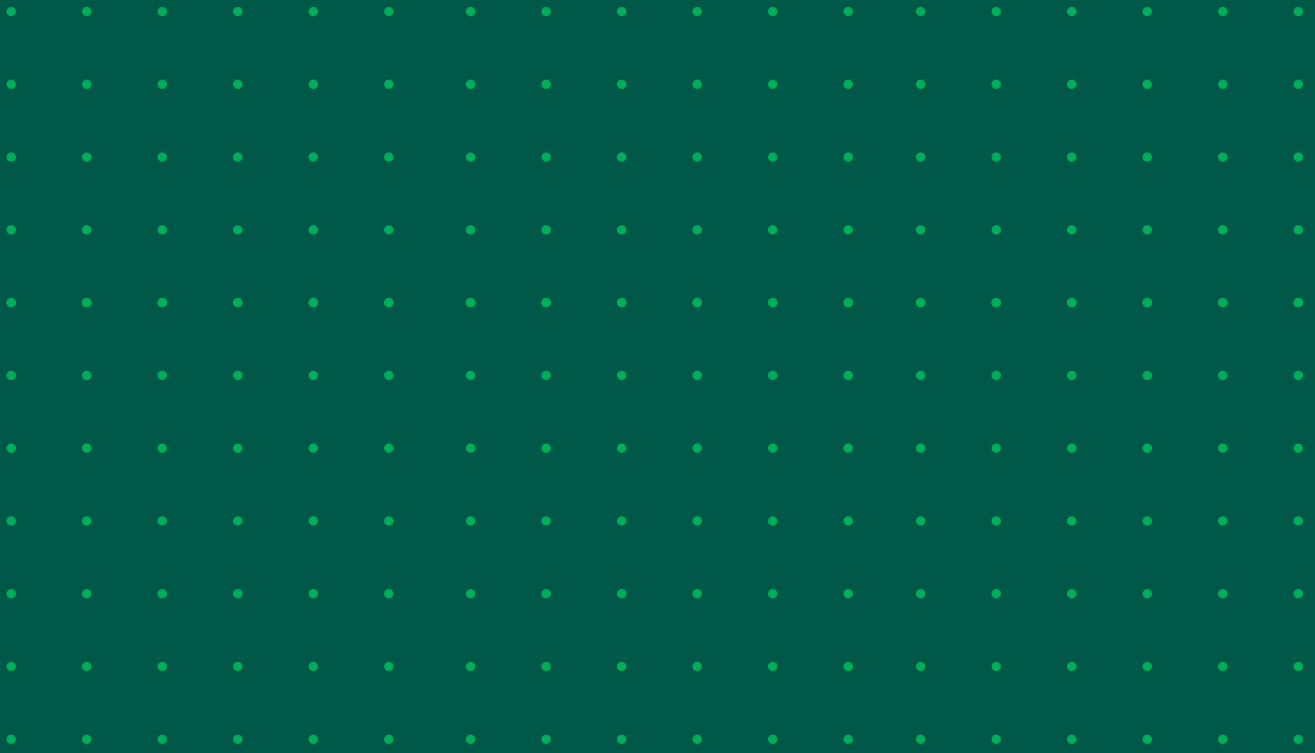




# ULTRASILENT™

Acoustic Drainage Piping System  
Technical Catalogue



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# Description of the

# ULTRASILENT™ System

Acoustic triple layer, push-fit system made of pipes and fittings for soil and waste discharge, at low and high temperatures, both within the building structure (application area code B) as well as buried in the ground (application area BD).

Pipes have a three-layer wall structure with external and internal layers of polypropylene (PP) and a middle layer of mineral-filled polypropylene (PP-MD). Fittings are made of mineral filled Polypropylene (PP-MD). Materials are halogen and cadmium free.

Joints are made with push-fit sockets and elastomer seals.

Suitable for the drainage of fluids, in compliance with DIN 8078, with pH between 2 and 12 at atmospheric pressure and at maximum operating temperature between 95°C and 98°C for short periods.

Suitable for the construction of ventilation, rainwater and drainage systems. Can be used at environmental temperatures no lower than -25°C.

The system has a sound level  $L_{sc,A}$  of 15dB(A) at a flow rate of 2 l/s, measured in compliance with EN 14366 and certified by the Fraunhofer Institut Für Bauphysik of Stuttgart number P-BA 20/2019e. The test was conducted using Huliot acoustic clamps.

Fire performance rating is D-s2,d2 in compliance with EN 13501-1.

The Ultra Silent System is certified by: SKZ, DiBt - Germany, DTI- Denmark, AENOR - Spain and SII - Israel. In compliance with HR 3.43, DIN EN 14366, UNE EN 1451-1, IS 958 Plastics piping system for soil and waste discharge (low and high temperature) within the building structure.



# Main Features



## Excellent acoustic performance

15dB(A) at a flow rate of 2 l/s, in compliance with EN 14366 using Huliote clamps



## High impact resistance

even at low temperature (-25°)



## Excellent resistance to high temperatures

95°C continuous, 98°C discontinuous



## High chemical resistance



## stable assembly

due to Increased depth of socket



## smoother and increased flow

due to Branches with swept angle and optimized design



## Wide range of diameters

DN 32mm to DN 200mm



## High UV resistance

due to black color of external layer



## Recyclability

Ultra Silent products have the Green Label mark for environmentally-friendly products



## All materials comply with RoHS directive

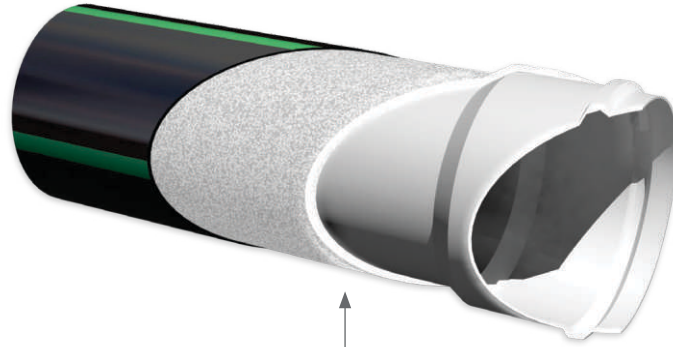
and are Halogen and Cadmium free



## 10-year guarantee



# System marking



## External Layer

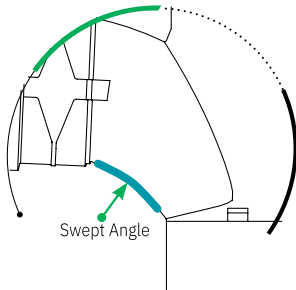
Black PP provides excellent impact resistance and long-term UV protection.

## Middle Layer

PP and PP-MD provide high mechanical resistance and excellent soundproofing performance.

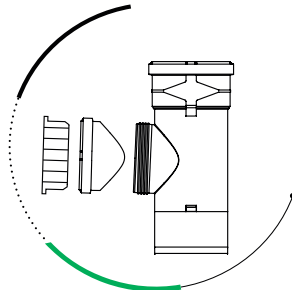
## Internal Layer

White PP provides the best flow performance and high-definition contrast for visual inspection.



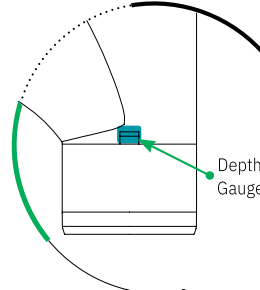
## Clever Design

Ultra Discharge Rate  
Ultra Smooth Flow



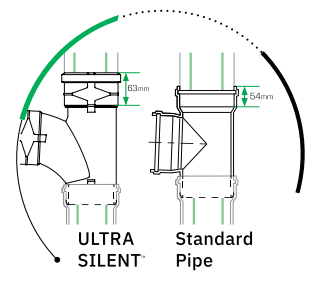
## Internal Plug

Ultra Smooth Flow  
Ultra Silent



## Depth Gauge

Ultra Fit



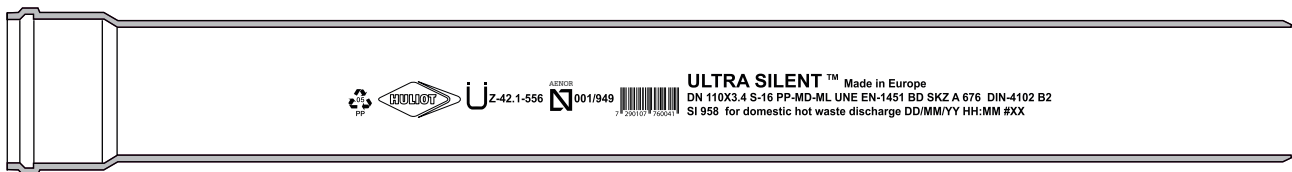
## Extra Socket Depth

Ultra Stable  
Ultra Solid



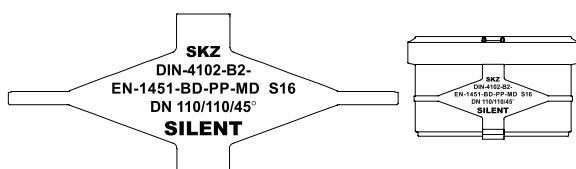
# Marking

## Marking of Pipes



|                                  |                                |
|----------------------------------|--------------------------------|
| PP                               | Recyclable product             |
| Huliot Logo                      | Manufacturer logo              |
| dibt Z-42.1-556                  | DIBT approval                  |
| AENOR 001/949                    | AENOR product certificate      |
| Barcode                          | Product barcode                |
| Ultra Silent                     | System brand name              |
| DN 110X3.4                       | Diameter and wall thickness    |
| PP-MD-ML                         | Material                       |
| S-16                             | Pipe series                    |
| UNE EN-1451                      | Construction standard          |
| BD                               | Application area               |
| SKZ A 676                        | Certificate number             |
| DIN 4102 B2                      | Fire resistance classification |
| SI 958                           | SI Standard                    |
| for domestic hot waste discharge | Pipe application               |
| DD/MM/YY                         | Production date                |
| HH:MM #XX                        | Production time and place      |

## Marking of Pipes



|                      |  |
|----------------------|--|
| SKZ                  | Approval   |
| DIN 4102 B2          | Fire resistance classification                               |
| EN 1451 BD PP-MD S16 | construction standard and application area, material, series |
| DN 110/110/87.5°     | Type of product, diameters, angle                            |
| ULTRA SILENT         | System brand name  |

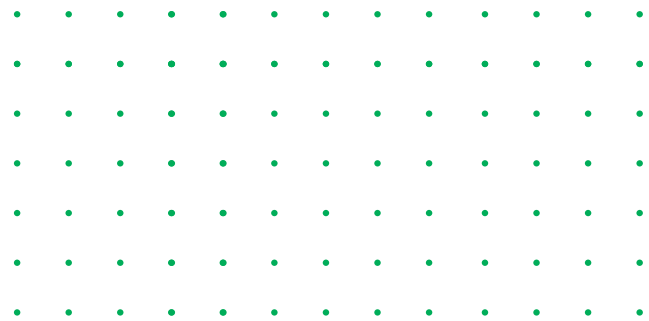
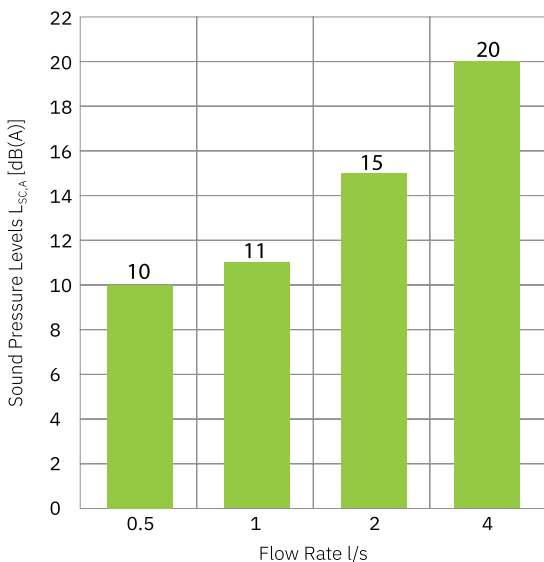
# Datasheet

| Property                    | Value   | Test Method              |
|-----------------------------|---|--------------------------|
| System Brand Name           | Ultra Silent  |                          |
| Application                 | Soil and waste discharge systems (low and high temperatures) within the building structure (application area code B) as well as buried in the ground (application area BD); construction of ventilation, rainwater and drainage systems inside the building structure (application area code "B") |                          |
| Pipe Material               | Co-polymer PP for the external (black) and the internal (white) layers. Compound of PP and PP-MD for the middle (white) layer.  |                          |
| Fitting Material            | PP and PP-MD  |                          |
| Connection                  | Push-fit sockets with elastomer rubber seals  |                          |
| Seal Material               | SBR-NR, NBR, EPDM   |                          |
| Colour                      | Black   |                          |
| Diameter                    | 32-200 mm   |                          |
| Density                     | Pipes: 1.15 ± 0.05g/cm <sup>3</sup><br>Fittings: 1.15-1.30g/cm <sup>3</sup>   |                          |
| Pipe Weight                 | Weight of 110 Pipe: 1.3 - 1.4 kg/m  |                          |
| Elasticity Modulus          | 2.300 - 3.000 N/mm <sup>2</sup>   | ISO 178                  |
| Elongation                  | 0.09 mm/m C°  | Raw Material Properties  |
| Ring Stiffness              | SN6> (6.0 kN/m <sup>2</sup> )   | ISO 9969                 |
| Halogen & Cadmium Content   | Free of halogen or cadmium  |                          |
| Chemical Resistance         | Discharge media between pH 2 and pH 12  | DIN 8078                 |
| Minimum Working Temperature | -25°C   |                          |
| Waste Water Temp. (Max.)    | +95° (continuous)<br>+98° (discontinuous)   |                          |
| Fire Resistance             | D-s2, d2<br>B2  | EN 13501-1<br>DIN 4102-1 |
| UV Resistance               | Suitable for external installation when protected from exposure to direct sunlight (for instance, by means of special UV protective coating); can be stored outside up to two years   |                          |
| Acoustic Performance        | Lsc,A = 15 dB(A) at 2l/s, measured at ground level behind installation wall, with two Huliote acoustic clamps per floor   | EN 14366                 |
| Construction Standard       | HR 3.43, DIN EN 14366, UNE EN 1451-1, IS 958  |                          |



# Acoustic Performance

## Ultra Silent Sound Pressure Levels $L_{SC,A}$ EN 14366



Sound level diagram resulting from Fraunhofer Test P-BA 20/2019e, according to EN 14366. The test was conducted using Huliote acoustic clamp.

## Ultra Silent - Fraunhofer Test Report

**Fraunhofer**  
IBP

Institution for testing, supervision and certification, officially recognized by the building supervisory authority. Approvals of new building materials, components and types of construction.

Director:  
Prof. Dr. Philip Leistner  
Prof. Dr. Klaus Peter Seibauer

**Test Report P-BA 20/2019e**

**Determination of the Acoustic Performance of a Wastewater Installation System in the Laboratory according to EN 14366**

**Client:** HULIOT (A.C.S) LTD, Kibbutz Sde Nehemia, D.N. Gallil Elyon 12145, ISRAEL

**Test object:** Wastewater system "ULTRA SILENT, DN 110x3.4, PP ML MD - 516, 16/11/18" (manufacturer: HULIOT (A.C.S) LTD.). The wastewater system consisted of straight plastic pipes and fittings "ULTRA SILENT, PP-MD 516" and pipe clamps with elastic inlay "Huliot 107-113, new inlay" (manufacturer: HULIOT (A.C.S) LTD.), mounted as sliding and fixing clamps.

**Content:**

|                  |   |
|------------------|---|
| Results sheet 1: | Summary of test results                                   |
| Figures 1 to 3:  | Detailed results  |
| Figures 4 and 5: | Test set-up   |
| Annex A:         | Measurement set-up, noise excitation, acoustic parameters |
| Annex F:         | Evaluation of measurements                                |
| Annex P:         | Description of the test facility                          |
| Annex V:         | Assessment according to VDI 4100                          |

**Test data:** The measurement was carried out on February 12, 2019 in the test facilities of the Fraunhofer Institute for Building Physics in Stuttgart.

Stuttgart, April 15, 2019

Responsible Test Engineer: Head of Laboratory:

Dipl.-Ing. (FH) J. Mohr, M.B.B. Dipl.-Ing. (FH) S. Ohler

The test was carried out in a laboratory, accredited according to DIN EN ISO/IEC 17025:2005 by DAkkS. The accreditation certificate is D-PL-11140-11-01.

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**Determination of the Acoustic Performance of a Wastewater Installation System in the Laboratory according to EN 14366** P-BA 20/2019e  
Results sheet 1

**Client:** HULIOT (A.C.S) LTD., Kibbutz Sde Nehemia, D.N. Gallil Elyon 12145, ISRAEL

**Test specimen:** Wastewater system "ULTRA SILENT, DN 110x3.4, PP ML MD - 516, 16/11/18" (manufacturer: HULIOT (A.C.S) LTD.). The wastewater system consisted of straight plastic pipes and fittings "ULTRA SILENT, PP-MD 516" and pipe clamps with elastic inlay "Huliot 107-113, new inlay" (manufacturer: HULIOT (A.C.S) LTD.), mounted as sliding and fixing clamps. Test object no.: 11359-01; see figure 4 and 5.

**Test set-up:**

- The pipe system was mounted according to figure 4 (see also Annex A).
- The system consisted of wastewater pipes (nominal size OD 110), three inlet tees (curved, 88°), two 45°-basement bends and a horizontal drain section. The inlet tees in the basement and in the ground floor were closed by lids supplied by the manufacturer.
- Pipe system: "ULTRA SILENT, DN 110x3.4, PP ML MD - 516, 16/11/18": Three-layer pipes: Material PP ML MD. Wall thickness 3.4 mm, weight 1.32 kg/m, density 1.15 g/cm<sup>3</sup>, values measured by IBP. One-layer fittings: Material PP-MD, wall thickness 3.6 mm, density 1.24 g/cm<sup>3</sup>, values measured by IBP. Plug connection of the pipes and fittings (shaped pipe sockets).
- Pipe clamps: Steel pipe clamp with new elastomer inlay and with one-sided closure, "HULIOT 107-113" (manufacturer: HULIOT), mounted as sliding and fixing clamps. In every storey (EG and UG) two pipe clamps were installed. In the upper wall area one clamp was mounted as a sliding clamp with 2 black spacers (15 mm) on one side of the clamp. In the lower wall area one clamp was mounted as a fixing clamp with 1 yellow spacer (5 mm) on one side of the clamp. The clamps were fixed to the installation wall with dowels and thread rods (figure 5).

The wastewater installation system was mounted by a technician under the authority of Fraunhofer IBP.

**Test facility:** Installation test facility P12, mass per unit area of the installation wall: 220 kg/m<sup>2</sup>, mass per unit area of the ceiling: 440 kg/m<sup>2</sup>. Installation rooms: sub-basement (KG), basement (UG) front, ground floor (EG) front and top floor (DG), measuring rooms: UG front, UG rear (details in Annex P and EN 14366: 2005-02).

**Test method:** The measurements were performed according to EN 14366:2005-02; noise excitation by steady water flow with 0.5 l/s, 1.0 l/s, 2.0 l/s and 4.0 l/s. Additional evaluation for comparison with requirements following German standards DIN 4109:2018-01 and VDI 4100:2012-10 (details in Annexes A, F and V).

**Result:**

| Wastewater system "ULTRA SILENT, DN 110x3.4, PP ML MD - 516, 16/11/18" (manufacturer: HULIOT (A.C.S) LTD.). The wastewater system consisted of straight plastic pipes and fittings "ULTRA SILENT, PP-MD 516" and pipe clamps with elastic inlay "Huliot 107-113, new inlay" (manufacturer: HULIOT (A.C.S) LTD.), mounted as sliding and fixing clamps. | Flow rate [l/s] |     |     |     |    |
|--|-----------------|-----|-----|-----|----|
|  | 0.5             | 1.0 | 2.0 | 4.0 |    |
| Airborne sound pressure level $L_{A}$ [dB(A)]  |                 |     |     |     |    |
| Structure-borne sound characteristic level $L_{SC}$ [dB(A)] according to EN 14366 for the basement test-room   | UG front        | 43  | 49  | 52  | 54 |
| Structure-borne sound characteristic level $L_{SC}$ [dB(A)] according to EN 14366 for the basement test-room   | UG rear         | <10 | 11  | 15  | 20 |
| Installation sound level $L_{Aeq,T}$ [dB(A)] following DIN 4109 in the basement test-room  | UG front        | 43  | 49  | 52  | 54 |
| Installation sound level $L_{Aeq,T}$ [dB(A)] following DIN 4109 in the basement test-room  | UG rear         | <10 | 15  | 19  | 24 |
| Installation sound level $L_{Aeq,T}$ [dB(A)] following VDI 4100 in the basement test-room  | UG front        | 40  | 47  | 49  | 52 |
| Installation sound level $L_{Aeq,T}$ [dB(A)] following VDI 4100 in the basement test-room  | UG rear         | <10 | 12  | 16  | 21 |

**Test date:** February 12, 2019

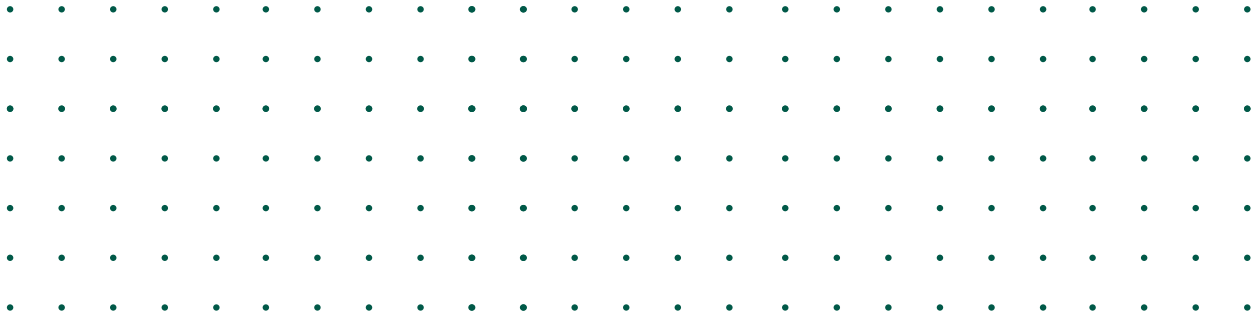
**Notes:**

- For comparing test results with requirements, note Annex A.
- Sound levels below 10 dB(A) are not measured by the global test report, since they are subject to an increased measurement uncertainty and moreover are not noticeable in a normal living environment.

The test was carried out in a laboratory, accredited according to DIN EN ISO/IEC 17025:2005 by DAkkS. The accreditation certificate is D-PL-11140-11-01.

Stuttgart, April 15, 2019  
Head of Laboratory:

# Product Approvals and Certificates



Deutsches  
Institut  
für  
Bautechnik



**ZERTIFIKAT** **SKZ**


**Certificate**

SKZ - Testing GmbH awards the following company

**HULIOT A.C.S. Ltd.**  
Kibbutz Sde Nehemia  
12145 D.N. GALIL ELYON  
ISRAEL

Production site: HULIOT A.C.S. Ltd., IL-12145 D.N. GALIL ELYON

the right to use the SKZ testing and inspection mark



**A 624**

for the following plastic products

**Waste water pipes made of polypropylene PP/PP-MD/PP and fittings made of polypropylene PP-MD within the building structure, group 1 and 2**


Trade name: ULTRA SILENT

SKZ Specification for Tests and Inspection **HR 3.43**

Users of the SKZ mark are obliged to observe the required regulations for the production and testing of these products.

Date of initial certification: 20 February 2015

Date of expiry: 13 December 2022



W. Krause  
Dipl.-Ing. Hans-Peter Krause  
Certification body

Würzburg, 14 December 2017

The original language of this certificate is German. In case of doubt, the German version is obligatory.


**ZERTIFIKAT** **SKZ**

SKZ - Testing GmbH awards the following company

**HULIOT D.O.O.**  
Vrhniška cesta 30  
1354 HORJUL  
SLOVENIA

Production site: HULIOT D.O.O., SL-1354 HORJUL

the right to use the SKZ testing and inspection mark



**A 676**

for the following plastic products

**Waste water pipes made of PP with mineral filling within the building structure, group 1 and 2**


Trade name: ULTRA SILENT

SKZ specification for tests and inspection **HR 3.43:2016-11**

Users of the SKZ mark are obliged to observe the required regulations for the production and testing of these products.

Date of initial certification: 28 April 2015

Date of expiry: 27 April 2025




W. Krause  
Dipl.-Ing. Hans-Peter Krause  
Head of Certification Body

Würzburg, 28 April 2020

The original language of this certificate is German. In case of doubt, the German version is obligatory.  
SKZ - Testing GmbH, Friedrich-Berglun-Ring 22, 97076 Würzburg, Germany, Tel. +49 931 4104-0, testing@skz.de, www.skz.de




  
 Deutsches Institut für Bautechnik

**Zulassungsstelle für Bauprodukte und Bauarten**  
**Bautechnisches Prüfamt**  
 Eine vom Bund und den Ländern  
 gemeinsam getragene Anstalt des öffentlichen Rechts  
 Mitglied der EOTA, der UEAtc und der WFTAD

Datum: 20.09.2018      Geschäftszeichen: III 55-1.42.1-22/18


**Zulassungsnummer:**  
**Z-42.1-556**

**Antragsteller:**  
 Huliot A.C.S. Ltd.  
 Kibbutz Sde Nehemia  
 1214500 UPPER GALILEE  
 ISRAEL


**Geltungsdauer**  
 vom: 20. September 2018  
 bis: 17. Oktober 2022

**Zulassungsgegenstand:**  
**Rohre und Formstücke aus PP-MD für Abwasserleitungen innerhalb der Gebäudestruktur mit der Bezeichnung "Ultra Silent"**

Der oben genannte Zulassungsgegenstand wird hiermit allgemein bauaufsichtlich zugelassen. Dieser Bescheid umfasst acht Seiten und zwölf Anlagen. Diese allgemeine bauaufsichtliche Zulassung ersetzt die allgemeine bauaufsichtliche Zulassung Nr. Z-42.1-556 vom 14. Oktober 2017.



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## Classification of Reaction to Fire Performance

**Report on classification of the burning behaviour of the building product**  
**"Huliot Ultra Silent"**

**Report no.: 12112803A**  
**Date: 27.05.2013**  
**Official in charge: H. Aglas/ko**  
**DD: 818**

**Applicant/manufacture:** Huliot  
 Kibbutz Sde Nehemia  
 IL-12145 D.N. Galil Elyon


**Date of application:** 01.02.2013

**Specimen of classification:** Plastic piping system "Huliot Ultra Silent"

**Short evaluation:** In accordance with EN 13501-1:2009 the above mentioned building product is ranked into the European Class D – s2, d2 because of its fire behaviour. The classification of reaction to fire and the therefore valid practical range of application is obvious by the representational classification report.

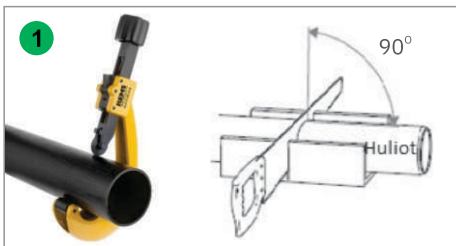
**This report contains:** 5 text pages

The duplication of this classification report in extracts is only allowed with written authorisation from the IBS



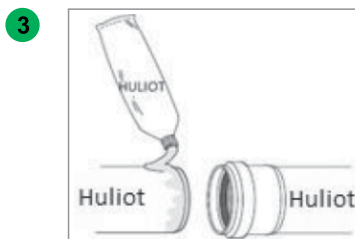
# Installation of the ULTRASILENT™ System

## 1.1 | Pipe preparation and assembly

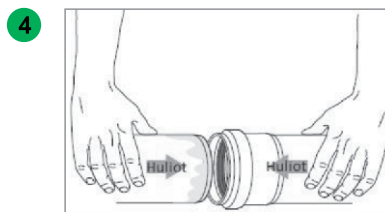


Cut the Huliot pipe using a suitable pipe cutter available in market or a fine tooth saw that is suitably guided to guarantee a perpendicular cut.

Chamfering and beveling the Huliot pipe ends to an angle of roughly 15o to 30o using a suitable chamfering tool or a fine file. The chamfered surface must be smooth to avoid damaging the ring seal inside the socket when the pipe is inserted.



Ensure that the inside of the socket, the seal and the spigot end of the pipe piece to be inserted are perfectly clean. Lubricate the spigot/pipe/fitting end and rubbering with the appropriate Huliot lubricant only.

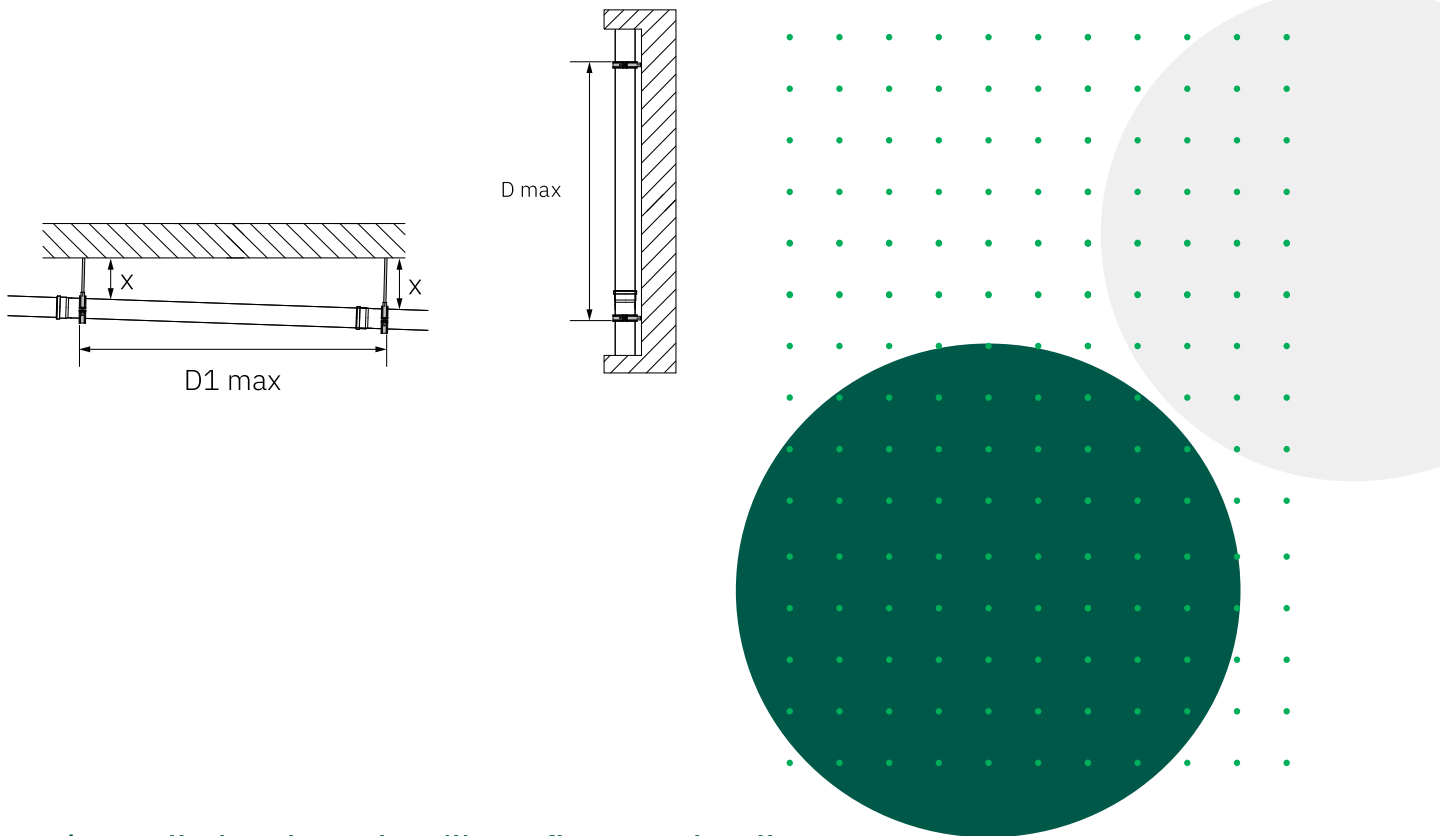


Join the pipes and fittings or fittings to fittings together by inserting the end/spigot into the socket to maximum socket depth.

## Hanging distances

| Pipe DN<br>(External diameter) | Max. bracket distance for<br>Horizontal installation - D1 max | Max. bracket distance for<br>Vertical installation - D max |
|--------------------------------|---|--|
| Ø 40                           | 0.8   | 1.0  |
| Ø 50                           | 0.8   | 1.0  |
| Ø 75                           | 0.8   | 1.1  |
| Ø 90                           | 0.9   | 1.4  |
| Ø 110                          | 1.1   | 1.5  |
| Ø 125                          | 1.1   | 1.5  |
| Ø 160                          | 1.5   | 1.5  |
| Ø 200                          | 1.5   | 1.5  |

| Pipe DN<br>(External diameter) | Hanging distance<br>from the ceiling (X) | Ceiling Rod<br>diameter |
|--------------------------------|--|-------------------------|
| 110, 125, 160, 200             | Up to 0.4 meters                         | 3/8"                    |
|                                | Over 0.4 meters<br>Up to 0.6 meters      | 1/2"                    |
|                                | Over 0.6 meters                          | 3/4"                    |



## 1.2 | Installation through ceilings, floors and walls

It is important in acoustic insulated systems to avoid contact between system components and rigid elements, such as walls, ceilings, floors etc., in order to prevent structure-borne noise transmission.

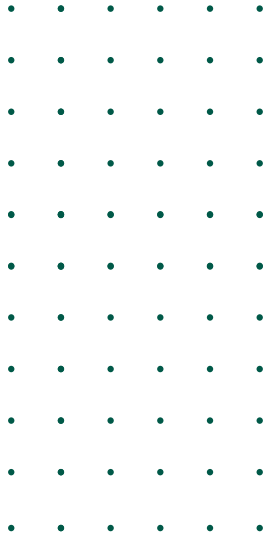
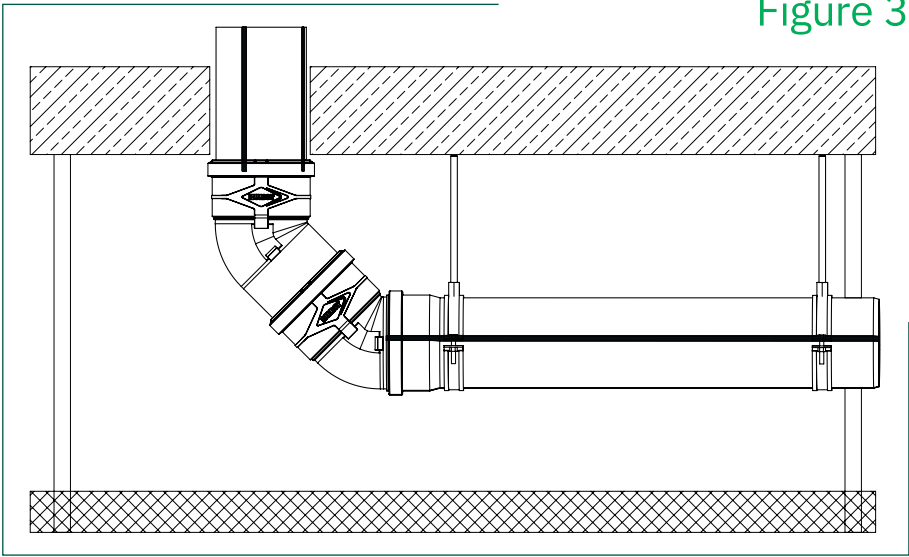
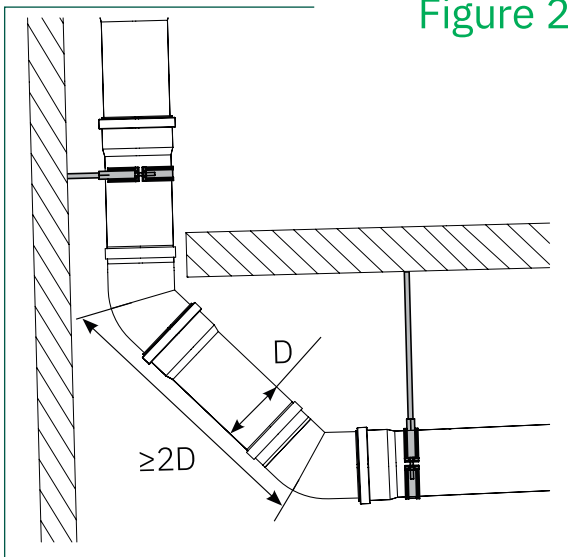
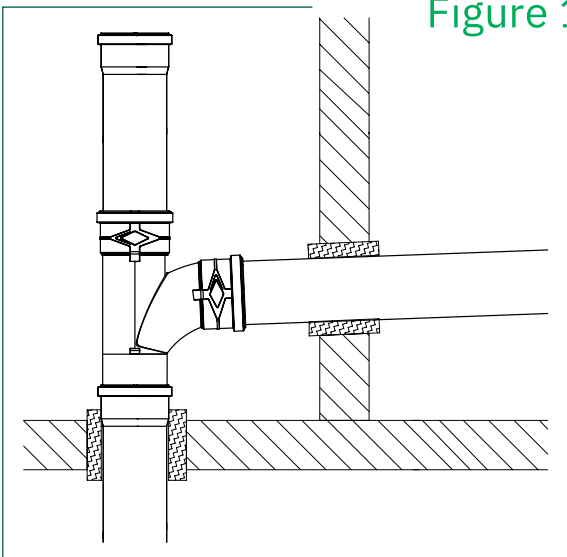
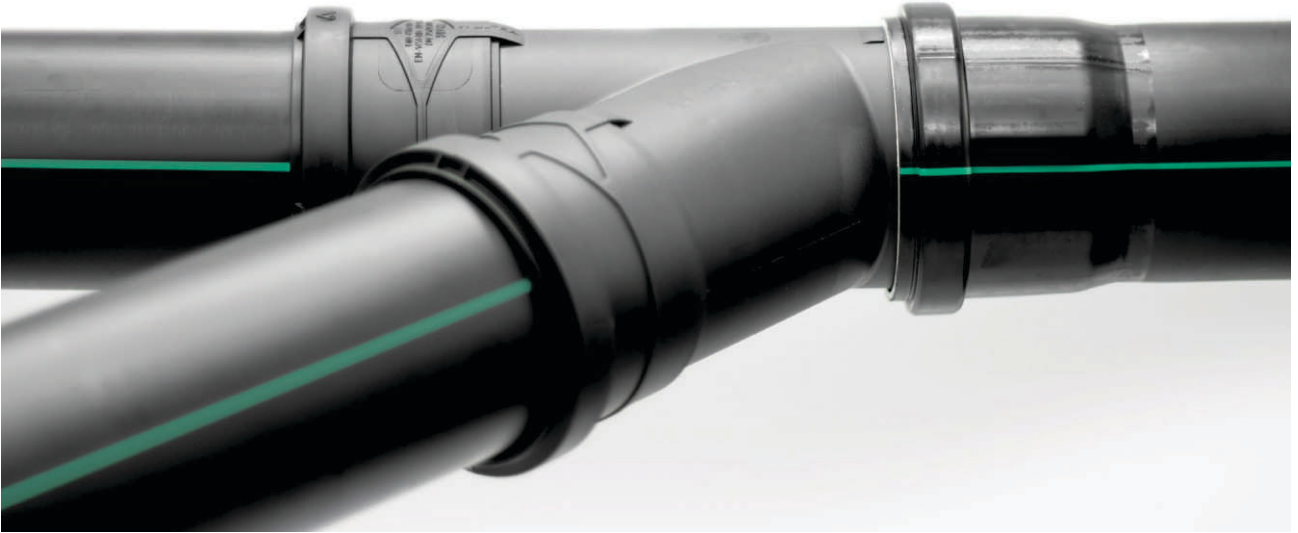
For pipes traversing walls and ceilings, a space of at least 30 mm should be maintained between the pipe and any rigid material.

If the spaces around the pipes traversing walls and floors must be filled, use only soft construction materials such as foam or glass fiber (Figure 1).

In case of pipes traversing floors where protection against humidity is needed we recommend to use Huliot Ultraseal (see description in following pages).

For improved hydraulic flow and reduced noise, 87° bends are not recommended to be used for changing flow direction from vertical to horizontal. It is preferable to use two 45° bends, with 2D minimum length of connecting pipe between them (Figure 2).

When installing pipes in open spaces (such as basements, parking garages etc.), above suspended ceilings or behind screen walls, prevent any contact of other material (such as suspended ceiling, electrical, water, ventilation and air conditioning systems etc.) with the pipes (Figure 3).





### 1.3 | Repairs and installation

To add a branch (USEA) to an existing pipe with long socket (USTL) and sleeve (USU), insert the long socket plain end into the branch socket, cut the equivalent of the socket length from the existing pipe piece. Insert the long socket into the upper pipe all the way. Fix the sleeve on the lower pipe and slide the branch and long socket down into the sleeve (Figure 4). An alternative possibility is to use two sleeves and plain pipe (the minimum plain pipe length must be more than double that of the external pipe diameter DN, as in Figure 5).

To fix punctured or damaged pipe, the same methods can apply with one socket pipe (USEM) instead of the branch and for adding inspection pipe (USRE) or double branch (USDA).

Figure 4

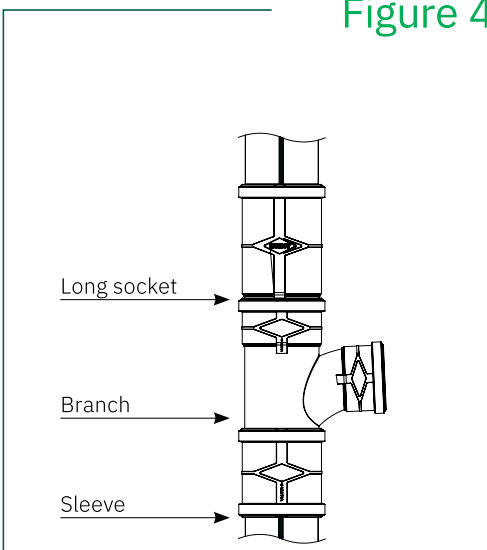
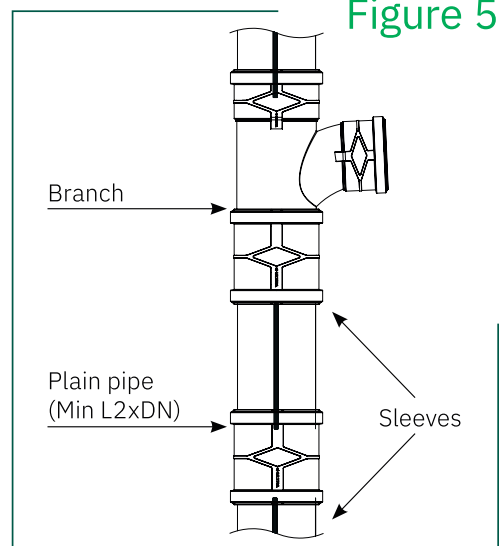
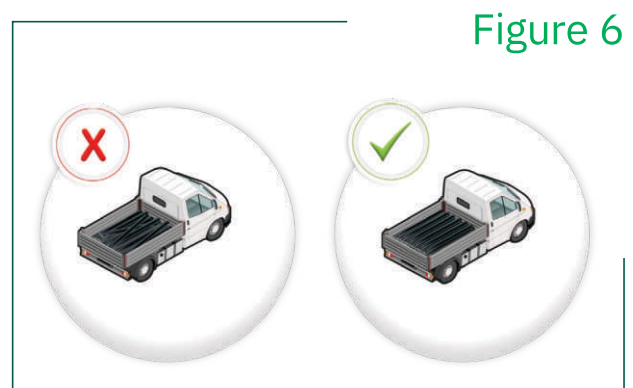
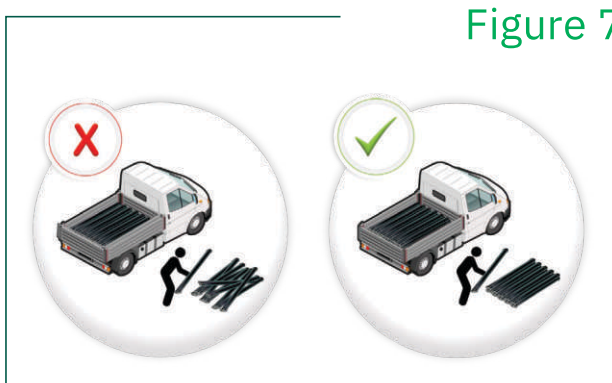


Figure 5



# Transportation, Handling and Storage



It is recommended to handle the pipes and fittings in their original sales packaging to protect them and prevent damage during loading and transporting.

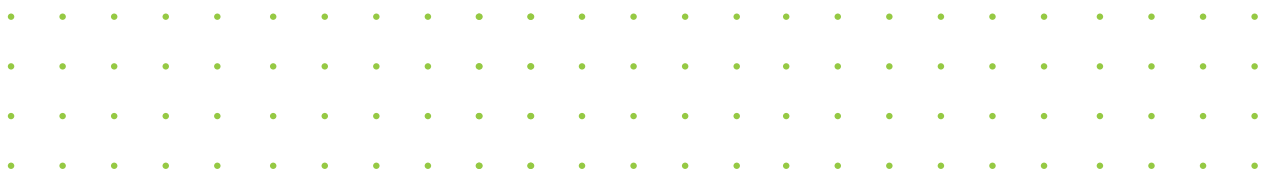
Load and transport pipes in straight, horizontal position with the full length supported (note that the sockets are unencumbered all around), avoid extreme pressure on the pipes (straps or other heavy materials).

Unload and handle pipes carefully and lay them in a straight, horizontal position (pay attention to positioning of the sockets), on a smooth surface (Figure 6, Figure 7).

Some sizes of pipes and all fittings are packed in carton boxes. Protect them from rain and moisture and store them in a dry place. It is recommended to store the pipes and fittings in their original sales packaging to protect them from damages.

Ultra Silent pipes are UV protected and can be stored outdoor for up to 2 years (depending on geographical location). The gasket material can withstand outdoor storage for up to 2 years and after this period must be replaced before installing. When using mechanical tools and machines (forklifts, cranes etc.) extra caution should be taken to prevent damages to the products.

Optical defects (external scratches and pigment changes etc.) have no influence on the quality and/or functionality of the system.







# ACOUSTIC CLAMP™

New! Huliot Acoustic Clamp for perfect Ultra Silent installation

Structured rubber profile with hollow sections for maximal pipe grip and minimal vibration intensity passed to the constructive elements

Easy and simple clamp fastening by a single screw on only one side

EPDM rubber body with air ducts for vibration prevention

Rubber softness level:  $25 \pm 5$  shore

## Acoustic Clamp Assembly instructions

Use Huliot acoustic clamps or equivalent products only

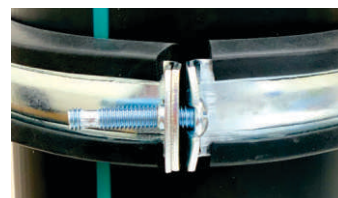
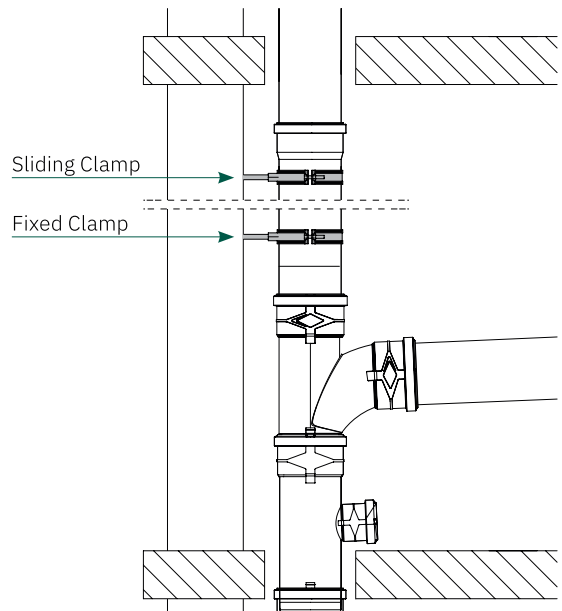
It is advisable to install the clamps on external walls only. Installation on interior walls will adversely affect acoustic performance

It is recommended to install the clamps around the head of the connection for a better grip

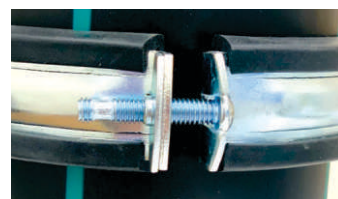
### For vertical wall mounting, two Huliot Ultra Silent clamps should be assembled on every floor:

**Fixed Clamp:** The first of the two clamps should be installed at the lower third of the floor height of each floor, just below the pipe or fitting socket, and must be fully tightened.

**Sliding Clamp:** Should be mounted at the upper third of the floor height of each floor. The clamp should lightly press the pipe against the rubber rather than be closed tightly, to reduce the vibration intensity passed to the constructive elements.



Lower Fixed clamp tightening level



Upper sliding clamp tightening level

# PRESSURECLAMP™

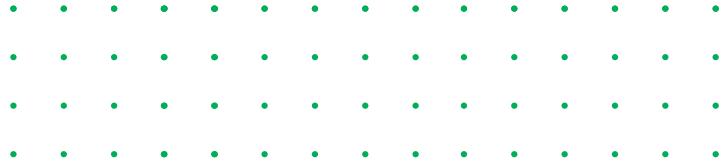
Pressure Clamp connector for perfect ULTRA SILENT installation



Pressure resistance up to 4 BAR  
Retrieval prevention

## Pressure Clamp Applications

- Parking lot ceilings
- Exposed rainwater pipes
- Blind pipes for sewage drainage



# ENDLOCK™

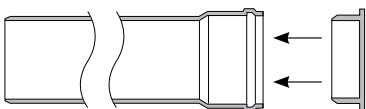
Pressure end cap for sealing pipeline end



## End Lock Assembly instructions

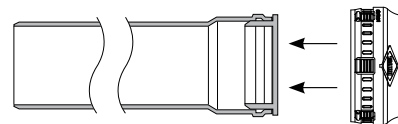
Connect the end cap to the pipe or fitting opening to be plugged

Ensure the presence of a gasket on the pipe or fitting to which the end cap is to be connected

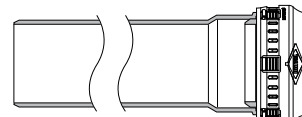


Connect the Endlock connector to the pipe or fitting end cap (Article 1)

Make sure the clips are in place and that the Endlock is properly aligned



Tighten the metal band



# LOCKSEAL™

New upgraded and shortened Lock Seal, for easy and simple installation

## Lock Seal Applications

### When Installing pipes in concrete the use of Lock Seal:

Protects the push-fit connections against vibrations generated during concrete pouring

Protects the push-fit connections against lift forces generated during concrete drying

Prevents the concrete slurry from infiltrating to the gasket and interfering with proper sealing

## Lock Seal Advantages

Easy and fast assembly

Increased safety

Tool-free installation

## Lock Seal Assembly instructions

Lockseal is designed for use with PP pipes resilient to hydrostatic pressure and with annular strength suitable for concrete casting.



1

Assemble the narrow part of the Lock Seal socket to the extremity of the pipe or the socket



2

Insert the plain end of the fitting or pipe into the socket (normal push-fit connection method)



3

Slide down the Lock Seal until it is properly aligned and the clips settle down in the socket to complete the installation



To facilitate the assembly, it is recommended to use Huliots pipe lubricant.



For disassembly, open the clips to pull the Lock Seal off

# ULTRASEAL™



## Ultra Seal System

Ultraseal provides the ideal solution for preventing the structure-borne noise created between wastewater pipes and solid construction.

Ultraseal prevents moisture transition between floors at the pipe borehole.

Ultraseal integrates a thin, highly flexible, waterproof geotextile membrane for perfect adherence to sealants and bituminous cement.

## Ultra Seal Advantages

Strong elastic gasket

Fast, simple assembly

No special tools or equipment required

Elastic, flexible, durable

Geotextile membrane meets European standards for wet rooms

## Ultra Seal Assembly instructions



1

Assembled on the pipe and placed in the pipe borehole



3

Second insulating layer



2

Initial insulating layer (primer)



4

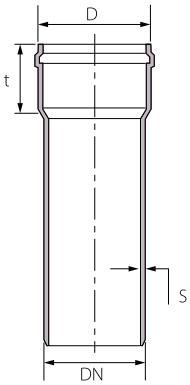
Final insulating layer



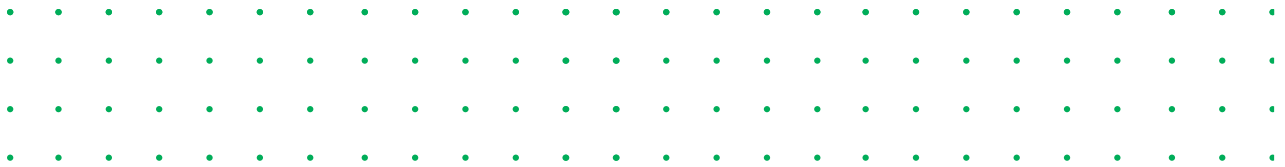
5

Filling and coating layer

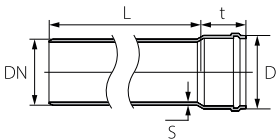
## Pipes





| DN         | D   | S   | t   | S Class |
|------------|-----|-----|-----|---------|
| <b>32</b>  | 45  | 1.8 | 42  | S16     |
| <b>40</b>  | 55  | 1.8 | 44  | S16     |
| <b>50</b>  | 65  | 1.8 | 46  | S16     |
| <b>75</b>  | 90  | 2.3 | 49  | S16     |
| <b>90</b>  | 107 | 2.8 | 54  | S16     |
| <b>110</b> | 130 | 3.4 | 65  | S16     |
| <b>125</b> | 149 | 3.9 | 72  | S16     |
| <b>160</b> | 186 | 4.9 | 75  | S16     |
| <b>200</b> | 228 | 6.2 | 108 | S16     |

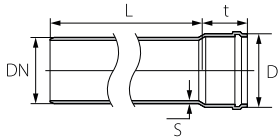




## US Single Socket Pipe

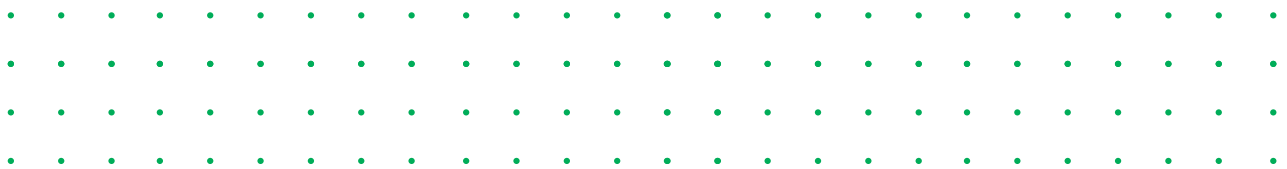


| Code       | DN | L    | D  | S   | t  |  |  |
|------------|----|------|----|-----|----|---|---|
| 5753200015 | 32 | 150  | 45 | 1.8 | 42 | 20  | 1440  |
| 5753200025 | 32 | 250  | 45 | 1.8 | 42 | 20  | 960   |
| 5753200050 | 32 | 500  | 45 | 1.8 | 42 | 20  | 480   |
| 5753200100 | 32 | 1000 | 45 | 1.8 | 42 | 15  | 300   |
| 5753200150 | 32 | 1500 | 45 | 1.8 | 42 | 15  | 300   |
| 5753200200 | 32 | 2000 | 45 | 1.8 | 42 | 15  | 300   |
| 5753200300 | 32 | 3000 | 45 | 1.8 | 42 | 15  | 300   |
| 5754000015 | 40 | 150  | 55 | 1.8 | 44 | 20  | 1440  |
| 5754000025 | 40 | 250  | 55 | 1.8 | 44 | 20  | 960   |
| 5754000050 | 40 | 500  | 55 | 1.8 | 44 | 20  | 480   |
| 5754000100 | 40 | 1000 | 55 | 1.8 | 44 | 15  | 420   |
| 5754000150 | 40 | 1500 | 55 | 1.8 | 44 | 15  | 420   |
| 5754000200 | 40 | 2000 | 55 | 1.8 | 44 | 15  | 420   |
| 5754000300 | 40 | 3000 | 55 | 1.8 | 44 | 15  | 420   |
| 5755000015 | 50 | 150  | 65 | 1.8 | 46 | 20  | 960   |
| 5755000025 | 50 | 250  | 65 | 1.8 | 46 | 20  | 540   |
| 5755000050 | 50 | 500  | 65 | 1.8 | 46 | 20  | 400   |
| 5755000100 | 50 | 1000 | 65 | 1.8 | 46 | 15  | 270   |
| 5755000150 | 50 | 1500 | 65 | 1.8 | 46 | 15  | 270   |
| 5755000200 | 50 | 2000 | 65 | 1.8 | 46 | 15  | 270   |
| 5755000300 | 50 | 3000 | 65 | 1.8 | 46 | 15  | 270   |

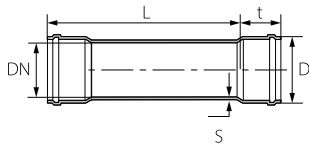
# US Single Socket Pipe





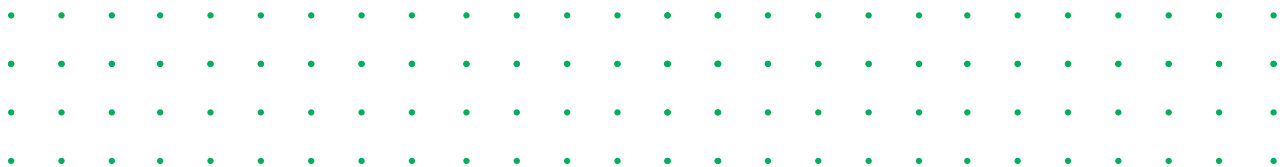
| Code       | DN  | L    | D   | S   | t   |  |  |
|------------|-----|------|-----|-----|-----|---|---|
| 5757500015 | 75  | 150  | 90  | 2.3 | 49  | 20  | 360   |
| 5757500025 | 75  | 250  | 90  | 2.3 | 49  | 20  | 240   |
| 5757500050 | 75  | 500  | 90  | 2.3 | 49  | 20  | 160   |
| 5757500100 | 75  | 1000 | 90  | 2.3 | 49  | 10  | 120   |
| 5757500150 | 75  | 1500 | 90  | 2.3 | 49  | 10  | 120   |
| 5757500200 | 75  | 2000 | 90  | 2.3 | 49  | 10  | 120   |
| 5757500300 | 75  | 3000 | 90  | 2.3 | 49  | 10  | 120   |
| 5759000015 | 90  | 150  | 107 | 2.8 | 54  | 20  | 240   |
| 5759000025 | 90  | 250  | 107 | 2.8 | 54  | 20  | 160   |
| 5759000050 | 90  | 500  | 107 | 2.8 | 54  | 10  | 120   |
| 5759000100 | 90  | 1000 | 107 | 2.8 | 54  | 10  | 100   |
| 5759000150 | 90  | 1500 | 107 | 2.8 | 54  | 10  | 100   |
| 5759000200 | 90  | 2000 | 107 | 2.8 | 54  | 10  | 100   |
| 5759000300 | 90  | 3000 | 107 | 2.8 | 54  | 10  | 100   |
| 5751100015 | 110 | 150  | 130 | 3.4 | 65  | 20  | 180   |
| 5751100025 | 110 | 250  | 130 | 3.4 | 65  | 20  | 180   |
| 5751100050 | 110 | 500  | 130 | 3.4 | 65  | 10  | 80  |
| 5751100100 | 110 | 1000 | 130 | 3.4 | 65  | 10  | 80  |
| 5751100150 | 110 | 1500 | 130 | 3.4 | 65  | 10  | 80  |
| 5751100200 | 110 | 2000 | 130 | 3.4 | 65  | 10  | 80  |
| 5751100300 | 110 | 3000 | 130 | 3.4 | 65  | 10  | 80  |
| 5751200015 | 125 | 150  | 149 | 3.9 | 72  | 10  | 120   |
| 5751200025 | 125 | 250  | 149 | 3.9 | 72  | 6   | 108   |
| 5751200050 | 125 | 500  | 149 | 3.9 | 72  | 6   | 72  |
| 5751200100 | 125 | 1000 | 149 | 3.9 | 72  | 8   | 80  |
| 5751200150 | 125 | 1500 | 149 | 3.9 | 72  | 8   | 80  |
| 5751200200 | 125 | 2000 | 149 | 3.9 | 72  | 8   | 80  |
| 5751200300 | 125 | 3000 | 149 | 3.9 | 72  | 8   | 80  |
| 5751600015 | 160 | 150  | 186 | 4.9 | 75  | 8   | 96  |
| 5751600025 | 160 | 250  | 186 | 4.9 | 75  | 8   | 48  |
| 5751600050 | 160 | 500  | 186 | 4.9 | 75  | 8   | 32  |
| 5751600100 | 160 | 1000 | 186 | 4.9 | 75  | 6   | 24  |
| 5751600150 | 160 | 1500 | 186 | 4.9 | 75  | 6   | 24  |
| 5751600200 | 160 | 2000 | 186 | 4.9 | 75  | 6   | 24  |
| 5751600300 | 160 | 3000 | 186 | 4.9 | 75  | 6   | 24  |
| 5752000100 | 200 | 1000 | 228 | 6.2 | 108 | 1   | 16  |
| 5752000300 | 200 | 3000 | 228 | 6.2 | 108 | 1   | 16  |



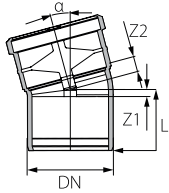
## US Double Socket Pipe





| Code       | DN  | L    | D   | S   | t  |  |  |
|------------|-----|------|-----|-----|----|---|---|
| 5753232050 | 32  | 500  | 45  | 1.8 | 42 | 20  | 240   |
| 5753232100 | 32  | 1000 | 45  | 1.8 | 42 | 15  | 300   |
| 5753232150 | 32  | 1500 | 45  | 1.8 | 42 | 15  | 300   |
| 5753232200 | 32  | 2000 | 45  | 1.8 | 42 | 15  | 300   |
| 5753232300 | 32  | 3000 | 45  | 1.8 | 42 | 15  | 300   |
| 5754040050 | 40  | 500  | 55  | 1.8 | 44 | 20  | 240   |
| 5754040100 | 40  | 1000 | 55  | 1.8 | 44 | 15  | 420   |
| 5754040150 | 40  | 1500 | 55  | 1.8 | 44 | 15  | 420   |
| 5754040200 | 40  | 2000 | 55  | 1.8 | 44 | 15  | 420   |
| 5754040300 | 40  | 3000 | 55  | 1.8 | 44 | 15  | 420   |
| 5755050050 | 50  | 500  | 65  | 1.8 | 46 | 20  | 240   |
| 5755050100 | 50  | 1000 | 65  | 1.8 | 46 | 15  | 270   |
| 5755050150 | 50  | 1500 | 65  | 1.8 | 46 | 15  | 270   |
| 5755050200 | 50  | 2000 | 65  | 1.8 | 46 | 15  | 270   |
| 5755050300 | 50  | 3000 | 65  | 1.8 | 46 | 15  | 270   |
| 5757575050 | 75  | 500  | 90  | 2.2 | 49 | 20  | 120   |
| 5757575100 | 75  | 1000 | 90  | 2.2 | 49 | 10  | 120   |
| 5757575150 | 75  | 1500 | 90  | 2.2 | 49 | 10  | 120   |
| 5757575200 | 75  | 2000 | 90  | 2.2 | 49 | 10  | 120   |
| 5757575300 | 75  | 3000 | 90  | 2.2 | 49 | 10  | 120   |
| 5759090050 | 90  | 500  | 107 | 2.8 | 54 | 10  | 90  |
| 5759090100 | 90  | 1000 | 107 | 2.8 | 54 | 10  | 100   |
| 5759090150 | 90  | 1500 | 107 | 2.8 | 54 | 10  | 100   |
| 5759090200 | 90  | 2000 | 107 | 2.8 | 54 | 10  | 100   |
| 5759090300 | 90  | 3000 | 107 | 2.8 | 54 | 10  | 100   |
| 5751111050 | 110 | 500  | 130 | 3.4 | 65 | 10  | 60  |
| 5751111100 | 110 | 1000 | 130 | 3.4 | 65 | 10  | 80  |
| 5751111150 | 110 | 1500 | 130 | 3.4 | 65 | 10  | 80  |
| 5751111200 | 110 | 2000 | 130 | 3.4 | 65 | 10  | 80  |
| 5751111300 | 110 | 3000 | 130 | 3.4 | 65 | 10  | 80  |
| 5751212050 | 125 | 500  | 149 | 3.9 | 72 | 6   | 54  |
| 5751212100 | 125 | 1000 | 149 | 3.9 | 72 | 8   | 80  |
| 5751212150 | 125 | 1500 | 149 | 3.9 | 72 | 8   | 80  |
| 5751212200 | 125 | 2000 | 149 | 3.9 | 72 | 8   | 80  |
| 5751212300 | 125 | 3000 | 149 | 3.9 | 72 | 8   | 80  |

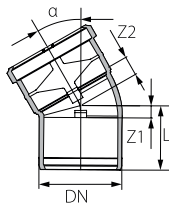




## US Bend 15°



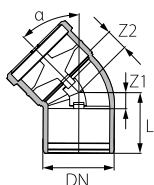
| Code       | DN  | L    | Z1 | Z2   |  |  |
|------------|-----|------|----|------|---|---|
| 7070000170 | 32  | 44.5 | 4  | 9.0  | 50  | 3000  |
| 7070010170 | 40  | 51.5 | 4  | 10.0 | 40  | 2400  |
| 7070020170 | 50  | 56.5 | 5  | 11.0 | 40  | 1200  |
| 7070030170 | 75  | 63.5 | 7  | 14.0 | 20  | 600   |
| 7070090170 | 90  | 68.0 | 8  | 16.0 | 20  | 480   |
| 7070040170 | 110 | 78.0 | 6  | 19.0 | 20  | 240   |
| 7070050170 | 125 | 87.0 | 12 | 21.9 | 10  | 160   |
| 7070060170 | 160 | 99.0 | 8  | 22.0 | 5   | 80  |



## US Bend 30°



| Code       | DN  | L     | Z1 | Z2   |  |  |
|------------|-----|-------|----|------|--|--|
| 7070000370 | 32  | 47.5  | 5  | 10.0 | 50   | 3000   |
| 7070010370 | 40  | 54.5  | 7  | 13.0 | 40   | 2400   |
| 7070020370 | 50  | 59.5  | 8  | 14.0 | 40   | 1200   |
| 7070030370 | 75  | 68.5  | 12 | 18.0 | 20   | 600  |
| 7070090370 | 90  | 74.0  | 14 | 20.5 | 20   | 320  |
| 7070040370 | 110 | 85.0  | 16 | 25.5 | 20   | 240  |
| 7070050370 | 125 | 104.0 | 29 | 30.0 | 10   | 160  |
| 7070060370 | 160 | 105.0 | 27 | 29.0 | 5  | 80   |

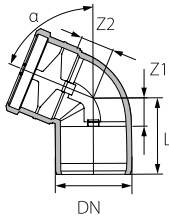
## US Bend 45°





| Code       | DN  | L     | Z1 | Z2   |  |  |
|------------|-----|-------|----|------|---|---|
| 7070000470 | 32  | 53.0  | 8  | 13.0 | 40  | 2400  |
| 7070010470 | 40  | 58.5  | 11 | 17.0 | 40  | 2400  |
| 7070020470 | 50  | 64.0  | 13 | 19.0 | 40  | 1200  |
| 7070030470 | 75  | 74.5  | 18 | 24.0 | 20  | 600   |
| 7070090470 | 90  | 81.0  | 21 | 27.5 | 20  | 320   |
| 7070040470 | 110 | 94.0  | 25 | 33.5 | 20  | 240   |
| 7070050470 | 125 | 104.0 | 29 | 38.0 | 10  | 120   |
| 7070060470 | 160 | 116.0 | 36 | 44.0 | 5   | 60  |
| 7070080470 | 200 | 148.0 | 49 | 63.0 | 3   | 36  |

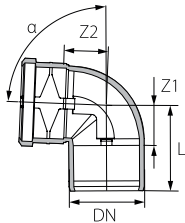




## US Bend 67.5°

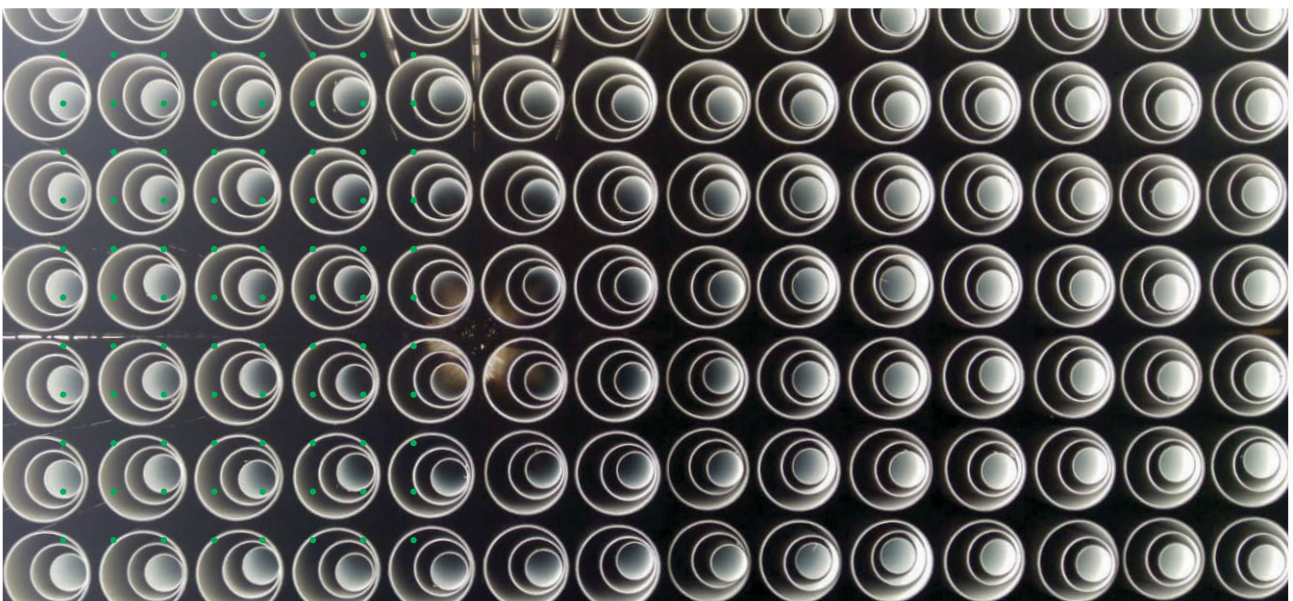


| Code       | DN  | L     | Z1 | Z2 |  |  |
|------------|-----|-------|----|----|---|---|
| 7070000670 | 32  | 58.0  | 13 | 18 | 50  | 3000  |
| 7070010670 | 40  | 65.5  | 18 | 24 | 40  | 1600  |
| 7070020670 | 50  | 72.5  | 21 | 27 | 40  | 1200  |
| 7070030670 | 75  | 85.5  | 29 | 35 | 20  | 480   |
| 7070090670 | 90  | 94.0  | 34 | 40 | 20  | 320   |
| 7070040670 | 110 | 110.0 | 44 | 48 | 20  | 240   |

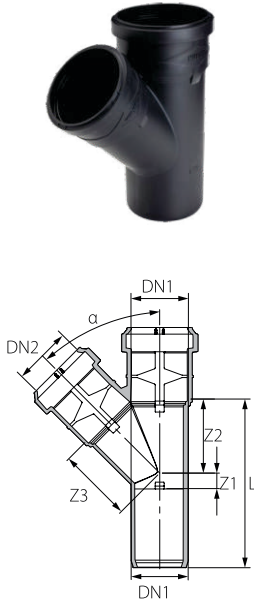
## US Bend 87.5°





| Code       | DN  | L     | Z1   | Z2 |  |  |
|------------|-----|-------|------|----|--|--|
| 7070000870 | 32  | 64.0  | 20.0 | 24 | 40   | 2400   |
| 7070010870 | 40  | 73.5  | 26.0 | 32 | 40   | 1600   |
| 7070020870 | 50  | 79.5  | 28.5 | 35 | 35   | 1050   |
| 7070030870 | 75  | 99.5  | 43.0 | 49 | 20   | 480  |
| 7070090870 | 90  | 110.0 | 50.0 | 56 | 20   | 320  |
| 7070040870 | 110 | 129.0 | 60.0 | 66 | 20   | 240  |
| 7070050870 | 125 | 142.0 | 67.0 | 73 | 10   | 120  |
| 7070060870 | 160 | 162.0 | 79.5 | 81 | 5  | 60   |

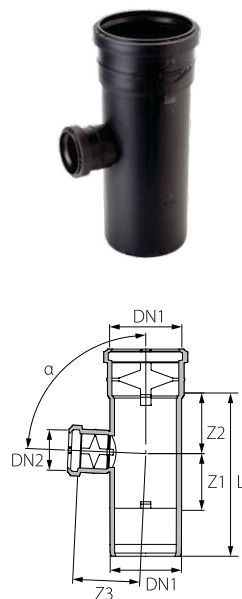




## US Branch 45°



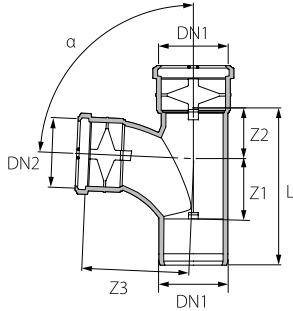
| Code       | DN1 | DN2 | Z1   | Z2    | Z3    | L     |  |  |
|------------|-----|-----|------|-------|-------|-------|---|---|
| 7070600470 | 32  | 32  | 9.0  | 42.0  | 42.0  | 95.0  | 30  | 1800  |
| 7070611470 | 40  | 40  | 11.0 | 52.0  | 52.0  | 111.0 | 20  | 800   |
| 7070621470 | 50  | 40  | 13.0 | 64.0  | 57.0  | 129.0 | 20  | 600   |
| 7070622470 | 50  | 50  | 13.0 | 64.0  | 64.0  | 129.0 | 20  | 600   |
| 7070632470 | 75  | 50  | 18.0 | 95.0  | 100.0 | 170.0 | 20  | 320   |
| 7070633470 | 75  | 75  | 18.0 | 95.0  | 95.0  | 170.0 | 20  | 320   |
| 7070691470 | 90  | 40  | 32.5 | 112.5 | 92.0  | 205.0 | 10  | 180   |
| 7070692470 | 90  | 50  | 32.5 | 112.5 | 89.0  | 205.0 | 10  | 180   |
| 7070699470 | 90  | 90  | 33.0 | 113.0 | 112.5 | 206.0 | 10  | 120   |
| 7070641470 | 110 | 40  | 17.0 | 112.0 | 96.5  | 148.5 | 10  | 160   |
| 7070642470 | 110 | 50  | 17.0 | 108.0 | 96.5  | 148.5 | 10  | 160   |
| 7070643470 | 110 | 75  | 2.0  | 121.0 | 113.5 | 184.5 | 10  | 120   |
| 7070649470 | 110 | 90  | 25.0 | 137.0 | 143.0 | 231.0 | 10  | 120   |
| 7070644470 | 110 | 110 | 25.0 | 137.0 | 137.0 | 231.0 | 8   | 96  |
| 7070654470 | 125 | 110 | 18.0 | 145.0 | 149.0 | 238.0 | 8   | 96  |
| 7070655470 | 125 | 125 | 31.0 | 152.0 | 152.0 | 258.0 | 6   | 72  |
| 7070664470 | 160 | 110 | 39.0 | 159.0 | 169.0 | 284.0 | 5   | 60  |
| 7070666470 | 160 | 160 | 39.0 | 194.0 | 194.0 | 319.0 | 3   | 36  |
| 7070686470 | 200 | 160 | 19.0 | 213.0 | 224.0 | 343.0 | 2   | 16  |
| 7070688470 | 200 | 200 | 25.0 | 219.0 | 226.0 | 399.0 | 4   | 16  |



## US Branch 87.5°



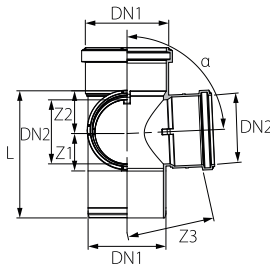
| Code       | DN1 | DN2 | Z1   | Z2 | Z3    | L     |  |  |
|------------|-----|-----|------|----|-------|-------|---|---|
| 7070600870 | 32  | 32  | 9.0  | 42 | 40.0  | 94.0  | 20  | 1600  |
| 7070611870 | 40  | 40  | 13.0 | 64 | 64.0  | 64.5  | 20  | 1200  |
| 7070621870 | 50  | 40  | 32.3 | 31 | 62.0  | 112.5 | 20  | 600   |
| 7070622870 | 50  | 50  | 31.0 | 30 | 62.0  | 112.5 | 20  | 600   |
| 7070632870 | 75  | 50  | 58.0 | 55 | 60.0  | 170.0 | 20  | 320   |
| 7070633870 | 75  | 75  | 58.0 | 55 | 55.0  | 114.5 | 20  | 320   |
| 7070692870 | 90  | 50  | 69.0 | 76 | 83.0  | 205.0 | 10  | 180   |
| 7070642870 | 110 | 50  | 32.0 | 65 | 36.5  | 137.5 | 10  | 160   |
| 7070655870 | 125 | 125 | 78.0 | 73 | 72.0  | 225.0 | 6   | 72  |
| 7070666870 | 160 | 160 | 97.0 | 87 | 144.0 | 276.0 | 4   | 48  |



## US Swept Branch 87.5°



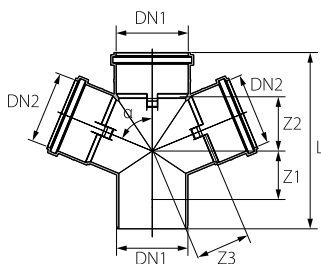
| Code       | DN1 | DN2 | Z1  | Z2 | Z3  | L   |  |  |
|------------|-----|-----|-----|----|-----|-----|---|---|
| 7070799870 | 90  | 90  | 79  | 66 | 97  | 205 | 10  | 120   |
| 7070743870 | 110 | 75  | 82  | 60 | 97  | 211 | 10  | 120   |
| 7070749870 | 110 | 90  | 82  | 60 | 97  | 211 | 10  | 120   |
| 7070744870 | 110 | 110 | 82  | 60 | 97  | 211 | 10  | 120   |
| 7070754870 | 125 | 110 | 100 | 65 | 117 | 240 | 6   | 72  |
| 7070764870 | 160 | 110 | 96  | 84 | 117 | 266 | 4   | 48  |
| 7070744877 | 110 | 110 | 82  | 60 | 97  | 211 | 7   | 84  |



## US Corner Branch 87.5°



| Code       | DN1 | DN2 | Z1 | Z2 | Z3  | L   |  |  |
|------------|-----|-----|----|----|-----|-----|---|---|
| 7071244870 | 110 | 110 | 82 | 56 | 151 | 207 | 6   | 72  |
| 7071254870 | 125 | 110 | 58 | 75 | 140 | 207 | 5   | 60  |



## US Double Branch 67.5°

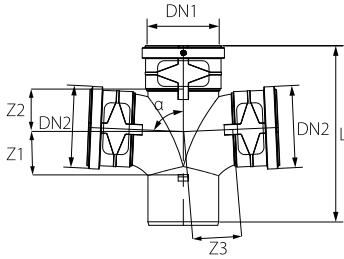


| Code       | DN1 | DN2 | Z1 | Z2 | Z3 | L   |  |  |
|------------|-----|-----|----|----|----|-----|---|---|
| 7071042670 | 110 | 50  | 17 | 54 | 73 | 207 | 9   | 108   |
| 7071044670 | 110 | 110 | 51 | 85 | 85 | 272 | 6   | 72  |

## US Double Branch 87.5°





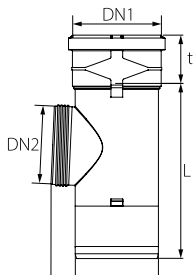
| Code       | DN1 | DN2 | Z1 | Z2 | Z3  | L   |  |  |
|------------|-----|-----|----|----|-----|-----|---|---|
| 7071044870 | 110 | 110 | 82 | 56 | 151 | 207 | 6   | 72  |



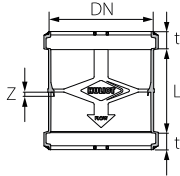
## US Inspection Pipe





| Code       | DN1 | DN2  | t  | L   | L1    |  |  |
|------------|-----|------|----|-----|-------|---|---|
| 7079120070 | 50  | 45.0 | 55 | 140 | 65.0  | 20  | 800   |
| 7079130070 | 75  | 45.0 | 71 | 140 | 98.0  | 25  | 400   |
| 7079190070 | 90  | 77.4 | 58 | 200 | 129.0 | 10  | 180   |
| 7079140070 | 110 | 97.0 | 64 | 231 | 140.0 | 10  | 120   |
| 7079150070 | 125 | 97.0 | 73 | 222 | 164.8 | 8   | 96  |
| 7079160070 | 160 | 97.0 | 85 | 236 | 198.4 | 6   | 72  |
| 7079180070 | 200 | 97.0 | 93 | 343 | 231.0 | 2   | 24  |

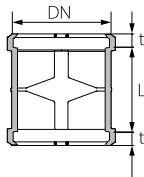




## US Double Socket



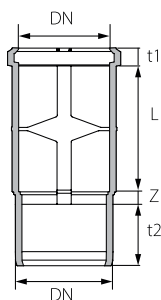
| Code       | DN  | t    | L     | Z    |  |  |
|------------|-----|------|-------|------|---|---|
| 7071700270 | 32  | 14.3 | 56.6  | 2.0  | 50  | 4000  |
| 7071710270 | 40  | 14.0 | 60.0  | 2.0  | 40  | 2400  |
| 7071720275 | 50  | 16.0 | 64.0  | 4.0  | 20  | 1200  |
| 7071730275 | 75  | 16.4 | 73.0  | 6.0  | 20  | 800   |
| 7071790270 | 90  | 14.0 | 85.0  | 1.4  | 20  | 480   |
| 7071740275 | 110 | 17.0 | 97.0  | 9.0  | 20  | 320   |
| 7071750275 | 125 | 17.0 | 118.6 | 10.4 | 10  | 160   |
| 7071760275 | 160 | 23.0 | 119.0 | 10.6 | 12  | 144   |
| 7071780275 | 200 | 28.5 | 135.0 | 12.0 | 2   | 48  |



## US Sleeve



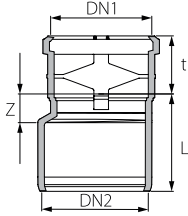
| Code       | DN  | t    | L     |  |  |
|------------|-----|------|-------|---|---|
| 7071700070 | 32  | 14.3 | 56.6  | 50  | 4000  |
| 7071710070 | 40  | 14.0 | 60.0  | 30  | 1800  |
| 7071720070 | 50  | 14.0 | 68.0  | 20  | 1200  |
| 7071730070 | 75  | 14.0 | 77.0  | 20  | 800   |
| 7071790070 | 90  | 14.0 | 85.0  | 20  | 480   |
| 7071740070 | 110 | 17.0 | 97.0  | 20  | 320   |
| 7071750070 | 125 | 16.8 | 118.6 | 10  | 160   |
| 7071760070 | 160 | 17.0 | 131.0 | 12  | 144   |
| 7071780070 | 200 | 28.3 | 192.2 | 2   | 48  |



## US Long Socket



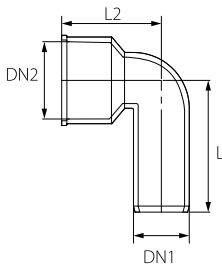
| Code       | DN  | t1   | t2    | L      | Z     |  |  |
|------------|-----|------|-------|--------|-------|---|---|
| 7072210070 | 40  | 14.1 | 47.55 | 81.26  | 4.74  | 30  | 1800  |
| 7072220070 | 50  | 14.1 | 51.55 | 101.00 | 6.74  | 20  | 800   |
| 7072230070 | 75  | 14.1 | 56.58 | 114.97 | 9.45  | 20  | 360   |
| 7072290070 | 90  | 14.1 | 60.00 | 133.90 | 13.10 | 20  | 320   |
| 7072240070 | 110 | 16.6 | 69.41 | 144.46 | 14.12 | 15  | 180   |
| 7072250070 | 125 | 19.1 | 75.00 | 188.94 | 15.63 | 12  | 144   |
| 7072260070 | 160 | 23.1 | 86.00 | 204.81 | 20.60 | 6   | 72  |



## US Reducer



| Code       | DN1 | DN2 | L     | t    | Z  |  |  |
|------------|-----|-----|-------|------|----|---|---|
| 7072110070 | 32  | 40  | 48.0  | 42.0 | 14 | 30  | 1800  |
| 7072120070 | 32  | 50  | 65.0  | 42.0 | 15 | 30  | 1800  |
| 7072121070 | 40  | 50  | 64.0  | 42.0 | 15 | 30  | 1800  |
| 7072191070 | 40  | 90  | 93.0  | 47.0 | 35 | 32  | 960   |
| 7072141070 | 40  | 110 | 122.5 | 43.0 | 51 | 20  | 480   |
| 7072132070 | 50  | 75  | 85.0  | 47.0 | 26 | 20  | 1200  |
| 7072192070 | 50  | 90  | 97.0  | 47.0 | 34 | 20  | 800   |
| 7072142070 | 50  | 110 | 118.0 | 47.0 | 46 | 20  | 480   |
| 7072193070 | 75  | 90  | 86.0  | 51.5 | 24 | 20  | 600   |
| 7072143070 | 75  | 110 | 106.0 | 52.0 | 34 | 20  | 360   |
| 7072149070 | 90  | 110 | 101.0 | 55.0 | 29 | 20  | 360   |
| 7072154070 | 110 | 125 | 106.0 | 64.0 | 29 | 10  | 240   |
| 7072164070 | 110 | 160 | 137.0 | 64.0 | 84 | 10  | 120   |
| 7072165070 | 125 | 160 | 140.0 | 55.0 | 74 | 16  | 192   |
| 7072186070 | 160 | 200 | 153.0 | 80.0 | 54 | 6   | 96  |



## US Technical Bend / Siphon Connector



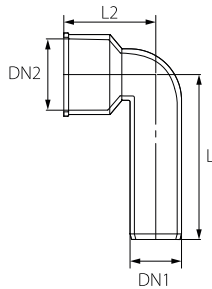
| Code       | DN1 | DN2 | L1 | L2 |  |  |
|------------|-----|-----|----|----|---|---|
| 7074010970 | 32  | 46  | 76 | 58 | 40  | 2400  |
| 7074021970 | 40  | 50  | 82 | 56 | 20  | 1200  |
| 7074011970 | 40  | 46  | 76 | 56 | 20  | 1200  |
| 7074022970 | 50  | 50  | 82 | 60 | 20  | 1200  |



## US Vent Cowl



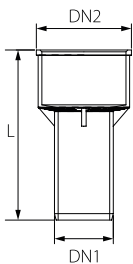
| Code     | DN1 |  |  |
|----------|-----|---|---|
| 42320040 | 50  | -   | 240   |
| 42330040 | 75  | -   | 96  |
| 42340060 | 110 | -   | 80  |
| 42360040 | 160 | -   | 27  |



## US Long Technical Bend / Siphon Connector



| Code       | DN1 | DN2 | L1  | L2 |  |  |
|------------|-----|-----|-----|----|---|---|
| 7074021971 | 40  | 50  | 140 | 56 | 20  | 1200  |
| 7074011971 | 40  | 46  | 140 | 57 | 20  | 1200  |



## US Straight Fitting / Siphon Connector



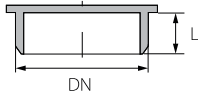
| Code       | DN1 | DN2 | L  |  |  |
|------------|-----|-----|----|---|---|
| 7141760070 | 32  | 46  | 93 | 40  | 2400  |
| 7141761070 | 40  | 46  | 93 | 40  | 2400  |
| 7141721070 | 40  | 50  | 93 | 40  | 2400  |



## Rubber Gasket for US, USSW, USSWL



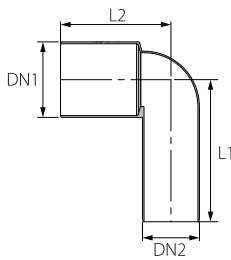
| Code           | DN    | DN2 |  |  |
|----------------|-------|-----|---|---|
| T047T000000000 | 26/32 | 46  | 500   | -   |
| T046T000000000 | 40    | 46  | 1000  | -   |
| T050T000000032 | 26/32 | 50  | 500   | -   |
| T050T000000040 | 40    | 50  | 500   | -   |



## US End Cap



| Code       | DN  | L  |  |  |
|------------|-----|----|---|---|
| 7071610070 | 40  | 44 | 80  | 4800  |
| 7071620070 | 50  | 46 | 70  | 4200  |
| 7071630070 | 75  | 44 | 30  | 1800  |
| 7071690070 | 90  | 59 | 20  | 1200  |
| 7071640070 | 110 | 49 | 20  | 800   |
| 7071650070 | 125 | 75 | 20  | 480   |
| 7071660070 | 160 | 83 | 20  | 240   |
| 7071680070 | 200 | 65 | 10  | 180   |

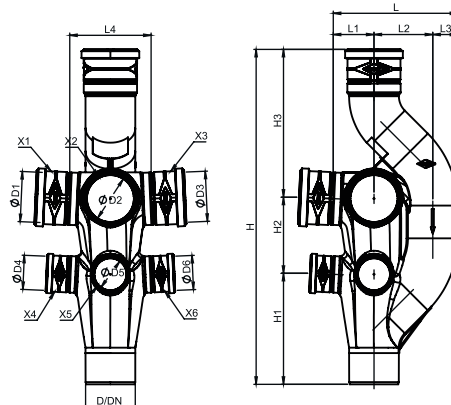
## US Long WC Bend



| Code       | DN1   | DN2 | L1  | L2  |  |  |
|------------|-------|-----|-----|-----|---|---|
| 7195000070 | 119.6 | 90  | 175 | 225 | 10  | 120   |
| 7155000070 | 119.6 | 110 | 185 | 226 | 10  | 120   |

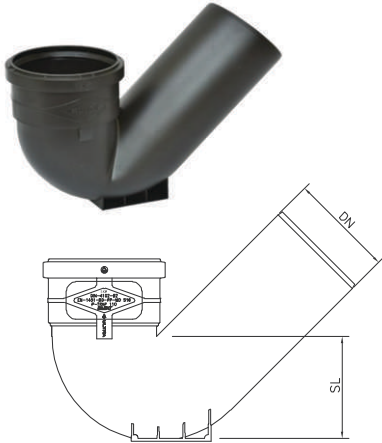
## US HAFF STACK x1 x2 x3 x4 x5 x6

| Code                            | D  | DN  | D1/D2/D3 | D4/D5/D6 | L   | L1 | L2  | L3 | L4  | H   | H1  | H2  | H3  |
|---------------------------------|----|-----|----------|----------|-----|----|-----|----|-----|-----|-----|-----|-----|
| Haff Stack<br>x1 x2 x3 x4 x5 x6 | 90 | 100 | 110      | 75       | 276 | 90 | 130 | 55 | 180 | 743 | 246 | 169 | 328 |





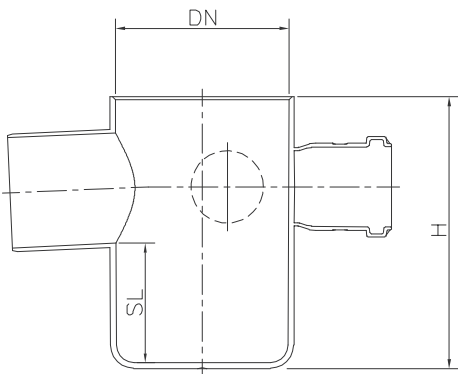
## P - Trap With Risers



| Code       | Item Description | DN1       | SL  |
|------------|------------------|-----------|-----|
| 49540750   | P Trap           | 110       | 107 |
| 7071042877 | DB Hopper        | 110x50x50 | -   |
| 7071242877 | Corner Hopper    | 110x50x50 | -   |



## Multi Trap With Risers And Gratings



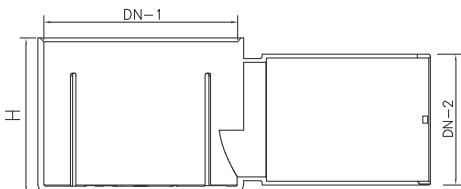
| Code          | Item Description      | DN1 | SL | H   |
|---------------|-----------------------|-----|----|-----|
| 60117060      | Multitrap             | 110 | 76 | 173 |
| 69201551      | Height Riser          | 110 | -  | 150 |
| 69203551      | Height Riser          | 110 | -  | 350 |
| 17078111070-B | Multitrap With Socket | 110 | 76 | 250 |



## Nahani Trap With Gratings

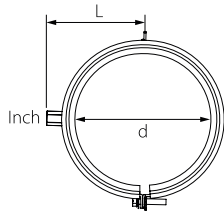


| Code     | Item Description | DN1 | DN2 | H  |
|----------|------------------|-----|-----|----|
| 69111750 | Nahani Trap      | 110 | 75  | 88 |



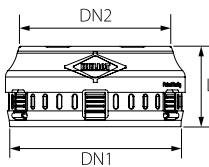
# Accessories



## Acoustic Clamp



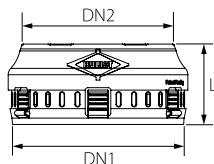
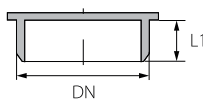
| Art-Nr.    | DN  | M      | Strip Size | Rubber Sleeve | Max Load (Kg) |
|------------|-----|--------|------------|---------------|---------------|
| 7890004071 | 40  | M8/M10 | 2x24       | 5 Ply EPDM    | 500           |
| 7890005071 | 50  | M8/M10 | 2x24       | 5 Ply EPDM    | 500           |
| 7890007571 | 75  | M8/M10 | 2x24       | 5 Ply EPDM    | 700           |
| 7890011071 | 110 | M8/M10 | 2x24       | 5 Ply EPDM    | 700           |
| 7890012571 | 125 | M8/M10 | 2x24       | 5 Ply EPDM    | 700           |
| 7890016071 | 160 | M8/M10 | 2x24       | 5 Ply EPDM    | 700           |
| 7890020071 | 200 | M8/M10 | 2x24       | 5 Ply EPDM    | 700           |



## Lock Seal



| Code       | DN  | DN1   | DN2   | L     |  |  |
|------------|-----|-------|-------|-------|---|---|
| 7072330000 | 75  | 91.5  | 79.8  | 59.0  | 48  | 1152  |
| 7072340000 | 110 | 130.0 | 112.0 | 63.0  | 30  | 480   |
| 7072350000 | 125 | 149.0 | 126.6 | 94.0  | 18  | 288   |
| 7072360000 | 160 | 186.5 | 162.0 | 99.7  | 10  | 240   |
| 7072380000 | 200 | 233.5 | 210.0 | 114.0 | 5   | 90  |



## End Lock

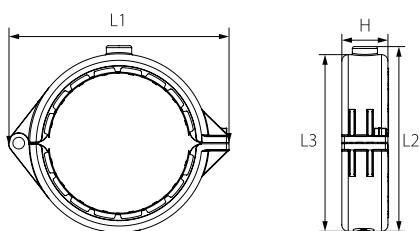


| Code       | DN  | DN1   | DN2   | L     | L1 |  |  |
|------------|-----|-------|-------|-------|----|---|---|
| 7078004000 | 110 | 130.0 | 112.0 | 63.0  | 62 | 30  | 480   |
| 7078005000 | 125 | 149.0 | 126.6 | 94.0  | 75 | 12  | 192   |
| 7078006000 | 160 | 186.5 | 162.0 | 99.7  | 86 | 12  | 192   |
| 7078008000 | 200 | 233.5 | 210.0 | 114.0 | 57 | 4   | 40  |

## Pressure Clamp





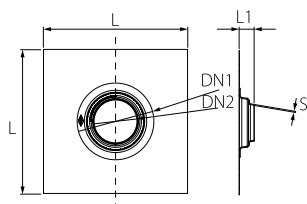
| Code       | DN  | L1  | L2     | L3  | H  |  |  |
|------------|-----|-----|--------|-----|----|---|---|
| 7073540070 | 110 | 170 | 144.28 | 138 | 36 | 20  | 800   |



## Ultra Seal





| Code       | DN  | DN1 | DN2 | L   | S | L1 |  |  |
|------------|-----|-----|-----|-----|---|----|---|---|
| 7981100000 | 110 | 220 | 102 | 340 | 3 | 52 | 30  | 480   |
| 7981250000 | 125 | 239 | 121 | 500 | 3 | 52 | 20  | 320   |
| 7981600000 | 160 | 266 | 149 | 500 | 3 | 52 | 20  | 320   |



## Lubricant



| Code     | ml   |  |  |
|----------|------|---|---|
| 47700012 | 250  | 50  | -   |
| 47700013 | 1000 | 12  | 1728  |





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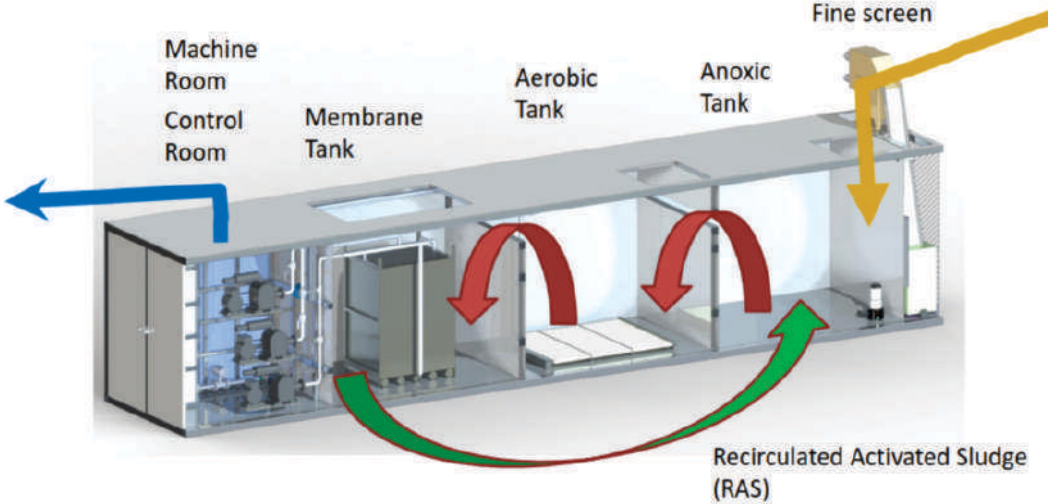
# CLEARBLACK

The future is clear

Using MBR technology, ClearBlack's Sewage recycling system can treat sewage and reuse it for flushing, gardening, washing, and feeding for the RO process.

When used with a mobile application or web link in any browser, this system may show unit operation and performance in real-time using an Android or iOS SMARTPHONE and a REAL SMART operating system.

- High Effluent Quality
- Low Operation Cost
- Low Cost of Maintenance
- Totally Autonomous
- Modular & Flexible
- Total I.o.t Connectivity
- Completely Mobile (Containerized)



Scan for Catalogs



WE MAKE IT FLOW

# Our Products



Domestic Drainage



Acoustic Drainage System



HT Drainage System



Induction Technology



Multilayer System



Clear Black



# We Make it Flow

Huliot Group is a global leader in advanced flow systems for commercial and residential buildings, bringing complete solutions that cover water supply, wastewater, and infrastructure.

We design, manufacture and market a full range of products that work together in harmony, to deliver a seamless and silent water flow experience, while respecting the environment and keeping it clean.



PP-R



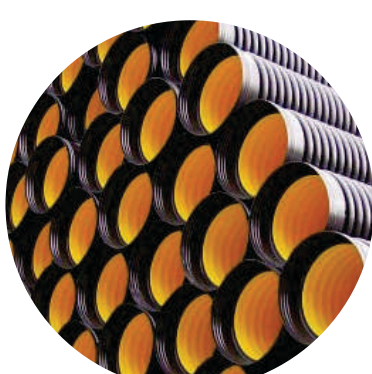
Fire Protection Networks



Manholes | Chambers



Channeling power cables in the building



Running water, canalization and sewage



Geotechnical products

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