## HEAR AND EXPERIENCE THE DIFFERENCE

ACOUSTIC SOIL AND WASTE PIPE SYSTEMS





# CONTENTS

MARKET-LEADING BENEFITS	4
HEAR THE DIFFERENCE – MARKET-LEADING SOUND INSULATION	6
EXPERIENCE THE DIFFERENCE – EASE OF INSTALLATION	8
CREATE VALUE – QUALITY AND RELIABILITY	10
LEVERAGE DIGITAL TECHNOLOGY – BIM MEETS MASTER3PLUS	12
CREATE ECOLOGICAL VALUE – BUILDING GREEN	14

# MARKET-LEADING BENEFITS

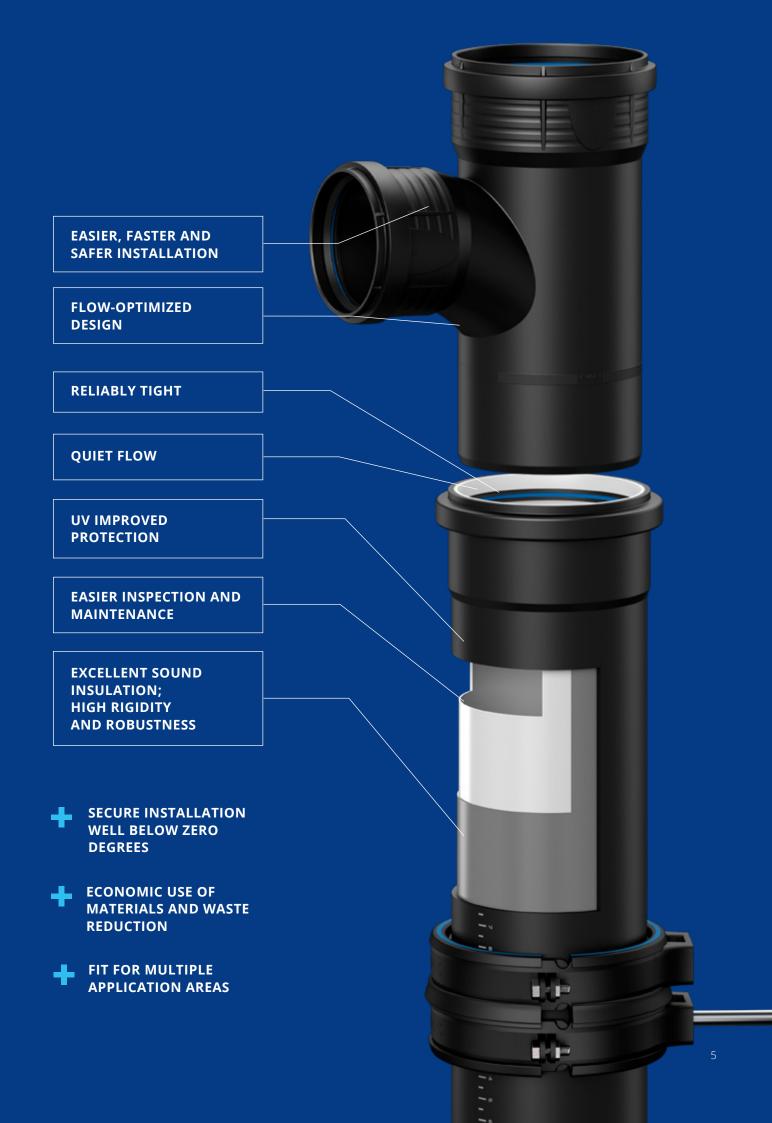
## Soil and waste pipes are essential service technology in buildings, but they can be noisy and disruptive.

Our state-of-the-art acoustic soil and waste pipe system, Master3Plus, is made to meet today's construction and housing challenges in terms of quality, sound insulation, ease of installation and service life. Three functional pipe layers, top-quality material, and a well-thought-out product design deliver tangible benefits for designers, installers, investors as well as dwellers.

#### **CLOSE TO 200 ARTICLES**







## HEAR THE DIFFERENCE

## **MARKET-LEADING SOUND INSULATION**

## Ensure improved general quality of life and increase property value by ruling out noise nuisance from neighboring rooms or apartments with market-leading building service technology.

Master3Plus, our premium polypropylene (PP) soil and waste piping system, effectively reduces airborne as well as structure-borne noise. This has been tested by the Fraunhofer Institute in Germany. In fact, results show that Master3Plus is one of the quietest soil and waste pipe systems available on the European market.

#### OPTIMIZED ACOUSTIC PROPERTIES

When choosing an acoustic soil and waste piping system, we strongly recommend taking the soundabsorbing properties of the complete piping system, its hydraulic design as well as adequate sound barriers (fastening) into consideration.

Sound is produced through vibrations that travel as waves either by air or matter. In building acoustics, these are referred to as air and structure-borne sound. While good pipe and wall insulation will minimize noise transmission within a space, the progression of structure-borne sound is more difficult to contain as it is transferred over walls and building structures to adjacent spaces.

Master3Plus successfully minimizes the development and propagation of air and structure-borne noise and qualifies as one of the quietest soil and waste piping systems on the European market.

#### STANDARDIZED TESTS FOR COMPARABILITY

For you to take our claims seriously, to ensure comparability, and for us to further improve our system's acoustic quality, we subject Master3Plus to standardized third-party acoustic tests in addition to stringent in-house laboratory testing.

Conducted at the independent testing institute Fraunhofer in Stuttgart, Germany, acoustic tests on Master3Plus are performed in reference to EN 14366 and with different fastening clamps in accordance with DIN 4109 and VDI 4100.

PIPELIFE's Master3Plus soil and waste pipe systems exceed the requirements for sound insulation of technical equipment in buildings and keep the installation sound level according to VDI 4100 below 10 dB(A).

#### HOW QUIET ARE 10 DECIBELS?

A person in an adjacent room or apartment will perceive water flowing at four liters per second (e.g. toilet flushing) as quietly as breathing.



# EXPERIENCE THE DIFFERENCE

## EASE OF INSTALLATION

The reliability, longevity and quality of soil and waste piping systems depend just as much on the quality of their installation as on product properties.

Based on our know-how and on the feedback and requests from plumbers and installers we continuously improve the design of our products – making the installation of Master3Plus as easy and safe as possible.

#### FAST, FAILSAFE AND FLEXIBLE SEALING

#### Minimize physical effort and get the job done faster.

The specially developed gasket profile facilitates assembly considerably.

#### **Count on failsafe pipe joining.** Master3Plus gaskets are designed to prevent accidental push-out or displacement.

With our **sealing ring for error-free installation**, you are always right and <u>connections are tight</u>.

## MARKED FOR PERFECT CONNECTIONS

#### Relying on **reinforcing ribs** positioned at a 60° angle, you will also know if you have oriented fittings correctly.

#### An **insertion-depth marking** on every Master3Plus fitting helps you to instantly tell if the products have been



connected correctly.

#### INSTALLATION DESPITE INTENSE CONDITIONS

Thanks to carefully selected raw materials and its sturdy design, Master3Plus boasts high impact resistance for **worry-free handling and manipulation on-site.** 

**Minus degrees well below 0 are no reason to postpone installation** – at least not for Master3Plus. The products' outstanding impact resistance is tested to EN 1451 at -10°C.



# **CREATE VALUE**

## **QUALITY AND RELIABILITY**

From the foundation to the roof, you build sustainable value for investors, homeowners and dwellers by carefully selecting building materials that are reliable, long-lasting and require as little as possible maintenance.

As a manufacturer, we do just the same for you. All products you receive from us are made from carefully sourced materials and manufactured with state-of-the-art design and production technology to last at least 50 years with minimal maintenance.





#### **RAW MATERIALS SELECTION**

Our Master3Plus soil and waste piping systems are made from halogen-free mineral-reinforced polypropylene copolymer. They are designed to withstand the challenges encountered in today's residential, commercial and industrial construction projects.

## **PROPERTIES AT A GLANCE**

Material: Pipe: PP-CO/PP-MV/PP-CO; Fitting: PP-CO-MV; Gasket: EPDM

**Factory standards:** Fittings and pipes tested to EN 1451

## **Diameter range:** 32 - 160 mm

**Pipe lengths:** DN/OD 32-50: 0.15, 0.25, 0.50, 1.0, 1.5, 2.0 meters ; DN/OD 75-160: 0.15, 0.25, 0.50, 1.0, 1.5, 2.0, 2.65 meters.

Fitting design: Socket-spigot and all-socket

**Fire classification:** B2 according to DIN 4102

**Temperature resistance:** Continuous load 60 °C, max. 95 °C

**Chemical resistance:** Acids and alkalis ranging from pH 2 to pH 12

#### **APPLICATION AREAS**

- + Domestic and industrial soil and waste system
- + Underground building laterals connecting to the road sewerage system (≥ 75 DN/OD)
- + Ventilation systems
- + Central vacuuming system
- + Applications in accordance with EN 1451-1



# LEVERAGE DIGITAL TECHNOLOGY

## **BIM MEETS MASTER3PLUS**

## Your vision is to improve design, construction and building operation processes through digitization? We are here to support you.

Fully leverage the advantages of Building Information Modeling (BIM) with our comprehensive BIM portfolios. We offer complete digital system design services based on your digital layout. If you prefer taking the design into your own hands, simply download our Master3Plus library for fast, accurate and more efficient implementation.



#### FULL DESIGN SERVICE FOR MASTER3PLUS

- + Continuously updated, comprehensive BIM library
- No plugins needed our BIM libraries are available for Autodesk Revit, MagiCAD Cloud, Trimble MEPcontent, Trimble 3D Warehouse, and other leading design software.
- + Produce accurate virtual simulations
- + Conduct quick, spot-on calculations also for unconventional designs
- + Instant conflict detection



#### FOR PROPRIETORS AND OPERATORS

- + Supplier and product data transparency
- + More accurate valuation of the building
- + Coordination of necessary maintenance service and renovation works
- + Prognosing maintenance and renovation costs



#### FOR INSTALLERS

- + Exact product specifications and calculations
- + Accurate product order lists
- + Optimized cost estimates and budgeting
- + Easier planning and cooperation
- + Faster project implementation



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# CREATE ECOLOGICAL VALUE

## **BUILDING GREEN**

While the eco-rating of buildings is still heavily focused on emissions and energy efficiency during operation, European environmental standards and specifications are bit by bit tightened taking environmental impacts from construction to demolition into consideration.

We help you meet the rising demand for sustainable buildings and greener construction. It is our goal to optimize energy and resource efficiency while increasing the service life of our products and ensuring they can be recycled or reused at the end of their lifecycle.

#### **ECOLOGICAL CHOICES WITH EPDS**

Environmental Product Declarations contain standardized third-party verified data about the environmental impacts of products across their entire lifecycle. PIPELIFE has started working on the digitization of EPDs so you can compare the environmental impact of products from various suppliers more easily.

#### **ENERGY EFFICIENCY**

Closed cooling circuits, reuse of production off-heat, and renewable energy sources to heat office buildings and charge an increasing number of electric vehicles at our warehouses and distribution centers effectively reduce energy consumption and emissions.

#### BIODIVERSITY

Our contribution to preserving nature does not stop with the reduction of  $CO_2$  emissions, waste or increasing the use of recycled materials. As part of the World of Wienerberger, PIPELIFE is working towards the group's self-imposed Environmental, Social and Corporate Governance Goals. Accordingly, biodiversity measures are implemented at all our plants to improve the flora and fauna at our production sites. We want to maximize green surfaces in the form of green roofs and facades, plant additional trees, and overall create a high-quality habitat for native species.

#### **REDUCE – REUSE – RECYCLE**

The Master3Plus assortment is 100% recyclable. Our cradle-to-cradle designs ensure that pipes and fittings can be re-produced into new quality-assured products, keeping waste to a minimum.

## TOWARDS ZERO WASTE CONSTRUCTION

For you to save on time and material and to minimize scrap on site, you can choose Master3Plus fittings with an all-socket design.

Prefab solutions are a true time and material saver, especially in large-scale building development projects. With offsite constructed Master3Plus soil and waste pipe systems on-site installation can be completed neatly with almost zero waste. Get in touch with your local Pipelife partner to find out if prefab is an option for you.

#### MEASURING AND IMPROVING EFFICIENCY

We deploy industry 4.0 technologies to measure and reduce energy, raw material consumption and related CO<sub>2</sub> emissions by improving our production processes. Quality management systems and environmental measures are implemented at all PIPELIFE production sites meeting national well as international standards such as ISO 9001 (Quality Management System) and as ISO 14001 standards (Environmental Management System).





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