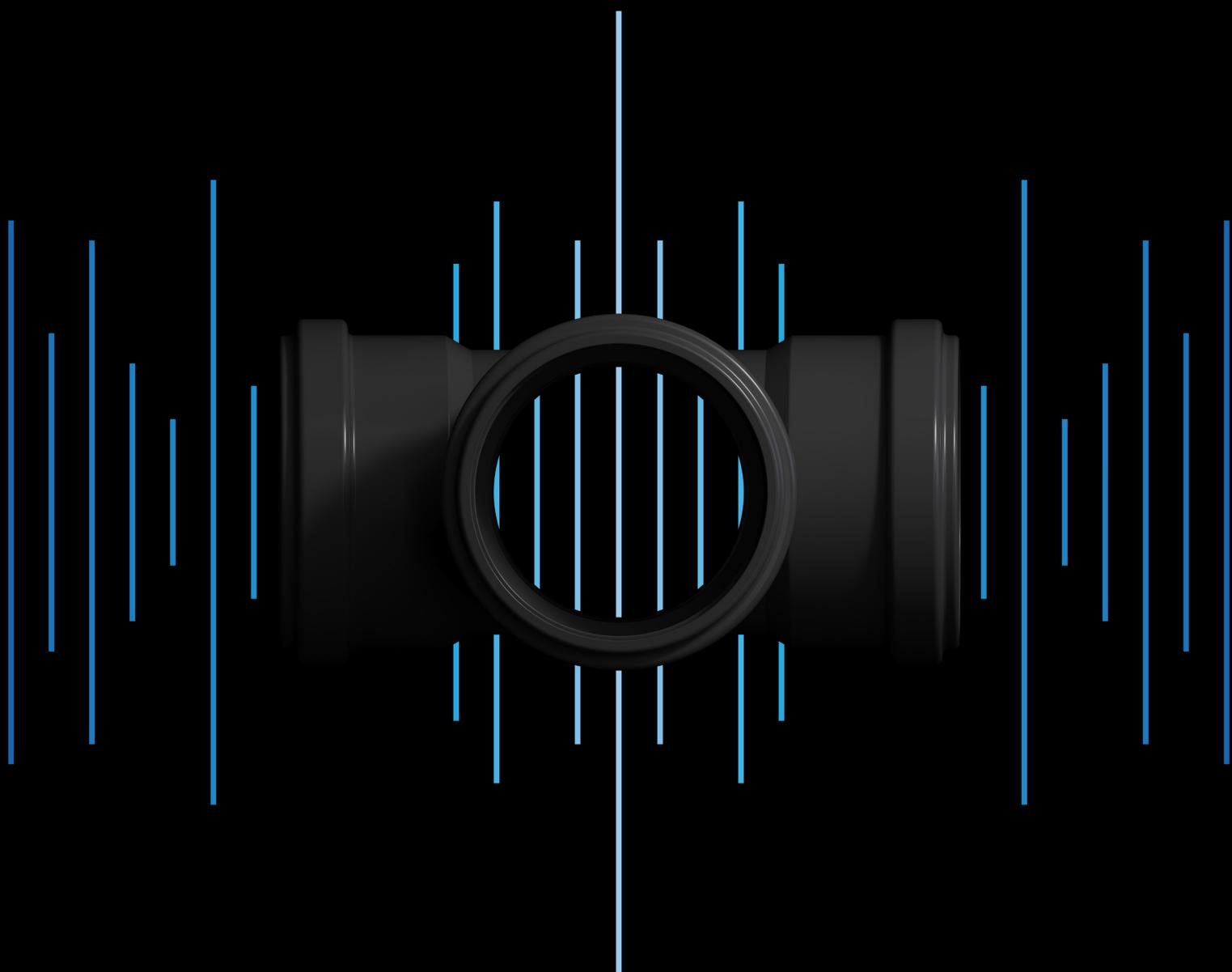


+GF+

# HT-PP

Flush out the noise



Excellence  
in **Flow**<sup>+</sup>



## Acoustic waste water systems

# The sound of stillness

In modern construction, drainage systems are essential infrastructure that most occupants never think about... until they hear them.

### The cost of noise

A well-designed waste water system operates silently in the background, while a poorly chosen one creates constant disruption. The challenge lies not just in moving water efficiently, but in doing so without compromising the comfort and quality of life for building occupants. Noise from drainage systems affects people daily in residential buildings, hotels, hospitals, and offices. The sound of rushing water, rattling pipes, and vibrating connections travels through walls and floors, disturbing sleep, interrupting conversations, and reducing property values. Beyond acoustic comfort, modern drainage systems must address fire safety requirements, chemical resistance, and long-term durability. These challenges are amplified by increasing urbanization, higher building densities, and stricter building regulations demanding better acoustic performance.

Historically, cast iron and PVC pipes dominated waste water applications. Cast iron offered durability and some natural sound dampening due to its mass, making it the preferred choice for multi-story buildings. PVC became popular for its cost-effectiveness and ease of installation. Both materials established themselves as reliable standards that installers trusted and building codes accepted.

### Redefining expectations

However, traditional materials come with significant drawbacks. Cast iron is heavy, requiring substantial structural support and making installation labor-intensive and time consuming. Corrosion over time leads to leaks and costly replacements. Standard PVC pipes, while lightweight and affordable, transmit noise freely: every flush becomes audible throughout the building. Neither material adequately addresses the acoustic demands of modern living spaces where comfort and quiet are not optional, but expected.

These limitations create the foundation for today's biggest challenge in waste water systems: delivering acoustic comfort while maintaining durability, installation efficiency, and environmental responsibility. Buildings are no longer judged solely on functionality. Occupant wellbeing, quality of life, and acoustic comfort have become essential criteria for successful construction projects.

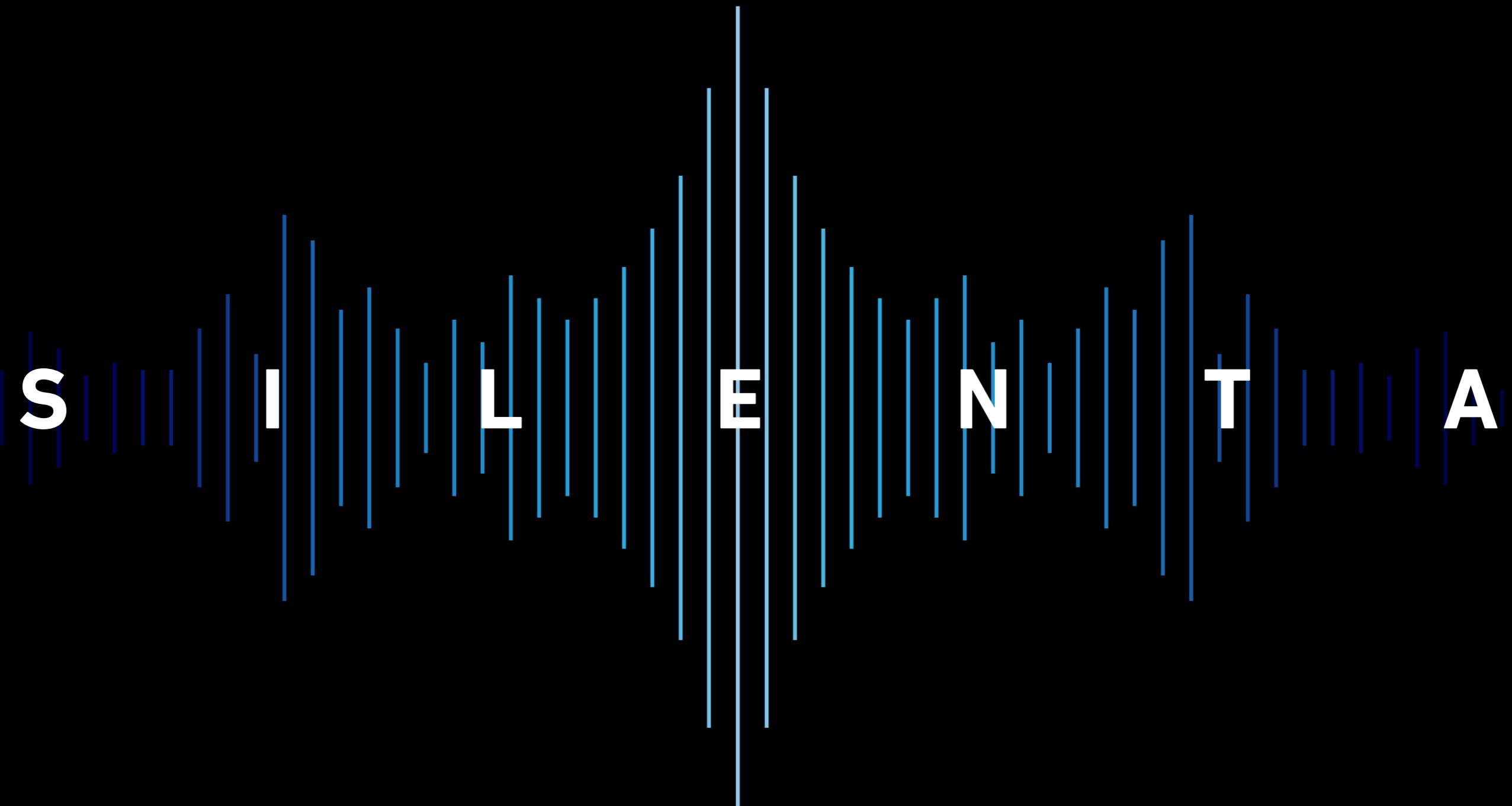
Silenta

# Flush out the noise

## Engineered for comfort

The challenges are real: noisy drainage systems disrupt daily life, reduce property values, and compromise building quality. Traditional materials cannot adequately address modern acoustic demands.

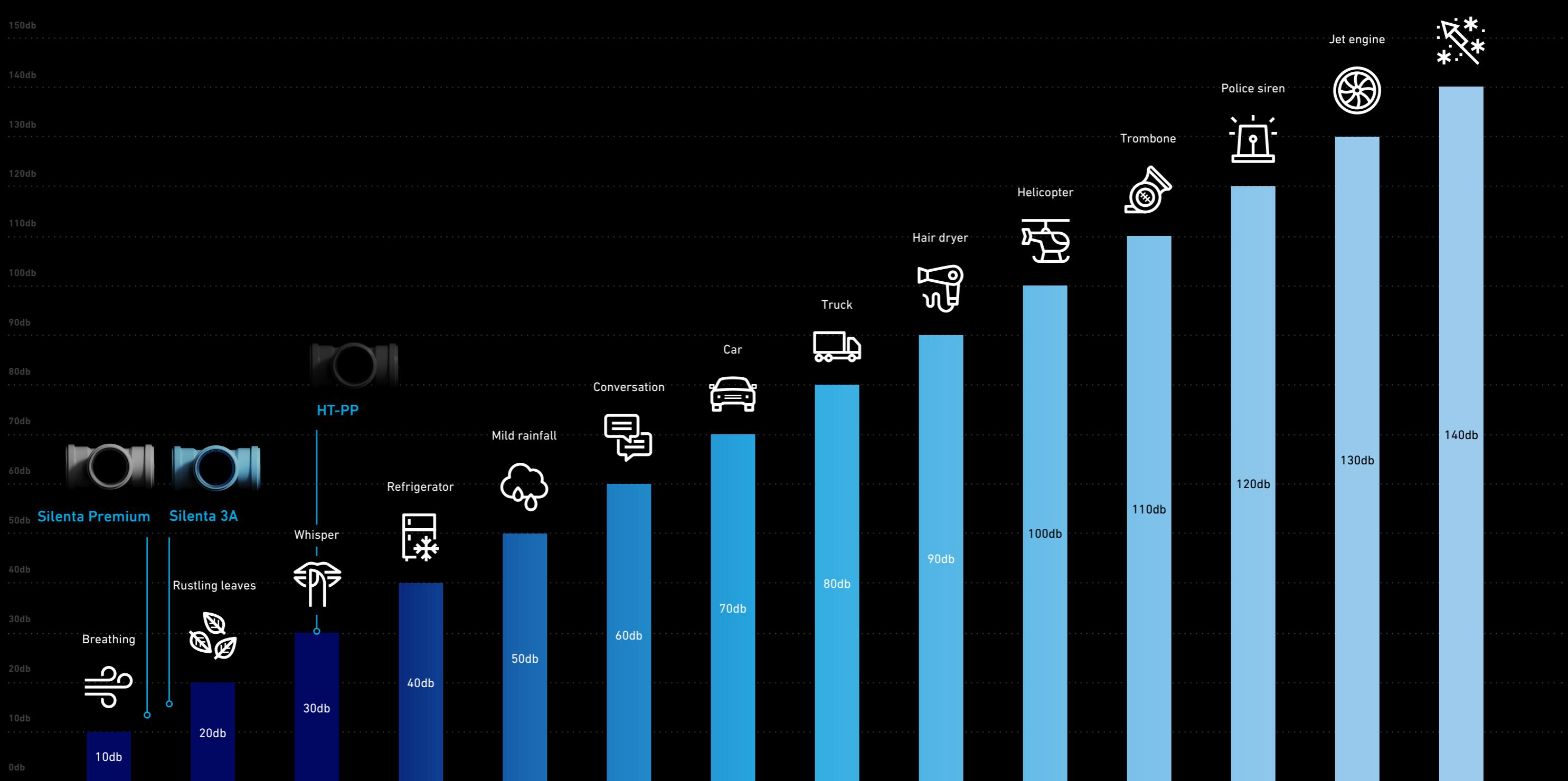
Silenta delivers the solution: sound-insulated drainage systems engineered for acoustic comfort.



**> 50%**  
noise reduction vs.  
standard PP-pipes

# Quietly confident

## Decibel sound levels

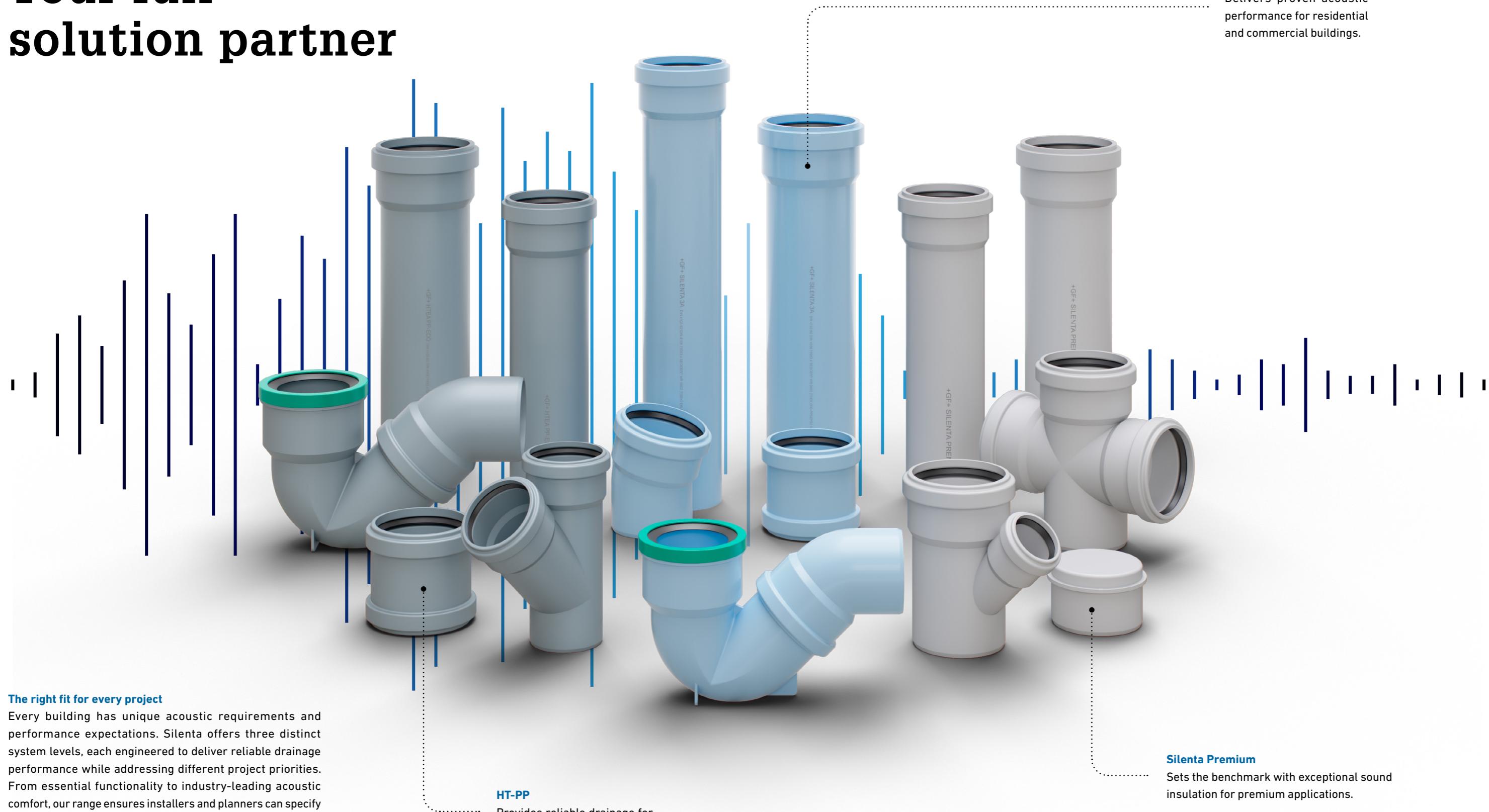


Decibels are how we measure sound, but numbers alone don't tell the full story. When comparing drainage systems, seemingly small numbers translate to dramatic differences in actual noise levels experienced by building occupants.

## Top of the range acoustic absorption

Everyday comparisons bring acoustic performance into perspective. From the distant hum of a refrigerator to the disruptive noise of a hair dryer, these reference points show where Silenta delivers measurable comfort. Lower decibel values mean quieter environments and better quality of life.

# Your full solution partner



## The right fit for every project

Every building has unique acoustic requirements and performance expectations. Silenta offers three distinct system levels, each engineered to deliver reliable drainage performance while addressing different project priorities. From essential functionality to industry-leading acoustic comfort, our range ensures installers and planners can specify the optimal solution for any application.

All three systems share the same foundation: high-quality polypropylene construction, push-fit installation, and GF reliability.

### HT-PP

Provides reliable drainage for straightforward installations.

### Silenta Premium

Sets the benchmark with exceptional sound insulation for premium applications.

**Silenta 3A**  
Delivers proven acoustic performance for residential and commercial buildings.

# Streamlined single-layer design

Sound reduction begins with intelligent material design. Each Silenta system uses a specific layer configuration engineered to balance acoustic performance, structural durability, and installation efficiency.



## Inner surface

Perfect flow performance with superior chemical resistance that prevents corrosion and abrasion, built to withstand high water temperatures.

## Outer surface

Resistant to high temperatures and impacts.

## Special gasket system

Guarantees water tightness while the geometrical properties of the gasket groove enables fast, effortless assembly.

## Different diameter options

HT-PP dimension range:  
DN 32-160 mm.

HT-PP delivers reliable drainage through efficient material design. High-quality polypropylene construction provides superior chemical resistance, exceptional impact strength, and temperature stability while maintaining lightweight handling for efficient installation. The optimized single-layer structure ensures consistent flow performance and long-term durability.

All three systems (Silenta Premium, Silenta 3A and HT-PP) feature a specialized gasket design that ensures water-tight connections while allowing thermal movement. The push-fit socket connection provides fast, reliable installation across the entire range.

# HT-PP



## Reliable drainage for straightforward installations

HT-PP provides dependable waste water drainage where acoustic performance is not the primary requirement. Built from high-quality polypropylene, this lightweight system delivers exceptional resistance to chemical agents and abrasion, making it ideal for building drainage and underground applications.

The single-layer design keeps installation simple and efficient. Low weight reduces handling time and physical demands during logistics and assembly. Push-fit jointing technology ensures fast, reliable connections without specialized equipment. Available in diameters from 32 mm to 160 mm, HT-PP offers cost-effective performance for projects prioritizing installation efficiency and chemical resistance.

## Features



High impact resistance



Lightweight construction



Easy and cost-efficient jointing technology



B2 Fire Classification in accordance with DIN4102



Superior chemical and abrasion resistance

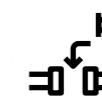


Push-fit socket connection

## Benefits



Reduced product loss during logistics and assembly



Simplified logistics and installation process



High time and effort efficiency



Lower physical demands for installers

# Reliable drainage for straightforward installations

HT-PP is engineered for projects prioritizing efficient execution and long-term performance. These applications require proven solutions that balance quality with practical implementation. With lightweight polypropylene construction and push-fit technology throughout, HT-PP delivers the durability and efficiency these projects demand.



Standard residential drainage



Underground applications



Projects prioritizing installation speed



Cost-conscious developments

## Technical specifications

### Design

Single-layer structure made of polypropylene. Pipe Classes S16 and S20

Diameters [mm] d32, d40, d50, d75, d110, d125, d160

150, 250, 500, 1000, 2000, 3000

Fire class E (EN 13501), B2 (DIN4102)

Jointing with Rubber Gasket and Socket (Push-Fit)

### Attachment/Clamping

With GF Standard Clamps

### Color

Dark Grey (d32-d160 mm) and White (d32-d50 mm)

### Installation

Lighter than cast-iron pipes, and Push fit system provides easier installation

compared to welded or cemented plastic systems

### Chemical resistance

Resistant to organic and inorganic chemical environments and to domestic wastewater and industrial wastewater with pH 2 – pH 12. Wherever chemically aggressive wastewater is used (e.g. for industrial applications), it is suitable for pH 2 to pH 12. An individual case assessment can be requested from GF specifying the composition of the respective wastewater and the operating conditions.

Minimum: -10°C Maximum: 60°C

Operating temperature Minimum: -10°C Maximum: 97°C (in short-term flow conditions)

Application class B (Building)

Impact strength Complies with EN 1451

Density Average: 0.92 g/cm<sup>3</sup>

Maintenance Negligible maintenance cost compared to metal-based systems

Permissible ambient temperature Between -20°C and 60°C

Permissible wastewater temperature For domestic wastewater between 0°C and 90°C, briefly up to 97°C

### Installation temperature

### Operating temperature

### Application class

### Impact strength

### Density

### Maintenance

### Permissible ambient temperature

### Permissible wastewater temperature

### Certifications

#### Country

Germany DiBt, SKZ

Austria Austrian Standard

Netherlands KIWA

Denmark ETA-DANAK

Sweden KIWA SwedCert

Norway Sintef

Italy KIWA IT

Poland ITB

France CSTB

Spain AENOR

UK BBA

Türkiye TSEK, EPD

#### Institute

Some certifications are in progress and will be available in 2026.

# Complete system range

HT-PP provides comprehensive drainage solutions with pipes and fittings across the full diameter range from 32 mm to 160 mm. Every component is designed for reliable drainage performance and efficient installation, ensuring system consistency from connection to connection. Push-fit technology and lightweight polypropylene construction deliver cost-effective, water-tight joints that simplify logistics and reduce installation time.



HT-PP Pipe with Socket (S 20)

Dia. (mm)	Leng. (mm)	Thick. (mm)	Code	Packing Type	Pc
32	150	1,8	4801003200121	Cartonbox	1000
32	250	1,8	4801003200221	Cartonbox	500
32	500	1,8	4801003200321	Cartonbox	150
32	1000	1,8	4801003200421	Bundle	10
32	1500	1,8	4801003200521	Bundle	10
32	2000	1,8	4801003200621	Bundle	10
32	3000	1,8	4801003200721	Bundle	10
40	150	1,8	4801004001021	Cartonbox	300
40	250	1,8	4801004001121	Cartonbox	220
40	500	1,8	4801004001221	Cartonbox	140
40	1000	1,8	4801004001321	Bundle	10
40	2000	1,8	4801004001521	Bundle	10
40	3000	1,8	4801004001621	Bundle	10
50	150	1,8	4801005002021	Cartonbox	200
50	250	1,8	4801005002121	Cartonbox	150
50	500	1,8	4801005002221	Cartonbox	90
50	1000	1,8	4801005002321	Bundle	10
50	2000	1,8	4801005002521	Bundle	10
50	3000	1,8	4801005002621	Bundle	10
50	6000	1,8	4801005002721	Bundle	10
75	150	1,9	4801007503021	Cartonbox	100
75	250	1,9	4801007503121	Cartonbox	70
75	500	1,9	4801007503221	Cartonbox	40
75	1000	1,9	4801007503321	Bundle	10
75	2000	1,9	4801007503521	Bundle	10
75	3000	1,9	4801007503621	Bundle	10
75	6000	1,9	4801007503721	Bundle	10
110	150	2,7	4801011004021	Cartonbox	45
110	250	2,7	4801011004121	Cartonbox	35
110	500	2,7	4801011004221	Cartonbox	20
110	1000	2,7	4801011004321	Bundle	4
110	2000	2,7	4801011004521	Bundle	4
110	3000	2,7	4801011004621	Bundle	4
110	6000	2,7	4801011004721	Length	1
125	150	3,1	4801012505021	Cartonbox	40
125	250	3,1	4801012505121	Cartonbox	20
125	500	3,1	4801012505221	Cartonbox	16
125	1000	3,1	4801012505321	Bundle	4
125	2000	3,1	4801012505421	Bundle	4
125	3000	3,1	4801012505521	Bundle	4
125	6000	3,1	4801012505621	Length	1
160	150	3,9	4801016006021	Cartonbox	24
160	250	3,9	4801016006121	Cartonbox	14
160	500	3,9	4801016006221	Cartonbox	8
160	1000	3,9	4801016006321	Bundle	4
160	2000	3,9	4801016006421	Bundle	4
160	3000	3,9	4801016006521	Bundle	4
160	6000	3,9	4801016006621	Bundle	4

HT-PP Pipe with Double Socket (S 20)

Dia. (mm)	Leng. (mm)	Code	Packing Type	Pc
32	150	4801003201521	Cartonbox	100
32	250	4801003201621	Cartonbox	20
32	500	4801003201721	Cartonbox	150
32	1000	4801003201821	Bundle	150
32	1500	4801003201921	Bundle	20
32	2000	4801003202021	Bundle	20
32	3000	4801003202121	Bundle	20
40	150	4801004019821	Cartonbox	-
40	250	4801004019921	Cartonbox	220
40	500	4801004020021	Cartonbox	140
40	1000	4801004020121	Bundle	10
40	1500	4801004020221	Bundle	10
40	2000	4801004020321	Bundle	10
40	3000	4801004020421	Bundle	10
50	500	4801005020121	Cartonbox	60
50	1000	4801005020421	Bundle	10
50	2000	4801005020221	Bundle	10
50	3000	4801005020321	Bundle	10
75	500	48010075020421	Cartonbox	35
75	1000	48010075020321	Bundle	10
75	2000	48010075020521	Bundle	10
75	3000	48010075020621	Bundle	10
110	500	4801011020621	Cartonbox	15
110	1000	4801011020721	Bundle	4
110	2000	4801011020821	Bundle	4
110	3000	4801011020921	Bundle	4
125	500	4801012521021	Cartonbox	8
125	1000	4801012521121	Bundle	4
125	2000	4801012521221	Bundle	4
125	3000	4801012521321	Bundle	4
160	1000	4801016021421	Bundle	4
160	3000	4801016021521	Bundle	4

## HT-PP



HT-PP Elbow 15°

Dia. (mm)	Code	Packing Type	Pc
32	4901103200121	Cartonbox	1000
40	4901104001021	Cartonbox	500
50	4901105002021	Cartonbox	300
75	4901107503021	Cartonbox	150
110	4901111004021	Cartonbox	60
160	4901116005521	Cartonbox	20



HT-PP Long Elbow 45°

Dia. (mm)	Code	Packing Type	Pc
110	4901111036521	Cartonbox	8



HT-PP Repair Pipe (Long Socket)

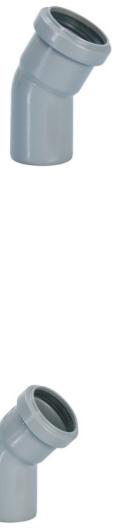
Dia. (mm)	Code	Packing Type	Pc
110	4901911015021	Cartonbox	15



\* HT-PP S Siphon 87,5°

Dia. (mm)	Code	Packing Type	Pc
75	4901507592521	Cartonbox	30
110	4901611015121	Cartonbox	15

HT-PP Elbow 15°



HT-PP Elbow 30°

Dia. (mm)	Code	Packing Type	Pc
32	4901103200221	Cartonbox	1000
40	4901104001121	Cartonbox	500
50	4901105002121	Cartonbox	300
75	4901107503121	Cartonbox	150
110	4901111004121	Cartonbox	60
160	4901116005621	Cartonbox	20



HT-PP Branch 87,5°

Dia. (mm)	Code	Packing Type	Pc
32-32	4901203241321	Cartonbox	500
40-40	4901204042821	Cartonbox	200
50-40	4901205042921	Cartonbox	200
50-50	4901205007021	Cartonbox	150
75-50	4901207508021	Cartonbox	100
75-75	4901207508121	Cartonbox	80
110-50	4901211009021	Cartonbox	50
110-75	4901211009121	Cartonbox	30
110-110	4901211009221	Cartonbox	30
125-125	4901212510321	Cartonbox	20
160-110	4901216010921	Cartonbox	14
160-160	4901216011121	Cartonbox	10

HT-PP Double Branch 87°



HT-PP Socket with Central Register

Dia. (mm)	Code	Packing Type	Pc
32	4901503241421	Cartonbox	600
40	4901504041521	Cartonbox	500
50	4901505031621	Cartonbox	400
75	4901507531721	Cartonbox	200
110	4901511031821	Cartonbox	80
160	4901516031921	Cartonbox	30



HT-PP Clean Out (Circular)

Dia. (mm)	Code	Packing Type	Pc
75	4901307530921	Cartonbox	80
110	4901311031321	Cartonbox	30



HT-PP Clean Out (Rectangular)

Dia. (mm)	Code	Packing Type	Pc
160	4901916041821	Cartonbox	8



HT-PP Elbow 45°

Dia. (mm)	Code	Packing Type	Pc
32	4901103200321	Cartonbox	1000
40	4901104001221	Cartonbox	500
50	4901105002221	Cartonbox	300
75	4901107503221	Cartonbox	150
110	4901111004221	Cartonbox	50
125	4901112505021	Cartonbox	40
160	4901116006021	Cartonbox	20



HT-PP Double Branch 45°

Dia. (mm)	Code	Packing Type	Pc
50-50	4901205012021	Cartonbox	100
75-50	4901207513021	Cartonbox	80
110-50	4901211042621	Cartonbox	35
110-110	4901211014021	Cartonbox	16
160-110	4901216042021	Cartonbox	8



HT-PP Branch 45°

Dia. (mm)	Code	Packing Type	Pc
32-32	4901203200121	Cartonbox	500
40-40	4901204001021	Cartonbox	250
50-32	4901205042721	Cartonbox	250
50-40	4901405041121	Cartonbox	200
50-50	4901205002021	Cartonbox	150
75-50	4901207503021	Cartonbox	75
75-75	4901207503121	Cartonbox	60
110-50	4901211004021	Cartonbox	40
110-75	4901211004121	Cartonbox	30
110-110	4901211004221	Cartonbox	20
125-75	4901212505121	Cartonbox	24
125-110	4901212505221	Cartonbox	15
125-125	4901212505321	Cartonbox	16
160-110	4901216006021	Cartonbox	10
160-125	4901216006121	Cartonbox	10
160-160	4901216006221	Cartonbox	8



HT-PP Reducer

Dia. (mm)	Code	Packing Type	Pc
40-32	4901404017021	Cartonbox	750
50-			



Positive health impact

# Protecting your peace

## Health and wellbeing through acoustic comfort

Noise pollution in buildings affects more than comfort. Studies confirm that persistent exposure to unwanted sound disrupts sleep patterns, increases stress levels, and reduces overall quality of life. Drainage systems that operate multiple times daily create repetitive disturbances that accumulate over time, affecting residents, patients, hotel guests, and office workers.

Acoustic comfort has become a measurable indicator of building quality. Property values reflect this reality, with quieter buildings commanding premium prices and higher tenant satisfaction. Protecting occupants from drainage noise is no longer optional: it is essential infrastructure planning that directly impacts human well-being.

## Understanding drainage noise

Waste water systems generate sound through multiple mechanisms. Water rushing through pipes creates turbulence. Direction changes at fittings produce vibrations. High flow velocities amplify noise levels. These sounds travel through pipe walls into building structures, radiating into living and working spaces.

### Common noise sources include:

- Toilet flushing
- Direction changes at elbows and junctions
- High water flow velocities
- Pipe joints and connections
- Discharge events
- Inadequate system planning
- Improper installation practices

Silenta addresses these challenges through specialized three-layer construction that absorbs vibrations at the source. The mineral-reinforced middle layer dampens sound waves before they can transfer to building structures. Critical connection points receive particular attention to minimize noise transmission where flow velocities and direction changes create the greatest acoustic impact.

## The case for sound protection

Building occupants deserve environments free from disruptive noise. Sound protection measures aim to create spaces where drainage systems operate without intruding on daily life. This means addressing both airborne sound that travels through air and structure-borne sound that transmits through walls, floors, and ceilings.

Drainage noise falls into both categories. Water flow creates airborne sound within pipes. Vibrations transfer to building materials, becoming structure-borne noise that radiates throughout the structure. Traditional single-layer pipes can't adequately control these transmission paths.

Silenta's three-layer technology provides comprehensive sound protection. The specialized middle layer absorbs acoustic energy, preventing it from reaching building structures. This dual approach of controlling both airborne and structure-borne sound ensures occupants experience the peace and quiet they expect from modern buildings.



Explore Silenta

# Next steps

## Proven solutions

Acoustic comfort in waste water drainage is no longer a compromise between performance and installation efficiency. Silenta's three-tier approach ensures every project, from cost-conscious installations to premium developments, benefits from engineered sound reduction, durable construction, and reliable push-fit technology.

Buildings deserve drainage systems that operate silently in the background. Occupants deserve environments free from disruptive noise. Silenta makes both possible.

## Enjoy the silence

You've now explored how Silenta delivers acoustic comfort through intelligent material design and how each system addresses specific project requirements while maintaining the reliability and quality that defines GF.

Ready to specify the right system for your next project? The Silenta page provides detailed information for each system level, helping you make informed decisions across all building types.



Learn more at  
[georgfischer.com/silenta](http://georgfischer.com/silenta)

Watch on YouTube  
[@UponorEurope](https://www.youtube.com/@UponorEurope)

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