



Your project deserves it.



WIWA RAIL
SOLUTIONS FOR RAILWAY AND RAILCARS

WWW.WIWA.COM



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 to every country 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 |
| 1968 | New Airless spray painting units and underbody coating pumps are added to the product range |
| 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; 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 | Zertifizierung des Qualitätsmanagements nach DIN ISO 9001 |
| 2000 | WIWA LP is established in Tucker, Georgia, USA |
| 2002 | Mobile 2K unit added to plural component systems program |
| 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 |
| 2010 | Relocation of WIWA LP to Alger, Ohio, USA |
| 2013 | Establishment of WIWA Middle East in Dubai |
| 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 |
| 2018 | Launch of the new generation single feed units PHOENIX GX und PROFESSIONAL GX |
| 2019 | Focusing and bundling of the worldwide know-how for the demands of the Railway industry |
| 2020 | 70 years of passion for your application |

Efficient work processes – Enormous cost savings

WIWA RAIL Dosing Unit



WIWA DOSING UNITS FOR FILLERS

Unique and indispensable. **WIWA Dosing Units for fillers** will inspire you. This series redefines dosing accuracy and speed. WIWA Dosing pumps optimize your workflow and increase productivity. Realize time savings through the semi-automated mixing of filler materials based on epoxy resin, polyester fillers with peroxide hardeners and PUR fillers.

The dispense of materials at the push of a button reduces the costs of production and unnecessary loss of material.

The units minimize air pockets, accelerate the flow of material supply and shorten the overall processing time.



TECHNICAL DATA WIWA DOSING UNITS

| | |
|--|--|
| Mixing ratio | 1:1, 2:1, 100:2 |
| Output per dosing process (l/gal) | 0,5/0.13 |
| Max. output at 60 double strokes (l/min/gpm) | 3/0.8 |
| Container sizes (l/gal) | via pressure vessel 4 up to 50/1 up to 13* |

* Optionally other container sizes are possible.

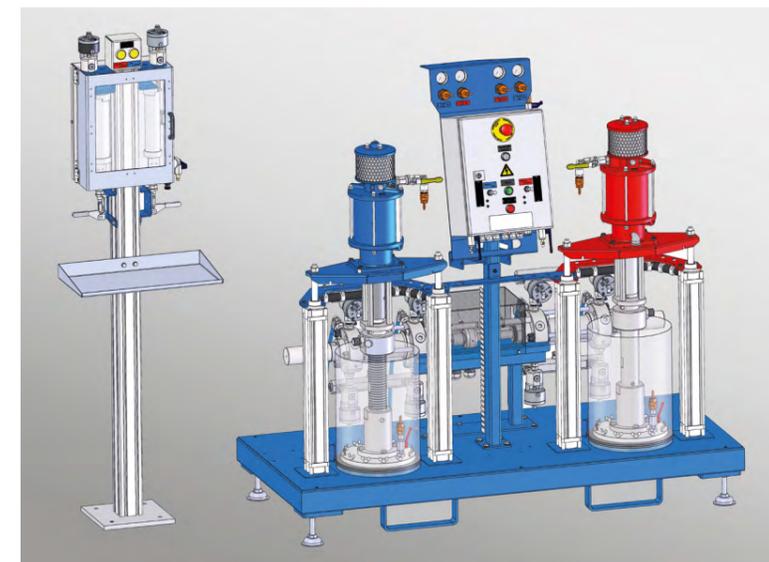
WIWA DUAL COMPONENT SYSTEM WITH PRECISE AND EVEN DOSING

The **WIWA Dual Component Dosing System** is suitable for pumping, dosing and dispersing materials which do not flow easily, e. g. adhesives, sealing compounds, mastics, insulants and high density materials, as well as all common filler materials based on epoxy resin or peroxide and PUR which can be poured or leveled.

The dual component dosing systems are available with fixed or variable mixing ratios, depending on the applications to suit a wide variety of cartridge filling allows easy handling for greater distances between place of application and the dual component dosing system.

ADVANTAGES

- Extremely accurate dosing, even when dispensing very small or large amounts
- Material savings by dispensing from large or small containers
- Environmentally friendly, minimal waste
- Mixing without bubbles, particularly important for filler materials, as this eliminates any further filling and grinding steps
- Time saving and error-free processing



MATERIALS

- filler materials based on
 - epoxy resin
 - peroxide
- PUR filler materials
- adhesives
- high density materials
- sealing compounds
- mastic
- insulants

Dosage at the highest level –
WIWA RAIL Dosing Systems

TECHNICAL DATA WIWA DUAL COMPONENT SYSTEM FIXED | VARIABLE

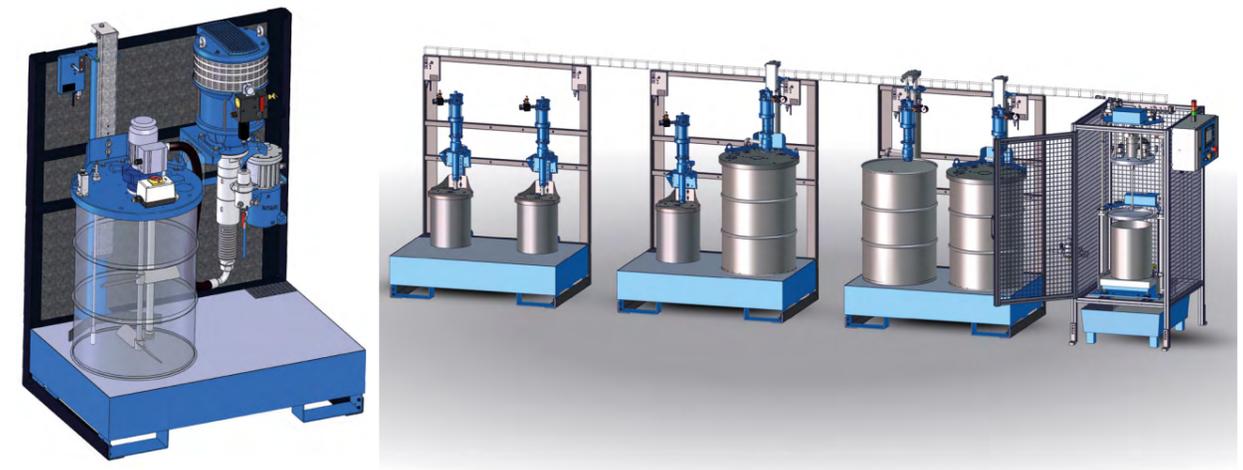
| | |
|--|---------------------|
| Pressure ratio | up to 54:1 |
| Mixing ratio | 100:100 up to 100:1 |
| Pump capacity per double stroke (cm ³) | max. 1945 1341 |
| Max. operating pressure (bar/psi) | 250/3625 |
| Max. air inlet pressure (bar/psi) | 8/116 |

WIWA MATERIAL SUPPLY SOLUTIONS

WIWA RAIL solutions always offer customer-specific detailed solutions, tailored to the situation on site and with these goals: to inspire you, save you unnecessary costs and achieve maximum efficiency.

The **WIWA agitating station** is designed for mixing and stirring of coating materials or similar materials. Material supply stations simplify your work flows and reduces costs. The product is converted into an homogeneous mixture which can then be processed as usual.

With a **WIWA agitating station**, in combination with a suitable **WIWA airless unit**, an optimal material transport can be achieved. Color, gloss, structure and other product characteristics are retained in the original quality and ensure a top result. ATEX versions are available on request.



WIWA FILLING AND DOSING SYSTEMS

WIWA filling and dosing systems minimize material losses through manual mixing and replace them with a fully automatic, computer-aided program with maximum mixing accuracy. The evaluation of process efficiency, incl. quantities applied with batch data an speed application, is always possible via the optionally available Data Logger. The implementation of up to 10 material components, 10 recipes and individual fill quantities from 3 kg to 25 kg (6,6 lbs to 55,1 lbs) guarantees flexibility. Easy-to-use, high-precision dosing, efficient use.

WIWA RAIL offers you practical solutions, tailor-made to fit your specific application.

Just one of many solutions at **WIWA RAIL**.

Material supply at the push of a button –
WIWA Material supply stations and filling systems

Mobile painting solutions without compromises – WIWA RAIL Airless paint spraying units



THE ART OF ENGINEERING TO PERFECTION.

WIWA RAIL stands for modern solutions in the railway and related railway industries. Efficient, ecological and cost-saving results for all coating, adhesive and sealing solutions from small containers to filling stations, to complex 2-component technologies. **WIWA RAIL** offers industry standards and individual solutions for your application, including in the fields of:

- Filling and dosing systems
- Underbody protection
- Grease
- Prime
- Paint
- Fill
- Fire protection
- Ballast / impact protection on the undercarriage construction
- Gluing (seals etc.)

WIWA PROFESSIONAL GX • WIWA HERKULES GX

The **WIWA PROFESSIONAL GX** and **HERKULES GX** were specially developed for use on large surface areas and thick-build coatings. Due to their enormous delivery rate and high pressure ratios, the **WIWA PROFESSIONAL GX** and the **HERKULES GX** are particularly suitable for processing the most difficult materials.

TECHNICAL DATA WIWA PROFESSIONAL GX

| | |
|--|---------------------------------|
| Pressure ratio | 27:1 up to 63:1 |
| Max. output at 60 double strokes (l/min/gpm) | 9,2 up to 21,6 / 2 up to 5 |
| Pump capacity per double stroke (cm ³) | 153 up to 360 ccm |
| Max. operating pressure (bar/psi) | 216 up to 441 / 3130 up to 6390 |
| Max. air inlet pressure (bar/psi) | 7-8/101-116 |



TECHNICAL DATA WIWA HERKULES GX

| | |
|--|---------------------------------|
| Pressure ratio | 24:1 up to 88:1 |
| Max. output at 60 double strokes (l/min/gpm) | 9,2 up to 33 / 2 up to 8 |
| Pump capacity per double stroke (cm ³) | 153 up to 550 |
| Max. operating pressure (bar/psi) | 192 up to 497 / 2780 up to 7200 |
| Max. air inlet pressure (bar/psi) | 5,5-8/79-116 |





WIWA DUOMIX • WIWA FLEXIMIX

Efficiency in perfection. WIWA Duomix and Fleximix systems are designed for maximum economy and reliability. Rail vehicles are constantly exposed to the weather, mechanical and technical stress.

WIWA 2-component systems support you in construction and operation: Whether for bogies, protective coatings, interior coatings or decorative exterior coating. WIWA 2K dosing systems are available with fixed or variable mixing ratios.

AREAS OF APPLICATION:

- Underbody protection
- Primers
- Fire Protection
- Paintwork and surface finishing

| TECHNICAL DATA WIWA DUOMIX | |
|--|-----------------|
| Pressure ratio | 20:1 up to 80:1 |
| Volumetric mixing ratios | 1:1 up to 10:1 |
| Pump capacity per double stroke (cm ³) | up to 800 |
| Max. operating pressure (bar/psi) | 450 / 6520 |
| Voltage | 230 V - 400 V* |

* When installing electrical component.



| TECHNICAL DATA WIWA FLEXIMIX | |
|--|------------------|
| Pressure ratio | 10:1 up to 88:1 |
| Volumetric mixing ratios | 0,5:1 up to 17:1 |
| Pump capacity per double stroke (cm ³) | up to 550 |
| Max. operating pressure (bar/psi) | up to 450 / 6520 |
| Voltage | 230 V / 400 V |



Brilliant and fascinating results –
WIWA RAIL plural component paint spraying units



WIWA VULKAN

Surface connection. Keep together what belongs together.

WIWA VULKAN – a thousand times proven extrusion pump for pumping, dosing and applying adhesives, insulating materials and sealing compounds. Whether in window, seat or other interior fittings – adhesive applications are an essential part of rail vehicle construction.

WIWA has the solutions.
WIWA's know-how can be helpful in any case.

The **WIWA VULKAN** range of extrusion pumps covers a total of 22 pumps with different capacities and pressure ratios in six performance classes and is thus one of the most extensive product ranges in the world.

AREAS OF APPLICATION:

- Supply and application of highly viscous materials for
 - Gluing
 - Condense
 - Isolate



Technology that connects –
WIWA RAIL extrusion pumps

TECHNICAL DATA WIWA VULKAN

| | |
|--|---------------------------------|
| Pressure ratio | 14:1 up to 94:1 |
| Max. output at 60 double strokes (l/min/gpm) | 9,2 up to 33 / 2 up to 8 |
| Pump capacity per double stroke (cm ³) | 78 up to 680 |
| Max. operating pressure (bar/psi) | 104 up to 474 / 1500 up to 6870 |

Functionality and feel-good atmosphere – WIWA RAIL surface systems



WIWA DUOMIX PU 540 • WIWA DUOMIX HYDRAULIK

Foam and insulation. Surface structures for floors and insulation.

In addition to the functional and decorative protection of the surfaces, the focus is on minimizing noise and the durability of the usable areas.

WIWA PU and WIWA polyurea systems offer effective application support through PU foams for sound insulation and other areas as well as for highly reactive polyurea applications, for example for decorative floor coverings.

TECHNICAL DATA WIWA DUOMIX PU 540

| | |
|--|-----------|
| Pressure ratio | 31:1 |
| Mixing ratio | 1:1* |
| Pump capacity per double stroke (cm ³) | 264 |
| Max. operating pressure (bar/psi) | 250/3625 |
| Voltage/phases | 400 V/3 P |
| Max. output at 60 double strokes (l/min/gpm) | 15,8/4.1 |
| Max. fluid heater rating | 12 kW |
| Heat output of hose package | 47 W/m |
| Max. hose length (m/inch) | 138/5433 |
| Max. power consumption | 16,5 kW |

* Others on request.



TECHNICAL DATA WIWA DUOMIX PU HYDRAULIK

| | |
|--|-------------|
| Mixing ratio | 1:1 |
| Pump capacity per double stroke (cm ³) | 194 |
| Max. operating pressure (bar/psi) | 250/3625 |
| Voltage | 230 - 400 V |
| Max. fluid heater rating | 12 kW |
| Heat output of hose package | 47 W/m |
| Max. hose length at 400 V (m/inch) | 138/5433 |
| Max. power consumption | 23 kW |
| Hydraulic power rating | 4 kW/PS |





WIWA PASSIVE FIRE PROTECTION – COATING SOLUTIONS

WIWA fire protection are worldwide market leaders. System engineering at the highest level to ensure the operational safety of rail technology, protection of passenger or goods transport and guaranteeing the highest safety standards in rail traffic. The application of passive flame and fire protection materials is very complex. The proven **WIWA** application techniques guarantee optimal function and cosmetically appealing application of the material.

Benefit from decades of experience in the area of passive fire protection to optimize your processes!



Protection and investment protection –
WIWA RAIL 2 component special coating solutions

TECHNICAL DATA WIWA FLEXIMIX

| | |
|--|------------------|
| Pressure ratio | 10:1 up to 88:1 |
| Volumetric mixing ratios | 0,5:1 up to 17:1 |
| Pump capacity per double stroke (cm ³) | up to 550 ccm |
| Max. operating pressure (bar/psi) | up to 450/6520 |
| Voltage | 230 V / 400 V |

PRODUCT RANGE

ISO 9001

BUREAU VERITAS
Certification



ATEX 94/9/EG

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WIWA FLEXIMIX 2, electronic plural component spray equipment



WIWA DUOMIX, pneumatic plural component spray equipment



WIWA DUOMIX PU HX, hydraulic plural component spray equipment



WIWA DUOMIX 333 PFP ATEX, for intumescent fire protection material



WIWA HERKULES GX 333 GX, single feed (airless) spray equipment



WIWA VULKAN, pneumatic extrusion equipment

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