

magnoplast

CATALOGUE



HT PLUS



INTERNAL SEWAGE SYSTEM

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INTERNAL
SEWAGE
SYSTEM

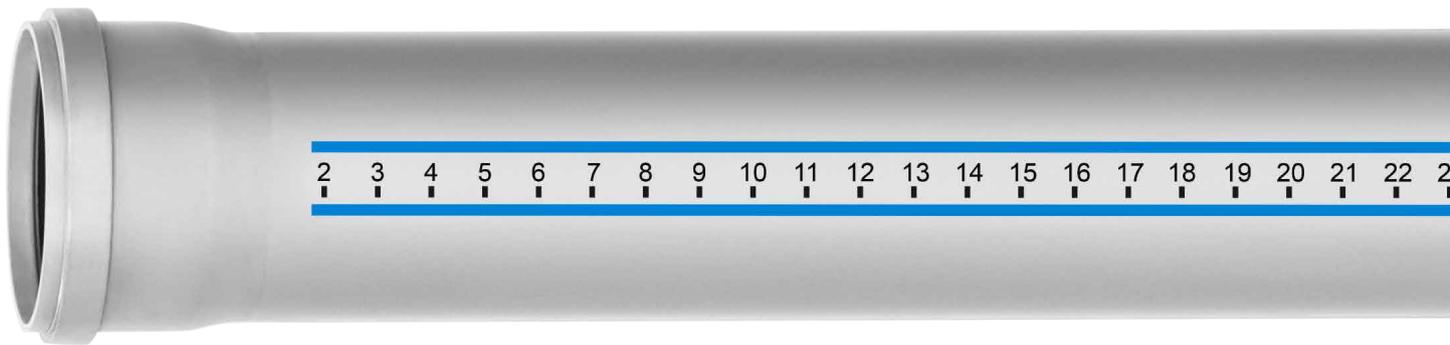
HT PLUS



**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 (%)			ξ _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

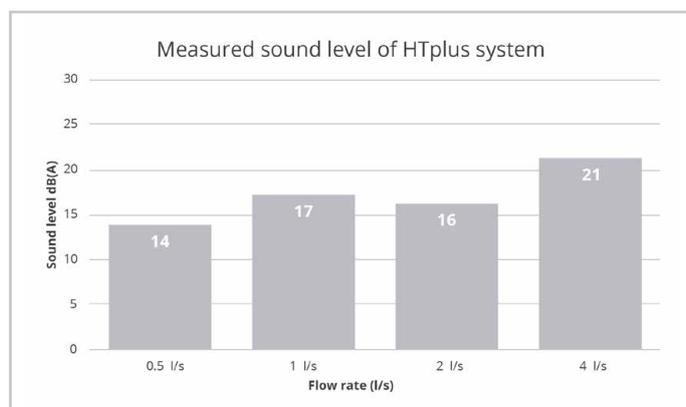
PRODUCT RANGE

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

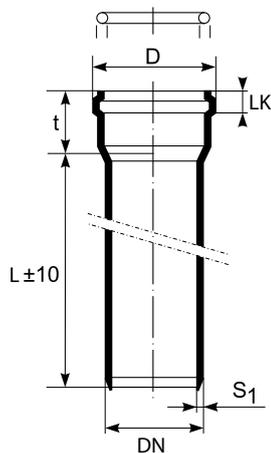
The pipes are packaged into bundles, wrapped in special tape and stored on pallets. The shorter pipes and fittings are packaged in carton boxes.



**PRODUCT
CATALOGUE**

HT PLUS

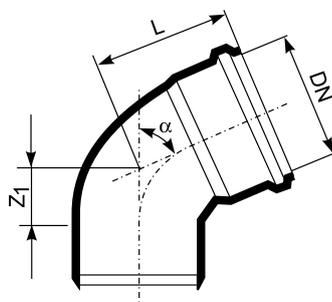
SOCKET PIPES (HTEM)



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

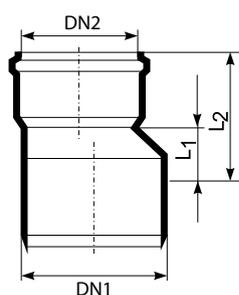
BENDS (HTB)

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

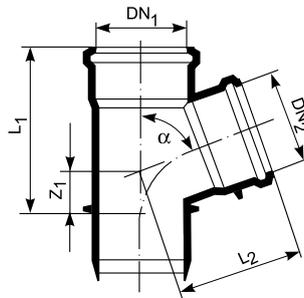


REDUCERS (HTR)

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)



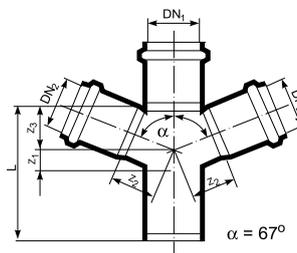
DN1/DN2 [mm]	angle α	L1 [mm]	L2 [mm]	Z1 [mm]	Art. no
40/40	45°	114	95	10	11500
50/40	45°	119	111	5	11510
50/50	45°	133	116	12	11520
75/50	45°	147	145	1	11540
75/75	45°	183	159	18	11550
110/50	45°	140	158	17	11560
110/75	45°	188	186	1	11570
110/110	45°	224	195	25	11580
125/110	45°	258	225	18	11590
125/125	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

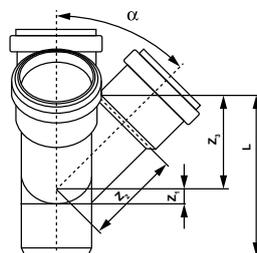
DOUBLE BRANCHES (HTDA) 67°

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



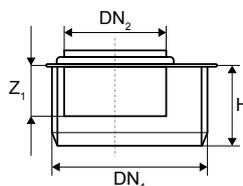
DOUBLE BRANCH ANGLE (HTED) 67°

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

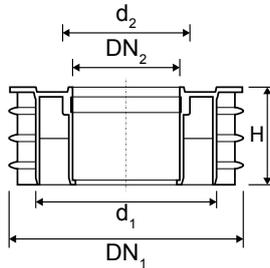


SHORT REDUCER (HTR)

DN1/DN2 [mm]	Z ₁ [mm]	H [mm]	Art. no
75/50	27	69	11325
110/50	28	74	11335
110/75	35	76	11345

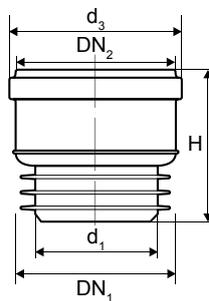


INNER REDUCER (HTR) FOR PIPE SPIGOT



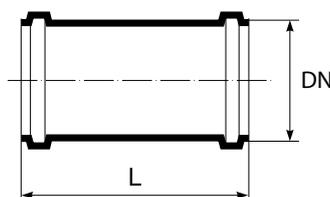
DN1/DN2 [mm]	d1 [mm]	d2 [mm]	H [mm]	Art. no
110/50	90	64	47	11336
110/75	90	89	47	11346

PLUG-IN SOCKET (HTSM) FOR PIPE SPIGOT



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

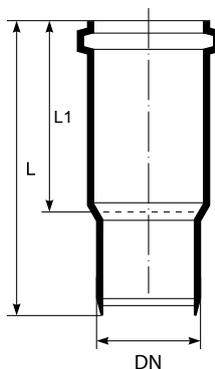
REPAIR COLLARS (HTU)



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

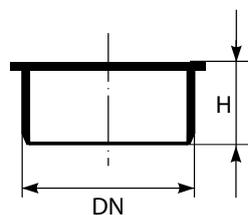
LONG MUFFS (HTL)

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



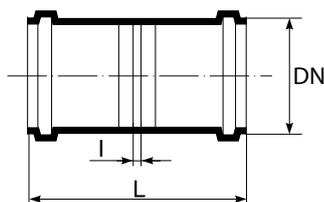
END CAPS (HTM)

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

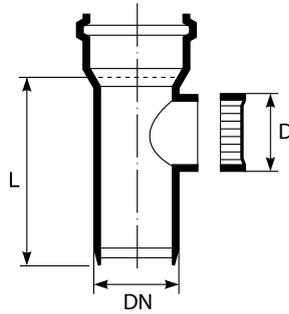


DOUBLE SOCKETS (HTMM)

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

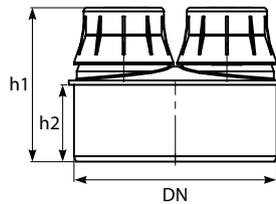


ACCESS PIPES (HTRE)



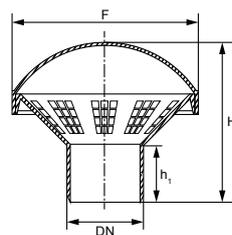
DN [mm]	L [mm]	D [mm]	Art. no
50	110	63	12410
75	138	88	12420
110	179	116	12430
125	191	116	12440
160	203	117	12450

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

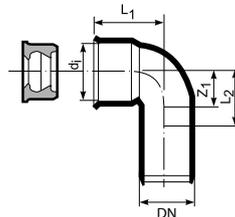
LUBRICANTS



Capacity	Art. no
250g	13110
500g	13120

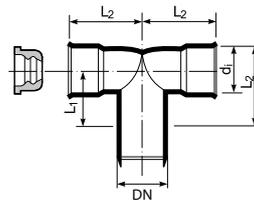
BEND CONNECTORS TO STEEL PIPES (HTSW) WITHOUT SEALING

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



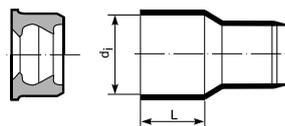
DOUBLE BEND CONNECTOR TO STEEL PIPES (HTDSW) WITHOUT SEALING

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



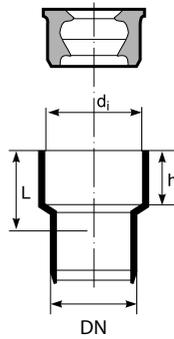
CONNECTORS TO CAST IRON PIPES (HTUG) WITHOUT SEALING

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

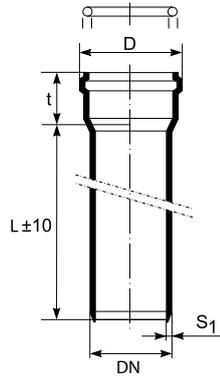
DN [mm]	Art. no
32	13590

PROTECTION CLAMPING RING

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

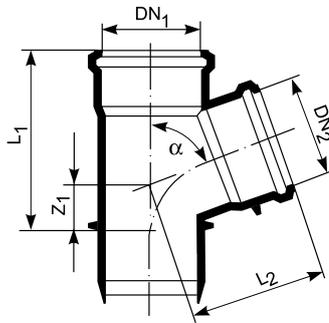


SOCKET PIPES (HTEM)



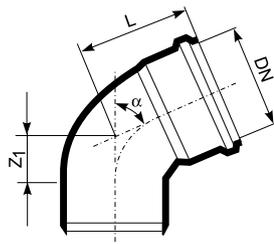
DN [mm]	s1 [mm]	D [mm]	t [mm]	L [mm]	Art. no
32	1,8	44	40	150	408116
32	1,8	44	40	250	408216
32	1,8	44	40	500	408416
32	1,8	44	40	1000	408616
32	1,8	44	40	1500	408716
32	1,8	44	40	2000	408816

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

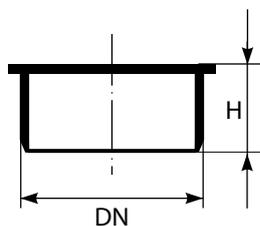
REDUCTION BEND (HTBR) 90°



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

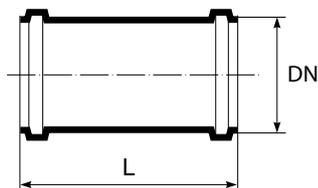
END CAP (HTM)

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



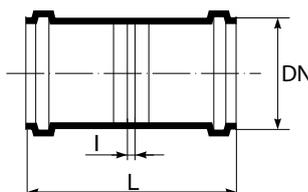
REPAIR COLLAR (HTU)

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



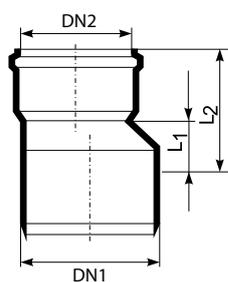
DOUBLE SOCKET (HTMM)

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

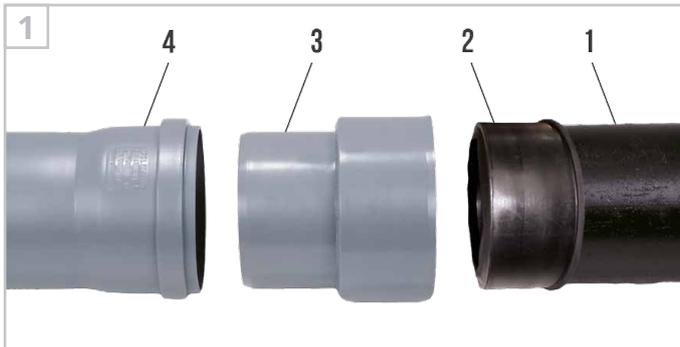


REDUCERS (HTR)

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

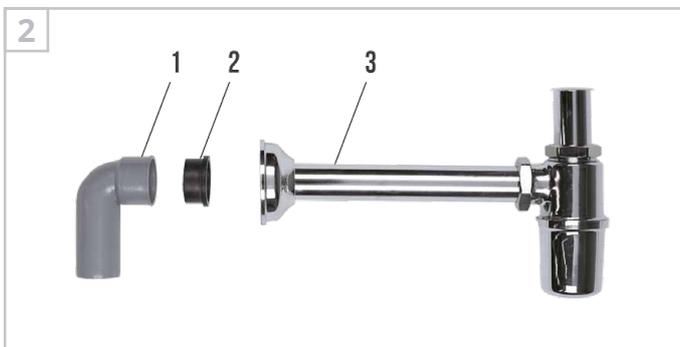


EXAMPLES OF APPLICATION OF “HTPLUS”



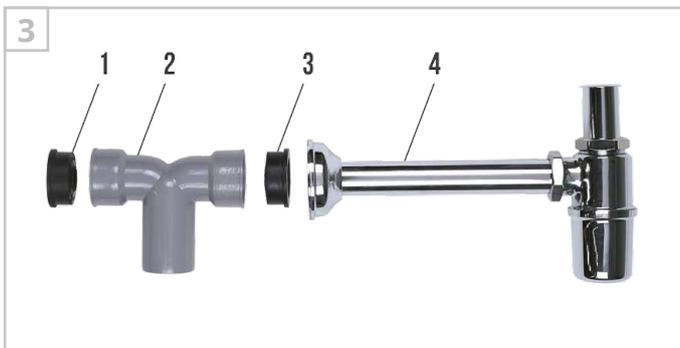
1. Coupling of cast iron pipe with HTEM pipe with the help of connector and sealing HTUG.

- 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



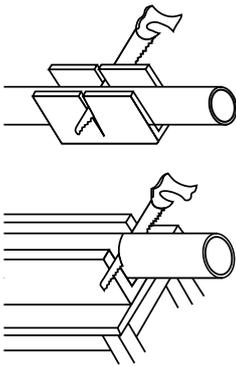
3. Use of HTDSW connector to connect two siphons

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

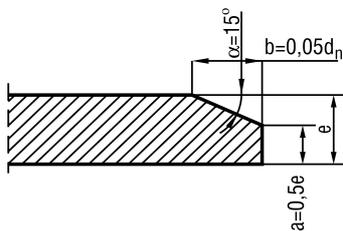


4. Use of HTS connector to connect siphon

- 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.



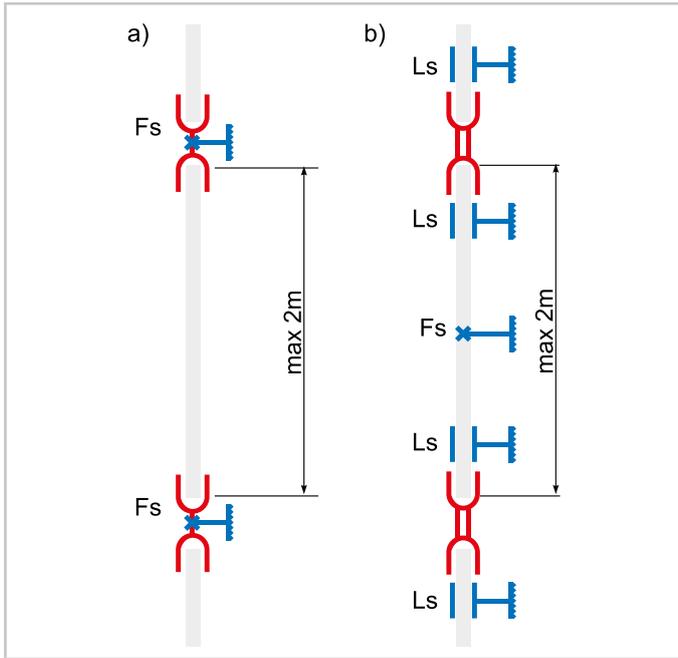
example of movable clamp with rubber insert

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

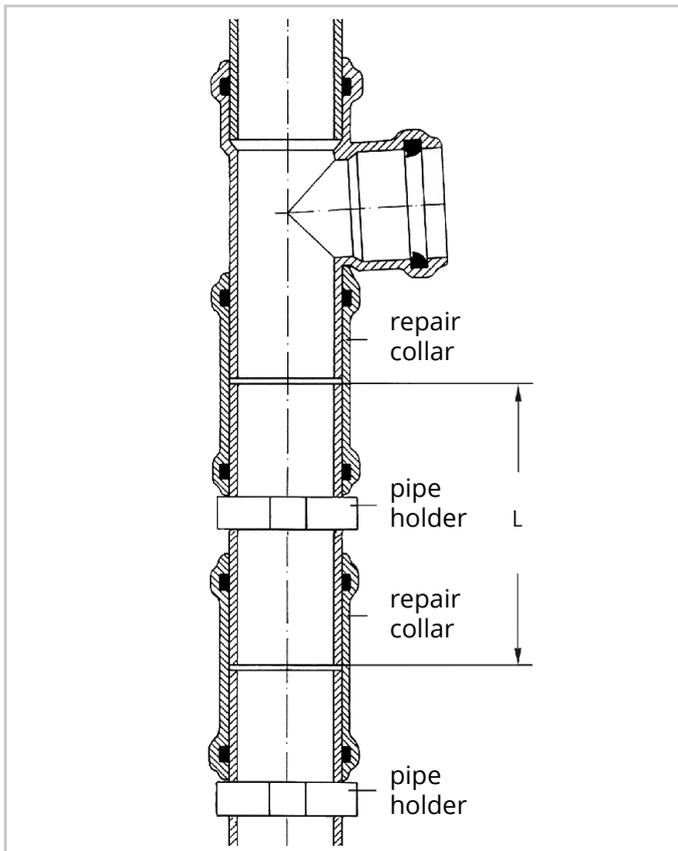
INSTALLATION OF PIPES IN A CONCRETE OR MASONRY WALL

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

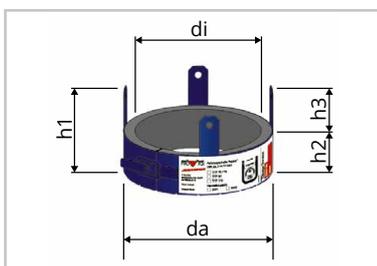


Additional connections may be installed by using the arms with repair collars. In the place of connection it is necessary to cut out a section of respective length of a straight pipe (**$L = \text{length of the coupling part} + 2,5 d$**) and to install the arm. It is necessary to clean and level the 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

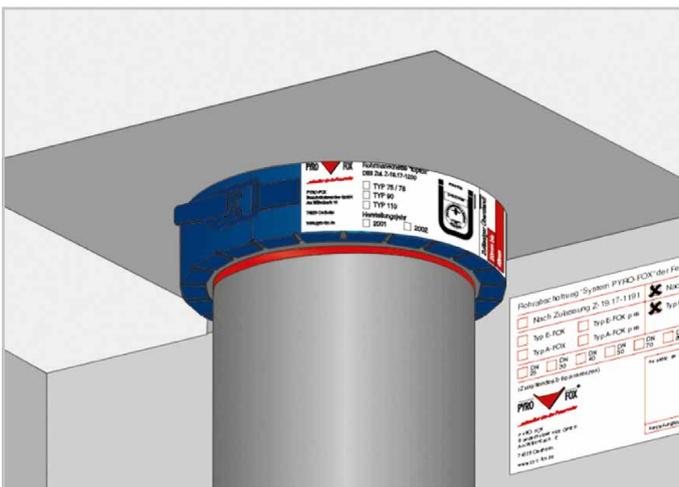


**EASY AND FAST
ASSEMBLING**

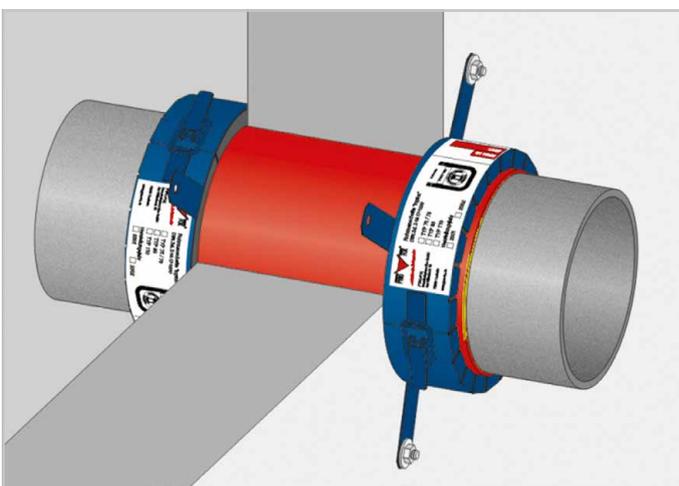
INSTALLATION OF FIREPROOF BANDS



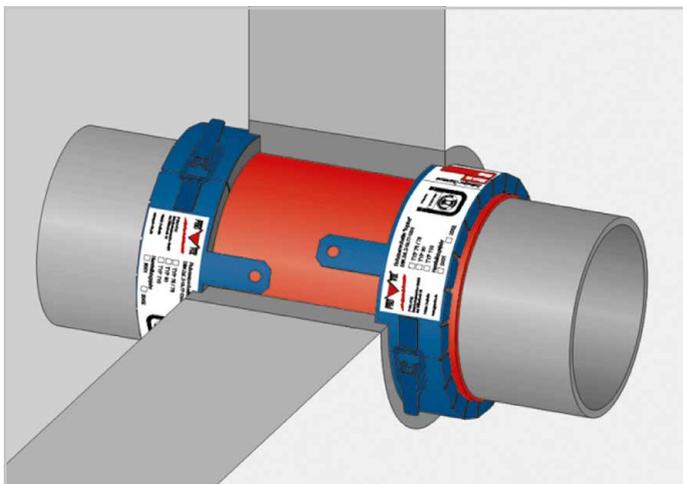
Crossing through a span
the band is mounted with studs



Crossing through a span
the band is concreted in

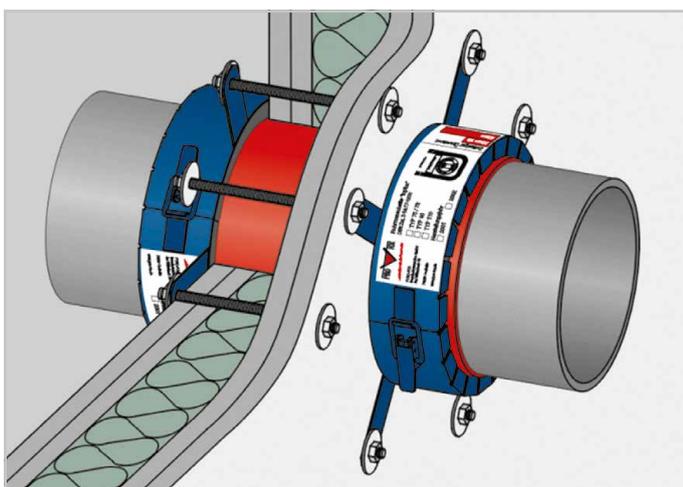


Crossing through a wall
the band is mounted with studs



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

magnoplast



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