

# PREIS®

## DRAINAGE SYSTEMS

### SML - Cast Iron Socketless Drain Pipe Systems for Building Drainage



## PREIS® SML - the cast iron socketless pipe system



— **Cast iron is the classic material for domestic drainage pipes.**

SML – since 1982, the cast iron socketless pipe system has completely replaced the socket drainage pipe. A tried-and-tested pipe material, easy to handle fittings and reliable couplings provide for a space-saving, fail-safe and durable pipe system that fully meets the high demands of today’s quality of living standards and state of the art technical building requirements. At the same time, it fulfils many critical safety requirements such as sound insulation and fireproofing.

Due to the high level of quality in SML systems, these cast iron pipes are used for the most important sections of pipe systems in a building’s drainage system (downpipes, collecting pipes and box-type inside rainwater drainpipes).

**The following standards and regulations are relevant to PREIS®SML products:**

**EN 877** | Cast iron pipes and fittings, their joints and accessories for the evacuation of water from building. Requirements, test methods and quality assurance.

**DIN 19522** | Complementary standard to EN 877. This standard mainly includes details about design and layout measures of pipes and fittings.

**RAL-GZ 698** | RAL quality label demanding a notably extended test range and stricter requirements on quality, which goes far beyond the requirements of EN 877.

**CE Label** | Declaration of conformity according to the European Directive for construction products (89/106/EEC).

**EN 1561** | Standard for founding of products made from grey cast iron with lamellar graphite.

### Material characteristics



**Density**  
approx. 7.2 kg/dm<sup>3</sup> (71.5 kN/m<sup>3</sup>)

**Tensile strength**  
≧ 150 MPa for fittings  
≧ 200 MPa for pipes

**Compressive strength**  
approx. 3 to 4 times the value for tensile strength

**Shear strength**  
approx. 1.1 to 1.6 times the value for tensile strength

**Crushing strength**  
(peak compressive strength)  
≧ 350 MPa

**Modulus of elasticity**  
8 x 10<sup>4</sup> to 12 x 10<sup>4</sup> N/mm<sup>2</sup>

**Poisson’s ratio** ~(-0,3)

**Heat resistance**  
PREIS® SML complies with fire resistance class A2 according to EN 13501 - not combustible\*

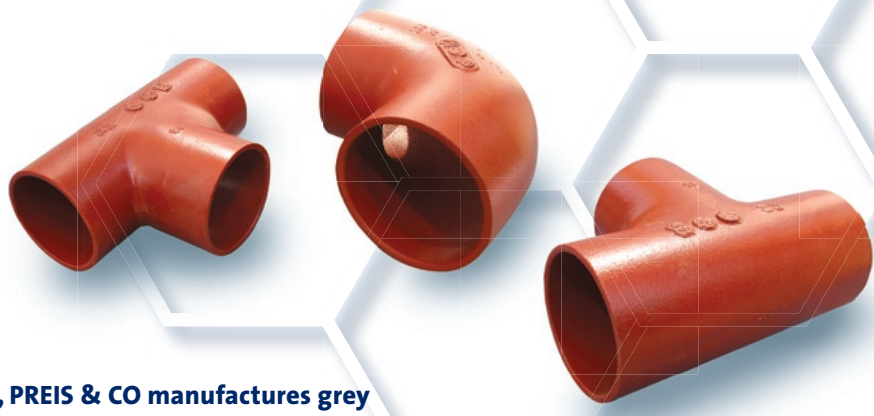
**Coefficient of thermal conductivity**  
50-60 W/mK (at 20° C)

**Coefficient of linear expansion**  
only 0.0105 mm/mK (between 0 and 100° C) more or less similar to concrete; can be set in concrete without any difficulty

**Chemical resistance**  
PREIS® SML is highly resistible against domestic sewage water with a pH value between pH2 and pH12

**\*Annex F.2 of EN 877 confirms:** „Cast Iron products in accordance with this European Standard are non-flammable and non-combustible. In case of fire they contain their functional characteristics and they remain fire proof for a few hours, that is to say during this period their walls are tight against flames and gases and they remain free from bursts, distortions and they are failsafe. Wall and ceiling pass-throughs remain intact.”





## Production

**At the foundry of FERRO-PREIS, PREIS & CO manufactures grey cast iron products containing flake granite (lamellar graphite).**

The **FERRO-PREIS** plant is equipped with state of the art machinery. This enables us to produce in an efficient and environment-friendly way.

The quality of our products is extremely important to us. Therefore, **PREIS & CO / FERRO-PREIS** takes the opportunity to continuously monitor all production steps to constantly improve production processes.

Hence, for very complex geometric shapes of cast iron parts we use a state-of the art 3-D measuring system during on-going product development and for carrying out inspection of the products.

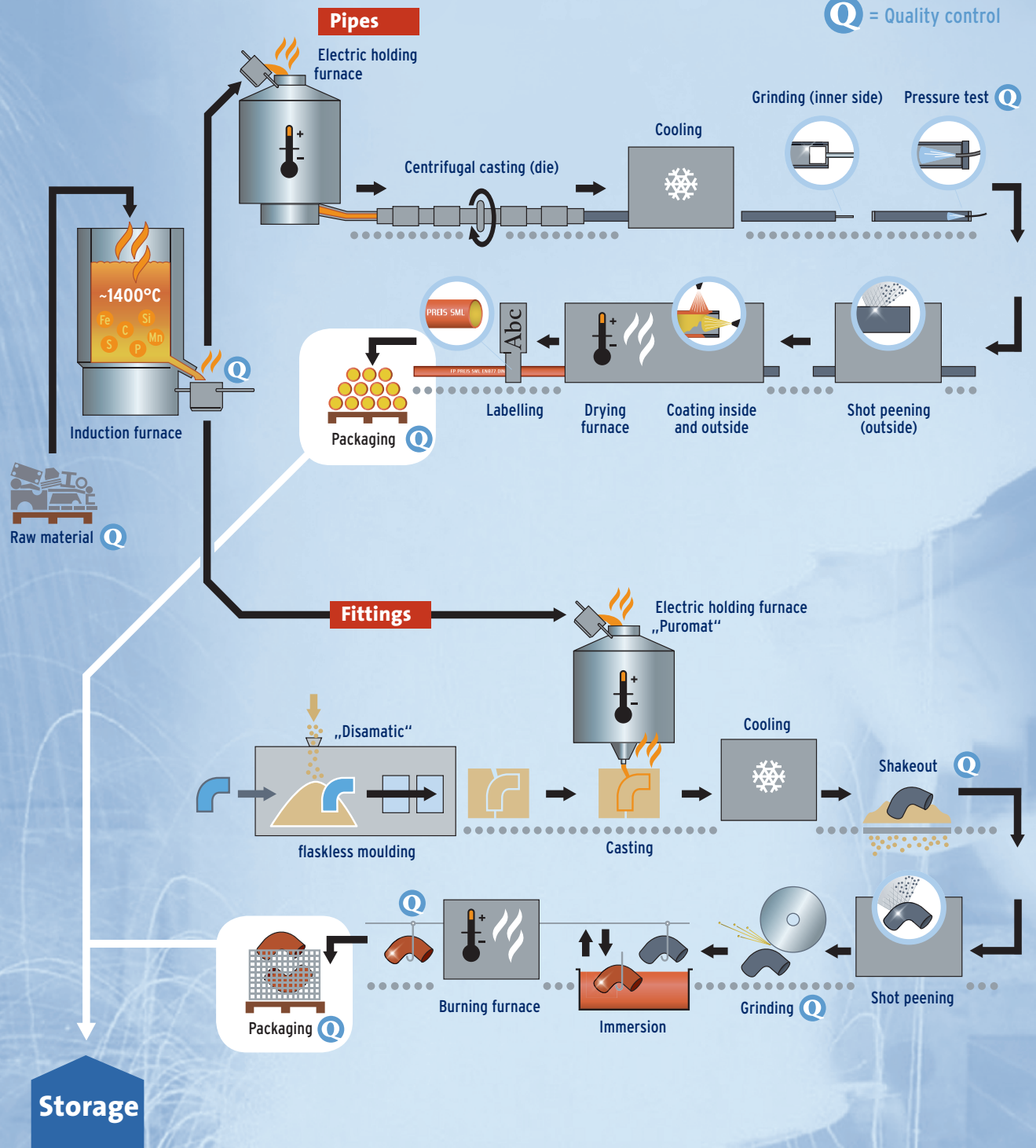
All working processes are accompanied and supervised by international certifications:

- ISO 9001:2008: Certificate of quality management
- ISO 14001:2009: operational environment
- BS OHSAS 18001: 2007: Occupational health and safety as a quality standard



# Production process

Q = Quality control



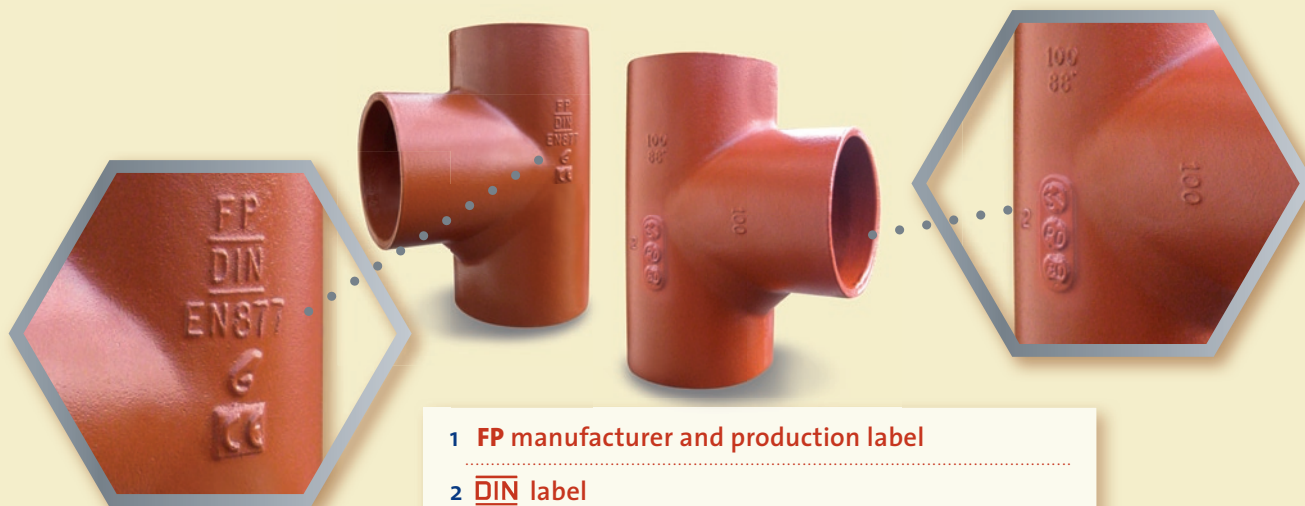


## Coating technology for SML pipes and fittings

**SML pipes and fittings are supplied with a high quality, reddish brown epoxy resin coating.**

The paint for fittings is applied as a dip coating with fully cross-linked epoxy resin coatings inside and outside of the piece, then to be heat-treated at 180°C during 45 minutes. This causes a compound to be built between the fitting and the coating which is of extra high strength, thus, providing the pieces with thermal and chemical resistance that goes far beyond the stringent requirements of EN 877 and RAL-GZ 698.

### Product labelling



- 1 **FP manufacturer and production label**
- 2 **DIN** label
- 3 **CE** - label of conformity
- 4 **EN 877** reference to the standard
- 5 **RAL quality label** of the GEG
- 6 **Nominal width and angular position** of the fitting
- 7 **Month/year** period of production

On the outside, **SML pipes** are coated with a reddish brown 40µm thick base coating in accordance with DIN EN 877 that can be repainted with any standard colour varnish or finish commercially available. On the inner side, the coating is sprayed with a completely cross-linked, ochre-coloured epoxy material (120µm), thus, protecting the pipe from aggressive domestic effluents.



## Resistance of the inside coating of PREIS® SML pipes and fittings

for domestic facilities and discontinuous use

| Resistance                     | to 23° C | to 50° C | to 80° C | Quality  |
|--------------------------------|----------|----------|----------|--|
| pH0                            |          |          |          | <p>The quality of the inside coating is decisive for the durability of the drainage system.</p> <p>Increasingly aggressive domestic sewage water brings about high demands on the inside coating.</p> <p><b>PREIS® SML</b> pipes and fittings cover a wide range of usage in evacuation of water in buildings.</p> |
| pH1 (except for organic acids) |          |          |          |  |
| pH2 (except for organic acids) |          |          |          |  |
| Lime-scale dissolving agents   |          |          |          |  |
| Cleaning agents                |          |          |          |  |
| Detergents                     |          |          |          |  |
| Disinfectants                  |          |          |          |  |
| Stain remover                  |          |          |          |  |
| Oxidants                       |          |          |          |  |
| Water, salts                   |          |          |          |  |
| Drain cleaner                  |          |          |          |  |
| Solvents                       |          |          |          |  |
| pH12                           |          |          |          |  |
| pH13                           |          |          |          |  |

## Agreement on assumption of liability entered into with the ZVSHK

The agreement on assumption of liability signed between PREIS & CO and the ZVSHK (Central Association for sanitation, heating, air-conditioning) shall provide and guarantee a higher level of security and cooperation in case of claims due to damages to all the German SHK member companies.

In case of non-compliance of the responsibilities under this agreement, incurring liabilities hereunder or direct consequential damages, the liability extends to a maximum of 1.2 million Euro per claim.

This agreement includes all products delivered by PREIS & CO

- PREIS® SML pipes
- PREIS® SML fittings
- PREIS® couplings and clamps

For further information go to [www.wasserwaermeluft.de](http://www.wasserwaermeluft.de)





## The benefits of cast iron drainage systems



**Noise protection**  
reduced sound transmission



**Preventive fire protection**  
PREIS® SML pipes and fittings are not combustible



**Not sensitive to heat and cold**  
low thermal expansion (0.0105 mm/mK) more or less similar to concrete; It can, therefore, be set in concrete without any difficulty



**Easy-to-assemble**  
in a flexible manner – no need for special tools



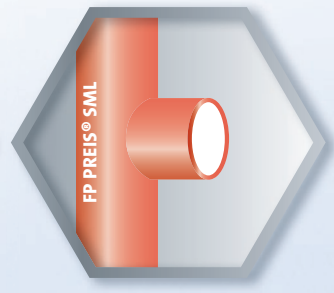
**100% recyclable**  
no problems with disposal



**No waste of resources**  
PREIS® SML products are mainly made of scrap iron



**Pipe internal coating**  
consists of a high quality 2-component system



**Optimum corrosion protection**  
for fittings thanks to the refined epoxy resin coating



**Time-saving**  
quick assembly by means of plug-in couplings



**High durability**  
exceeding the requirements of EN 877



**High abrasion resistance**  
easy flow due to the smooth surface



**Sturdy and dimensionally stable**  
impact resistant



# Sound insulation

**Sound insulation is one of the main advantages of PREIS® SML.**

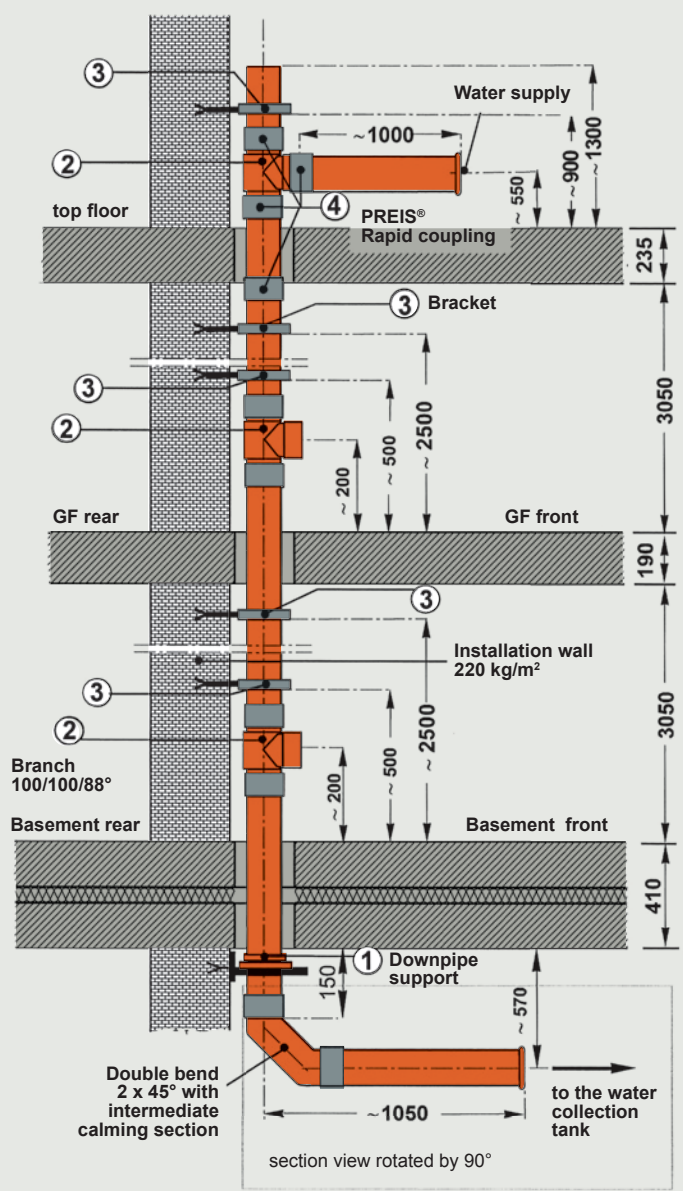
Due to the high density of cast iron and the buffer effect of the rubber lining in the couplings, sound transmission is reduced to a minimum so that the system is a grant for silent drainage. This provides the basis for general well-being in both, homes and offices, which is required by law and laid down in DIN 4109.

## Testing

In December 2011, Preis & Co conducted a sound insulation test according to DIN 4109 and EN 14366 at the renowned Fraunhofer Institute in Stuttgart, Germany. For the tests, standard PREIS® SML pipes and fittings were used along with the PREIS® Rapid couplings for connections and standard clamps for the wall fixing. (See details on the right side).

- ① Downpipe support
- ② Branch 100/100/88°
- ③ Bracket
- ④ Rapid coupling

**Arrangement of the drainage system,** fixed at an installation wall with different pipe brackets (reproduction not scaled, dimensions given in mm).  
 Outline Fraunhofer-Institute for Building Physics





### Sound level

The bottom row in the table below shows the sound level, if the downpipe is not attached to the wall - that is to say it is installed independently. This test has been carried out to isolate the airborne sound from the structure-borne sound.




The tests also have demonstrated that the cast iron drainage system with rapid couplings as a free-standing system emits a very low level of noise. **The crucial point in sound insulation lies in the pipe clamps for wall and ceiling installation**, that is to say, in the connections of the pipe system to wall and / or ceiling.

If a vibration-decoupling element is used, the sound level can be reduced even more significantly (see corresponding table) until a sound level is reached which is not longer audible for human ears.

### Conclusion

The tests focused on simulating common, real-life situations to show that those figures can be reproduced in both, a laboratory environment and in everyday installation on site.

**Hence, PREIS® SML proved to be the best choice to fulfil the provisions of sound protection using standard products without any additional, costly measures.**

| PREIS® SML in combination with:   | Flow of water [litres per second]  |     |     |     |
|---|--|-----|-----|-----|
|   | 0,5  | 1,0 | 2,0 | 4,0 |
| <b>Pipe clamp without rubber lining</b>   |  |     |     |     |
|    | Sound level in the ground floor (behind the wall - "GF rear") in [db(A)] |     |     |     |
|   | 21   | 26  | 31  | 36  |
| <b>Pipe clamp with rubber lining</b>  |  |     |     |     |
|   | Sound level in the ground floor (behind the wall - "GF rear") in [db(A)] |     |     |     |
|   | 16   | 20  | 25  | 30  |
| <b>Pipe clamp without rubber lining + vibration-decoupling element</b>  |  |     |     |     |
|   | Sound level in the ground floor (behind the wall - "GF rear") in [db(A)] |     |     |     |
|   | <10  | <10 | 12  | 15  |
| <b>Free-standing downpipe</b>   |  |     |     |     |
| <b>Not fixed at the wall.</b><br>The downpipe only rests at the downpipe support. The values shown refer exclusively to airborne sound; structure borne sound is explicitly excluded. (Test results are not foreseen for official purposes, only to provide information). | Sound level in the ground floor (behind the wall - "GF rear") in [db(A)] |     |     |     |
|   | -1   | 1   | 5   | 10  |



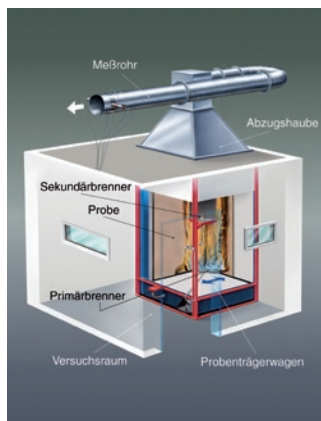
## Preventive fire protection

**PREIS® SML fulfils all requirements.**

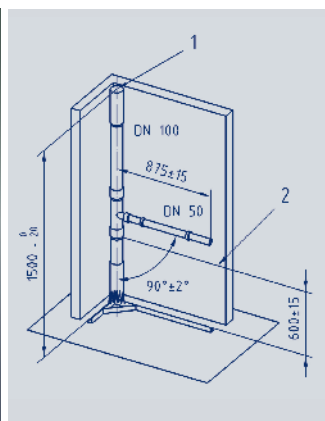
Preventive fire protection is the generic term for all preventive measures taken to inhibit or limit fire outbreak, spreading of fire or the effects of fire. Constructional measures are varied, especially for public buildings where people gather, and they already start with the selection of materials and components.

As set forth in EN 877, the Austrian Research Institute for Chemistry and Technology tested our cast-iron PREIS® SML drainage system under the fire behaviour according to EN 13823 (reaction to fire tests for building products) by means of the SBI-test (Single Burning Item Test) and according to EN ISO 1716 (Determination of the heat of combustion) by means of an oxygen bomb calorimeter and it confirmed the **classification of A2** according to EN 13501.

### SBI-test (Single-Burning-Item-Test):



Test scenario according to DIN EN 13823



Installation



Firing

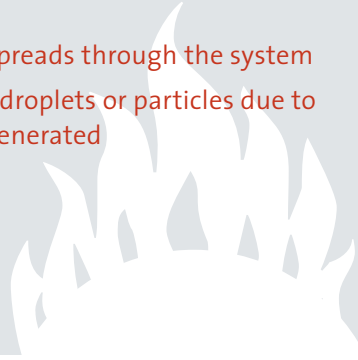


Results

**The excellent properties of our cast-iron drainage system have been confirmed:**



- non-flammable (fire protection class A2 acc. to EN 13501)
- no smoke spreads through the system
- no flaming droplets or particles due to high heat generated







## Evidence of quality and safety given by the GEG quality label

**— This quality label from GEG is a guarantee for cast iron drainage systems you can trust also in future.**

For quality assurance reasons, the „German Institute for Quality Assurance and Certification“ (RAL), Sankt Augustin, took the lead and founded the Gütegemeinschaft Entwässerungstechnik Guss e.V. (GEG - German Association for Drainage Technology Castings).

Its main objective is to guarantee excellent product quality also for the future - documented by the quality label (RAL-GZ 698). There are suppliers who do not comply with the required quality objectives which have always been a relevant criterion for cast iron drain pipes. The quality label takes into account the need for safety of all our partners, such as distributors, craftsmen, planning firms or authorities.

The quality label is awarded upon successful completion of an extensive initial test by independent, recognised test institutes. In addition, the test institutes conduct ad hoc external inspections at least twice a year to assure the quality of the products to meet the stringent quality requirements.

These measures guarantee consistently high quality and spell out the great responsibility of manufacturers towards their partners in the market, for example distributors, fitters and end customers.

### Requirements and inspections

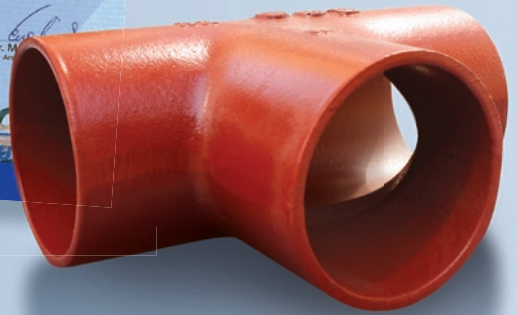
| Requirements as of →       | EN 877   | GEG  |
|----------------------------|--|--|
| salt spraying              | 350 hours  | 1,500 hours  |
| Resistance to waste water* | 30 days at 23°C                                  | 30 days at 50°C  |
| Chemical resistance        | within a range of pH 2 to pH 12, 30 days at 23°C | enhanced tests with aggressive substances such as phosphoric acid (pH 1) |

\*For typical composition of waste water see EN 877, chapter 5.7.2.2, table 5

# Third party certified quality assurance



We continually strive for a certified quality assurance system and quality assurance of cast iron drainage pipes, fittings and couplings.





# Dimensions

## — Pipes / fittings / couplings

| Nominal width<br>DN | External diameter |                     | Wall thickness |  | Insertion length<br>(sealing zone)<br>t | Pipe weight           |                      | Surface<br>approx.<br>m <sup>2</sup> per m |
|---------------------|-------------------|---------------------|----------------|--|---|-----------------------|----------------------|--|
|                     | DE                | Permitted deviation | e              | Pipes and fittings permitted deviation |   | empty approx.<br>kg/m | Full approx.<br>kg/m |  |
| 50                  | 58                | +2                  | 3,5            | -0,5                                   | 30                                      | 4,3                   | 6,4                  | 0,18                                       |
| 70                  | 78                |                     | 3,5            | -0,5                                   | 35                                      | 5,9                   | 9,9                  | 0,25                                       |
| 75-S                | 75                |                     | 3,5            | -0,5                                   | 35                                      | 5,7                   | 10,1                 | 0,25                                       |
| 80                  | 83                | -1                  | 3,5            | -0,5                                   | 35                                      | 6,3                   | 10,6                 | 0,26                                       |
| 100                 | 110               |                     | 3,5            | -0,5                                   | 40                                      | 8,5                   | 16,7                 | 0,35                                       |
| 125                 | 135               | +2                  | 4,0            | -0,5                                   | 45                                      | 11,9                  | 24,5                 | 0,42                                       |
| 150                 | 160               | -2                  | 4,0            | -0,5                                   | 50                                      | 14,2                  | 32,2                 | 0,50                                       |
| 200                 | 210               | +2,5                | 5,0            | -1,0                                   | 60                                      | 23,3                  | 54,5                 | 0,65                                       |
| 250                 | 274               |                     | 5,5            | -1,0                                   | 70                                      | 33,5                  | 87,6                 | 0,85                                       |
| 300                 | 326               | -2,5                | 6,0            | -1,0                                   | 80                                      | 43,6                  | 120,6                | 1,02                                       |

# SML pipes and fittings

## — Product overview



| 3000 mm PIPE | DN   | kg/pcs. | ART.NR. | PU |
|--------------|------|---------|---------|----|
|              | 50   | 13,0    | 26620   | 37 |
|              | 70   | 17,7    | 26621   | 41 |
|              | 75-S | 17,0    | 19903   | 41 |
|              | 80   | 18,9    | 26622   | 38 |
|              | 100  | 25,4    | 26623   | 38 |
|              | 125  | 35,7    | 26624   | 23 |
|              | 150  | 42,5    | 26626   | 20 |
|              | 200  | 69,8    | 26627   | 10 |
|              | 250  | 100,5   | 26628   | 8  |
|              | 300  | 130,7   | 26629   | 6  |

| 15° BEND | DN   | kg/pcs. | ART.NR. | X  |
|----------|------|---------|---------|----|
|          | 50   | 0,4     | 11270   | 40 |
|          | 70   | 0,6     | 11269   | 45 |
|          | 75-S | 0,6     | 25935   | 45 |
|          | 80   | 0,7     | 19945   | 45 |
|          | 100  | 1,0     | 10041   | 50 |
|          | 125  | 1,8     | 11268   | 60 |
|          | 150  | 2,6     | 11267   | 65 |
|          | 200  | 4,6     | 19844   | 80 |

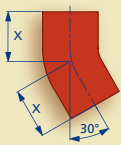
| 22° BEND | DN   | kg/pcs. | ART.NR. | X  |
|----------|------|---------|---------|----|
|          | 75-S | 0,7     | 20916   | 45 |
|          | 100  | 1,3     | 25964   | 50 |

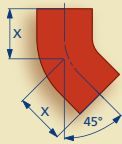
75-S = Scandinavian norm. Further products available on request

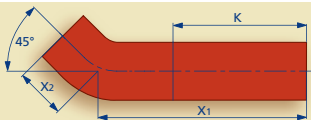
+7 (499) 502-21-00

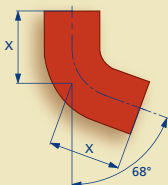
www.bnk-group.com

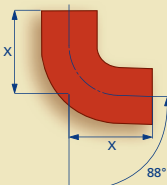
info@bnk-group.com

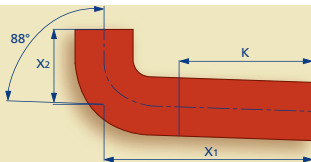
| 30° BEND  | DN   | kg/pcs. | ART.NR. | X   |
|---|------|---------|---------|-----|
|  | 50   | 0,5     | 11266   | 45  |
|   | 70   | 0,7     | 10042   | 50  |
|   | 75-S | 0,7     | 25936   | 50  |
|   | 80   | 0,8     | 19946   | 50  |
|   | 100  | 1,3     | 10043   | 60  |
|   | 125  | 2,1     | 11265   | 70  |
|   | 150  | 3,0     | 11264   | 80  |
|   | 200  | 5,4     | 19845   | 95  |
|   | 250  | 8,0     | 10045   | 110 |
|   | 300  | 14,0    | 10048   | 130 |

| 45° BEND  | DN   | kg/pcs. | ART.NR. | X   |
|---|------|---------|---------|-----|
|  | 50   | 0,5     | 10050   | 50  |
|   | 70   | 0,9     | 10067   | 60  |
|   | 75-S | 0,8     | 15552   | 60  |
|   | 80   | 0,9     | 13875   | 60  |
|   | 100  | 1,6     | 10073   | 70  |
|   | 125  | 2,3     | 10076   | 80  |
|   | 150  | 3,5     | 10079   | 90  |
|   | 200  | 5,7     | 10082   | 110 |
|   | 250  | 10,3    | 18242   | 130 |
|   | 300  | 16,5    | 10096   | 155 |

| BEND WITH LONG 45° LEG  | DN  | kg/pcs. | ART.NR. | X1  | X2 | K   |
|---|-----|---------|---------|-----|----|-----|
|  | 100 | 3,5     | 10101   | 250 | 70 | 180 |

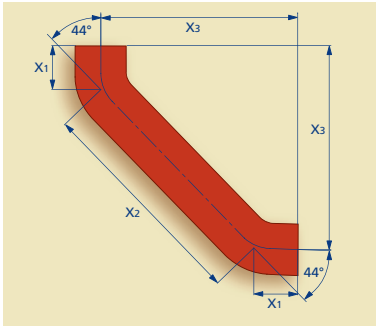
| 68° BEND  | DN   | kg/pcs. | ART.NR. | X   |
|---|------|---------|---------|-----|
|  | 50   | 0,7     | 19709   | 65  |
|   | 70   | 1,1     | 10112   | 75  |
|   | 75-S | 1,1     | 25937   | 75  |
|   | 80   | 1,2     | 23733   | 80  |
|   | 100  | 1,9     | 10113   | 90  |
|   | 125  | 2,9     | 11263   | 105 |
|   | 200  | 4,1     | 11262   | 120 |

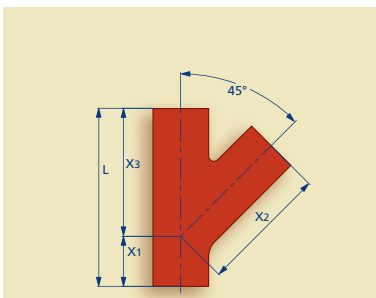
| 88° BEND  | DN   | kg/pcs. | ART.NR. | X   |
|---|------|---------|---------|-----|
|  | 50   | 0,7     | 10118   | 75  |
|   | 70   | 1,2     | 10121   | 90  |
|   | 75-S | 1,2     | 15553   | 90  |
|   | 80   | 1,3     | 13876   | 95  |
|   | 100  | 2,1     | 10125   | 110 |
|   | 125  | 3,2     | 10129   | 125 |
|   | 150  | 4,3     | 10131   | 145 |
|   | 200  | 8,8     | 18241   | 180 |

| BEND WITH LONG 88° LEG  | DN  | kg/pcs. | ART.NR. | X   | X2  | K   |
|---|-----|---------|---------|-----|-----|-----|
|  | 100 | 3,6     | 10109   | 250 | 110 | 140 |

| 88° DOUBLE BEND   | DN  | kg/pcs. | ART.NR. | X1 | X2  | X3  |
|---|-----|---------|---------|----|-----|-----|
|  | 50  | 1,0     | 19115   | 50 | 100 | 121 |
|   | 70  | 1,8     | 19986   | 60 | 120 | 145 |
|   | 80  | 1,9     | 19985   | 60 | 120 | 145 |
|   | 100 | 3,2     | 10152   | 70 | 140 | 170 |
|   | 125 | 4,3     | 10151   | 80 | 160 | 195 |
|   | 150 | 6,2     | 10154   | 90 | 180 | 219 |

75-S = Scandinavian norm. Further products available on request

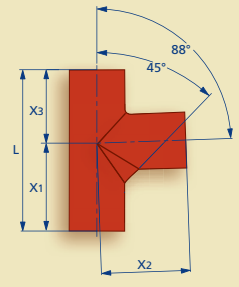
| 88° BEND WITH STRAIGHT LINE   | DN  | kg/pcs. | ART.NR. | X1 | X2  | X3  |
|---|-----|---------|---------|----|-----|-----|
|  | 100 | 4,8     | 10032   | 70 | 312 | 291 |
|   | 125 | 6,4     | 10037   | 80 | 322 | 308 |
|   | 150 | 8,7     | 10039   | 90 | 334 | 326 |

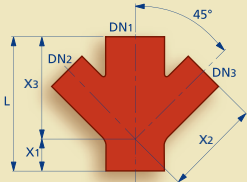
| 45° BRANCH  | DN          | kg/pcs. | ART.NR. | X1  | X2  | X3  | L   |
|---|-------------|---------|---------|-----|-----|-----|-----|
|  | 50 x 50     | 1,4     | 17017   | 50  | 135 | 135 | 185 |
|   | 70 x 50     | 1,6     | 10002   | 40  | 150 | 150 | 190 |
|   | 70 x 70     | 2,1     | 10028   | 55  | 160 | 160 | 215 |
|   | 75-S x 50   | 1,6     | 25950   | 40  | 130 | 130 | 170 |
|   | 75-S x 75-S | 2,1     | 15554   | 55  | 160 | 160 | 215 |
|   | 80 x 50     | 1,6     | 19756   | 45  | 135 | 135 | 180 |
|   | 80 x 80     | 2,3     | 13878   | 60  | 155 | 155 | 215 |
|   | 100 x 50    | 2,3     | 10029   | 35  | 165 | 165 | 200 |
|   | 100 x 70    | 3,0     | 10030   | 50  | 185 | 185 | 235 |
|   | 100 x 75-S  | 3,0     | 15555   | 50  | 185 | 185 | 235 |
|   | 100 x 80    | 3,0     | 13877   | 50  | 170 | 170 | 220 |
|   | 100 x 100   | 4,4     | 10033   | 70  | 205 | 205 | 275 |
|   | 125 x 50    | 3,2     | 11301   | 20  | 185 | 185 | 205 |
|   | 125 x 70    | 4,0     | 11302   | 40  | 200 | 200 | 240 |
|   | 125 x 80    | 4,4     | 23831   | 51  | 189 | 189 | 240 |
|   | 125 x 100   | 5,0     | 10034   | 60  | 220 | 220 | 280 |
|   | 125 x 125   | 6,1     | 10035   | 80  | 240 | 240 | 320 |
|   | 150 x 70    | 5,3     | 11300   | 30  | 215 | 215 | 245 |
|   | 150 x 80    | 5,3     | 21002   | 115 | 140 | 105 | 220 |
|   | 150 x 100   | 6,5     | 10060   | 55  | 240 | 240 | 295 |
|   | 150 x 125   | 7,2     | 10061   | 70  | 255 | 255 | 325 |
|   | 150 x 150   | 8,3     | 10062   | 90  | 265 | 265 | 355 |
|   | 200 x 100   | 10,0    | 11299   | 40  | 265 | 265 | 305 |
|   | 200 x 125   | 11,6    | 11298   | 55  | 280 | 280 | 335 |
|   | 200 x 150   | 13,3    | 10063   | 75  | 300 | 300 | 375 |
|   | 200 x 200   | 17,2    | 11297   | 115 | 340 | 340 | 455 |
|   | 250 x 100   | 13,6    | 10064   | 15  | 310 | 310 | 325 |
|   | 250 x 125   | 16,3    | 10065   | 35  | 335 | 335 | 370 |
|   | 250 x 200   | 20,4    | 10068   | 90  | 385 | 385 | 475 |
|   | 250 x 250   | 31,5    | 10071   | 130 | 430 | 430 | 560 |
|   | 300 x 125   | 21,0    | 10072   | 15  | 360 | 360 | 375 |
|   | 300 x 200   | 30,0    | 10074   | 70  | 440 | 415 | 485 |
|   | 300 x 250   | 36,9    | 10075   | 115 | 465 | 465 | 580 |
|   | 300 x 300   | 48,2    | 10077   | 155 | 505 | 505 | 660 |

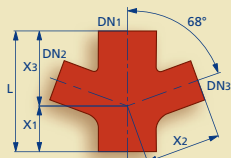
75-S = Scandinavian norm. Further products available on request



| 68° BRANCH  | DN        | kg/pcs. | ART.NR. | X1 | X2  | X3  | L   |
|---|-----------|---------|---------|----|-----|-----|-----|
|  | 50 x 50   | 0,9     | 24870   | 55 | 80  | 80  | 135 |
|   | 70 x 50   | 1,0     | 24869   | 55 | 90  | 90  | 145 |
|   | 70 x 70   | 1,2     | 22405   | 70 | 100 | 100 | 170 |
|   | 100 x 50  | 1,9     | 10080   | 55 | 110 | 100 | 155 |
|   | 100 x 70  | 2,4     | 10081   | 70 | 120 | 110 | 180 |
|   | 100 x 100 | 2,9     | 10083   | 85 | 130 | 130 | 215 |
|   | 125 x 100 | 3,9     | 11257   | 85 | 145 | 140 | 225 |

| 88° BRANCH  | DN          | kg/pcs. | ART.NR. | X1  | X2  | X3  | L   |
|---|-------------|---------|---------|-----|-----|-----|-----|
|  | 50 x 50     | 1,1     | 11296   | 79  | 80  | 66  | 145 |
|   | 70 x 50     | 1,3     | 10086   | 83  | 90  | 72  | 155 |
|   | 70 x 70     | 1,7     | 10087   | 97  | 95  | 83  | 180 |
|   | 75-S x 75-S | 1,6     | 20409   | 97  | 95  | 83  | 180 |
|   | 80 x 50     | 1,4     | 19757   | 85  | 90  | 75  | 160 |
|   | 80 x 80     | 1,8     | 13880   | 95  | 95  | 85  | 180 |
|   | 100 x 50    | 2,1     | 10088   | 94  | 105 | 76  | 170 |
|   | 100 x 70    | 2,4     | 10089   | 102 | 110 | 88  | 190 |
|   | 100 x 75-S  | 2,3     | 18088   | 102 | 110 | 88  | 190 |
|   | 100 x 80    | 2,4     | 13879   | 100 | 110 | 90  | 190 |
|   | 100 x 100   | 2,9     | 10090   | 115 | 115 | 105 | 220 |
|   | 125 x 50    | 3,0     | 11295   | 98  | 120 | 82  | 180 |
|   | 125 x 70    | 3,6     | 10097   | 107 | 125 | 93  | 200 |
|   | 125 x 80    | 3,4     | 23992   | 105 | 125 | 100 | 205 |
|   | 125 x 100   | 4,0     | 11294   | 125 | 130 | 110 | 235 |
|   | 125 x 125   | 4,6     | 19841   | 137 | 135 | 123 | 260 |
|   | 150 x 50    | 4,4     | 10095   | 100 | 140 | 100 | 200 |
|   | 150 x 100   | 4,7     | 10099   | 130 | 145 | 115 | 245 |
| 150 x 125   | 6,2         | 19842   | 147     | 150 | 128 | 275 |     |
| 150 x 150   | 6,9         | 19843   | 158     | 155 | 142 | 300 |     |

| 45° DOUBLE BRANCH   | DN          | kg/pcs. | ART.NR. | X1 | X2  | X3  | L   |
|---|-------------|---------|---------|----|-----|-----|-----|
|  | 100x100x100 | 3,8     | 21186   | 70 | 130 | 130 | 215 |

| 68° DOUBLE BRANCH   | DN          | kg/pcs. | ART.NR. | X1 | X2  | X3  | L   |
|---|-------------|---------|---------|----|-----|-----|-----|
|  | 100x100x100 | 3,6     | 20463   | 85 | 130 | 130 | 215 |

75-S = Scandinavian norm. Further products available on request

| 88° DOUBLE BRANCH | DN          | kg/pcs. | ART.NR. | X1  | X2  | X3  | L   |
|-------------------|-------------|---------|---------|-----|-----|-----|-----|
|                   | 100x50x50   | 2,2     | 11288   | 100 | 80  | 105 | 180 |
|                   | 100x70x70   | 3,0     | 20619   | 102 | 88  | 110 | 190 |
|                   | 100x100x100 | 3,9     | 10138   | 120 | 120 | 120 | 230 |
|                   | 125x100x100 | 5,0     | 19846   | 130 | 115 | 135 | 245 |
|                   | 150x100x100 | 7,1     | 19847   | 130 | 115 | 145 | 245 |

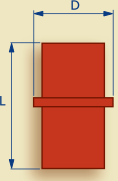
| 88° ANGLE DOUBLE BRANCH | DN          | kg/pcs. | ART.NR. | X1  | X2  | X3  | L   |
|-------------------------|-------------|---------|---------|-----|-----|-----|-----|
|                         | 100x100x100 | 3,8     | 10146   | 115 | 120 | 105 | 220 |
|                         | 150x100x100 | 6,1     | 21826   | 130 | 130 | 145 | 245 |

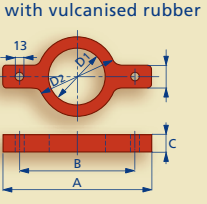
| ECCENTRIC REDUCER | DN       | kg/pcs. | ART.NR. | A    | L   |
|-------------------|----------|---------|---------|------|-----|
|                   | 70/50    | 0,7     | 10139   | 10   | 75  |
|                   | 75-S/50  | 0,6     | 20410   | 10   | 75  |
|                   | 80/50    | 0,7     | 13884   | 13   | 80  |
|                   | 100/50   | 0,9     | 10140   | 25   | 80  |
|                   | 100/70   | 0,9     | 10142   | 16   | 85  |
|                   | 100/75-S | 0,9     | 18089   | 10   | 75  |
|                   | 100/80   | 1,0     | 13882   | 14   | 90  |
|                   | 125/50   | 1,4     | 19856   | 38,5 | 85  |
|                   | 125/70   | 1,6     | 10144   | 28,5 | 90  |
|                   | 125/80   | 1,7     | 23833   | 26   | 95  |
|                   | 125/100  | 1,8     | 10145   | 12,5 | 95  |
|                   | 150/70   | 2,2     | 11282   | 41   | 100 |
|                   | 150/80   | 2,3     | 20676   | 39   | 100 |
|                   | 150/100  | 2,4     | 10147   | 25   | 105 |
|                   | 150/125  | 2,6     | 10149   | 12,5 | 110 |
|                   | 200/100  | 4,1     | 18654   | 50   | 115 |
|                   | 200/125  | 4,1     | 19762   | 37,5 | 120 |
|                   | 200/150  | 4,3     | 18243   | 25   | 125 |
|                   | 250/150  | 6,8     | 18244   | 57   | 140 |
|                   | 250/200  | 7,0     | 18245   | 32   | 145 |
| 300/250           | 12,4     | 19126   | 26      | 170  |     |

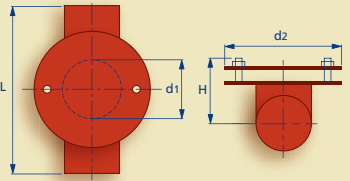
| S-BEND | DN  | kg/pcs. | ART.NR. | A      |
|--------|-----|---------|---------|--------|
|        | 100 | 2,5     | 11261   | 65 mm  |
|        |     | 3,4     | 11258   | 130 mm |

75-S = Scandinavian norm. Further products available on request

| PLUG  | DN   | kg/pcs. | ART.NR. | L  |
|---|------|---------|---------|----|
|  | 50   | 0,3     | 11284   | 30 |
|   | 70   | 0,4     | 11287   | 35 |
|   | 75-S | 0,4     | 25952   | 35 |
|   | 80   | 0,5     | 13888   | 35 |
|   | 100  | 0,8     | 10150   | 40 |
|   | 125  | 1,1     | 19114   | 45 |
|   | 150  | 1,6     | 11290   | 50 |
|   | 200  | 3,1     | 19850   | 60 |
|   | 250  | 6,0     | 19851   | 70 |
|   | 300  | 9,5     | 21633   | 80 |

| DOWNPIPE BRACKET  | DN  | kg/pcs. | ART.NR. | D   | L   |
|---|-----|---------|---------|-----|-----|
|  | 50  | 1,3     | 19852   | 87  | 200 |
|   | 70  | 1,8     | 11276   | 106 | 200 |
|   | 80  | 1,8     | 13887   | 118 | 220 |
|   | 100 | 2,7     | 10106   | 145 | 200 |
|   | 125 | 3,0     | 11275   | 170 | 200 |
|   | 150 | 4,0     | 11274   | 195 | 200 |
|   | 200 | 5,9     | 20499   | 245 | 200 |
|   | 250 | 18,7    | 19854   | 340 | 300 |
|   | 300 | 24,0    | 19855   | 390 | 300 |

| BEARING FOR DOWNPIPE BRACKET   | DN  | kg/pcs. | ART.NR. | D1  | D2  | A   | B   | C  |
|--|-----|---------|---------|-----|-----|-----|-----|----|
|  | 50  | 0,8     | 10104   | 61  | 93  | 195 | 148 | 25 |
|  | 70  | 1,0     | 10024   | 81  | 114 | 215 | 166 | 26 |
|  | 80  | 1,1     | 24013   | 87  | 133 | 218 | 175 | 19 |
|  | 100 | 1,4     | 10027   | 115 | 147 | 250 | 202 | 28 |
|  | 125 | 1,5     | 21139   | 138 | 171 | 275 | 224 | 28 |
|  | 150 | 2,0     | 21918   | 163 | 199 | 300 | 252 | 30 |
|  | 200 | 3,0     | 21237   | 215 | 250 | 360 | 310 | 30 |

| CLEANING PIPE WITH ○ COVER  | DN   | kg/pcs. | ART.NR. | H  | d1  | d2  | L   |
|---|------|---------|---------|----|-----|-----|-----|
|  | 50   | 2,3     | 13226   | 59 | 53  | 105 | 190 |
|   | 70   | 2,8     | 10133   | 69 | 73  | 125 | 210 |
|   | 75-S | 2,8     | 21783   | 68 | 73  | 125 | 210 |
|   | 80   | 3,5     | 13885   | 71 | 73  | 125 | 210 |
|   | 100  | 4,8     | 10135   | 84 | 104 | 159 | 260 |

| CLEANING PIPE WITH □ COVER  | DN  | kg/pcs. | ART.NR. | H   | G   | d   | A   | F   | L   |
|---|-----|---------|---------|-----|-----|-----|-----|-----|-----|
|  | 100 | 7,0     | 10122   | 83  | 160 | 100 | 200 | 230 | 340 |
|   | 125 | 10,0    | 10128   | 101 | 190 | 125 | 225 | 255 | 370 |
|   | 150 | 12,8    | 10130   | 112 | 215 | 150 | 250 | 280 | 395 |
|   | 200 | 25,2    | 18468   | 137 | 265 | 200 | 300 | 330 | 465 |
|   | 250 | 36,5    | 18469   | 170 | 330 | 259 | 350 | 426 | 570 |
|   | 300 | 51,0    | 18471   | 195 | 380 | 309 | 400 | 476 | 640 |

| CLEANING PIPE WITH TOGGLE COVER   | DN  | kg/pcs. | ART.NR. | A   | F   | d   | H     | L   |
|---|-----|---------|---------|-----|-----|-----|-------|-----|
|  | 100 | 9,2     | 10114   | 250 | 275 | 110 | 160   | 400 |
|   | 125 | 10,2    | 10117   | 250 | 275 | 135 | 172,5 | 410 |
|   | 150 | 11,5    | 10119   | 250 | 275 | 160 | 185   | 420 |
|   | 200 | 17,9    | 10120   | 250 | 275 | 210 | 210   | 440 |

75-S= Scandinavian norm. Further products available on request



| SIPHON | DN  | kg/pcs. | ART.NR. | l   | h   | X1  | X2  | X3  | X4  | w   |
|--------|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|
|        | 50  | 2,9     | 20182   | 190 | 250 | 182 | 68  | 122 | 68  | 60  |
|        | 70  | 5,8     | 20170   | 265 | 293 | 200 | 93  | 172 | 93  | 60  |
|        | 80  | 5,9     | 23848   | 265 | 293 | 200 | 93  | 172 | 93  | 60  |
|        | 100 | 9,5     | 17988   | 325 | 392 | 282 | 110 | 215 | 110 | 100 |
|        | 125 | 13,0    | 19859   | 390 | 446 | 316 | 130 | 260 | 130 | 100 |
|        | 150 | 21,8    | 20191   | 470 | 493 | 348 | 145 | 325 | 145 | 100 |
|        | 200 | 38,4    | 20177   | 600 | 600 | 420 | 180 | 400 | 200 | 100 |

| RAINWATER SIPHON | DN  | kg/pcs. | ART.NR. | l   | l2  | l3  | a   | b   |
|------------------|-----|---------|---------|-----|-----|-----|-----|-----|
|                  | 100 | 18,5    | 11271   | 588 | 90  | 408 | 276 | 124 |
|                  | 125 | 28,5    | 11272   | 687 | 100 | 487 | 344 | 144 |

75-5 = Scandinavian norm. Further products available on request

## SML couplings

### Product overview



| AXIAL RESTRAINT          |  |                       |     |     |      |     |     |     |         |         |         | compatibility chart      |                       |                       |          |                 |
|--------------------------|--|-----------------------|-----|-----|------|-----|-----|-----|---------|---------|---------|--------------------------|-----------------------|-----------------------|----------|-----------------|
|                          |  | DN and pressure (bar) |     |     |      |     |     |     |         |         |         | PREIS®<br>Rapid coupling | PREIS®<br>Rapid clamp | PREIS®<br>CV-coupling | CV-clamp | Universal-clamp |
|                          |  | 50                    | 70  | 80  | 75-5 | 100 | 125 | 150 | 200     | 250     | 300     |                          |                       |                       |          |                 |
| PREIS®<br>Rapid coupling |  | 0,5                   | 0,5 | 0,5 | 0,5  | 0,5 | 0,5 | 0,5 | 0,5     | 0,3     | 0,3     |                          | ✓                     | ✗                     | ✓        | ✓               |
| PREIS®<br>Rapid clamp    |  | 10                    | 10  | 10  | 10   | 7   | 6   | 4   | 3       | -       | -       | ✓                        |                       | ✗                     | ✗        | ✗               |
| PREIS®<br>CV-coupling    |  | -                     | -   | -   | -    | -   | -   | -   | -       | -       | -       | ✗                        | ✗                     |                       | ✓        | ✓               |
| CV-clamp                 |  | 10                    | 10  | 10  | 10   | 10  | 5   | 5   | 3       | -       | -       | ✓                        | ✗                     | ✓                     |          | ✗               |
| Universal-clamp          |  | -                     | -   | -   | -    | -   | -   | -   | Rapid 5 | Rapid 3 | Rapid 3 | ✓                        | ✗                     | ✓                     | ✗        |                 |
|                          |  | -                     | -   | -   | -    | -   | -   | -   | -       | CV 5    | CV 3    | CV 3                     | ✓                     | ✗                     | ✓        | ✗               |

# Couplings and clamps

## Properties

| PREIS® Rapid coupling with EPDM gasket   |      | DN  | PU    | ART.NR. | Torque (Nm) |
|--|------|-----|-------|---------|-------------|
|  <ul style="list-style-type: none"> <li>• Building component approved according to EN 877</li> <li>• Material: chromium steel 1.4520</li> <li>• A special coating provides a high protection level against corrosion of all lockers and fittings</li> <li>• Axial restraint up to 0.5 bar inner pressure</li> <li>• Locked with only one screw (up to DN100)</li> <li>• Tightening without special tools, only visual check necessary</li> <li>• Quick assembly and disassembly</li> <li>• Integrated EPDM lining</li> <li>• High lateral rigidity enables the pipes to be pre-assembled</li> <li>• Meets the corresponding fire safety requirements</li> </ul> | 50   | 100 | 20903 | 13-15   |             |
|  | 70   | 100 | 20904 | 13-15   |             |
|  | 75-S | 100 | 23335 | 13-15   |             |
|  | 80   | 100 | 20905 | 13-15   |             |
|  | 100  | 50  | 20906 | 13-15   |             |
|  | 125  | 35  | 20907 | 13-15   |             |
|  | 150  | 25  | 20908 | 13-15   |             |
|  | 200  | 15  | 27193 | 13-15   |             |

| PREIS® Rapid INOX coupling with EPDM gasket  |      | DN | PU    | ART.NR. | Torque (Nm) |
|--|------|----|-------|---------|-------------|
|  <ul style="list-style-type: none"> <li>• Applications: for underground laying and may also be exposed to all weather conditions for aggressive environments (when air contains salt, ...)</li> <li>• Axial restraint up to 0.5 bar inner pressure</li> <li>• Locked with only one screw (up to DN100)</li> <li>• Materials:                             <ul style="list-style-type: none"> <li>- Coupling: stainless steel V4A 1.4571</li> <li>- Locked by a screw M6 x 45 mm, 6 mm</li> <li>Hexagon socket: stainless steel A4-80</li> <li>- Clamping bolt: stainless steel V4A 1.4404</li> <li>- Rubber gasket for sound reduction: EPDM – Shore=55° +/-5°</li> </ul> </li> </ul> | 50   | 50 | 26680 | 13-15   |             |
|  | 70   | 50 | 26682 | 13-15   |             |
|  | 75-S | 50 | 26683 | 13-15   |             |
|  | 80*  | 50 | 26684 | 13-15   |             |
|  | 100  | 50 | 26685 | 13-15   |             |
|  | 125* | 35 | 26686 | 13-15   |             |
|  | 150  | 25 | 26687 | 13-15   |             |

| PREIS® CV coupling with EPDM gasket  |      | DN  | PU    | ART.NR. | Torque (Nm) |
|--|------|-----|-------|---------|-------------|
|  <ul style="list-style-type: none"> <li>• Tried and tested coupling for all standard application in wastewater pipelines</li> <li>• Double screw locked</li> <li>• Suitable for situations with reduced height</li> <li>• May also be used for repair work</li> <li>• Does not meet the fire safety requirements</li> </ul> | 50   | 100 | 18405 | 4-6     |             |
|  | 70   | 100 | 18406 | 4-6     |             |
|  | 75-S | 100 | 18408 | 4-6     |             |
|  | 100  | 50  | 18409 | 10-12   |             |
|  | 125  | 25  | 18410 | 10-12   |             |
|  | 150  | 20  | 18411 | 10-12   |             |
|  | 200  | 10  | 18412 | 15-20   |             |
|  | 250  | 10  | 18413 | 15-20   |             |
|  | 300  | 10  | 18414 | 15-20   |             |

| PREIS® Rapid clamp  |       | DN | PU    | ART.NR. | Torque (Nm) |
|---|-------|----|-------|---------|-------------|
|  <ul style="list-style-type: none"> <li>• Material: DD11 - galvanized</li> <li>• Clip collar with axial restraint</li> <li>• For internal pressure loads up to 10 bar</li> <li>• Two parts clip collar with claws and four Allen screws (up to DN 125)</li> <li>• The same tools to be used as for PREIS® Rapid - couplings, therefore, no change of tools necessary = safes time</li> <li>• Applications: Pressurized pipes, rainwater and wastewater pipelines in areas affected by backwater</li> </ul> | 50    | 25 | 21855 | 27-29   |             |
|   | 70/80 | 25 | 21856 | 27-29   |             |
|   | 100   | 25 | 21857 | 27-29   |             |
|   | 125   | 10 | 21858 | 27-29   |             |
|   | 150   | 10 | 21859 | 27-29   |             |

\* in preparation

| CV clamp  | DN      | PU | ART.NR. | Torque (Nm)      |
|---|---------|----|---------|------------------|
|  <ul style="list-style-type: none"> <li>• Clip collar with axial restraint</li> <li>• For internal pressure loads up to 10 bar</li> <li>• Material: galvanized steel</li> <li>• Locker: galvanized steel</li> <li>• Screw size:                             <ul style="list-style-type: none"> <li>- DN 50-80: cylinder head bolt with hexagon socket including flat washer M8 x 50</li> <li>- DN 100-150: cylinder head bolt with hexagon socket including flat washer M10 x 45</li> </ul> </li> <li>• Applications: Rainwater and wastewater pipelines in areas at risk from backwater</li> </ul>  | 50      | 10 | 24768   | 12-14            |
|   | 70/75-S | 10 | 24769   | 12-14            |
|   | 80      | 10 | 24770   | 12-14            |
|   | 100     | 10 | 24771   | 32-35            |
|   | 125     | 10 | 24772   | 32-35            |
|   | 150     | 5  | 24348   | 45-49            |
|   | 200     | 1  | 24349   | 40-50            |
| Universal clamp   | DN      | PU | ART.NR. | Torque (Nm)      |
|  <ul style="list-style-type: none"> <li>• The clamp for high tensile loads                             <ul style="list-style-type: none"> <li>- PREIS® RAPID for pressure loads up to 10 bar</li> <li>- CV for a maximum pressure load of 5 bar (DN 50–200)</li> <li>- CV for a maximum pressure load of 3 bar (DN 250–300)</li> </ul> </li> <li>• Only two screws → shorter assembly time</li> <li>• Block tightening → no special tools required (visual check)</li> <li>• Only one clamp for several couplings → a 15% reduction in stockholding costs</li> <li>• Applications: Pump pressure lines for pump stations, rainwater and wastewater pipelines in areas at risk from backwater</li> </ul> | 200     | 4  | 19997   | Block tightening |
|   | 250     | 4  | 23196   | Block tightening |
|   | 300     | 4  | 23197   | Block tightening |
| Konfix  | DN      | PU | ART.NR. | —                |
|  <ul style="list-style-type: none"> <li>• For connecting pipes to other materials (steel or plastics) to SML</li> <li>• With NORMACLAMP® TORRO® in 12 mm range; stainless steel band 1.4016, powerful worm thread clamp</li> <li>• Material EPDM</li> </ul>  | 50      | 50 | 18240   | —                |
|   | 70      | 50 | 19120   | —                |
|   | 80      | 20 | 19999   | —                |
|   | 100     | 20 | 18656   | —                |
|   | 125     | 10 | 19121   | —                |
| Rollfix   | DN      | PU | ART.NR. | —                |
|  <ul style="list-style-type: none"> <li>• For connecting cast iron pipes to HT-pipes or to PVC pipes with sockets or for connecting PVC-pipes to cast iron pipes with socket</li> <li>• Saves time</li> <li>• No double stock-keeping necessary (Mengenring and O-ring)</li> <li>• Safe connection</li> <li>• Material EPDM</li> </ul>   | 50      | 1  | 25771   | —                |
|   | 70      | 1  | 25772   | —                |
|   | 100     | 1  | 25773   | —                |
|   | 125     | 1  | 26305   | —                |
|   | 150     | 1  | 26308   | —                |
|   | 200     | 1  | 26309   | —                |




# Universal couplings and connections for transitions


## Universal coupling

Universal couplings and joints may be used for connecting pipes of different materials (SML, stoneware, LORO-X, eternit, skolan, plastic pipes, etc.). The possibilities of use of these couplings differ in resistance to pressure and in resistance to shear strength.

### Universal coupling LP 0.6 bar \*

| <b>Fields of applications:</b> max. internal pressure 0.6 bar without shear strength<br><b>Holding range:</b> from 24 to 225 mm<br><b>Recommended torque:</b> up to 100mm - 3 Nm / from 100 mm - 6 Nm | Example:             |                          |                    |             |  |
|---|----------------------|--------------------------|--------------------|-------------|---|
|   | Product denomination | Span d <sub>i</sub> (mm) | Profile width (mm) | Weight (kg) |   |
|   | ALP115               | 100-115                  | 120                | 0,45        |   |


### Universal coupling HP 2.5 bar \*

| <b>Fields of applications:</b> max. internal pressure 2.5 bar, exposed to shear strength<br><b>Holding range:</b> from 55 to 385 mm<br><b>Recommended torque:</b> 10 Nm | Example:             |                          |                    |             |  |
|---|----------------------|--------------------------|--------------------|-------------|--|
|   | Product denomination | Span d <sub>i</sub> (mm) | Profile width (mm) | Weight (kg) |  |
|   | AHP115               | 100-115                  | 120                | 0,80        |  |

## Universal joint for transitions

Universal joints may be used for reliable and cost-efficient transitions or changes of nominal width for all pipe materials in domestic buildings. When connecting pipes with different nominal width, external diameters or different materials special attention has to be paid to the flow direction.

### Universal joint 0.6 bar \*

| <b>Fields of applications:</b> up to 0.6 bar Internal pressure, without shear strength<br><b>Holding range:</b> from 32 to 460 mm<br><b>Recommended torque:</b> up to 100 mm - 3 Nm / from 100 mm - 6 Nm | Example:             |                            |                            |                    |             |  |
|--|----------------------|----------------------------|----------------------------|--------------------|-------------|---|
|  | Product denomination | Span A d <sub>i</sub> (mm) | Span B d <sub>i</sub> (mm) | Profile width (mm) | Weight (kg) |   |
|  | AUG1153              | 100-115                    | 40-50                      | 120                | 0,45        |   |

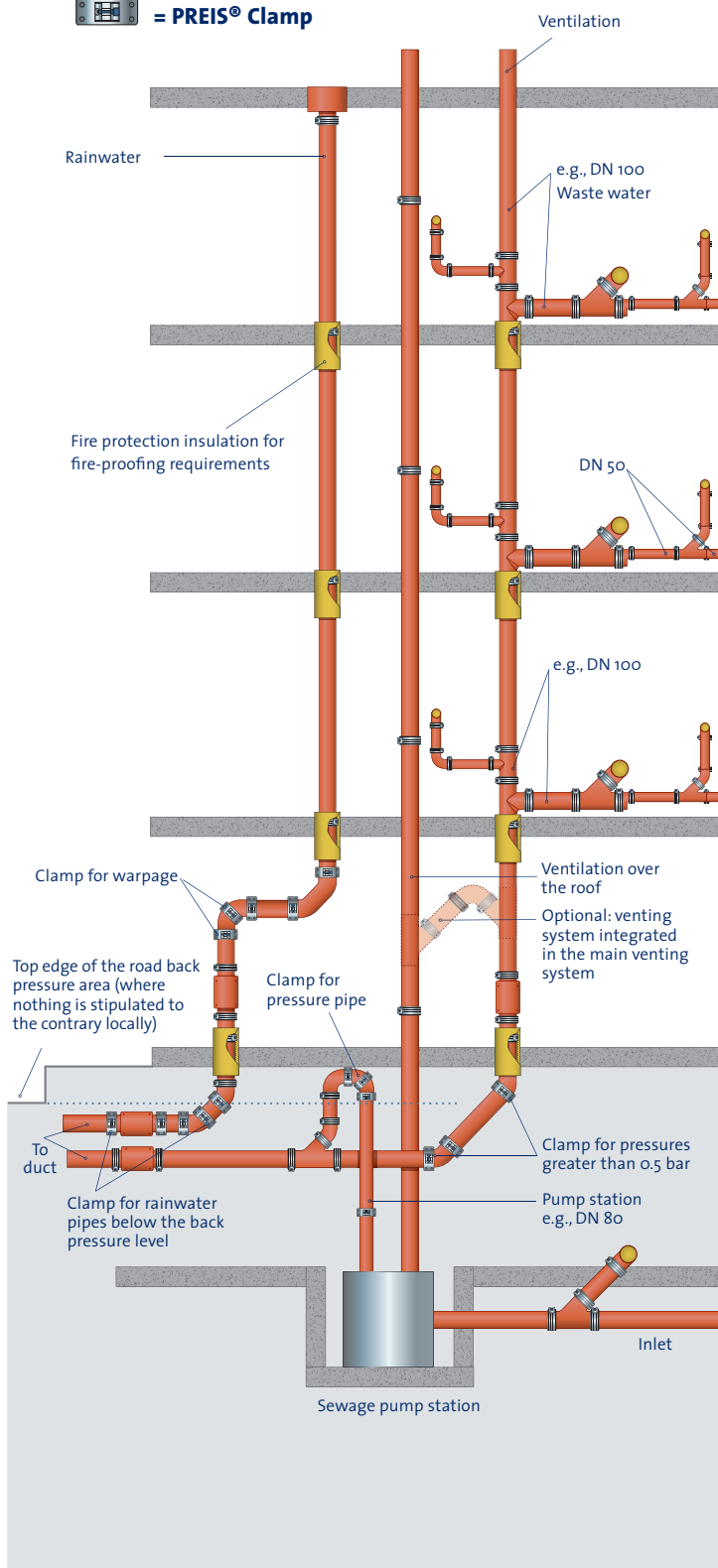
\*) **Material:** Universal joints and universal couplings are made of high-quality, ozone-resistant EPDM-elastomer (ethylene-propylenediene-caoutchouc). Clamping braces made from austenitic stainless premium steel (1.4301,V2A). **Resistance to chemicals:** Contact with benzine has to be avoided and it may be exposed to oil or solvents only in very restricted circumstances. High resistance to acids and alkaline solutions. Suitable for underground installation. Resistant to UV light. **Heat resistance:** between -40°C and +120°C.

# Assembly and installation instructions



 = PREIS® Rapid coupling

 = PREIS® Clamp



**PREIS® SML pipes, fittings and coupling systems are produced and inspected according to EN 877.**

**The SML pipes are cut to the required length directly from the personnel working with the material. Pipes and fittings are joined with suitable pipe clamps.**

Horizontal pipes have to be adequately fastened at all turns and branches. Downpipes have to be fastened at a maximum distance of 2 m. In buildings with 5 floors or more, the downpipes of DN 100 or larger should be secured against sinking by means of a downpipe support. Additionally, for higher buildings a downpipe support should be fitted at every subsequent fifth storey.

Drainage pipes are planned as unpressurized gravity flow lines. However, this does not exclude the pipe to be under pressure if certain operating conditions occur. As drainage and ventilation pipes are subject to possible interactions between the pipes and their environment, they have to be permanently leak-tight against internal and external pressure of between 0 and 0.5 bar. To sustain this pressure, those pipe parts subject to longitudinal movement must be fitted along the longitudinal axis, properly supported and secured.

This kind of fitting has to be used whenever interior pressure exceeding 0.5 bar may arise in the drainage pipes, such as in the following cases:

- **Rainwater pipes**
- **Pipes in the backwater area**
- **Wastewater pipes which run through more than one basement without further outlet**
- **Pressure pipes at wastewater pumps.**

Non-friction-fitted pipelines subject to possible internal pressure or pressure developing during operation. These pipes must be provided with a suitable fixture, above all along the turns, to secure the axes from slipping apart and separating.

The required resistance of the pipe and fitting connections to longitudinal forces is achieved by installing additional clamps (internal pressure load up to 10 bar possible) at the joints.

*Further information on technical issues can be found in our brochure for technical specifications and details.*



This document is not exhaustive. No liability is assumed for printing or type setting errors. Version: August 2017



#### Head office

##### **PREIS & CO Ges.m.b.H**

Josef Nitsch-Straße 5  
A-2763 Pernitz, Austria  
Phone: +43 (0)2632/733 55-0  
Fax: +43 (0)2632/729 76  
office@preis-co.at



#### Foundry products

##### **FERRO-PREIS d.o.o**

Dr. Tome Bratkovica 2  
HR-40000 Cakovec, Croatia  
Phone: +385 (0)40/384 206  
Fax: +385 (0)40/384 209  
office@ferro-preis.com

**WEBSITE.** Stay up-to-date and visit our homepage  
[www.preisgroup.com](http://www.preisgroup.com)

Website

### Your PREIS® SML sales representative:

115088, Moscow,  
Ugreshskaya st., 2, str. 146  
tel/fax: +7 (499) 502-21-00  
E-mail: info@bnk-group.com

195197, St Petersburg,  
17-ya Liniya V.O., 52, korp. 2  
tel: +7 (812) 602-21-00  
E-mail: spb@bnk-group.com

420061, Kazan,  
Zinina st., 7  
tel: +7 (927) 454-21-00  
E-mail: kzn@bnk-group.com

[www.bnk-group.com](http://www.bnk-group.com)