



Your project deserves it.



## INJECTION / BUILDING PROTECTION





Dear business partners,

the renovation of structures such as bridges, tunnels, the sewer system, dams and old buildings is increasingly coming into focus. Due to climate change, the seasons are becoming more and more extreme – cracks and subsidence of the soil can be the result. Through our years of experience and close contact with material manufacturers worldwide, we are very flexible and can respond comprehensively to our customers special requests.

Our injection technology is completely designed, built and tested at our Lahnau site. We offer highly complex, automated systems and easy-to-operate equipment for efficient and trouble-free work. From small construction sites in the private sector, such as crack repair or the sealing of basements and buildings, up to underground or in tunnel construction - our WIWA INJECT series in the 1C and 2C range offer efficient solutions for every job volume.

In the following you will find our large selection of pump technology and accessories. Contact us – we will find the solution for your application and your material.

Kind regards on behalf of our entire team

Peter Turczak  
General Manager



## Company history

It all started with spray nozzles, which precision mechanic Wilhelm Wagner manufactured in the 1940s. Today – 70 years after it was established – WIWA Wilhelm Wagner GmbH & Co. KG supplies first class coating systems, spray painting equipment, injection and fluid handling systems around the world.

1950	Company founded in Lahnau, WIWA develops and makes oil pumps and lubrication guns.
1967	The first Airless spray painting units are sold.
1970	New products – AIRLESS 10.000, AirCombi units, zinc silicate spraying units, feed pumps, airless spray painting guns – are added to the product range. Company expands: New building is opened on Gewerbestrasse in Lahnau-Waldgirmes.
1975	Founder's daughter Heidrun Wagner-Turczak takes the commercial helm of the company and Günter Leinweber takes over as Chief Technical Officer.
1980	Expansion of fluids handling technology product range and market launch of WIWA extrusion pumps and hot-spraying systems.
1992	WIWA JUMBO launched on the market – the world's largest airless unit.
1994	WIWA plural component technology opens up a promising, new market segment with the launch of the DUOMIX range.
1996	Certification of quality management according to DIN ISO 9001.
2000	WIWA LP is established in Tucker, Georgia, USA.
2004	Unveiling of 1K (single-component) and 2K PFP units for fire-protection coatings. WIWA is awarded ATEX certification.
2005	WIWA launches electronic plural component technology with the FLEXIMIX 1 and FLEXIMIX 2.
2007	Relocation of WIWA factory in Leun-Stockhausen to new building at HQ Lahnau.
2009	Unveiling of newly developed range of polyurea application units.
2014	WIWA DUOMIX 333 PFP certified for use on offshore platforms. New generation of airless units, the HERKULES GX SERIES.
2015	Modernization of the DUOMIX range with the launch of the DUOMIX 270.
2016	Introduction of the new generation single feed units HERKULES 270 and 333 GX and of the DATALOGGER.
2017	The 3rd generation takes over the management. Peter Turczak succeeds his mother Heidrun Wagner-Turczak.
2018	Launch of the new generation single feed units PHOENIX GX and PROFESSIONAL GX.
2021	DUOMIX 230 MINI as new 2K entry-level machine. Brand relaunch and realignment to the market segments Protective Coatings, Extrusion/Material Handling and Injection/Building Protection.
2022	Relocation of the 2K special construction to new company building in Aßlar, Germany. With the HYDRO PX series, compressed air independent units complete the WIWA product portfolio. Purely electrically operated follows the WIWA ELAN.

## About us



## Made in Germany – Made by WIWA!



### RELIABILITY AND PRECISION FOR MORE THAN 70 YEARS

WIWA Wilhelm Wagner GmbH & Co. KG is one of the world's leading developers and producers in the fields of 1- and multi-component airless paint spraying equipment, material conveying, extrusion and injection systems.

The application spectrum of our equipment and systems ranges from painting and bonding in mechanical and vehicle engineering to large-area and thick-film coatings in the marine and offshore industries, in building and corrosion protection, and in passive fire protection.

Under the highest quality standards WIWA manufactures at its founding site in Lahnuau, Germany, equipment and systems for the most diverse requirements.

WIWA technology proves itself in decorative and protective surface coating, surface sealing in tunnel and canal construction,

or the application of highly viscous, paste-like 2K and 3K materials on steel and concrete. The family-owned company develops, produces and sells its products in Germany. It also sells through a company-owned subsidiary in the USA and through highly experienced distributors in all parts of the world. In close cooperation with these international experts, WIWA develops and implements industry-leading special solutions.

By adapting the work processes to the strict requirements of DIN EN ISO 9001:2008 as well as the introduction of a quality management system, WIWA offers national and international customers even more transparency and investment security. WIWA holds the corresponding certifications of TÜV Rheinland and Bureau Veritas. German workmanship describes in our company the consequent highest quality and innovative solutions.

The fact that our global customers despite growing cost pressure and on „Made in Germany – Made by WIWA“ is based not least on the clear commitment to our home location in Lahnuau and our more than 135 qualified employees.

It is not always recognizable technical factors that pay off for our customers day after day. Direct contact with each individual WIWA employee, often with many years of experience and competence, creates trust. Use the potential of all specialist departments of our company from design to production to final assembly, the shipping department and our service team clearly for one big goal: Your daily success!

How much „Made in Germany“ is actually still in a WIWA system?

Quite clear:  
almost 100%

## The new dimension of injection systems

Regular maintenance measures are important for the long-term use of structures. Injection systems make a sustainable contribution to this.

High-performance injection materials combined with optimal processing technology are prerequisites for successful injection measures.

This brochure presents you with a comprehensive overview of WIWA injection solutions from the 1K and 2K range for:

- Waterproofing of floor slabs
- Reinforcement and strengthening
- Crack repair / crack grouting
- Joint sealing
- Horizontal barriers
- Stopping of strong water inflows
- Structural waterproofing by curtain and surface injection
- Filling of cavities
- Consolidation and stabilization of rock and subsoil

**1K INJECT SOLUTIONS**

from Page 8

**2K INJECT SOLUTIONS**

from Page 24

**2K FOAM/PU SOLUTIONS**

from Page 52

**ACCESSORIES**

from Page 60

## WIWA 1K INJECT SOLUTIONS

The WIWA INJECT HD series consists of 5 versatile and high quality pneumatic piston pumps for the 1K injection range.

They are particularly suitable for injecting and injection of low viscosity epoxy or polyurethane resins and meet the requirements of the ZTV Riss.



## 1K Solutions



## Compact · High-quality · Strong

Our 1K injection units HD 1 to HD 3 of the WIWA INJECT HD series are equipped with the powerful pneumatic WIWA PROFIT piston pumps.

Carefully selected, premium quality materials create high durability and reduce the wear and tear of all parts that come into contact with the fluid. Minimal repair costs and downtime create satisfied customers all over the world. Robust, reliable and versatile WIWA technology to your benefit.

### THE ADVANTAGES:

- Portable for flexible use anywhere.
- Pulsation is barely noticeable thanks to the high stroke changeover speed.
- Spring supported, self adjusting packings reduce wear and tear.
- Quicker and simpler maintenance and assembly thanks to direct threading and wrench flats.



### DESIGN FEATURES OF HD 1-3

#### Air motor

- 1 Pulsation is barely noticeable thanks to the high stroke changeover speed.
- 2 Low number of components make the motor easy to assemble and disassemble.

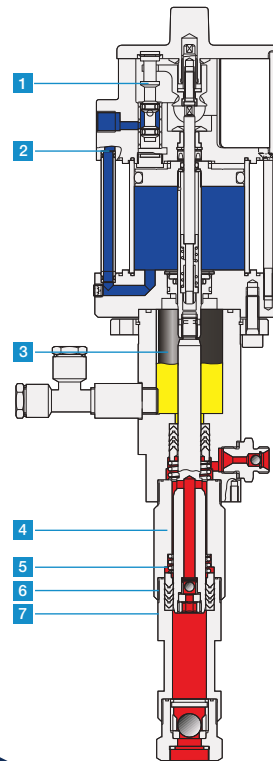
#### Lubrication chamber

- 3 A closed lubrication chamber separates the air motor and the material pump. The closed design prevents foreign objects such as blasting material from entering the pump system from the outside. The lubricant also prevents paint from drying onto the piston rod and protects the packings.

#### Material pump

Less pressure loss even with highly viscous materials due to large bores and voluminous material passages in the bottom valve.

- 4 Precision guides ensure simple and exact alignment of components and thus less wear and tear.
- 5 Better flushing due to short packing retention springs and large fluid passages.
- 6 Sealing rings located in front of the threads prevent the threads from sticking and make disassembly easier.
- 7 Pump components are quick to assemble and disassemble as they are simply screwed together.



All components of the units comply with the ATEX directives.

## 1K Solutions

### WIWA INJECT HD 1 / HD 2 / HD 3



Technical data	HD 1	HD 2	HD 3
Output per cycle	14 cm <sup>3</sup>	14 cm <sup>3</sup>	27 cm <sup>3</sup>
Pressure ratio	33:1	33:1	33:1
Max. air inlet pressure	8 bar/116 psi	8 bar/116 psi	8 bar/116 psi
Max. operating pressure	264 bar/ 3829 psi	264 bar/ 3829 psi	264 bar/ 3829 psi
Weight	12 kg	16,3 kg	13 kg
Material feed hopper	1,5 l	6 l	1,5 l
Order No.	0644426	0644517	0669680

#### SECURITY FOR YOUR PROFIT

The advantage of air-operated piston pumps compared to electric membrane pumps is that the pump stops when the injection site is filled. The slower stroke speed allows the operator to see how far the injection process has progressed.

#### MATERIALS

- PUR injection foam resins
- PUR Combination Injection Foam Resins
- PUR Combination Injection Resins
- PUR injection resins
- EP injection resins
- Also suitable for processing 2K injection materials with longer pot life.

#### AREAS OF APPLICATION

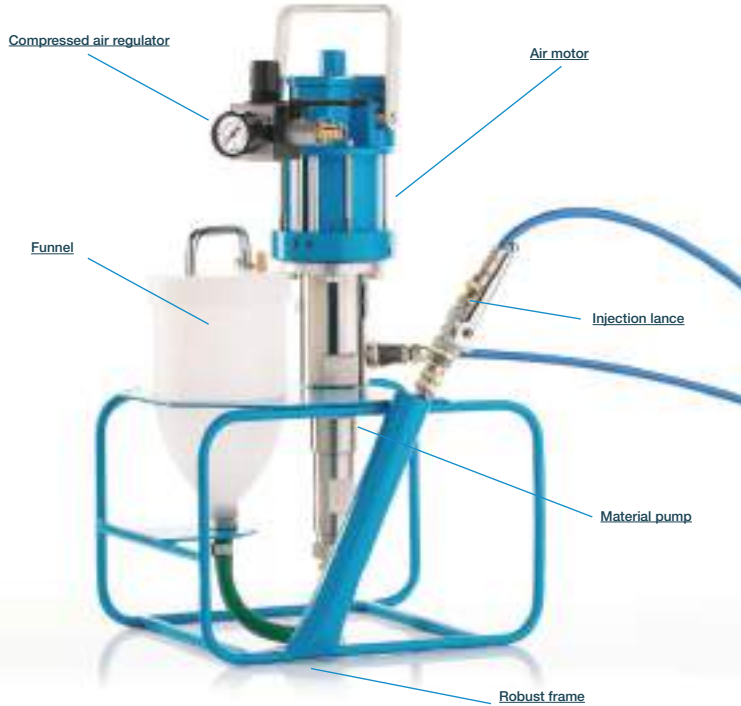
- Crack injection
- Subsequent horizontal barrier
- Grouting of injection hoses
- Filling of smaller cavities
- Sewer rehabilitation

#### BASIC EQUIPMENT

- High pressure pump
- Compressed air regulator
- Safety valve
- Feed hopper, approx. 1,5 liters (HD 1) or feed tank, approx. 6 liters (HD 2)
- High-pressure material hose (7,5 m)
- Injection lance with 4-jaw-injection coupling
- Bottle of release agent
- Operating manual with spare parts list

- Easy to operate and transport
- The injection pressure is infinitely adjustable
- Compact, portable and powerful injection equipment with pneumatic drive

## Accessories for WIWA INJECT HD 1 / HD 2 / HD 3



Accessories	Order No.	Description
Suction line	0643949	Suction hose -N- NW 9
Mounting kit funnel black 1,5 l	0645575	Funnel 1,5 Liter complete
Mounting kit funnel black 6 l	0631064	Funnel 6 Liter complete
Mounting kit funnel transparent 6 l	0668846	Funnel 6 Liter complete with lid and sieve
Hose NW4 1/4" 7,5 m	0410845	Material hose NW 4/460-1/4"-7,5 N
Compressed air regulator	0644180	Compressed air regulator G 1/4" complete
Injection lance complete	0641948	Injection lance complete
Stroke counter	0671687	Stroke counter complete with holder
Gun	0668657	Injektionspistole complete WIWA 500D with adapter 1/4" NPSM (A)
Whip 0,3 m	0631406	Material hose NW 6/410-1/4"-0,30 N
Mounting kit straight lance	0669411	Mounting kit for injection gun pipe straight 600 mm
Mounting kit bent lance	0669410	Mounting kit for injection gun pipe bent 170 mm
Mounting kit bent lance	0218820	Double nipple NPS 1/4"-M 10x1
Sliding coupling 90°	0669301	Sliding coupling angular 90°, for nipple M1 Aluminium
Sliding coupling straight	0641199	Sliding coupling gerade, for nipple M1 Aluminium
Hydraulic mouthpiece	0411302	Hydraulic mouthpiece M10x1 IG 4 jaws chrome-plated (Replacement seal 0660477)
Quick release pliers	0668559	Quick release pliers R1/4 (A), 4 mm



ATEX version: Can be used in explosion-proof areas.

N = Normal steel galvanized, not stainless    RS = Stainless steel, rust and acid resistant



## 1K Solutions

# Enduring Reliable Robust

Our next larger 1K injection units WIWA INJECT HD 4 and HD 5 are equipped with the high-quality pneumatic WIWA PHOENIX piston pumps.

They convince with above-average service life of all components. During daily operation, selected high-quality materials reduce wear and tear and the resulting repair costs to a

minimum. The INJECT HD series is uniquely versatile thanks to its sophisticated modular conception. If the operating conditions change, the pressure ratio and output can be easily adjusted by replacing only a few components. This avoids additional investments.



### DESIGN FEATURES OF HD 4+5

#### Air motor

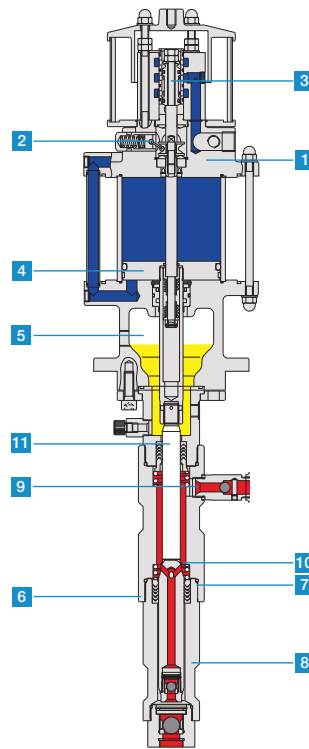
- 1 Easy disassembly and assembly due to few components.
- 2 The snips are highly visible and therefore easy to use.
- 3 Pulsation is barely noticeable thanks to the high stroke changeover speed.
- 4 Change of performance by changing the piston diameter of the air motor.

#### Lubrication chamber

- 5 A closed lubrication chamber separates the air motor and the material pump. The closed design prevents foreign objects such as blasting material from entering the pump system from the outside. The lubricant also prevents paint from drying onto the piston rod and protects the packings.

#### Material pump

- 6 Fast disassembly and assembly due to direct screw connection. During disassembly, the parts are automatically pulled apart.
- 7 Sealing rings located in front of the threads prevent the threads from sticking and make disassembly easier.
- 8 Less wear due to guided and therefore easy to assemble components.
- 9 Less pressure loss due to large bores and large-volume material passages.
- 10 Better flushing due to large material passages and short packing tensioners.
- 11 Change flow rate and pressure ratio by replacing piston rod and packings.



## WIWA INJECT HD 4 / HD 5



### COMPACT AND POWERFUL

The WIWA INJECT HD 4 and HD 5 are characterized by large valves. The spring-loaded packings make them particularly low-wear. The models are available in direct suction, suction line, funnel and with connection to a large container. By adapting an high pressure filter and nozzle, they can also be used as an airless unit.

### MATERIALS

- PUR injection foam resins
- PUR Combination Injection Foam Resins
- PUR Combination Injection Resins
- PUR injection resins
- EP injection resins
- Also suitable for processing 2K injection materials with longer pot life.

### AREAS OF APPLICATION

- Ideal for filling cracks and cavities
- Subsequent horizontal barrier
- Grouting of injection hoses
- Filling of smaller cavities
- Sewer renovation
- Sealing of joints
- Connecting of broken building elements
- Renovation of floor slabs

### BASIC EQUIPMENT

- High pressure pump
- Compressed air regulator
- DAS = Direct suction (INJECT HD 4) or feed tank, approx. 6 Liter (INJECT HD 5), ASL = Suction line (INJECT HD 5)
- High pressure material hose (7,5 m)
- Injection lance with hydraulic mouthpiece
- Bottle of release agent
- Operating manual with spare parts list

Technical data	HD 4	HD 5	HD 5
Output per cycle	43 cm <sup>3</sup>	72 cm <sup>3</sup>	72 cm <sup>3</sup>
Pressure ratio	30:1	32:1	32:1
Max. air inlet pressure	8 bar/116 psi	8 bar/116 psi	8 bar/116 psi
Max. operating pressure	240 bar/ 3480 psi	256 bar/ 3712 psi	256 bar/ 3712 psi
Weight	23 kg	33 kg	33 kg
Material filling	DAS	6 l Funnel	ASL
Order No.	0669679	0669225	0669224

- Also suitable for viscous materials
- Fast start-up of the pump with very low air input
- Simple handling, easy operation and simple maintenance of the plant

**i** All material-carrying parts of the pump technology are made of stainless steel.  
DAS = Direct suction      ASL = Suction line

## Accessories for WIWA INJECT HD 4 / HD 5



Accessories	Order No.	Description
Suction line	0667173	Suction line 25 ltr NW20 / G 3/4" -RS-
Mounting kit funnel black	0666699	Funnel 6 l complete for PHOENIX GX, with cover and suction tube
Mounting kit funnel transparent	0668846	Funnel 6 l complete with lid and sieve, plastic white, non-conductive
Hoses NW6 1/4" 7,5 m	0410780	Material hose NW 6/410-1/4"-7,5 N
Compressed air regulator	0663775	Compressed air regulator G 1/4" complete
Injection lance complete	0641948	Injection lance complete
Ball valve	0646988	Ball valve G 1/4" 1/1
Stroke counter	0671687	Stroke counter complete with holder
Injection gun	0668657	Injection gun complete WIWA 500D with adapter 1/4" NPSM (A)
Whip 0,3 m	0631406	Material hose NW 6/410-1/4"-0,30 N
Mounting kit straight lance	0669411	Mounting kit for injection gun pipe straight 600 mm
Mounting kit bent lance	0669410	Mounting kit for injection gun pipe bent 170 mm
Connection nipple	0218820	Double nipple NPS 1/4"-M 10x1
Sliding coupling 90°	0669301	Sliding coupling angular 90°, for nipple M1 Aluminium
Sliding coupling straight	0641199	Sliding coupling straight, for nipple M1 Aluminium
Hydraulic mouthpiece	0411302	Hydraulic mouthpiece M10x1 IG 4 jaws chrome-plated (Replacement seal 0660477)
Quick release pliers	0668559	Quick release pliers R1/4 (A), 4 mm
High pressure filter	0663760	High pressure filter typ 11 GX -RS-
Airless gun WIWA 250 D with swivel joint	0646997	Airless gun WIWA 250D 7/8" Insert



ATEX version: Can be used in explosion-proof areas.

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## The WIWA INJECT HD series at a glance

Larger injection piston pumps available on request.



Technical data	HD 1	HD 2	HD 3	HD 4	HD 5
Output per Cycle	14 cm <sup>3</sup>	14 cm <sup>3</sup>	27 cm <sup>3</sup>	43 cm <sup>3</sup>	72 cm <sup>3</sup>
Pressure ratio	33:1	33:1	33:1	30:1	32:1
Max. air inlet pressure	8 bar/116 psi	8 bar/116 psi	8 bar/116 psi	8 bar/116 psi	8 bar/116 psi
Max. operating pressure	264 bar/3829 psi	264 bar/3829 psi	264 bar/3829 psi	240 bar/3480 psi	256 bar/3712 psi
Weight	12 kg	16,3 kg	13 kg	23 kg	33 kg
Material filling	1,5 l	6 l	1,5 l	DAS = Direct suction	6 l Funnel ASL = Suction line
Order No.	0644426	0644517	0669680	0669679	0669225 0669224

WIWA PROFIT Piston pumps

WIWA PHOENIX Piston pumps