



the system

FRIAFIT®-Sewage System:

The safe connection method for HD-PE pipes carrying sewage and foul water.

Product Range AF 10/05
valid from 1st February 2005

Safety

*in pipe system installation
... leading worldwide*

*innovative
cost efficient
excellent*



Things worth knowing about FRIAFIT®-Sewage System and this Product Range

Contents

To help you to find specific products easily we have included an alphabetical list arranged in product groups on page 4.

Stocking status

Please note the following:

- All articles with a stock **status of 1** are **usually available ex-stock**.
- All articles with a stock **status of 2** are **manufactured to order** and hence have a **delivery time of 3 – 4 weeks**.

Packaging and pallet units

The product range shows packaging units (VE) and pallet units (PE). An order in complete VE/PE will simplify the procedure in your goods inwards department as well as your storage and ensures we can pick and deliver your order quickly.

The product range will show that we have selected sensible and fair packaging units for you.

Returns

Goods returned for credit must comply with certain criteria under our Quality Management System. We shall be glad to inform you about this separately on request. If the goods meet the criteria and their return is approved by us in advance they will be credited less 25 % inspection costs.

Factory certificates

For factory certificates to **DIN EN 10204-3.1** there will be a processing charge of **€ 13,- per item**. The factory certificates **must be ordered at the same time as the order is placed**; it is not possible to supply them retrospectively.

Quality Certification

FRIAFIT®-Sewage System are subject to constant Quality checks under stringent inspection regulations, which are part of our comprehensive Quality Management System which is certified to **DIN EN ISO 9001 : 2000**.

The FRIAFIT®-Sewage System and the operation of our Technical Equipment are matched to each other. All modifications and additions occurring in the course of continuing technical development are taken into account. Our continuous monitoring of production as part of the Quality Assurance system includes the FRIAFIT®-Sewage System, the Technical Equipment and the quality of the fused joint as a result of the combination of these two components. With the expansion of the scope of FRIAFIT® products due to new developments, but also due to the reworking of components in our product range, the FWS 225 fusion units are no longer included in suitability tests. The operation and functional safety of fusion units from other manufacturers are not subject to our specifications and checks. When installing fittings please proceed in accordance with our assembly instructions and the operating instructions for the equipment in question.

Norm Conformity/Fusion capability

The FRIAFIT®-Sewage System complies with DIN 19 537 and thus counts as a regulated building product. As such it does not require a general building supervision approval. A certificate of conformity from DIBT Berlin is available.

The FRIAFIT®-Sewage System (without sewage sleeves AM) can be fused to pipes of SDR stages 33 to 11 in accordance with DIN 8074, DIN 19 537 and pr EN 12 666.

FRIAFIT® sewage sleeves AM SDR 17 are designed for use with water. They are registered according to DVGW – VP 607 certified by DV-8606BO6114 and DV-8611BO6115 and are subject to regular external checks.

FRIAFIT® sewage sleeves AM SDR 17 may be welded with pipes ranging in SDR from 33 to 17 according to DIN 8074, ISO 4437, EN 12 201 and EN 13 244.

Pipes made of raw material types PE 63, PE 80 and PE 100 in melt index groups 003 to 020 can be fused.

The FRIAFIT® sewage system may be processed with ambient temperatures ranging from -10°C to +45°C. The ADFIT adapter (see FRIALEN®/FRIAFIT® Technical Equipment Product Range) is required for the fusion process except with ASA-TL. Due to the gradual introduction of standardised 4 mm switch plugs with AM couplers and AEM sewage insert sleeves it is possible that some dimensions have already been equipped with 4 mm switch plugs. An adapter plug for the fusion unit is not required here. In order to avoid unnecessary down times on the building site we recommend you have the ADFIT adapter plugs at your disposal.

Pressure loading capacity

It is designed for **unpressurised pipes (gravity pipes)**. The test pressure for this type of system in accordance with DIN EN 1610 is a maximum of 0,5 bar.

Pressure load limits

FRIAFIT® sewage sleeves made from PE 100 SDR 17 are designed according to EN 12 201 and EN 13 244 for pressure load limits of 10 bar for water and sewage pipes with a design factor C = 1.25.

Static

The static calculation for the PE sewer pipe must in each individual case be carried out by the relevant pipe manufacturer or engineering office depending on the ambient conditions which prevail.

The annular rigidity of the pipe joint fused with FRIAFIT® sewage sleeves will in all cases be higher than the annular rigidity of the pipe used.

Cooling times

FRIAFIT® sewage sleeves (AM) and FRIAFIT® sewage insert sleeves (AEM)

The cooling times given in the bar codes and identified by additional letters (C.T.) are the times during which the fused joint should not be moved.

FRIAFIT® sewage saddle top loading

The cooling times given in the bar codes (C.T.) are the times before tapping takes place.

You can get further details from our assembly instruction.

Technical Details

The technical details in this product range are not comprehensive. Please refer to our data sheets for detailed information. These may also be downloaded from the internet on www.friafit.de.

Update/Technical Progress

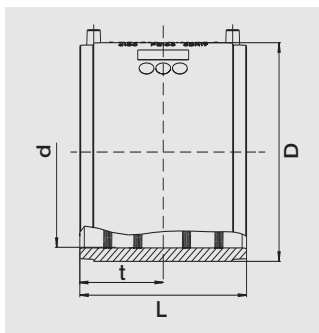
All specifications are valid as at time of going to print. We reserve the right to implement changes which serve technical progress. We do not accept liability for printing mistakes.

Contents

Article	Page	Brief Description
FRIAFIT basic programme		
Sewage sleeve SDR 17	4	AM
Sewage insert sleeve	4	AEM
Sewage inspection chamber adapter	5	ASF
Sewage inspection chamber adapter for masoned canals, L = 250 mm	5	ASFL
Sewage saddle top loading	6	ASA-TL
Transition piece PE – PVC/PP	6	UKG
FRIAFIT additional fittings		
Sewage elbows 30° (spigot fittings)	7	ABS 30°
Sewage elbows 45° (spigot fittings)	7	ABS 45°
Sewage elbows 60° (spigot fittings)	7	ABS 60°
Sewage elbows 90° (spigot fittings)	8	ABS 90°
Equal branch 45° (spigot fittings)	8	ATS 45°
Unequal branch 45° (spigot fittings)	9	ATSR 45°
Equal branch 60° (spigot fittings)	9	ATS 60°
Unequal branch 60° (spigot fittings)	10	ATSR 60°
Reducers eccentric (spigot fittings)	10	RES

AM

Sewage sleeve SDR 17



With exposed heating coils for optimal heat transfer, large insertion depth, extra wide fusion zones plus cold zones at the end and in the middle to prevent the flow of molten material for use without holding devices.

When using the AM sewage sleeve and the AEM sewage insert sleeve, the ADFIT adapter will be needed (see Technical Equipment product range FRIALEN®/FRIAFIT® and details on page 2).

Ⓣ: separate fusion zones

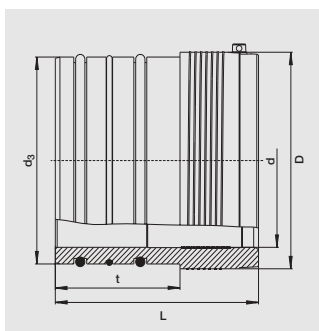
PE 100 SDR 17

Maximum working pressure 10 bar (water, sewage)

d	Order Ref.	Quantity	Stock-status	VE	PE	D	L	t	Weight kg/each
110	T-680 001	1	1	24	192	128	160	80	0,600
125	T-680 013	1	1	22	176	146	160	80	0,620
160	T-680 002	1	1	12	96	184	180	90	1,100
180	T-680 003	1	1	8	64	206	180	90	1,700
200	T-680 004	1	1	1	56	229	180	90	3,200
225	T-680 005	1	1	4	32	250	200	100	2,000
250	T-680 006	1	1	4	32	280	200	100	2,650
280	T-680 007	1	1	1	32	315	200	100	3,450
315	T-680 008	1	1	1	24	355	220	110	4,900
355	T-680 009	1	1	1	20	400	220	110	6,100
400	T-680 010	1	1	1	12	450	220	110	7,850
450	T-680 011	1	1	1	6	500	220	110	8,400
500 [Ⓣ]	T-680 012	1	1	1	4	560	270	135	14,900

AEM

Sewage insert sleeve



For connecting HD-PE pipes into concrete inspection chambers to DIN 4034 with the FRIAFIT® inspection chamber adapter. The FRIAFIT® inspection chamber acts as a connecting element between the prefabricated inspection chamber and the FRIAFIT® sewage insert sleeve with resilient sealing allows optimal anchoring to the FRIAFIT® inspection chamber adapter. **For extra safety, the Q seal ring capable of soaking up water ist included.**

The connection side to the HD-PE pipe with exposed heating coils for optimal heat transfer, large insertion depth, extra wide fusion zones plus cold zones at the end to prevent the flow of molten material, for use without holding devices.

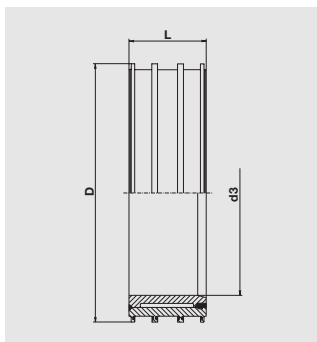
PE 100

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d	Order Ref.	Quantity	Stock-status	VE	PE	D	d ₃	L	t	Weight kg/each
110	T-680 201	1	1	8	144	133	131	165	135	0,690
160	T-680 202	1	1	8	64	193	187	220	135	1,720
180	T-680 203	1	1	1	54	225	215	220	135	2,640
200	T-680 204	1	1	1	56	250	247	220	135	3,640
225	T-680 205	1	1	1	32	280	277	220	135	4,600
250	T-680 206	1	1	1	32	280	277	220	135	2,640
280	T-680 207	1	1	1	24	315	313	220	135	3,500
315	T-680 208	1	1	1	24	355	354	220	135	4,540
355	T-680 209	1	1	1	20	400	399	220	135	5,800
400	T-680 210	1	1	1	12	450	449	220	135	7,500
450	T-680 211	1	1	1	8	500	499	220	135	8,100

ASF

Sewage inspection chamber adapter



Connection unit between the ready made concrete inspection chamber and the FRIAFIT® sewage insert sleeve (AEM). With anchoring ribs across the whole width of the diameter for a secure seat in the concrete. Resilient centre section serves to take up the stresses when the pipes are under load. Stable inside diameter due to high wall thickness giving a good connection to the AEM in accordance with DIN 4034.

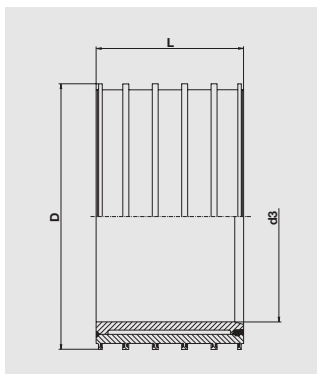
PE 100

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d	Order Ref.	Quantity	Stock-status	VE	PE	d ₃	D	L	Weight kg/each
110	T-680 401		1	12	96	134	200	135	1,450
160	T-680 402		1	8	64	190	250	135	1,650
180	T-680 403		1	6	48	218	280	135	1,950
200	T-680 404		1	4	32	250	315	135	1,800
225	T-680 405		1	4	32	280	355	135	3,150
250	T-680 406		1	4	32	280	355	135	3,350
280	T-680 407		1	4	32	316	400	135	4,200
315	T-680 408		1	1	18	357	450	135	5,400
355	T-680 409		1	1	18	402	500	135	6,400
400	T-680 410		1	1	12	452	560	135	8,200
450	T-680 411		1	2	8	502	630	135	11,450

ASFL

**Sewage inspection chamber adapter for masoned canals
L = 250 mm**



Connection unit between masoned canal and FRIAFIT® AEM sewage insert sleeve. Fixing supports across the entire width for proper fit in canal with retrospective installation. Elastomere central piece to counterbalance stresses. Solid internal diameter due to large wall thickness.

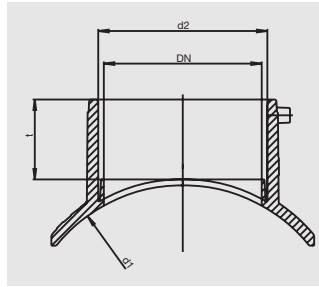
PE 100

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d	Order Ref.	Quantity	Stock-status	VE	PE	d ₃	D	L	Weight kg/each
160	T-680 502		2	2	36	190	250	250	2,910
225	T-680 505		2	2	16	280	355	250	4,664
280	T-680 507		2	2	16	316	400	250	6,648
315	T-680 508		2	1	18	357	450	250	
355	T-680 509		2	1	6	402	500	250	11,050
450	T-680 511		2	1	4	502	630	250	19,260

ASA-TL

Sewage saddle top loading



The FRIAFIT® sewage saddle top loading is a compact component consisting of a fusion saddle with an integral fusion coupler at its outlet (d 160). The FRIAFIT® sewage saddle top loading can be used to connect sewer pipes to an existing main sewer system made of HD-PE. With exposed heating element for optimal heat transfer. Tapping area free of heating wires. The FRIAFIT® sewage saddle top loading will be fixed on the pipe by a clamping and drilling unit FWFIT (see Technical Equipment FRIALEN®/FRIAFIT® product range) and tapping takes place after the cooling time.

Ⓢ: Installation d 500/560 using FRIALEN® FRIATOP clamping device (see product range Technical Equipment).

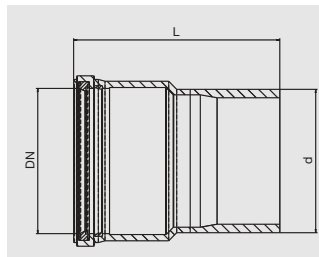
PE 100

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d ₁	d ₂	DN	Order Ref.	Quantity	Stock-status	VE	PE	t	Weight kg/each
200	160	150	T-682 618		1	8	64	76	1,000
225	160	150	T-682 613		1	8	64	76	1,046
250	160	150	T-682 619		1	10	80	76	0,986
280	160	150	T-682 614		1	10	80	76	0,986
315	160	150	T-682 615		1	10	80	76	0,986
355	160	150	T-682 620		1	10	80	76	0,986
400	160	150	T-682 621		1			76	
450	160	150	T-682 616		1	10	80	76	1,016
500/560 [Ⓢ]	160	150	T-682 622		1	10	80	76	1,016

UKG

Transition piece PE – PVC/PP



Flexible material transition in domestic range between HD-PE pipes SDR (33-SDR 17.6) and PVC/PP pipes. HD-PE side can be fused with FRIAFIT® AM sewage coupler or with the outlet of the FRIAFIT® ASA-TL sewage saddle. PVC/PP side acts as push-fit coupler with SBR lip seal gasket. POM centering ring and large insertion depth. Transition to clay is possible with extra KGUS transition piece.

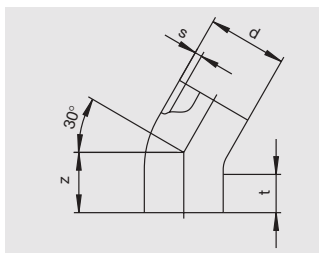
PE 80

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d/DN	Order Ref.	Quantity	Stock-status	VE	PE	L	Weight kg/each
160/150	T-682 617		1	2	64	230	1,070

ABS 30°

Sewage elbows 30° (spigot fittings)



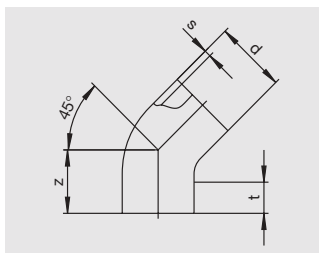
HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices.

PE 80

d	Order Ref.	Quantity	Stock-status	VE	PE	t	z	s	Weight kg/each
160	T-681 001		2	1		180	245	9,1	2,660
180	T-681 002		2	1	8	180	253	10,2	3,520
225	T-681 003		2	1		200	473	12,8	12,490

ABS 45°

Sewage elbows 45° (spigot fittings)



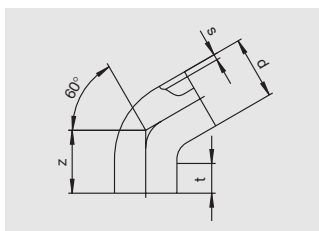
HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices.

PE 80

d	Order Ref.	Quantity	Stock-status	VE	PE	t	z	s	Weight kg/each
160	T-681 201		2	1		180	281	9,1	3,210
180	T-681 202		2	1		180	293	10,2	4,300
200	T-681 203		2	1		200	326	11,4	5,910
225	T-681 204		2	1	4	200	484	12,8	12,490
250	T-681 205		2	1		220	535	14,2	17,150
280	T-681 206		2	1		220	573	15,9	23,220
315	T-681 207		2	1		250	647	17,9	33,140
355	T-681 208		2	1		250	697	20,1	45,220

ABS 60°

Sewage elbows 60° (spigot fittings)



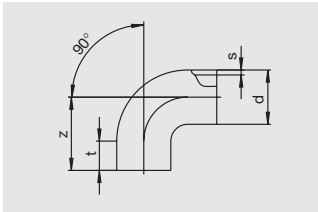
HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices.

PE 80

d	Order Ref.	Quantity	Stock-status	VE	PE	t	z	s	Weight kg/each
160	T-681 401		2	1		180	318	9,1	2,660
180	T-681 402		2	1		180	336	10,2	3,520
225	T-681 403		2	1		200	492	12,8	7,950

ABS 90°

Sewage elbows 90° (spigot fittings)



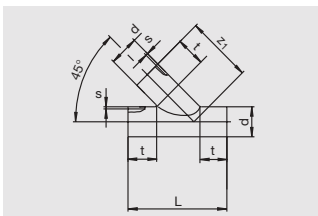
HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices

PE 80

d	Order Ref.	Quantity	Stock-status	VE	PE	t	z	s	Weight kg/each
160	T-681 601		2	1		180	420	9,1	3,210
180	T-681 602		2	1		180	450	10,2	4,300
225	T-681 603		2	1		200	538	12,8	7,950

ATS 45°

Equal branch 45° (spigot fittings)



HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices.

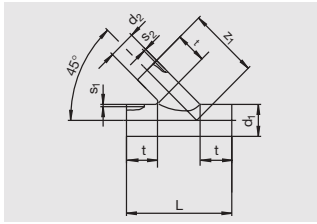
PE 80

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d	Order Ref.	Quantity	Stock-status	VE	PE	L	t	z ₁	s	Weight kg/each
110	T-682 001		2	1		556	200	333	6,3	1,600
160	T-682 002		2	1		626	200	393	9,1	3,700
180	T-682 003		2	1		655	200	417	10,2	4,800
200	T-682 004		2	1		783	250	491	11,4	7,100
225	T-682 005		2	1		818	250	522	12,8	9,200
250	T-682 006		2	1		954	300	602	14,2	13,400
280	T-682 007		2	1		996	300	638	15,9	17,200
315	T-682 008		2	1		1.145	350	730	17,9	25,100
355	T-682 009		2	1		1.202	350	779	20,1	33,100

ATSR 45°

Unequal branch 45° (spigot fittings)



HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices.

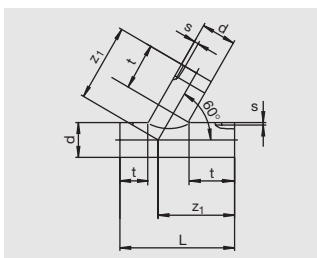
PE 80

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d ₁	d ₂	Order Ref.	Quantity	Stock-status	VE	PE	L	t	z ₁	s ₁	s ₂	Weight kg/each
160	110	T-682 201		2	1		556	200	368	9,1	6,3	2,900
180	160	T-682 202		2	1		676	200	489	10,2	9,1	5,300
225	160	T-682 203		2	1		726	250	489	12,8	9,1	7,600
280	160	T-682 204		2	1		826	300	578	15,9	9,1	12,500
280	225	T-682 205		2	1		918	300	610	15,9	12,8	15,600
315	160	T-682 206		2	1		926	350	653	17,9	9,1	17,300
315	225	T-682 207		2	1		1.018	350	685	17,9	12,8	21,000
355	160	T-682 208		2	1		926	350	681	20,1	9,1	21,400
355	225	T-682 209		2	1		1.018	350	714	20,1	12,8	25,500

ATS 60°

Equal branch 60° (spigot fittings)



HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices.

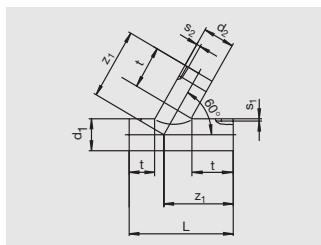
PE 80

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d	Order Ref.	Quantity	Stock-status	VE	PE	L	t	z ₁	s	Weight kg/each
110	T-682 401		2	1		527	200	295	6,3	1,200

ATSR 60°

Unequal branch 60° (spigot fittings)



HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices.

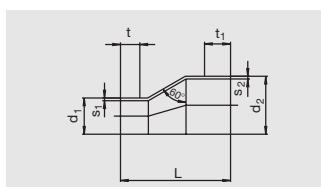
PE 80

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d ₁	d ₂	Order Ref.	Quantity	Stock-status	VE	PE	L	t	z ₁	s ₁	s ₂	Weight kg/each
160	110	T-682 601		2	1		527	200	324	9,1	6,3	2,800
180	160	T-682 602		2	1	8	585	200	364	10,2	9,1	5,100
225	160	T-682 603		2	1		685	250	426	12,8	9,1	7,300
280	160	T-682 604		2	1		785	300	508	15,9	9,1	12,000
280	225	T-682 605		2	1		860	300	527	15,9	12,8	14,900
315	160	T-682 606		2	1		885	350	578	17,9	9,1	17,300
315	225	T-682 607		2	1		960	350	597	17,9	12,8	21,000
355	160	T-682 608		2	1		885	350	601	20,1	9,1	21,400
355	225	T-682 609		2	1		960	350	620	20,1	12,8	25,500

RES

Reducers eccentric (spigot fittings)



HD-PE fitting for use with FRIAFIT® sewage sleeve AM without holding devices.

PE 80

Maximum test pressure in accordance with DIN EN 1610 0,5 bar

d ₁	d ₂	Order Ref.	Quantity	Stock-status	VE	PE	L	t	t ₁	s ₁	s ₂	Weight kg/each
110	160	T-681 801		2	1		390	150	150	6,3	9,1	1,200
160	225	T-681 802		2	1		417	150	150	9,1	12,8	2,530
160	280	T-681 803		2	1		611	150	250	9,1	15,9	5,430
180	225	T-681 806		2	1		384	150	150	10,2	12,8	2,550
180	280	T-681 807		2	1		578	150	250	10,2	15,9	5,430
180	315	T-681 808		2	1		721	150	300	10,2	17,9	8,250
225	280	T-681 810		2	1		509	150	250	12,8	15,9	5,460
225	315	T-681 811		2	1		655	150	300	12,8	17,9	8,380
225	355	T-681 812		2	1	6	680	150	300	12,8	20,1	10,370

General conditions of supply and payment of FRIATEC Aktiengesellschaft

Technical Plastics Division

1. Scope

Terms and conditions as listed below apply to all deliveries. Other conditions do not automatically become contractual, even if not expressly contradicted by us.

2. Conclusion of a Contract

Our quotations are not binding. A contract is made only when we confirm an order in writing. Our written order confirmation controls content and size of the order.

Alterations to the technical execution of ordered goods are acceptable unless they constitute essential functional changes or the customer proves that the alterations are unacceptable.

We will accept liability for the quality of an item only if this has been expressly stated in our order confirmation or in our advertisements.

3. Delivery

Delivery dates and deadlines are subject to ourselves being supplied appropriately and in good time. Delivery deadlines are determined by the date of our order confirmation. They are regarded as fulfilled once the goods have left the factory or been released for shipment.

The deadline is extended if the customer desires changes retrospectively or if events occur for which we are not responsible.

4. Prices and Payment Conditions

Our prices are ex factory or ex warehouse, plus VAT. Insurance, packaging, shipment and custom clearance charges are invoiced separately, unless expressly stated otherwise in our current price list.

Our invoices are payable net within 30 days from the invoice date. We offer 2% discount for payments within 14 days, but only if all other outstanding invoices have been paid.

We reserve the right to accept bills of exchange and cheques in individual cases. No discount is offered when paying by bill of exchange. Bills of exchange and cheques are accepted only on account of performance. The claim is regarded as fulfilled only once payment has been cashed or credited. All expenses which may arise must be met by the customer.

We are authorised to demand immediate cash payment for all deliveries, if payment conditions are not adhered to, or in circumstances causing the credit worthiness of a customer to be questioned. A possible deferral caused by the acceptance of bills of exchange becomes null and void. The customer is obliged to pay cash immediately on returning the bill of exchange. In addition we are authorised to carry out any remaining deliveries against advance or warranty payment or to rescind the contract and demand compensation. We are furthermore authorised to stop the onward sale of goods to be delivered and to retrieve the goods at the customer's expense if we have rescinded the contract.

5. Passage of Risk

The risk is transferred to the customer at the moment of the goods being ready for shipment and the notification thereof. This applies even if shipment is delayed due to circumstances not in our control. If there is no notification of readiness for shipment, the risk is passed to the transport company, and on to the customer no later than at the point of the goods leaving the factory or warehouse. This applies also if our own transport is used or carriage is paid.

6. Formal Complaints, Claims, Limitation Period

The customer must immediately check goods received for any defects. Formal complaints must be lodged immediately on receipt of the goods, and no later than a fortnight after receipt, in writing. The same timeframe applies to hidden defects after discovery. There can be no claims for defects which have not been notified within the appropriate period.

When a claim is justified, we will choose either to repair or replace the goods. If we do not rectify the defect or provide a substitute within an appropriate period, or following no more than two attempts, the customer is authorised to rescind the contract or demand a reduction in the purchasing price.

It is not possible to rescind if there is only an insignificant violation on our part.

The limitation period for claims is

5 years for building materials which have been installed and have caused defects within a pipe system.

1 year for delivery of other new goods to contractor

2 years for all others

Limitation period starts on delivery of goods.

7. Reservation of Ownership

Our deliveries are all subject to reservation of ownership. The goods remain in our ownership until payment of all claims arising from our business relationship with the customer is made. With an account current the reserved ownership constitutes the security for our balance claim.

The customer is authorised to resell delivered goods within the framework of his or her ordinary business procedures. He or she may not however pledge or transfer the conditional commodity by way of security.

In the event of resale the customer assigns to us all claims including all subsidiary rights which arise from the resale. This applies without taking into consideration whether he or she resells the conditional commodity unaltered, unprocessed, or in conjunction with other items. If the resale takes place including goods not owned by us, the assigning applies only up to the value of the conditional commodity. The value is determined according to our sales prices.

Processing of the conditional commodity always occurs according to § 950 BGB for us as manufacturers, but without obligation. The processed goods constitute the conditional commodity as part of these conditions. If the conditional commodity is processed together or is irretrievably mixed up with other items not owned by us, we will gain co-ownership of the new item at a ratio of conditional commodity invoice value to the invoice value of other used goods at the time of processing and mixing. The co-ownership rights thus created apply as conditional commodity in the context of these conditions. The customer is obliged, if requested by us, to point out our ownership rights to the prospective buyer.

The customer is authorised to collect the claim from the resale notwithstanding our own collection authorisation. While the customer meets his payment obligations appropriately, we will not put the claim into force. The customer has to inform us of the debtors of the assigned claims and to notify the assignment to them. Our right of informing third-party debtors of the assignment will not be affected by this.

The customer is not allowed to assign the claim against third-party debtors to third parties or to negotiate an assignment ban with the third-party debtor.

The customer is obliged to notify us immediately and in the quickest way possible about a pledge or any other infringement of our security rights by third parties. The customer is obliged to hand over to us all documents required to preserve our rights, and to compensate us for any costs arising from a possible intervention.

We pledge to release existing securities of our choice up to the point where their value exceeds the claims to be secured by more than 25%.

The customer is obliged to insure the goods for the duration of our reservation of ownership.

8. Acts of God – Right to Rescind

If we are prevented from fulfilling our terms of delivery by acts of God or other circumstances not within our control, or if the fulfilment of our obligations becomes too great a burden for these reasons, we are authorised to rescind the contract. Compensation claims by the customer in such circumstances are not permitted. The right to rescind is effective also if the delivery period was initially extended.

9. Limitations of Liability

We are liable for any violations of life, body or health for which we are accountable in accordance with legal requirements.

For other damages the following applies:

We are liable for damages based on gross negligence by us or deliberate or gross negligence by our legal representatives or assistants in accordance with legal requirements.

For damages based on the violation of essential contractual obligations based on negligence by us, our legal representatives or assistants, our liability is limited to the predictable contractual damage up to a maximum of the value of the delivered item.

Claims for other damage on violating subsidiary obligations or inessential obligations based on negligence are excluded.

Claims for damages for delay caused by negligence are excluded. The customer's legal rights on completion of an appropriate period of time remain unaffected.

Liability exclusions or limitations do not apply if a defect has been deliberately concealed by us or if we have offered warranty on the quality of the item.

A customer's claim for compensation of time or costs invested in vain instead of compensation in place of time or costs, and the liability according to the product liability law remain unaffected.

10. Non-assignment clause

Unless something different has been expressly agreed with the customer, the customer is not authorised to transfer rights from the contract to third parties without our agreement.

11. Applicable rights, Place of Jurisdiction

Only German law applies under the exclusion of UN purchasing rights.

Exclusive place of jurisdiction for disagreements between contract parties is Mannheim, if the customer is a merchant, a legal person of public law or a special asset, or if the customer does not have a place of jurisdiction in Germany. We do however reserve the right to proceed against a customer who does not have a general place of jurisdiction in Germany within other courts of our choice.

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Safety in pipe system installation
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innovative
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