since 1973



### WEH® CNG Refueling

High-performance components for natural gas vehicles and fueling stations



### **CNG** Refueling components

Outstanding quality for maximum reliability

WEH recognized early on the future of alternative fuels and started developing refueling components for natural gas and hydrogen in 1986. Today, the NGV1 natural gas refueling system developed by WEH has been established as the worldwide standard.

As a world market leader and pioneer for alternative refueling components, WEH offers a comprehensive product range for natural gas refueling:

- ▶ For fueling stations: fueling nozzles, breakaways, hoses, filters
- ▶ For vehicles: receptacles and check valves



# WEH® Natural gas components at a glance Overview of types & standards

Fueling nozzles						
Туре	Car	Car (Italy)	Bus/truck	Self-service		
TK17 CNG	✓			✓		
TK16 CNG	✓			✓		
TK10 CNG	✓					
TK4 CNG	✓					
TK4i CNG		<b>~</b>				
TK1 CNG	✓					
TK26 CNG			✓	✓		
TK22 CNG			<b>✓</b>			
TK24 CNG			<b>✓</b>			

Defueling nozzle							
Туре	Discharging of CNG fuel tanks — car	Discharging of CNG fuel tanks – bus/truck	Discharging of trailers				
TK6 CNG	✓						
TK21 CNG		✓					
TK23 CNG			✓				

Breakaways						
Туре	Car	Car – Inline	Bus/truck	Bus/truck – Inline		
TSA1 CNG	<b>✓</b>					
TSA2 CNG		✓				
TSA5 CNG			✓			
TSA6 CNG				✓		

### International standards and approvals

ANSI NGV1 ECE R110 ISO 14469 ISO 15500 ISO 15501

### **Technical data**

1. Pressure range: P30 acc. to ANSI NGV1 / B200 acc. to ISO 14469 (200 bar) P36 acc. to ANSI NGV1 / B250 acc. to ISO 14469 (250 bar)

2. Temperature range: -40 °C to +85 °C (+120°C)

The specifications provided above are examples for the listed product range. For the applicable standards, approvals and technical data for individual products, please refer to the catalog.



# The original WEH® Jaw locking mechanism For a perfect connection in seconds

Almost every fueling nozzle has the unique WEH® Jaw locking mechanism, specially developed by WEH.

The clamping jaws are highly resistant to contamination and attach securely and reliably to the vehicle receptacle. The operation is extremely simple.

In addition, wear on the vehicle receptacle is minimized by the relatively low surface pressure on the ball locking system .



### The benefits for you

Thanks to many years of experience, we are your reliable partner for all things related to fueling stations and vehicle components, and we satisfy our customers' every need.

- Balanced design
- 2 One-of-a-kind ease of use
- 3 Maximum functionality and safety
- 4 Reliability and efficiency
- 5 High flow rate short filling times
- Optimal protection for operator and components
- 7 Minimal downtime low maintenance
- 8 Robust and durable





# **CNG fueling station components** for cars

### High flow rates - Faster filling times

Superior quality and maximum reliability have made WEH CNG dispenser components so popular throughout the world.

WEH fill nozzles, breakaways and filters for cars and light duty vehicles convince by their outstanding functionality. Ideally suited for self-serve fast filling, fleet and time filling, the fueling nozzles feature:

- ▶ High flow rate Short filling times
- ▶ Clear identification of pressure range (no mix-up)
- ▶ Colour coded impact protection 200 bar (P30 3,000 psi / black) & 250 bar (P36 3,600 psi / yellow)
- ▶ Integrated swivel joint for comfortable handling

Breakaways for protection of dispenser in the event of a 'drive-off' and CNG filters for CNG free of impurities round off the portfolio.

All CNG Dispenser products have been extensively tested.















### WEH® Fueling station components

Fueling nozzles for cars





### WEH® TK17 CNG

The NGV1 single-handed fueling nozzle with the design of a petrol fueling nozzle has established itself on the global market thanks to its easy and convenient handling. The two-hose system of the Type 1 fueling nozzle recirculates the vented gas via the gas recirculation system.

### Pressure range:

P30 acc. to ANSI NGV1 / B200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36 acc. to ANSI NGV1 / B250 acc. to ISO 14469 PN = 250 bar | PS = 350 bar

### **Application:**









### WEH® TK16 CNG

The best-selling NGV1 fueling nozzle by WEH is extremely light and easy to handle. High flow rates enable rapid refueling. The two-hose system of the Type 1 fueling nozzle recirculates the vented gas via the gas recirculation system.

### Pressure range:

P30 acc. to ANSI NGV1 / B200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36 acc. to ANSI NGV1 / B250 acc. to ISO 14469 PN = 250 bar | PS = 350 bar







WEH® TK10 CNG without gas recirculation, grip position 90°



WEH® TK10 CNG without gas recirculation, grip position 45°

### WEH® TK10 CNG

The NGV1 Type 2 fueling nozzle is characterized by its outstanding ease of use. Thanks to the clamping jaw mechanism, the integrated TK4 CNG fueling nozzle can easily be placed on the receptacle without pulling back the sleeve.

The fueling nozzle is optionally available with or without gas recirculation, with a 45° or 90° grip position.

### Pressure range:

P30 acc. to ANSI NGV1 / B200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36 acc. to ANSI NGV1 / B250 acc. to ISO 14469 PN = 250 bar | PS = 350 bar





### WEH® Fueling station components

Fueling nozzles for cars



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### WEH® TK4 CNG

The NGV1 Type 3 fueling nozzle is characterized by its outstanding ease of use. The fueling nozzle only needs to be positioned straight and pushed onto the receptacle. The extended construction of the fueling nozzle allows easy refueling of difficult-to-access receptacles.

### Pressure range:

P30 acc. to ANSI NGV1 / B200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36 acc. to ANSI NGV1 / B250 acc. to ISO 14469 PN = 250 bar | PS = 350 bar

### **Application:**









### WEH® TK4i CNG

The TK4i CNG fueling nozzle has been designed especially for the Italian NGV market enabling connection to Italian receptacles with a push-pull nozzle. The fueling nozzle only needs to be positioned straight and pushed onto the receptacle. 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.

### Pressure range:

P30 acc. to ANSI NGV1 / B200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar









### WEH® TK1 CNG

The NGV1 Type 3 fueling nozzle for time-fill refueling of vehicles with 'Fuelmaker' compressors is characterized by its outstanding ease of use. The fueling nozzle only needs to be positioned straight and pushed onto the receptacle. The extended construction of the fueling nozzle allows easy refueling of difficult-to-access receptacles.

### Pressure range:

P30 acc. to ANSI NGV1 / B200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36 acc. to ANSI NGV1 / B250 acc. to ISO 14469 PN = 250 bar | PS = 350 bar

### **Application:**







WEH® TK4 CNG fueling nozzle



WEH® TK6 CNG service nozzle

### WEH® TZ21 CNG

Emergency fueling set for refueling of cars by a service vehicle, consisting of:

- TK4 CNG fueling nozzle,
- TK6 CNG defueling nozzle with bleeding valve,
- hose and
- fittings

Only to be used by specially trained service personnel. Not for self-service operation!

#### Pressure range:

P30 acc. to ANSI NGV1 / B200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36 acc. to ANSI NGV1 / B250 acc. to ISO 14469 PN = 250 bar | PS = 350 bar

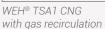


### WEH® Fueling station components

Breakaways for cars









WEH® TSA1 CNG without gas recirculation

### WEH® TSA1 CNG

The breakaway coupling provides additional safety at fueling stations, is installed between the dispenser and the filling/venting hose and is optionally available with or without gas recirculation.

If unexpected pulling force occurs, e.g. due to a vehicle driving off while it is still connected to the fueling nozzle, the breakaway coupling cuts off the connection between the dispenser and the filling hose in a controlled manner.

### Pressure range:

PN = 200 bar | PS = 300 bar PN = 250 bar | PS = 350 bar

### **Application:**







WEH® TSA2 CNG with gas recirculation



WEH® TSA2 CNG without gas recirculation

### WEH® TSA2 CNG

The inline breakaway coupling provides additional safety at fueling stations, is installed between the filling hose and the venting hose and is optionally available with or without gas recirculation.

If unexpected pulling force occurs, e.g. due to a vehicle driving off while it is still connected to the fueling nozzle, the breakaway coupling cuts off the connection between the dispenser and the filling hose in a controlled manner.

### Pressure range:

PN = 200 bar | PS = 300 bar PN = 250 bar | PS = 350 bar







### WEH® Fueling station components

for buses and trucks

### Simple & safe refueling of buses/trucks at natural gas fueling stations

Superior quality and maximum reliability have made WEH CNG dispenser components so popular throughout the world.

WEH fill nozzles, breakaways and filters for buses, trucks and heavy duty vehicles convince by their outstanding functionality. Ideally suited for self-serve fast filling, fleet and time filling, the fueling nozzles feature:

- ▶ High flow rate Short filling times
- ► Clear identification of pressure range (no mix-up)
- ▶ Colour coded impact protection 200 bar (P30 3,000 psi / black) & 250 bar (P36 3,600 psi / yellow)
- ▶ Integrated swivel joint for comfortable handling

Breakaways for protection of dispenser in the event of a 'drive-off' and CNG filters for CNG free of impurities round off the portfolio. All CNG Dispenser products have been extensively tested















# WEH® Fueling station components Fueling nozzles for buses and trucks



### WEH® TK26 CNG

The Type 1 fueling nozzle for refueling of buses and trucks 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.

### Pressure range:

P30HD acc. to ANSI NGV1 / C200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36HD acc. to ANSI NGV1 / C250 acc. to ISO 14469 PN = 250 bar | PS = 350 bar















### WEH® TK22 CNG

The fueling nozzle with push-pull actuation was specially developed for refueling natural gas buses and trucks. Thanks to its sturdy construction and unique WEH® Jaw locking mechanism, a pressuretight connection is created in a matter of seconds.

### Pressure range:

P30HD acc. to ANSI NGV1 / C200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36HD acc. to ANSI NGV1 / C250 acc. to ISO 14469 PN = 250 bar | PS = 350 bar







### WEH® TK24 CNG

The Type 2 fueling nozzle for refueling buses and trucks with natural gas is characterized by its outstanding ease of use and is also suitable for time-fill refueling. The fueling nozzle is optionally available with or without gas recirculation.

### Pressure range:

P30HD acc. to ANSI NGV1 / C200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

P36HD acc. to ANSI NGV1 / C250 acc. to ISO 14469  $PN = 250 \text{ bar} \mid PS = 350 \text{ bar}$ 

### Application:







WEH® TK22 CNG fueling nozzle



WEH® TK21 CNG service nozzle

### WEH® TZ22 CNG

Emergency fueling set for refueling of buses and trucks by a service vehicle, consisting of:

- TK22 CNG fueling nozzle,
- TK21 CNG defueling nozzle,
- two-way ball valve,
- hose
- fittings

Only to be used by specially trained service personnel. Not for self-service operation!

### Pressure range:

P30HD acc. to ANSI NGV1 / C200 acc. to ISO 14469 PN = 200 bar | PS = 300 bar

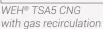




# WEH® Fueling station components Breakaways for buses and trucks









WEH® TSA5 CNG without gas recirculation

### WEH® TSA5 CNG

The breakaway coupling provides additional safety at fueling stations, is installed between the dispenser and the filling/venting hose and is optionally available with or without gas recirculation.

If unexpected pulling force occurs, e.g. due to a vehicle driving off while it is still connected to the fueling nozzle, the breakaway coupling cuts off the connection between the dispenser and the filling hose in a controlled manner.

### Pressure range:

PN = 200 bar | PS = 300 bar PN = 250 bar | PS = 350 bar

### **Application:**







WEH® TSA6 CNG with gas recirculation



WEH® TSA6 CNG without gas recirculation

### WEH® TSA6 CNG

The inline breakaway coupling provides additional safety at fueling stations, is installed between the filling hose and the venting hose and is optionally available with or without gas recirculation.

If unexpected pulling force occurs, e.g. due to a vehicle driving off while it is still connected to the fueling nozzle, the breakaway coupling cuts off the connection between the dispenser and the filling hose in a controlled manner.

### Pressure range:

PN = 200 bar | PS = 300 bar PN = 250 bar I PS = 350 bar







### **CNG** vehicle components

for cars, buses, trucks and other lightweight or heavy commercial vehicles

#### **OEMs first choice - Built to last**

Famous automotive manufacturers all around the world rely on WEH® Products onboard CNG vehicles offering superior quality and maximum reliablilty.

WEH® Receptacles for cars, buses, trucks and other light duty and heavy-duty vehicles offer:

- ▶ Increased longevity
- ▶ Superior flow characteristics short filling times
- ▶ Compatible for CNG nozzles acc. to ISO 14469 / ANSI NGV1
- ▶ Low-noise refueling
- ▶ 200 bar (3,000 psi) / 250 bar (3,600 psi) pressure range
- ▶ Low maintenance and down-time

You can choose between a large choice of connection possibilities – bulkhead fitting, straight female thread, ACME thread, UNF or NPT.

CNG filters for protection of the downstream CNG components round up the product line and reduce downtime for the end user. The filter inserts can be easily cleaned.

All CNG Vehicle products have been extensively tested.



















### WEH® TN1 CNG

The TN1 CNG receptacle is designed specifically for car refueling. 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 optionally available with a tube fitting, female thread and a 40 micron filter.

### Pressure range:

PN = 200 bar | PS = 260 bar (ECE) PN = 250 bar | PS = 315 bar

### **Application:**









### WEH® TS50 CNG

Fueling system for installation in cars, for quick and easy retrofitting of vehicles for natural gas refueling.

The fueling valve is available in three versions:

Version 1: with lockable fuel tank cap and key, Version 2: with cap, without lock and starter cut-off micro switch,

Version 3: with lockable 3-hole fuel tank cap.

### Pressure range:

PN = 200 bar | PS = 260 bar (ECE)



### **WEH®** Vehicle components

for cars, buses and trucks





### WEH® TVR1 CNG

This cost-effective and high-performance check valve is made of corrosion resistant stainless steel and is built to last, thanks to its robust internal construction.

The check valves are optionally available with a tube fitting on both sides, and with a male thread and tube fitting.

### Pressure range:

PN = 200 bar | PS = 260 bar (ECE) PN = 250 bar | PS = 315 bar

### **Application:**











### WEH® TSF1 CNG

The TSF1 CNG filter is used for fueling stations and dispensers as well as onboard CNG powered vehicles. The filter is mainly installed as prefilter in the media inlet between fueling nozzle and filling hose.

The filters are optionally available with a male or female thread on both sides, or with both a male and female thread.

### Pressure range:

PN = 200 bar | PS = 260 bar (ECE) PN = 250 bar | PS = 315 bar







### WEH® TSF2 CNG

The filter for installation in CNG vehicles and fueling stations reliably cleans the gas flow from contaminants. The TSF2 CNG filter is low-maintenance and can be retrofitted in vehicles and fueling stations.

### Pressure range:

PN = 200 bar | PS = 300 bar

### **Application:**















### WEH® TSF4 CNG

The filter for installation in CNG vehicles and fueling stations reliably cleans the gas flow from contaminants. The filter is low-maintenance and can be retrofitted in vehicles and fueling stations.

The TSF4 CNG is available as a round filter or T-filter with different connection configurations.

### Pressure range:

PN = 200 bar | PS = 260 bar (ECE) PN = 200 bar | PS = 300 bar







### WEH® Vehicle components

for cars, trucks and buses





### WEH® TSF5 CNG

The TSF5 CNG filter is used for fueling stations as well as for dispensers.

The filter is mainly installed as prefilter in the media inlet between inline breakaway coupling and filling hose.

### Pressure range:

PN = 200 bar | PS = 300 bar PN = 250 bar | PS = 350 bar

### **Application:**









### WEH® TSF2 CNG Coalescing Filter

The coalescing filter for installation in CNG vehicles and fueling stations reliably cleans the gas flow from contaminants.

The filter is low-maintenance and can be retrofitted in vehicles and fueling stations.

### **Pressure range:**

PN = 200 bar | PS = 260 bar (ECE)







### **WEH®** Vehicle components

for trucks and buses







### WEH® TN5 CNG

The TN5 CNG receptacle is designed specifically for bus and truck refueling. 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 optionally available with a tube fitting, a male and female thread, an ACME thread and a 50 micron filter.

### Pressure range:

PN = 200 bar | PS = 260 bar (ECE) PN = 250 bar | PS = 260 bar (ECE)

PN = 250 bar | PS = 315 bar

### **Application:**









### WEH® TS55 CNG

Fueling system for installation in buses and trucks, for quick and easy retrofitting of vehicles for natural gas refueling.

### Pressure range:

PN = 200 bar | PS = 260 bar (ECE)









### WEH® TVR5 CNG

TVR5 CNG is the largest of our check valves. It is most efficient and developed specifically for CNG buses and trucks.

The check valves are optionally available with a tube fitting on both sides and a female thread on both sides.

### Pressure range:

PN = 200 bar | PS = 260 bar (ECE) PN = 250 bar | PS = 315 bar







# WEH® Defueling nozzles for cars, trucks and buses

### Safe and easy defueling for natural gas with WEH® Defueling nozzles

When it comes to emptying CNG tanks, a distinction is made between emergency defueling and defueling for maintenance purposes, such as for repairs to the natural gas tank. Precisely for these cases, WEH offers various defueling nozzles with outstanding features:

- ▶ Ease of operation
- ▶ High flow rate
- ▶ Plastic thermal protection prevents frostbite



















### WEH® TK6 CNG

The defueling nozzle for emptying the CNG tanks of cars through the filling receptacle is used in the maintenance and inspection of natural gas vehicles.

The defueling nozzle is optionally available with or without a bleeding valve.

### Pressure range:

PN = 250 bar | PS = 350 bar



### WEH® Defueling nozzles

for cars, trucks and buses







### WEH® TK21 CNG

The defueling nozzle for emptying the CNG tanks of buses and trucks through the filling receptacle is used in the maintenance and inspection of natural gas vehicles.

### Pressure range:

PS = 350 bar

### Application:









### WEH® TK23 CNG

The defueling nozzle has been specially developed for emptying cylinder bundles (e.g. on trailers) and removing CNG from cylinder bundles.

### Pressure range:

PN = 250 bar | PS = 350 bar









# WEH® Adaptor nozzles for cars, trucks and buses

### Safe & easy refueling according to country-specific standards

Since the NGV1 standard is not yet in use worldwide, drivers of natural gas vehicles repeatedly have to face a challenge. To allow refueling with different, country-specific standards, WEH offers a range of adaptor nozzles and receptacles.

Refueling between the NGV1 standard and various country-specific standards is no problem with WEH® adaptor nozzles and receptacles.

Country-specific standards for which WEH offers the right solution include:

Italian standard, NZ standard (e.g. in Brazil, Pakistan, Bangladesh, India, China, Argentina) and GOST standard (Russia)















### NZ/GOST standard

Adaptor nozzles for quick refueling of cars with a NGV1/ISO 14469 receptacle profile at car fueling stations with NZ or GOST standards.

Adaptor receptacle for natural gas refueling of cars with an NZ or GOST receptacle profile at car fueling stations with the NGV1 standard/ISO 14469.



### **Italian standard**

Adaptor nozzles for quick refueling of natural gas cars with a NGV1/ISO 14469 receptacle profile with fueling nozzles in accordance with the Italian standard, or cars with an Italian receptacle profile with fueling nozzles in accordance with the NGV1 standard/ISO 14469.



### Adaptor nozzles for buses and trucks

Adaptor nozzles for quick refueling of natural gas buses and trucks at car fueling stations or for quick refueling of natural gas cars at bus/truck fueling stations in accordance with the NGV1 standard/ISO 14469.



### **Quality & Service at WEH**

- Made in Germany -

### Opt for safety: The manufacturer service from WEH

You have chosen a WEH® Product and thereby choosing quality and safety. Your satisfaction is our focus - especially after purchasing our products. Our service team is your reliable and competent point of contact when it comes to the lifespan of our products.

#### That's what we call excellent service!

The quality of our products is the major benefit for our customers. Because WEH® Products are not simply replaced they are sent for service.

#### Your benefits:

- Our experts reliably, quickly & safely inspect, repair, and maintain your devices.
- We meet national and international requirements.
- We only use original spare parts.
- We carry out outgoing goods inspections and prepare a test report.
- We guarantee maximum availability and performance of our products.
- With our service, you minimize security risks.
- Our experts recognize impending damages at an early stage.
- Our service personnel can rule out unnecessary repairs and subsequent damages.
- ▶ The costs for service and maintenance are transparent.

#### What we can do for you



**ANALYSIS** 

During maintenance, we decide which individual parts can be reused.



REPLACEMENT

We replace parts to ensure quality and safety criteria.



GUARANTEE & WARRANTY

Anyone who does excellent work is happy to offer a guarantee. You can be assured that every product has been tested.



**LABORATORY** 

We invest continuously. For very specific analyses, we collaborate with our partner laboratories.



CLEANING

Please wash first! This is done by a state-of-the-ar cleaning machine.







### **Quality from experience**

### Market-proven technology for more than 50 years

Many will describe WEH as obsessed. Obsessed with the highest quality. In fact, this is one of the most important criteria that our products must fulfill. Quality is paramount alongside safety. We only use high-quality materials and have been relying on the "Made in Germany" seal for decades.

Sustainable satisfaction, but above all the safety of our customers is paramount to us. From the product idea to the service performance, the demand for excellent quality is firmly anchored in our company's processes. For us, it goes without saying that every product undergoes maximum quality and safety checks.

Our customers can rely on our team to carefully inspect incoming and outgoing goods. Our quality experts have state-of-the-art measuring and testing methods at their disposal.

By the way, we apply the high standard of top quality not only to our ready-to-ship products, but also to goods we receive from suppliers. We place great value on reliable partners who also embody and implement our standards in their companies.

Only if the quality of the purchased materials is assured can you rely on the final product being safe and high-quality.

### The result of our philosophy?

Product solutions that impress with top quality and optimum safety and offer our customers numerous benefits, such as:

- Low downtime
- Cost reduction and increased productivity
- ▶ Reliability and unique user-friendliness







#### **CERTIFIED QUALITY MANAGEMENT**

Our quality standards are certified according to recognized standards:

- ▶ ISO 9001:2015
- ▶ ISO 14001:2015
- Pressure Equipment Directive 2014/68/EU Annex III, Module H

### Contact

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

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