

magnoplast

CATALOGUE



HT PLUS



INTERNAL SEWAGE SYSTEM

TABLE OF CONTENT:

| | |
|-----------------------|-----------|
| Introduction | 5 |
| Product catalogue | 11 |
| Application of HTplus | 23 |
| Installation | 24 |





INTERNAL
SEWAGE
SYSTEM

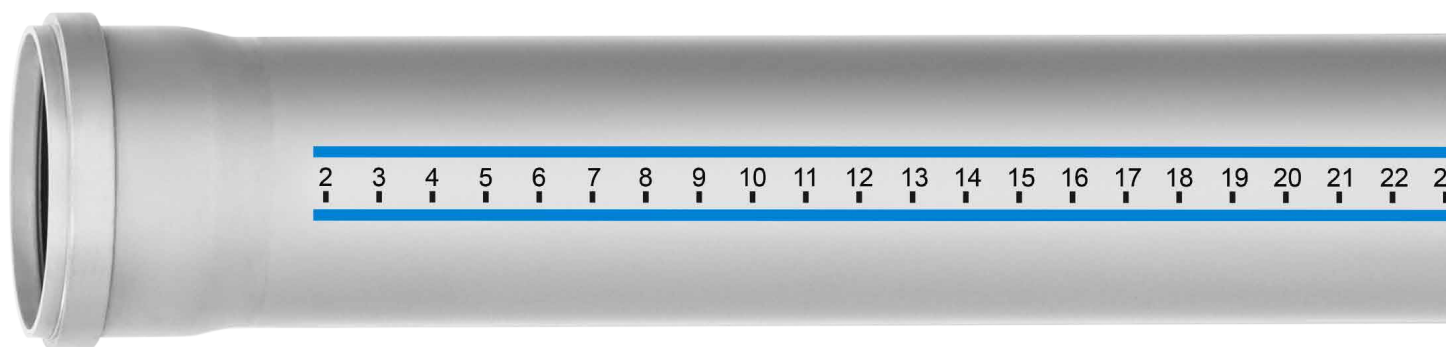
HT PLUS



**CUTTING-EDGE
TECHNOLOGY**

SYSTEM HTPLUS

“HTplus” is a new generation sewage system designed to dispose domestic sewage and rainwater within the building. **“HTplus”** system is made of improved formula plastic using polypropylene and natural components, therefore it has the advantages of a previously produced **“HT”** system and new properties that improve the functionality of the system. A stabilized, heat resistant plastic from which the system is made is characterized by superior resistance to various effects including effects of aggressive chemical substances and high and low temperature sewage. Pipes and fittings withstand a long-lasting flow of high temperature water, and therefore these pipes and fittings are used domestically and wherever it is necessary to remove high temperature waste-water.



“HTplus” system complies with all requirements of modern ecologic sewage systems. Pipes and fittings may be processed in a way that guarantees 100% retrieval of raw materials and the use of those materials in manufacturing of fully-fledged **“HTplus”** system. Sound insulation is one of the essential advantages of the new system. Tests conducted in Fraunhofer Institute in Stuttgart have confirmed the sound insulation properties of **“HTplus”** system; the **“HTplus”** system damps the noise emerging in the sewage systems perfectly. Precision and easy and fast assembly of the products are a few other properties that distinguish the **“HTplus”** system. Application of an innovative solution to print the length scale directly on the pipes made the assembly even simpler.



CHARACTERISTIC FEATURES OF HTPLUS SYSTEM

- Pipes and fittings manufactured in a single-layer technology, using a perfected raw material formula
- Addition of mineral components has resulted in significant noise emission reduction. Tests conducted by the Fraunhofer Institute have shown that the HTplus low-noise sewage system's acoustic properties exceed the DIN 4109 standard requirements.
- Highly precise workmanship – smooth surfaces of pipes and fittings eliminate the adverse phenomenon of sediment sticking to element walls
- 100% recyclable pipes and fittings
- Simple and reliable socket joints for pipes and fittings factory fitted with lip seals
- Easy and quick installation – low weight and centimetre scale printed on pipes
- Fixing by means of available clamping rings with damping inserts or standard plastic clamping rings
- Wide range of pipes and fittings manufactured in diameters from DN 32 to DN 160 mm, including special fittings, e.g. access pipes, double branches and connectors to cast iron elements
- Compatibility with other available internal sewage systems
- Highly attractive appearance
- High mechanical impact strength

APPLICATION

- Internal discharge of household sewage and storm-water and ventilation
- Discharge of high-temperature sewage (up to 95°C)
- Resistance to corrosion and aggressive sewage ensures a broad scope of applications not only in residential buildings, but also in chemical and pharmaceutical industries. Installations may be assembled in negative temperatures up to -10°C

GUARANTEE OF QUALITY

- Renowned raw material suppliers
- Highest quality seals
- Continuous raw material and production control process
- Constant internal quality control ensured by quality management personnel certified to DIN EN ISO 9001:2000
- In-house laboratory

TECHNICAL DATA OF MAGNAPLAST HTPLUS

Raw material

Polypropylene (PP), natural additions.

Color

Gray, RAL 7037, free of halogens and cadmium.

Chemical resistance

Resistant to sewage from Ph 2 to Ph 12 (see Chemical resistance table Sheet No.1 of DIN 8078 standard).

Thermal resistance

Resistant to a constant flow of sewage of 90°C temperature.

Resistant to a short-term flow of sewage of 95°C temperature.

Tightness

Rubber sealing in muffs of pipes and fittings mounted at the factory.

MECHANIC AND THERMAL PROPERTIES

| Property | Measurement method | | Symbol | Value |
|---|--|--------------------------------------|-----------------|-----------------|
| Resistance to impact (kJ/m ²)* | ISO R 179 Sample according to Ex. 2 | DIN 63453 Normalized small sample | a _k | 6,86 |
| Marginal flexural 2 stress (N/mm ²) | | DIN 53452 Normalized small sample | σ _{bg} | 43,14 |
| Marginal flexural 2 moment (N/mm ²) | ISO R 527 Speed of test C. | DIN 53452 Speed of test V. | σ _s | 30,39 |
| Resistance to 2 tension (N/mm ²) | Sample according to Ex.2 | Sample 4. | σ _R | 39,22 |
| Elongation at break (%) | | | ε _R | 800 |
| Module of elasticity (N/mm ²) | | DIN 53457 Chapter 2.3. | E | 1275 |
| Vicat softening temperature (°C) | ISO R 306-1 kp | DIN 53460 Method A Engine oils | VSP/A | 158 - 164 ** |
| Thermal conductivity (W/Km) | | DIN 52162 | λ | 0,22 |
| Coefficient of linear expansion (°C-1) | | VDE 0304 Chapter 1.4 | α | 1,2 · 10-4 |

* measured at temperature 20°C

** intended for main material

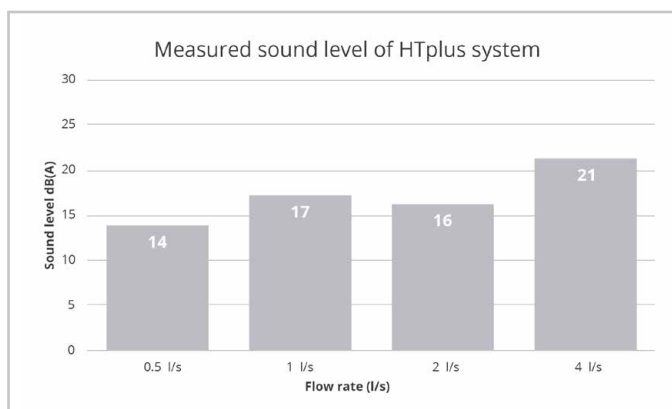
PRODUCT RANGE

A full system of pipes and fittings, diameters ranging from DN 32 to DN 160.

SOUNDPROOF CHARACTERISTICS

Improved noise-dampening characteristics offered by HTplus system.

Tests carried out by Fraunhofer Institute of Building Physics in Germany in accordance with DIN EN 14366:2006.



MARKING

The following marks are provided on pipes and fittings:

- Manufacturer's mark,
- Quality mark,
- Diameter,
- Material,
- Product marking (symbol, angle),
- Year of manufacture,
- Standard,
- Bar code,
- Length scale,
- Technical approbation.

TRANSPORTATION AND STORAGE

During transportation pipes and fittings must be protected against mechanical damage. When the ambient temperature is low transportation of the products must be executed with extra care. The surface of the storage area must be even and without any bumps. In order to prevent deformation the pipes must be stored horizontally. The pipes must be stored in layers, interchangeably, in such a way that ends with sockets would be free. When storing the pipes and fittings outside for a long time, they must be protected against direct solar radiation.

PACKAGING

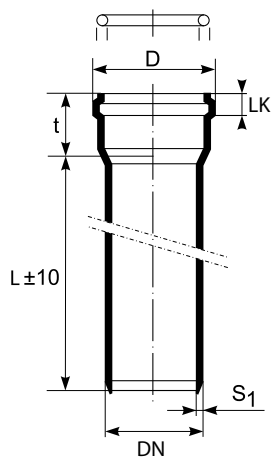
The pipes are packaged into bundles, wrapped in special tape and stored on pallets. The shorter pipes and fittings are packaged in carton boxes.



PRODUCT
CATALOGUE

HT PLUS

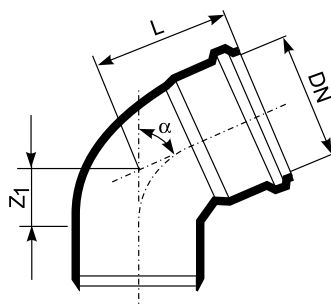
SOCKET PIPES (HTEM)



| DN [mm] | s1 [mm] | D [mm] | t [mm] | L [mm] | LK [mm] | Art. no |
|------------|------------|-----------|-----------|-----------|------------|---------|
| 40 | 1,8 | 54 | 55 | 150 | 19 | 10100 |
| 40 | 1,8 | 54 | 55 | 250 | 19 | 10110 |
| 40 | 1,8 | 54 | 55 | 500 | 19 | 10120 |
| 40 | 1,8 | 54 | 55 | 1000 | 19 | 10140 |
| 40 | 1,8 | 54 | 55 | 1500 | 19 | 10150 |
| 40 | 1,8 | 54 | 55 | 2000 | 19 | 10160 |
| | | | | | | |
| 50 | 1,8 | 64 | 56 | 150 | 19 | 10200 |
| 50 | 1,8 | 64 | 56 | 250 | 19 | 10210 |
| 50 | 1,8 | 64 | 56 | 315 | 19 | 10215 |
| 50 | 1,8 | 64 | 56 | 500 | 19 | 10220 |
| 50 | 1,8 | 64 | 56 | 750 | 19 | 10230 |
| 50 | 1,8 | 64 | 56 | 1000 | 19 | 10240 |
| 50 | 1,8 | 64 | 56 | 1500 | 19 | 10250 |
| 50 | 1,8 | 64 | 56 | 2000 | 19 | 10260 |
| 50 | 1,8 | 64 | 56 | 3000 | 19 | 10265 |
| | | | | | | |
| 75 | 1,9 | 89 | 61 | 150 | 22 | 10300 |
| 75 | 1,9 | 89 | 61 | 250 | 22 | 10310 |
| 75 | 1,9 | 89 | 61 | 315 | 22 | 10315 |
| 75 | 1,9 | 89 | 61 | 500 | 22 | 10320 |
| 75 | 1,9 | 89 | 61 | 750 | 22 | 10330 |
| 75 | 1,9 | 89 | 61 | 1000 | 22 | 10340 |
| 75 | 1,9 | 89 | 61 | 1500 | 22 | 10350 |
| 75 | 1,9 | 89 | 61 | 2000 | 22 | 10360 |
| | | | | | | |
| 110 | 2,7 | 128 | 76 | 150 | 25 | 10400 |
| 110 | 2,7 | 128 | 76 | 250 | 25 | 10410 |
| 110 | 2,7 | 128 | 76 | 315 | 25 | 10415 |
| 110 | 2,7 | 128 | 76 | 500 | 25 | 10420 |
| 110 | 2,7 | 128 | 76 | 750 | 25 | 10430 |
| 110 | 2,7 | 128 | 76 | 1000 | 25 | 10440 |
| 110 | 2,7 | 128 | 76 | 1500 | 25 | 10450 |
| 110 | 2,7 | 128 | 76 | 2000 | 25 | 10460 |
| 110 | 2,7 | 128 | 76 | 3000 | 25 | 10465 |
| 110 | 2,7 | 128 | 76 | 5000 | 25 | 10470 |
| | | | | | | |
| 125 | 3,1 | 146 | 82 | 150 | 28 | 10500 |
| 125 | 3,1 | 146 | 82 | 250 | 28 | 10510 |
| 125 | 3,1 | 146 | 82 | 500 | 28 | 10520 |
| 125 | 3,1 | 146 | 82 | 750 | 28 | 10530 |
| 125 | 3,1 | 146 | 82 | 1000 | 28 | 10540 |
| 125 | 3,1 | 146 | 82 | 1500 | 28 | 10550 |
| 125 | 3,1 | 146 | 82 | 2000 | 28 | 10560 |
| 125 | 3,1 | 146 | 82 | 3000 | 28 | 10570 |
| | | | | | | |
| 160 | 3,9 | 184 | 100 | 500 | 33 | 10620 |
| 160 | 3,9 | 184 | 100 | 750 | 33 | 10630 |
| 160 | 3,9 | 184 | 100 | 1000 | 33 | 10640 |
| 160 | 3,9 | 184 | 100 | 1500 | 33 | 10650 |
| 160 | 3,9 | 184 | 100 | 2000 | 33 | 10660 |
| 160 | 3,9 | 184 | 100 | 3000 | 33 | 10665 |

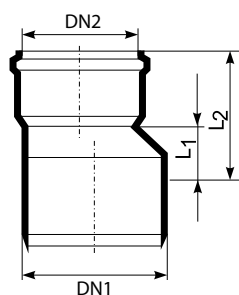
BENDS (HTB)

| DN [mm] | angle α | z1 [mm] | L [mm] | Art. no |
|------------|----------------|------------|-----------|---------|
| 40 | 15° | 8 | 69 | 10700 |
| 40 | 30° | 9 | 67 | 10710 |
| 40 | 45° | 16 | 77 | 10720 |
| 40 | 67° | 20 | 73 | 10730 |
| 40 | 87° | 23 | 80 | 10750 |
| | | | | |
| 50 | 15° | 10 | 70 | 10800 |
| 50 | 30° | 9 | 68 | 10810 |
| 50 | 45° | 17 | 87 | 10820 |
| 50 | 67° | 28 | 77 | 10830 |
| 50 | 87° | 28 | 84 | 10850 |
| | | | | |
| 75 | 15° | 23 | 91 | 10900 |
| 75 | 30° | 11 | 80 | 10910 |
| 75 | 45° | 18 | 92 | 10920 |
| 75 | 67° | 29 | 86 | 10930 |
| 75 | 87° | 42 | 94 | 10950 |
| | | | | |
| 110 | 15° | 24 | 101 | 11000 |
| 110 | 30° | 18 | 100 | 11010 |
| 110 | 45° | 36 | 115 | 11020 |
| 110 | 67° | 39 | 122 | 11030 |
| 110 | 87° | 59 | 131 | 11050 |
| | | | | |
| 125 | 15° | 28 | 122 | 11100 |
| 125 | 30° | 19 | 108 | 11110 |
| 125 | 45° | 38 | 129 | 11120 |
| 125 | 67° | 55 | 142 | 11130 |
| 125 | 87° | 75 | 147 | 11150 |
| | | | | |
| 160 | 15° | 30 | 144 | 11200 |
| 160 | 30° | 30 | 113 | 11210 |
| 160 | 45° | 50 | 131 | 11220 |
| 160 | 87° | 95 | 162 | 11250 |

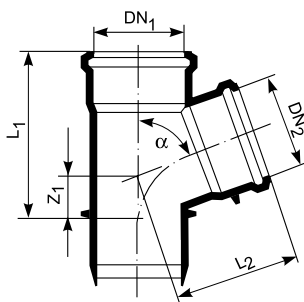


REDUCERS (HTR)

| DN1/DN2 [mm] | L1 [mm] | L2 [mm] | Art. no |
|-----------------|------------|------------|---------|
| 50/40 | 10 | 66 | 11300 |
| 75/50 | 19 | 73 | 11320 |
| 110/50 | 37 | 93 | 11330 |
| 110/75 | 22 | 87 | 11340 |
| 125/110 | 16 | 95 | 11350 |
| 160/110 | 49 | 130 | 11360 |
| 160/125 | 44 | 123 | 11370 |



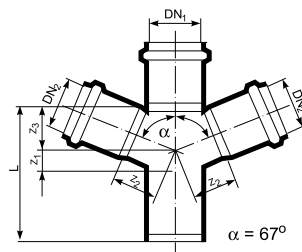
SIMPLE BRANCHES (HTEA)



| DN1/DN2 [mm] | angle α | L1 [mm] | L2 [mm] | Z1 [mm] | Art. no |
|-----------------|-------------------|------------|------------|------------|---------|
| 40/40 | 45° | 114 | 95 | 10 | 11500 |
| 50/40 | 45° | 119 | 111 | 5 | 11510 |
| 50/50 | 45° | 133 | 116 | 12 | 11520 |
| 75/50 | 45° | 147 | 145 | 1 | 11540 |
| 75/75 | 45° | 183 | 159 | 18 | 11550 |
| 110/50 | 45° | 140 | 158 | 17 | 11560 |
| 110/75 | 45° | 188 | 186 | 1 | 11570 |
| 110/110 | 45° | 224 | 195 | 25 | 11580 |
| 125/110 | 45° | 258 | 225 | 18 | 11590 |
| 125/125 | 45° | 262 | 234 | 28 | 11600 |
| 160/110 | 45° | 275 | 263 | 1 | 11610 |
| 160/160 | 45° | 330 | 294 | 36 | 11630 |
| | | | | | |
| 40/40 | 67° | 118 | 95 | 16 | 11700 |
| 50/40 | 67° | 115 | 97 | 14 | 11710 |
| 50/50 | 67° | 118 | 99 | 20 | 11720 |
| 75/50 | 67° | 117 | 109 | 14 | 11740 |
| 75/75 | 67° | 165 | 126 | 28 | 11750 |
| 110/50 | 67° | 167 | 129 | 8 | 11760 |
| 110/75 | 67° | 169 | 144 | 22 | 11770 |
| 110/110 | 67° | 190 | 160 | 40 | 11780 |
| | | | | | |
| 40/40 | 87° | 117 | 51 | 23 | 11900 |
| 50/40 | 87° | 108 | 86 | 23 | 11910 |
| 50/50 | 87° | 117 | 91 | 28 | 11920 |
| 75/50 | 87° | 119 | 99 | 27 | 11940 |
| 75/75 | 87° | 158 | 115 | 40 | 11950 |
| 110/50 | 87° | 122 | 125 | 28 | 11960 |
| 110/75 | 87° | 166 | 126 | 40 | 11970 |
| 110/110 | 87° | 182 | 133 | 57 | 11980 |
| 125/110 | 87° | 257 | 179 | 58 | 11990 |
| 125/125 | 87° | 225 | 179 | 65 | 12000 |
| 160/110 | 87° | 230 | 267 | 58 | 12010 |
| 160/160 | 87° | 344 | 243 | 83 | 12030 |

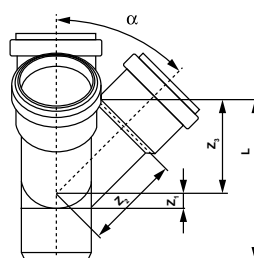
DOUBLE BRANCHES (HTDA) 67°

| DN1/DN2 [mm] | Z1 [mm] | Z2 [mm] | Z3 [mm] | L [mm] | Art. no |
|-----------------|------------|------------|------------|-----------|---------|
| 50/50 | 20 | 41 | 41 | 124 | 11400 |
| 75/75 | 28 | 59 | 59 | 153 | 11410 |
| 100/50 | 8 | 71 | 51 | 135 | 11420 |
| 110/110 | 40 | 85 | 85 | 201 | 11440 |



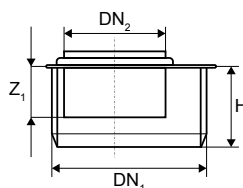
DOUBLE BRANCH ANGLE (HTED) 67°

| DN1/ DN2 [mm] | Z1 [mm] | Z2 [mm] | Z3 [mm] | Z4 [mm] | L [mm] | Art. no |
|---------------------|------------|------------|------------|------------|-----------|------------|
| 110/110 | 40 | 86 | 86 | 86 | 202 | 11450 |

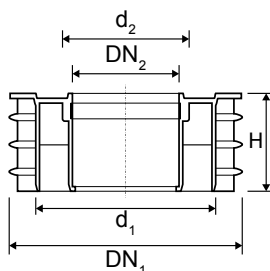


SHORT REDUCER (HTR)

| DN1/DN2 [mm] | Z1 [mm] | H [mm] | Art. no |
|-----------------|------------|-----------|---------|
| 75/50 | 27 | 69 | 11325 |
| 110/50 | 28 | 74 | 11335 |
| 110/75 | 35 | 76 | 11345 |

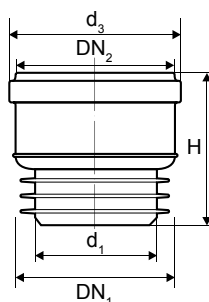


INNER REDUCER (HTR) FOR PIPE SPIGOT



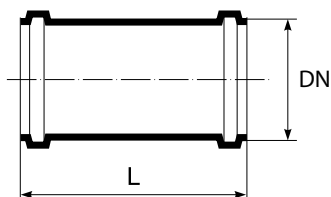
| DN1/DN2 [mm] | d1 [mm] | d2 [mm] | H [mm] | Art. no |
|-----------------|------------|------------|-----------|---------|
| 110/50 | 90 | 64 | 47 | 11336 |
| 110/75 | 90 | 89 | 47 | 11346 |

PLUG-IN SOCKET (HTSM) FOR PIPE SPIGOT



| DN1/DN2 [mm] | d1 [mm] | d3 [mm] | H [mm] | Art. no |
|-----------------|------------|------------|-----------|---------|
| 110/110 | 90 | 127 | 112 | 12735 |

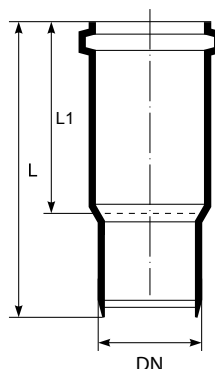
REPAIR COLLARS (HTU)



| DN [mm] | L [mm] | Art. no |
|------------|-----------|---------|
| 40 | 101 | 12200 |
| 50 | 103 | 12210 |
| 75 | 109 | 12220 |
| 110 | 125 | 12230 |
| 125 | 138 | 12240 |
| 160 | 158 | 12250 |

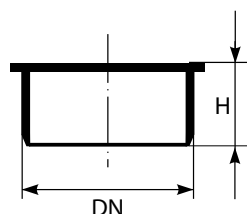
LONG MUFFS (HTL)

| DN [mm] | L [mm] | L1 [mm] | Art. no |
|------------|-----------|------------|---------|
| 40 | 156 | 106 | 12300 |
| 50 | 164 | 109 | 12310 |
| 75 | 223 | 165 | 12320 |
| 110 | 225 | 186 | 12330 |



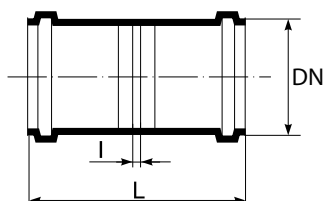
END CAPS (HTM)

| DN [mm] | H [mm] | Art. no |
|------------|-----------|---------|
| 40 | 39 | 12500 |
| 50 | 39 | 12510 |
| 75 | 39 | 12520 |
| 110 | 46 | 12530 |
| 125 | 50 | 12540 |
| 160 | 58 | 12550 |

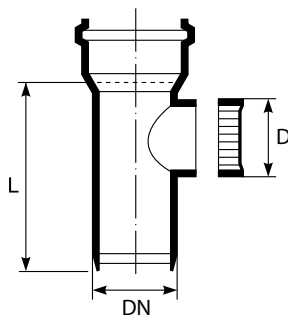


DOUBLE SOCKETS (HTMM)

| DN [mm] | L [mm] | I [mm] | Art. no |
|------------|-----------|-----------|---------|
| 40 | 111 | 9 | 12100 |
| 50 | 112 | 9 | 12110 |
| 75 | 118 | 22 | 12120 |
| 110 | 140 | 26 | 12130 |
| 125 | 177 | 27 | 12140 |
| 160 | 196 | 30 | 12150 |

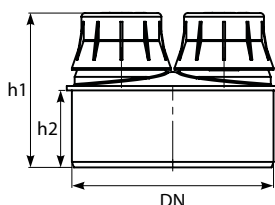


ACCESS PIPES (HTRE)



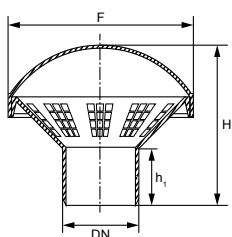
| DN [mm] | L [mm] | D [mm] | Art. no |
|---------|--------|--------|---------|
| 50 | 110 | 63 | 12410 |
| 75 | 138 | 88 | 12420 |
| 110 | 179 | 116 | 12430 |
| 125 | 191 | 116 | 12440 |
| 160 | 203 | 117 | 12450 |

AERATION VALVE



| DN [mm] | h1 [mm] | h2 [mm] | Art. no |
|---------|---------|---------|---------|
| 50 | 68 | 34 | 13410 |
| 75 | 78 | 45 | 13420 |
| 110 | 78 | 45 | 13430 |

VENTILATION



| DN [mm] | H [mm] | h1 [mm] | F [mm] | Art. no |
|---------|--------|---------|--------|---------|
| 50 | 108 | 38 | 124 | 13210 |
| 75 | 108 | 41 | 124 | 13220 |
| 110 | 121 | 40 | 166 | 13230 |
| 160 | 151 | 51 | 224 | 13240 |

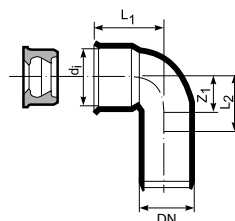
LUBRICANTS



| Capacity | Art. no |
|----------|---------|
| 250g | 13110 |
| 500g | 13120 |

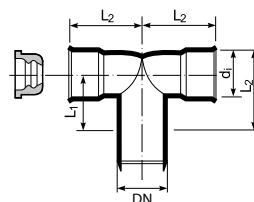
BEND CONNECTORS TO STEEL PIPES (HTSW) WITHOUT SEALING

| DN [mm] | di [mm] | L1 [mm] | L2 [mm] | Z1 [mm] | Art. no | Appropriate sealing |
|------------|------------|------------|------------|------------|------------|------------------------|
| 40/30 | 45,9 | 46 | 34 | 23,5 | 12850 | 40/30A |
| 40/40 | 53,7 | 49 | 36 | 23,5 | 12860 | 40/40C |
| 50/40 | 53,7 | 51 | 43 | 28,5 | 12870 | 40/30B,40/40C |
| 50/50 | 67,2 | 55 | 49 | 28,5 | 12880 | 50/30D,50/40E,50/50F |
| 50/30 | 45,9 | 48 | 35 | 23,5 | 12840 | 40/50/30 |



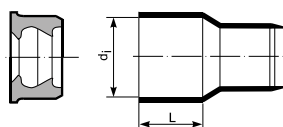
DOUBLE BEND CONNECTOR TO STEEL PIPES (HTDSW) WITHOUT SEALING

| DN [mm] | di [mm] | L1 [mm] | L2 [mm] | Art. no | Appropriate sealing |
|----------|------------|------------|------------|---------|------------------------|
| 40/50/40 | 50 | 40 | 69 | 12890 | 40/30B,40/40C |



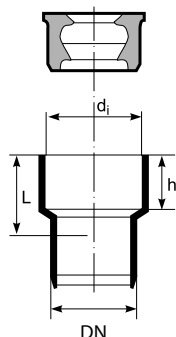
CONNECTORS TO CAST IRON PIPES (HTUG) WITHOUT SEALING

| DN [mm] | di [mm] | L [mm] | Art. no |
|------------|------------|-----------|---------|
| 50 | 72 | 55 | 12610 |
| 75 | 92 | 55 | 12620 |
| 110 | 124 | 60 | 12630 |



Application of above fittings is presented on page 23

CONNECTORS TO STEEL PIPES (HTS) WITHOUT SEALING



| DN [mm] | di [mm] | L [mm] | h [mm] | Art. no | Appropriate sealing |
|------------|------------|-----------|-----------|------------|------------------------|
| 40/40 | 53,7 | 30 | 25 | 12800 | 40/30B,40/30C |
| 50/40 | 53,7 | 29 | 25 | 12810 | 40/30B,40/40C |
| 50/50 | 67,2 | 32 | 25 | 12820 | 50/30D,50/40E,50/50F |

SEALING (HTGM)



| DN [mm] | Art. no |
|------------|---------|
| 40/30A | 12900 |
| 40/30B | 12910 |
| 40/40C | 12920 |
| 50/30D | 12930 |
| 50/40E | 12940 |
| 50/50F | 12950 |

SEALING (HTUG)

| DN [mm] | Art. no |
|------------|---------|
| 50 | 13010 |
| 75 | 13020 |
| 110 | 13030 |

HOLDERS TO PIPE

| DN [mm] | Art. no |
|------------|---------|
| 40 | 13500 |
| 50 | 13510 |
| 75 | 13520 |
| 110 | 13530 |



COLOR: WHITE

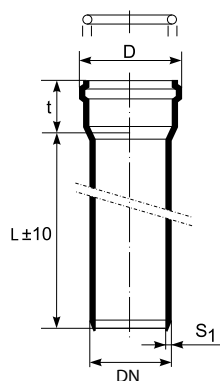
| DN [mm] | Art. no |
|------------|---------|
| 32 | 13590 |

PROTECTION CLAMPING RING

| DN [mm] | Art. no |
|------------|---------|
| 50 | 13515 |
| 75 | 13525 |
| 110 | 13535 |
| 160 | 13555 |

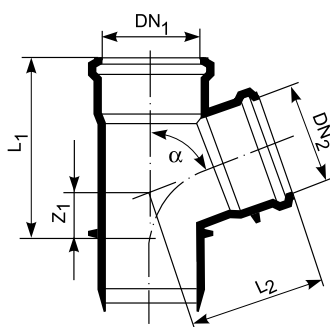


SOCKET PIPES (HTEM)



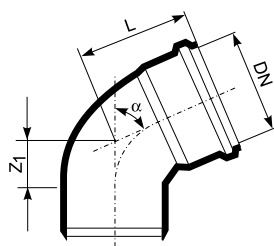
| DN [mm] | s1 [mm] | D [mm] | t [mm] | L [mm] | Art. no |
|------------|------------|-----------|-----------|-----------|---------|
| 32 | 1,8 | 44 | 40 | 150 | 408116 |
| 32 | 1,8 | 44 | 40 | 250 | 408216 |
| 32 | 1,8 | 44 | 40 | 500 | 408416 |
| 32 | 1,8 | 44 | 40 | 1000 | 408616 |
| 32 | 1,8 | 44 | 40 | 1500 | 408716 |
| 32 | 1,8 | 44 | 40 | 2000 | 408816 |

SIMPLE BRANCHES (HTEA)



| DN1/DN2 [mm] | angle α | L1 [mm] | L2 [mm] | Z1 [mm] | Art. no |
|-----------------|------------|------------|------------|------------|---------|
| 32/32 | 45° | 94 | 78 | 18 | 422103 |
| 32/32 | 88,5° | 85 | 56 | 29 | 422608 |

BENDS (HTB)



| DN [mm] | angle α | Z1 [mm] | L [mm] | Art. no |
|------------|---------|------------|-----------|---------|
| 32 | 15° | 9 | 52 | 421008 |
| 32 | 30° | 11 | 55 | 421108 |
| 32 | 45° | 15 | 58 | 421208 |
| 32 | 67° | 14 | 58 | 421209 |
| 32 | 88,5° | 27 | 61 | 421308 |

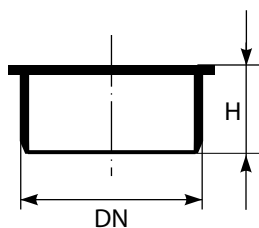
REDUCTION BEND (HTBR) 90°



| DN/DN2 [mm] | Art. no |
|----------------|---------|
| 32/50 | 421412 |

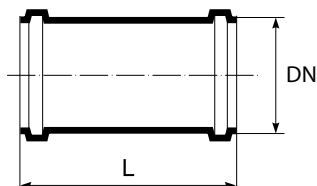
END CAP (HTM)

| DN [mm] | H [mm] | Art. no |
|------------|-----------|---------|
| 32 | 43 | 425008 |



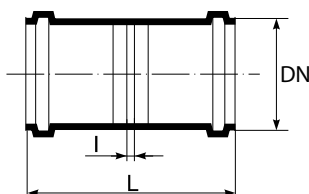
REPAIR COLLAR (HTU)

| DN [mm] | L [mm] | Art. no |
|------------|-----------|---------|
| 32 | 78 | 420208 |



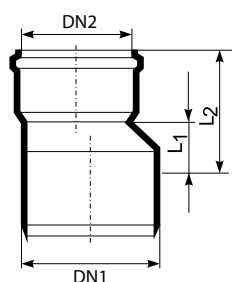
DOUBLE SOCKET (HTMM)

| DN [mm] | L [mm] | I [mm] | Art. no |
|------------|-----------|-----------|---------|
| 32 | 78 | 2 | 420108 |

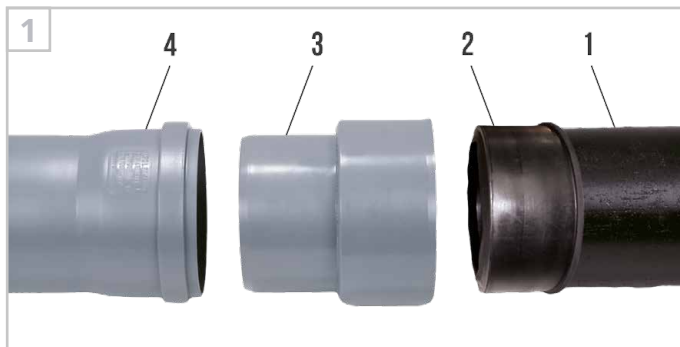


REDUCERS (HTR)

| DN1/DN2 [mm] | L1 [mm] | L2 [mm] | Art. no |
|-----------------|------------|------------|---------|
| 40/32 | 20 | 52 | 420410 |
| 50/32 | 22 | 60 | 420412 |

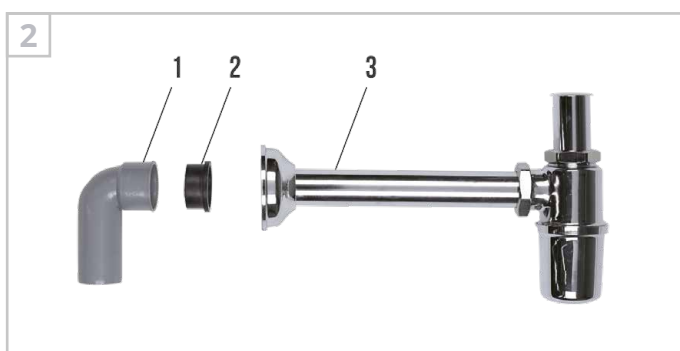


EXAMPLES OF APPLICATION OF “HTPLUS”



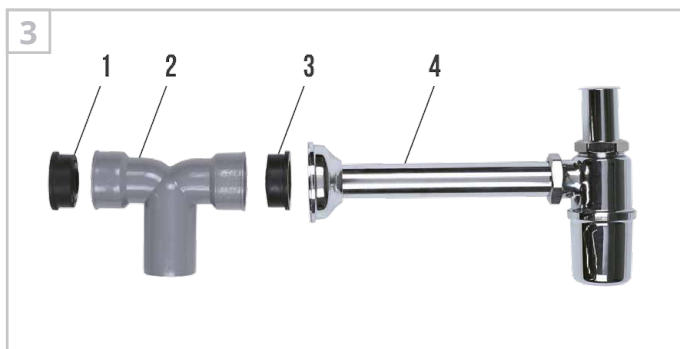
1. Coupling of cast iron pipe with HTEM pipe with the help of connector and sealing HTUG.

- 1. Cast iron pipe
- 2. HTUG sealing
- 3. HTUG connector
- 4. HTEM pipe



2. Use of HTSW connector to connect siphon

- 1. HTSW connector
- 2. HTGM sealing
- 3. Pipe to connect siphon



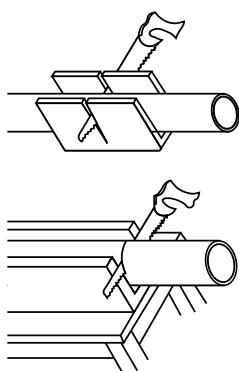
3. Use of HTDSW connector to connect two siphons

- 1. HTGM sealing
- 2. HTDSW double connector
- 3. HTGM sealing
- 4. Pipe to connect siphon

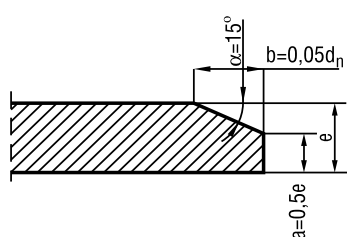


4. Use of HTS connector to connect siphon

- 1. HTEA simple branch
- 2. HTS connector
- 3. HTGM sealing
- 4. Pipe to connect siphon



Ways of cutting pipe using holder.



Preparation of an even end of the sewage pipe.

SYSTEM INSTALLATION

Cutting and sloping

The pipes are cut with the help of appropriate knife or a small saw. The cut is made perpendicular to the axis of the pipe. In order to cut easier, you may use holders.

You should remove any burrs from the edges of the pipe after cutting it. The end of the cut pipe is trimmed at an angle of 15° with the help of cutting tools or a large rasp.

Coupling of pipes

When connecting the pipes the following is recommended:

- Clean the dirt from the ends of the pipes to be connected and from the sealing elements,
- Lubricate the ends of the pipes with lubricant,
- Check the position and the condition of the sealing elements,
- Insert the end of the pipe into the socket until it rests (it is recommended to use the long sockets when installing long pipes).
- pull out the pipe to leave 1 cm gap inside the socket for pipe elongation



INSTALLATION

The “HTplus” sewage pipes must be fastened in a way, that no strains would emerge and that there would be an opportunity to compensate expansion. Common use holders of pipe should be used to fasten the pipes.



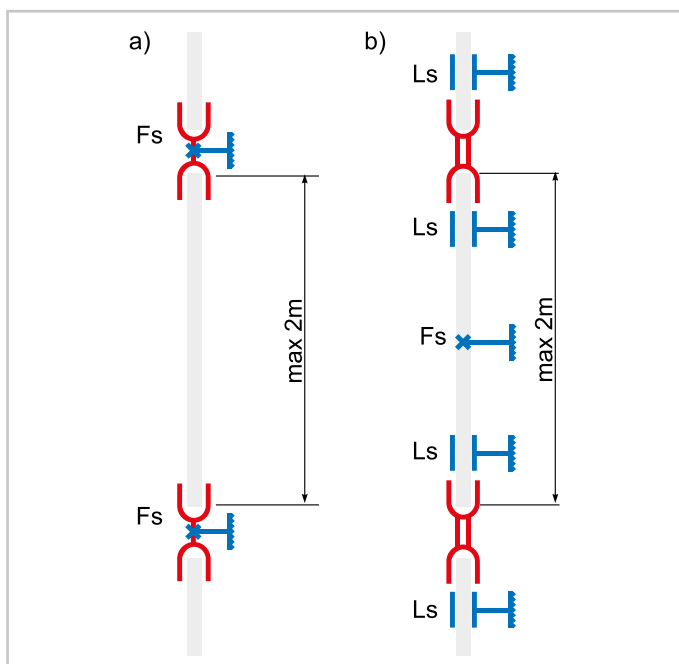
example of movable clamp with rubber insert

PLACING OF HOLDERS

When installing the “HTplus” sewage system one should bear in mind that due to high temperature the pipes expand; therefore it is necessary to guarantee sufficient space for movement. It is considered that one connection with sealing compensate for 1 cm elongation. Usually the vertically installed pipes are fastened to the wall under the coupling point. The vertically installed “HTplus” system pipes with connections must be fastened at two points on every floor of the building:

- Permanent fastening under the span (under the pipe socket),
- Mobile fastening at the middle of the floor of the building.

In case when double sockets are used for coupling of pipes, 2m-long pipes may be fastened permanently by installing the holder on the socket. Longer pipes (no more than 3m long) must be additionally fastened with mobile fastening (Ex. a). When repair collars are used for coupling of vertical piping, the length of the pipes may not exceed 2m, the permanent fastening must be installed in the middle of the section and the mobile clamps must be installed above and below the collar (Ex. b).



Installation of fastening (fastening of a vertical section)

Ls - mobile fastening,

Fs - permanent fastening

a) pipes coupled with the help of HTMM sockets

b) pipes coupled with the help of HTU collars

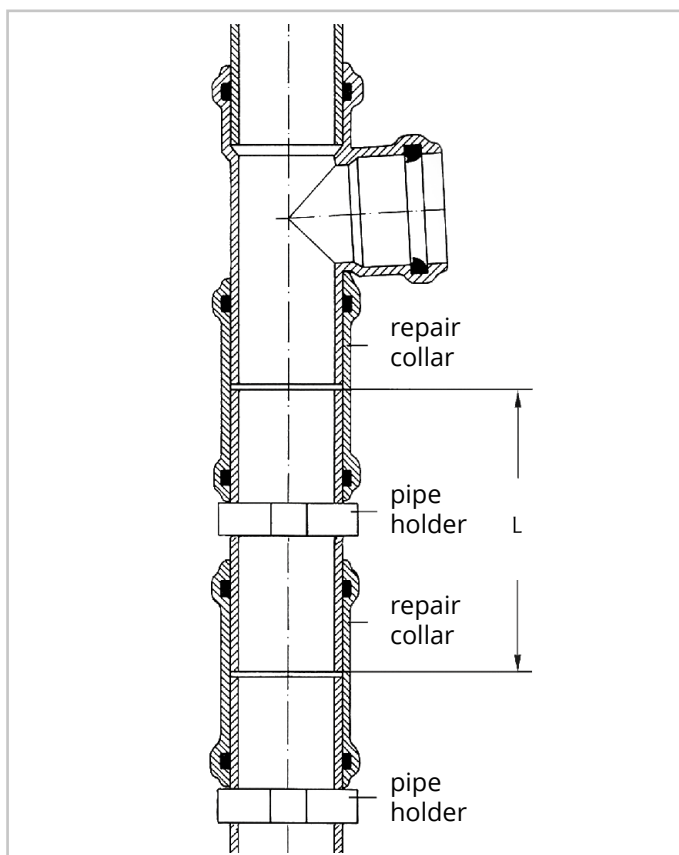
INSTALLATION OF PIPES IN A CONCRETE OR MASONRY WALL

It is possible to install “HTplus” pipes and fittings directly into concrete or masonry walls provided that you observe relevant requirements. In order to prevent entering of concrete grout into the clamp it should be sealed and wrapped in tape. Pipe openings must be sealed. It is important to fasten the system elements in such a way that the length of the piping would stay the same during the concreting work. When installing the system in the wall chamfers and gaps, it is necessary to cover it with at least 1,5 cm thick daub layer.

CROSSING THROUGH SPANS

Crossing points must be tight and guarantee appropriate noise insulation. When laying the pipes into the poured concrete the pipes must be protected with protective pipes or wrapped in heat insulation materials in the places where they cross the spans.

SUBSEQUENT INSTALLATION OF SYSTEM ELEMENTS

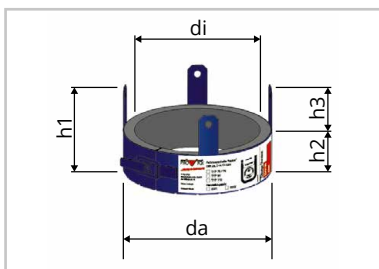


Additional connections may be installed by using the arms with repair collars. In the place of connection it is necessary to cut out a section of respective length of a straight pipe (**$L = \text{length of the coupling part} + 2,5 d$**) and to install the arm. It is necessary to clean and level the coupling point. The remaining section of the smooth pipe and the pipe section of the respective length should be fitted with one collar each, then this section of the pipe should be put on the piping and the collars should be moved over the cutting edges. It is necessary to secure the collars with holders.

“HTPLUS” FIRE PROTECTION

“HTplus” system offers practical and economic solutions when it comes to ensuring adequate fire protection. The measurements of the new generation fireproof bands are notably smaller. This ensures more flexibility when installing. The new generation fireproof bands were designed for the use in places where plastic pipes cross the walls and spans. A clampable cover provides an opportunity to install fire protection band at a later time.

It is possible to install fireproof bands traditionally, i.e. by installing them inside the masonry wall, and also it is possible to do this later and to mount the fireproof bands with studs.



| DN [mm] | Internal diameter of pipe | da [mm] | di [mm] | h1 [mm] | h2 [mm] | h3 [mm] | Art. No |
|------------|---------------------------------|------------|------------|------------|------------|------------|---------|
| 50 | 52-61 | 77 | 66 | 100 | 50 | 50 | 17600 |
| 70 | 67-81 | 109 | 87 | 130 | 80 | 50 | 17610 |
| 100 | 95-113 | 140 | 119 | 130 | 80 | 50 | 17630 |
| 150 | 136-160 | 198 | 167 | 160 | 80 | 80 | 17650 |

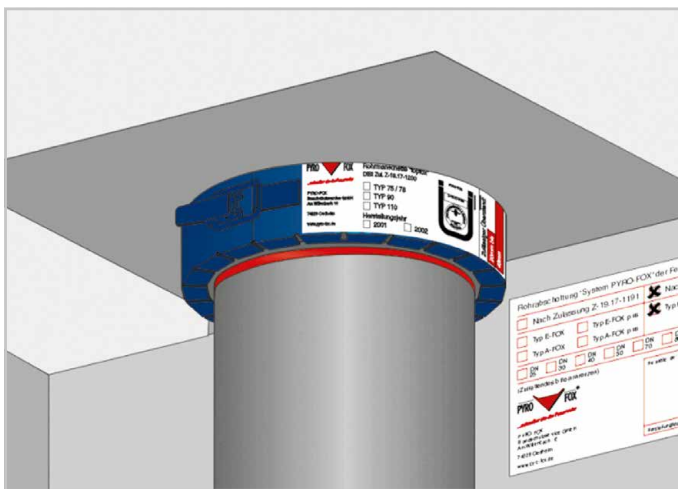


**EASY AND FAST
ASSEMBLING**

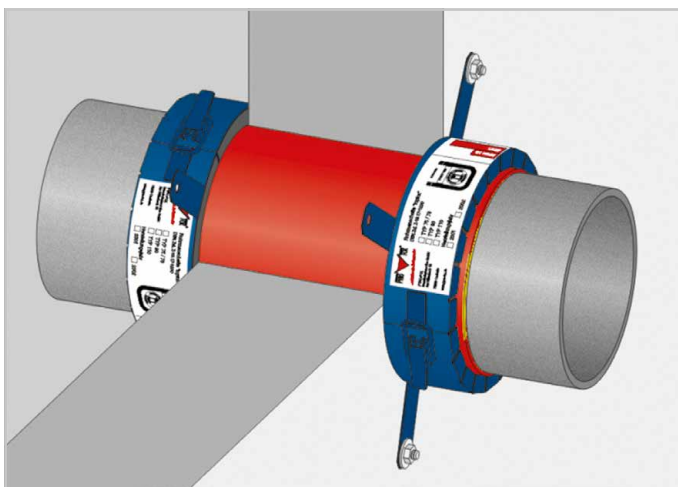
INSTALLATION OF FIREPROOF BANDS



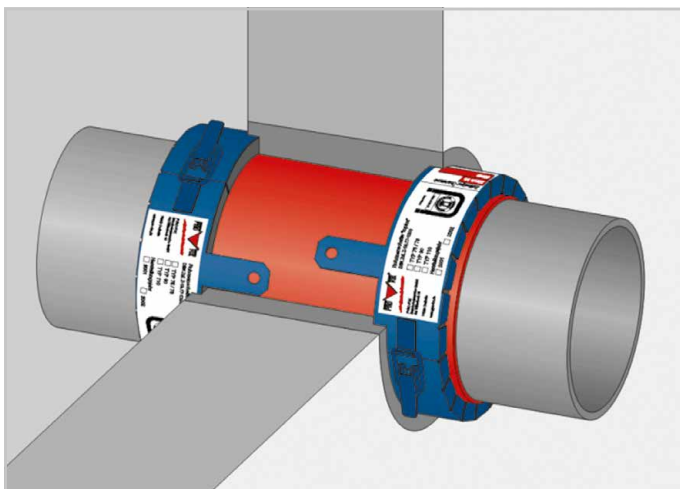
Crossing through a span
the band is mounted with studs



Crossing through a span
the band is concreted in

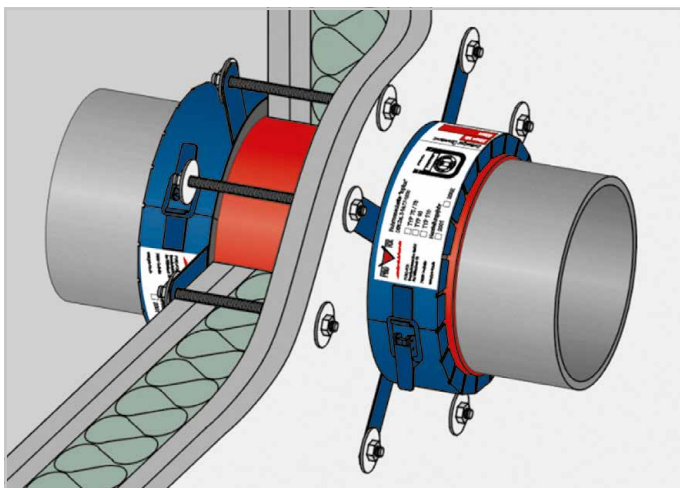


Crossing through a wall
the band is mounted with studs



Crossing through a wall

the band is concreted in



Crossing through a partition wall

the band is mounted with bolts

Installation in a wall

Unlike in the case with spans, in crossings through the walls two fire protection bands must be installed. The installation process is similar

Partition walls

When installing fire protection bands in the partition walls, threaded mounting elements must be used. It is recommended to turn the fire protection bands by 45° angle in respect of each other.



SOLUTIONS FOR YEARS

magna*plast*



HTPLUS INDOOR SEWAGE SYSTEM



ULTRA dB LOW-NOISE INDOOR SEWAGE SYSTEM



SKOLAN-dB THICK-WALLED, LOW-NOISE SEWAGE SYSTEM



KG PVC OUTDOOR SEWERAGE SYSTEM



PP OUTDOOR SEWERAGE SYSTEM MAGNACOR



SEWERAGE CHAMBERS SYSTEM



POLYETHYLENE (PE) PRESSURE PIPES



DRAINAGE (DR) SYSTEMS