

SIMONA



Components for Piping Systems

Pipes, Fittings, Valves

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*Hubert Mauz, Technical Director
at Uhrig Kanaltechnik GmbH,
Geisingen, puts his trust in pipes
and fittings by SIMONA.
www.uhrig-bau.de*

Put your trust in quality and expertise!



When it comes to piping systems, two factors are essential to success: premium-quality pipes and fittings that meet your application-specific requirements and a high-calibre partner who can assist you with everything from product selection to on-site project planning. SIMONA offers you the best of both worlds – premium quality and unrivalled expertise.

Lean back and relax, safe in the knowledge that our products are designed to deliver an outstanding performance. Add to this a highly qualified team with a passion for excellence, and you have an unrivalled package geared to success.



Benefit from our passion and commitment –
Welcome to SIMONA!



Behind each product associated with our company stands a dedicated team that has developed and manufactured it. SIMONA draws its inspiration from the unparalleled vision, dedication and passion of its employees. Indeed, it is they who have shaped the company over the past 150 years, gradually evolving SIMONA into a global leader within the field of semi-finished thermoplastics.

Products tailored to your needs

SIMONA is able to offer you the most extensive range of semi-finished thermoplastics worldwide. Our comprehensive portfolio of products encompasses pipes, fittings, valves, sheets, rods, profiles and welding rods for a diverse range of applications. The materials offered within this area span everything from PE and PP to PVC, PVDF, E-CTFE and PETG. On request, we can even develop customised products tailored to your specific requirements.

Best-in-class quality

Our products and services are designed to deliver the very best quality imaginable. When implementing your projects, we always place the greatest possible emphasis on professionalism during every stage of the process. We are supported in our efforts by a first-class Quality Management system – for total peace of mind.

Global sales network

Boasting a global network of subsidiaries and distribution partners, SIMONA is renowned as a fast, flexible and reliable partner. We look forward to assisting you.

Exceptional service

As a customer, you always take centre stage: from project development to materials procurement and on-site planning, we are committed to providing the very best consulting services. In addition, we will supply you with the full range of documentation accompanying our products and offer specialist training where required.



SIMONA AG's Quality and Environmental Management system is certified in accordance with DIN EN ISO 9001 : 2000 and DIN EN ISO 14001 : 2005.

The Quality Management system of SIMONA AG in compliance with the Pressure Equipment Directive is certified to 97/23/EC Annex I, para. 4.3.



Effective and economical – SIMONA piping systems for renovation projects and new installations



Increasingly, planning engineers and purchasing managers are discovering the enormous benefits associated with plastics in the field of pipeline construction. Among the key advantages of deploying plastics are cost-effectiveness, chemical resistance, structural stability, corrosion resistance, diffusion tightness, durability and efficient processing.

In contrast to traditional materials used within this area, plastics also offer greater certainty in terms of planning and expenditure.

Piping systems by SIMONA

For the construction of piping systems, SIMONA offers you a comprehensive product portfolio comprising pipes, fittings and valves made of various materials. They range from PE, PP and PVC to partially fluorinated PVDF and E-CTFE.

Thus, we are able to supply a full range of piping system solutions tailored to your applications:

Industrial piping systems

- Chemical process industry
- Water treatment
- Swimming-pool technology
- Air-conditioning and ventilation systems
- Industrial waste-water treatment
- and other applications

Disposal systems

- Municipal and industrial waste water
- Landfill engineering
- Transport engineering

Supply systems

- Drinking-water supply
- Gas supply
- Elevated-tank linings

Within the area of water disposal we supply a range of pressure and non-pressure pipes made of PE 80 and PE 100, supplemented by PP-manufactured products within the supply-line segment. In addition, for solutions in the field of chemical equipment and installation engineering we can offer you pipeline components with an extensive operational track record.

With a portfolio of high-quality pipes engineered to dovetail with our range of PE, PP, PVDF fittings and valves, you can rest assured that each component has been designed to deliver outstanding performance within a system environment. In other words, all products within the range are fully compatible.

The products within our range can be joined to create permanently bonded piping systems by means of various processing methods, such as heated-tool butt welding, infra-red welding, heated-tool socket welding and electric socket welding. Alternatively, flange connections may be used.

Alongside our standard product range, we offer a premium-class package of specialist solutions:

- Pipes in various lengths for a range of joining methods,
- Special pipe sizes adapted to the standard nominal diameters of other materials,
- Pipes with non-standard properties such as electrical conductivity or low flammability,
- Customised fittings as system components for your specific application.

Always at your service

Our highly qualified engineers look forward to assisting you with project planning, product selection, processing or on-site project management.

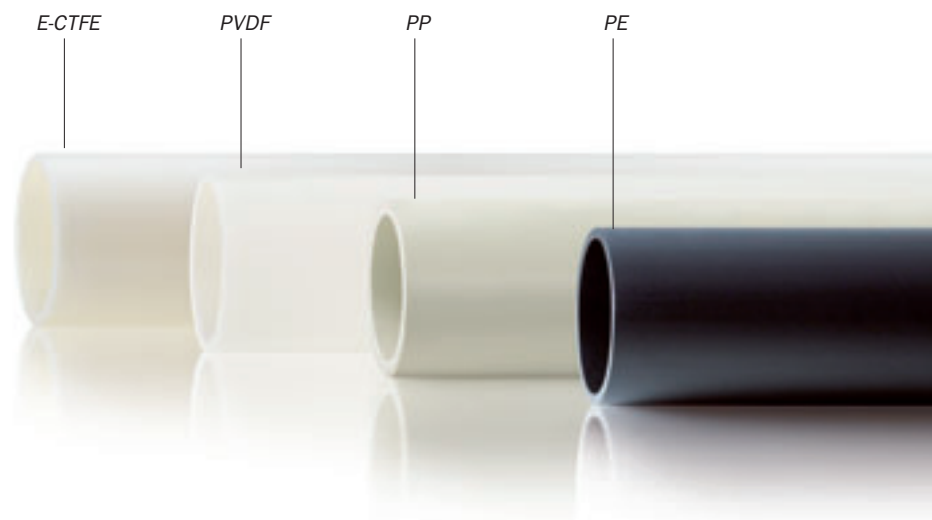
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pipingsystems@simona.de





Solutions tailored to any application

The specific area of application and related technical factors play an important part when selecting a piping system that best suits your needs. SIMONA piping systems are designed to meet every possible requirement within the industrial and utility sectors, as well as offering outstanding operational safety.

Committed to excellence – SIMONA piping systems

SIMONA subjects its products to thorough internal and external testing on a regular basis. We are happy to make the results of these tests available to our customers. After all, they bear testimony to the superior quality of our standardised products and the unrivalled performance of our customised solutions.



The following factors are of importance when selecting a suitable material for your area of application:

- Chemical resistance
- Cost-effectiveness in operation and maintenance
- Recyclability
- Operating temperature
- Processing capabilities
- Operating pressure and hydraulics

100 years and more

In contrast to many other materials, plastic boasts exceptional levels of durability. Thus, the above-average performance of plastic pipes is maintained over the entire useful life of the piping system:

- Creep strength
- Stability and flexibility (creep modulus)
- Notch and crack resistance
- Abrasion resistance
- Corrosion resistance

Operational reliability

Long-term testing in laboratory conditions as well as field evaluations on installed pipes show that plastic pipes are unsusceptible to damage caused by incrustation or material abrasion – even when exposed to a high proportion of solid media.

Hydraulics

Owing to the smooth interior surfaces of our pipes and fittings, the flow characteristics achieved by SIMONA products are outstanding. This also translates into energy savings when it comes to transporting media through the system – for the ultimate in cost-effective operations.



In accordance with Worksheet A 110 of the DWA*, the calculation of pipe flow rates is performed at a water temperature of 10 °C. The coefficient of roughness, k , of the plastic pipes is assumed to be 0.01. The flow rate charts show the flow volume and flow velocity in relation to the nominal diameter and the specific degree of incline.

Chemical resistance

Our range of piping system products is tailored to the requirements of industrial applications, delivering high-end solutions for the handling of aggressive chemicals and other hazardous media.

Resistant to a wide range of chemicals, PE, PP, PVDF and E-CTFE have become the material of choice within the chemical process industry as well as in the fields of chemical engineering, electroplating and flue gas desulphurisation.

SIMONA assesses the chemical resistance of its products on a regular basis. We look forward to passing on our in-depth knowledge within this area – spanning more than 1000 different media. For relevant data, please refer to our electronic SIMCHEM catalogue, available on CD-ROM.

To request SIMCHEM:
simchem@simona.de

Pipe laying

All piping systems developed by SIMONA are to be installed in accordance with country-specific standards and regulations. For detailed technical information concerning the installation of underground piping systems, please refer to DIN EN 1610. Details regarding the assembly of overground piping systems can be found in DVS 2210.

Summary

SIMONA piping systems fulfil all requirements relating to industrial, supply and disposal applications, as well as offering superior operational reliability.

* DWA = German Association for Water Management, Sewage and Salvage

Admissible working pressures for pipes and fittings

DIN 8074/8075 (PE) and DIN 8077/8078 (PP) as well as the application-specific DIN EN and ISO standards distinguish between various safety factors, thus resulting in different PN pressure ratings at a given geometry, i.e. the outer diameter in relation to the wall thickness (SDR).

These interconnections are outlined in the table below. Prior to implementation, users may select the appropriate safety factors according to their specific application. For further details, please refer to our technical Pipes & Fittings product catalogue. In the case of welded fittings made of pipes, please note that reduction factors may apply depending on the type of fitting.

Correlation between SDR and PN

	PE 80	PE 100	PP-H AlphaPlus	PVDF	PVC-U	E-CTFE
Safety factor S	1.25	1.25	1.6	2.0	2.5	
SDR	PN ^①					
51.0	2.5	3.2			4.0	
41.0	3.2	4.0	3.1			
33.0	4.0	5.0	3.9	10	~ 6.0	
26.0	5.0	6.3	5.0			
22.0	6.0	~ 7.6				
21.0	6.3	8.0		16	10.0	10
17.6	~ 7.6	~ 9.7	7.5			
17.0	8.0	10.0				
13.6	10.0	12.5			~ 16.0	
11.0	12.5	16.0	12.5			
9.0	~ 16.0	20.0			~ 25.0	
7.4	20.0	25.0	19.8			
6.0	25.0					

① PN is valid at 20 °C and a computed service life of 50 years.

Material specifications

Technical data	PE 80	PE 100	PE-EL	PP-H AlphaPlus	PP-R 80	PPs	PVDF	E-CTFE
Density, g/cm ³ , ISO 1183	0.955	0.958	0.99	0.91	0.90	0.95	1.78	1.68
Yield stress, MPa, DIN EN ISO 527	22	23	26	33	24	32	56	31
Elongation at yield, %, DIN EN ISO 527	9	9	7	8	10	8	6	4
Elongation at break, %, DIN EN ISO 527	≥ 300	≥ 300	≥ 60	≥ 70	≥ 70	≥ 70	≥ 22	≥ 125
Tensile modulus of elasticity, MPa, DIN EN ISO 527	800	900	1100	1700	800	1300	1950	1650
Impact strength, kJ/m ² , DIN EN ISO 179	no break	no break	no break	no break	no break	no break	no break	no break
Notched impact strength, kJ/m ² , DIN EN ISO 179	> 20	> 25	5	> 7	20	> 4	12	–
Ball indentation hardness, MPa, DIN EN ISO 2039-1	40	–	50	70	45	70	120	56
Shore hardness, D, ISO 868	63	61	63	72	65	72	78	74
Mean coefficient of linear thermal expansion, K ⁻¹ , DIN 53752	1.8 · 10 ⁻⁴	1.8 · 10 ⁻⁴	1.8 · 10 ⁻⁴	1.6 · 10 ⁻⁴	1.6 · 10 ⁻⁴	1.6 · 10 ⁻⁴	1.3 · 10 ⁻⁴	0.5 · 10 ⁻⁴
Thermal conductivity, W/m · K, DIN 52612	0.38	–	0.38	0.22	0.22	0.22	0.14	0.15
Dielectric strength, kV/mm, VDE 0303-21	47	22	–	52	52	22	25	–
Surface resistivity, ohm, DIN IEC 167	10 ¹⁴	–	< 10 ⁶	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹³	10 ¹⁵
Fire behaviour, DIN 4102	B2	B2	B2	B2	B2	B1	B1	low flammability
Physiologically safe as per BfR	yes	yes	no	yes	yes	no	yes	yes
Chemical resistance according to DIN 8075 Supplement	fulfilled	fulfilled	fulfilled	fulfilled	fulfilled	fulfilled	fulfilled	fulfilled
Temperature range, °C	– 40 to + 80	– 40 to + 80	– 20 to + 80	0 to + 100	0 to + 80	0 to + 100	– 30 to + 140	– 40 to + 150

Components for industrial piping systems

Our portfolio includes high-end pipeline components with an extensive operational track record when exposed to aggressive chemicals – the perfect solution for chemical equipment engineering and tank/vessel construction as well as applications within the semiconductor and electroplating industry.

When it comes to handling chemicals, granular substances, powders, water or pressurised air, the thermoplastics polyethylene (PE), polypropylene (PP) and polyvinylidene fluoride (PVDF), as well as low-flammability PPs and electrically conductive moulding compounds (-EL) have established a particularly strong position within the area of industrial piping systems thanks to their superb material properties such as corrosion and chemical resistance.

In addition, the superior durability and impermeability of these plastic piping components, as well as their efficiency when it comes to operation and maintenance, make them particularly cost-effective.



Fields of application of industrial piping systems



Transport of chemicals

- SIMONA® PE 100
- SIMONA® PE-EL
- SIMONA® PP-H AlphaPlus
- SIMONA® PVDF
- SIMONA® E-CTFE
- SIMONA® PVC-GLAS



Cooling-water pipes

- SIMONA® PE 100
- SIMONA® PP-H AlphaPlus



Transport of solid media

- SIMONA® PE 100
- SIMONA® PE-EL
- SIMONA® PP-H AlphaPlus
- SIMONA® PVDF
- SIMONA® E-CTFE



Explosion-protected environment

- SIMONA® PE-EL
- SIMONA® PP-EL
- SIMONA® PP-EL-S
- SIMONA® PVDF-EL



Transport of high-grade media

- SIMONA® PVDF
- SIMONA® E-CTFE



Water catchment and treatment

- SIMONA® PE 100
- SIMONA® PP-H AlphaPlus



Swimming-pool technology

- SIMONA® PE 100
- SIMONA® PP-H AlphaPlus



Tank and equipment engineering

- SIMONA® PE 100
- SIMONA® PE-EL
- SIMONA® PP-H AlphaPlus
- SIMONA® PPs
- SIMONA® PVDF
- SIMONA® E-CTFE
- SIMONA® PVC-GLAS



HVAC systems

- SIMONA® PE 100
- SIMONA® PE-EL
- SIMONA® PP-H AlphaPlus
- SIMONA® PPs
- SIMONA® PVDF

Disposal systems

Meeting all the requirements of modern waste-water disposal, SIMONA offers a comprehensive range of innovative piping systems made of high-performance plastics – a perfect solution for repair or new installation projects. One of the key advantages associated with our high-end products is that they offer greater certainty in terms of planning and expenditure.

The main reasons for leaking sewers are corrosion, inadequate socket connections, cracked or ruptured pipes as well as incrustations. Increasingly, traditional materials such as concrete, stoneware and cast iron are being replaced by piping systems made of plastics. SIMONA pipes and fittings made of premium-quality plastics are an effective way to combat long-term damage to such systems.

Key benefits of disposal systems made of plastics

- Permanent, impermeable bond through welding
- Excellent corrosion resistance eliminates need for protective coating
- Elimination/reduction of need for cleaning and flushing
- Favourable hydraulic properties due to low wall roughness
- High abrasion resistance
- Superior flexibility prevents pipe rupture

SIMONA offers a complete range of products within the area of waste disposal. Alongside pipes for various applications, our portfolio includes fittings, electrofusion sockets, service pipe components as well as shaft connectors and specialist welding equipment.



Fields of application of disposal systems



Sewer pipes

- SIMONA® PE 80
- SIMONA® PE 100
- SIMONA® PP-H AlphaPlus



Waste-water pressure pipes

- SIMONA® PE 100
- SIMONA® PP-H AlphaPlus
- SIMONA® SPC waste-water pipes



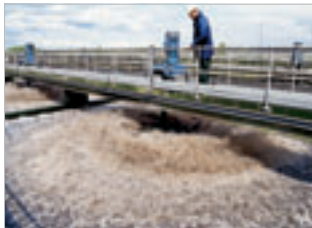
Sewer renovation

- SIMONA® PE 80
- SIMONA® PE Ovoid pipe
- SIMONA® PE 100
- SIMONA® PP-H AlphaPlus



Double-containment piping systems

- SIMONA® PE 80
- SIMONA® PE 100
- SIMONA® PE-EL
- SIMONA® PP-H AlphaPlus
- SIMONA® PVDF
- SIMONA® E-CTFE



Piping systems for purification plants

- SIMONA® PE 80
- SIMONA® PE 100
- SIMONA® PE-EL



Landfill technology

- SIMONA® PE 80
- SIMONA® PE 100
- SIMONA® PE-EL
- SIMONA® PP-H AlphaPlus



Effluent pipes

- SIMONA® PE 80



Traffic route technology

- SIMONA® PE 80/PE 100 SIMODRAIN®

Supply systems

Supplying towns and cities with clean water can be considered one of the essential challenges of the future. SIMONA offers a high-quality range of piping systems tailored specifically to the safe and reliable supply of drinking-water or other substances, such as gas, by utility operators. In addition to manufacturing pipes and fittings, we are able to deliver a number of customised solutions to meet the requirements of even the most demanding project.

We also have a proven track record as a specialist within the field of linings used in elevated water tanks.

The interior surfaces of elevated water tanks erected in the 1960s and 1970s are generally lined with cement-based materials or tiles. However, over a period of time corrosion tends to attack the joints, thus greatly increasing the risk of decontamination by microorganisms, which may have dire consequences for the supply of water.

Our complete system, comprising sheets and welding rods, for the renovation of elevated water tanks is designed to deliver permanent corrosion protection and impermeability, in addition to providing a solid basis for cost-effective operations.

Offering premium-quality products, long-standing experience and unrivalled expertise, we look forward to becoming your trusted partner in the field of utility services.



Fields of application of supply systems



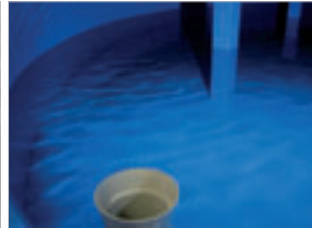
Drinking-water pipes

- SIMONA® PE 100
- SIMONA® SPC drinking-water pipes



Water treatment

- SIMONA® PE 100
- SIMONA® PP-H AlphaPlus



Liners for elevated tanks

- SIMONA® PE light blue 340



Gas pipes

- SIMONA® PE 100

Our team of highly qualified experts will be glad to advise you.



Piping systems product range

Whether you need special fittings or state-of-the-art double-containment piping systems, SIMONA has the perfect solution to match your requirements. In fact, we have established the most extensive range of semi-finished thermoplastics for piping systems – worldwide.



PE 80/PE 100 Pressure pipes

Material

PE 80/PE 100

Colour

Black

Dimensions

Standard length: 6 m

Remark

Other lengths on request

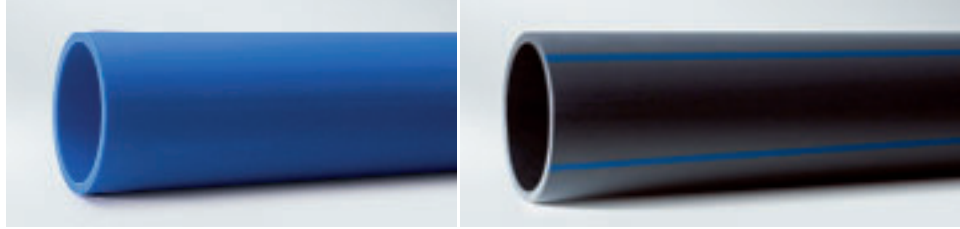
Application

Industrial pipes
Disposal systems
Supply systems

Standards

DIN 8074/8075
DIN EN 13244
DIN EN 15013
DIBt approval Z-40.23.311 for liquids
hazardous to water
TÜV Süddeutschland certified

Pressure pipe	SDR 41	SDR 33	SDR 26	SDR 17.6	SDR 17	SDR 11	SDR 7.4
d mm	e mm	e mm	e mm	e mm	e mm	e mm	e mm
10						1.8	
12						1.8	
16						1.8	
20				1.8		1.9	
25				1.8		2.3	
32				1.8	1.9	2.9	
40			1.8	2.3	2.4	3.7	
50			2.0	2.9	3.0	4.6	6.9
63		2.0	2.5	3.6	3.8	5.8	8.6
75	1.9	2.3	2.9	4.3	4.5	6.8	10.3
90	2.2	2.8	3.5	5.1	5.4	8.2	12.3
110	2.7	3.4	4.2	6.3	6.6	10.0	15.1
125	3.1	3.9	4.8	7.1	7.4	11.4	17.1
140	3.5	4.3	5.4	8.0	8.3	12.7	19.2
160	4.0	4.9	6.2	9.1	9.5	14.6	21.9
180	4.4	5.5	6.9	10.2	10.7	16.4	24.6
200	4.9	6.2	7.7	11.4	11.9	18.2	27.4
225	5.5	6.9	8.6	12.8	13.4	20.5	30.8
250	6.2	7.7	9.6	14.2	14.8	22.7	34.2
280	6.9	8.6	10.7	15.9	16.6	25.4	38.3
315	7.7	9.7	12.1	17.9	18.7	28.6	43.1
355	8.7	10.9	13.6	20.1	21.1	32.2	48.5
400	9.8	12.3	15.3	22.7	23.7	36.3	54.7
450	11.0	13.8	17.2	25.5	26.7	40.9	61.5
500	12.3	15.3	19.1	28.4	29.7	45.4	
560	13.7	17.2	21.4	31.7	33.2	50.8	
630	15.4	19.3	24.1	35.7	37.4	57.2	
710	17.4	21.8	27.2	40.2	42.1		
800	19.6	24.5	30.6	45.3	47.4		
900	22.0	27.6	34.4	51.0	53.3		
1000	24.5	30.6	38.2	56.7	59.3		
1200	29.4	36.7	45.9	68.0	70.6		



PE 100 Pressure pipes for drinking-water

Material

PE 100

Colour

Blue

Black with blue stripes

Dimensions

Standard lengths: 6 m, 12 m

Remark

Other lengths on request

Application

Supply systems

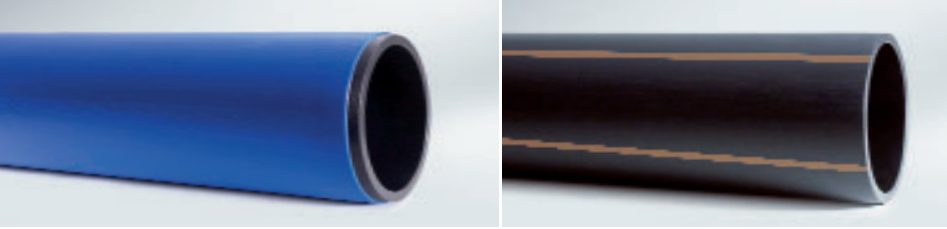
Standards

DIN 8074/8075

DVGW GW 335-A2

DIN EN 12201

Pressure pipe	SDR 41	SDR 33	SDR 26	SDR 17.6	SDR 17	SDR 11	SDR 7.4
d mm	e mm	e mm	e mm	e mm	e mm	e mm	e mm
20						1.9	
25						2.3	
32					1.9	2.9	
40					2.4	3.7	
50					3.0	4.6	
63					3.8	5.8	
75					4.5	6.8	
90					5.4	8.2	
110					6.6	10.0	
125					7.4	11.4	
140					8.3	12.7	
160					9.5	14.6	
180					10.7	16.4	
200					11.9	18.2	
225					13.4	20.5	
250					14.8	22.7	
280					16.6	25.4	
315					18.7	28.6	
355					21.1	32.2	
400					23.7	36.3	
450					26.7	40.9	
500					29.7	45.4	
560					33.2	50.8	
630					37.4	57.2	
710					42.1		
800					47.4		
900					53.3		
1000					59.3		
1200					70.6		



PE 100 SPC Drinking-water pressure pipes

Material

PE 100 with drinking-water approval and protective jacket made of modified PP Protect

Colour

Inner pipe: black
Jacket pipe: blue

Dimensions

Standard length: 12 m

Remark

Other lengths on request

Application

Supply systems

Standards

based on
DIN 8074/8075
DIN EN 12201
DVGW GW 335-A2

Pressure pipe	SDR 41	SDR 33	SDR 26	SDR 17.6	SDR 17	SDR 11	SDR 7.4
d mm	e mm	e mm	e mm	e mm	e mm	e mm	e mm
90					5.4	8.2	
110					6.6	10.0	
125					7.4	11.4	
140					8.3	12.7	
160					9.5	14.6	
180					10.7	16.4	
200					11.9	18.2	
225					13.4	20.5	
250					14.8	22.7	
280					16.6	25.4	
315					18.7	28.6	
355					21.1	32.2	
400					23.7	36.3	
450					26.7	40.9	
500					29.7	45.4	
560					33.2	50.8	
630					37.4	57.2	

PE 100 Coils for drinking- and waste-water

Material

PE 100

Colour

Black with blue stripes – for drinking-water
Black with brown stripes – for waste-water

Dimensions

Standard length: 100 m

Remark

Other lengths on request

Application

Supply systems
Disposal systems

Standards

Coils for drinking-water
DIN 8074/8075
DIN EN 12201
DVGW GW 335-A2

Coils for waste-water
DIN 8074/8075
DIN EN 13244
DIN EN 12666

Pressure pipe	Nominal diameter		Coil dimension			SDR 17	SDR 11
	d mm	DN mm inch	Da mm	d _i mm	b mm		
20	15	1/2	900	650	170		1.9
25	20	3/4	1000	650	200		2.3
32	25	1	1200	900	250	1.9	2.9
40	32	1 1/4	1350	900	300	2.4	3.7
50	40	1 1/2	1550	1000	330	3.0	4.6
63	50	2	1950	1400	350	3.8	5.8
75	65	2 1/2	2550	1900	420	4.5	6.8
90	80	3	2600	2000	600	5.4	8.2
110	100	4	2900	2200	770	6.6	10.0
125	100	4	3000	2200	820		11.4
160	125	5	3000	2000	1100		14.6
180	150	6	3100	2000	1150		16.4



PE 80 CoEx Sewer pipes

Material

PE 80
PE 100 on request

Colour

Light grey with black UV protective layer

Dimensions

Standard lengths: 6 m, 12 m

Remark

Other lengths on request

Application

Disposal systems; suitable for open-trench installation with sand bed; light-coloured pipe interior facilitates camera inspection

Standards

DIN 8074/8075
DIN 19537
DIN EN 13244

Pipe	SDR 41	SDR 33	SDR 26	SDR 17.6	SDR 17	SDR 11	SDR 7.4
d mm	e mm	e mm	e mm	e mm	e mm	e mm	e mm
160				9.1			
180				10.2			
225				12.8			
280			10.7	15.9			
315			12.1	17.9			
355			13.6	20.1			
400			15.3	22.7			
450			17.2	25.5			
560			21.4	31.7			
630			24.1	35.7			

PE Ovoid pipes

Material

PE 80/PE 100

Colour

Black

Dimensions

Standard length: 0.7 – 2.5 m
For standardised cross sections (DIN 4263)

Remark

Other lengths on request

Application

Disposal systems; suitable for sewer repair and rehabilitation in ovoid brickwork or concrete systems

Standards

Tolerances based on DIN 8074/8075

Standard ovoid duct profiles^① (in mm)

Nominal diameter DN ^② DIN 4263 b/h	Outside diameter ^③ ba/ha	Wall thickness ^④ e	Inside diameter bi/hi	Annular space ^⑤ Δk
500/750	458/692	17	423/657	58
	466/700	21	423/657	50
	487/721	31	423/657	29
600/900	558/841	17	523/806	58
	567/850	21	523/806	50
	577/860	27	523/806	40
700/1050	657/990	19	618/951	59
	667/1000	24	618/951	50
	679/1012	30	618/951	38
800/1200	724/1125	22	698/1081	74
	753/1136	27	698/1081	63
	767/1150	34	698/1081	50
	854/1288	24	805/1239	62
900/1350	867/1300	30	805/1239	50
	882/1315	38	805/1239	35
	1000/1500		on request	

^① All values specified in the table are based on theoretical calculations. When placing a specific order for a pipe installation project, please be advised that delivery times will depend on the actual dimensions (height, width, length and wall thickness) and the joining method used (connectors or welding); delivery may take between 4 and 8 weeks once an order has been processed. The actual ovoid modules or geometries to be deployed will depend on the condition of the existing pipe as well as structural calculations.

^② The dimensions listed above are deployable in the standard profiles according to DIN 4263. Use in connection with other sectional shapes, including brickwork sewer systems, is possible.

^③ The ovoid pipes are manufactured on the basis of DIN 8074 within the admissible dimensional limits of the mean outside diameters ba/ha.

^④ The ovoid pipes are manufactured on the basis of DIN 8074 within the admissible dimensional limits of the wall thicknesses.

^⑤ The size of the annular space varies depending on the specified tolerances and the actual wall thickness.



PE 80 SPC Waste-water pipes/ PE 100 SPC Waste-water pressure pipes

Material

PE 80 and protective jacket made of modified PP Protect

PE 100 and protective jacket made of modified PP Protect

Colour

PE 80

Inner pipe: light grey
Protective jacket: brown

PE 100

Inner pipe: black
Protective jacket: brown

Dimensions

Standard length: 12 m

Remark

Other lengths on request

Application

Disposal systems; suitable for trenchless installation (flush drilling, relining, pipe bursting) or open-trench installation without sand bed

Standards

based on DIN 8074/8075

Pipe PE 80

d mm	Pipe PE 80				Pressure pipe PE 100		
	SDR 41	SDR 33	SDR 26	SDR 17.6	SDR 17	SDR 11	SDR 7.4
e mm	e mm	e mm	e mm	e mm	e mm	e mm	e mm
90					5.4	8.2	
110					6.6	10.0	
125					7.4	11.4	
140					8.3	12.7	
160			6.2	9.1	9.5	14.6	
180			6.9	10.2	10.7	16.4	
200			7.7	11.4	11.9	18.2	
225			8.6	12.8	13.4	20.5	
250			9.6	14.2	14.8	22.7	
280			10.7	15.9	16.6	25.4	
315			12.1	17.9	18.7	28.6	
355			13.6	20.1	21.1	32.2	
400			15.3	22.7	23.7	36.3	
450			17.2	25.5	26.7	40.9	
500			19.1	28.4	29.7	45.4	
560			21.4	31.7	33.2	50.8	
630			24.1	35.7	37.4	57.2	

PE Effluent pipes (HT)

Material

PE

Colour

Black

Dimensions

Standard length: 6 m

Remark

Other lengths on request

Application

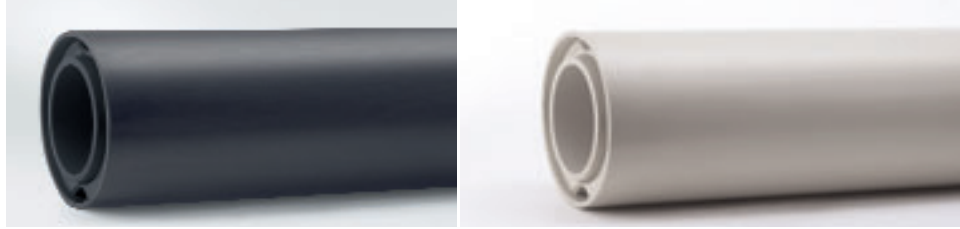
Disposal systems

Disposal systems

DIN 8074/8075

DIN EN 1519

Pipe	SDR 41	SDR 33	SDR 26	SDR 17.6	SDR 17	SDR 11	SDR 7.4
d mm	e mm	e mm	e mm	e mm	e mm	e mm	e mm
50		3.0					
56		3.0					
63		3.0					
75		3.0					
110		3.4	4.2				
125		3.9	4.8				
160		4.9	6.2				
200		6.2	7.7				
250		7.7	9.6				
315		9.7	12.1				



PE Double-containment pipes

Material

Inner pipe: PE CoEx as per DIN 8074/8075
Outer pipe: PE 100 as per DIN 8074/8075

Colour

PE CoEx: light grey with black
UV protective layer
PE 100: black

Welding methods

Inner pipe: SDR 17.6
Outer pipe: SDR 26 simultaneous welding
Inner pipe: SDR 17.6
Outer pipe: SDR 17 cascade welding

Remark

Other dimensions and lengths on request subject to technical and dimensional modifications

Application

Disposal systems

Inner Pipe PE CoEx

Outer Pipe PE 100

SDR 17.6		SDR 26	SDR 17	
d mm	e mm	d mm	e mm	e mm
160	9.1	250	9.6	14.8
180	10.2	280	10.7	16.6
200	11.4	315	12.1	18.7
225	12.8	315	12.1	18.7
280	15.9	400	15.3	23.7
315	17.9	400	15.3	
315	17.9	450		26.7
355	20.1	450	17.2	
355	20.1	500		29.7
400	22.7	500	19.1	
400	22.7	560		33.2
450	25.5	560	21.4	
450	25.5	630		37.4
560	31.7	710		42.1
630	35.7	800		47.4

PE 100/PP-H AlphaPlus Double-containment pipes

Material

Inner Pipe: PP-H AlphaPlus as per DIN 8077/8078, low-stressed due to thermal post-treatment

Outer Pipe: PP-H AlphaPlus or PE 100 as per DIN 8074/8075

Colour

PP: grey
PE: black

Welding methods

Inner- and outer pipe PP:
Simultaneous/cascade welding
Inner pipe PP/outer pipe PE:
Cascade welding

Remark

Other dimensions and lengths on request subject to technical and dimensional modifications

Application

Industrial pipes
Disposal systems

Inner Pipe

Outer Pipe

PP-H AlphaPlus SDR 17.6		PP-H AlphaPlus SDR 33	PE 100 SDR 17	
d mm	e mm	d mm	e mm	e mm
90	5.1	160	4.9	9.5
110	6.3	200	6.2	11.9
125	7.1	200	6.2	11.9
140	8.0	225	6.9	13.4
160	9.1	250	7.7	14.8
180	10.2	250	7.7	
180	10.2	280		16.6
200	11.4	315	9.7	18.7
225	12.8	315	9.7	18.7
250	14.2	355	10.9	21.1
280	15.9	400	12.3	23.7
315	17.9	400	12.3	
315	17.9	450		26.7
355	20.1	450	13.8	
355	20.1	500		29.7
400	22.7	500	15.3	
400	22.7	560		33.2
450	25.5	560	17.2	
450	25.5	630		37.4
500	28.4	630	19.3	37.4
560	31.7	710	21.8	42.1
630	35.7	800	24.5	47.4



PE 100 Double-containment pipes

Material

Inner pipe: PE 100 nach DIN 8074/8075
Outer pipe: PE 100 nach DIN 8074/8075

Colour

PE 100: black

Welding methods

Inner pipe: SDR 11
Outer pipe: SDR 17 simultaneous welding

Inner pipe: SDR 17
Outer pipe: SDR 17 cascade welding

Remark

Other dimensions and lengths on request subject to technical and dimensional modifications

Application

Industrial pipes
Disposal systems

Inner pipe PE 100

Outer pipe PE 100

d mm	Inner pipe PE 100		Outer pipe PE 100	
	SDR 17 e mm	SDR 11 e mm	SDR 17 d mm e mm	
90	5.4	8.2	160	9.5
110	6.6	10.0	200	11.9
125	7.4	11.4	200	11.9
140	8.3	12.7	225	13.4
160	9.5	14.6	250	14.8
180	10.7	16.4	280	16.6
200	11.9	18.2	315	18.7
225	13.4	20.5	315	18.7
250	14.8	22.7	355	21.1
280	16.6	25.4	400	23.7
315	18.7	28.6	450	26.7
355	21.1	32.2	500	29.7
400	23.7	36.3	560	33.2
450	26.7	40.9	630	37.4
500	29.7	45.4	630	37.4

PE 80 Electrically conductive pressure pipes

Material

PE-EL electrically conductive

Colour

Black

Dimensions

Standard length: 5 m

Remark

Other lengths on request

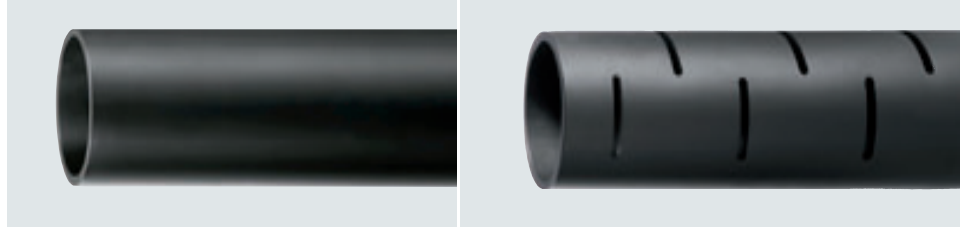
Application

Industrial pipes
Disposal systems

Standards

DIN 8074/8075

Pressure Pipe d mm	SDR 41 e mm	SDR 33 e mm	SDR 26 e mm	SDR 17.6 e mm	SDR 17 e mm	SDR 11 e mm	SDR 7.4 e mm
32						2.9	
40						3.7	
50						4.6	
63				3.6		5.8	
75				4.3		6.8	
90				5.1		8.2	
110				6.3		10.0	
125				7.1		11.4	
140				8.0		12.7	
160				9.1		14.6	
180				10.2		16.4	
200				11.4		18.2	
225				12.8		20.5	
250				14.2		22.7	
280				15.9		25.4	
315				17.9		28.6	
355				20.1		32.2	
400				22.7		36.3	
450				25.5			
500				28.4			
560				31.7			
630				35.7			



SIMONA® SIMODRAIN® Traffic route drainage pipes

Material

PE 80/PE 100

Colour

Black

Dimensions

Standard length: 6 m

Remark

Pipes with smooth ends
Other lengths and dimensions
on request

Application

Deep drainage of roads and rail tracks

Standards

DIN 8074/8075
EBA (= Federal Railway Authority) approval

Drainage pipe	SDR 26	SDR 17.6	SDR 17	SDR 11
d mm	e mm	e mm	e mm	e mm
160	6.2	9.1	9.5	14.6
180				16.4
200	7.7	11.4	11.9	18.2
225				20.5
250	9.6	14.2	14.8	22.7
280				25.4
315	12.1	17.9	18.7	28.6
355	13.6	20.1	21.1	32.2
400	15.3	22.7	23.7	36.9
450				40.9

Product types

- SIMODRAIN® multi-purpose pipes unslotted (UP)
- SIMODRAIN® multi-purpose pipes 1/3 slotted (MP)
- SIMODRAIN® partial drainage pipes 2/3 slotted (LP)
- SIMODRAIN® full drainage pipes circumferential slotting (TP)

Further information

For further details on the full SIMODRAIN® range, please refer to the separate product brochure.

Systems for landfill drainage and degasification

Material

Perforated and slotted PE 80/
PE 100 pipes; perforated and slotted
PP-H AlphaPlus pipes

Colour

PE: black
PP: grey

Dimensions

d 90 – 630 mm

Remark

The pipes and system components are
also available as electrically conductive
versions (PE-EL)

Product types

Connectors for drainage water piping,
shafts and accessories, parts for asphalt-
sealed landfill sites, system components
for gas piping, gas collection wells, gas
manifolds, condensate separators, conden-
sate shafts

Further information

For further details, please request
our specialist application brochures.



PP-H AlphaPlus Pressure pipes

Material

PP-H AlphaPlus

Colour

Grey

Dimensions

Standard length: 5 m

Remark

Other lengths on request

Application

Industrial pipes

Disposal systems

Supply systems

Standards

DIN 8077/8078

DIN EN ISO 15494

Pressure pipe	SDR 41	SDR 33	SDR 26	SDR 17.6	SDR 17	SDR 11	SDR 7.4
d mm	e mm	e mm	e mm	e mm	e mm	e mm	e mm
10						1.8	
12						1.8	
16						1.8	
20						1.9	
25				1.8		2.3	
32				1.8		2.9	
40			1.8	2.3		3.7	
50		1.8	2.0	2.9		4.6	
63	1.8	2.0	2.5	3.6		5.8	
75	1.9	2.3	2.9	4.3		6.8	
90	2.2	2.8	3.5	5.1		8.2	
110	2.7	3.4	4.2	6.3		10.0	
125	3.1	3.9	4.8	7.1		11.4	
140	3.5	4.3	5.4	8.0		12.7	
160	4.0	4.9	6.2	9.1		14.6	
180	4.4	5.5	6.9	10.2		16.4	
200	4.9	6.2	7.7	11.4		18.2	
225	5.5	6.9	8.6	12.8		20.5	
250	6.2	7.7	9.6	14.2		22.7	
280	6.9	8.6	10.7	15.9		25.4	
315	7.7	9.7	12.1	17.9		28.6	
355	8.7	10.9	13.6	20.1		32.2	
400	9.8	12.3	15.3	22.7		36.3	
450	11.0	13.8	17.2	25.5		40.9	
500	12.3	15.3	19.1	28.4		45.4	
560	13.7	17.2	21.4	31.7			
630	15.4	19.3	24.1	35.7			
710	17.4	21.8	27.2	40.2			
800	19.6	24.5	30.6	45.3			
900	22.0	27.6	34.4				
1000	24.5	30.6	38.2				



PPs Ventilation pipes

Material

Low-flammability PP

Colour

Grey

Dimensions

Standard length: 5 m

Remark

Other lengths on request

PP-ELs on request

Application

Industrial pipes

Disposal systems

Standards

As per DIN 4102 B1

Ventilation series

d mm	e mm						
10							
12							
16							
20							
25							
32	3.0						
40	3.0						
50	3.0						
63	3.0						
75	3.0						
90	3.0						
110	3.0						
125	3.0						
140	3.0						
160	3.0						
180	3.0						
200	3.0						
225	3.5						
250	3.5						
280	4.0						
315	5.0						
355	5.0						
400	6.0						
450	7.0						
500	8.0						
560	8.0						
630	10.0						



PVDF Pressure pipes

Material
PVDF

Colour
Natural

Dimensions
Standard length: 5 m

Remark
Other lengths on request

Application
Industrial pipes

Standards
ISO 10931

Kynar
inside

Pressure pipe	SDR 41	SDR 33	SDR 21	SDR 17.6	SDR 17	SDR 11	SDR 7.4
d mm	e mm	e mm	e mm	e mm	e mm	e mm	e mm
16			1.9				
20			1.9				
25			1.9				
32			2.4				
40			2.4				
50			3.0				
63		2.0	3.0				
75		2.3	3.6				
90		2.8	4.3				
110		3.4	5.3				
125		3.9	6.0				
140		4.3	6.7				
160		4.9	7.7				
180		5.5					
200		6.2					
225		6.9					
250		7.7					
280		8.6					
315		9.7					

PVDF Liner pipes

Material
PVDF

Colour
Natural

Dimensions
Standard length: 5 m

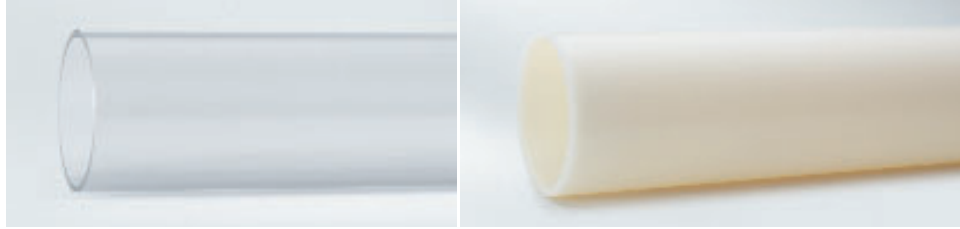
Remark
Other lengths on request

Application
Industrial pipes

Standards
ISO 10931

Kynar
inside

Liner pipes, pre-treated				Liner pipes, untreated			
d mm	e mm			e mm			
16							
20							
25							
32	2.4						
40	2.4						
50	3.0						
63	3.0						
75	3.0			3.0			
90	3.0			3.0			
110	3.0			3.0			
125	3.0			3.0			
140	3.0			3.0			
160	3.0			3.0			
180	3.0			3.0			
200	3.0			3.0			
225	3.0			3.0			
250	3.0			3.0			
280	3.5			3.5			
315	4.0			4.0			
355	5.0			5.0			
400	5.0			5.0			



PVC-GLAS Pressure pipes

Material

PVC-GLAS

Colour

Transparent

Dimensions

Standard length: 5 m

Remark

Other lengths on request

Application

Industrial pipes

Pressure pipe	SDR 51	SDR 34.3	SDR 21	SDR 13.5	SDR 9		
d mm	e mm	e mm	e mm	e mm	e mm		
6					1.0		
8					1.0		
10					1.2		
12				1.0	1.4		
16				1.2			
20				1.5			
25			1.5	1.9			
32			1.8	2.4			
40			2.0	3.0			
50		1.8	2.4	3.7			
63	1.8		3.0	4.7			
75	1.8		3.6				
90	1.8		4.3				
110	2.2		5.3				
125	2.5						
140	2.8						
160	3.2	4.7					

E-CTFE Pressure pipes

Material

E-CTFE

Colour

Natural

Dimensions

Standard length: 5 m

Remark

Other lengths on request

Application

Industrial pipes

Standards

based on ISO 10931

Pressure pipes	SDR 41	SDR 33	SDR 21	SDR 17	SDR 11		
d mm	e mm	e mm	e mm	e mm	e mm		
6							
8							
10							
12							
16			1.9				
20			1.9				
25			1.9				
32			2.4				
40			2.4				
50			3.0				
63			3.0				
75			3.6				
90			4.3				
110			5.3				
125			6.0				
140			6.7				
160			7.7				

Pipe fittings and valves

As one of the leading manufacturers within its field, SIMONA offers an extensive range of specialist fittings and other components tailored to the requirements of pipeline engineering.





PE 100 Fittings with elongated spigots

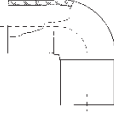

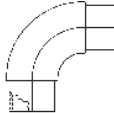
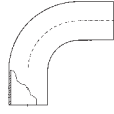
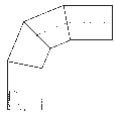
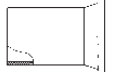
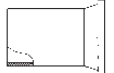
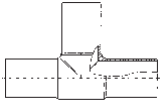
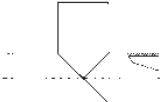
Material
PE 100

Colour
Black

Execution
with elongated spigots
for butt and electrofusion welding

Remark
Reduction factors to be observed in the
case of welded geometries

Standards
DIN EN 1555
DIN EN 12201
DIN EN 13244
DIN EN ISO 15494

		SDR-class	d
	Elbows 90° injected	SDR 17	50 – 315 mm
		SDR 11	20 – 315 mm
	Elbows 45° injected	SDR 17	50 – 315 mm
		SDR 11	20 – 315 mm
	Bends 90° injected	SDR 17	50 – 315 mm
		SDR 11	20 – 315 mm
	Bends 90°, 60°, 45°, 30°, 22°, 11° seamless, $r \sim 1,5 d$	SDR 17	50 – 630 mm
		SDR 11	32 – 630 mm
	Bends 90°, 60°, 45°, 30° segment-welded, $r \sim 1,5 d$	SDR 33	90 – 1200 mm
		SDR 17	90 – 1200 mm
		SDR 17.6	90 – 1200 mm
		SDR 11	90 – 630 mm
	Stub flanges injected	SDR 17	50 – 400 mm
		SDR 11	20 – 400 mm
	Stub flanges welded from pipe	SDR 17	450 – 630 mm
		SDR 11	450 – 630 mm
	Tees injected	SDR 17	50 – 500 mm
		SDR 11	20 – 500 mm
	Tees segment-welded	SDR 33	90 – 1000 mm
		SDR 26	90 – 1000 mm
		SDR 17	90 – 1000 mm
		SDR 11	90 – 630 mm

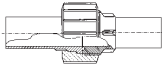
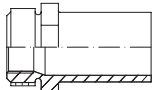
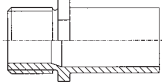


PE 100 Fittings with elongated spigots

		SDR-class	d
	Tees segment-welded reinforced	SDR 17	560 – 900 mm
		SDR 11	560 – 630 mm
	Tees with reduced branch injected	SDR 17	63/50 – 315/250 mm
		SDR 11	63/50 – 315/250 mm
	Tees with reduced branch saddle-mounted, swept	SDR 17	90/50 – 630/450 mm
		SDR 11	90/50 – 560/400 mm
	Tees with reduced branch and internal thread saddle-mounted	SDR 17	1/2" – 2"/50 – 500 mm
	Branches 45° injected	SDR 33	110 mm
		SDR 17	63 – 110 mm
		SDR 11	63 – 110 mm
	Branches 60°, 45° segment-welded	SDR 17	110 – 630 mm
		SDR 11	110 – 630 mm
	Reducers, concentric injected	SDR 17	50/25 – 630/560 mm
		SDR 11	25/20 – 630/560 mm
	End caps injected	SDR 17	50 – 400 mm
		SDR 11	20 – 400 mm
	End caps welded from pipe	SDR 17	450 – 630 mm
		SDR 11	450 – 630 mm



PE 100 Fittings with elongated spigots

		SDR-class	d
	Unions injected, with EPDM or FPM gasket	SDR 11	20 – 63 mm
	Adaptors with threaded female end Rp injected	SDR 11	20 – 63 mm
	Adaptors with threaded male end R injected	SDR 11	20 – 63 mm







PE 100 Fittings with short spigots

Material
PE 100

Colour
Black

Execution
With short spigots for butt welding



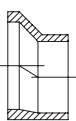

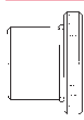

Standards
DIN EN 12201
DIN EN 13244
DIN EN ISO 15494

		SDR-class	d
	Bends 90° injected, r=d	SDR 33 SDR 17.6 SDR 11	110 – 400 mm 50 – 400 mm 20 – 400 mm
	Stub flanges for loose flanges ISO/DIN injected	SDR 33 SDR 17 ^⓪ SDR 11	110 – 630 mm 50 – 630 mm 20 – 500 mm
	Stub flanges for loose flanges ISO/DIN machined	SDR 33 SDR 17 ^⓪ SDR 11	710 – 1200 mm 710 – 1200 mm 560 – 630 mm
	Stub flanges for loose flanges ANSI injected	SDR 11	20 – 90 mm
	Tees injected	SDR 33 SDR 17 ^⓪ SDR 11	110 – 400 mm 50 – 500 mm 20 – 500 mm
	Tees with reduced branch injected	SDR 17 ^⓪ SDR 11	90/32 – 250/160 mm 90/32 – 250/160 mm

^⓪ SDR 17 version also suitable for SDR 17.6



PE 100 Fittings with short spigots

		SDR-class	d
	Reducers, concentric injected	SDR 17 ^①	63/50 – 315/280 mm
		SDR 11	25/20 – 315/280 mm
	Reducers, concentric machined	SDR 17 ^①	355/225 – 800/710 mm
		SDR 11	355/225 – 630/560 mm
	Reducers, eccentric injected, machined	SDR 33	160/90 – 1200/900 mm
		SDR 17 ^①	160/90 – 1200/900 mm
		SDR 11	160/90 – 630/560 mm
	End caps machined	SDR 17 ^①	250 – 800 mm
		SDR 11	250 – 630 mm
	Thread plugs injected		1/2 " – 2 1/2 "
	Anchors for pipe clamps	SDR 17	50 – 500 mm
		SDR 11	50 – 500 mm

① SDR 17 version also suitable for SDR 17.6

Special fittings

PE 80, PE 100:

Inspection tees 90°, 60°, expansion sockets, compensators

SIMONA® SIMODRAIN®

PE fittings for SIMODRAIN® pipe systems:

PE 100 electrofusion socket, channel; PE 80 double sockets with lip-seal gasket or O-ring; PE 80 end caps with O-ring; PE shaft liner for concreting

Double-containment pipe fittings

PE 80, PE 100:

Bends 90°, tees, branches 45°, branches with bend and more



PE Fittings for electrofusion welding

Material

PE 80
PE 100

Colour

Black

Welding

Integral electrofusion joints

Remark


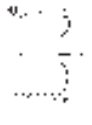
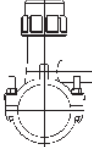
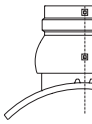
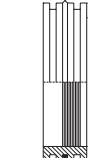
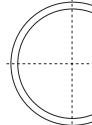
PE 80 internal saddle for service pipes, suitable for rehabilitation of service pipe connections using trenchless installation methods

PE 80 external saddle for service pipes, suitable for electrofusion connection of service pipes to PE sewer pipes using open-trench installation methods

PE 80 shaft connection suitable for joining PE sewer pipes in SDR classes 33, 26 and 17.6 to ready-mixed concrete shafts

In PE 100 on request:

- Tees with integral electrofusion joints
- Elbows 90°/45° with integral electrofusion joints
- Concentric reducers with integral electrofusion joints
- End caps with integral electrofusion joints

		SDR-class	d
	Electrofusion sockets pressure for piping systems SDR 17 to SDR 11		20 – 710 mm
	Electrofusion sockets channel for piping systems SDR 33 to SDR 17		110 – 500 mm
	Tapping saddles		40/20 – 250/63 mm
	PE 100 external saddle for service pipe connection ①	150/160	225 – 560
		DN	d
	PE 80 shaft connection	160	60 – 630
		L	135
		SDR-class	d
	PE 80/PE 100 pipe modules with integral electrofusion joints	SDR 33	500 – 800 mm
		SDR 26	400 – 800 mm
		SDR 17.6	280 – 800 mm
		SDR 17	280 – 800 mm
		SDR 11	180 – 800 mm

① Saddle for pipes up to d 1000 as well as ovoid pipes on request



PP Fittings with elongated spigots for IR/butt welding

Material

PP-H AlphaPlus

Colour

Grey

Welding

IR/butt welding

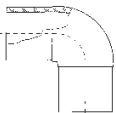
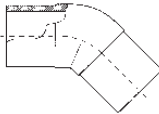
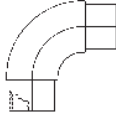
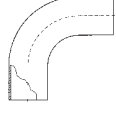
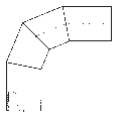
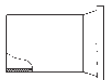
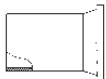
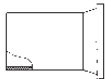
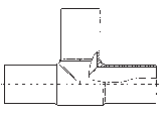
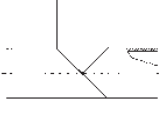
Remark

Reduction factors to be observed in the case of welded geometries

For operational reasons, certain dimensions are also produced in PP-R 80

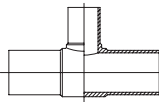
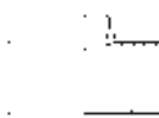
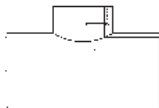

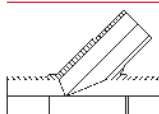

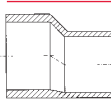
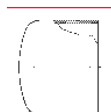
Standards

DIN EN ISO 15494

		SDR-class	d
	Elbows 90° injected	SDR 11	20 – 315 mm
	Elbows 45° injected	SDR 17.6 SDR 11	50 – 315 mm 20 – 315 mm
	Bends 90° injected	SDR 17.6 SDR 11	50 – 315 mm 20 – 315 mm
	Bends 90°, 60°, 45°, 30° seamless, $r \sim 1,5 d$ other angles and radii on request	SDR 11	32 – 315 mm
	Bends 90°, 60°, 45°, 30° segment-welded, $r \sim 1,5 d$	SDR 17.6 SDR 11	90 – 800 mm 90 – 500 mm
	Stub flanges for loose flanges ISO/DIN injected	SDR 11	20 – 315 mm
	Stub flanges for loose flanges ANSI injected	SDR 11	20 – 90 mm
	Stub flanges for loose flanges JIS injected	SDR 11	20 – 225 mm
	Tees injected	SDR 11	20 – 500 mm
	Tees segment-welded	SDR 33 SDR 17.6 SDR 11	90 – 1000 mm 90 – 800 mm 90 – 500 mm



PP Fittings with elongated spigots for IR/butt welding

		SDR-class	d
	Tees with reduced branch injected	SDR 17.6	90/50 – 315/250 mm
		SDR 11	63/50 – 315/250 mm
	Tees with reduced branch saddle-mounted, swept	SDR 17.6	90/50 – 630/450 mm
		SDR 11	90/50 – 500/355 mm
	Tees with reduced branch and internal thread saddle-mounted	SDR 17.6	1/2" – 2"/50 – 500 mm
	Branches 60°, 45° segment-welded	SDR 17.6	110 – 630 mm
		SDR 11	110 – 500 mm
	Branches 45° injected	SDR 33	110 mm
		SDR 17.6	63 – 110 mm
		SDR 11	63 – 110 mm
	Reducers, concentric injected	SDR 11	25/20 – 315/280 mm
	Reducers, eccentric injected	SDR 11	25/20 – 250/225 mm
	End caps injected	SDR 17.6	50 – 400 mm
		SDR 11	20 – 400 mm



PP Fittings with elongated spigots for IR/butt welding

		SDR-class	d
	Adaptors with threaded female end Rp and NPT injected	SDR 11	20 – 63 mm
	Adaptors with threaded male end R and NPT injected	SDR 11	20 – 63 mm
	Unions injected, with EPDM or FPM gasket	SDR 11	20 – 63 mm
	Compensators	SDR 11	63 – 400 mm

Remark: For operational reasons, certain dimensions are also produced in PP-R 80.



PP Fittings with short spigots

Material

PP-H AlphaPlus
PP-R 80

Colour

Grey

Welding






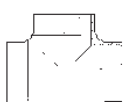
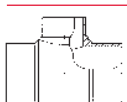
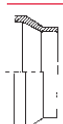

IR/butt welding

Remark

For operational reasons, certain dimensions are also produced in PP-R 80



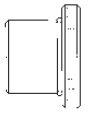

Standards

DIN EN ISO 15494

		SDR-class	d
	Bends 90° injected, $r = d$	SDR 33	110 – 400 mm
		SDR 17.6	50 – 400 mm
		SDR 11	20 – 400 mm
	Stub flanges for loose flanges ISO/DIN injected	SDR 33	110 – 630 mm
		SDR 17.6	50 – 630 mm
		SDR 11	20 – 500 mm
	Stub flanges for loose flanges ISO/DIN machined	SDR 33	710 – 1000 mm
		SDR 17.6	710 – 1000 mm
		SDR 11	560 – 630 mm
	Stub flanges for loose flanges ANSI injected	SDR 17.6	50 – 90 mm
		SDR 11	20 – 90 mm
	Stub flanges for loose flanges JIS injected	SDR 17.6	50 – 225 mm
		SDR 11	20 – 225 mm
	Tees injected	SDR 33	110 – 500 mm
		SDR 17.6	50 – 500 mm
		SDR 11	20 – 500 mm
	Tees with reduced branch injected	SDR 17.6	90/32 – 250/160 mm
		SDR 11	90/32 – 250/160 mm
	Reducers, concentric injected	SDR 17.6	63/50 – 315/280 mm
		SDR 11	25/20 – 315/280 mm
	Reducers, concentric machined	SDR 17.6	355/225 – 800/710 mm
		SDR 11	355/225 – 630/560 mm



PP Fittings with short spigots

		SDR-class	d
	End caps machined	SDR 17.6	250 – 800 mm
		SDR 11	250 – 500 mm
	Thread sockets injected	SDR 11	1/2" – 2 1/2" 32 – 75 mm
	Thread plugs injected		1/2" – 2 1/2"
	Anchors for pipe clamps	SDR 17.6	50 – 500 mm
		SDR 11	50 – 500 mm

PP Fittings for electrofusion welding

Material

PP-H AlphaPlus

Colour

Grey

Welding

Integral electrofusion joints

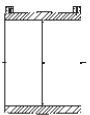
Remark

injected

up to 63 mm: suitable for pipes SDR 11

from 75 mm: suitable for pipes SDR 17.6

to SDR 11

		SDR-class	d
	Electrofusion sockets pressure for piping systems SDR 17 to SDR 11		20 – 225 mm



PE 80/PP Fittings for socket welding

Material

PE 80
PP-H AlphaPlus, PP-R 80

Colour

PE 80: black
PP: grey

Welding








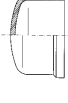
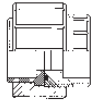
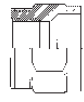
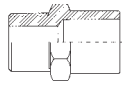
Socket welding

Remark

For operational reasons, certain dimensions are also produced in PP-R 80.
PE 100 on request

Standards

DIN EN ISO 15494

		SDR-class	d	
	Elbows 90°, 45° injected	PN 12.5	20 – 63 mm	PE 80
		PN 12.5	16 – 110 mm	PP-H
	Tees injected	PN 12.5	20 – 63 mm	PE 80
		PN 12.5	16 – 110 mm	PP-H
	Stub flanges for socket welding for loose flanges ISO/DIN injected	PN 12.5	20 – 63 mm	PE 80
		PN 12.5	16 – 110 mm	PP-H
	Stub flanges for socket welding for loose flanges ANSI injected	PN 12.5	20 – 110 mm	PP-H
	Stub flanges for socket welding for loose flanges JIS injected	PN 12.5	20 – 110 mm	PP-H
	Sockets injected	PN 12.5	20 – 63 mm	PE 80
		PN 12.5	16 – 110 mm	PP-H
	Reducers injected	PN 12.5	25/20 – 63/50 mm	PE 80
		PN 12.5	20/16 – 110/90 mm	PP-H
	End caps injected	PN 12.5	20 – 63 mm	PE 80
		PN 12.5	16 – 110 mm	PP-H
	Unions, with cylindrical pipe thread R injected, with EPDM gasket	PN 12.5	20 – 63 mm	PP-H
	Adaptors with threaded female end Rp injected, (pressure reduction factor 0.8)	PN 12.5	20 – 63 mm	PP-H
	Adaptors with threaded pipe thread Rp injected, (pressure reduction factor 0.6)	PN 12.5	20 – 63 mm	PP-H



Fittings for flange assemblies
PE 80/PE 100/PP
Piping systems

Material


PP/steel


Gasket material: EPDM/FPM/NBR


Colour


Black

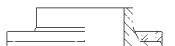
Grey

Flanges		drilled as per	d
	PP/steel loose flanges for stub flanges	ISO/DIN PN 10/16	20 – 180 mm
		SO/DIN PN 10	200 – 500 mm
		ANSI 150 lbs	1/2" – 16"
		ISO/DIN PN 10/16	32 – 500 mm ^①

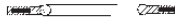
	PP/steel loose flanges for stub flanges for socket welding	ISO/DIN PN 10/16	90 – 110 mm
		ANSI 150 lbs	90 – 110 mm

	PP/steel profile loose flanges	ISO/DIN PN 10/16	50 – 180 mm
		ISO/DIN PN 16	200 – 400 mm
		ISO/DIN PN 10	200 – 630 mm

	PP/steel Blind flanges	ISO/DIN PN 10/16	20 – 180 mm
		ISO/DIN PN 10	200 – 400 mm

		SDR-class	d
	Special flange connections with EPDM O-ring and galvanised steel flange	SDR 17	160 – 560 mm
		SDR 11	160 – 560 mm

Gaskets			
	Flat gaskets for stub flanges	SDR 17	50 – 1000 mm
		SDR 11	20 – 630 mm

	Profile gaskets with steel insert, up to PN 16	for stub flanges SDR 33	90 – 315 mm
		for stub flanges SDR 17	50 – 630 mm
		for stub flanges SDR 11	25 – 630 mm
		for stub flanges	
		for socket welding PN 16	16 – 110 mm

^① PP-EL/steel





Fittings for flange assemblies PVDF piping systems

Material
PP/steel, FPM, GFK

Colour
Black

Gaskets		SDR-class	d
	Flat gaskets FPM up to 10 bar	for stub flanges for socket welding PN 16	20 – 110 mm
	Profile gaskets with steel insert FPM up to PN 16	for stub flanges SDR 33 for stub flanges SDR 21 for stub flanges for socket welding PN 16	90 – 315 mm 25 – 225 mm 16 – 110 mm

Accessories

Accessories			d
	PP pipe clamps injected	without clip with clip	16 – 32 mm 40 – 160 mm
	PP spacer for pipe clamps	Type A/Type B	16 – 160 mm

PVDF Fittings for IR/butt welding

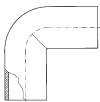
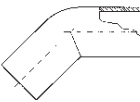


Material
PVDF

Colour
Natural

Welding
IR/butt welding

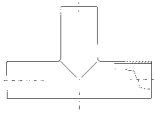
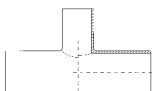
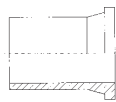
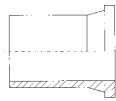
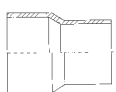
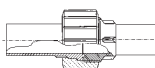
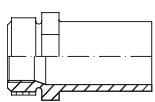
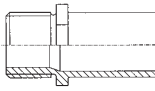
Standards
ISO 10931

Kynar[®]
inside

		SDR-class	d
	Elbows 90° injected	SDR 21	20 – 63 mm
	Elbows 45° injected	SDR 33 SDR 21	90 – 225 mm 20 – 225 mm
	Bends 90° injected, short spigots only for butt welding	SDR 21	20 – 63 mm
	Bends 90° injected, r = d	SDR 33 SDR 21	90 – 225 mm 75 – 225 mm



PVDF Fittings
for IR/butt welding

		SDR-class	d
	Tees injected	SDR 33	90 – 225 mm
		SDR 21	20 – 225 mm
	Tees with reduced branch injected	SDR 33	160/90 – 225/110 mm
	Stub flanges for loose flanges ISO/DIN injected	SDR 33	90 – 225 mm
		SDR 21	20 – 225 mm
	Stub flanges for loose flanges ANSI injected	SDR 21	25 – 90 mm
	Reducers injected	SDR 33	90/63 – 225/200 mm
		SDR 21	25/20 – 225/200 mm
	Unions injected, with FPM gasket	SDR 21	20 – 63 mm
	Adaptors with threaded female end Rp and NPT injected	SDR 21	20 – 63 mm
	Adaptors with threaded male end R and NPT injected	SDR 21	20 – 63 mm



PVDF Fittings for socket welding

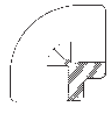






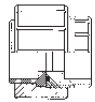
Material
PVDF

Colour
Natural

Welding
Socket welding

Standards
ISO 10931

Kynar[®]
inside

		SDR-class	d
	Elbows 90°, 45° injected	PN 16	20 – 63 mm
	Tees injected	PN 16	20 – 63 mm
	Stub flanges for loose flanges ISO/DIN injected	PN 16	20 – 63 mm
	Stub flanges for loose flanges ANSI injected	PN 16	20 – 63 mm
	Sockets injected	PN 16	20 – 63 mm
	Reducers injected	PN 16	20/16 – 63/50 mm
	End caps injected	PN 16	20 – 63 mm
	Unions injected, with FPM gasket	PN 16	16 – 63 mm



PPs Fittings for ventilation pipes

Material

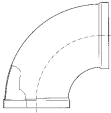
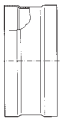
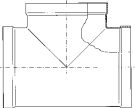
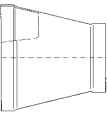
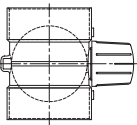
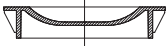

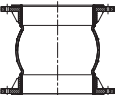
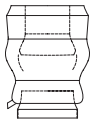
PPS[Ⓞ]

Colour

Grey

Standards

Low flammability
as per DIN 4102

		d
	Bends 90°, 60°, 45°, 30°	Ventilation series 50 – 800 mm
	Sockets	Ventilation series 50 – 800 mm
	Tees	Ventilation series 50 – 800 mm
	Reducers, concentric	Ventilation series 90/75 – 630/560 mm
	Butterfly valves Incremental adjustment, infinitely variable	Ventilation series 50 – 315 mm Ventilation series 50 – 400 mm
	End caps	Ventilation series 50 – 400 mm
	Flange adaptors with socket	Ventilation series 50 – 400 mm
	Sleeves with flange connection or tensioning strap	Ventilation series 50 – 400 mm
	Air exit duct	Ventilation series 110 – 400 mm

[Ⓞ] Ventilation pipe fittings in PE, PP or PVDF on request



PP Valves
manual operation

Material

PP

Colour

Grey

Connections



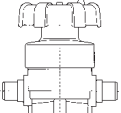





IM, DM, FM, MM, EM, OM, ISO, VSS, VSM
Explanation see page 52

Flange connections

ISO/DIN, ANSI

Gaskets/diaphragms

EPDM, FPM, PTFE/FPM

		d
	2-way ball valve	20 – 110 mm 20 – 110 mm
	3-way ball valve with L- or T-bore	20 – 63 mm 20 – 63 mm
	Diaphragm valve	20 – 110 mm 20 – 110 mm
	Butterfly valve with locking lever	50 – 225 mm
	Butterfly valve with hand lever	75 – 315 mm
	Ball check valve	20 – 63 mm
	Check valve	20 – 90 mm
	Sediment strainer	20 – 110 mm



PVDF Fittings manual operation

Material

PVDF

Colour

Natural

Connections



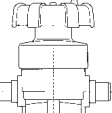



IM, DM, EF, OM ISO
Explanation see below

Flange connections

ISO/DIN, ANSI

Gaskets/diaphragms

EPDM, FPM, PTFE/FPM

		d
	2-way ball valve	16 – 90 mm
	3-way ball valve with L- or T-bore	20 – 63 mm
	Diaphragm valve	20 – 110 mm 20 – 110 mm
	Butterfly valve with locking lever	50 – 225 mm
	Butterfly valve with hand lever	75 – 315 mm
	Ball check valve	20 – 63 mm

Connection key:

IM = female fusion ends ISO/DIN

DM = male fusion ends ISO/DIN

FM = thread sockets with cyl. female threaded ends R

MM = PP butt fusion ends SDR 11 elongated

EM = PE 80 butt fusion ends SDR 11 elongated

OM ISO = PP/steel loose flanges, drilled as per ISO/DIN 2501

VSS = union with male butt-fusion-end insert

VSM = union with female butt-fusion-end insert

EF = with male IR/butt fusion ends SDR 21 elongated



Butterfly valves

Operating pressure

max. 10 bar for SDR 11,
max. 6 bar for SDR 17/17.6

Nominal diameter

DN 50 – DN 60

Connection

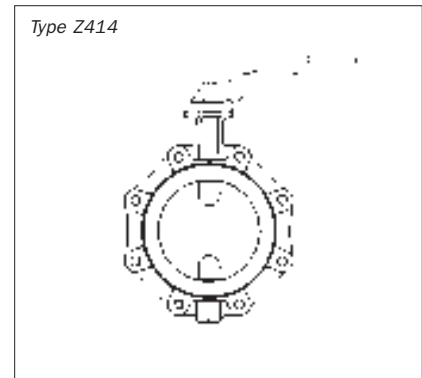
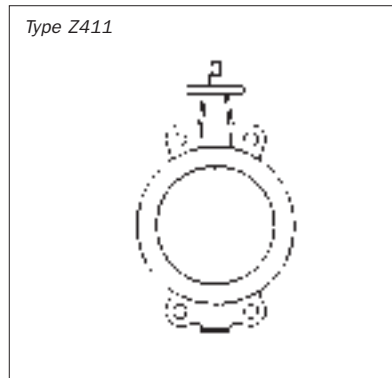
PN 10 as per ISO/DIN 2501

Remark

Valve geometry has been specially adapted for PE and PP pipes. No need for additional machining of stub flanges.

Body

Aluminium
GGG 40



	SDR-class	d
Butterfly valve TYPE Z411 interposed flange valve	SDR 17/17.6	63 – 630 mm
	SDR 11	63 – 630 mm
Butterfly valve TYPE Z414 flange mounting valve	SDR 17/17.6	63 – 630 mm
	SDR 11	63 – 630 mm

Valve accessories

We offer a full range of accessories for the relevant valves and connectors.

For ball valves

- Ball valve brackets
- PP/PVDF inserts

For diaphragm valves

- Mounting plates
- Electrical position indicators
- Locking devices

For further information about our range of valves, please refer to the Gross Price List.



Services

As a customer, you always take centre stage: from project development to materials procurement and on-site planning, we are committed to providing the very best consulting services.

Our long-standing experience is your gain.

SIMONA services

Advisory service

We have channelled considerable resources into technical consulting and would be delighted to share our know-how with you. We offer global consulting services, headed by highly qualified staff at our Technical Sales Service and within our sales organisation – from project planning and product selection to on-site assistance tailored to your applications.

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+49 (0) 67 52/14-315
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pipingsystems@simona.de

Our consulting service covers the following areas:

Project planning

We advise project planners and contractors on the selection of suitable materials and products as well as on the most efficient methods of installation. It would be a great pleasure for us to assist you in addressing all technical issues related to your specific project, e.g. pipe-laying methods, structural calculations or joining technology.

On-site consulting

We are happy to provide active support at all stages of your project. Our qualified engineers will assist you on site throughout your construction project and also advise you on technical matters subsequent to completion.

Training

You might also like to take advantage of our offer to train your staff on site or at our Technology Centre in Kirn.

Structural analysis

We perform structural calculations in the following areas

- Underground pipe installation
- Drainage pipes in landfill sites
- Shaft installations
- Rectangular and cylindrical tanks/vessels
- Ventilation piping systems.

Customised pipes and fittings

Alongside our standard product range, we offer a premium-class package of specialist solutions:

- Pipes in various lengths for a range of joining methods
- Special pipe sizes adapted to the standard nominal diameters of other materials
- Pipes with non-standard properties such as electrical conductivity or low flammability
- Customised fittings as system components for your application.

Standard tendering documents

To view standard tendering documents for our products, please refer to our SIMONA® SIMCAT CD-ROM or visit our website at www.simona.de.

Equipment and accessories

We are able to supply you with specialist equipment and accessories required for professional welding and processing, such as welding machines for electrofusion or heated-element butt welding as well as tensioning devices and other processing machinery. Specialist equipment can be either purchased or hired. Please contact us for further details.

Information service

For further details about SIMONA piping systems, please refer to the following publications:

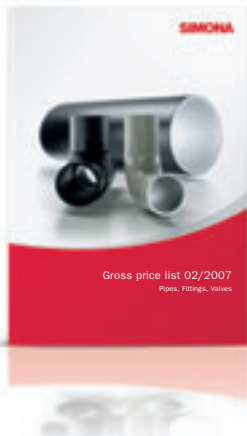
- PE CoEx Sewer Duct Systems for Municipal Sewage
- PE 80/PE 100 Pressure Pipe Systems for Municipal Sewage
- PP-H 100 Sewer Duct Systems for Industrial Sewage
- SPC Protective-Jacket Pipes
- CD-ROM SIMCAT
- Piping Systems for Waste-Water Disposal
- Gross Price List
- SIMONA® Ovoid Pipes
- SIMONA® SIMODRAIN®

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Our detailed product range for pipes, fittings and valves is listed in our Gross Price List (print version) and on the Internet at www.simona.de

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