

Since 1974  
experienced manufacturer of  
diffusers and aeration grids



Stainless steel aeration grids  
made by



Polypropylen grids  
made by



SUPRATEC Gesellschaft für Umwelt- und Verfahrenstechnik mbH  
Von-Drais-Strasse 7  
55469 Simmern, Germany  
[www.oxyflex.de](http://www.oxyflex.de)



Member of  
German Water  
Partnership

December 2021



SUPRATEC supplies aeration grids manufactured in stainless steel in different material qualities AISI304, AISI 304L, AISI 316, AISI316L, ... project-by-project basis acc. to

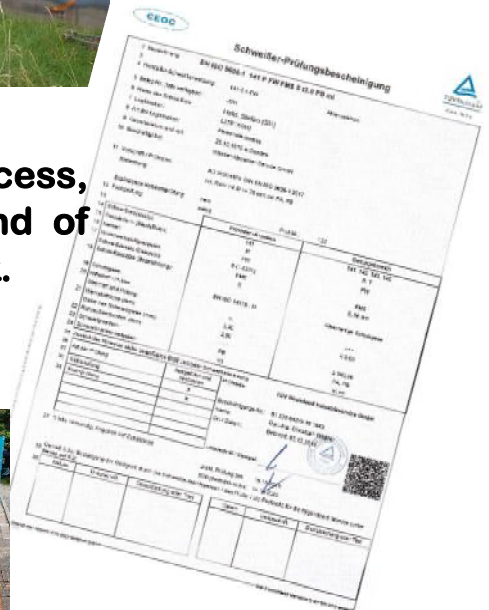
- specified material quality
- individual design and drawings.

Stainless steel grids are manufactured by:

**WAS GmbH**  
 Am Bergpfad 4  
 57520 Friedewald  
 Germany  
[www.was-gmbh.eu](http://www.was-gmbh.eu)



By certified welding process, WAS is supplying all kind of stainless steel equipment.





**WAS is specialist in production of piping for waster water treatment plants and installation, resp. service on site.**



**Stainless steel grids are manufactured and supplied acc. to project-by-project designed drawings, based on long-term experience of SUPRATEC in close cooperation with client resp. consultant to enable the best and easiest installation on site to ensure a sustainable operation of optimised aeration system.**

**Aeration grids are designed acc. to DIN EN standards, but can also be adapted to clients special wished like e.g. flanges acc. to ASME B16.5 as supply limit at top of the drop pipe.**

**Wall thickness for pipes is dependent on temperature and pressure stage. In aeration systems for waste water treatment plants, pressure below 1bar is commonly used dependent on water depth, whereas air temperatures is mostly less than 150°C.**

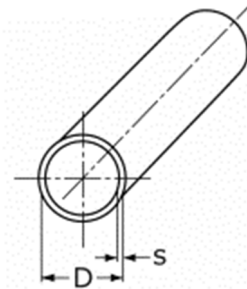
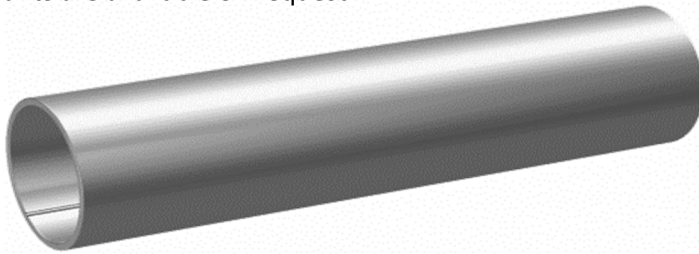
<b>Pressure table for stainless steel pipes</b>					
highest allowed internal pressure [bar]					
		<b>AISI 304</b>		<b>AISI 316</b>	
<b>AD Ø</b>	<b>wall thickness [mm]</b>	<b>max. pressure [bar] at 20°C</b>	<b>max. pressure [bar] at 150°C</b>	<b>max. pressure [bar] at 20°C</b>	<b>max. pressure [bar] at 150°C</b>
60,3	2	87	68	102	82
76,1	2	69	53	81	64
88,9	2	59	50	69	55
114,3	2	46	35	54	42
139,7	2	38	29	44	35
168,3	2	32	24	37	29
219,1	3	36	28	42	33
273,0	3	29	22	34	27
323,9	3	24	19	28	23

**SUPRATEC used standard wall thickness is based on this table and under consideration of sustainable long-term usage.**

## WELDED ROUND TUBE

acc. to EN 10217-7

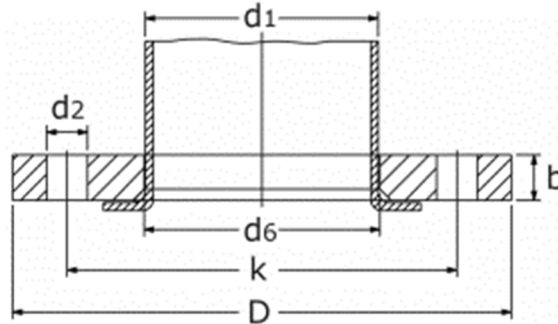
SUPRATEC standard wall thickness for aeration systems in waste water treatment plants are marked. Deviants are available on request.



diameter D [mm]	wall thickness s [mm]	standard / optional	weight [kg/m]
<b>60,3</b>	<b>2</b>	<b>standard</b>	<b>2,92</b>
60,3	2,6	optional	3,757
60,3	2,9	optional	4,168
<b>76,1</b>	<b>2</b>	<b>standard</b>	<b>3,711</b>
76,1	2,3	optional	4,25
76,1	2,6	optional	4,765
76,1	2,6	optional	4,749
76,1	2,9	optional	5,315
<b>88,9</b>	<b>2</b>	<b>standard</b>	<b>4,352</b>
88,9	2,3	optional	4,987
88,9	2,6	optional	5,618
88,9	3	optional	6,452
88,9	3,2	optional	6,876
<b>114,3</b>	<b>2</b>	<b>standard</b>	<b>5,624</b>
114,3	2,6	optional	7,272
114,3	3	optional	8,361
114,3	3	optional	8,496
<b>139,7</b>	<b>2</b>	<b>standard</b>	<b>6,9</b>
139,7	2,6	optional	8,926
139,7	3	optional	10,269
<b>168,3</b>	<b>2</b>	<b>standard</b>	<b>8,328</b>
168,3	2,6	optional	10,788
168,3	3	optional	12,417
168,3	4	optional	16,456
219,1	2	optional	10,872
<b>219,1</b>	<b>3</b>	<b>standard</b>	<b>16,233</b>
219,1	4	optional	21,554
273	2	optional	13,57
<b>273</b>	<b>3</b>	<b>standard</b>	<b>20,29</b>
323,9	2,6	optional	20,92
<b>323,9</b>	<b>3</b>	<b>standard</b>	<b>24,18</b>
323,9	4	optional	32,445
<b>355,6</b>	<b>3</b>	<b>standard</b>	<b>26,6</b>
355,6	4	optional	35,216

## LOOSE PLATE FLANGE

Use standard: flanges acc. to EN 1092-1 drilled as PN10/16 with reduced thickness  
 Supply limit with flanges acc. to different standards  
 (e.g. ASME / ASTM B 16.5) are available on request!

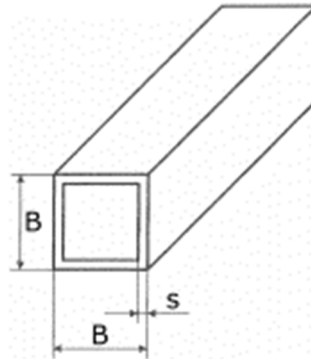
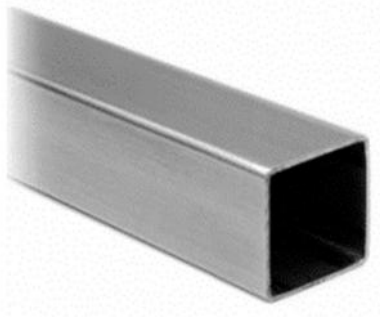


DN	d1 [mm]	b [mm]	k [mm]	D [mm]	screws	drilled
25	33,7	10	85	115	4 x M16	PN 10-40
32	42,4	10	100	140	4 x M16	PN 10-40
40	48,3	10	110	150	4 x M16	PN 10-40
50	60,3	10	125	165	4 x M16	PN 10/16
65	76,1	10	145	185	4 x M16	PN 10/16
80	88,9	10	160	200	8 x M16	PN 10/16
100	114,3	10	180	220	8 x M16	PN 10/16
125	139,7	12	210	250	8 x M16	PN 10/16
150	168,3	12	240	285	8 x M20	PN 10/16
200	219,1	12	295	340	8 x M20	PN 10
250	273	15	350	395	12 x M20	PN 10
300	323,9	15	400	445	12 x M20	PN 10



**WELDED SQUARE PIPE**

perfect solution for laterals with installation of plate diffusers OXYFLEX MF1100,  
OXYFLEX MF650 and oval tube diffusers OXYFLEX OM



B [mm]	B [mm]	s [mm]
60	60	2
80	80	2
100	100	2

SUPRATEC produces Polypropylene grids/pipes project-by-project basis acc. to individual design and drawings by our own.

Drop pipes are recommended to be made out of stainless steel, headers can be realised in stainless steel but of also in Polypropylene.

Polypropylene grids are manufactured by:

**SUPRATEC**  
**Gesellschaft für Umwelt- und Verfahrenstechnik mbH**  
**Von-Drais-Strasse 7**  
**55469 Simmern**  
**Germany**  
[www.oxyflex.de](http://www.oxyflex.de)



**Handling and welding of pipe up to a diameter of DN300 in our own production**





## Polypropylene pipes PP-H AlphaPlus are used by SUPRATEC for aeration pipes

### Manufacturer of PP-pipes:

**SIMONA AG**  
**Teichweg 16**  
**55606 Kirn**  
**Germany**  
**www.simona.de**

#### Technical Data Sheet SIMONA® PP-H AlphaPlus®



Trade name: **SIMONA® PP-H AlphaPlus®**  
 Date of printing: 12.11.2020

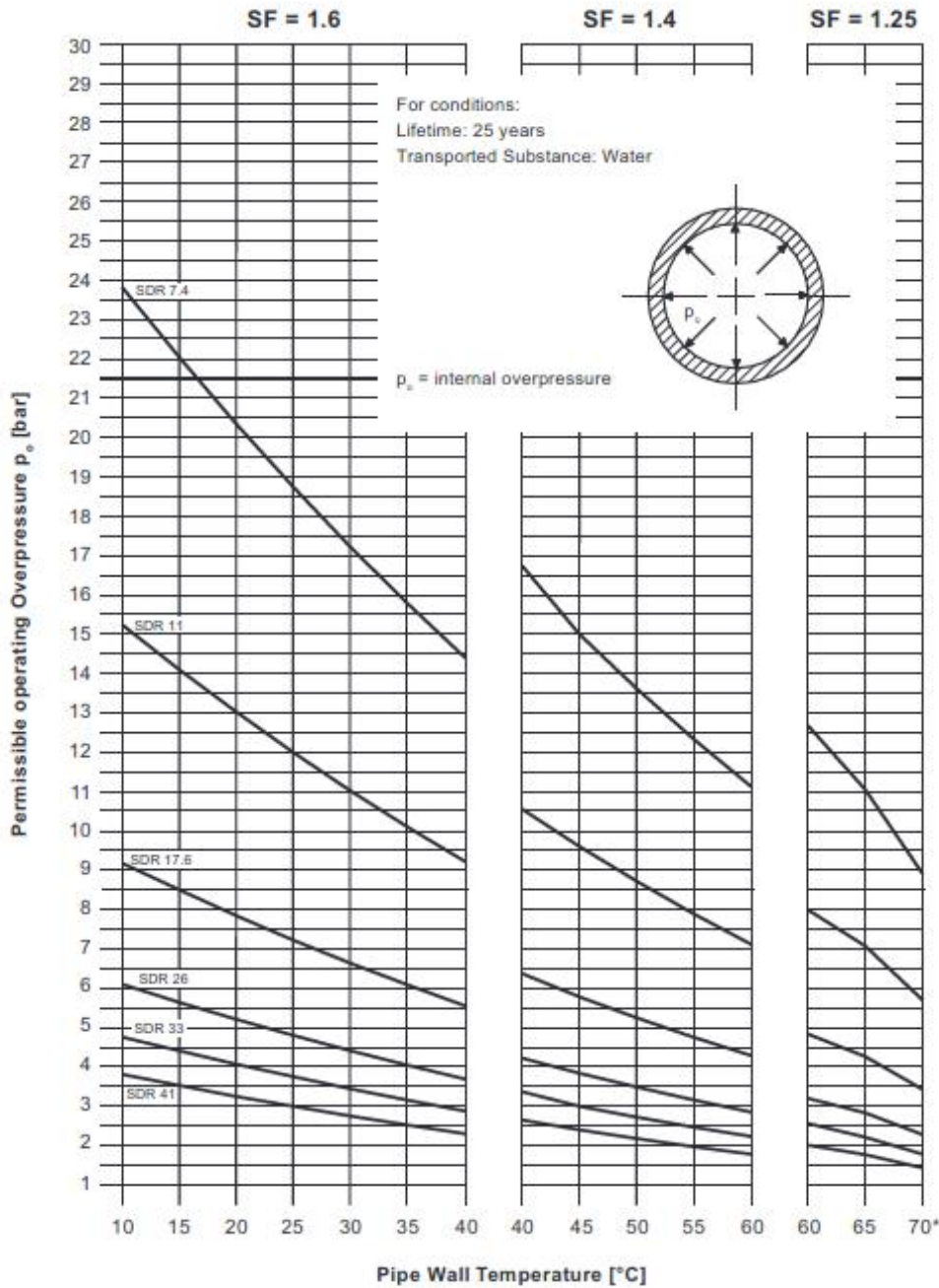
Revision: 27.05.2019

SIMONA® PP-H AlphaPlus®	
Data sheet update	27.05.2019
Moulding compound extruded	PP-H,ECH,16-09-003
Extruded to moulding compound standard	DIN EN ISO 19069-1
Moulding compound pressed	PP-H,QCH,16-09-003
Pressed to moulding compound standard	DIN EN ISO 19069-1
Density, g/cm <sup>3</sup> , DIN EN ISO 1183	0.910
Tensile modulus of elasticity, MPa, DIN EN ISO 527	1700
Yield stress, MPa, DIN EN ISO 527	33
Elongation at yield, % , DIN EN ISO 527	8
Impact strength, kJ/m <sup>2</sup> , DIN EN ISO 179	without break
Notched impact strength Charpy, kJ/m <sup>2</sup> , DIN EN ISO 179-1eA	9
Shore hardness D (15 s), DIN EN ISO 868	72
Mean coefficient of linear thermal expansion, K <sup>-1</sup> , ISO 11359-2	1,6 x 10 <sup>-4</sup>
Surface resistivity, Ohm , DIN IEC 60093	≥ 10 <sup>13</sup>
Temperature range, °C	0 to +100
Fire behaviour DIN 4102	DIN 4102 B2 normal flammability (self-assessment without test certificate)
Food compliance EU 10/2011	yes
Food compliance FDA	yes



**SDR17.6 are used by SURATEC as standard  
(alternatives are possible on demand like e.g. SDR11)**

Permissible loads for plastic pipelines under internal overpressure  
 Material: PP-H  
 SDR 41/33/26/17.6/11/7.4  
 SF = 1.25/1.4/1.6



**Note: Higher temperatures possible for decreased lifetimes (see DIN EN 8077)**

\* Service life temperature limit at 25 years due to thermal ageing (effects related to thermoxydation)



# SUPRATEC

Gesellschaft für Umwelt- und Verfahrenstechnik mbH

***Power up your wastewater:  
Save up to 50% of aeration energy costs***



- Conception
- Engineering
- Design
- Production

