

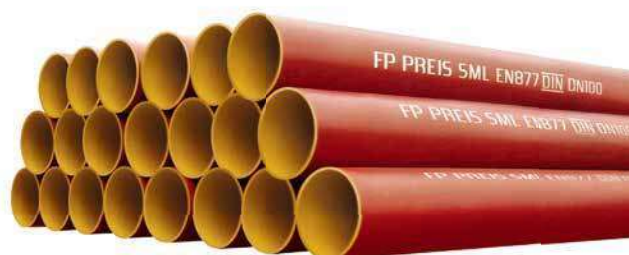
# PREIS®

## 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 manufactures grey cast iron products containing flake granite (lamellar graphite).**

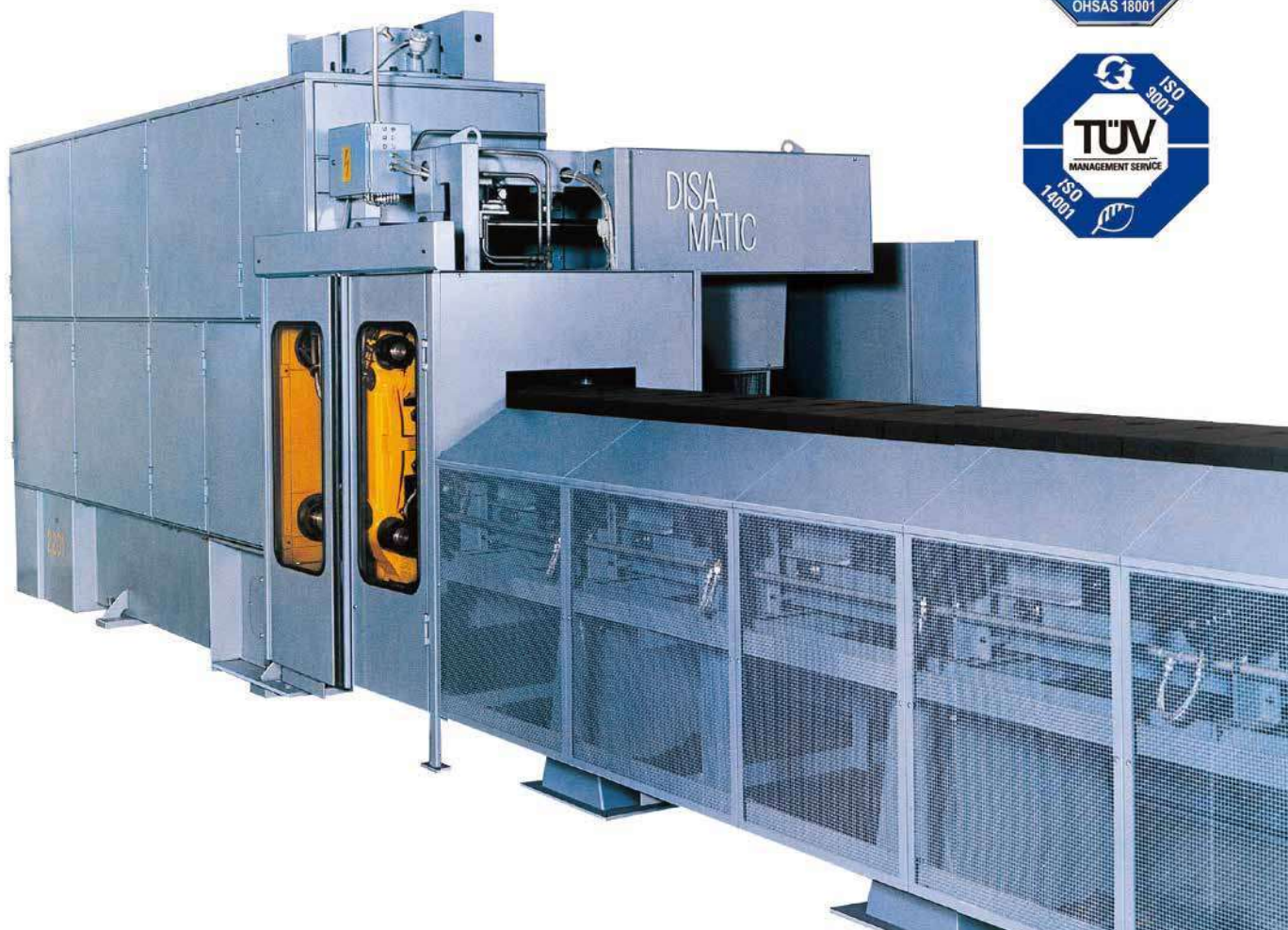
The **FERRO-PREIS** plant is equipped with state of the art machinery. This enables us to produce in an efficient and environment-friendly way.

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

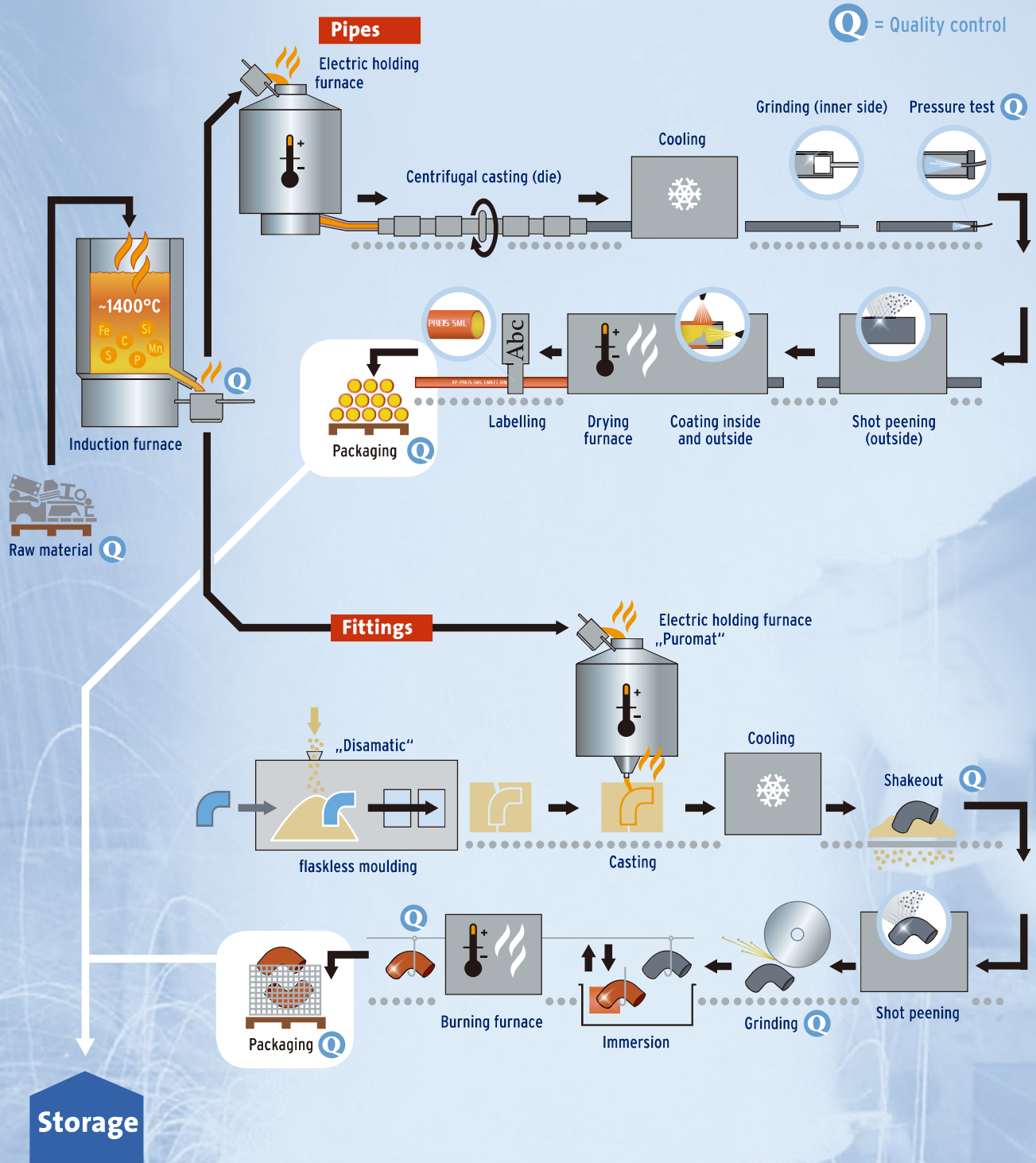
Hence, for very complex geometric shapes of cast iron parts we use a state-of-the-art 3-D measuring system during on-going product development and for carrying out inspection of the products.

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





# Reduce corrosion to the max!



## Zinc coating

*„To enhance corrosion performance, we apply an extra layer of zinc coating underneath the external epoxy coating!“*

With this new layer of external coating, our drainage system made of cast iron is able to withstand atmospheric corrosion in coastal regions. We apply our zinc coating by spray metallising. Molten metal is sprayed with high speed onto the surface of our pipes. This creates a instantly solidified layer of protection for the iron.

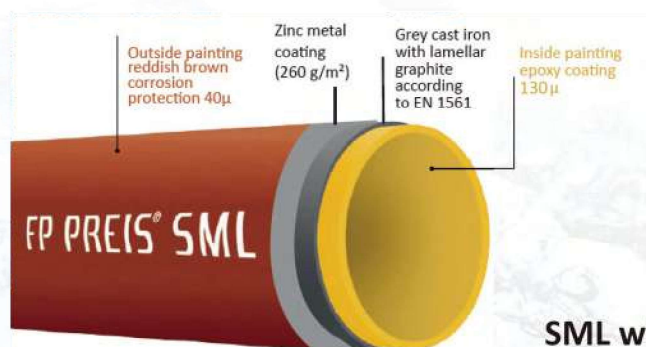
## A strong drainage system for difficult atmospheric conditions



Atmospheric reactions of the air oxygen in coastal regions can cause problems to metallic surfaces if not suitable protected. This problem is enhanced by climatic stress like atmospheric pollution and acidic aerosols.

In Hong Kong, the main pollutants is sulfur dioxide, various nitrogen oxides, chlorides and dust, mainly coming from continental areas. These atmospheric elements react with the surface of a cast iron drainage system at ambient air temperature. Moisture and pollutants combine to create an electrolyte film.

**With our new Zinc coating this is no reason to make you worry! Zinc metal coatings are an excellent corrosion protection and very powerful in creating an overall impact in sustainability by extending the lifespan of our cast iron drainage system.**

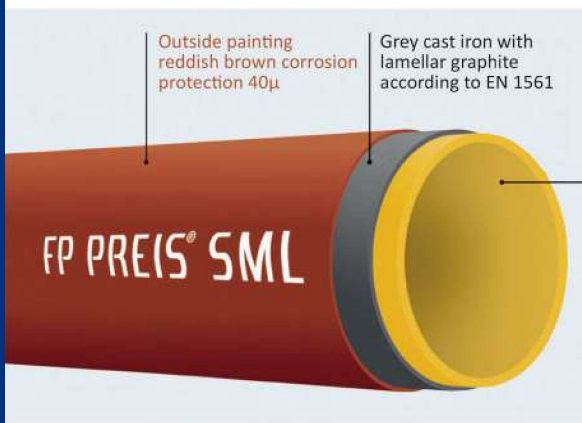


SML with zinc coating

# Tested quality for the most demanding requirements

For more than two decades, Preis GmbH holds a leading position amongst European producers for cast iron drainage systems.

Thanks to their superior material characteristics, cast iron drainage systems, produced by the European Standard EN 877, grant for a rugged and a long-lasting pipeline system for building drainage. They also fulfill the high safety demand for modern technical building requirements, such as sound insulation and fireproofing, are mostly produced from recyclable materials and therefore exceptionally eco-friendly and sustainable.



Outside painting reddish brown corrosion protection 40µ

Grey cast iron with lamellar graphite according to EN 1561

Inside painting epoxy coating 130 µ

- for standard building drainage applications
- temperature resistant
- dimensionally stable and placeable in concrete
- overpaintable with commercial paints



Epoxy resin cover coating at least 60 µ thick

Zinc coating 130 g/m<sup>2</sup>

Grey cast iron with lamellar graphite according to EN 1561

Double coating of the interior fully cross-linked epoxy resin layers, 260 µ (2x 130 µ)

- for aggressive wastewater (canteen-kitchens, laboratories,...)
- temperature resistant
- dimensionally stable and groundable
- placeable in concrete



Epoxy resin cover coating at least 80 µ thick

Zinc coating 2 x 20 µ

Grey cast iron with lamellar graphite according to EN 1561

Inside painting epoxy coating 130 µ

- for drainage application for bridges
- temperature resistant
- dimensionally stable and placeable in concrete
- overpaintable with commercial paints



## 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

## 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				

EN 877



# Sound insulation

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

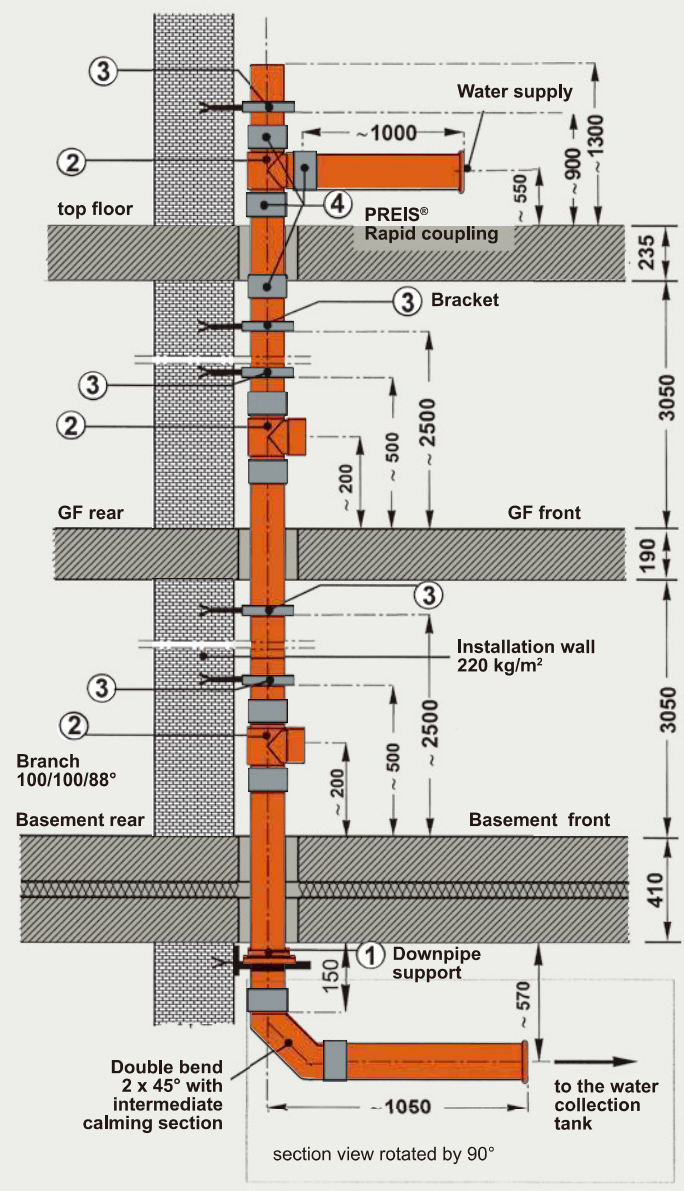
Due to the high density of cast iron and the buffer effect of the rubber lining in the couplings, sound transmission is reduced to a minimum so that the system is a grant for silent drainage. This provides the basis for general well-being in both, homes and offices, which is required by law and laid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

## Testing

In December 2011, Preis 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 insulation

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.



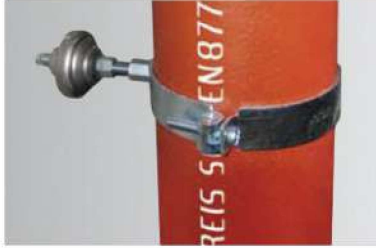
The tests also have demonstrated that the cast iron drainage system with rapid couplings as a free-standing system emits a very low level of noise. **The crucial point in sound insulation lies in the pipe clamps for wall and ceiling installation**, that is to say, in the connections of the pipe system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



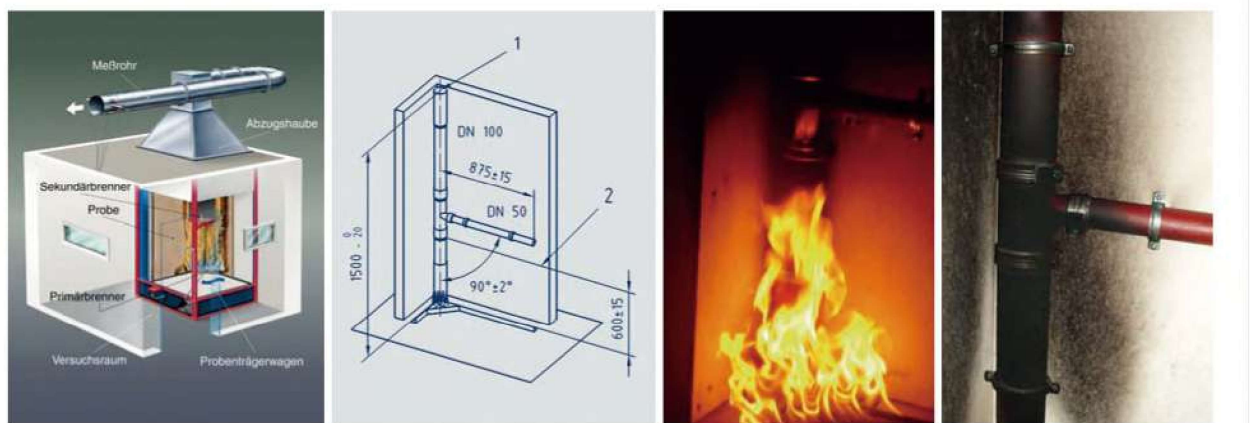
## Preventive fire protection

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 castiron 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-Burnign-Item-Test):



Test scenario according to DIN EN 13823

Installation

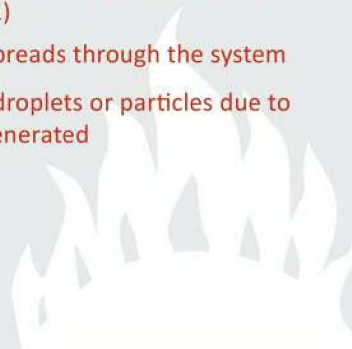
Firing

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	1500 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

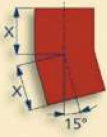
## Pipes / fittings / couplings


Nominal width	External diameter		Wall thickness		Insertion length	Pipe weight		Surface
	DN	DE	Permitted deviation	e	Pipes and fittings permitted deviation	(sealing zone) t	empty approx. kg/m	Full approx. kg/m
50	58	+2 -1	3.5	-0.5	30	4.3	6.4	0.18
80 (75)	83		3.5	-0.5	35	6.3	10.6	0.26
100	110		3.5	-0.5	40	8.5	16.7	0.35
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		6.0	-1.0	80	43.6	120.6	1.02

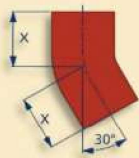
# SML pipes and fittings

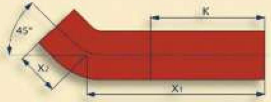
## Product overview

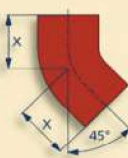
3000 mm PIPE	DN	kg/pcs.	ART.NR.	PU
	50	13.0	26620	37
	80 (75)	18.9	26622	38
	100	25.4	26623	38
	150	42.5	26626	20
	200	69.8	26627	10
	250	100.5	26628	8
	300	130.7	26629	6

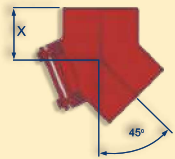
15° BEND	DN	kg/pcs.	ART.NR.	X
	50	0.4	11270	40
	80 (75)	0.7	19945	45
	100	1.0	10041	50
	150	2.6	11267	65
	200	4.6	19844	80

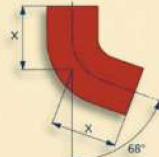
22° BEND	DN	kg/pcs.	ART.NR.	X
	50	0.5	54202	40
	80 (75)	0.9	54203	54
	100	1.3	25964	50
	150	3.2	54206	70
	200	4.7	54208	96

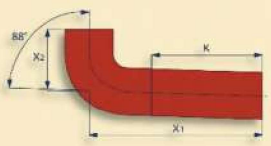
30° BEND	DN	kg/pcs.	ART.NR.	X
	50	0.5	11266	45
	80 (75)	0.8	19946	50
	100	1.3	10043	60
	150	3.0	11264	80
	200	5.4	19845	95
	250	8.0	10045	110
	300	14.0	10048	130

BEND WITH LONG 45° LEG	DN	kg/pcs.	ART.NR.	X1	X2	K
	100	3.5	10101	250	70	180

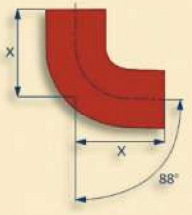
45° BEND	DN	kg/pcs.	ART.NR.	X
	50	0.5	10050	50
	80 (75)	0.9	13875	60
	100	1.6	10073	70
	150	3.5	10079	90
	200	5.7	10082	110
	250	10.3	18242	130
	300	16.5	10096	155

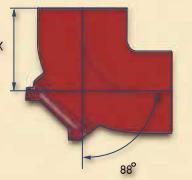
45° BEND WITH ROUND DOOR	DN	kg/pcs.	ART.NR.	X
	50	1.0	94120	60
	80 (75)	1.7	94130	76
	100	2.6	94140	83
	150	7.0	94160	113

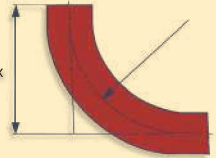
68° BEND	DN	kg/pcs.	ART.NR.	X
	50	0.7	19709	65
	80 (75)	1.2	23733	80
	100	1.9	10113	90
	150	4.1	11262	120
	200	7.7	10115	145

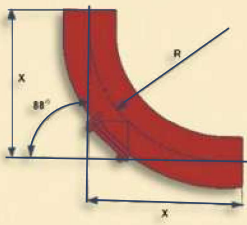
BEND WITH LONG 88° LEG	DN	kg/pcs.	ART.NR.	X1	X2	K
	100	3.6	10109	250	110	140

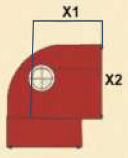


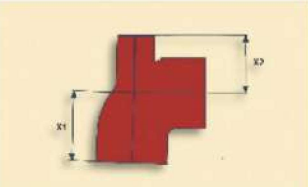
88° BEND	DN	kg/pcs.	ART.NR.	X
	50	0.7	10118	75
	80 (75)	1.3	13876	95
	100	2.1	10125	110
	150	4.3	10131	145
	200	8.8	18241	180
	250	17.9	54010	222
	300	28.0	54012	263

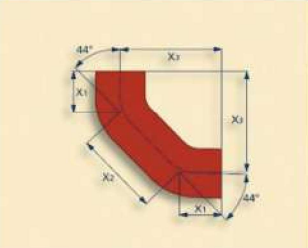
88° BEND WITH ROUND DOOR	DN	kg/pcs.	ART.NR.	X
	50	1.1	94020	76
	80 (75)	2.2	94030	95
	100	3.4	94040	110
	150	7.0	94060	150

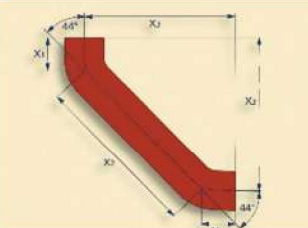
88° LONG RADIUS BEND	DN	kg/pcs.	ART.NR.	R	X
	80 (75)	3.6	54430	250	288
	100	5.4	54440	230	271
	150	9.8	54460	230	277

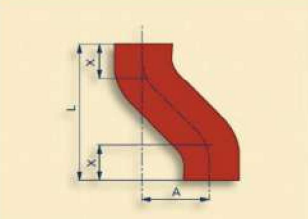
88° LONG RADIUS BEND WITH ROUND DOOR	DN	kg/pcs.	ART.NR.	R	X1	X2
	100	7.0	94446	150	232	252

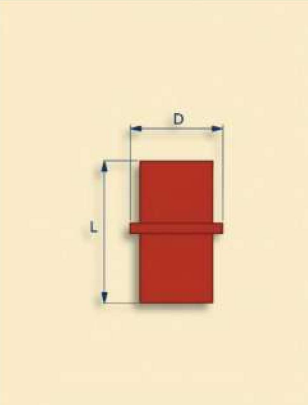
88° BEND WITH Side Vent	DN	kg/pcs.	ART.NR.	X1	X2
	100 x 50	2.9	51942	111.3	111.2

88° BEND WITH Back Vent	DN	kg/pcs.	ART.NR.	X1	X2
	100 x 50	2.5	51842	111	93

88° DOUBLE BEND	DN	kg/pcs.	ART.NR.	X1	X2	X3
	50	1.0	19115	20	100	121
	80 (75)	1.9	19985	60	120	145
	100	3.2	10152	70	140	170
	150	6.2	10154	90	180	219

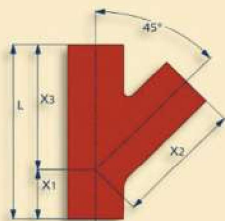
88° BEND WITH STRAIGHT LINE	DN	kg/pcs.	ART.NR.	X1	X2	X3
	100	4.8	10032	70	312	291
	150	8.7	10039	90	334	326

S-BEND	DN	kg/pcs.	ART.NR.	A
	100	2.5	11261	65
	100	3.4	11258	130

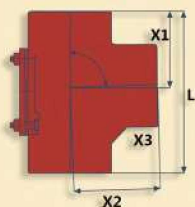
DOWNPIPE BRACKET	DN	kg/pcs.	ART.NR.	D	L
	50	1.3	19852	87	200
	80 (75)	1.8	13887	118	220
	100	2.7	10106	145	200
	150	4.0	11274	195	200
	200	5.9	20499	245	200
	250	18.7	19854	340	300
	300	24.0	57112	430	350

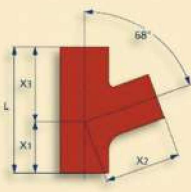


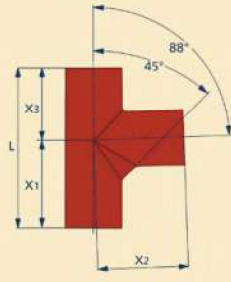
45° BRANCH	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	50 x 50	1.4	17017	50	135	135	185
	80 (75) x 50	1.6	19756	45	135	135	180
	80 (75) x 80 (75)	2.3	13878	60	155	155	215
	100 x 50	2.3	10029	35	165	165	200
	100 x 80 (75)	3.0	13877	50	170	170	220
	100 x 100	4.4	10033	70	205	205	275
	150 x 80 (75)	5.3	21002	115	140	105	220
	150 x 100	6.5	10060	55	240	240	295
	150 x 150	8.3	10062	90	265	265	355
	200 x 80 (75)	8.5	53183	20	243	243	263
	200 x 100	10.0	11299	40	265	265	305
	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 150	20.2	53106	56	353	353	409
	250 x 200	20.4	10068	90	385	385	475
	250 x 250	31.5	10071	130	430	430	560
	300 x 150	26.9	53126	35	384	384	419
	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

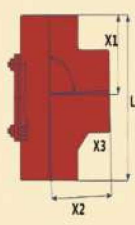


45° BRANCH WITH ROUND DOOR	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	80 (75) x 80 (75)	3.0	92133	66	163	162	228
	100 x 50	3.6	93142	41	158	173	214
	100 x 80 (75)	4.5	93143	61	197	200	261
	100 x 100	5.3	92144	70	192	186	256
	150 x 100	8.0	93164	48	230	237	285
	150 x 150	10.4	92166	84	267	260	344
	200 x 100	11.0	93184	40	304	306	346
	200 x 150	14.0	93186	55	389	340	417
	200 x 200	16.4	92188	112	370	376	488
	250 x 250	40.0	92110	135	452	453	588
	300 x 300	57.2	92112	156	528	538	694

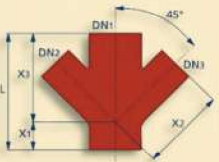


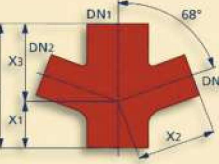
68° BRANCH	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	50 x 50	0.9	24870	55	80	80	135
	100 x 50	1.9	10080	55	110	100	155
	100 x 100	2.9	10083	85	130	130	215

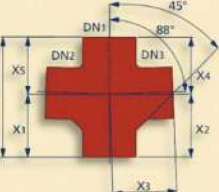
88° BRANCH	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	50 x 50	1.1	11296	79	80	66	145
	80 (75) x 50	1.4	19757	85	90	75	160
	80 (75) x 80 (75)	1.8	13880	95	95	85	180
	100 x 50	2.1	10088	94	105	76	170
	100 x 80 (75)	2.4	13879	100	110	88	190
	100 x 100	2.9	10090	115	115	105	220
	150 x 50	4.4	10095	100	140	100	200
	150 x 80 (75)	5.0	53063	116	142	107	223
	150 x 100	4.7	10099	130	145	115	245
	150 x 150	6.9	19843	158	155	142	305
	200 x 100	7.8	53084	142	175	129	271
	200 x 150	10.8	53086	175	187	154	329
	200 x 200	12.8	52088	201	190	178	379
	250 x 150	15.0	53006	188	230	171	359
	250 x 200	17.5	53008	211	235	197	408
	250 x 250	27.0	52010	243	246	230	473
	300 x 150	22.8	53026	212	258	192	404
	300 x 200	27.0	53028	235	265	220	455
	300 x 250	31.6	53020	273	279	253	526
300 x 300	35.0	52022	282	258	272	554	

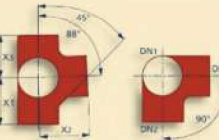
88° BRANCH WITH ROUND DOOR	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	50 x 50	1.3	92022	80	81	66	146
	80 (75) x 80 (75)	2.9	92033	131	131	91	222
	100 x 50	3.8	93042	105	96	100	205
	100 x 80 (75)	3.8	93043	112	112	92	204
	100 x 100	4.5	92044	171	153	105	276
	150 x 100	7.5	93064	163	165	115	278
	150 x 150	11	92066	205	192	148	353

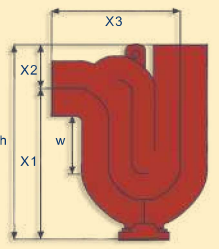


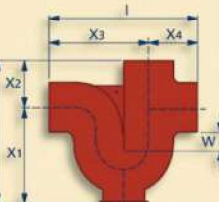
45° DOUBLE BRANCH	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	100x100x100	3.8	21186	70	130	130	215
	150x100x100	9.0	53264	56	242	242	298
	150x150x150	10.8	52966	92	269	266	358

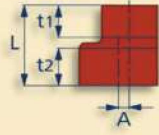
68° DOUBLE BRANCH	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	100 x 100 x 100	3.6	20463	85	130	130	215


88° DOUBLE BRANCH	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	100 x 50 x 50	2.2	11288	100	80	105	180
	100 x 100 x 100	3.9	10138	120	120	120	230
	150 x 100 x 100	7.1	19847	130	115	145	245

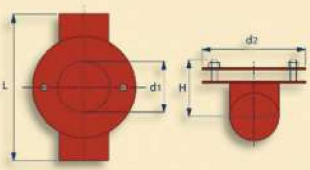
88° ANGLE DOUBLE BRANCH	DN	kg/pcs.	ART.NR.	X1	X2	X3	L
	100 x 100 x 100	3.8	10146	115	120	105	220
	150 x 100 x 100	6.1	21826	130	130	145	245

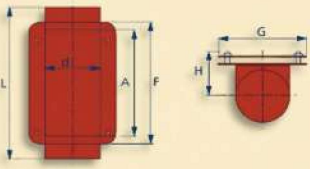
ANTI-SIPHON TRAP WITH DOOR	DN	kg/pcs.	ART.NR.	h	X1	X2	X3	w
	50	3.3	59222	251	192	59	155	80
	80 (75)	7.0	59233	294	221	73	200	86
	100	11.5	59244	450	295	110	295	85
	150	30.0	59266	620	485	165	380	85

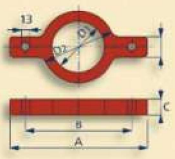
TRAP (SIPHON)	DN	kg/pcs.	ART.NR.	l	h	X1	X2	X3	X4	w
	50	2.9	20182	190	250	182	68	122	68	60
	80 (75)	5.9	23848	265	293	200	93	172	93	60
	100	9.5	17988	325	392	282	110	215	110	100
	150	21.8	20191	470	493	348	145	325	145	100
	200	38.4	20177	600	600	420	180	400	200	100

ECCENTRIC REDUCER	DN	kg/pcs.	ART.NR.	A	L
	80 (75) x 50	0.7	13884	13	80
	100 x 50	0.9	10140	25	80
	100 x 80 (75)	1.0	13882	14	90
	150 x 50	2.0	55862	51	103
	150 x 80 (75)	2.3	20676	39	100
	150 x 100	2.4	10147	25	105
	200 x 100	4.1	18654	50	115
	200 x 150	4.3	18243	25	125
	250 x 100	6.2	55804	82	128
	250 x 150	6.8	18244	57	140
	250 x 200	7.0	18245	32	145
	300 x 150	10.7	55826	84	152
	300 x 200	11.4	55828	59	162
	300 x 250	12.4	19126	26	170

PLUG	DN	kg/pcs.	ART.NR.	L
	50	0.3	11284	30
	80 (75)	0.5	13888	35
	100	0.8	10150	40
	150	1.6	11290	50
	200	3.1	19850	60
	250	6.0	19851	70
	300	9.5	21633	80

CLEANING PIPE WITH ROUND COVER	DN	kg/pcs.	ART.NR.	H	d1	d2	L
	50	2.3	13226	59	53	105	190
	80 (75)	3.5	13885	71	73	125	210
	100	4.8	10135	90	104	159	260
	150	11.5	57206	120	165	200	300

CLEANING PIPE WITH RECTANGULAR COVER	DN	kg/pcs.	ART.NR.	H	G	d	A	F	L
	100	7.0	10122	83	160	100	200	230	340
	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

BEARING FOR DOWNPIPE BRACKET	DN	kg/pcs.	ART.NR.	D1	D2	A	B	C
	50	0.8	10104	61	93	195	148	25
	80 (75)	1.1	24013	87	133	218	175	19
	100	1.4	10027	115	147	250	202	28
	150	2.0	21918	163	199	300	252	30
	200	3.0	21237	215	250	360	310	30



# SML couplings

## Product overview



### AXIAL RESTRAINT

DN and pressure(bar)									compatibility chart			
		50	80	100	150	200	250	300	FP PREIS® Rapid Inox coupling S.S.316	FP PREIS® CV- Inox coupling S.S. 316	FP PREIS® Rapid clamp G.M.S.	FP PREIS® High Pressure Grip Coupling S.S.316
FP PREIS® Rapid Inox coupling S.S.316		0,5	0,5	0,5	0,5	0,5	-	-		x	✓	
FP PREIS® CV- Inox coupling S.S. 316		0,5	0,5	0,5	0,5	0,5	0,3	0,3	x		✓	x
FP PREIS® Rapid clamp G.M.S.		10	10	10	5	5	3	3	✓	✓		
FP PREIS® High Pressure Grip Coupling S.S.316		16	14	14	12	8	8	7	provide the same function	provide the same function	provide the same function	

# Couplings and clamps

## — Properties

FP PREIS® Rapid Inox coupling with EPDM gasket		DN	Torque (Nm)
 <ul style="list-style-type: none"> <li>• Building component approved according to EN877</li> <li>• Locked with only one screw</li> <li>• Axial restraint up to 0,5 bar inner pressure</li> <li>• Tightening without special tools, only visual check necessary</li> <li>• Quick assembly and disassembly</li> <li>• Material:                             <ul style="list-style-type: none"> <li>- Coupling: stainless steel S.S. 316</li> <li>- Locked by a screw M6x 45mm, 6mm(TBC)</li> </ul> </li> </ul>	50	13-15	
	80	13-15	
	100	13-15	
	150	13-15	
	200	13-15	
FP PREIS® CV Inox coupling with EPDM gasket		DN	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 all situations</li> <li>• May also be used for repair work</li> </ul>	50	4-6	
	80	4-6	
	100	10-12	
	150	10-12	
	200	15-20	
	300	15-20	
FP PREIS® Rapic clamp		DN	Torque (Nm)
 <ul style="list-style-type: none"> <li>• Material: Galvanized Mild Steel</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 screws</li> <li>• Applications: Pressure pipes, rainwater and wastewater pipelines in area affected by backwater</li> </ul>	50	27-29	
	80	27-29	
	100	27-29	
	150	27-29	
	200	27-29	
	250	27-29	
	300	27-29	
High Pressure Grip coupling		DN	Torque (Nm)
 <ul style="list-style-type: none"> <li>• High Pressure Grip Couplings are designed for high pressure situation</li> <li>• Grip type couplings resist against axial movement up to 8-16 bar</li> <li>• Installation is done at one side. It enables products to be stored or work to be done at a narrow area.</li> </ul>	50	18	
	80	35	
	100	35	
	150	45	
	200	70	

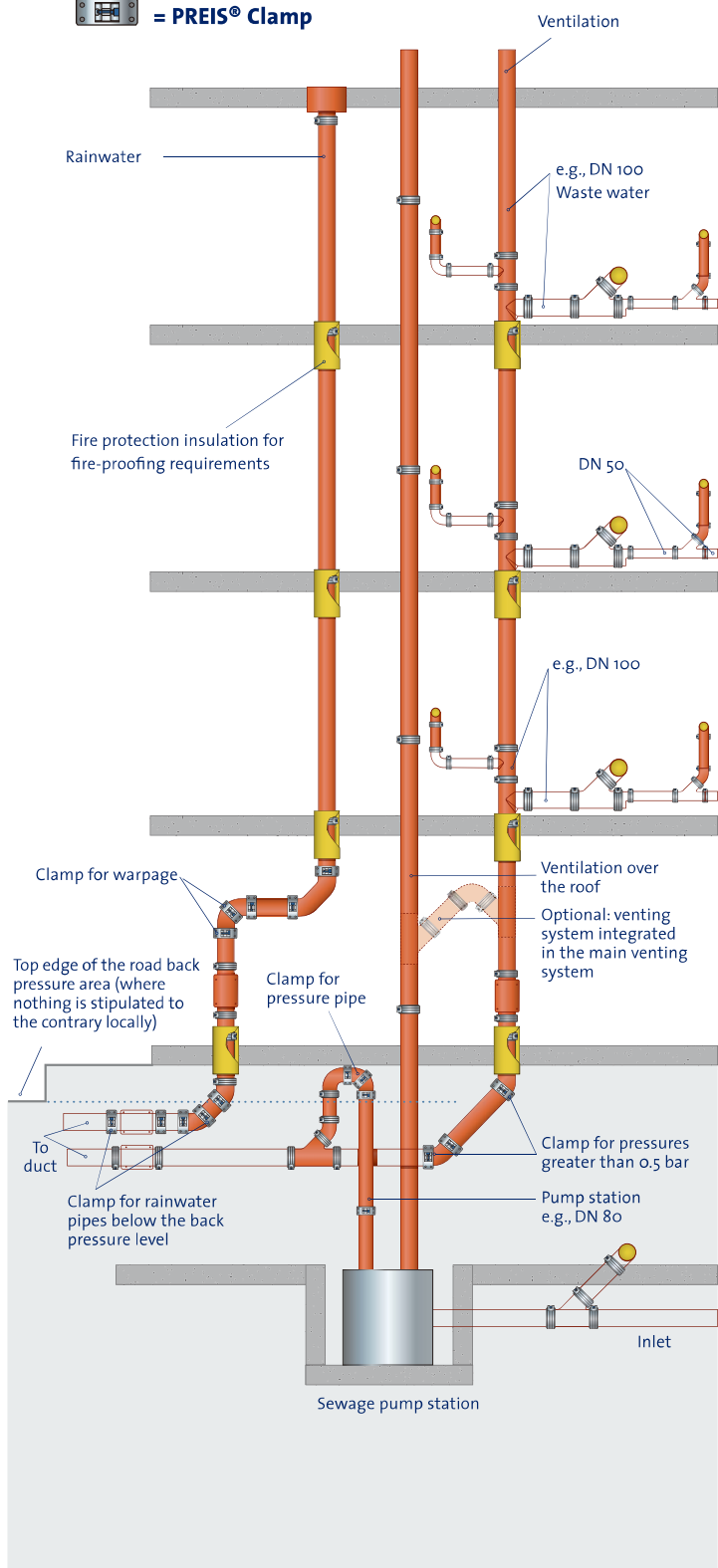


# Assembly and installation instructions



 = 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



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