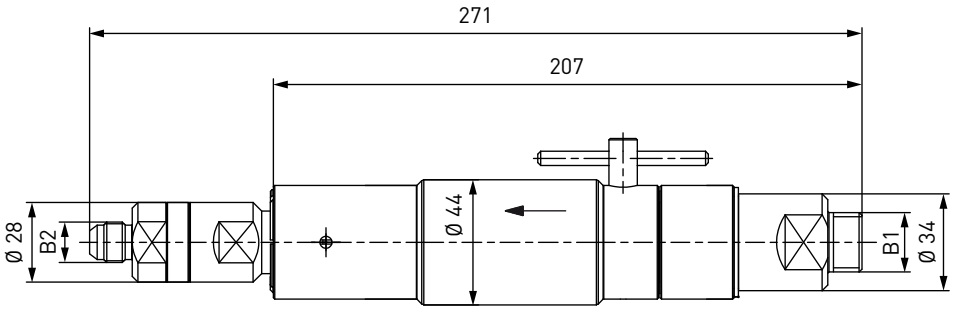


Part No.	Description	Pressure (PN)	B1 (external thread)	B2 (external thread)	C1 (external thread)	C2 (external thread)
C1-17195/7-X01	TSA1 CNG with filter	200 bar / 3,000 psi	G1/2"	UNF 9/16"-18*	UNF 7/16"-20*	G1/4"
C1-102487	TSA1 CNG with filter	250 bar / 3,600 psi	G1/2"	UNF 9/16"-18*	UNF 7/16"-20*	G1/4"
C1-17196-X7-X01	TSA1 CNG without filter	200 bar / 3,000 psi	G1/2"	UNF 9/16"-18*	UNF 7/16"-20*	G1/4"
C1-101108-X01	TSA1 CNG with filter	200 bar / 3,000 psi	G1/2"	UNF 7/16"-20*	UNF 7/16"-20*	G1/4"

* acc. to SAE J514, 37°
** length depending on type of breakaway coupling

ORDERING | Breakaway coupling TSA1 CNG without gas recirculation

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	B1 (external thread)	B2 (external thread)
C1-17197-X3-X01	TSA1 CNG with filter	200 bar / 3,000 psi	G1/2"	UNF 9/16"-18*

* acc. to SAE J514, 37°

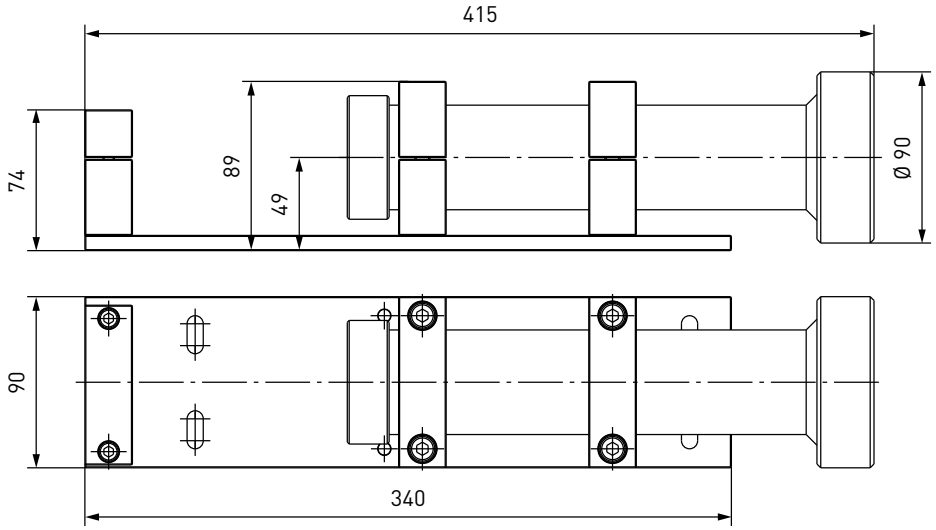
Breakaway coupling **TSA1 CNG**

ACCESSORIES

The following accessories are available for type TSA1 CNG:

Dispenser mounting for breakaway coupling

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. The dispenser mounting can be used instead of a return pulley (hose pulley).



Part No.	Description
C1-69275	Mounting for TSA1 CNG

Filling and venting hoses

Please see page 126 or the corresponding fuelling nozzles for filling and venting hoses suitable for the type TSA1 CNG breakaway coupling.

Breakaway coupling **TSA1 CNG**

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

Part No.	Description	Connection breakaway	Connection filling hose
C1-79538	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18** internal thread
E80-647P	Fitting	UNF 9/16"-18* internal thread	UNF 7/8"-14* external thread
E80-60018	Fitting	UNF 9/16"-18* external thread	G3/8" external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

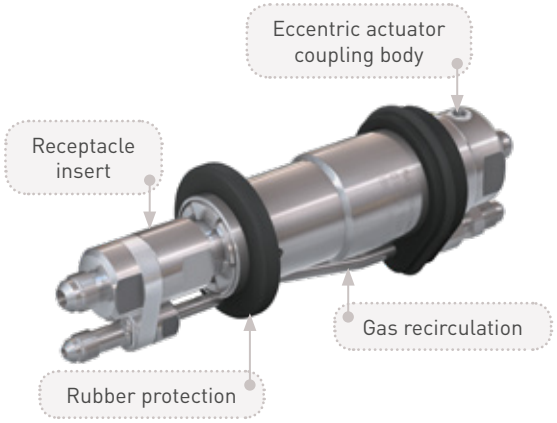
Spare parts

Various parts are available as spares for type TSA1 CNG:

Part No.	Description
W56149	Receptacle insert for type TSA1 CNG with gas recirculation
W60006	Receptacle insert for type TSA1 CNG without gas recirculation
E69-9061	Wire filter insert 40 micron (incl. spring and o-ring)
E59-46414	Copper disc for G1/4" external thread (port C2)
E59-45950	Copper disc for G1/2" external thread (port B1)

Inline breakaway coupling **TSA2 CNG**

DESCRIPTION



Features
- Re-usable without factory reservicing
- Installation inbetween the filling and venting hoses
- Small compact design
- Rubber protection
- Eccentric actuation via an allen wrench
- Option: without gas recirculation

With type TSA2 CNG, an inline breakaway coupling which is installed inbetween the filling and venting hoses, is now also available for car fuelling stations. In the event of accidental deployment, e.g. driving a vehicle from the dispenser with the nozzle remaining in the vehicle fuel port, the coupling will separate the connections between dispenser and hoses sealing both ends. This protects largely the receptacle, the fuelling nozzle and the dispenser against damage. The detached coupling can be easily reattached and placed back in service after having been function tested.

The breakaway device consists of a coupling body, a receptacle insert and an optional gas recirculation.

We recommend the installation of a type TSF5 CNG filter (see page 108) when using the TSA2 CNG inline breakaway coupling. The filter protects your system from dirt ingress.

We also offer complete hose assemblies consisting of a fuelling nozzle, a hose set and a breakaway coupling (for complete hose assemblies see respective fuelling nozzle).

Application
Inline breakaway coupling for car fuelling stations for installation inbetween the filling and venting hoses.

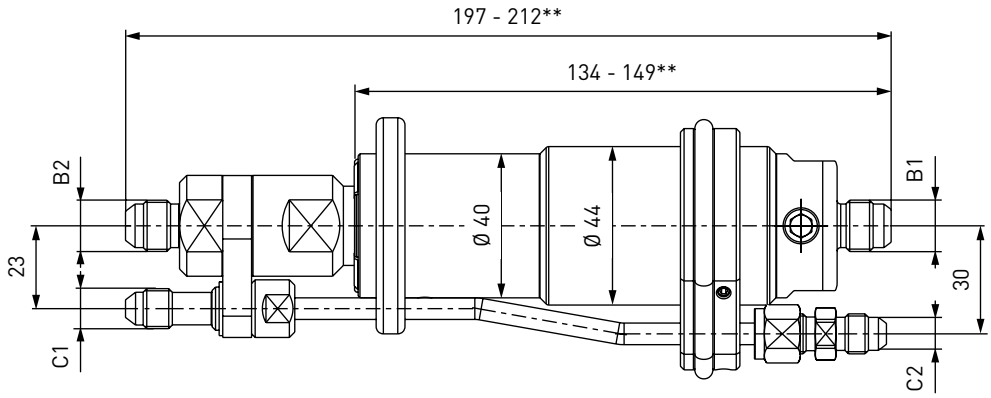
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Breakaway force	300 - 600 N	On request
Material	Corrosion resistant stainless steel, aluminium	On request
Sealing material	Natural gas compatible	On request
Design	With gas recirculation	Without gas recirculation

Inline breakaway coupling **TSA2 CNG**

ORDERING | Inline breakaway coupling TSA2 CNG with gas recirculation

approx. dimensions (mm)

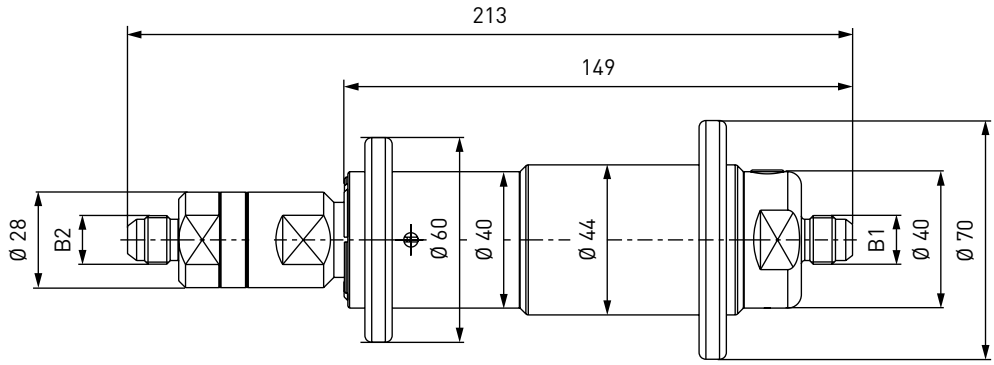


Part No.	Description	DN	Pressure (PN)	B1/B2 (external thread)	C1/C2 (external thread)
C1-60003-X1-X01	TSA2 CNG	8	200 bar / 3,000 psi	UNF 9/16"-18*	UNF 7/16"-20*
C1-101094-X01	TSA2 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18*	UNF 7/16"-20*
C1-92668-X01	TSA2 CNG	4	200 bar / 3,000 psi	UNF 7/16"-20*	UNF 7/16"-20*

* acc. to SAE J514, 37°
** length depending on type of breakaway coupling

ORDERING | Inline breakaway coupling TSA2 CNG without gas recirculation

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	B1 (external thread)	B2 (external thread)
C1-60007-X1-X01	TSA2 CNG	8	200 bar / 3,000 psi	UNF 9/16"-18*	UNF 9/16"-18*
C1-101042-X01	TSA2 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18*	UNF 9/16"-18*
C1-74443-X01	TSA2 CNG	4	200 bar / 3,000 psi	UNF 9/16"-18*	UNF 7/16"-20*
C1-103076-X01	TSA2 CNG	4	200 bar / 3,000 psi	UNF 7/16"-20*	UNF 7/16"-20*

* acc. to SAE J514, 37°

Inline breakaway coupling **TSA2 CNG**

ACCESSORIES

The following accessories are available for type TSA2 CNG:

Filter TSF5 CNG (50 micron)

For upgrading existing inline breakaways without integrated filter, we recommend the installation of a type TSF5 CNG filter (see page 108). The filter protects your system from dirt ingress. Type TSF5 CNG is installed as prefilter in the media inlet between inline breakaway coupling and filling hose.

Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A
C1-83120-X01	TSF5 CNG	8	200 bar / 3,000 psi	UNF 9/16"-18* external thread	UNF 9/16"-18* internal thread
C1-102491-X01	TSF5 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18* external thread	UNF 9/16"-18* internal thread

* acc. to SAE J514, 37°

Filling and venting hoses

Please see page 126 or the corresponding fuelling nozzles for filling and venting hoses suitable for the type TSA2 CNG inline breakaway coupling.

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

Part No.	Description	Connection breakaway	Connection filling hose
C1-79538	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18** internal thread
C1-66850	Fitting	UNF 9/16"-18* internal thread	UNF 3/4"-16* external thread
C1-65592	Fitting	UNF 9/16"-18* internal thread	NPT 1/4" internal thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

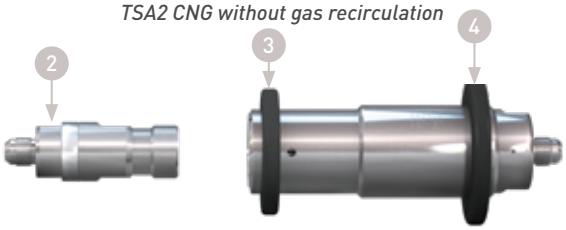
Please see page 130 onwards for a detailed overview on all available fittings.

Inline breakaway coupling **TSA2 CNG**

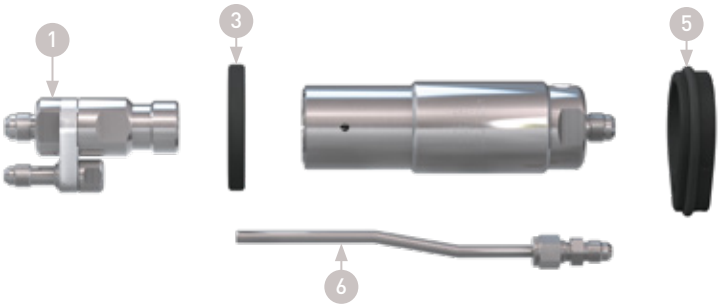
Spare parts

Various parts are available as spares for type TSA2 CNG:

TSA2 CNG without gas recirculation



TSA2 CNG with gas recirculation



Part No.	Description
W56149	1 Receptacle insert for type TSA2 CNG with gas recirculation (C1-60003, C1-101094)
W101086	1 Receptacle insert for type TSA2 CNG with gas recirculation (C1-92668)
W60006	2 Receptacle insert for type TSA2 CNG without gas recirculation (C1-60007, C1-101042, C1-103076)
W74608	2 Receptacle insert for type TSA2 CNG without gas recirculation (C1-74443)
E80-71324	3 Front rubber protection
E80-71325	4 Rear rubber protection
W72525	5 Mounting flange
E80-6002	6 Gas recirculation tube
C1-119056	Spare seal set for receptacle insert W56149 and W101086
C1-119054	Spare seal set for receptacle insert W60006 and W74608

Receptacle **TN1 CNG**

DESCRIPTION

Features
- Compatible with fuelling nozzles acc. to NGV1 standard and ISO 14469-1 and 3
- Low-noise refuelling
- Integrated self-cleaning particle filter (40 micron)
- Integrated high-flow check valve
- Sealing-friendly design
- Coding for pressure range / gas type

The WEH® TN1 CNG receptacle is designed specifically for car refuelling. Due to the internal aerodynamic design the TN1 CNG receptacle gives low noise (no high frequency whistle) combined with maximum flow rate and fast filling. The receptacle is a very durable unit, minimizing maintenance and down-time. The type TN1 CNG also has an integrated check valve system which is designed to minimize the effect that dirt particles have on the sealing components within the receptacle.
The TN1 CNG receptacle is equipped with a coding for pressure range and gas type.

The WEH® TN1 CNG receptacle works best with WEH® Fuelling nozzles. We recommend the fuelling nozzles type TK17 CNG, TK16 CNG, TK10 CNG, TK1 CNG and TK4 CNG.

Enhanced safety by integrating a dirt particle filter
Using an integrated particle filter avoids dirt ingress and therefore leakage from the receptacle which gives enhanced safety and reliability - essential features for the volatile nature of CNG products.

Application
Receptacle for refuelling of cars with CNG to be used with WEH® Fuelling nozzles acc. to NGV1 Standard and ISO 14469-1 and 3. Only use receptacles with ECE approval for fitment in vehicles!

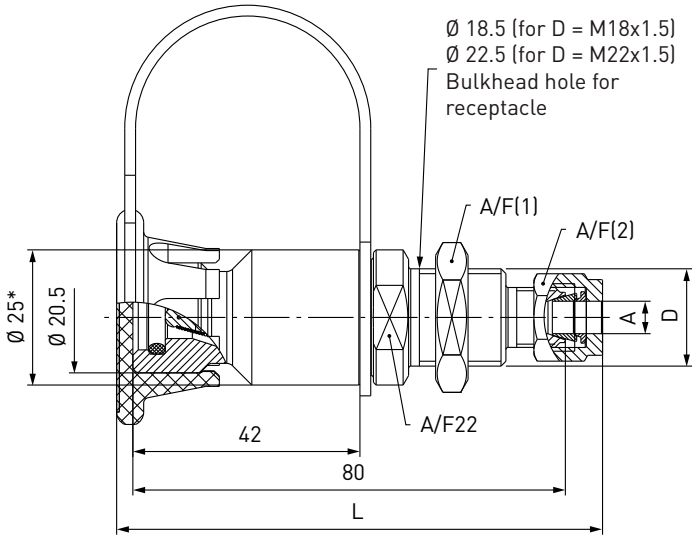
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE) PN = 250 bar (3,600 psi) | PS = 315 bar | PT = 475 bar	
Temperature range	-40 °F up to +248 °F	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With protection cap, integrated particle filter (40 micron) and fittings (only for receptacles with tube fitting)	Without integrated particle filter
Registration	E1 110R-000001-01 (ECE)	

Receptacle **TN1 CNG**

ORDERING | Receptacle TN1 CNG with tube fitting and filter (40 micron)

approx. dimensions (mm)



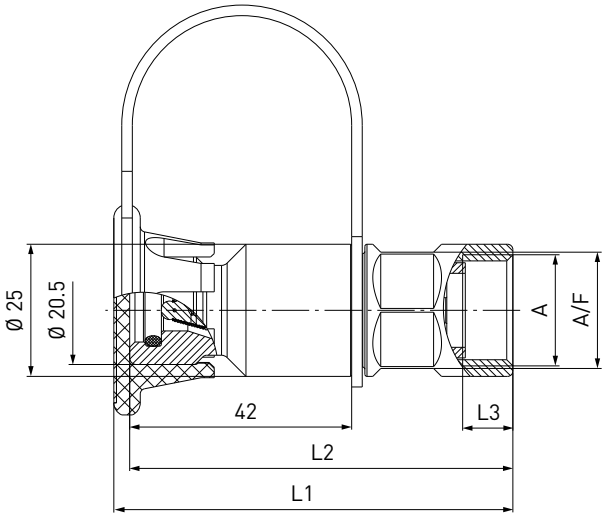
Part No.	Description	DN**	Pressure (PN)	Connection A***	L	D	A/F(1)	A/F(2)
C1-99331	TN1 CNG (ECE)	5	3,000 psi	Tube Ø 6	90	M18x1.5	24	14
C1-105789	TN1 CNG (ECE)	5	3,000 psi	Tube Ø 1/4"	90	M18x1.5	24	14
C1-102542-X01*	TN1 CNG	5	3,600 psi	Tube Ø 1/4"	90	M18x1.5	24	14
C1-106400	TN1 CNG (ECE)	6	3,000 psi	Tube Ø 8	90	M18x1.5	24	16
C1-103611	TN1 CNG (ECE)	6	3,000 psi	Tube Ø 3/8"	90	M18x1.5	24	17.4
C1-102579-X01*	TN1 CNG	6	3,600 psi	Tube Ø 3/8"	90	M18x1.5	24	17.4
C1-106401	TN1 CNG (ECE)	6	3,000 psi	Tube Ø 10	91	M18x1.5	24	19
C1-105939	TN1 CNG (ECE)	6	3,000 psi	Tube Ø 12	92	M22x1.5	27	22
C1-106402	TN1 CNG (ECE)	6	3,000 psi	Tube Ø 1/2"	94	M22x1.5	27	22
C1-102580*	TN1 CNG	6	3,600 psi	Tube Ø 1/2"	94	M22x1.5	27	22

* Different diameter (Ø 24 mm) due to pressure range coding
** depending on inner diameter of tube
*** double ferrule fitting

Receptacle **TN1 CNG**

ORDERING | Receptacle TN1 CNG with female thread and filter (40 micron)

approx. dimensions (mm)

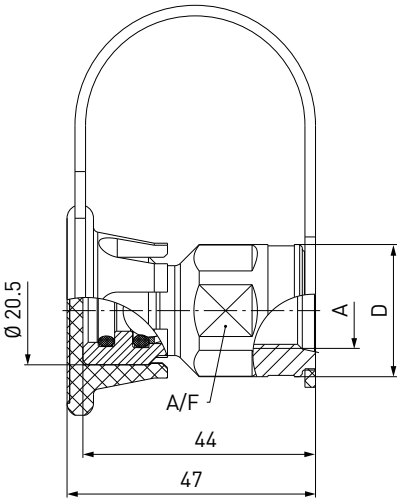


Part No.	Description	DN	Pressure (PN)	Connection A (female thread)	L1	L2	L3	A/F
C1-92149	TN1 CNG (ECE)	5	3,000 psi	G1/2"	75.5	72.5	9.5	22
C1-101953	TN1 CNG (ECE)	5	3,000 psi	UNF 9/16"-18*	80	77	12.7	23

* acc. to SAE J1926

ORDERING | Receptacle TN1 CNG with female thread (without filter)

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Connection A (female thread)	D	A/F
C1-101122	TN1 CNG (ECE)	6	3,000 psi	UNF 9/16"-18*	25	23
C1-33505-X01	TN1 CNG	6	3,600 psi	UNF 9/16"-18*	24	22

* acc. to SAE J1926

Other connection sizes on request.

Receptacle **TN1 CNG**

SPARE PARTS

Various parts are available as spares for type TN1 CNG:

Protection Cap

Protection cap with a strap to protect the type TN1 CNG receptacle from dirt ingress.

Part No.	Description
C1-68966	Protection cap

Fuelling system **TS50 CNG**

DESCRIPTION

Features
- Integrated WEH® TN1 CNG receptacle (NGV1) with filter
- Integrated starter cut-off micro switch (version 1 + 3)
- Gas venting via protection hose (version 1 + 2)
- Different fuel tank caps, acc. to design
- Protection against unauthorized use (version 1 + 3)
- Dirt and splash waterproof construction
- No danger of freezing

WEH offers the fuelling system type TS50 CNG for retrofitting of vehicles to run on compressed natural gas. The TS50 CNG fuelling system is a CNG conversion kit for quick and easy installation into the vehicle. The two housings can be preinstalled within seconds. The final installation is possible from the inside or outside of the vehicle. The type TS50 CNG is equipped with a receptacle with filter compatible with the NGV1 profile. Version 1 and 3 have a starter cut-off micro switch. The micro switch interrupts the starter operation and prevents the vehicle from driving off during refuelling. Version 1 and 2 are additionally equipped with a protection hose for gas venting. In case of a gas leakage the gas is diverted away from the connection.
The interior of the fuelling system is protected by a fuel tank cap from dirt and splash water thus reducing the danger of freezing.

On request type TS50 CNG is also available without tube for protection hose for gas venting and without starter cut-off micro switch.

Application
Fuelling system for installation in cars.

TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	8 mm	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE)	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Housing: plastic Receptacle: corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	Incl. TN1 CNG receptacle with filter (40 micron), starter cut-off micro switch (protection type IP679), tube for protection hose for gas venting, fuel tank cap and fittings	Without tube for protection hose for gas venting Without starter cut-off micro switch
Registration	E1 110R-000001-01 (TN1 CNG)	

Fuelling system **TS50 CNG**

OVERVIEW TYPES TS50 CNG

For the TS50 CNG fuelling system various designs are available:

* Housing A/B may differ from version 2 and 3

1 TS50 CNG with lockable fuel tank cap and key (version 1)

To prevent unauthorized use, the fuelling system is equipped with a lockable fuel tank cap.

2 TS50 CNG with cap, without lock and starter cut-off micro switch (version 2)

The type TS50 CNG is also available without lock. The fuel tank cap protects the interior of the fuelling system from dirt and splash water and reduces the danger of freezing.

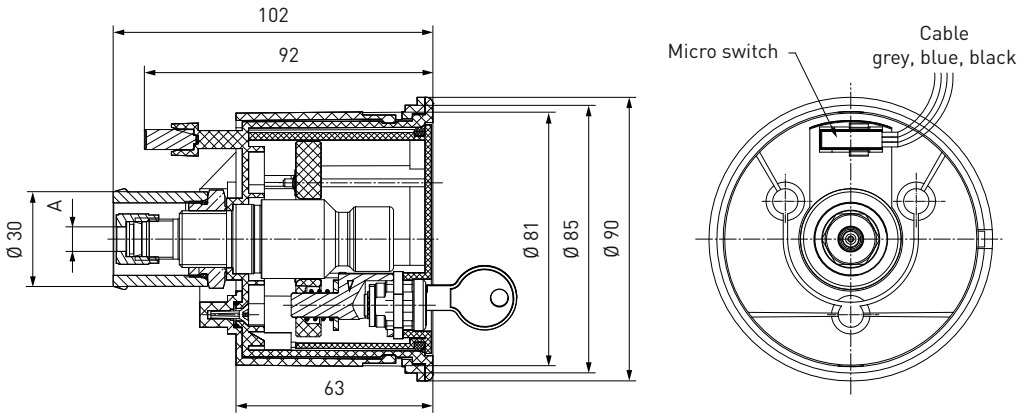
3 TS50 CNG with lockable 3-hole fuel tank cap (version 3)

We also offer type TS50 CNG with 3-hole fuel tank cap and special key to prevent unauthorized use for narrowed spaces.

Fuelling system **TS50 CNG**

ORDERING | Fuelling system TS50 CNG with lockable fuel tank cap and 2 keys (version 1)

approx. dimensions (mm)



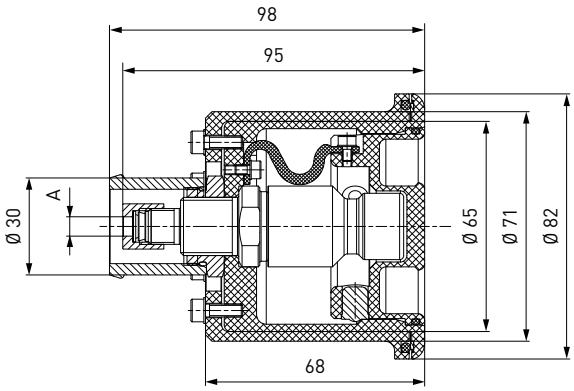
Cable: grey = N/C | blue = N/O | black = inlet port

Part No.	Description	Pressure (PN)	Connection A
C1-106406	TS50 CNG	200 bar / 3,000 psi	Tube Ø 6*
C1-106413	TS50 CNG	200 bar / 3,000 psi	Tube Ø 1/4"*
C1-106410	TS50 CNG	200 bar / 3,000 psi	Tube Ø 8*
C1-106414	TS50 CNG	200 bar / 3,000 psi	Tube Ø 3/8"*
C1-106415	TS50 CNG	200 bar / 3,000 psi	Tube Ø 10*

* double ferrule fitting

ORDERING | Fuelling system TS50 CNG with fuel tank cap, without starter cut-off micro switch (version 2)

approx. dimensions (mm)

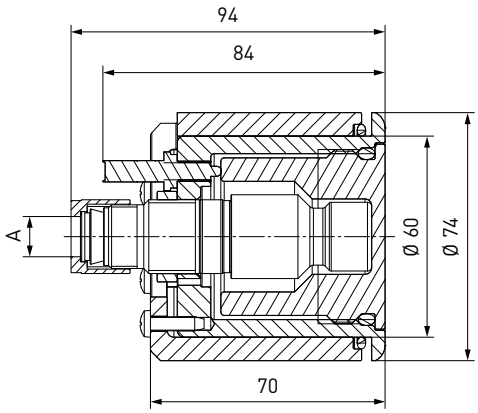


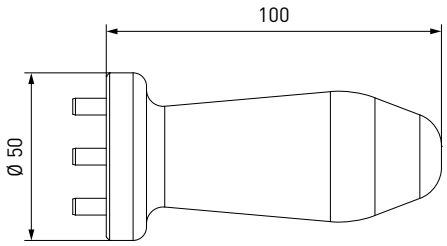
Part No.	Description	Pressure (PN)	Connection A
C1-106416	TS50 CNG	200 bar / 3,000 psi	Tube Ø 6*
C1-106417	TS50 CNG	200 bar / 3,000 psi	Tube Ø 8*
C1-106418	TS50 CNG	200 bar / 3,000 psi	Tube Ø 10*

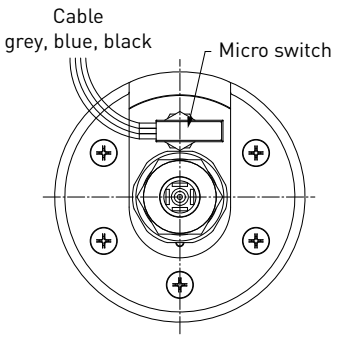
* double ferrule fitting

ORDERING | Fuelling system TS50 CNG with lockable 3-hole fuel tank cap (version 3)

approx. dimensions (mm)







Cable: grey = N/C | blue = N/O | black = inlet port

Part No.	Description	Pressure (PN)	Connection A
On request	TS50 CNG**	200 bar / 3,000 psi	Tube Ø 10*
C1-106419	TS50 CNG**	200 bar / 3,000 psi	Tube Ø 12*
C1-106421	TS50 CNG**	200 bar / 3,000 psi	Tube Ø 1/2"*

* double ferrule fitting
** without tube for protection hose for gas venting

SPARE PARTS

Various parts are available as spares for type TS50 CNG:

Part No.	Description
W6931	1 Fuel tank cap with marking incl. 2 keys (version 1)
W35528	2 Pull-out fuel tank cap (version 2)
E29-277S401	3 3-hole fuel tank cap (version 3)
W6036	4 Key for 3-hole fuel tank cap (version 3)

Check valve **TVR1 CNG**

DESCRIPTION

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

With the type TVR1 CNG WEH offers a high performance check valve for use with natural gas. The check valve system is designed to minimize the effect of dirt particles on the sealing components within the unit. The WEH® TVR1 CNG check valve is constructed of corrosion-resistant stainless steel achieving a very durable unit due to its robust internal structure.

Application
Check valve for cars (ECE approval), also suitable for installation in fuelling stations.
Only use check valves with ECE approval for fitment in vehicles!

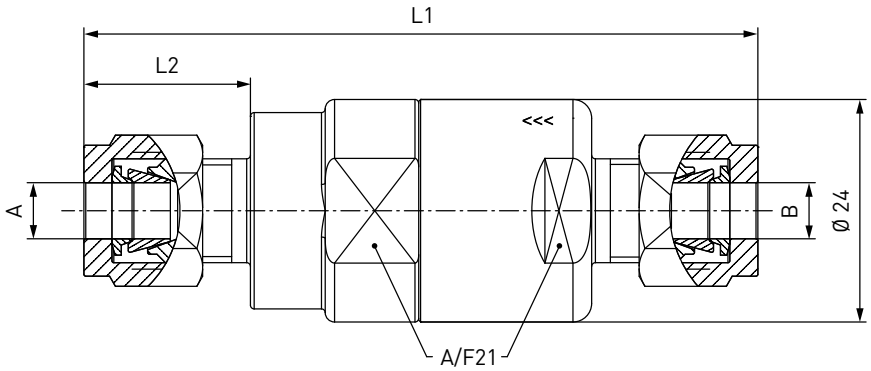
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE) PN = 250 bar (3,600 psi) | PS = 315 bar | PT = 475 bar	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant stainless steel	On request
Sealing material	Natural gas compatible	On request
Design	Incl. fittings (only for check valves with tube fitting)	On request
Registration	E1 110R-000002-03 (ECE)	

Check valve **TVR1 CNG**

ORDERING | Check valve TVR1 CNG with tube fitting on both sides

approx. dimensions (mm)



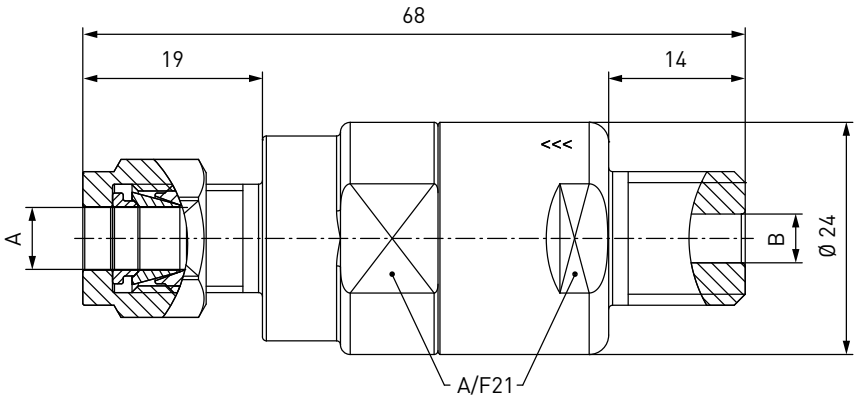
Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A	L1	L2
C1-105917	TVR1 CNG (ECE)	5	200 bar / 3,000 psi	Tube Ø 6*	Tube Ø 6*	72	18
C1-106982-X01	TVR1 CNG	5	250 bar / 3,600 psi	Tube Ø 6*	Tube Ø 6*	72	18
C1-106455	TVR1 CNG (ECE)	5	200 bar / 3,000 psi	Tube Ø 1/4"*	Tube Ø 1/4"*	73	18
C1-102597-X01	TVR1 CNG	5	250 bar / 3,600 psi	Tube Ø 1/4"*	Tube Ø 1/4"*	73	18
C1-106451	TVR1 CNG (ECE)	6	200 bar / 3,000 psi	Tube Ø 8*	Tube Ø 8*	75	20
C1-106983-X01	TVR1 CNG	6	250 bar / 3,600 psi	Tube Ø 8*	Tube Ø 8*	75	20
C1-107710	TVR1 CNG (ECE)	8	200 bar / 3,000 psi	Tube Ø 3/8"*	Tube Ø 3/8"*	76	20
C1-102598-X01	TVR1 CNG	8	250 bar / 3,600 psi	Tube Ø 3/8"*	Tube Ø 3/8"*	76	20
C1-106452	TVR1 CNG (ECE)	8	200 bar / 3,000 psi	Tube Ø 10*	Tube Ø 10*	77	20
C1-106984	TVR1 CNG	8	250 bar / 3,600 psi	Tube Ø 10*	Tube Ø 10*	77	20
C1-106453	TVR1 CNG (ECE)	8	200 bar / 3,000 psi	Tube Ø 12*	Tube Ø 12*	81	22
C1-106985-X01	TVR1 CNG	8	250 bar / 3,600 psi	Tube Ø 12*	Tube Ø 12*	81	22

* double ferrule fitting

Check valve **TVR1 CNG**

ORDERING | Check valve TVR1 CNG with external thread and tube fitting

approx. dimensions (mm)



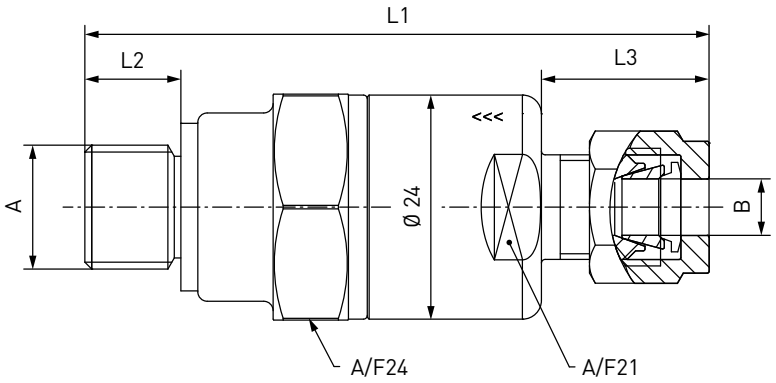
Part No.	Description	DN	Pressure (PN)	Inlet B (external thread)	Outlet A
C1-106934	TVR1 CNG (ECE)	5	200 bar / 3,000 psi	NPT 1/4"	Tube Ø 1/4"*
C1-107134-X01	TVR1 CNG	5	250 bar / 3,600 psi	NPT 1/4"	Tube Ø 1/4"*

* double ferrule fitting

Check valve **TVR1 CNG**

ORDERING | Check valve TVR1 CNG with tube fitting and external thread

approx. dimensions (mm)



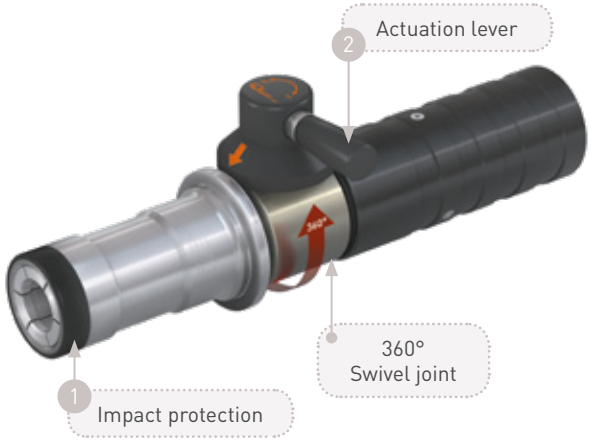
Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A (external thread)	L1	L2	L3
C1-73740	TVR1 CNG (ECE)	5	200 bar / 3,000 psi	Tube Ø 6*	G1/4"	66	10	18
C1-106986	TVR1 CNG	5	250 bar / 3,600 psi	Tube Ø 6*	G1/4"	66	10	18
C1-106979	TVR1 CNG (ECE)	5	200 bar / 3,000 psi	Tube Ø 6*	UNF 9/16"-18** SAE O-Ring	66	12	18
C1-106987-X01	TVR1 CNG	5	250 bar / 3,600 psi	Tube Ø 6*	UNF 9/16"-18** SAE O-Ring	66	12	18
C1-106988	TVR1 CNG (ECE)	5	200 bar / 3,000 psi	Tube Ø 8*	G1/4"	68	10	20
C1-106989	TVR1 CNG	5	250 bar / 3,600 psi	Tube Ø 8*	G1/4"	68	10	20

* double ferrule fitting
** acc. to SAE J1926

Other connection sizes on request.

Fuelling nozzle **TK26 CNG**

DESCRIPTION



Features

- Super light ➡ only 3400 grams
- Compatible with receptacles acc. to ISO 14469-2
- WEH® EASY-TURN 360° swivel joint for actuation lever
- Easy operation
- Extremely high flow rate ➡ short filling times
- Recirculation of the vented gas
- Plastic thermal protection
- WEH® Jaw locking mechanism
- Colour coded impact protection (200 bar / 3,000 psi black, 250 bar / 3,600 psi yellow)
- High-grade materials
- Coding for pressure range / gas type

The TK26 CNG fuelling nozzle is very light in weight and therefore easy to operate. The integrated swivel joint is located at the actuation lever and can easily be turned into the optimal actuating position. The compact actuation lever needs less effort to actuate the nozzle.

Safety
The TK26 CNG offers optimum safety to the operator.
The fuelling nozzle remains connected to the receptacle until the gas between inlet valve and receptacle is depressurized. To achieve optimum performance it is recommended that the TK26 CNG fuelling nozzle is used with the WEH® TN5 CNG receptacle.

Application
Fuelling nozzle for CNG fast filling of buses and trucks at self-service fuelling stations to be used with WEH® TN5 CNG receptacles acc. to ISO 14469-2.

TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	12 mm	On request
Pressure range	C200 acc. to ISO 14469-2 PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection and gas recirculation	On request
Weight	3.4 kg (7.50 lbs.)	
Registration	Acc. to ISO 14469-2*	

* The NGV1 standard does not include the size 2 refuelling interface. The ISO 14469-2 can be used as a follower of the ANSI/NGV1 for the size 2 refuelling interface. The components are tested in accordance with ISO14469-2. The test program is similar to the NGV1 but displays the different profile and size of the components.

Fuelling nozzle **TK26 CNG**

ORDERING | Fuelling nozzle TK26 CNG

approx. dimensions (mm)

Part No.	Description	Pressure (PN)	Inlet B (external thread)	Gas recirculation C (external thread)
C1-70708-X01	TK26 CNG	200 bar / 3,000 psi (black)	UNF 7/8"-14*	UNF 9/16"-18*
C1-102475-X01	TK26 CNG	250 bar / 3,600 psi (yellow)	UNF 7/8"-14*	UNF 9/16"-18*

* acc. to SAE J514, 37°

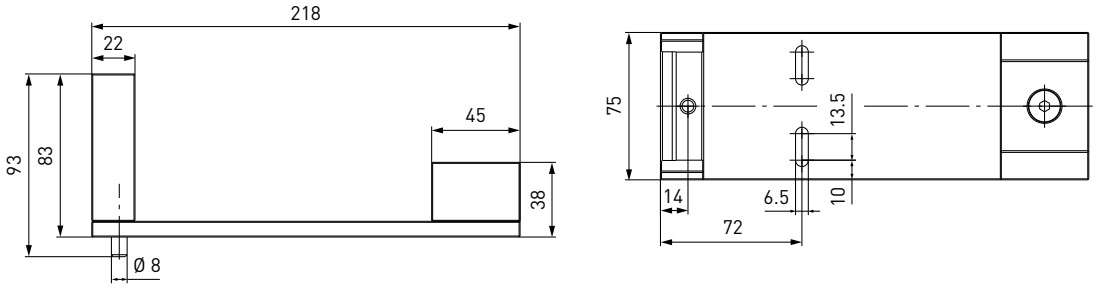
Please see page 66 onwards for complete hose assemblies consisting of fuelling nozzle, hose set and breakaway coupling.

ACCESSORIES

The following accessories are available for type TK26 CNG:

Dispenser mounting

Mounting for safe attachment of the fuelling nozzle to the dispenser. Optionally with or without switch actuation.
Design: Aluminium, stainless steel

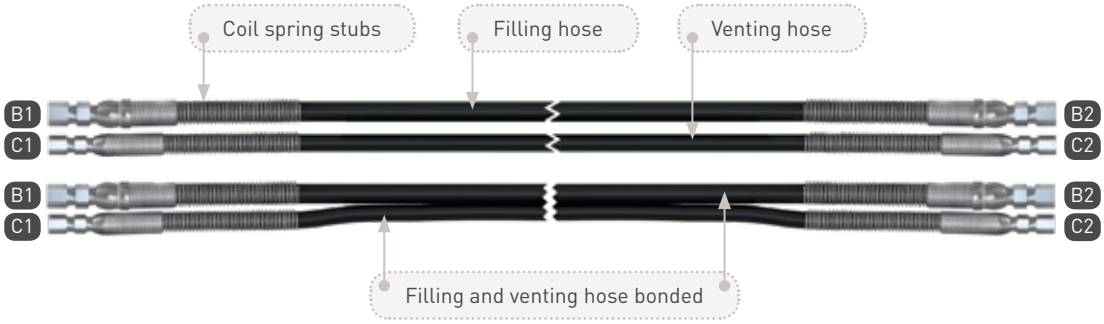


Part No.	Description
C1-94805	Mounting (switch actuated)
On request	Mounting (not switch actuated)

Fuelling nozzle **TK26 CNG**

Hose sets TK26 CNG - TSA5 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle and type TSA5 CNG breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs. Available as single or twin hoses (permanently bonded).



Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-101749	UNF 7/8"-14*	UNF 9/16"-18*	3 m
C1-102079	UNF 7/8"-14*	UNF 9/16"-18*	4 m
C1-102508	UNF 7/8"-14*	UNF 9/16"-18*	5 m

* acc. to SAE J514, 37°
All designs also available with permanently bonded filling and venting hose. Please contact us!

Hose sets TK26 CNG - TSA6 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle / dispenser and type TSA6 CNG inline breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
On request	UNF 7/8"-14*	UNF 9/16"-18*	2.5 | 0.5 m
On request	UNF 7/8"-14*	UNF 9/16"-18*	3.5 | 0.5 m
On request	UNF 7/8"-14*	UNF 9/16"-18*	4.5 | 0.5 m

* acc. to SAE J514, 37°
All designs also available with permanently bonded filling and venting hose. Please contact us!

Fuelling nozzle **TK26 CNG**

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
C1-97227	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18* internal thread
C1-79538	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18 ** internal thread
E80-647P	Fitting	UNF 9/16"-18* internal thread	UNF 7/8"-14* external thread
C1-66850	Fitting	UNF 9/16"-18* internal thread	UNF 3/4"-16* external thread
C1-65592	Fitting	UNF 9/16"-18* internal thread	NPT 1/4" internal thread
E80-52705	Fitting	UNF 7/8"-14* internal thread	UNF 9/16"-18* external thread
C1-105411	Fitting	UNF 7/8"-14* internal thread	UNF 7/16"-20* external thread
C1-48976	Fitting	UNF 7/8"-14* internal thread	NPT 1/4" external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

Spare parts

Various parts are available as spares for type TK26 CNG:

Part No.	Description
E80-94808	1 Impact protection (200 bar / 3,000 psi, black)
E80-106832	1 Impact protection (250 bar / 3,600 psi, yellow)
W72504	2 Actuation lever
E99-44923	Maintenance spray

Hose assembly **TK26 CNG**

We also offer complete sets assembled and pressure tested for installation at fuelling stations. The hose assemblies consist of a fuelling nozzle, a hose set and a breakaway coupling. All hose assemblies are available with different hose lengths and can either be delivered with a type TSA5 CNG breakaway coupling directly mounted at the dispenser or a type TSA6 CNG inline breakaway coupling mounted inbetween the hoses.

Application
Hose assembly for CNG fast filling of buses and trucks at self-service fuelling stations.

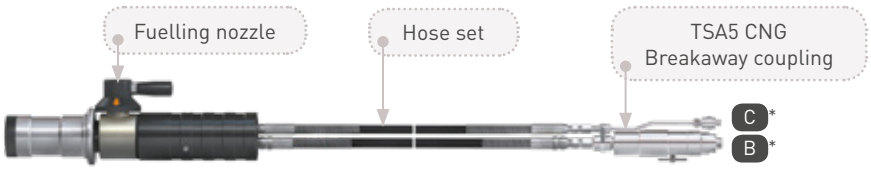
TECHNICAL DATA

Characteristic	Basic version
Nominal bore DN	12 mm
Pressure range	C200 acc. to ISO 14469-2 PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar
Temperature range	On request
Material	Corrosion resistant
Sealing material	Natural gas compatible
Design	TK26 CNG fuelling nozzle, hose set and breakaway coupling fully assembled and pressure tested

Hose assembly **TK26 CNG**

ORDERING | Hose assembly TK26 CNG with TSA5 CNG breakaway coupling

Complete hose assembly consisting of a TK26 CNG (200 bar / 3,000 psi) fuelling nozzle, a hose set and a TSA5 CNG breakaway coupling (with filter 40 micron).



Part No.	Description	Hose length
C1-101917	Hose assembly with TSA5 CNG breakaway coupling	3 m
C1-106459	Hose assembly with TSA5 CNG breakaway coupling	4 m
C1-106460	Hose assembly with TSA5 CNG breakaway coupling	5 m

All designs are also available with a type TK26 CNG - 250 bar (3,600 psi) fuelling nozzle or with permanently bonded filling and venting hose. Please contact us!
* For connection sizes 'B' and 'C' see page 76, TSA5 CNG breakaway coupling.

ORDERING | Hose assembly TK26 CNG with TSA6 CNG inline breakaway coupling

Complete hose assembly consisting of a TK26 CNG (200 bar / 3,000 psi) fuelling nozzle, a hose set and a TSA6 CNG inline breakaway coupling.

Part No.	Description	Hose length
C1-106464	Hose assembly with TSA6 CNG inline breakaway coupling	2.5 | 0.5 m
C1-106466	Hose assembly with TSA6 CNG inline breakaway coupling	3.5 | 0.5 m
C1-106467	Hose assembly with TSA6 CNG inline breakaway coupling	4.5 | 0.5 m

All designs are also available with a type TK26 CNG - 250 bar (3,600 psi) fuelling nozzle or with permanently bonded filling and venting hose. Please contact us!
* For connection sizes 'B' and 'C' see page 126, TK26 CNG hose set.

Fuelling nozzle **TK22 CNG**

DESCRIPTION

Features

- Compatible with receptacles acc. to ISO 14469-2
- Push-Pull actuation
- Extremely high flow rate
- Integrated shut-off valve
- Plastic thermal protection
- WEH® Jaw locking mechanism
- Colour coded impact protection (200 bar / 3,000 psi black, 250 bar / 3,600 psi yellow)
- High-grade materials
- Compact design
- Retrofitting of safety device for grip sleeve at any time

Type TK22 CNG is the WEH® Fuelling nozzle for CNG refuelling of buses and trucks. The compact design and the unique WEH® Jaw locking mechanism provide a pressure-tight connection within seconds.

The type TK22 CNG can be used wherever the system is pressurized and vented at the fuelling station. Easy push-pull connection. The nozzle only has to be placed onto the receptacle and the clamping jaws close. Disconnection is effected by pulling back the grip sleeve.

TK22 CNG with safety device for grip sleeve

Application

Fuelling nozzle for CNG fast filling of buses and trucks to be used with WEH® TN5 CNG receptacles acc. to ISO 14469-2.
Operation only by specially trained service personnel. Not for self-service operation!
For self-service operation we recommend our TK22 CNG with safety device for grip sleeve.

TECHNICAL DATA

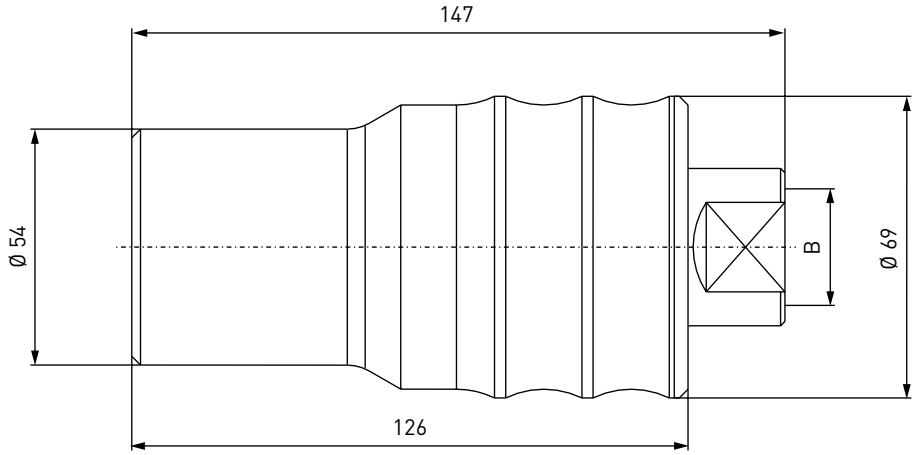
Characteristic	Basic version	Options
Nominal bore DN	12 mm	On request
Pressure range	C200 acc. to ISO 14469-2 PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection	On request
Weight	1.8 kg (3.97 lbs.) resp. 2.2 kg (4.85 lbs.) with safety device for grip sleeve	
Registration	Acc. to ISO 14469-2*	

* The NGV1 standard does not include the size 2 refuelling interface. The ISO 14469-2 can be used as a follower of the ANSI/NGV1 for the size 2 refuelling interface. The components are tested in accordance with ISO14469-2. The test program is similar to the NGV1 but displays the different profile and size of the components.

Fuelling nozzle **TK22 CNG**

ORDERING | Fuelling nozzle TK22 CNG

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Inlet B (internal thread)
C1-18890-X2-X01	TK22 CNG	200 bar / 3,000 psi (black)	UNF 7/8"-14*
C1-102476-X01	TK22 CNG	250 bar / 3,600 psi (yellow)	UNF 7/8"-14*

* acc. to SAE J1926

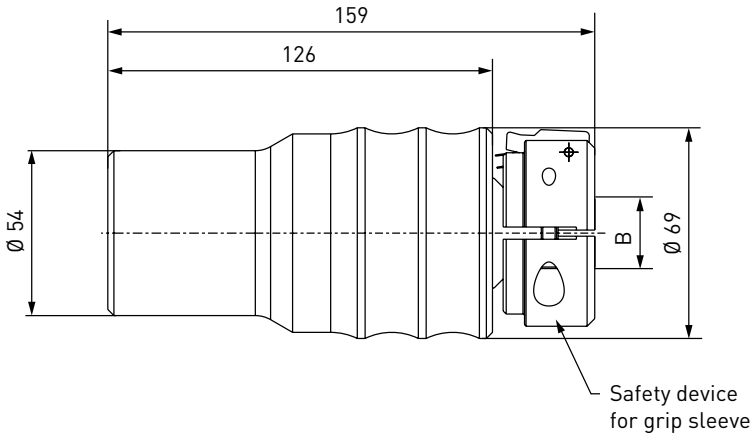
Fuelling nozzle **TK22 CNG**

ACCESSORIES

The following accessories are available for type TK22 CNG:

Safety device for grip sleeve

TK22 CNG with safety device for grip sleeve is appropriated for self-service operation.



Part No.	Description
W33337	Safety device for grip sleeve for TK22 CNG

Filling hoses

Filling hoses for connecting fuelling nozzle and dispenser, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1033-3000	UNF 7/8"-14*	3 m
E68-1033-4000	UNF 7/8"-14*	4 m
E68-1033-5000	UNF 7/8"-14*	5 m

* acc. to SAE J514, 37°

Fuelling nozzle **TK22 CNG**

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
W6703	Fitting	UNF 7/8"-14* external thread	UNF 7/8"-14** external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

Spare parts

Various parts are available as spares for type TK22 CNG:

Part No.	Description
C1-127951	1 Spare parts set 200 bar / 3,000 psi (grip sleeve incl. metal sleeve and circlip)
C1-127950	1 Spare parts set 250 bar / 3,600 psi (grip sleeve incl. yellow impact protection, metal sleeve and circlip)
E99-44923	Maintenance spray

Fuelling nozzle **TK24 CNG**

DESCRIPTION

Features
- Compatible with receptacles acc. to ISO 14469-2
- Push-Pull actuation
- Integrated shut-off valve
- Plastic thermal protection
- Grip position at 90°
- Ergonomic design
- WEH® Jaw locking mechanism
- Colour coded impact protection (200 bar / 3,000 psi black, 250 bar / 3,600 psi yellow)
- High-grade materials
- Option: without gas recirculation

The TK24 CNG fuelling nozzle combines user comfort with maximum convenience. The integrated TK22 CNG fuelling nozzle features 'push-to-connect' jaw locking system which automatically moves the grip sleeve back when making a connection. The ergonomic design of the handle enables an easy connection to the receptacle. This feature can help to prevent stresses on the high pressure hose and hose damage due to chafing on the ground. Refuelling starts after opening the integrated ball valve. Closing the ball valve finishes refuelling and the integrated gas recirculation automatiaclly depressurizes the system. The nozzle can then be disconnected by pulling back the grip sleeve of the TK22 CNG.
Optionally type TK24 CNG is also available with integrated gas recirculation.

The extended construction of the integrated TK22 CNG fuelling nozzle helps in refuelling difficult-to-access receptacles. WEH® Jaws grip symmetrically, avoiding damage to the receptacle profile which could result in leakage. To achieve optimum performance it is recommended that the TK24 CNG fuelling nozzle is used with the WEH® TN5 CNG receptacle.

Application
Fuelling nozzle for CNG fast filling of buses and trucks (also for slowfill refuelling) to be used with WEH® TN5 CNG receptacles acc. to ISO 14469-2. Operation only by specially trained service personnel. Not for self-service operation!

TECHNICAL DATA

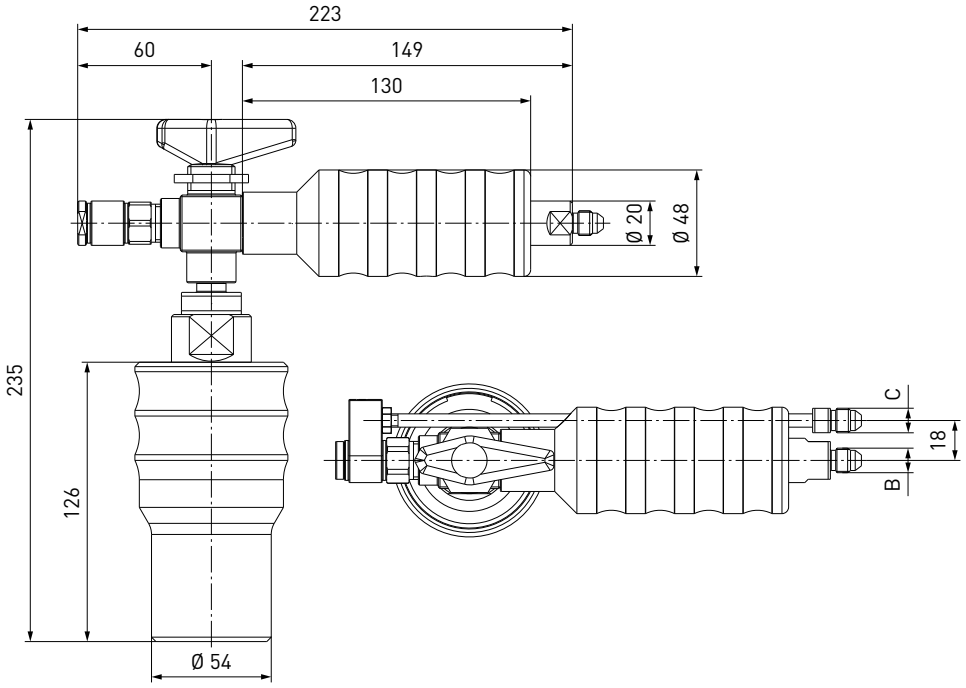
Characteristic	Basic version	Options
Nominal bore DN	5 mm	On request
Pressure range	C200 acc. to ISO 14469-2 PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (black) PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar (yellow)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection, integrated ball valve and gas recirculation	Without gas recirculation
Weight	2.7 kg (5.95 lbs.) without gas recirculation resp. 3.4 kg (7.50 lbs.) with gas recirculation	
Registration	Acc. to ISO 14469-2*	

* The NGV1 standard does not include the size 2 refuelling interface. The ISO 14469-2 can be used as a follower of the ANSI/NGV1 for the size 2 refuelling interface. The components are tested in accordance with ISO14469-2. The test program is similar to the NGV1 but displays the different profile and size of the components.

Fuelling nozzle **TK24 CNG**

ORDERING | Fuelling nozzle TK24 CNG with gas recirculation

approx. dimensions (mm)



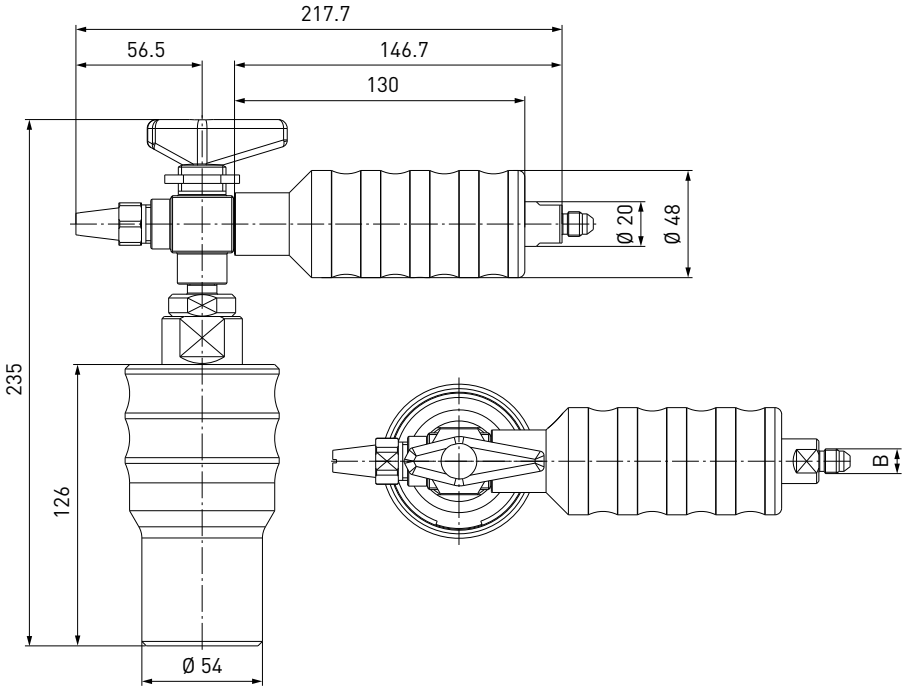
Part No.	Description	Pressure (PN)	Inlet B (external thread)	Gas recirculation C (external thread)
C1-42414-X2-X01	TK24 CNG	200 bar / 3,000 psi (black)	UNF 7/16"-20*	UNF 7/16"-20*
C1-112627	TK24 CNG	250 bar / 3,600 psi (yellow)	UNF 7/16"-20*	UNF 7/16"-20*

* acc. to SAE J514, 37°

Fuelling nozzle **TK24 CNG**

ORDERING | Fuelling nozzle TK24 CNG without gas recirculation

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Inlet B (external thread)
C1-72213-X1-X01	TK24 CNG	200 bar / 3,000 psi (black)	UNF 7/16"-20*
C1-111939	TK24 CNG	250 bar / 3,600 psi (yellow)	UNF 7/16"-20*

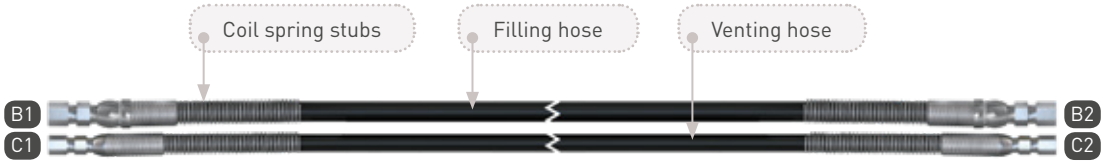
* acc. to SAE J514, 37°

ACCESSORIES

The following accessories are available for type TK24 CNG:

Hose sets TK24 CNG - TSA1 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle and type TSA1 CNG breakaway coupling, complete fittings and press-fittings supported by coil spring stubs.



Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-106385	UNF 7/16"-20*	UNF 7/16"-20*	3 m
C1-106386	UNF 7/16"-20*	UNF 7/16"-20*	4 m
C1-106387	UNF 7/16"-20*	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°

Fuelling nozzle **TK24 CNG**

Hose sets TK24 CNG - TSA2 CNG (filling and venting hose)

Filling and venting hoses for connecting fuelling nozzle / dispenser and type TSA2 CNG inline breakaway coupling, complete fittings and press-fittings supported by coil spring stubs.

Bestellnummer	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-106395	UNF 7/16"-20*	UNF 7/16"-20*	2.5 | 0.5 m
C1-106396	UNF 7/16"-20*	UNF 7/16"-20*	3.5 | 0.5 m
C1-106397	UNF 7/16"-20*	UNF 7/16"-20*	4.5 | 0.5 m

* acc. to SAE J514, 37°

Filling hoses

Filling hoses for connecting fuelling nozzle (without gas recirculation) and dispenser, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1032-3000	UNF 7/16"-20*	3 m
E68-1032-4000	UNF 7/16"-20*	4 m
E68-1032-5000	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

Part No.	Description	Connection fuelling nozzle	Connection filling hose
E80-648P	Fitting	UNF 7/16"-20* internal thread	UNF 9/16"-18* external thread

* acc. to SAE J514, 37°

Please see page 130 onwards for a detailed overview on all available fittings.

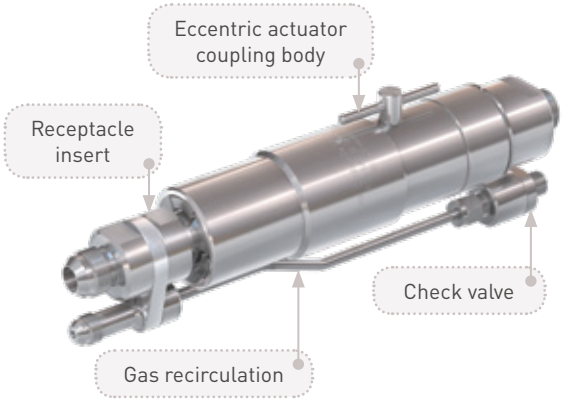
Spare parts

Various parts are available as spares for type TK24 CNG:

Part No.	Description
C1-127951	1 Spare parts set 200 bar / 3,000 psi (grip sleeve incl. metal sleeve and circlip)
C1-127950	1 Spare parts set 250 bar / 3,600 psi (grip sleeve incl. yellow impact protection, metal sleeve and circlip)
E99-44923	Maintenance spray

Breakaway coupling **TSA5 CNG**

DESCRIPTION



Features
- Re-usable without factory reservicing
- Installation at the dispenser
- Small compact design
- Integrated cleanable filter (40 micron)
- Check valve at venting line
- No additional tool necessary
- Option: without filter; without gas recirculation

The type TSA5 CNG breakaway coupling offers additional safety for your bus and truck fuelling station. The breakaway is installed between the dispenser and the filling/venting hose. In the event of accidental deployment, e.g. driving a vehicle from the dispenser with the nozzle remaining in the vehicle fuel port, the coupling will separate the connections between dispenser and hose sealing both ends. This protects largely the receptacle, the fuelling nozzle and the dispenser against damage. The detached coupling can be easily reattached and placed back in service after having been function tested.
We recommend to use breakaways with integrated filter. The filter provides clean natural gas and is easy to maintain.
Of course we also offer breakaway couplings without filter.

The breakaway device consists of a coupling body, a receptacle insert and a gas recirculation with check valve. The breakaway is also available without gas recirculation.

We also offer complete hose assemblies consisting of a fuelling nozzle, a hose set and a breakaway coupling (for complete hose assemblies see respective fuelling nozzle).

Application
Breakaway coupling for bus and truck fuelling stations for installation between the dispenser and the filling/venting hose.

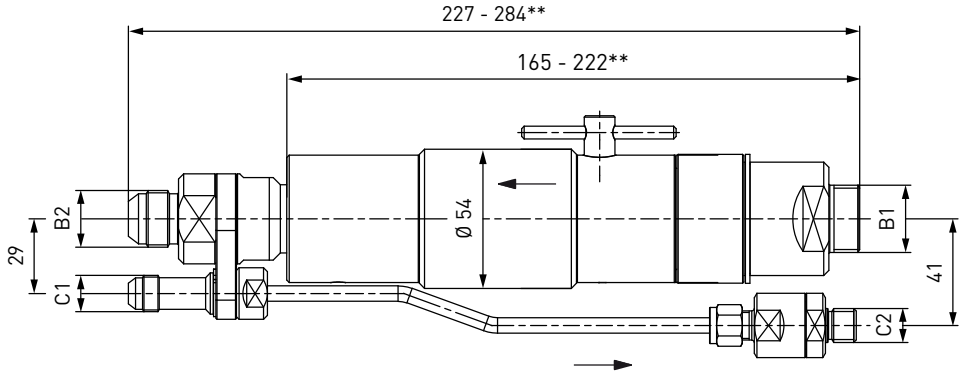
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	12 mm	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Breakaway force	300 - 600 N	On request
Material	Corrosion resistant stainless steel, aluminium	On request
Sealing material	Natural gas compatible	On request
Design	With gas recirculation and filter (40 micron)	Without gas recirculation Without filter

Breakaway coupling **TSA5 CNG**

ORDERING | Breakaway coupling TSA5 CNG with gas recirculation

approx. dimensions (mm)

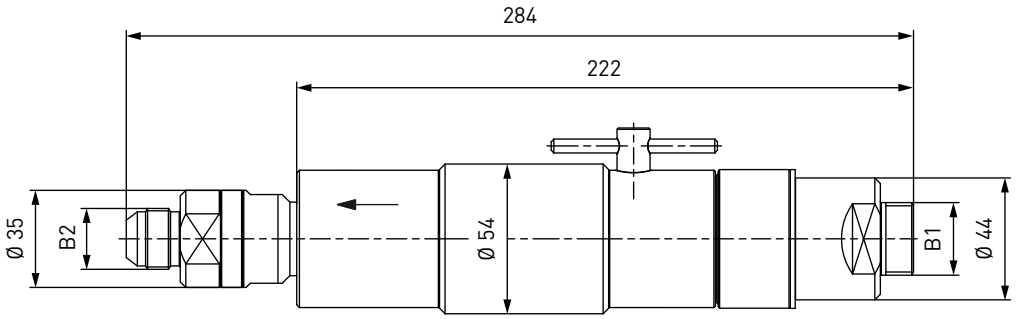


Part No.	Description	Pressure (PN)	B1 (external thread)	B2 (external thread)	C1 (external thread)	C2 (external thread)
C1-17198-X7-X01	TSA5 CNG with filter	200 bar / 3,000 psi	G3/4"	UNF 7/8"-14*	UNF 9/16"-18*	G1/4"
C1-102489-X01	TSA5 CNG with filter	250 bar / 3,600 psi	G3/4"	UNF 7/8"-14*	UNF 9/16"-18*	G1/4"
C1-17199-X7-X01	TSA5 CNG without filter	200 bar / 3,000 psi	G3/4"	UNF 7/8"-14*	UNF 9/16"-18*	G1/4"

* acc. to SAE J514, 37°
** length depending on type of breakaway coupling

ORDERING | Breakaway coupling TSA5 CNG without gas recirculation

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	B1 (external thread)	B2 (external thread)
C1-18693-X2-X01	TSA5 CNG with filter	200 bar / 3,000 psi	G3/4"	UNF 7/8"-14*

* acc. to SAE J514, 37°

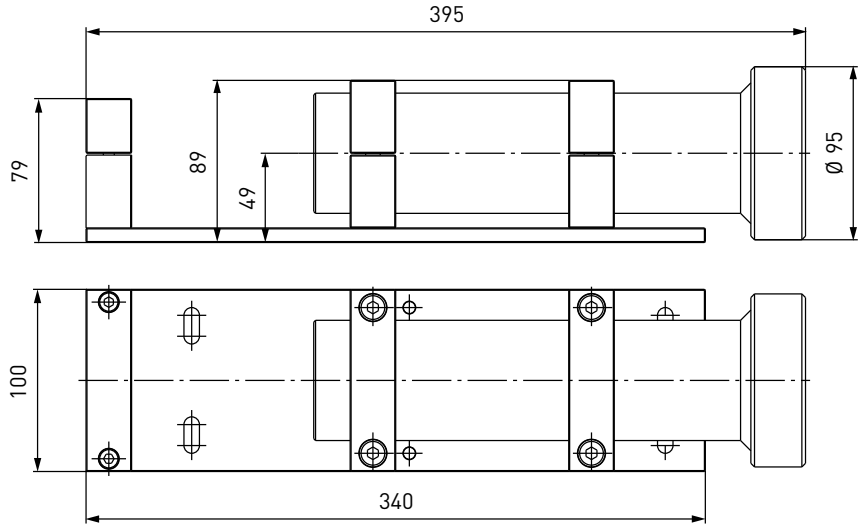
Breakaway coupling **TSA5 CNG**

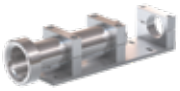
ACCESSORIES

The following accessories are available for type TSA5 CNG:

Dispenser mounting for breakaway coupling

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. The dispenser mounting can be used instead of a return pulley (hose pulley).





Part No.	Description
C1-82110	Mounting for TSA5 CNG

Filling and venting hoses

Please see page 126 or the corresponding fuelling nozzles for filling and venting hoses suitable for the type TSA5 CNG breakaway coupling.

Breakaway coupling **TSA5 CNG**

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

Part No.	Description	Connection breakaway	Connection filling hose
C1-97227	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18* internal thread
C1-79538	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18 ** internal thread
E80-647P	Fitting	UNF 9/16"-18* internal thread	UNF 7/8"-14* external thread
C1-66850	Fitting	UNF 9/16"-18* internal thread	UNF 3/4"-16* external thread
C1-65592	Fitting	UNF 9/16"-18* internal thread	NPT 1/4" internal thread
E80-52705	Fitting	UNF 7/8"-14* internal thread	UNF 9/16"-18* external thread
C1-105411	Fitting	UNF 7/8"-14* internal thread	UNF 7/16"-20* external thread
C1-48976	Fitting	UNF 7/8"-14* internal thread	NPT 1/4" external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

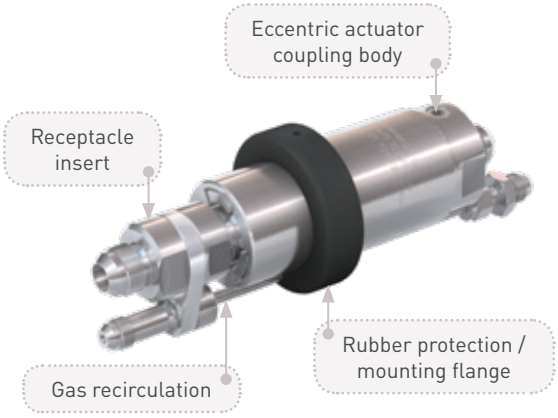
Spare parts

Various parts are available as spares for type TSA5 CNG:

Part No.	Description
W63194	Receptacle insert for type TSA5 CNG with gas recirculation
W106557	Receptacle insert for type TSA5 CNG without gas recirculation
E69-9062	Wire filter insert 40 micron (incl. spring and o-ring)
E69-46414	Copper disc for G1/4" external thread (port C2)
E69-45951	Copper disc for G3/4" external thread (port B1)

Inline breakaway coupling **TSA6 CNG**

DESCRIPTION



Features
- Re-usable without factory reservicing
- Installation inbetween the filling and venting hoses
- Small compact design
- Rubber protection / mounting flange
- Eccentric actuation via an allen wrench
- Option: without gas recirculation

With type TSA6 CNG, an inline breakaway coupling which is installed inbetween the filling and venting hoses, is now also available for bus and truck fuelling stations. In the event of accidental deployment, e.g. driving a vehicle from the dispenser with the nozzle remaining in the vehicle fuel port, the coupling will separate the connections between dispenser and hoses sealing both ends. This protects largely the receptacle, the fuelling nozzle and the dispenser against damage. The detached coupling can be easily reattached and placed back in service after having been function tested.

The breakaway device consists of a coupling body, a receptacle insert and an optional gas recirculation.

We recommend the installation of a type TSF5 CNG filter (see page 108) when using the TSA6 CNG inline breakaway coupling. The filter protects your system from dirt ingress.

We also offer complete hose assemblies consisting of a fuelling nozzle, a hose set and a breakaway coupling (for complete hose assemblies see respective fuelling nozzle).

Application
Inline breakaway coupling for bus and truck fuelling stations for installation inbetween the filling and venting hoses.

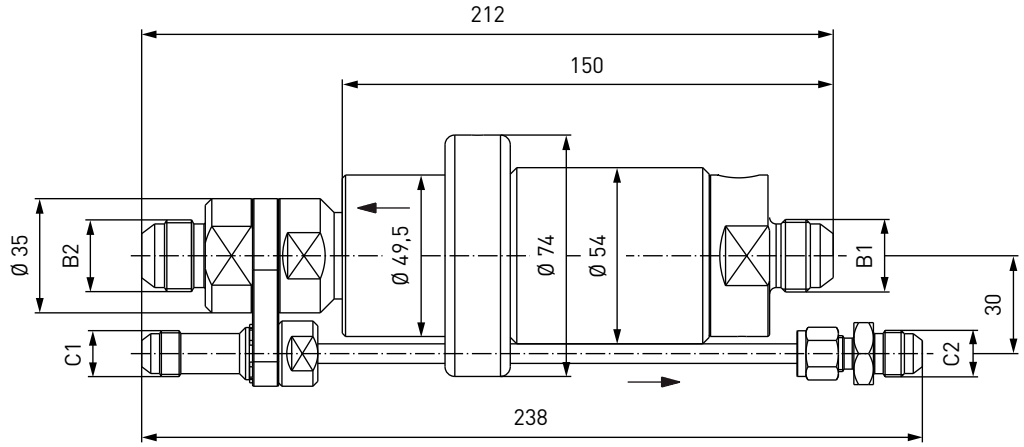
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	12 mm	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Breakaway force	300 - 600 N	On request
Material	Corrosion resistant stainless steel, aluminium	On request
Sealing material	Natural gas compatible	On request
Design	With gas recirculation	Without gas recirculation

Inline breakaway coupling **TSA6 CNG**

ORDERING | Inline breakaway coupling TSA6 CNG with gas recirculation

approx. dimensions (mm)

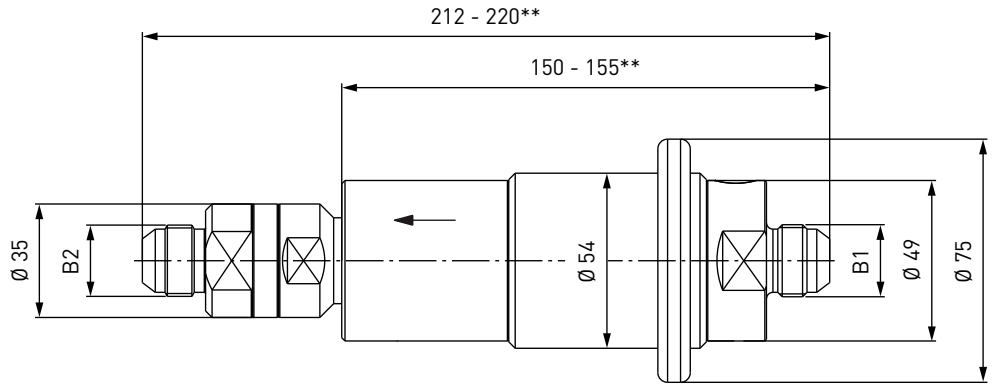


Part No.	Description	Pressure (PN)	B1/B2 (external thread)	C1/C2 (external thread)
C1-78834-X01	TSA6 CNG	200 bar / 3,000 psi	UNF 7/8"-14*	UNF 9/16"-18*
C1-102493-X01	TSA6 CNG	250 bar / 3,600 psi	UNF 7/8"-14*	UNF 9/16"-18*
C1-71057-X1-X01	TSA6 CNG	200 bar / 3,000 psi	UNF 7/8"-14*	UNF 7/16"-20*

* acc. to SAE J514, 37°

ORDERING | Inline breakaway coupling TSA6 CNG without gas recirculation

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	B1/B2 (external thread)
C1-76955-X01	TSA6 CNG	200 bar / 3,000 psi	UNF 7/8"-14*
C1-102492-X01	TSA6 CNG	250 bar / 3,600 psi	UNF 7/8"-14*
C1-74444-X1-X01	TSA6 CNG	200 bar / 3,000 psi	UN 1 1/16"-12*

* acc. to SAE J514, 37°
** length depending on type of breakaway coupling

Inline breakaway coupling **TSA6 CNG**

ACCESSORIES

The following accessories are available for type TSA6 CNG:

Filter TSF5 CNG (50 micron)

For upgrading existing inline breakaways without integrated filter, we recommend the installation of a type TSF5 CNG filter (see page 108). The filter protects your system from dirt ingress. Type TSF5 CNG is installed as prefilter in the media inlet between inline breakaway coupling and filling hose.

Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A
C1-105923-X01	TSF5 CNG	12	200 bar / 3,000 psi	UNF 7/8"-14* external thread	UNF 7/8"-14* internal thread

* acc. to SAE J514, 37°

Filling and venting hoses

Please see page 126 or the corresponding fuelling nozzles for filling and venting hoses suitable for the type TSA6 CNG inline breakaway coupling.

Fittings

Stainless steel fittings for connecting the media inlet 'B' to the filling hose or the gas recirculation inlet 'C' to the venting hose.

Part No.	Description	Connection breakaway	Connection filling hose
C1-97227	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18* internal thread
C1-79538	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18 ** internal thread
E80-647P	Fitting	UNF 9/16"-18* internal thread	UNF 7/8"-14* external thread
C1-66850	Fitting	UNF 9/16"-18* internal thread	UNF 3/4"-16* external thread
C1-65592	Fitting	UNF 9/16"-18* internal thread	NPT 1/4" internal thread
E80-52705	Fitting	UNF 7/8"-14* internal thread	UNF 9/16"-18* external thread
C1-105411	Fitting	UNF 7/8"-14* internal thread	UNF 7/16"-20* external thread
C1-48976	Fitting	UNF 7/8"-14* internal thread	NPT 1/4" external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

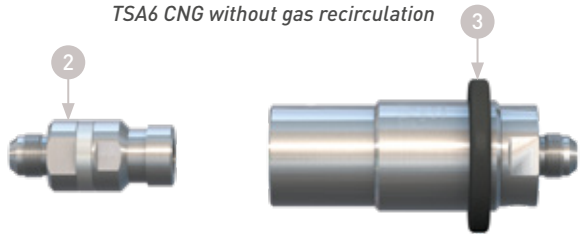
Please see page 130 onwards for a detailed overview on all available fittings.

Inline breakaway coupling **TSA6 CNG**

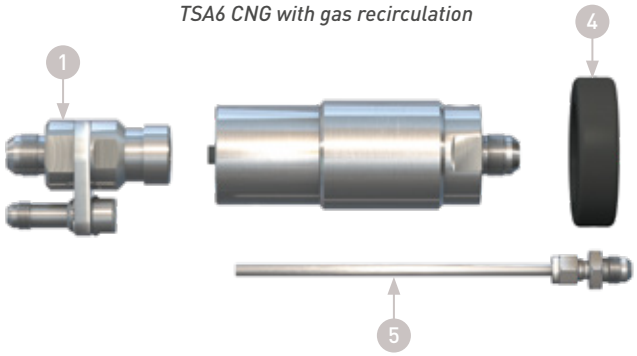
Spare parts

Various parts are available as spares for type TSA6 CNG:

TSA6 CNG without gas recirculation



TSA6 CNG with gas recirculation



Part No.	Description
W83706	1 Receptacle insert for type TSA6 CNG with gas recirculation (C1-78834, C1-102493)
W71060	1 Receptacle insert for type TSA6 CNG with gas recirculation (C1-71057)
W106557	2 Receptacle insert for type TSA6 CNG without gas recirculation (C1-76955, C1-102492)
W74634	2 Receptacle insert for type TSA6 CNG without gas recirculation (C1-74444)
E80-76830	3 Rubber protection
E80-72682	4 Mounting flange
E80-71101	5 Gas recirculation tube
C1-119726	Spare seal set for receptacle insert W83706 and W71060
C1-119725	Spare seal set for receptacle insert W106557 and W74634

Receptacle **TN5 CNG**

DESCRIPTION

Features
- Compatible with fuelling nozzles acc. to ISO 14469-2
- Low-noise refuelling
- Integrated high-flow check valve
- Sealing-friendly design
- Option: integrated particle filter (50 micron)
- Coding for pressure range / gas type

The WEH® TN5 CNG receptacle is designed specifically for bus and truck refuelling. Due to the internal aerodynamic design the TN5 CNG receptacle gives low noise (no high frequency whistle) combined with maximum flow rate and fast filling. The receptacle is a very durable unit, minimizing maintenance and down-time. The type TN5 CNG also has an integrated check valve system which is designed to minimize the effect that dirt particles have on the sealing components within the receptacle. The TN5 CNG receptacle is equipped with a coding for pressure range and gas type.

The WEH® TN5 CNG receptacle works best with WEH® Fuelling nozzles. We recommend the fuelling nozzles type TK26 CNG, TK22 CNG and TK24 CNG.

Application
Receptacle for refuelling of buses and trucks with CNG to be used with WEH® Fuelling nozzles acc. to ISO 14469-2.
Only use receptacles with ECE approval for fitment in vehicles!

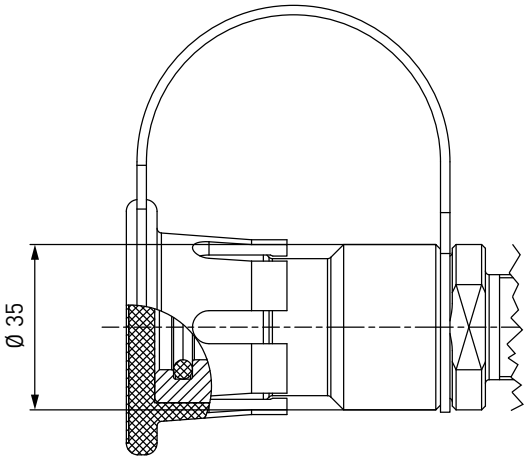
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE) PN = 250 bar (3,600 psi) | PS = 260 bar | PT = 390 bar (ECE) PN = 250 bar (3,600 psi) | PS = 315 bar | PT = 475 bar	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With protection cap (except for receptacles with ACME thread) and fittings (only for receptacles with tube fitting)	Without protection cap Integrated particle filter (40 micron)
Registration	E1 110R-000007 (ECE)	

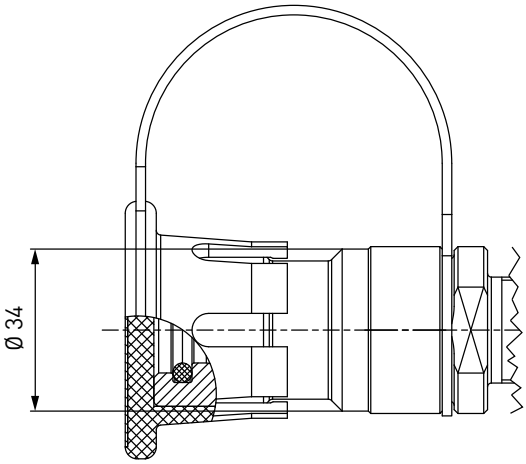
Receptacle **TN5 CNG**

PRESSURE RANGES 200 BAR (3,000 PSI) | 250 BAR (3,600 PSI)

Pressure range 200 bar (3,000 psi)

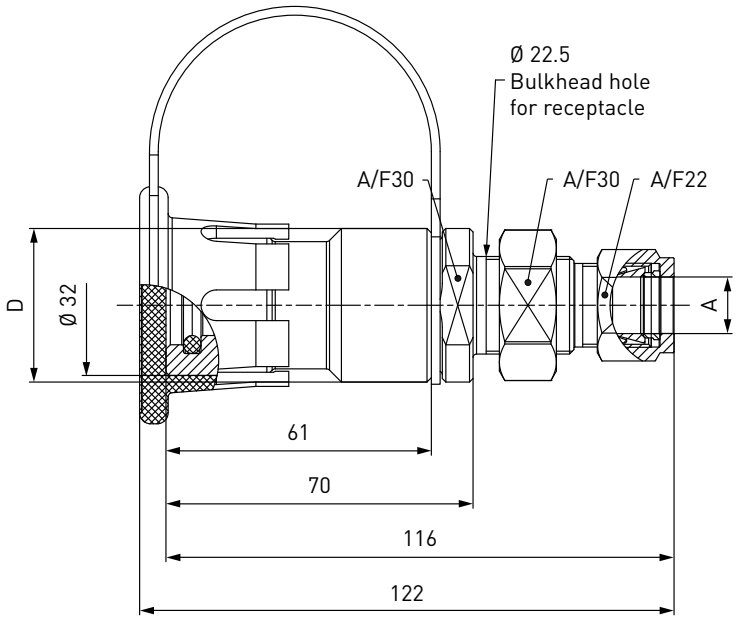


Pressure range 250 bar (3,600 psi)



ORDERING | Receptacle TN5 CNG with tube fitting and filter (50 micron)

approx. dimensions (mm)



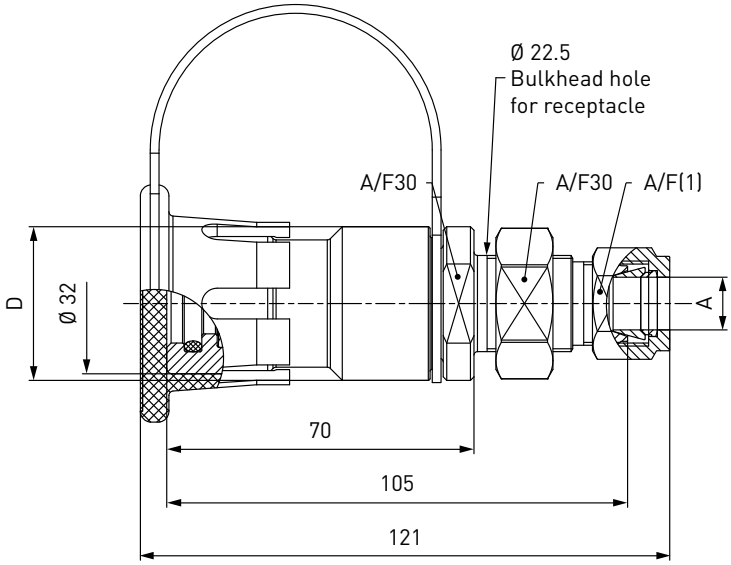
Part No.	Description	DN	Pressure (PN)	Connection A	D
C1-101906	TN5 CNG (ECE)	8	200 bar / 3,000 psi	Tube Ø 10*	Ø 35
C1-106903	TN5 CNG (ECE)	10	200 bar / 3,000 psi	Tube Ø 12*	Ø 35
C1-106906	TN5 CNG (ECE)	10	250 bar / 3,600 psi	Tube Ø 12*	Ø 34
C1-81605	TN5 CNG (ECE)	10	200 bar / 3,000 psi	Tube Ø 1/2"*	Ø 35
C1-81615	TN5 CNG (ECE)	10	250 bar / 3,600 psi	Tube Ø 1/2"*	Ø 34
C1-108583	TN5 CNG (ECE)	12	200 bar / 3,000 psi	Tube Ø 16*	Ø 35
C1-108584	TN5 CNG (ECE)	12	250 bar / 3,600 psi	Tube Ø 16*	Ø 34

* double ferrule fitting

Receptacle **TN5 CNG**

ORDERING | Receptacle TN5 CNG with tube fitting (without filter)

approx. dimensions (mm)

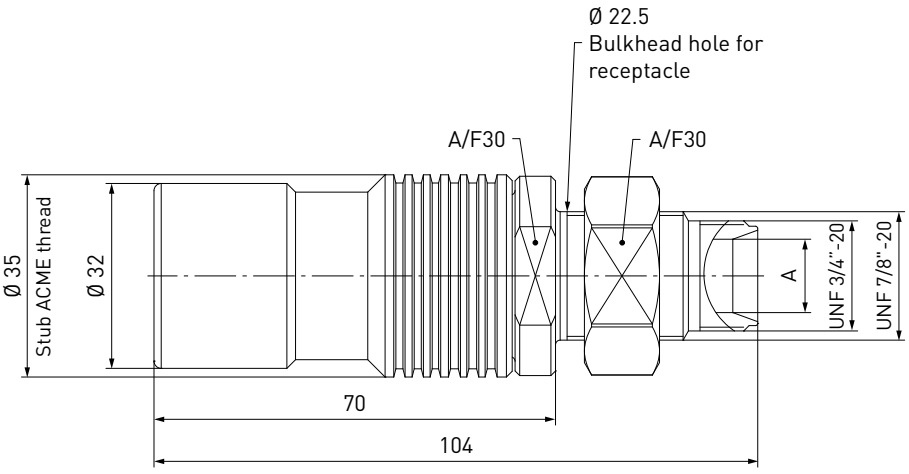


Part No.	Description	DN	Pressure (PN)	Connection A	D	A/F(1)
C1-49817	TN5 CNG (ECE)	10	200 bar / 3,000 psi	Tube Ø 12*	Ø 35	22
C1-105717-X01	TN5 CNG	10	250 bar / 3,600 psi	Tube Ø 12*	Ø 34	22
C1-108330	TN5 CNG (ECE)	10	200 bar / 3,000 psi	Tube Ø 1/2"*	Ø 35	22
C1-81623	TN5 CNG (ECE)	10	250 bar / 3,600 psi	Tube Ø 1/2"*	Ø 34	22
C1-35401	TN5 CNG (ECE)	12	200 bar / 3,000 psi	Tube Ø 16*	Ø 35	25
C1-33744	TN5 CNG (ECE)	12	250 bar / 3,600 psi	Tube Ø 16*	Ø 34	25

* double ferrule fitting

ORDERING | Receptacle TN5 CNG with tube fitting and ACME thread and filter (50 micron)

approx. dimensions (mm)



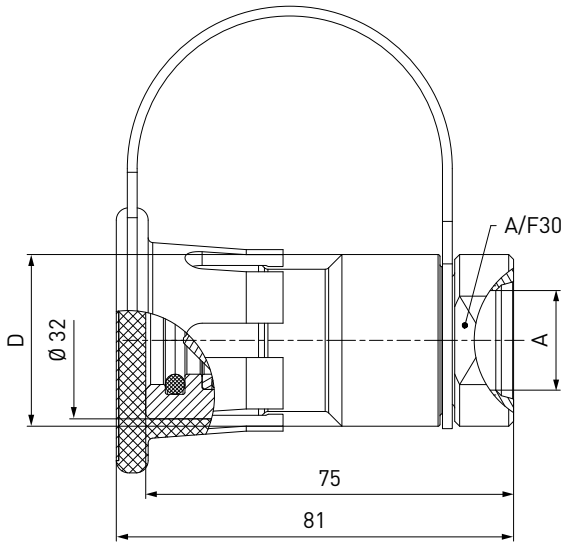
Part No.	Description	DN	Pressure (PN)	Connection A
C1-106904	TN5 CNG (ECE)	10	200 bar / 3,000 psi	Tube Ø 1/2"*

* double ferrule fitting

Receptacle **TN5 CNG**

ORDERING | Receptacle TN5 CNG with internal thread (without filter)

approx. dimensions (mm)

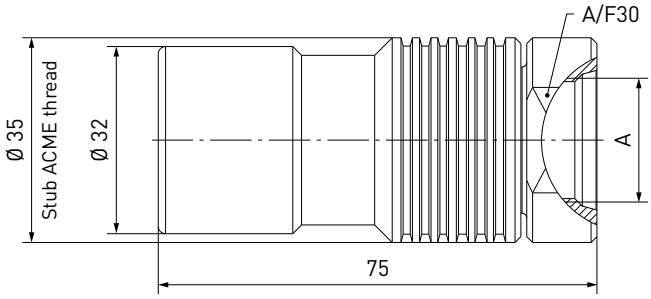


Part No.	Description	DN*	Pressure (PN)	Connection A (internal thread)	D
C1-35432	TN5 CNG (ECE)	12	200 bar / 3,000 psi	UNF 7/8"-14**	Ø 35
C1-42194	TN5 CNG (ECE)	12	250 bar / 3,600 psi	UNF 7/8"-14**	Ø 34

* depending on inner diameter of tube
** acc. to SAE J1926

ORDERING | Receptacle TN5 CNG with internal thread and ACME thread (without filter)

approx. dimensions (mm)



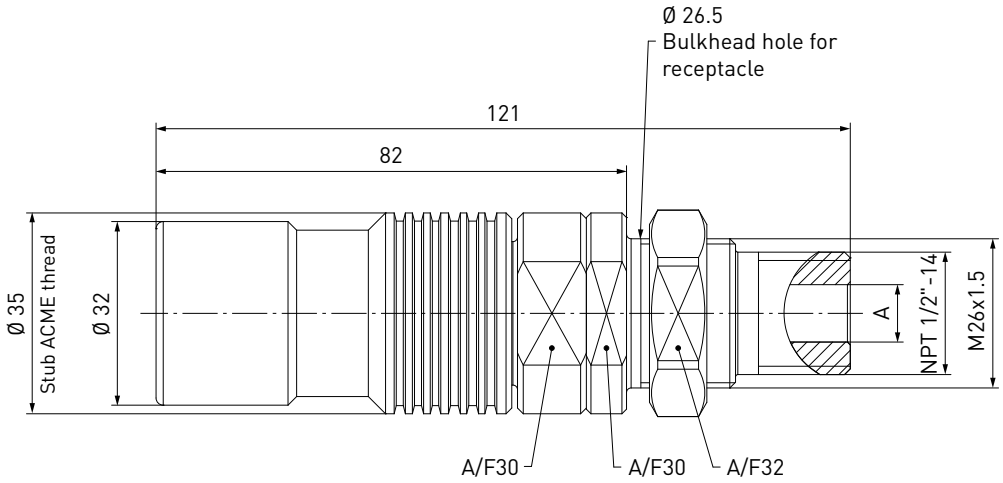
Part No.	Description	DN*	Pressure (PN)	Connection A (internal thread)
C1-84168	TN5 CNG (ECE)	14	200 bar / 3,000 psi	UNF 7/8"-14**

* depending on inner diameter of tube
** acc. to SAE J1926

Receptacle **TN5 CNG**

ORDERING | Receptacle TN5 CNG with external NPT thread and ACME thread (without filter)

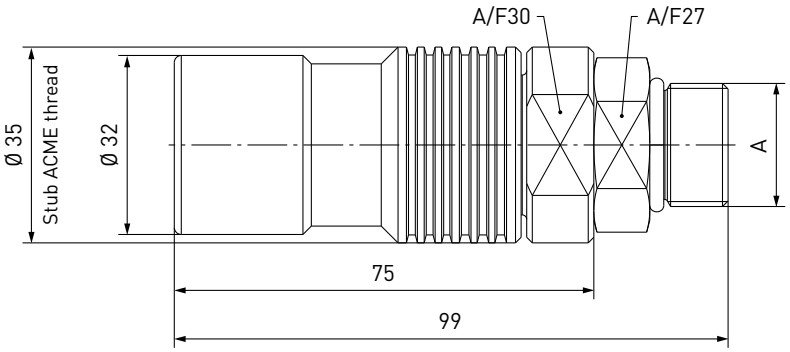
approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Connection A (external thread)
C1-101485	TN5 CNG (ECE)	10	200 bar / 3,000 psi	NPT 1/2"

ORDERING | Receptacle TN5 CNG with external UNF thread and ACME thread (without filter)

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Connection A (external thread)
C1-84870	TN5 CNG (ECE)	10	200 bar / 3,000 psi	UNF 7/8"-14*

* acc. to SAE J1926

Other connection sizes on request.

Receptacle **TN5 CNG**

SPARE PARTS

Various parts are available as spares for type TN5 CNG:

Protection cap

Protection cap with a strap to protect the type TN5 CNG receptacle from dirt ingress.

Part No.	Description
E80-42725	Protection cap

Fuelling system **TS55 CNG**

DESCRIPTION

Features
- Integrated WEH® TN5 CNG receptacle without filter
- Handy cap
- Dirt and splash waterproof construction
- No danger of freezing
- Option: starter cut-off switch

A WEH® Fuelling system for refuelling buses and trucks is also available. The TS55 CNG consists of a fully assembled housing with an integrated large receptacle and enables easy retrofitting of buses and trucks to compressed natural gas. The converted vehicle can be easily refuelled from the outside by simply removing the fuel tank cap and connecting the nozzle to the receptacle. Then refuelling can start.
The integrated WEH® TN5 CNG receptacle ensures rapid filling with a high flow rate and reduced noise during refuelling. The fuelling system consists of two preinstalled housings for mounting into the vehicle.

Conversion:
When retrofitting buses and trucks to natural gas, the TS55 CNG fuelling system is installed into the vehicle body panel. For this, the panel needs an appropriate aperture for installation in which the TS55 CNG fuelling system can be easily inserted. The installer will find this system significantly easier than receptacle installation in the engine compartment.

Application
Fuelling system for installation in buses and trucks.

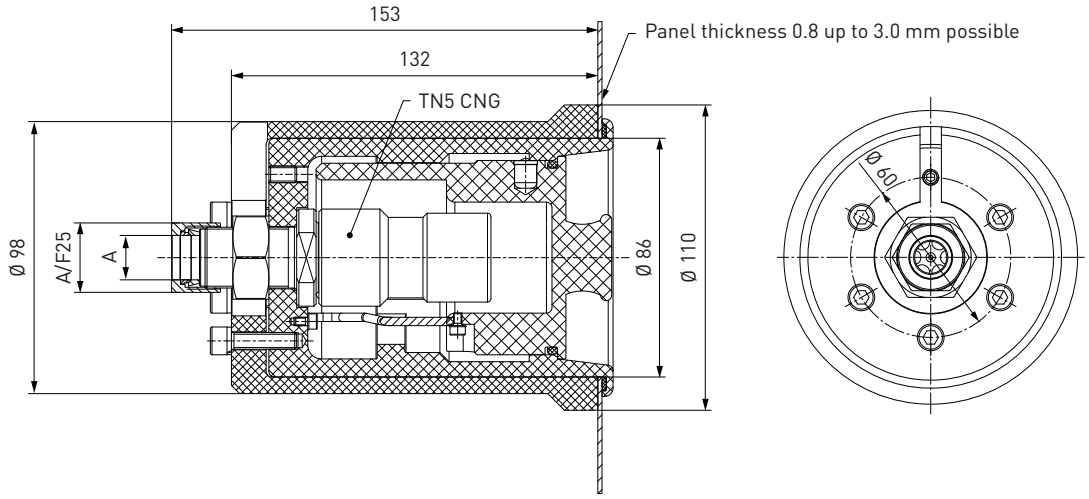
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	12 mm	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE)	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Housing: plastic Receptacle: corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	Incl. TN5 CNG receptacle without filter, fuel tank cap and fittings	TN5 CNG receptacle with filter With starter cut-off micro switch (protection type IP67)
Registration	E1 110R-000007 (TN5 CNG)	

Fuelling system **TS55 CNG**

ORDERING | Fuelling system TS55 CNG

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Connection A
C1-62854	TS55 CNG	200 bar / 3,000 psi	Tube Ø 16*
C1-62690	TS55 CNG with starter cut-off switch	200 bar / 3,000 psi	Tube Ø 16*

* double ferrule fitting

Other connection sizes and version on request.

SPARE PARTS

Various parts are available as spares for type TS55 CNG:

Part No.	Description
W84958	1 Fuel tank cap

Check valve **TVR5 CNG**

DESCRIPTION

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

Type TVR5 CNG is the largest of our check valves. It is most efficient and developed specifically for CNG buses and trucks. The check valve system is designed to minimize the effect of dirt particles on the sealing components within the unit. The WEH® TVR5 CNG check valve is constructed of corrosion-resistant stainless steel achieving a very durable unit due to its robust internal structure.

Application
Check valve for buses and trucks (ECE approval), also suitable for installation in fuelling stations.
Only use check valves with ECE approval for fitment in vehicles!

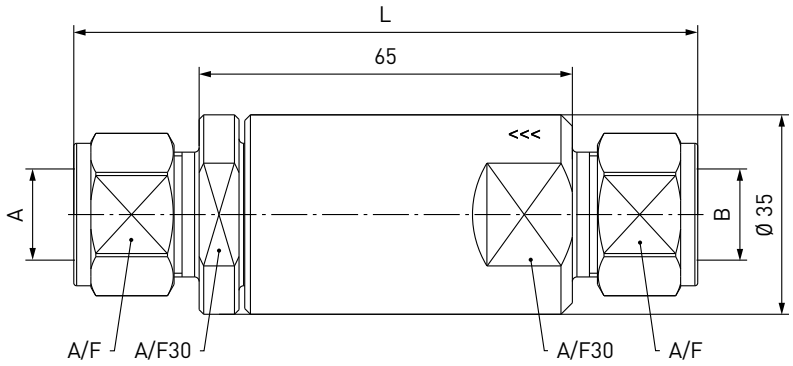
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE) PN = 250 bar (3,600 psi) | PS = 315 bar | PT = 475 bar	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant stainless steel	On request
Sealing material	Natural gas compatible	On request
Design	Incl. fittings (only for check valves with tube fitting)	On request
Registration	E1 110R-000015 (ECE)	

Check valve **TVR5 CNG**

ORDERING | Check valve TVR5 CNG with tube fitting on both sides

approx. dimensions (mm)

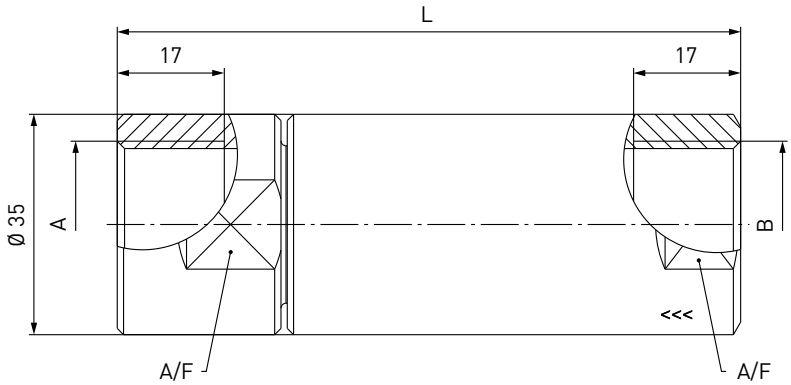


Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A	L	A/F
C1-54787	TVR5 CNG (ECE)	9	200 bar / 3,000 psi	Tube Ø 12*	Tube Ø 12*	110	22
C1-76354-X01	TVR5 CNG	9	250 bar / 3,600 psi	Tube Ø 12*	Tube Ø 12*	110	22
C1-81616	TVR5 CNG (ECE)	9	200 bar / 3,000 psi	Tube Ø 1/2"*	Tube Ø 1/2"*	110	22
C1-41732	TVR5 CNG (ECE)	12	200 bar / 3,000 psi	Tube Ø 16*	Tube Ø 16*	110	25
C1-15506-X1-X01	TVR5 CNG	12	250 bar / 3,600 psi	Tube Ø 16*	Tube Ø 16*	110	25

* double ferrule fitting

ORDERING | Check valve TVR5 CNG with internal thread on both sides

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (internal thread)	L	A/F
C1-40046-X1-X01	TVR5 CNG	12	250 bar / 3,600 psi	G1/2"*	G1/2"*	95	30
C1-41734	TVR5 CNG (ECE)	12	200 bar / 3,000 psi	G3/4"*	G3/4"*	99	32
C1-15507-X1-X01	TVR5 CNG	12	250 bar / 3,600 psi	G3/4"*	G3/4"*	99	32

* acc. to ISO 228-1

Other connection sizes and versions on request.

Filter **TSF1 CNG**

DESCRIPTION

Features
- For CNG free of impurities
- Prefilter for fuelling nozzles
- For installation between fuelling nozzle and filling hose

Contaminants in the gas flow can enter the vehicle's storage tank during refuelling. These dirt particles in the natural gas fuel may cause damage to the sealing components. WEH, therefore, offers CNG filter for clean natural gas. Solid particles are captured reliably.
The TSF1 CNG filter is used for fuelling stations and dispensers as well as onboard CNG powered vehicles. The filter is mainly installed as prefilter in the media inlet between fuelling nozzle and filling hose.

Application
Filter for installation as prefilter between fuelling nozzle and filling hose.
Only use filters with ECE approval for fitment in vehicles!

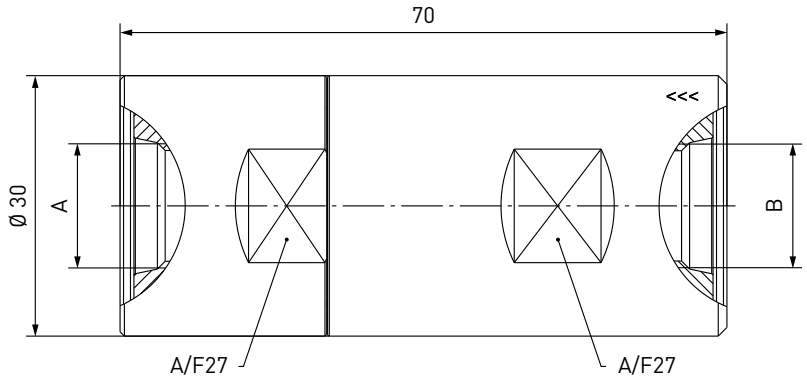
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	8 mm	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE) PN = 250 bar (3,600 psi) | PS = 315 bar | PT = 475 bar	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant stainless steel	On request
Sealing material	Natural gas compatible	On request
Filter element	50 resp. 40 micron, depending on design	On request
Registration	E1 110R-000100 (ECE)	

Filter **TSF1 CNG**

ORDERING | Filter TSF1 CNG (50 micron) with internal thread on both sides

approx. dimensions (mm)

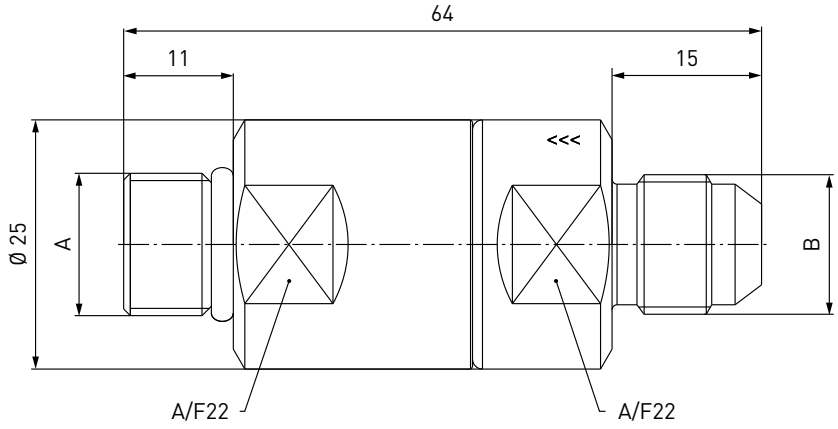


Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (internal thread)
C1-66532**	TSF1 CNG (ECE)	8	200 bar / 3,000 psi	UNF 9/16"-18*	UNF 9/16"-18*

* acc. to SAE J1926
** The filter element can be removed and is re-usable after having been cleaned

ORDERING | Filter TSF1 CNG (40 micron) with external thread on both sides

approx. dimensions (mm)



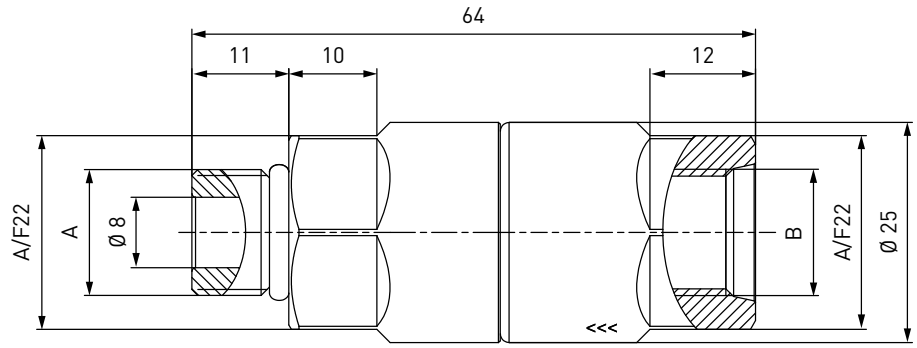
Part No.	Description	DN	Pressure (PN)	Inlet B (external thread)	Outlet A (external thread)
C1-106854-X01	TSF1 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18*	UNF 9/16"-18**

* acc. to SAE J514, 37°
** acc. to SAE J1926

Filter **TSF1 CNG**

ORDERING | Filter TSF1 CNG (40 micron) with internal thread and external thread

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (external thread)
C1-94070-X01	TSF1 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18*	UNF 9/16"-18*
C1-100700-X01	TSF1 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18* LH	UNF 9/16"-18* LH

* acc. to SAE J1926

SPARE PARTS

Various parts are available as spares for type TSF1 CNG:

Part No.	Description
C1-131848	Maintenance set consisting of o-ring, filter element and back-up ring (for C1-66532)

Filter **TSF1 CNG**

Filter **TSF2 CNG**

DESCRIPTION

Features
- For CNG free of impurities
- Filter insert can be cleaned
- For installation onboard CNG vehicles and in fuelling stations

Contaminants in the gas flow can enter the vehicle's storage tank during refuelling. These dirt particles in the natural gas fuel may cause damage to the sealing components. WEH, therefore, offers CNG filter for clean natural gas. Solid particles are captured reliably.
The filter element can be removed and is re-usable after having been cleaned.
The TSF2 CNG filter is mainly used for fuelling stations and dispensers.

Application
Filter for installation onboard CNG vehicles and in fuelling stations.
Only use filters with ECE approval for fitment in vehicles!

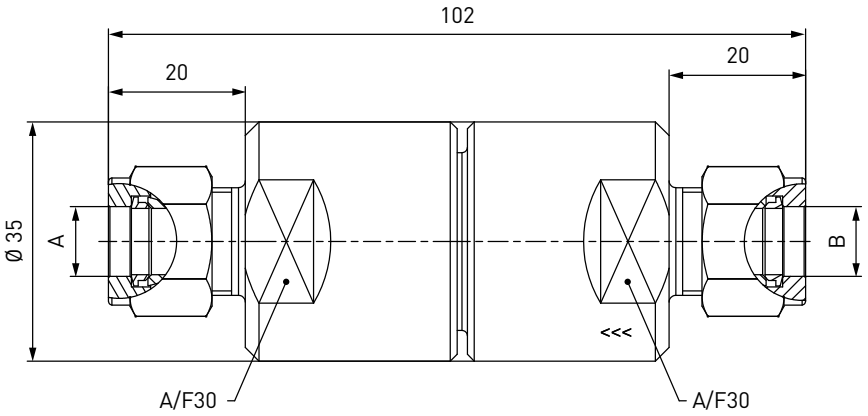
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant stainless steel	On request
Sealing material	Natural gas compatible	On request
Filter element	40 micron	50 micron, others on request
Design	Incl. fittings (only for filters with tube fitting)	On request
Registration	ECE approval on request	

Filter **TSF2 CNG**

ORDERING | Filter TSF2 CNG (40 micron) with tube fitting on both sides

approx. dimensions (mm)

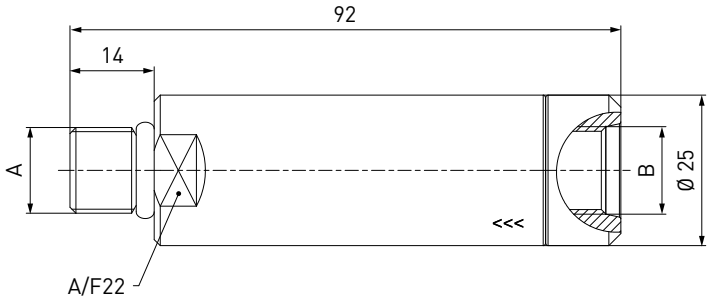


Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A
C1-106736-X01	TSF2 CNG	5	200 bar / 3,000 psi	Tube Ø 6*	Tube Ø 6*
C1-106750	TSF2 CNG	5	200 bar / 3,000 psi	Tube Ø 1/4"*	Tube Ø 1/4"*
C1-106746-X01	TSF2 CNG	6	200 bar / 3,000 psi	Tube Ø 8*	Tube Ø 8*
C1-106751	TSF2 CNG	8	200 bar / 3,000 psi	Tube Ø 3/8"*	Tube Ø 3/8"*
C1-16840-X1-X01	TSF2 CNG	8	200 bar / 3,000 psi	Tube Ø 10*	Tube Ø 10*

* double ferrule fitting

ORDERING | Filter TSF2 CNG (40 micron) with internal and external thread

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (internal thread)
C1-15334-X01	TSF2 CNG	8	200 bar / 3,000 psi	UNF 9/16"-18*	UNF 9/16"-18*

* acc. to SAE J1926

SPARE PARTS

Various parts are available as spares for type TSF2 CNG:

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

Coalescing filter **TSF2 CNG**

DESCRIPTION

Features

- Fine filter with high particle removal efficiency (efficiency of approx. 99.9% > 0.3 micron)
- For installation onboard CNG vehicles and in fuelling stations
- Protection of critical components in the fuel system
- Laterally offset flow possible
- Aluminium construction
- Ease of maintenance

Clean, filtered gases are essential to guarantee the proper function of components for vehicles and fuelling stations when refuelling with natural gas. The WEH® TSF2 CNG coalescing filter was developed to remove particles from the gas flow. When filtering the gas flow, the coalescing filter reliably removes contaminants such as oil, water and dirt particles which are contained in the gas. This contamination is isolated by the coalescing filter. Natural gas flows through the filter, whereas contaminants such as oil, water and other aerosols coalesce, and drop into the sump of the filter, where they are separated into a drain port.
The filters are easy to maintain and can be installed onboard vehicles and in fuelling stations at any time.

Application
Coalescing filter for installation onboard CNG vehicles and in fuelling stations.
Only use filters with ECE approval for fitment in vehicles!

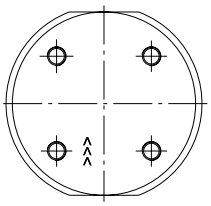
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE)	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant Housing: aluminium	On request
Sealing material	Natural gas compatible	On request
Filter element	< 1 micron	On request
Registration	E1 110R-000189 (ECE)	

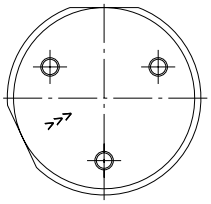
Coalescing filter **TSF2 CNG**

ORDERING | Coalescing filter TSF2 CNG with filter cartridge Ø 25.4 mm

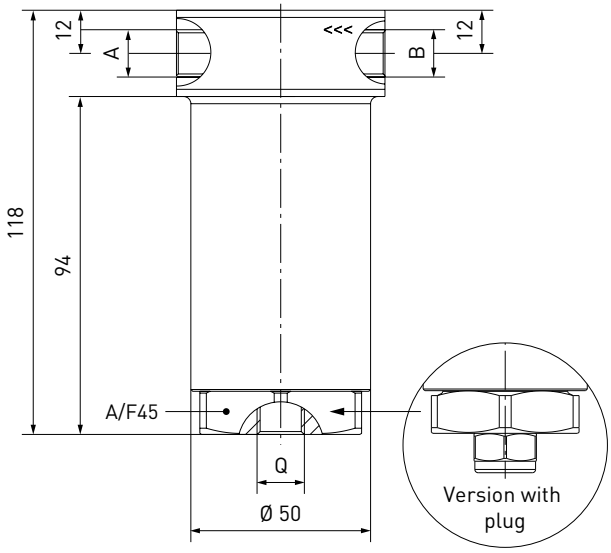
approx. dimensions (mm)



Straight flow



Lateral flow displaced



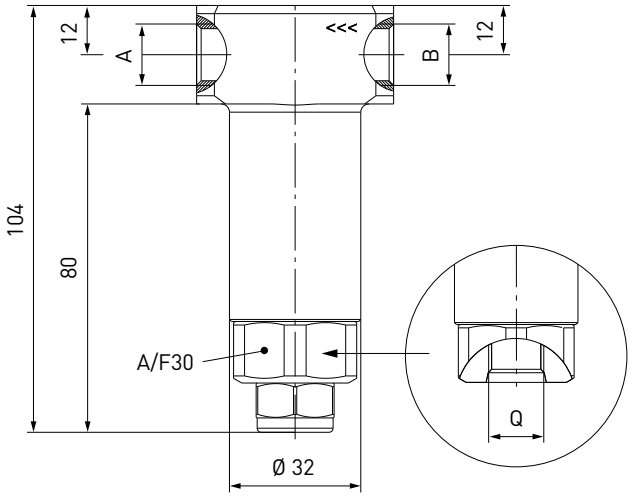
Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (internal thread)	Drain port Q (internal thread)
C1-82999**	TSF2 CNG (ECE)	4	200 bar / 3,000 psi	NPT 1/4"	NPT 1/4"	UNF 9/16"-18*
C1-79766**	TSF2 CNG (ECE)	4	200 bar / 3,000 psi	UNF 9/16"-18*	UNF 9/16"-18*	UNF 9/16"-18*
C1-81722	TSF2 CNG (ECE)	4	200 bar / 3,000 psi	G1/4"	G1/4"	G1/4"
C1-81766	TSF2 CNG (ECE)	4	200 bar / 3,000 psi	G1/4"	G1/4" flow direction 115° RH	G1/4"

* acc. to SAE J1926
** incl. plug with o-ring

Coalescing filter **TSF2 CNG**

ORDERING | Coalescing filter TSF2 CNG with filter cartridge Ø 19.3 mm

approx. dimensions (mm)

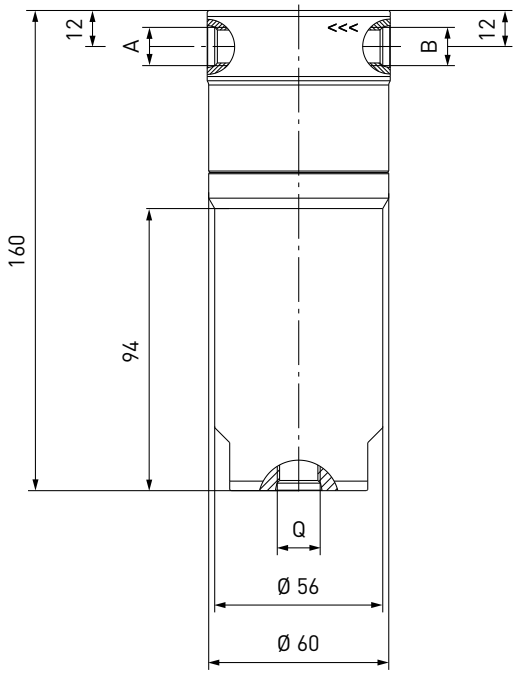


Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (internal thread)	Drain port Q (internal thread)
C1-89582**	TSF2 CNG (ECE)	4	200 bar / 3,000 psi	NPT 1/4"	NPT 1/4"	UNF 9/16"-18*

* acc. to SAE J1926
** incl. plug with o-ring

ORDERING | Coalescing filter TSF2 CNG with filter cartridge Ø 38.0 mm

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (internal thread)	Drain port Q (internal thread)
C1-89633	TSF2 CNG (ECE)	10	200 bar / 3,000 psi	UNF 9/16"-18*	UNF 9/16"-18*	UNF 9/16"-18*

* acc. to SAE J1926

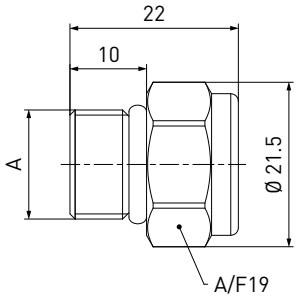
Coalescing filter **TSF2 CNG**

ACCESSORIES

The following accessories are available for type TSF2 CNG coalescing filter:

Plug

Plug with o-ring for closing the drain port 'Q' (end of the filter).
Design: Plug incl. polyurethane o-ring



Part No.	Description	Connection A
E69-93336	Plug with o-ring	UNF 9/16"-18* external thread
E69-108334	Plug with o-ring	G1/4" external thread

* acc. to SAE J1926

Filter cartridge Ø 19.3

For type TSF2 CNG with filter cartridge Ø 19.3 mm
Design: outer Ø 19.3 mm, inner Ø 12.5 mm

Part No.	Description	Length
E69-89541	for C1-89582	40.0 mm

Filter cartridge Ø 25.4

For type TSF2 CNG with filter cartridge Ø 25.4 mm
Design: outer Ø 25.4 mm, inner Ø 12.5 mm

Part No.	Description	Length
E69-79770	for C1-82999, C1-81766, C1-81722, C1-67454	56.0 mm

Filter cartridge Ø 38.0

For type TSF2 CNG with filter cartridge Ø 38.0 mm
Design: outer Ø 38.0 mm, inner Ø 22.5 mm

Part No.	Description	Length
E69-89626	for C1-89633	90.0 mm

Filter **TSF4 CNG**

DESCRIPTION

Features
- For CNG free of impurities
- Filter insert can be cleaned
- For installation onboard CNG vehicles and in fuelling stations

Contaminants in the gas flow can enter the vehicle's storage tank during refuelling. These dirt particles in the natural gas fuel may cause damage to the sealing components. WEH, therefore, offers CNG filter for clean natural gas. Solid particles are captured reliably.
The filter element can be removed and is re-usable after having been cleaned.
The TSF4 CNG filter is mainly used for onboard CNG powered vehicles, but can also be used for fuelling stations and dispensers.
Type TSF4 CNG round filter is available with tube fitting or internal thread on both sides or external and internal thread.

TSF4 CNG T-filter has been specially designed for use in CNG buses and trucks. The filter can be removed for cleaning purposes without tedious unscrewing of the media lines.

T-filter TSF4 CNG

Application
Filter for installation onboard CNG vehicles and in fuelling stations.
Only use filters with ECE approval for fitment in vehicles!

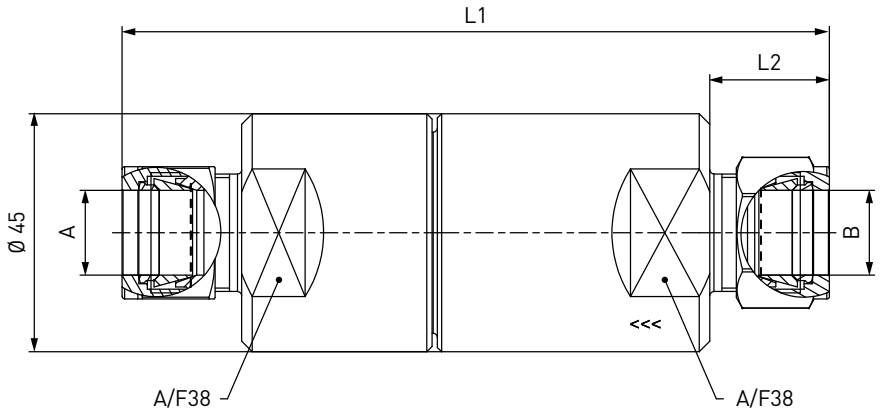
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant stainless steel	On request
Sealing material	Natural gas compatible	On request
Filter element	40 resp. 10 micron, depending on design	On request
Design	Incl. fittings (only for filters with tube fitting)	On request
Registration	E1 110R-000017 (ECE)	

Filter **TSF4 CNG**

ORDERING | Round filter TSF4 CNG (40 micron) with tube fitting on both sides

approx. dimensions (mm)

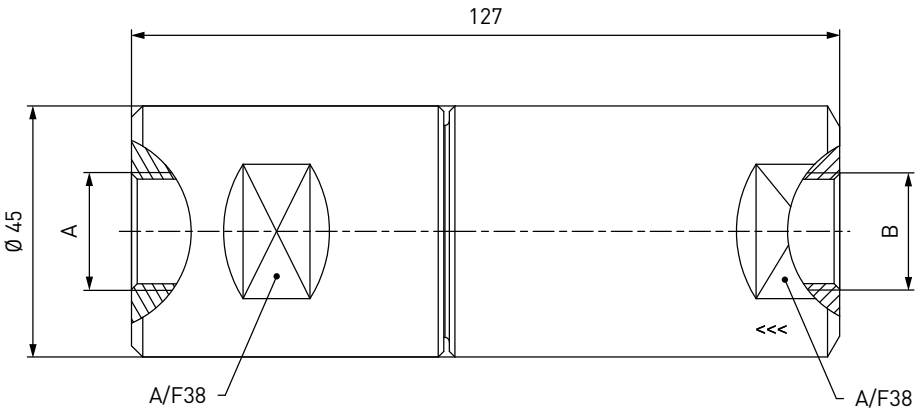


Part No.	Description	DN	Pressure (PN)	Inlet B	Outlet A	L1	L2
C1-106765-X01	TSF4 CNG	8	200 bar / 3,000 psi	Tube Ø 10*	Tube Ø 10*	129	20
C1-102742	TSF4 CNG (ECE)	10	200 bar / 3,000 psi	Tube Ø 12*	Tube Ø 12*	133	22
C1-32744-X01	TSF4 CNG	10	200 bar / 3,000 psi	Tube Ø 12*	Tube Ø 12*	133	22
C1-42476	TSF4 CNG (ECE)	12	200 bar / 3,000 psi	Tube Ø 16*	Tube Ø 16*	134	23
C1-16843-X01	TSF4 CNG	12	200 bar / 3,000 psi	Tube Ø 16*	Tube Ø 16*	134	23

* double ferrule fitting

ORDERING | Round filter TSF4 CNG (40 micron) with internal thread on both sides

approx. dimensions (mm)

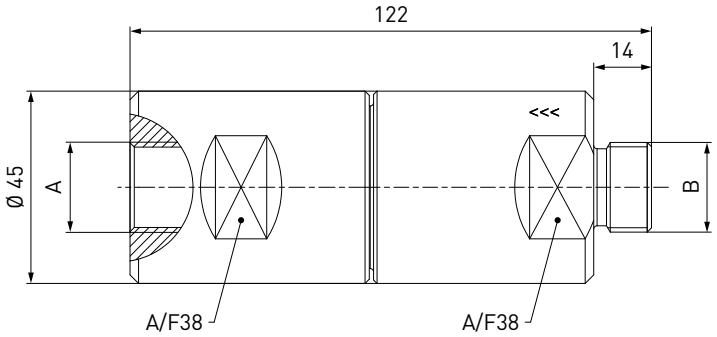


Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (internal thread)
C1-50371-X01	TSF4 CNG	12	200 bar / 3,000 psi	G1/2"	G1/2"
C1-99215	TSF4 CNG (ECE)	12	200 bar / 3,000 psi	NPT 1/2"	NPT 1/2"

Filter **TSF4 CNG**

ORDERING | Round filter TSF4 CNG (40 micron) with external and internal thread

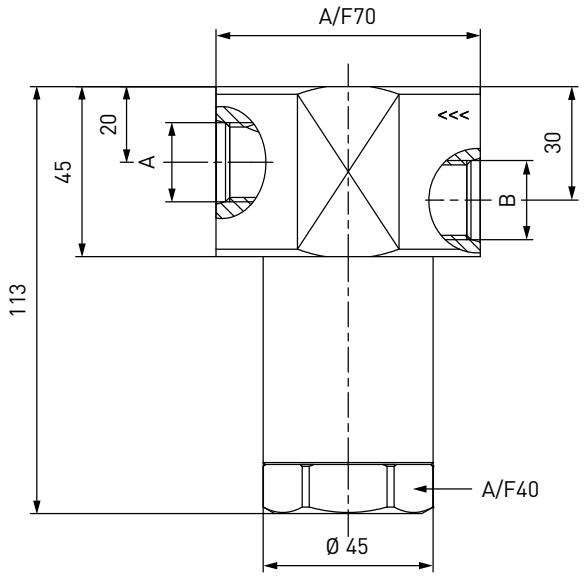
approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Inlet B (external thread)	Outlet A (internal thread)
C1-42578-X01	TSF4 CNG	12	200 bar / 3,000 psi	G1/2"	G1/2"

ORDERING | T-filter TSF4 CNG (40 micron) with internal thread on both sides

approx. dimensions (mm)

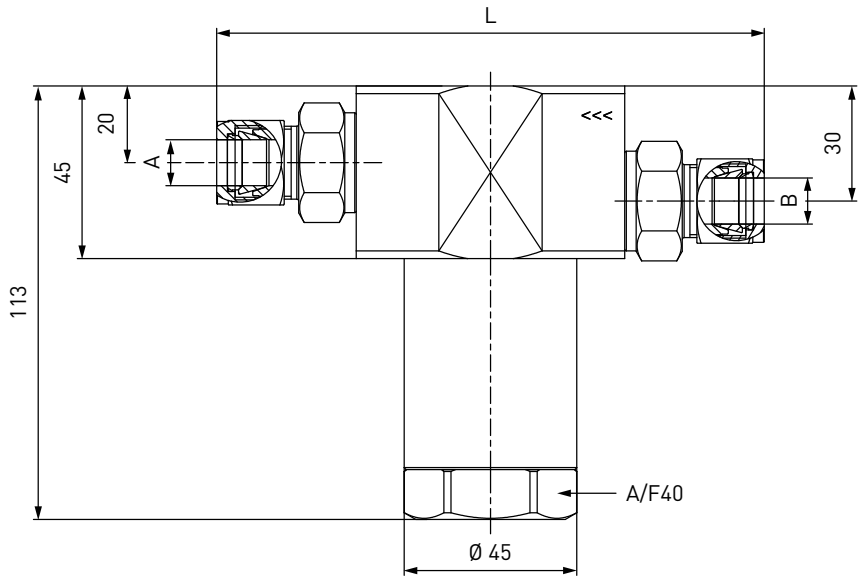


Part No.	Description	DN	Pressure (PN)	Inlet B (internal thread)	Outlet A (internal thread)
C1-83168	TSF4 CNG (ECE)	12	200 bar / 3,000 psi	G1/2"	G1/2"

Filter **TSF4 CNG**

ORDERING | T-filter TSF4 CNG with tube fitting on both sides

approx. dimensions (mm)



Part No.	Description	Filter (micron)	DN	Pressure (PN)	Inlet B	Outlet A	L
C1-106809	TSF4 CNG (ECE)	40	8	200 bar / 3,000 psi	Tube Ø 10*	Tube Ø 10*	140
C1-54023	TSF4 CNG (ECE)	10	8	200 bar / 3,000 psi	Tube Ø 10*	Tube Ø 10*	140
C1-106810	TSF4 CNG (ECE)	40	10	200 bar / 3,000 psi	Tube Ø 12*	Tube Ø 12*	143
C1-86825	TSF4 CNG (ECE)	10	10	200 bar / 3,000 psi	Tube Ø 12*	Tube Ø 12*	143
C1-106811	TSF4 CNG (ECE)	10	12	200 bar / 3,000 psi	Tube Ø 1/2"*	Tube Ø 1/2"*	144
C1-106812	TSF4 CNG (ECE)	40	12	200 bar / 3,000 psi	Tube Ø 16*	Tube Ø 16*	144
C1-51178-X01	TSF4 CNG	10	12	200 bar / 3,000 psi	Tube Ø 16*	Tube Ø 16*	144

* double ferrule fitting

SPARE PARTS

Various parts are available as spares for type TSF4 CNG:

Part No.	Description
E69-9062	Wire filter insert 40 micron (incl. spring and o-ring)
E69-9063	Wire filter insert 10 micron (incl. spring and o-ring)
E51-47589	O-ring for filter insert (only T-filter)

Filter **TSF5 CNG**

DESCRIPTION

Features
- For CNG free of impurities
- Filter insert can be cleaned
- Prefilter for inline breakaways
- For installation between inline breakaway and filling hose

Contaminants in the gas flow can enter the vehicle's storage tank during refuelling. These dirt particles in the natural gas fuel may cause damage to the sealing components. WEH, therefore, offers CNG filter for clean natural gas. Solid particles are captured reliably.
The TSF5 CNG filter is used for fuelling stations as well as for dispensers. The filter is mainly installed as prefilter in the media inlet between inline breakaway coupling and filling hose.

Application
Filter for installation as prefilter between inline breakaway coupling and filling hose.

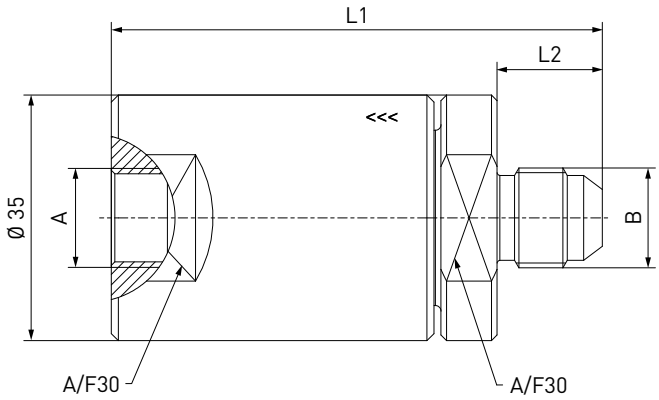
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar	
Temperature range	-40 °C up to +120 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant stainless steel	On request
Sealing material	Natural gas compatible	On request
Filter element	50 micron	On request

Filter **TSF5 CNG**

ORDERING | Filter TSF5 CNG (50 micron) with external and internal thread

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Inlet B (external thread)	Outlet A (internal thread)	L1	L2
C1-83120-X01	TSF5 CNG	8	200 bar / 3,000 psi	UNF 9/16"-18*	UNF 9/16"-18*	70	15
C1-102491-X01	TSF5 CNG	8	250 bar / 3,600 psi	UNF 9/16"-18*	UNF 9/16"-18*	70	15
C1-105923-X01	TSF5 CNG	12	200 bar / 3,000 psi	UNF 7/8"-14*	UNF 7/8"-14*	75	19.5

* acc. to SAE J514, 37°

SPARE PARTS

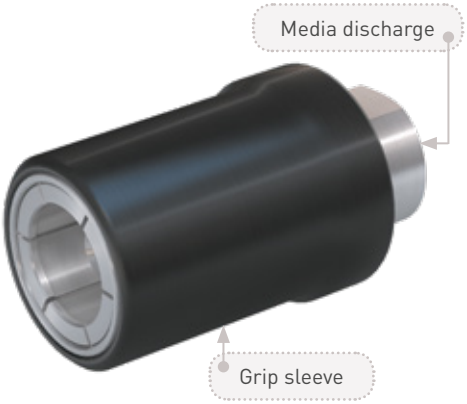
Various parts are available as spares for type TSF5 CNG:

Part No.	Description
E50-252S568	O-ring for UNF 9/16"-18* external thread
E51-91526	O-ring for UNF 7/8"-14* external thread
E55-247A	Back-up ring
E80-31704	Filter element

* acc. to SAE J514, 37°

Defuelling nozzle **TK23 CNG**

DESCRIPTION



Features
- Push-Pull actuation
- Extremely high flow rate
- Plastic thermal protection
- WEH® Jaw locking mechanism
- High-grade materials
- Compact design

The TK23 CNG defuelling nozzle is designed specifically for evacuating and discharging CNG of cylinder bundles (e.g. on trailers).
The type TK23 CNG is equipped with a pin, which opens the check valve in the type TN5 CNG receptacle (without filter) and releases the flow. Now the CNG can be discharged from the cylinder bundles. Connecting and disconnecting can only occur in depressurised condition. The TK23 CNG is not equipped with an integrated check valve.
The WEH® TK23 CNG defuelling nozzle is suitable for WEH® TN5 CNG receptacles without filter and with PEEK seal (see accessories).

Application
Defuelling nozzle for discharging of CNG to be used with WEH® TN5 CNG receptacles without filter.
Operation only by specially trained service personnel. Not for self-service operation!

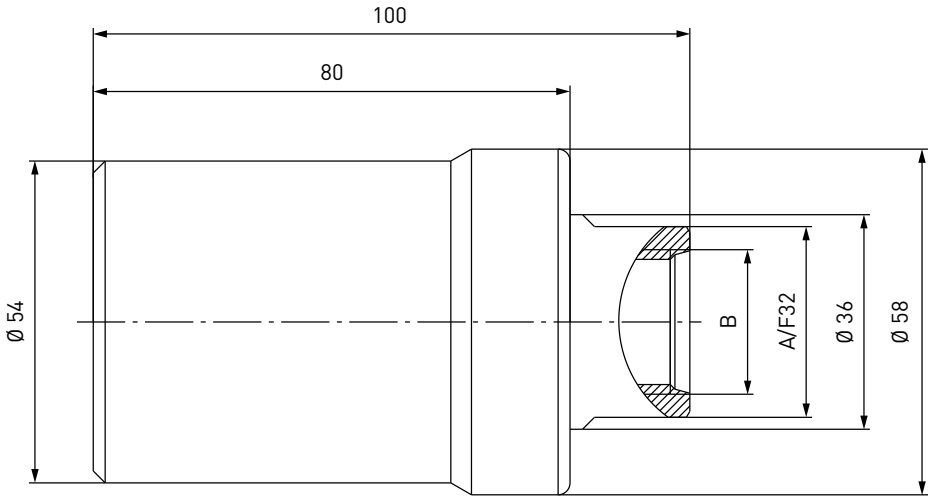
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	Depending on design	On request
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar PN = 200 bar (3,000 psi) | PS = 260 bar | PT = 390 bar (ECE)	
Temperature range	TK23 CNG: -40 °C up to +85 °C (-40 °F up to +185 °F) TN5 CNG: -40°C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	TK23 CNG: With plastic thermal protection TN5 CNG: Incl. fittings (only for nozzles with tube fitting)	On request
Weight	Approx. 1 kg (2.20 lbs.)	
Registration	E1 110R-000007 (ECE)	

Defuelling nozzle **TK23 CNG**

ORDERING | Defuelling nozzle TK23 CNG

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Discharge B (internal thread)
C1-58985-X01	TK23 CNG	10	200 bar / 3,000 psi	UNF 7/8"-14*

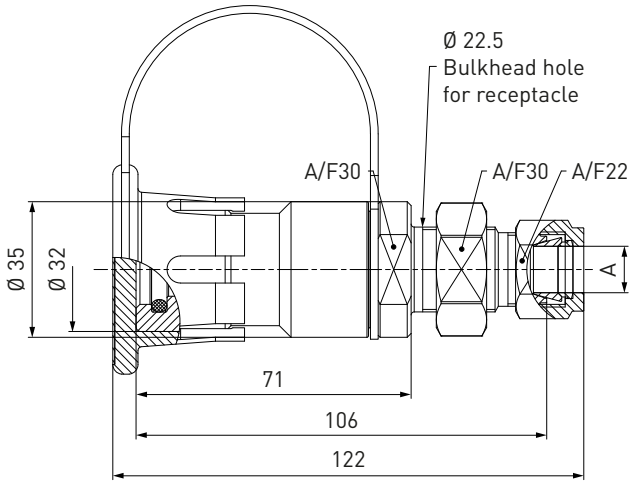
* acc. to SAE J1926
Other connection sizes and versions on request

ACCESSORIES

The following accessories are available for type TK23 CNG:

Receptacle TN5 CNG with tube fitting and PEEK seal (without filter, for TK23 CNG)

approx. dimensions (mm)



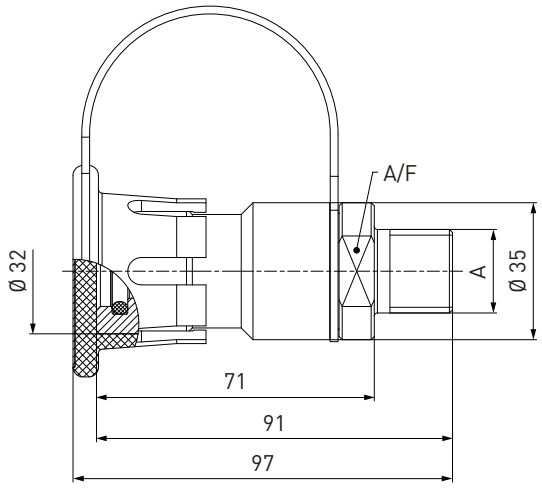
Part No.	Description	DN	Pressure (PN)	Connection A
C1-71939-X01	TN5 CNG	10	200 bar / 3,000 psi	Tube Ø 12*
C1-77635-X01	TN5 CNG	10	200 bar / 3,000 psi	Tube Ø 1/2"*
C1-71938-X01	TN5 CNG	14	200 bar / 3,000 psi	Tube Ø 16*

* double ferrule fitting

Defuelling nozzle **TK23 CNG**

Receptacle TN5 CNG with external thread and PEEK seal (without filter, for TK23 CNG)

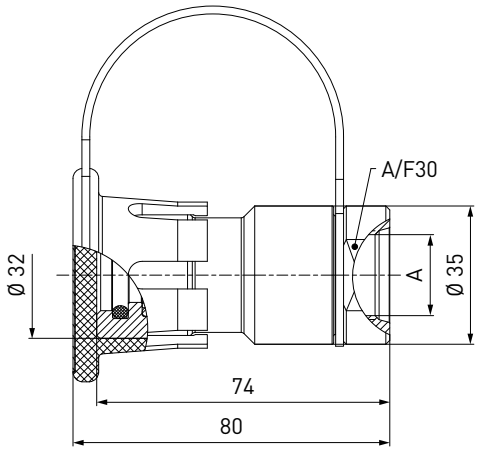
approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Connection A (external thread)	A/F
C1-77638-X01	TN5 CNG	12	200 bar / 3,000 psi	NPT 1/2"	30
C1-77639-X01	TN5 CNG	12	200 bar / 3,000 psi	NPT 1"	36

Receptacle TN5 CNG with internal thread and PEEK seal (without filter, for TK23 CNG)

approx. dimensions (mm)



Part No.	Description	DN	Pressure (PN)	Connection A (internal thread)
C1-108331	TN5 CNG (ECE)	12	200 bar / 3,000 psi	UNF7/8"-14*

* acc. to SAE J1926

Defuelling nozzle **TK23 CNG**

Hoses

Hoses for connection to the defuelling nozzle, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Hose B1/B2 (internal thread)	Hose length
E68-1033-3000	UNF 7/8"-14*	3 m
E68-1033-4000	UNF 7/8"-14*	4 m
E68-1033-5000	UNF 7/8"-14*	5 m

* acc. to SAE J514, 37°

Fittings

Stainless steel fittings for connecting the media discharge 'B' to the hose.

Part No.	Description	Connection defuelling nozzle	Connection hose
W6703	Fitting	UNF 7/8"-14* external thread	UNF 7/8"-14** external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926

Please see page 130 onwards for a detailed overview on all available fittings.

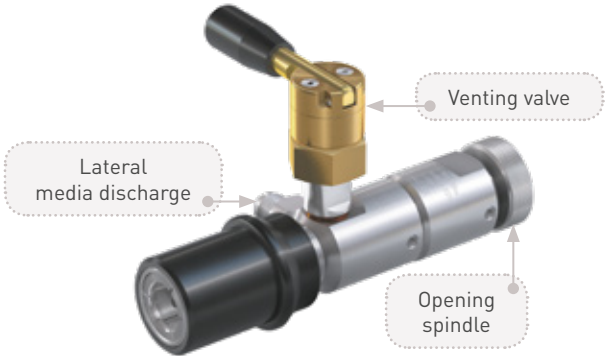
Spare parts

Various parts are available as spares for type TK23 CNG:

Part No.	Description
E99-44923	Maintenance spray

Service nozzle **TK6 CNG** for cars

DESCRIPTION



Features
- Discharge through the filling receptacle
- Knurled spindle actuation
- No additional locking device required
- Plastic thermal protection
- Only suitable for special WEH® TN1 CNG receptacles (without a filter)
- Option: without venting valve

Cars running on natural gas have to be serviced and checked regularly, a process involving the discharge of their pressurized fuel tanks. The WEH® TK6 CNG service nozzle has been designed for this specific purpose.
The service nozzle is simply engaged onto the receptacle of the car and the knurled spindle fully turned until the receptacle is fully open. Discharge can now take place through the lateral media discharge vent.

Application
Service nozzle for discharging of CNG fuel tanks of cars through the filling receptacle. Only to be used with special WEH® TN1 CNG receptacles without a filter. Please contact us!
Operation only by specially trained personnel. Not for self-service operation!

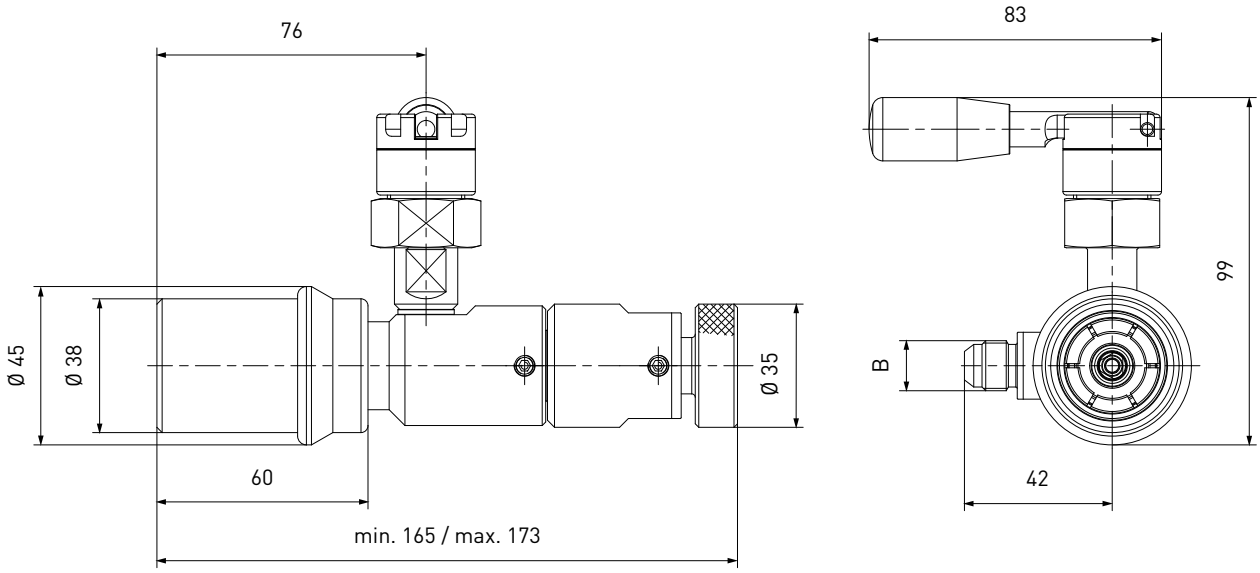
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	6 mm	On request
Pressure range	PN = 250 bar (3,600 psi) | PS = 350 bar | PT = 525 bar	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection, opening spindle and venting valve	Without venting valve
Weight	Approx. 1.2 kg (2.65 lbs.) with venting valve resp. 1 kg (2.20 lbs.) without venting valve	

Service nozzle **TK6 CNG** for cars

ORDERING | Service nozzle TK6 CNG with venting valve

approx. dimensions (mm)

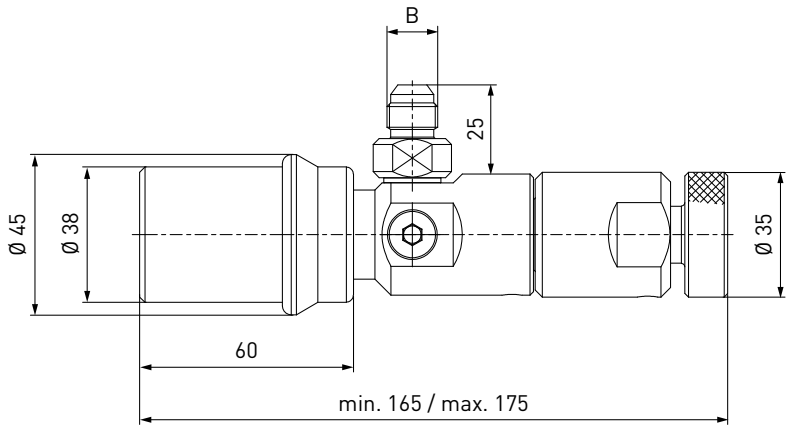


Part No.	Description	Pressure (PN)	Discharge B (external thread)
C1-111166-X01	TK6 CNG	250 bar / 3,600 psi	UNF 9/16"-18*

* acc. to SAE J514, 37°

ORDERING | Service nozzle TK6 CNG without venting valve

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Discharge B (external thread)
C1-105544-X01	TK6 CNG	250 bar / 3,600 psi	UNF 9/16"-18*

* acc. to SAE J514, 37°

Service nozzle **TK6 CNG** for cars

ACCESSORIES

The following accessories are available for type TK6 CNG:

Hoses

Hoses for connection to the service nozzle TK6 CNG, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Hose B1/B2 (internal thread)	Hose length
E68-1031-3000	UNF 9/16"-18*	3 m
E68-1031-4000	UNF 9/16"-18*	4 m
E68-1031-5000	UNF 9/16"-18*	5 m

* acc. to SAE J514, 37°

Spare parts

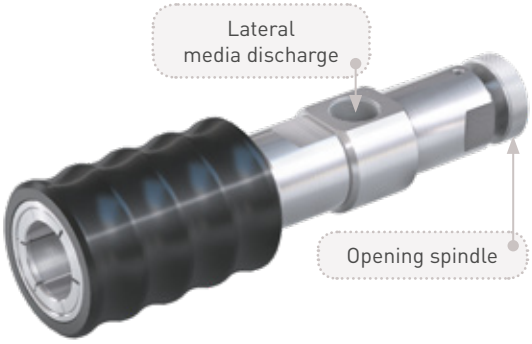
Various parts are available as spares for type TK6 CNG:

Part No.	Description
E99-44923	Maintenance spray

Service nozzle **TK6 CNG** for cars

Service nozzle **TK21 CNG** for buses and trucks

DESCRIPTION



Features
- Discharge through the filling receptacle
- Knurled spindle actuation
- No additional locking device required
- Plastic thermal protection
- Only suitable for WEH® TN5 CNG receptacles (without a filter)

Buses and trucks running on natural gas have to be serviced and checked regularly, a process involving the discharge of their pressurized fuel tanks. The WEH® TK21 CNG service nozzle has been designed for this specific purpose.
The service nozzle is simply engaged onto the receptacle of the bus/truck and the knurled spindle fully turned until the receptacle is fully open. Discharge can now take place through the lateral media discharge vent.

Application
Service nozzle for discharging of CNG fuel tanks of buses and trucks through the filling receptacle. Only to be used with WEH® TN5 CNG receptacles without a filter. Operation only by specially trained personnel. Not for self-service operation!

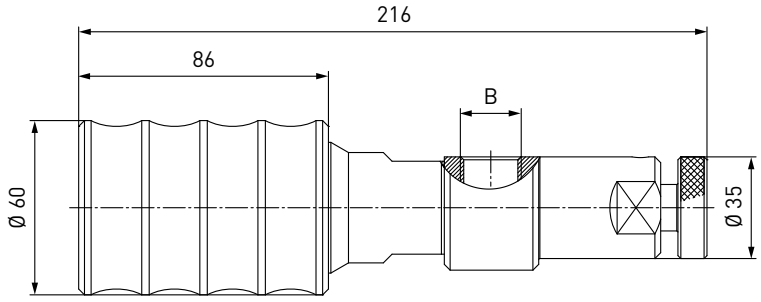
TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	8 mm	On request
Pressure range	PS = 350 bar (5,000 psi)	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	With plastic thermal protection and opening spindle	On request
Weight	2.1 kg (4.63 lbs.)	

Service nozzle **TK21 CNG** for buses and trucks

ORDERING | Service nozzle TK21 CNG

approx. dimensions (mm)



Part No.	Description	Pressure (PS)	Discharge B (internal thread)
C1-12641-X2-X01	TK21 CNG	350 bar / 5,000 psi	G1/2"*

* acc. to DIN 3852-2

ACCESSORIES

The following accessories are available for type TK21 CNG:

Hoses

Hoses for connection to the service nozzle TK21 CNG, complete with fittings and press-fittings supported by coil spring stubs.

Part No.	Hose B1/B2 (internal thread)	Hose length
E68-1031-3000	UNF 9/16"-18*	3 m
E68-1031-4000	UNF 9/16"-18*	4 m
E68-1031-5000	UNF 9/16"-18*	5 m

* acc. to SAE J514, 37°

Service nozzle **TK21 CNG** for buses and trucks

Fittings

Stainless steel fittings for connecting the media discharge 'B' to the hose.

Part No.	Description	Connection service nozzle	Connection hose
C1-61524	Fitting	G1/2"* external thread	UNF 7/8"-14** external thread

* acc. to DIN 3852-2
** acc. to SAE J514, 37°

Please see page 130 onwards for a detailed overview on all available fittings.

Spare parts

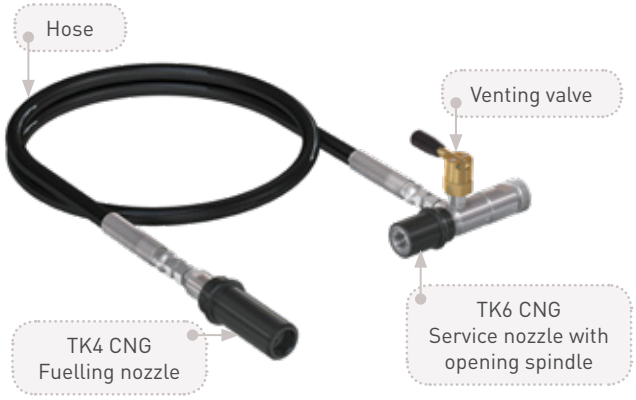
Various parts are available as spares for type TK21 CNG:

Part No.	Description
E99-44923	Maintenance spray

Service nozzle **TK21 CNG** for buses and trucks

Emergency fuelling set **TZ21 CNG** for cars

DESCRIPTION



Features

- For bi-fuelled service vehicles in order to refuel a broken down CNG car
- TZ21 CNG emergency fuelling set consists of:
  - 1 type TK4 CNG fuelling nozzle (C1-15459) without gas recirculation
  - 1 type TK6 CNG service nozzle (C1-111166) with opening spindle and integrated venting valve
  - 1 hose, length 3 m to 5 m
  - Fittings
- Only suitable for special WEH® TN1 CNG receptacles (without a filter)

  The components for conversion of the service vehicle are NOT included in this fuelling set!

A bi-fuelled (CNG and petrol) vehicle is equipped with a bypass with ball valve. Its manual operation circumvents the internal check valve in front of the pressure vessel (natural gas tank). This subsequent conversion can be effected without problems by any vehicle converter. The CNG tank of the service vehicle will be refuelled at the CNG fuelling station. The service vehicle running for this purpose on petrol, drives to the broken down mono-fuelled vehicle. The broken down vehicle can be refuelled locally using the WEH® TZ21 CNG emergency fuelling set.

The TK6 CNG service nozzle is placed onto the receptacle of the service vehicle. The TK4 CNG fuelling nozzle is connected to the broken down vehicle. Both vehicles are connected with a hose to each other. By rotating the opening spindle at the TK6 CNG service nozzle the check valve of the WEH® TN1 CNG receptacle opens. The ball valve at the bypass of the service vehicle is opened slowly. At the TK4 CNG fuelling nozzle the natural gas is lead into the empty tank. After refuelling the ball valve at the bypass of the service vehicle is closed. The opening spindle of the TK6 CNG service nozzle is rotated back and the check valve of the WEH® TN1 CNG receptacle is closed. Then the integrated venting valve at the TK6 CNG vents the TZ21 CNG emergency fuelling set. The TK6 CNG service nozzle and the TK4 CNG fuelling nozzle can be removed.
Now the monofuelled CNG vehicle can drive away with a refuelled CNG tank.

Note
A special WEH® TN1 CNG receptacle (without a filter) has to be installed at the service vehicle for proper function.
Please contact us!

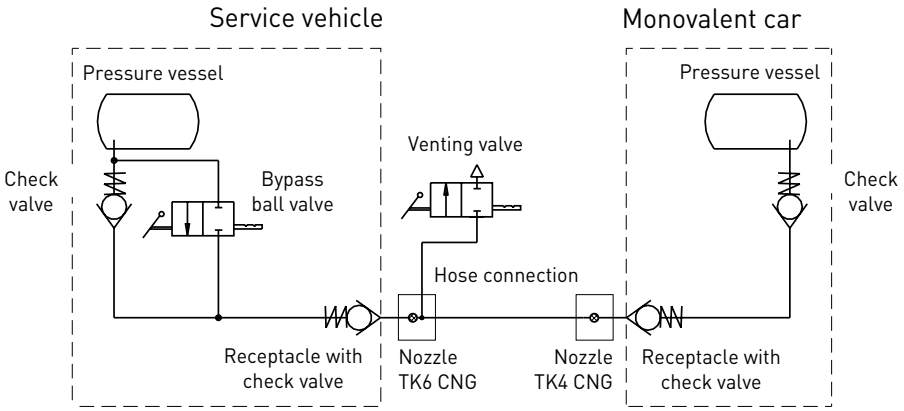
Application
Emergency fuelling set for refuelling cars from a service vehicle.
Only to be used by specially trained service personnel. Not for self-service operation!

TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	6 mm	
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar	
Temperature range	On request	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	TK4 CNG without gas recirculation, TK6 CNG with opening spindle and integrated venting valve, hose: length 3 m / 5 m	On request

Emergency fuelling set **TZ21 CNG** for cars

ORDERING | Emergency fuelling set TZ21 CNG



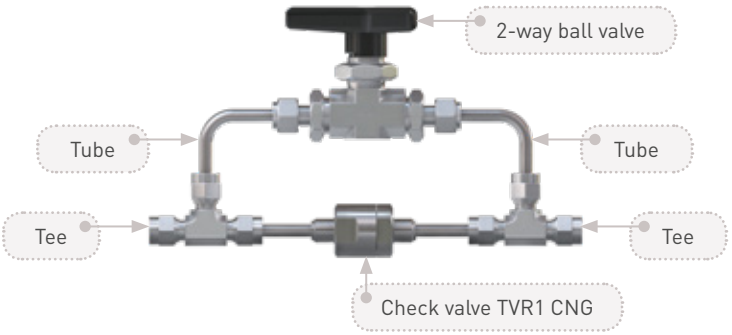
Part No.	Description	Pressure (PN)
C1-109088	TZ21 CNG (hose 3 m)	200 bar / 3,000 psi
C1-109089	TZ21 CNG (hose 5 m)	200 bar / 3,000 psi

ACCESSORIES

The following accessories are available for type TZ21 CNG:

Bypass

Bypass set for installation at the service vehicle, consisting of a 2-way ball valve and a TVR1 CNG check valve.



Part No.	Description
C1-32047	Bypass set for TZ21 CNG with tube connection Ø 6 mm

Spare parts

Various parts are available as spares for type TZ21 CNG:

Part No.	Description
C1-127959	Spare parts set TK4 CNG 200 bar / 3,000 psi (black sliding sleeve incl. metal sleeve and circlip)
E99-44923	Maintenance spray

Emergency fuelling set **TZ22 CNG** for buses and trucks

DESCRIPTION

Features

- For bi-fuelled service vehicles in order to refuel a broken down CNG bus or truck
- TZ22 CNG emergency fuelling set consists of:
  - 1 type TK22 CNG fuelling nozzle (C1-18890) without gas recirculation
  - 1 type TK21 CNG service nozzle (C1-12641) with opening spindle
  - 2-way ball valve
  - 1 hose, length 5 m
  - Fittings
- Suitable only for WEH® TN5 CNG receptacle (without a filter)

The components for conversion of the service vehicle are NOT included in this fuelling set!

A bi-fuelled (CNG and petrol) vehicle is equipped with a bypass with ball valve. Its manual operation circumvents the internal check valve in front of the pressure vessel (natural gas tank). This subsequent conversion can be effected without problems by any vehicle converter. The CNG tank of the service vehicle will be refuelled at the CNG fuelling station. The service vehicle running for this purpose on petrol, drives to the broken down mono-fuelled vehicle. The broken down vehicle can be refuelled locally using the WEH® TZ22 CNG emergency fuelling set.

The TK21 CNG service nozzle is placed onto the receptacle of the service vehicle. The TK22 CNG fuelling nozzle is connected to the broken down vehicle. Both vehicles are connected with a hose to each other. By rotating the opening spindle at the TK21 CNG service nozzle the check valve of the WEH® TN5 CNG receptacle opens. The ball valve at the bypass of the service vehicle is opened slowly. At the TK22 CNG fuelling nozzle the natural gas is lead into the empty tank. After refuelling the ball valve at the bypass of the service vehicle is closed. The opening spindle of the TK21 CNG service nozzle is rotated back and the check valve of the WEH® TN5 CNG receptacle is closed. Then the system is vented by actuating the 2-way ball valve. The TK21 CNG service nozzle and the TK22 CNG fuelling nozzle can be removed.
Now the monofuelled CNG vehicle can drive away with a refuelled CNG tank.

Note
A WEH® TN5 CNG receptacle (without filter) has to be installed at the service vehicle for proper function.

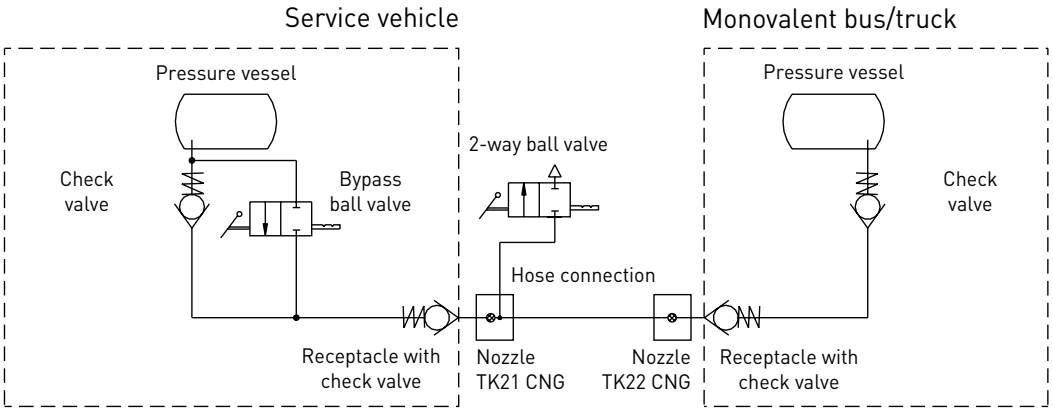
Application
Emergency fuelling set for refuelling buses and trucks from a service vehicle.
Only to be used by specially trained service personnel. Not for self-service operation!

TECHNICAL DATA

Characteristic	Basic version	Options
Nominal bore DN	8 mm	
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar	
Temperature range	On request	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request
Design	TK22 CNG without gas recirculation, TK21 CNG with opening spindle, 2-way ball valve, hose: length 5 m	On request

Emergency fuelling set **TZ22 CNG** for buses and trucks

ORDERING | Emergency fuelling set TZ22 CNG



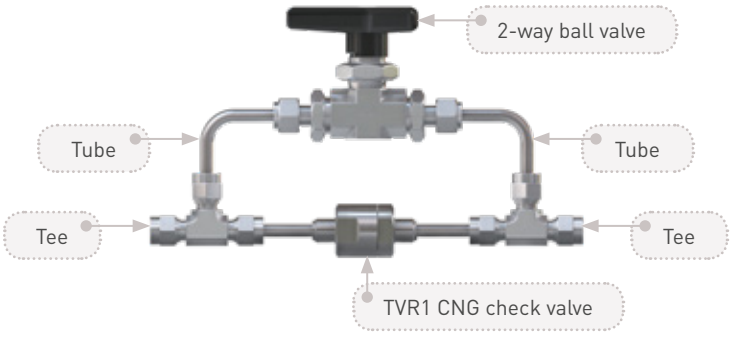
Part No.	Description	Pressure (PN)
C1-68558	TZ22 CNG (hose 5 m)	200 bar / 3,000 psi

ACCESSORIES

The following accessories are available for type TZ22 CNG:

Bypass

Bypass set for installation at the service vehicle, consisting of a 2-way ball valve and a TVR1 CNG check valve.



Part No.	Description
C1-32047	Bypass set for TZ22 CNG with tube connection Ø 6 mm

Spare parts

Various parts are available as spares for type TZ22 CNG:

Part No.	Description
C1-127951	Spare parts set TK22 CNG 200 bar / 3,000 psi (grip sleeve incl. metal sleeve and circlip)
E99-44923	Maintenance spray

Filling and venting hoses

DESCRIPTION

Features
- Coil spring stubs on both sides
- Different lengths available
- Twin hoses (permanently bonded) possible
- Tailor-made according to customers' specifications

We also offer filling and venting hoses with press-fittings supported by coil spring stubs for connecting fuelling nozzle and breakaway coupling or dispenser. The high-pressure hoses are available with the appropriated fittings. The filling and venting hoses can be delivered in different standard sizes and also also bonded permanently together.

Application
Filling and venting hoses for installation at the dispenser.

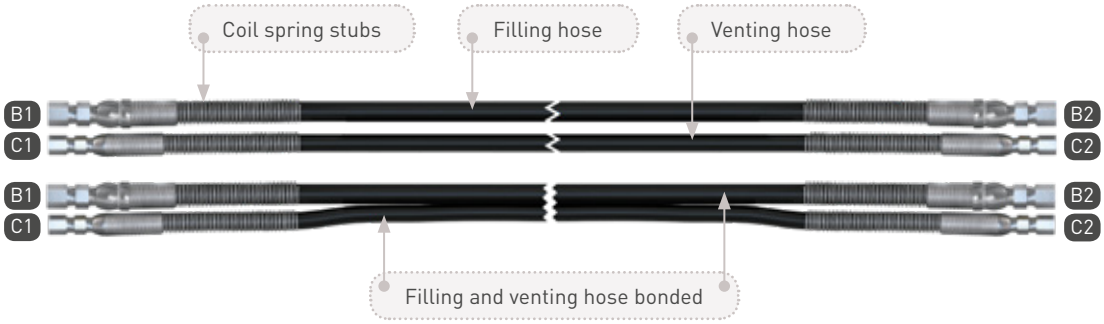
TECHNICAL DATA

Characteristic	Basic version
Pressure range	Max. 350 bar (5,000 psi)
Temperature range	-40 °C up to +65 °C (-40 °F up to +149 °F)
Sealing material	Natural gas compatible
Registration	Comply to NFPA 52, ANSI/IAS NGV 4.2-1999, CSA 12.52-M99

Filling and venting hoses

ORDERING | Filling and venting hoses connected with type TSA1 CNG / TSA5 CNG breakaway coupling

Filling and venting hoses for connecting fuelling nozzle and type TSA1 CNG / TSA5 CNG breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs. The designs for type TK17 CNG, TK16 CNG and TK26 CNG fuelling nozzles are also available with permanently bonded filling and venting hose. Please contact us!



Hose set for TK17 CNG / TK16 CNG

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-50487	UNF 9/16"-18*	UNF 7/16"-20*	3 m
C1-42304	UNF 9/16"-18*	UNF 7/16"-20*	4 m
C1-58587	UNF 9/16"-18*	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°

Hose set for TK10 CNG / TK24 CNG

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-106385	UNF 7/16"-20*	UNF 7/16"-20*	3 m
C1-106386	UNF 7/16"-20*	UNF 7/16"-20*	4 m
C1-106387	UNF 7/16"-20*	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°

Hose set for TK26 CNG

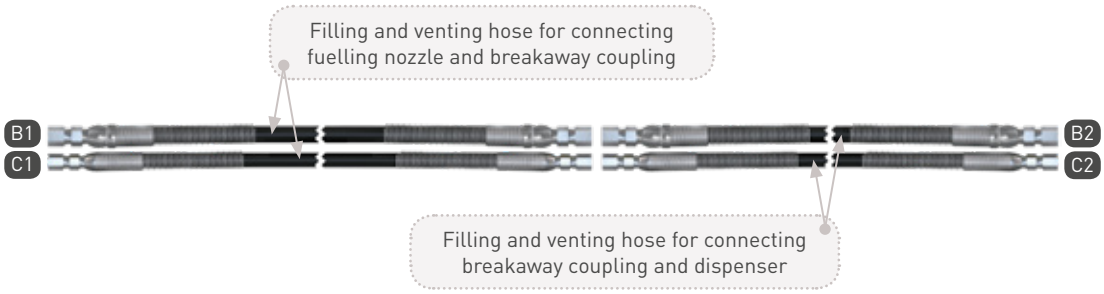
Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-101749	UNF 7/8"-14*	UNF 9/16"-18*	3 m
C1-102079	UNF 7/8"-14*	UNF 9/16"-18*	4 m
C1-102508	UNF 7/8"-14*	UNF 9/16"-18*	5 m

* acc. to SAE J514, 37°

Filling and venting hoses

ORDERING | Filling and venting hoses connected with type TSA2 CNG / TSA6 CNG inline breakaway coupling

Filling and venting hoses for connecting fuelling nozzle /dispenser and type TSA2 CNG / TSA6 CNG inline breakaway coupling, complete with fittings and press-fittings supported by coil spring stubs.



Hose set for TK17 CNG / TK16 CNG

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
On request	UNF 9/16"-18*	UNF 7/16"-20*	2.5 | 0.5 m
On request	UNF 9/16"-18*	UNF 7/16"-20*	3.5 | 0.5 m
On request	UNF 9/16"-18*	UNF 7/16"-20*	4.5 | 0.5 m

* acc. to SAE J514, 37°

Hose set for TK10 CNG / TK24 CNG

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
C1-106395	UNF 7/16"-20*	UNF 7/16"-20*	2.5 | 0.5 m
C1-106396	UNF 7/16"-20*	UNF 7/16"-20*	3.5 | 0.5 m
C1-106397	UNF 7/16"-20*	UNF 7/16"-20*	4.5 | 0.5 m

* acc. to SAE J514, 37°

Hose set for TK26 CNG

Part No.	Filling hose B1/B2 (internal thread)	Venting hose C1/C2 (internal thread)	Hose length
On request	UNF 7/8"-14*	UNF 9/16"-18*	2.5 | 0.5 m
On request	UNF 7/8"-14*	UNF 9/16"-18*	3.5 | 0.5 m
On request	UNF 7/8"-14*	UNF 9/16"-18*	4.5 | 0.5 m

* acc. to SAE J514, 37°

Filling and venting hoses

ORDERING | Filling hoses

Filling hoses for connecting fuelling nozzle and dispenser, complete with fittings and press-fittings supported by coil spring stubs.

Filling hoses for TK4 CNG / TK1 CNG / TK6 CNG / TK21 CNG

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1031-3000	UNF 9/16"-18*	3 m
E68-1031-4000	UNF 9/16"-18*	4 m
E68-1031-5000	UNF 9/16"-18*	5 m

* acc. to SAE J514, 37°

Filling hoses for TK10 CNG / TK24 CNG

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1032-3000	UNF 7/16"-20*	3 m
E68-1032-4000	UNF 7/16"-20*	4 m
E68-1032-5000	UNF 7/16"-20*	5 m

* acc. to SAE J514, 37°

Filling hoses for TK22 CNG / TK23 CNG

Part No.	Filling hose B1/B2 (internal thread)	Hose length
E68-1033-3000	UNF 7/8"-14*	3 m
E68-1033-4000	UNF 7/8"-14*	4 m
E68-1033-5000	UNF 7/8"-14*	5 m

* acc. to SAE J514, 37°

Fittings

DESCRIPTION

Stainless steel fittings for connecting fuelling components.

Part No.	Description	Connection	Connection
C1-97227	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18* internal thread
C1-79538	Fitting	UNF 9/16"-18* internal thread	UNF 9/16"-18** internal thread
E80-647P	Fitting	UNF 9/16"-18* internal thread	UNF 7/8"-14* external thread
C1-66850	Fitting	UNF 9/16"-18* internal thread	UNF 3/4"-16* external thread
E48-69486	Fitting	UNF 9/16"-18* internal thread	NPT 3/8" external thread (60°)
E48-69485	Fitting	UNF 9/16"-18* internal thread	NPT 1/2" external thread (60°)
C1-65592	Fitting	UNF 9/16"-18* internal thread	NPT 1/4" internal thread
E48-76299	Fitting	UNF 9/16"-18* internal thread	Plug
E80-787P	Fitting	UNF 9/16"-18* external thread	UNF 9/16"-18* external thread
W6704	Fitting	UNF 9/16"-18* external thread	UNF 7/8"-14** external thread
C1-83033	Fitting	UNF 9/16"-18* external thread	Tube Ø 6***
C1-41811	Fitting	UNF 9/16"-18* external thread	Tube Ø 1/4"***
E80-678P	Fitting	UNF 9/16"-18* external thread	G1/8" external thread
E80-32728	Fitting	UNF 9/16"-18* external thread	G1/4" external thread
E80-60018	Fitting	UNF 9/16"-18* external thread	G3/8" external thread
E80-61523	Fitting	UNF 9/16"-18* external thread	G1/2" external thread
C1-53226	Fitting	UNF 9/16"-18* external thread	G1/2" internal thread
C1-105737	Fitting	UNF 9/16"-18* external thread	NPT 1/4" internal thread
E80-33888	Fitting	UNF 9/16"-18* external thread	NPT 1/4" external thread
E80-761P	Fitting	UNF 9/16"-18* external thread	NPT 3/8" external thread
E80-59169	Fitting	UNF 9/16"-18* external thread	NPT 1/2" external thread
E80-32932	Fitting	UNF 9/16"-18* external thread	M24x1.5 external thread (Ermeto 24° ‚S')
C1-65970	Fitting	UNF 9/16"-18* external thread	BSPP 1/4" external thread
C1-63131	Fitting	UNF 9/16"-18* external thread	Plug
W6702	Fitting	UNF 9/16"-18** external thread	UNF 9/16"-18* external thread
E80-33558	Fitting	UNF 9/16"-18** external thread	UNF 9/16"-18** external thread
W6705	Fitting	UNF 9/16"-18** external thread	UNF 7/16"-20* external thread
W6927	Fitting	UNF 9/16"-18** external thread	UNF 7/8"-14* external thread
C1-48605	Fitting	UNF 9/16"-18** external thread	UNF 3/4"-16* external thread
C1-41812	Fitting	UNF 9/16"-18** external thread	Tube Ø 1/4"***
E69-124048	Fitting	UNF 9/16"-18** external thread	Tube Ø 10***
W6980	Fitting	UNF 9/16"-18** external thread	G1/4" internal thread
E80-713P	Fitting	UNF 9/16"-18** external thread	G1/4" external thread (30°)
E80-561P	Fitting	UNF 9/16"-18** external thread	NPT 1/4" external thread
C1-59695	Fitting	UNF 9/16"-18* external thread LH	UNF 9/16"-18** external thread
E80-52705	Fitting	UNF 7/8"-14* internal thread	UNF 9/16"-18** external thread
C1-105411	Fitting	UNF 7/8"-14* internal thread	UNF 7/16"-20* external thread
C1-48976	Fitting	UNF 7/8"-14* internal thread	NPT 1/4" external thread
E80-724P	Fitting	UNF 7/8"-14* external thread	UNF 7/8"-14* external thread
W6703	Fitting	UNF 7/8"-14* external thread	UNF 7/8"-14** external thread

Fittings

Part No.	Description	Connection	Connection
C1-32781	Fitting	UNF 7/8"-14* external thread	UNF 7/8"-20 external thread (20°)
C1-72492	Fitting	UNF 7/8"-14* external thread	Tube Ø 16 mm***
C1-33425	Fitting	UNF 7/8"-14* external thread	G1/2" internal thread
C1-61524	Fitting	UNF 7/8"-14* external thread	G1/2" external thread
C1-61345	Fitting	UNF 7/8"-14* external thread	NPT 1/4" external thread
C1-33976	Fitting	UNF 7/8"-14* external thread	NPT 3/8" external thread
C1-50420	Fitting	UNF 7/8"-14* external thread	NPT 1/2" external thread
E80-648P	Fitting	UNF 7/16"-20* internal thread	UNF 9/16"-18* external thread
C1-32692	Fitting	UNF 7/16"-20* internal thread	UNF 7/16"-20* external thread
C1-62138	Fitting	UNF 7/16"-20* internal thread	NPT 1/4" internal thread
E80-32691	Fitting	UNF 7/16"-20* external thread	UNF 9/16"-18* internal thread
E80-64236	Fitting	UNF 7/16"-20* external thread	UNF 7/16"-20* external thread
C1-83055	Fitting	UNF 7/16"-20* external thread	Tube Ø 6 mm***
C1-88589	Fitting	UNF 7/16"-20* external thread	Tube Ø 1/4"***
E69-1162	Fitting	UNF 7/16"-20* external thread	Tube Ø 3/8"***
C1-101817	Fitting	UNF 7/16"-20* external thread	G1/2" internal thread
C1-61521	Fitting	UNF 7/16"-20* external thread	G1/4" external thread
C1-34556	Fitting	UNF 7/16"-20* external thread	G1/2" external thread
C1-33659	Fitting	UNF 7/16"-20* external thread	NPT 1/4" external thread
C1-60511	Fitting	UNF 7/16"-20* external thread	M12x1.0 external thread
C1-63130	Fitting	UNF 7/16"-20* external thread	Plug
C1-41202	Fitting	NPT 1/4" external thread	UNF 7/8"-14 internal thread
C1-54081	Fitting	NPT 1/4" external thread	UNF 7/8"-14** external thread
E48-42412	Fitting	NPT 1/4" external thread	Tube Ø 6 mm
E48-69354	Fitting	NPT 1/4" external thread	Tube Ø 8 mm
E26-167M	Fitting	NPT 1/4" external thread	W21.8x1/14" external thread

* acc. to SAE J514, 37°
** acc. to SAE J1926
*** double ferrule fitting

Italian standard

DESCRIPTION

Features
- Push-Pull actuation
- High-grade materials
- Compact design

Fuelling nozzles must be adapted to country-specific standards as the NGV1 standard is not yet used worldwide. We, therefore, adapted our TK4 CNG fuelling nozzle for refuelling vehicles with NGV1 standard at Italian fuelling stations. We offer special versions for installation at fuelling stations having Italian standard.

Application
Adaptor nozzle for CNG fast filling of cars with NGV1 receptacle profile / Italian receptacle profile with fuelling nozzles acc. to Italian standard / NGV1 standard. Operation only by specially trained service personnel. Not for self-service operation!

Description	Car	Fuelling station
TK4 CNG	NGV1	Italian standard
TK4i CNG	New Italian standard (without external thread)	NGV1
TW04 CNG	Italian standard (with external thread)	NGV1

TECHNICAL DATA

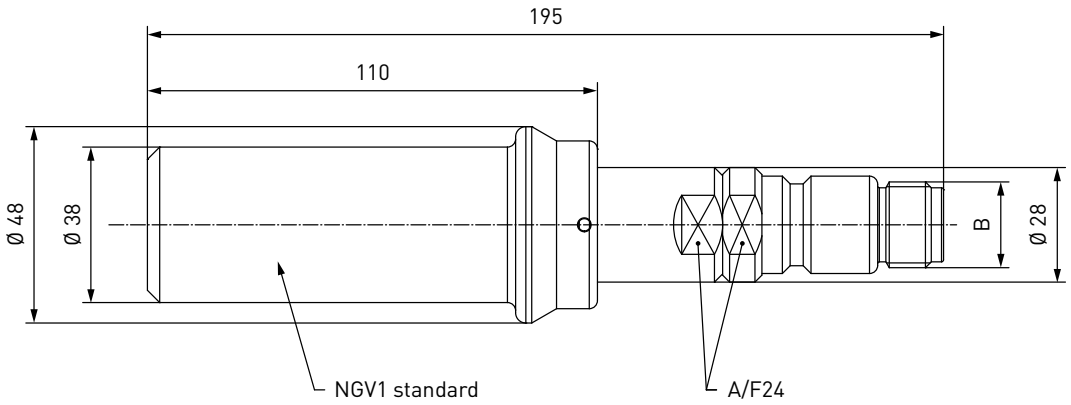
Characteristic	Basic version	Options
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request

Italian standard

ORDERING | Adaptor nozzle TK4 CNG

Adaptor nozzle for refuelling a car having a NGV1 receptacle profile with a fuelling nozzle acc. to Italian standard.
Not for self-service operation!

approx. dimensions (mm)

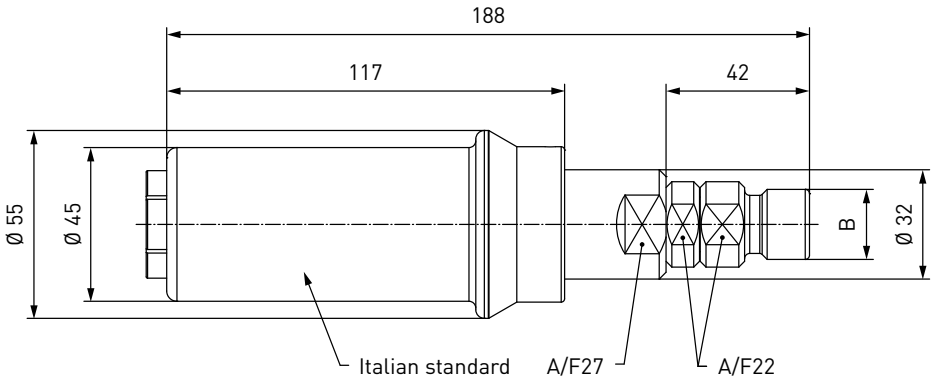


Part No.	Description	Pressure (PN)	Inlet B (external thread)
C1-30989-X1-X01	Adaptor nozzle TK4 CNG	200 bar / 3,000 psi	Italian standard (G1/2")

ORDERING | Adaptor nozzle TK4i CNG

Adaptor nozzle for refuelling a car having a receptacle profile acc. to **new Italian standard (without external thread)** with a fuelling nozzle acc. to NGV1 standard. **Not for self-service operation!**

approx. dimensions (mm)



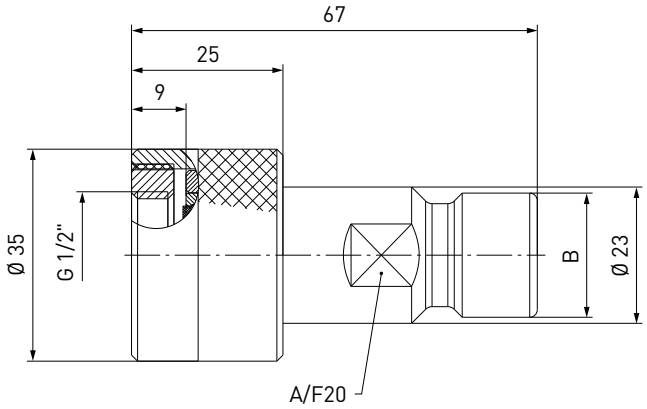
Part No.	Description	Pressure (PN)	Inlet B
C1-18148-X5-X01	Adaptor nozzle TK4i CNG	200 bar / 3,000 psi	NGV1

Italian standard

ORDERING | Adaptor nozzle TW04 CNG

Adaptor nozzle for refuelling a car having a receptacle profile acc. to **Italian standard (G1/2“ external thread)** with a fuelling nozzle acc. to NGV1 standard. **Only suitable for self service after reading operating instructions!**

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Inlet B
C1-89166-X01	Adaptor nozzle TW04 CNG with integrated shut-off valve	200 bar / 3,000 psi	NGV1

Italian standard

NZ/GOST standard

DESCRIPTION

Features
- Push-Pull actuation
- Plastic thermal protection
- WEH® Jaw locking mechanism
- High-grade materials
- Compact design

Fuelling nozzles must be adapted to country-specific standards as the NGV1 standard is not yet used worldwide. We, therefore, adapted our TK4 CNG fuelling nozzle for refuelling vehicles with NGV1 standard at fuelling stations in China, South America, Southeast Asia, Russia, etc. We offer special versions for installation at fuelling stations having NZ or GOST standard.

Application
Adaptor nozzle for CNG filling of cars having a NGV1 receptacle profile at car fuelling stations with NZ/GOST standard. Operation only by specially trained service personnel. Not for self-service operation!

TECHNICAL DATA

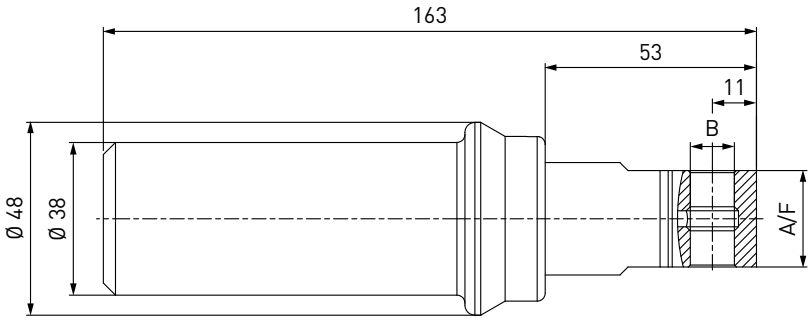
Characteristic	Basic version	Options
Pressure range	B200 acc. to ISO 14469-1 (P30 acc. to ANSI NGV1) PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar	
Temperature range	-40 °C up to +85 °C (-40 °F up to +185 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request

NZ/GOST standard

ORDERING | Adaptor nozzle TK4 NZ

Adaptor nozzle for refuelling a car having a NGV1 receptacle profile at fuelling stations with a fuelling nozzle acc. to NZ standard. **Not for self-service operation!**

approx. dimensions (mm)

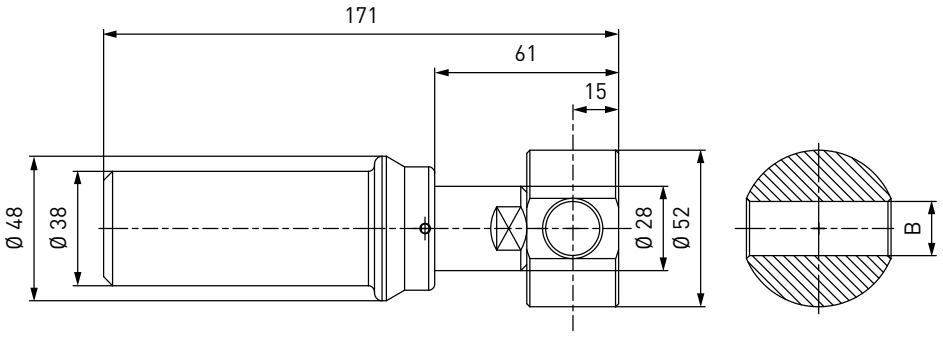


Part No.	Description	Pressure (PN)	Inlet B	A/F
C1-68100-X1-X01	TK4 NZ	200 bar / 3,000 psi	NZ Ø 11.0 mm (e.g. Brasil, Pakistan, Bangladesh, India)	24
C1-66737-X1-X01	TK4 NZ	200 bar / 3,000 psi	NZ Ø 12.0 mm (e.g. China)	25
C1-61672-X1-X01	TK4 NZ	200 bar / 3,000 psi	NZ Ø 1/2" / Ø 12.7 mm (e.g. Argentina)	24

ORDERING | Adaptor nozzle TK4 GOST

Adaptor nozzle for refuelling a car having a NGV1 receptacle profile at fuelling stations with a fuelling nozzle acc. to GOST standard. **Not for self-service operation!**

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Inlet B
C1-70009-X1-X01	TK4 GOST	200 bar / 3,000 psi	GOST Ø 18.0 mm (Russia)

NZ/GOST standard

DESCRIPTION

Features
- Compatible with NZ/GOST standard
- Sealing-friendly design

Fuelling products must be adapted to country-specific standards as the NGV1 standard is not yet used worldwide. We, therefore, adapted our TN1 CNG fuelling receptacle for refuelling vehicles with NZ or GOST standard at NGV1 fuelling stations in China, South America, Southeast Asia, Russia, etc. We offer TN1 CNG adaptor receptacles for connection to the NZ or GOST receptacle of the vehicle. The adaptor receptacle can also be permanently installed in the vehicle.

Application
Adaptor receptacle for CNG filling of cars having a NZ/GOST receptacle profile at car fuelling stations with NGV1 standard. Operation only by specially trained service personnel. Not for self-service operation!

TECHNICAL DATA

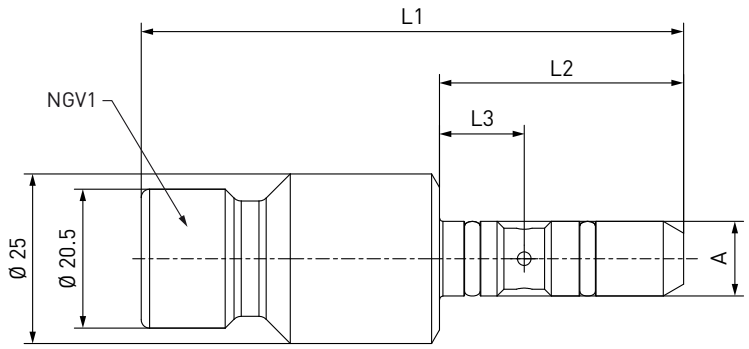
Characteristic	Basic version	Options
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar	
Temperature range	-40 °C up to +120 °C (-40 °F up to +248 °F)	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request

NZ/GOST standard

ORDERING | Adaptor receptacle TN1 NZ

Adaptor receptacle for refuelling a car having a NZ receptacle profile at fuelling stations with a fuelling nozzle acc. to NGV1 standard. **Not for self-service operation!**

approx. dimensions (mm)



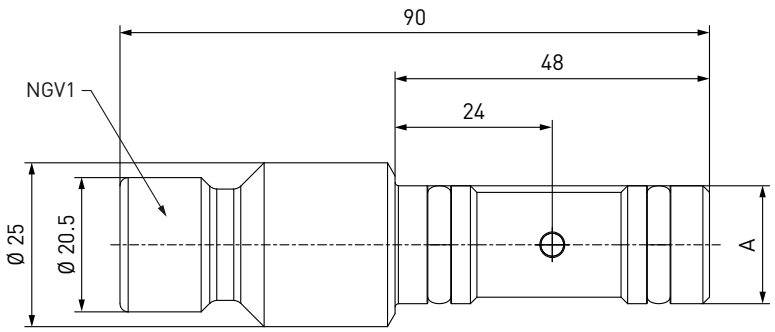
Part No.	Description	Pressure (PN)	Connection A	L1	L2	L3
C1-67266	TN1 NZ	200 bar / 3,000 psi	NZ Ø 11 mm (e.g. Brasil, Pakistan, Bangladesh, India)	80	36	12.5
C1-66731	TN1 NZ	200 bar / 3,000 psi	NZ Ø 12 mm (e.g. China)	75	34	12.5
C1-61763	TN1 NZ	200 bar / 3,000 psi	NZ Ø 1/2" / Ø 12.7 mm (e.g. Argentinia)	71	30	15
C1-75326*	TN1 NZ	200 bar / 3,000 psi	NZ Ø 11 mm (e.g. Brasil, Pakistan, Bangladesh, India)	85	44	12.5
C1-66634*	TN1 NZ	200 bar / 3,000 psi	NZ Ø 1/2" / Ø 12.7 mm (e.g. Argentinia)	85	44	12.5

* for permanent mounting in cars with self-retaining nut

ORDERING | Adaptor receptacle TN1 GOST

Adaptor receptacle for refuelling a car having a GOST receptacle profile at fuelling stations with a fuelling nozzle acc. to NGV1 standard. **Not for self-service operation!**

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Connection A
C1-77971	TN1 GOST	200 bar / 3,000 psi	GOST Ø 18.0 mm (Russia)

Buses and trucks

DESCRIPTION

Features
- Push-Pull actuation
- Plastic thermal protection
- WEH® Jaw locking mechanism
- Integrated shut-off valve
- High-grade materials

WEH has developed special adaptor nozzles for refuelling of buses and trucks at car fuelling stations and cars at bus fuelling stations.

Application
Adaptor nozzle for CNG fast filling of buses and trucks at car fuelling stations with NGV1 standard and fast filling of cars having a NGV1 receptacle profile at bus and truck fuelling stations.
Operation only by specially trained service personnel. Not for self-service operation!

Description	Vehicle	Fuelling station
Adaptor nozzle TK22N	NGV2*	NGV1
Adaptor nozzle TK4-TN5	NGV1	NGV2*

* non standardized denomination for ISO 14469-2

TECHNICAL DATA

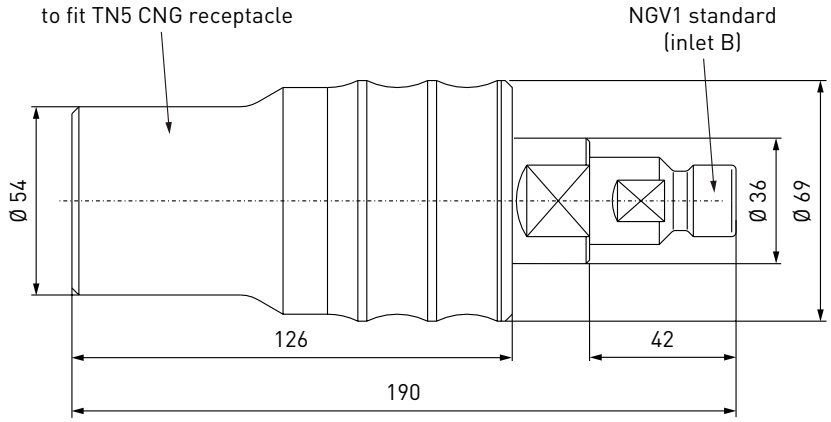
Characteristic	Basic version	Options
Pressure range	PN = 200 bar (3,000 psi) | PS = 300 bar | PT = 450 bar (P30)	
Temperature range	On request	On request
Material	Corrosion resistant	On request
Sealing material	Natural gas compatible	On request

Buses and trucks

ORDERING | Adaptor nozzle TK22N

Adaptor nozzle for refuelling buses and trucks having a NGV2* receptacle profile (e.g. TN5 CNG) at car fuelling stations with a fuelling nozzle acc. to NGV1 standard. **Not for self-service operation!**

approx. dimensions (mm)



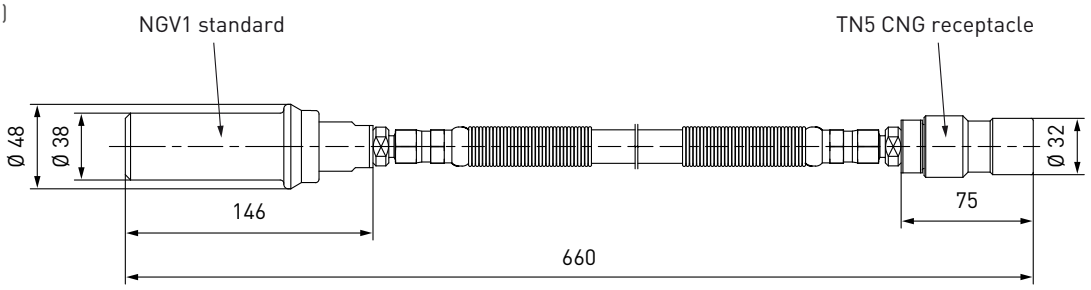
Part No.	Description	Pressure (PN)	Inlet B
C1-31219-X2-X01	Adaptor nozzle TK22N	200 bar / 3,000 psi	NGV1

* non standardized denomination for ISO 14469-2

ORDERING | Adaptor nozzle TK4-TN5

Adaptor nozzle for refuelling cars having a NGV1 receptacle profile at bus or truck fuelling stations with a fuelling nozzle acc. to NGV2 Standard*. **Not for self-service operation!**

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Inlet B
C1-30193-X2-X01	Adaptor nozzle TK4-TN5	200 bar / 3,000 psi	NGV2*

* non standardized denomination for ISO 14469-2

Technical appendix

Definitions

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

Technical appendix

Technical explanations

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

Further explanations

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

Technical appendix

Further explanations

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

Brochure data

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

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

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

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Design and production

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