

LORO-X

www.loro-x.com

The secure solution for facade design:

LORO- Stand and downpipes

- made of steel
- made of **stainless steel**
- made of **copper**



**...optimal drainage with
maximum safety!**

LORO-X Stand and downpipes

Steel discharge pipes with push-fit socket

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1/LRR ENG/1.0



LORO-X Stand and downpipes

Steel discharge pipes with push-fit socket

Rainwater downpipes are at risk of mechanical damage on residential buildings, inside and outside industrial buildings, on public buildings and multi-storey car parks and in the vicinity of paths and roads up to a height of 3 metres.

Damaged rainwater downpipes impair the function of the roof drainage and lead in the long run to undesirable moisture penetration into masonry and facades.

DIN 1986-100: 2016-12 (number 6.1.4) stipulates:

"Pipes (standpipes) made of a suitable material must be used for rainwater downpipes in areas where mechanical damage can be expected."

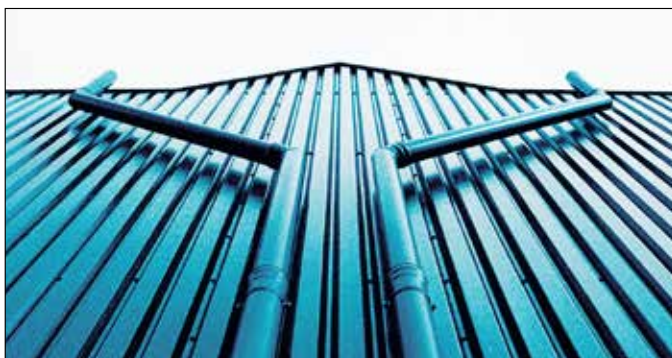


LORO meets this requirement with rain standpipes and rainwater downpipes:

- **made of steel:** for rainwater downpipes made of titanium zinc, galvanized steel sheet according to DIN EN 612, aluminium and plastic pipes, or of LORO-X steel discharge pipes according to DIN EN 1123.
- **made of copper:** for rainwater downpipes made of copper sheet according to DIN EN 612, or of LORO-N copper discharge pipes according to DIN 1754/1786.
- **made of stainless steel:** for rainwater downpipes made of stainless steel, or of LORO-XCL stainless steel discharge pipes according to DIN EN 1124.



Advantages:

- shockproof and formstable
- standpipe and cleaning pipe in one piece
- not susceptible to heat or cold
- incombustible
- can be painted
- versatile pipe and fittings program, single-sourced for universal problem solutions
- usable as design elements of the facade architecture



LORO-X Standpipes and downpipes Configurator

<p>Downpipes</p>	<p>LORO-X round</p>  <p>Page 23</p>	<p>Zink</p> 	<p>LORO-X Reduced plug-in</p>  <p>Page 28</p>
	 <p>Page 27</p>	 <p>Page 20</p>	 <p>Page 27</p>
<p>Standpipe</p>	 <p>Page 14</p>	 <p>Page 16</p>	 <p>Page 15</p>  <p>Page 17</p>
<p>Connectors to sewer system</p>	 <p>KG + SML</p> <p>Page 26</p>		
<p>Fittings</p>	 <p>Page 24</p>  <p>Page 27</p>	 <p>Page 26-27</p>	 <p>Pages 24-25</p>
<p>Fastening</p>	 <p>Page 16</p>	 <p>Page 33</p>	 <p>Page 32</p>

<p>LORO-X quadratic</p>  <p>Page 30</p>	<p>Copper round</p>  <p>Page 30</p>	<p>Copper quadratic</p>	<p>LORO-XCL Stainless steel</p>  <p>Page 28</p>
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 <p>Page 18</p>	 <p>Page 19</p>	 <p>Page 20</p>	 <p>Page 21</p>
		 <p>KG + SML Page 35</p>	 <p>KG + SML Page 39</p>
 <p>Page 31</p>	 <p>Page 35</p>		 <p>Pages 36-37</p>
 <p>Page 32</p>	 <p>Page 36</p>	 <p>Page 36</p>	 <p>Page 40</p>

Sturdy:

LORO-X rain standpipes and rainwater downpipes for every facade



LORO-X rain standpipes and rainwater downpipes with a LORO-X parapet drainage



LORO-X rain standpipes without clean-out openings with pipe offset into the sewer pipe



LORO-X Standpipe for renovation



LORO-X rain standpipes (downspout) without cleaning opening with bend



LORO-X High performance safety over flow with stand pipe



LORO-X rain standpipes and rainwater downpipes in residential construction

Pipe material

Stand and downpipes made of steel:



Material: Quality precision steel pipe according to DIN EN 10305-3, made from cold rolled narrow strip according to DIN 1624

Tensile strength: R_m 310 - 410 N/mm²
 Elongation at rupture: A_5 min. 28%
 Dynamic modulus of elasticity: at + 20 °C = 55 W/m °C

Length expansion coefficient
 -20 °C bis +80 °C: 0,012 mm/m °C

Example: 3,0 m pipe, Δt + 25 °C
 $3,0 \times 25 \times 0,012 = 0,900$ mm

Stand and downpipes made of copper:

Material: Copper pipe SF-Cu nach DIN 1754/1786

Tensile strength: R_m 290 N/mm²
 Elongation at rupture: A_5 min. 4%
 Dynamic modulus of elasticity: at + 20 °C = 305 W/m °C

Length expansion coefficient
 -20 °C bis +80 °C: 0,017 mm/m °C

Example: 3,0 m pipe, Δt + 25 °C
 $3,0 \times 25 \times 0,017 = 1,275$ mm

Stand and downpipes made of stainless steel:



Material: Welded pipes according to DIN EN 1124 made from austenitic stainless steels according to DIN EN ISO 1127
 Material number: 1.4301
 Short name: X 5 Cr Ni 18 10

Tensile strength: R_m 500 - 750 N/mm²
 Elongation at rupture: A_5 min. 26 - 50%
 Dynamic modulus of elasticity: bei + 20 °C = 15 W/m °C

Length expansion coefficient
 -20 °C bis +80 °C: 0,016 mm/m °C

Example: 3,0 m pipe, Δt + 25 °C
 $3,0 \times 25 \times 0,016 = 1,200$ mm



DIN EN 1123
DIN EN 1124
Sealing elements



Member of the quality association



Steel drainpipes and fittings

Member of the trade association:



Surface finish/corrosion protection

LORO steel rain standpipes and rainwater downpipes:
Hot-dip galvanising inside and outside according to DIN EN 1123 Parts 1 and 2.

With additional inside coating, colour: red-brown.

The cut surfaces of pipes that have been cut to length do not corrode if used for the intended purpose. The interactive zinc boundary layers produce the well-known cathodic protection.

LORO copper rain standpipes and rainwater downpipes:
Copper does not require any additional corrosion-protection measures.

Durable protective layers are created on the surface in conjunction with oxygen from the air.

LORO stainless steel rain standpipes and rainwater downpipes:
Bare metal according to DIN EN 1124. The stainless steel material (X5 Cr Ni 18 9) used for LORO rain standpipes and rainwater downpipes is one of the largely corrosion-resistant materials.

Additional corrosion-protection measures are not required.

Fire behaviour

According to DIN 4102, LORO rain standpipes and rainwater downpipes are to be assigned to building material class A 1, incombustible, and are classified as incombustible according to DIN 1986, Part 4.

Sealing elements

Standard: **SB (SBR)** styrene-butadiene copolymer, DN 70 - DN 200.

Tightness values

The tightness values of the LORO-X push-fit socket connection lie above the requirement of DIN 1986 Part 100:2008 (internal and external overpressure 0 – 0.5 bar) for all nominal sizes.

At higher pressures the socket joint can be secured against axial thrust by the **LORO-X anchor clip, no. 806X** (DN 40 – DN 125) or by the **LORO-X anchor hoop, no. 808X** (DN 150 – DN 200). The following values are achieved when installing with anchor clips or anchor hoops and glued sealing element:

DN 70, 80, 100	=	5 bar overpressure
DN 125	=	4 bar overpressure
DN 150, 200	=	1,5 bar overpressure

Custom-made cleaning pipes and closing plugs are available for pressures above 0.5 bar.

Supervision

The manufacturing supervision for pipes and fittings is performed by the Würzburg Materials Testing Office of LGA Qualitest GmbH and for sealing elements by the State Materials Testing Office of North Rhine-Westphalia in Dortmund (external supervision).

System overview

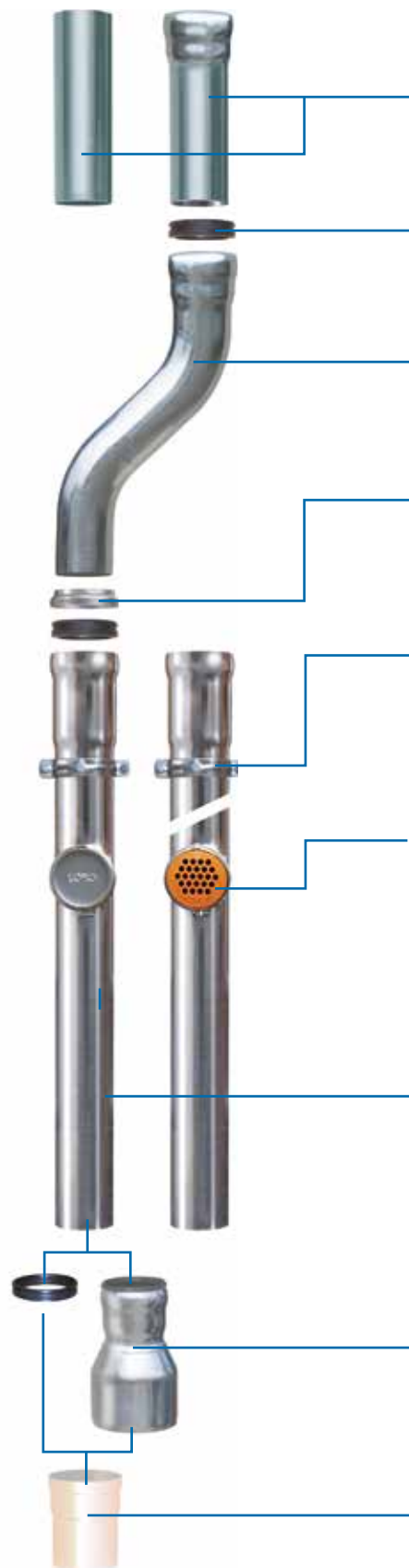
	DN	70	80	100	125	150	200
Stand pipes							
	round, without cleaning opening	● ●	● ● ●	● ● ●	● ● ●	● ●	
	round, with cleaning opening	● ●	● ● ●	● ● ●	● ● ●	● ●	
	round, with cleaning opening and cleaning cover	● ●	● ●	● ●	● ●		
	quadratic, without cleaning opening	●	●	● ●			
	quadratic, with cleaning opening	●	●	● ●			
Down pipes							
	round, with socket	● ● ●	● ● ●	● ● ●	● ●	● ●	●
	quadratic, with socket and seaing	●	●	●			
	round, with reduced plug-in, without seal	●	●	●			
Formteile							
	Greenery trap fitting			●			
	Branches	● ● ●	● ● ●	● ● ●	● ●	● ●	●
	Branches, with reduced plug-in	●	●	●			
	Bends	● ● ●	● ● ●	● ● ●	● ●	● ●	●
	Offset pipes	●	●	●	●		
	Bends, with reduced plug-in	●	●	●			
	Transition pipes		● ● ●	● ● ●	● ●	● ●	●
	Transition pipes, from round to quadratic	●	●	●			
	Transition pipes, from quadratic to round	●	●	●			
	Connectors to pipes from other manufacturers	● ● ●	● ● ●	● ● ●	● ●		●
	Connectors, with socket and reduced plug-in	●		●			
Accessories							
	Stand pipe caps	● ●	● ●	● ●	● ●		
	CV-Connector			●			
	Pipe clips, round, with knocking pin	● ●	● ●	● ●	● ●	● ●	●
	Pipe clips, round, with connecting thread	● ●	● ● ●	● ● ●	● ● ●	●	●
	Pipe clips, quadratic, with knockin pin	●	●	● ●			
	Pipe clips, quadratic, with connecting thread		●	●	●		
	Sealing elements	●	●	●	●	●	●

● = Steel, galvanized

● = Copper

● = Stainless steel

LORO-Standpipes



LORO-X Downpipes

(Art.-No. and dimensions see pages 22 - 39)

LORO-X Sealing elements

(Art.-No. and dimensions see page 27)

LORO-X Offset pipes

mit Sprung $e = 200\text{mm}$, 130mm oder 75mm
(Art.-No. and dimensions see page 25)

LORO-X Standpipe caps

accurately fitting for customized Zinc- or copper downpipe
(Art.-No. and dimensions see pages 15 und 20)

LORO-X Pipe clips

with knockin pin, or connection thread, made of steel, galvanized
(see page 32), copper (see page 36) or stainless steel (see page 17)

LORO-X Stand pipe with High performance safety over flow

made of galvanized steel
(Art.-No. and dimensions see page 17)

LORO-X Stanpipes

made of galvanized steel with and without cleaning opening
(Art.-No. and dimensions see pages 14 - 18)

made of copper, with and without cleaning opening
(Art.-No. and dimensions see pages 19 - 20)

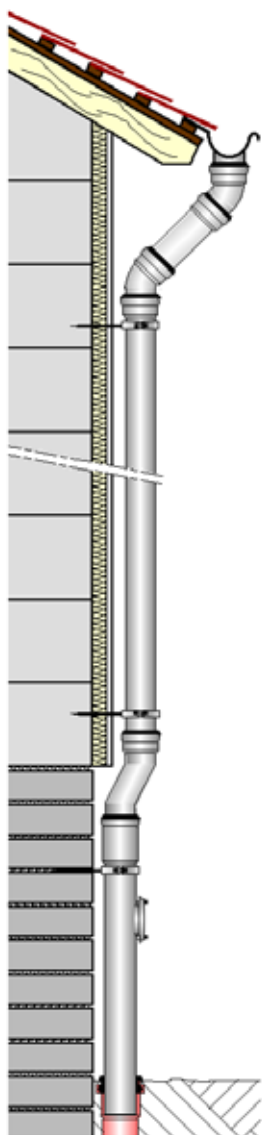
made of stainless steel, with and without cleaning opening
(Art.-No. and dimensions see pages 21)

LORO-X Connectors/Sealing elements

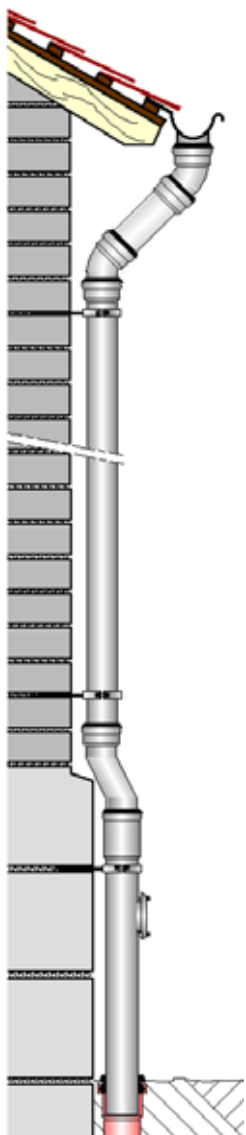
for the connection from KG-/HT-Muffe to LORO-Stand pipe,
Art.-No. and dimensions see pages 44 - 45

Sewer KG-/HT-Pipe

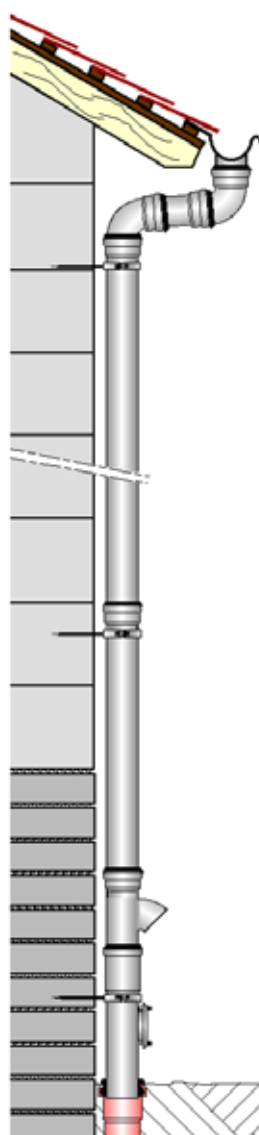
Example applications



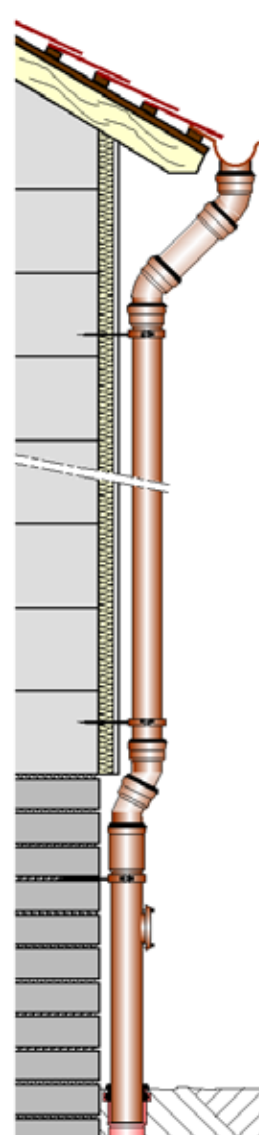
Façade installation with LORO rain standpipes and rainwater downpipes.



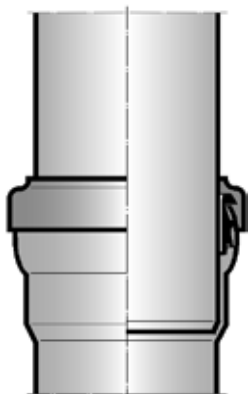
LORO rain standpipe with LORO-X offset pipe in case of pipeline offset, steel version.



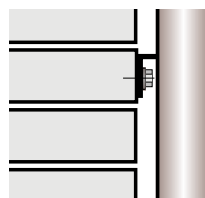
LORO rain standpipe with LORO greenery trap fitting.



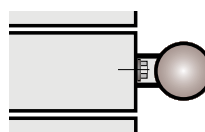
LORO rain standpipe with LORO-N bend in case of pipeline offset, copper version.



LORO rain standpipe cap for commercially available rainwater downpipes or for LORO rainwater downpipes with an external diameter of 102 mm (use with sealing element).

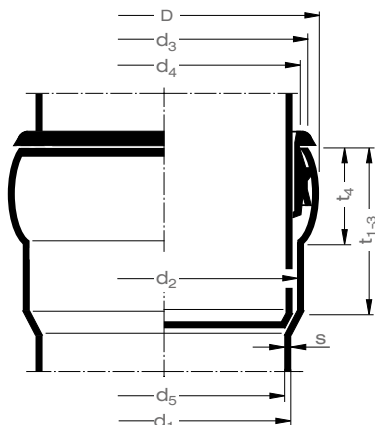


LORO rainwater downpipe with concealed welded bracket as a custom production.

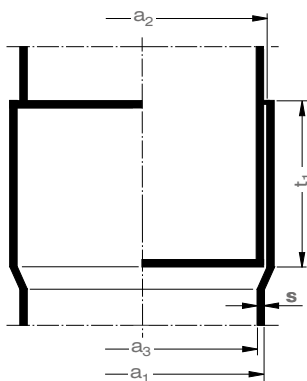


Dimensions and weights

Stand and downpipes, round, with seal



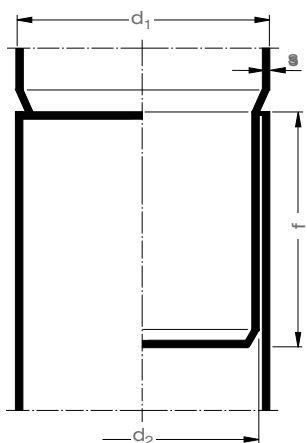
DN		D	d ₁	d ₂	d ₃	d ₄	d ₅	s	t ₁	t ₂	t ₃	t ₄
70	●	84,2	73	76,0	81,0	76,0	69,8	1,6	55	120	175	27
	●	84,2	73	76,0	81,0	76,0	69,8	1,6	55	120	175	27
	●	83,2	73	75,8	78,2	75,8	70,6	1,2	55	120	175	27
80	●	102,2	89	92,0	99,0	92,0	85,8	1,6	60	130	190	31
	●	103,0	89	92,0	99,0	92,0	85,0	2,0	60	130	190	31
	●	101,1	88,9	91,7	94,1	91,7	86,5	1,2	60	130	190	31
100	●	118,0	102	106,0	114,0	107,0	98,0	1,5	70	150	220	38
	●	118,0	102	106,0	114,0	107,0	98,0	2,0	70	150	220	38
	●	115,8	101,6	105,4	108,8	106,4	99,2	1,2	70	150	220	38
125	●	152,0	133	138,0	147,0	140,0	128,0	2,5	75	160	235	41
	●	153,0	133	138,0	147,0	140,0	127,0	3,0	75	160	235	41
	●	149,8	133	137,8	142,8	139,8	130,0	1,5	75	160	235	41
150	●	181,0	159	164,0	176,0	168,0	154,0	2,5	80	170	250	46
	●	178,8	159	163,8	170,8	167,8	156,0	1,5	80	170	250	46
200	●	246,8	219	224,0	241,0	228,0	213,2	2,9	120	250	370	76



Stand and downpipes, quadratic, without seal

- only for vertical installation on the facade -

DN		a ₁	a ₂	a ₃	s	t ₁
70	●	□ 70	□ 72	□ 66	2,0	55
80	●	□ 80	□ 82	□ 74	3,0	60
100	●	□ 100	□ 102,3	□ 94	3,0	70
	●	□ 100	□ 102,3	□ 96	2,0	70



Downpipes with reduced plug-in (Plug-in according to DIN EN 1123) round, without socket, without seal (Reduced-plug-in)

- only for vertical installation on the facade -

DN		d ₁	d ₂	s	f
70	●	73	69	1,6	60
80	●	89	84	1,6	60
100	●	102	95	2,0	95
125	●	133	125	2,5	90

● = Steel, galvanized

● = Copper

● = Stainless steel

LORO-Standpipes



A LORO-Standpipes, round

DN 70 - DN 150, made of steel, hot dip galvanized, with long socket, additional inside coating, without or with cleaning opening.

B LORO-Standpipes, made of steel, quadratic

70 x 70 mm, 80 x 80 mm und 100 x 100 mm, hot dip galvanized, additional inside coating, with socket, without seal without or with cleaning opening.



C LORO-Standpipes made of copper, round

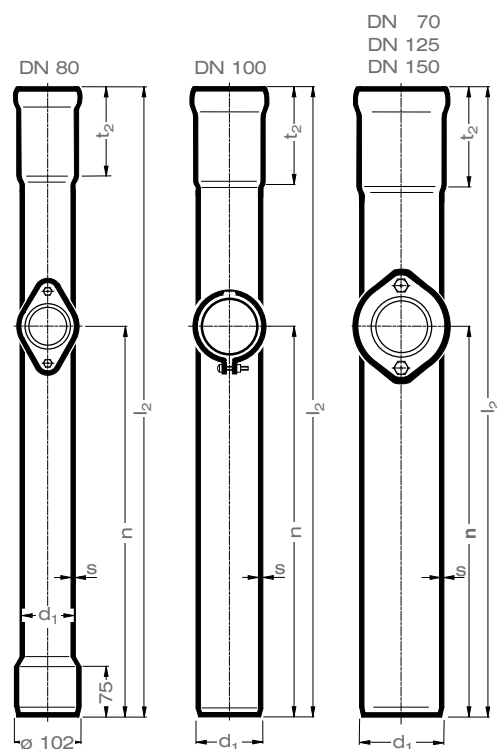
DN 70 - DN 150, with long socket, without or with cleaning opening.

D LORO-Standpipes made of copper, quadratic

100 x 100 mm, with socket, without seal, without or with cleaning opening.

E LORO-Standpipes made of stainless steel, round

DN 80 - DN 125, Material number 1.4301, with long socket, without or with cleaning opening.



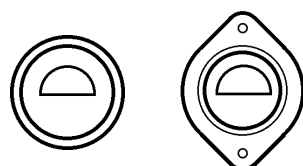
Dimensions and weights

Standpipes made of steel, round, with cleaning opening

(Pipe- and socket dimensions see page 12)

Art.-No.	DN	l ₂	d ₁	t ₂	n	s	kg
05510.070X	70	1000	73	120	620	1,6	3,1
05515.070X	70	1500	73	120	620	1,6	4,7
05520.070X	70	2000	73	120	620	1,6	6,4
05530.070X	70	3000	73	120	620	1,6	9,5
05510.080X	80	1000	89	130	620	1,6	3,5
05515.080X	80	1500	89	130	620	1,6	5,9
05520.080X	80	2000	89	130	620	1,6	7,8
05530.080X	80	3000	89	130	620	1,6	10,8
05503.100X	100	500	102	150	250	1,5	2,0
05510.100X	100	1000	102	150	620	1,5	4,1
05515.100X	100	1500	102	150	620	1,5	5,9
05520.100X	100	2000	102	150	620	1,5	8,8
05530.100X	100	3000	102	150	620	1,5	13,1
05503.125X	125	500	133	160	250	2,5	4,5
05510.125X	125	1000	133	160	620	2,5	8,1
05515.125X	125	1500	133	160	620	2,5	12,1
05520.125X	125	2000	133	160	620	2,5	16,2
05530.125X	125	3000	133	160	620	2,5	25,3
05510.150X	150	1000	159	170	620	2,5	10,5
05515.150X	150	1500	159	170	620	2,5	16,0
05520.150X	150	2000	159	170	620	2,5	20,0
05530.150X	150	3000	159	170	620	2,5	31,5

Standpipes with cleaning opening and safety overflow*



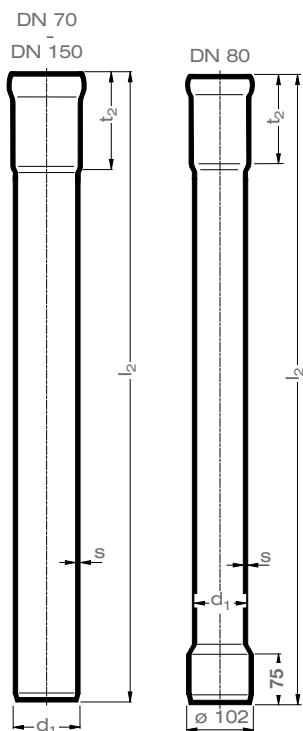
Cleaning cover with safety overflow

	DN	l ₂	d ₁	t ₂	n	s	kg
55103.070X	70	1000	73	120	620	1,6	3,2
55103.080X	80	1000	89	130	620	1,6	4,2
55103.100X	100	1000	102	150	620	1,5	4,0
55153.100X	100	1500	102	150	620	1,5	6,6
55203.100X	100	2000	102	150	620	1,5	8,8
55103.125X	125	1000	133	160	620	2,5	8,6
55153.125X	125	1500	133	160	620	2,5	12,9
55203.125X	125	2000	133	160	620	2,5	18,5

*Attention:

Cleaning cover with safety overflow may not be installed behind a closed facade

Please order sealing elements for each socket connection additionally, see page 27

Standpipes made of steel, round, without cleaning opening*


Art.-No.	DN	l ₂	d ₁	t ₂	n	s	kg
05526.070X	70	1000	73	120	620	1,6	3,0
05526.080X	80	1000	89	130	620	1,6	3,9
05526.100X	100	1000	102	150	620	1,5	4,0
05525.100X	100	1500	102	150	620	1,5	6,4
05524.100X	100	2000	102	150	620	1,5	10,4
05526.125X	125	1000	133	160	620	2,5	8,1
05525.125X	125	1500	133	160	620	2,5	12,1
05524.125X	125	2000	133	160	620	2,5	16,2
05526.150X	150	1000	159	170	620	2,5	10,7

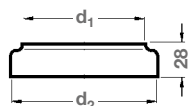
* can be combined with bend see pages 24-25


Stand pipe (downspout), made of steel, round, without Cleaning opening, with bend

Art.-No.	DN
on request	50
on request	70
on request	80
on request	100
on request	125

Accessories:
Standpipe caps

compatible for rain standpipes made of Titanium zinc, according to DIN EN 612



Art.-No.	DN	d ₁	d ₂	kg
55870.070X	70	77	87	0,02
55870.080X	80	81	102	0,04
55870.100X	100	101	116	0,06
55870.125X	125	121	150	0,08

compatible for LORO-X downpipes, according to DIN EN 1123 Parts 1 and 2, mit external diameter 102 mm

55871.100X	100	103	116	0,04
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Please order sealing elements for each socket connection additionally, see page 27

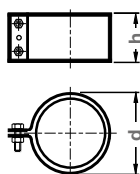
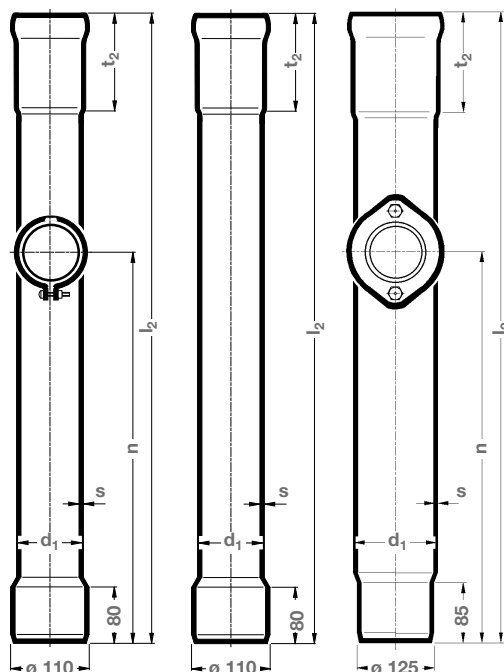
LORO-X Rain standpipes for the refurbishment of rainwater downpipes

with discharge end for transition to SML/KG discharge pipes

- 1) Rainwater downpipe to be repaired with underground pipe made of cast iron or plastic
- 2) Shorten the underground pipe with a saw or angle grinder
- 3) Deburr the cut underground pipe
- 4) Place the CV/CE seal on the sawn-off end of the pipe and insert the LORO rain standpipe into the CV/CE seal
- 5) Attach the CV/CE connector
- 6) Repaired rainwater downpipe



No negative effects on the underground pipe!



Standpipes as Renovation-standpipes with cleaning opening made of steel, round

Art.-No.	DN	Auslauf	l ₂	d ₁	t ₂	n	s	kg
05559.100X	100	110	500	102	150	250	1,8	2,8
05554.100X	100	110	1000	102	150	620	1,8	5,3
05557.100X	100	110	2000	102	150	620	1,8	10,4
05554.125X	125	125	1000	133	160	620	2,5	8,5

Standpipes as Renovation-standpipes without cleaning opening made of steel, round

Art.-No.	DN	Auslauf	l ₂	d ₁	t ₂	s	kg
05553.100X	100	110	1000	102	150	5,1	2,8

Delivery length 500 mm und 2000 mm on request.

CV-connector for renovation standpipes DN 100

Art.-No.	DN	d	h	kg
09070.100X	100	121	54	0,21

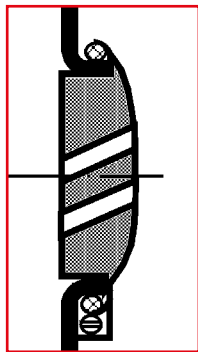
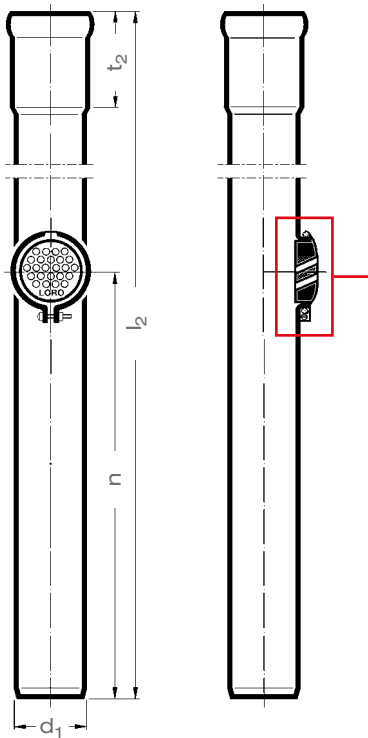
Please order sealing elements for each socket connection additionally, see page 27

LORO-X Standpipe with High performance safety overflow

LORO-X rain standpipes with high-performance safety overflow offer increased protection against backflow from the underground pipe in the downpipe of the main drainage.

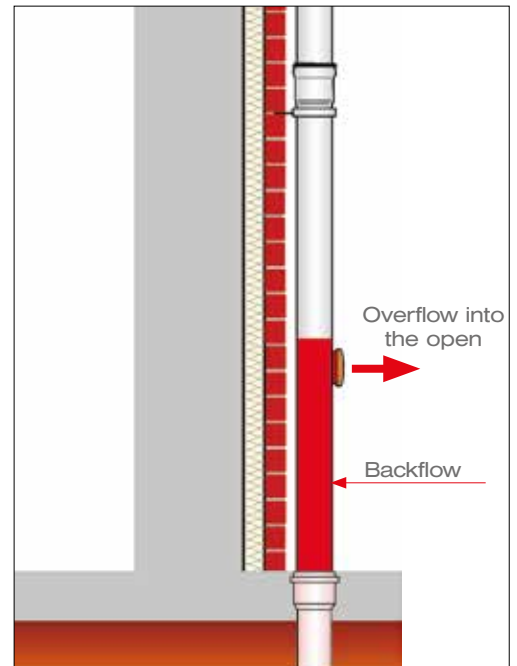
Drainage takes place via the patented safety overflow in the clean-out opening on surfaces that can be flooded without causing damage.

- **High-performance backflow protection**
- **Suitable for all exterior downpipes**
- **Suitable for new buildings and for refurbishment**
- **Discharge rate of up to 9 l/sec (DN 100)**

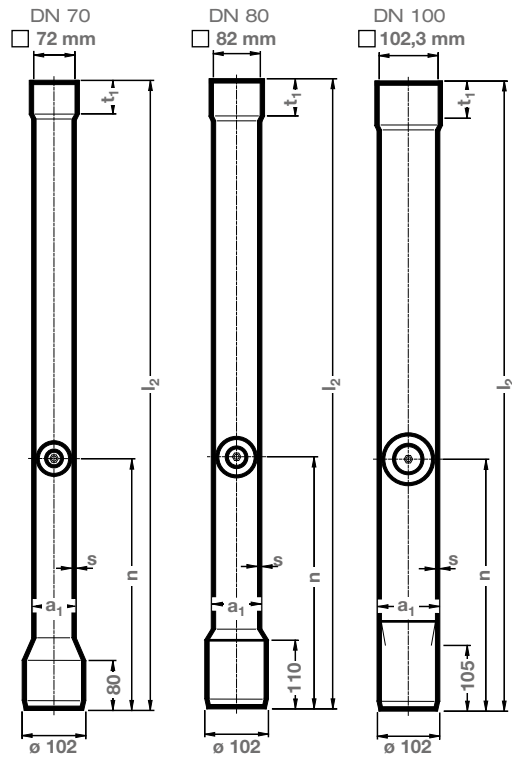


with pipe-like drain openings

Art.-No.	DN	l ₂	d ₁	t ₂	n	kg
55154.100X	100	1500	102	150	620	6,6
55204.100X	100	2000	102	150	620	7,5
55204.125X	125	2000	133	160	620	18,5



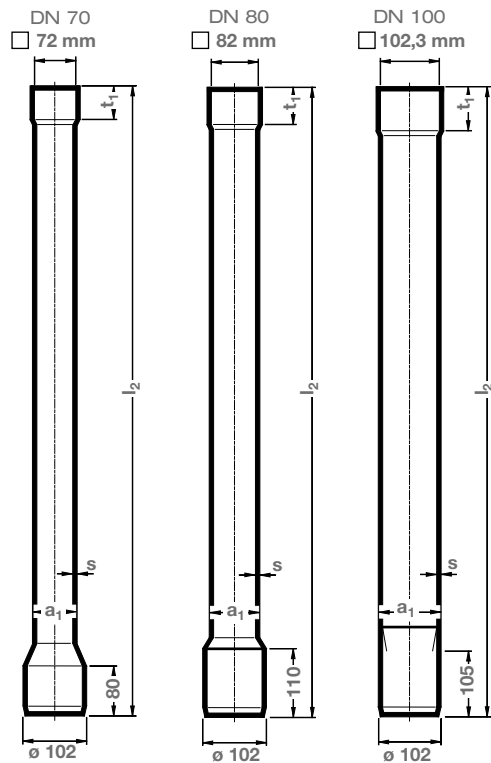
Please order sealing elements for each socket connection additionally, see page 27



Standpipes made of steel, quadratic with cleaning opening

(Pipe- and socket dimensions see page 12)

Art.-No.	DN	l_2	a_1	t_1	n	s	kg
05505.070X	70	1000	□ 70	55	400	2,0	4,5
05505.080X	80	1000	□ 80	60	400	3,0	7,0
05505.100X	100	1000	□ 100	70	400	2,5	8,5



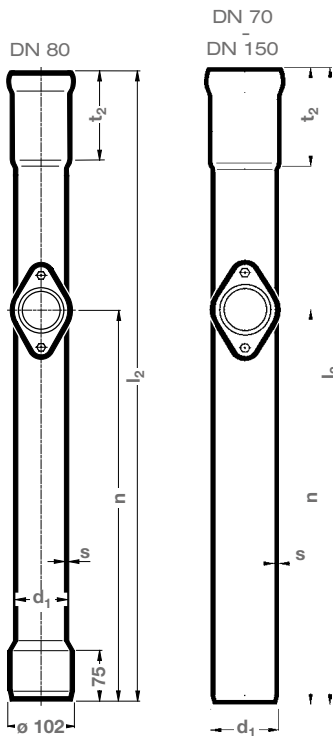
Standpipes made of steel, quadratic without cleaning opening

Art.-No.	DN	l_2	a_1	t_1	n	s	kg
05506.070X	70	1000	□ 70	55	400	2,0	5,0
05506.080X	80	1000	□ 80	60	400	3,0	6,9
05506.100X	100	1000	□ 100	70	400	2,5	8,3

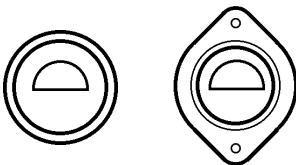
Dimensions and weights

Standpipes, round, made of **copper**, with cleaning opening

(Pipe- and socket dimensions see page 12)



	DN	l ₂	d ₁	t ₂	n	s	kg
05510.070N	70	1000	73	120	620	1,6	3,3
05520.070N	70	2000	73	120	620	1,6	6,4
05510.080N	80	1000	89	130	620	2,0	4,9
05520.080N	80	2000	89	130	620	2,0	9,1
05503.100N	100	500	102	150	250	1,6	3,1
05510.100N	100	1000	102	150	620	2,0	5,7
05515.100N	100	1500	102	150	620	2,0	8,8
05520.100N	100	2000	102	150	620	2,0	11,5
05503.125N	125	500	133	160	250	2,5	6,7
05510.125N	125	1000	133	160	620	2,5	11,1
05515.125N	125	1500	133	160	620	2,5	15,8
05520.125N	125	2000	133	160	620	2,5	21,9
05510.150N	150	1000	159	170	620	2,5	15,0



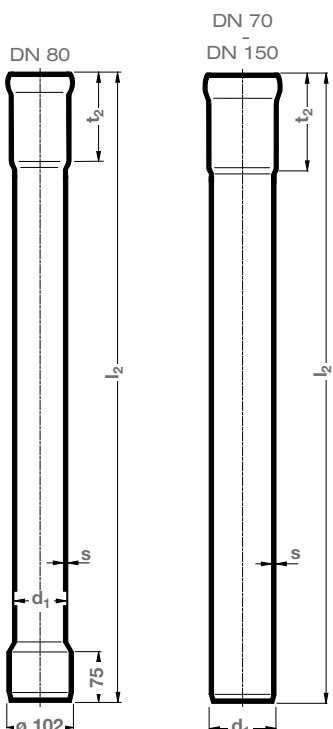
Cleaning plug with safety overflow

Standpipes, round, made of **copper**, with cleaning opening and safety overflow

	DN	l ₂	d ₁	t ₂	n	s	kg
55103.070N	70	1000	73	120	620	1,6	3,3
55103.080N	80	1000	89	130	620	2,0	4,9
55103.100N	100	1000	102	150	620	2,0	5,7
55103.125N	125	1000	133	160	620	2,5	11,1

*Attention:

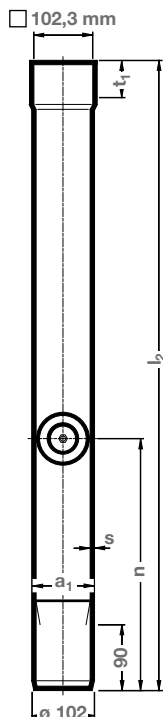
Cleaning cover with safety overflow may not be installed behind a closed facade



Standpipes, round, made of **copper**, without cleaning opening

	DN	l ₂	d ₁	t ₂	n	s	kg
05526.070N	70	1000	73	120	620	1,6	3,2
05526.080N	80	1000	89	130	620	2,0	4,9
05526.100N	100	1000	102	150	620	2,0	5,7
05526.125N	125	1000	133	160	620	2,5	11,1
05526.150N	150	1000	159	170	620	2,5	15,0

Please order sealing elements for each socket connection additionally, see page 27



Standpipes, quadratic, made of **copper**, with cleaning opening

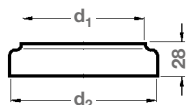
(Pipe- and socket dimensions see page 12)

Art.-No.	DN	l ₂	a ₁	t ₁	n	s	kg
05505.100N	100	1000	□ 100	70	400	2,5	5,6



Standpipes, quadratic, made of **copper**, without cleaning opening

Art.-No.	DN	l ₂	a ₁	t ₁	s	kg
05506.100N	100	1000	□ 100	70	2,5	5,4



Stanpipe caps, made of **copper**,

compatible for rain standpipes according to DIN EN 612

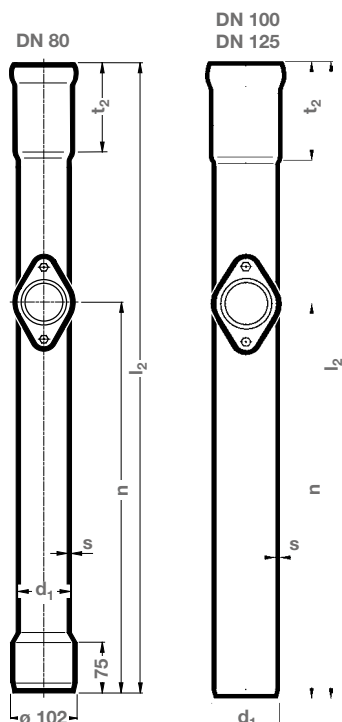
Art.-No.	DN	d ₁	d ₂	kg
55870.070N	70	77	87	0,02
55870.080N	80	81	102	0,04
55870.100N	100	101	116	0,06
55870.125N	125	121	150	0,1

compatible for rain standpipes made of copper, with external diameter 102 mm

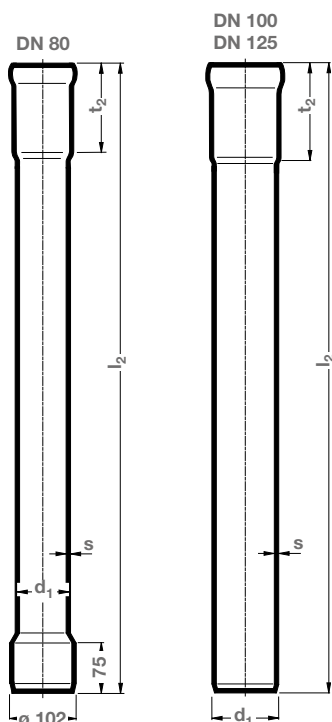
55871.100N	100	103	116	0,04
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Dimensions and weights
Standpipes, round, made of stainless steel, with cleaning opening

(Pipe- and socket dimensions see page 12)



	DN	l ₂	d ₁	t ₂	n	s	kg
4.5510080C*	80	1000	89	130	620	2,0	2,6
4.5510100C*	100	1000	102	150	620	2,0	3,8
4.5510125C*	125	1000	133	160	620	2,5	6,5


Standpipes, round, made of stainless steel, without cleaning opening

	DN	l ₂	d ₁	t ₂	n	s	kg
4.5526080C*	80	1000	89	130	620	2,0	2,6
4.5526100C**	100	1000	102	150	620	2,0	3,8
4.5526125C**	125	1000	133	160	620	2,5	6,5

* Material number 1.4571

** Material number 1.4404

Please order sealing elements for each socket connection additionally, see page 27

LORO-Downpipes



A LORO-Downpipes made of steel, round

DN 70 - DN 200, made of steel, hot dip galvanized, additional inside coating, with socket. Fittings in all usual versions.

See brochure LORO-X Steel discharge pipes.

Areas of application: Roof and balcony drainage in residential construction, roof drainage of industrial buildings, public buildings, multi-storey car parks, etc.

B LORO-Downpipes, quadratic*, made of steel

70 x 70 mm, 80 x 80 mm and 100 x 100* mm, made of steel, hot dip galvanized, additional inside coating, without socket.

Areas of application: Only for installation on the façade, especially brick facades and box-shaped gutters.

*) Also available in copper on request

C LORO-Red.-plug-in downpipes, round, with reduced plug-in, made of steel

DN 70 - DN 100, made of steel, hot dip galvanized, additional inside coating, without socket and seal.

Areas of application: For installation on the façade only. Particular advantage: slender pipe, no visible socket joint.



D LORO-Downpipes, round, made of stainless steel

DN 70 - DN 150, Material number 1.4301. Fittings in all usual versions. See brochure LORO-XCL Stainless steel discharge pipes.

Areas of application: Drainage of roofs with stainless steel roofing and/or stainless steel gutters.

E LORO-Downpipes, round, made of copper

DN 70 - DN 100.

Areas of application: Drainage of roofs with copper roofing and/or copper gutters.

F LORO-Downpipes made of composite pipes

Inner and outer pipe made of steel, DN 70 - DN 150, hot dip galvanized, additional inside coating PU insulation. Fittings in all usual versions. See LORO compound pipes brochure.

Areas of application: Roof drainage pipes insulated against condensation in buildings and for the penetration of rainwater pipes through open intermediate storeys (e.g. in multi-storey car parks).

Custom LORO rainwater downpipes

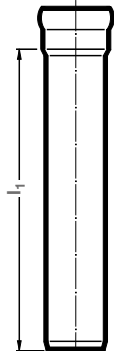
for adaptation to the façade construction according to your and our detailed drawings. Please speak to our consulting service.

*Note:

Square zinc downpipes do not fit our square LORO rain standpipes as the edges of the socket are rounded.

Dimensions and weights
**Extract from the technical information about LORO-X
Steel discharge pipes**
Downpipes made of steel*, round, with socket

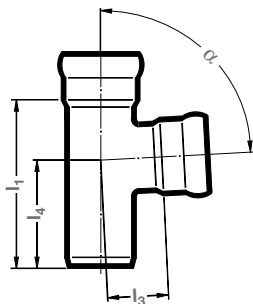
(Pipe- and socket dimensions see page 12)



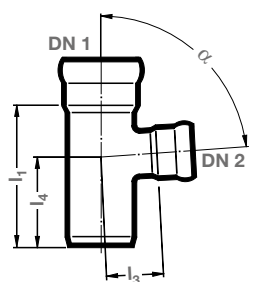
Art-No.	DN	l ₁	kg
01301.070X	70	500 mm	1,7
01301.080X	80		2,1
01301.100X	100		2,9
01301.125X	125		4,8
01301.150X	150		5,8
01301.200X	200		10,1
01201.070X	70	1000 mm	3,0
01201.080X	80		3,8
01201.100X	100		5,4
01201.125X	125		8,6
01201.150X	150		10,4
01201.200X	200		18,2
01111.070X	70	1500 mm	4,7
01111.080X	80		5,6
01111.100X	100		9,1
01111.125X	125		12,5
01111.150X	150		15,5
01111.200X	200		26,4
01101.070X	70	2000 mm	6,4
01101.080X	80		8,1
01101.100X	100		11,2
01101.125X	125		17,2
01101.150X	150		22,1
01101.200X	200		34,4
01001.070X	70	3000 mm	9,5
01001.080X	80		12,0
01001.100X	100		16,6
01001.125X	125		27,4
01001.150X	150		32,7
01001.200X	200		50,3
01011.070X	70	4000 mm	12,0
01011.080X	80		15,0
01011.100X	100		22,2
01011.125X	125		33,9
01011.150X	150		45,0
01011.200X	200		66,5
01013.070X	70	5000 mm	15,8
01013.080X	80		18,5
01013.100X	100		27,6
01013.125X	125		43,0
01013.150X	150		52,5
01014.070X	70		6000 mm
01014.080X	80	23,9	
01014.100X	100	33,0	
01014.125X	125	54,6	
01014.150X	150	66,3	

* also available with welded fastening bracket

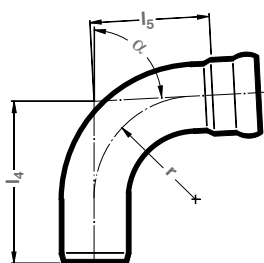
Please order sealing elements for each socket connection additionally, see page 27


Branches

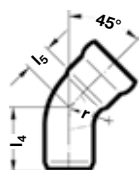
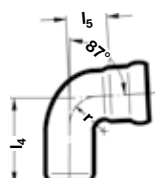
Art.-No.	DN	α	l_1	l_3	l_4	kg
00200.CC0X	70	87°	175	65	110	1,0
00200.MM0X	80		205	78	135	1,4
00200.DD0X	100		230	90	140	2,0
00200.EE0X	125		285	120	170	4,5
00200.FF0X	150		320	135	190	5,2
00200.GG0X	200		420	170	260	10,9
00220.CC0X	70	45°	200	115	85	1,3
00220.MM0X	80		235	138	97	1,8
00220.DD0X	100		265	155	110	2,8
00220.EE0X	125		340	210	130	5,6
00220.FF0X	150		380	240	140	7,5
00220.GG0X	200		500	320	190	13,1


Reducing branches

Art.-No.	DN 1	DN 2	α	l_1	l_3	l_4	kg
00230.DC0X	100	70	87°	200	80	125	1,7
00230.DM0X	100	80		210	85	135	2,0
00230.ED0X	125	100		255	105	155	3,4
00230.FE0X	150	125		290	134	175	4,6
00230.GF0X	200	150		355	166	225	8,8
00250.DC0X	100	70	45°	230	136	90	2,0
00250.DM0X	100	80		250	145	100	2,1
00250.ED0X	125	100		290	176	105	3,9
00250.FE0X	150	125		340	230	120	6,2
00250.GF0X	200	150		420	284	150	9,9

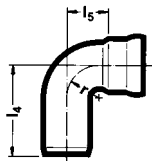

Bends

Art.-No.	DN	α	l_4	l_5	r	kg
00300.070X	70	87°	185	146	117,5	1,3
00300.080X	80		207	177	133,5	1,8
00300.100X	100		161	91	70	1,9
00300.125X	125		179	97	90	3,2
00300.150X	150		220	133	105	4,7
00300.200X	200		435	330	305	21,1
00320.070X	70	45°	122	83	117,5	0,9
00320.080X	80		135	104	133,5	1,3
00320.100X	100		124	54	70	1,4
00320.125X	125		131	58	90	2,4
00320.150X	150		164	77	105	3,5
00320.200X	200		270	166	305	13,0

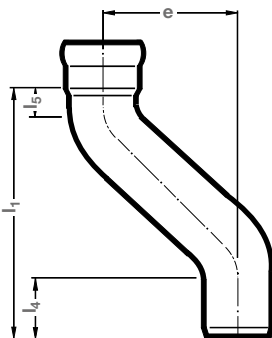

Bends with small radius

Art.-Nr.	α	DN	l_4	l_5	r	kg
00350.050X	87°	50	98	44	36,5	0,4
00350.070X		70	117	59	50	0,7
00350.080X		80	137	72	60	1,0
00352.050X	45°	50	79	24	36,5	0,3
00352.070X		70	91	32	50	0,6

Please order sealing elements for each socket connection additionally, see page 27

Angle bends


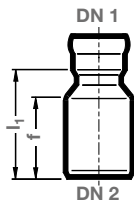
Art.-No.	α	DN	l_4	l_5	r	kg
00500.050X	90°	50	100	45	36,5	0,4
00500.070X		70	120	63	50	0,7
00500.080X		80	140	66	60	1,0
00500.100X		100	165	95	70	1,7

Offset pipes*


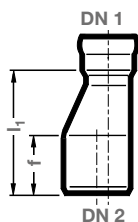
Art.-No.	DN	Sprung	l_4	l_5	r	kg
00380.070X	70	e = 200 mm	359	73,5	35	1,5
00380.080X	80		405	75	55	1,9
00380.100X	100		370	95	17	2,9
00380.125X	125		387	95	20	4,9
00390.070X	70	e = 130 mm	335	73,5	35	1,4
00390.080X	80		390	75	55	1,9
00390.100X	100		300	95	17	2,3
00390.125X	125		314	95	20	4,1
00400.070X	70	e = 75 mm	300	73,5	35	1,2
00400.080X	80		351	75	55	1,6
00400.100X	100		245	95	17	1,9
00400.125X	125		255	95	20	3,3

* DN 150 and DN 200 available as customized pipe on request

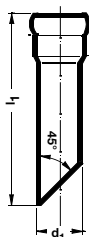
Offset measures using bends: see page Seite 43

Transition pipes (concentric reducers)


Art.-No.	DN 1	DN 2	l_1	f	kg
00600.CM0X	70	80	130	85	0,7
00600.CD0X	70	100	140	100	0,9
00600.MD0X	80	100	140	100	0,8
00600.DE0X	100	125	160	100	1,6
00600.EF0X	125	150	150	120	2,2
00600.FG0X	150	200	235	140	4,1

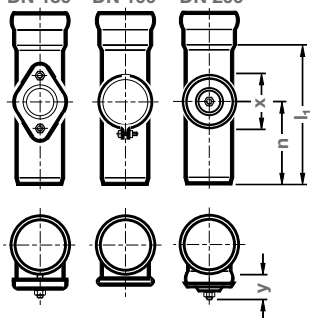
Transition pipes (eccentric reducers)


Art.-No.	DN 1	DN 2	l_1	f	kg
00601.CM0X	70	80	135	75	0,7
00601.CD0X	70	100	195	100	1,1
00601.MD0X	80	100	195	100	1,3
00601.DE0X	100	125	170	100	1,7
00601.EF0X	125	150	177	100	2,4
00601.FG0X	150	200	235	140	4,4

LORO-X Spout


Art.-Nr.	DN 1	l_1	d_1	kg
15199.050X	50	288	53	0,6
15199.070X	70	305	73	0,9
15199.100X	100	320	102	1,4

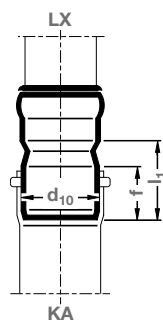
Please order sealing elements for each socket connection additionally, see page 27

DN 70
 DN 80
 DN 125
 DN 150

Cleaning pipes with circular clean-out opening

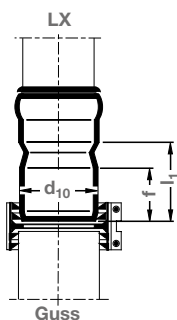
Art.-No.	DN	l_1	n	x	y	kg
00550.070X	70	200	125	100	16	0,9
00550.080X	80	240	145	125	16	1,4
00550.100X	100	265	165	109	16	1,5
00550.125X	125	290	185	160	25	3,5
00550.150X	150	320	190	190	25	4,5
00550.200X	200	420	260	260	25	9,7

Connectors for the connection to plastic pipe socket (KA)

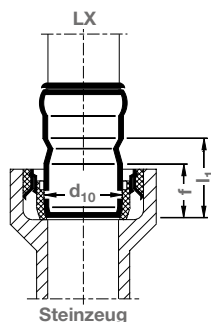
Art.-No.	DN(LX)	DN(KA)	l_1	d_{10}	f	kg
00630.070X	70	100	120	110	80	0,8
00630.100X	100	100	110	110	80	1,0
00642.100X	100	125	140	125	85	1,5
00642.125X	125	125	130	125	85	1,9
00600.EFOX	125	150	150	160	110	2,2
-	150	150			direct	
00672.200X	200	200	170	200	100	4,6


Connectors for the connection to cast iron pipes (SML)

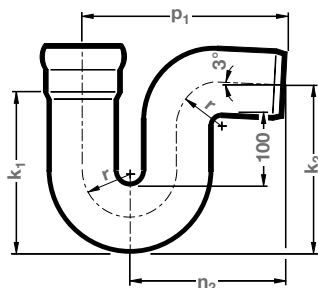
Art.-No.	DN(LX)	DN(SML)	l_1	d_{10}	f	kg
00630.070X	70	100	120	110	80	0,8
00630.100X	100	100	110	110	80	1,0
00600.DE0X	100	125	160	133	100	1,6
-	125	125			direct	
00600.EFOX	125	150	150	160	110	2,2
-	150	150			direct	
00670.200X	200	200	170	210	120	4,6


Connectors for the connection to pottery sockets* (St)

Art.-No.	DN(LX)	DN(St)	l_1	d_{10}	f	kg
00630.070X	70	100	120	110	80	0,8
00630.100X	100	100	110	110	80	1,0
00600.DE0X	100	125	160	133	100	1,6
00600.DFOX	100	150	170	160	110	1,9
-	125	125			direct	
00600.EFOX	125	150	150	160	110	2,2
-	150	150			direct	
00670.200X	200	200	170	210	120	4,6

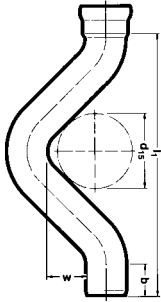


* Are directly connectable with the transit ring for the cast iron pipes of the pottery producer


P-Traps

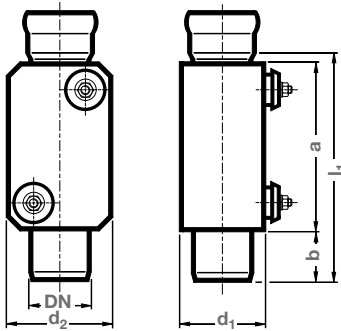
Art.-No.	DN	p_1	n_2	k_1	k_2	f	kg
04375.070X	70	220	170	166	203	50	2,0
04375.100X	100	305	235	246	281	70	4,6

Please order sealing elements for each socket connection additionally, see page 27



Double bend

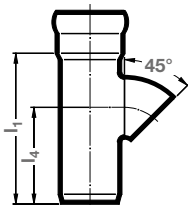
Art.-Nr.	DN	b	l ₁	w	d ₁₅	kg
00430.070X	70	73,5	576	100	170	2,6
00430.100X	100	95,0	620	100	205	4,8



Downpipe traps with straight discharge with circular clean-out opening

Art.-No.	DN	l ₁	a	b	d ₁	d ₂	kg
04374.070X	70	294	219	65	112	122	3,4
04374.100X	100	386	286	85	146	180	6,3

* For pressure up to 0,5 bar available in special design on request.



Greenery trap fitting

Art.-No.	DN	l ₁	l ₂	kg
05536.100X	100	230	143	2,1



Sealig element

or LORO-X pipe

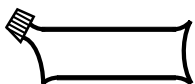
Art.-No.	DN	kg
00911.070X	70	0,022
00911.080X	80	0,035
00911.100X	100	0,050
00911.125X	125	0,100
00911.150X	150	0,150
00911.200X	200	0,300

for transition from KA-Socket to LORO-X pipe

Art.-No.	DN	kg
00937.100X	100	0,05

for transition from KA-Pipe to LORO-X socket

Art.-No.	DN	kg
00944.125X	125	0,15



Lubricant

Art.-No.	
00986.000X	250 g - Tube
09861.000X	1000 g - Dose



Original LORO-X Adhesive

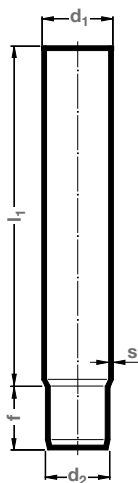
Art.-No.	
00985.000X	Pinselflasche (125 ccm)

Please order sealing elements for each socket connection additionally, see page 27

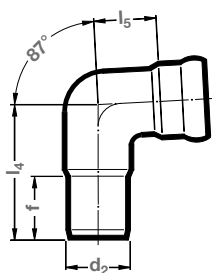
Red.-plug-in downpipe made of steel, round

without socket and sealing, with reduced plug-in

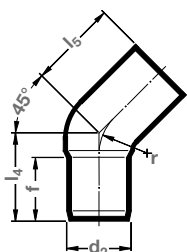
(Pipe dimensions see page 12)



Art.-No.	DN	l_1	l_4	d_2	s	f	kg
01121.070X	70	500	73	69	1,6	60	1,7
01202.070X	70	1000	73	69	1,6	60	3,2
01102.070X	70	1500	73	69	1,6	60	4,4
01103.070X	70	2000	73	69	1,6	60	8,5
01104.070X	70	3000	73	69	1,6	60	9,5
01121.080X	80	500	89	84	1,6	60	2,0
01202.080X	80	1000	89	84	1,6	60	4,3
01102.080X	80	1500	89	84	1,6	60	5,4
01103.080X	80	2000	89	84	1,6	60	8,0
01104.080X	80	3000	89	84	1,6	60	12,0
01121.100X	100	500	102	95	2,0	95	3,2
01202.100X	100	1000	102	95	2,0	95	6,0
01102.100X	100	1500	102	95	2,0	95	8,5
01103.100X	100	2000	102	95	2,0	95	11,2
01104.100X	100	3000	102	95	2,0	95	16,6

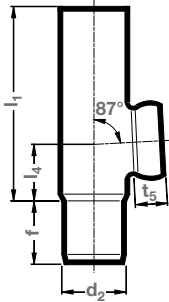

Bends 87°, with socket and reduced plug-in

Art.-No.	DN	l_4	l_5	d_2	f	kg
03009.070X	70	150	58	69	60	1,3
03009.080X	80	180	73	84	60	1,3
03009.100X	100	200	85	95	95	2,0

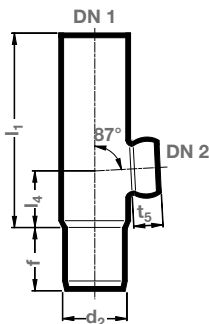

Bends 45°, with socket, with reduced plug-in

Art.-No.	DN	l_4	l_5	d_2	f	r	kg
03208.100X	100	145	124	95	95	70	1,5

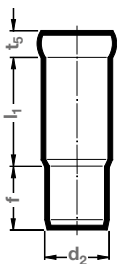
Please order sealing elements for each socket connection additionally, see page 27


Branches 87°, with socket, with reduced plug-in

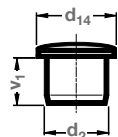
Art.-No.	DN	l_1	l_4	d_2	t_5	f	kg
02090.CC0X	70	260	70	69	35	60	1,0
02090.MM0X	80	280	80	84	40	60	1,5
02090.DD0X	100	285	85	95	50	95	2,4


Reducing branches 87°, with socket, with reduced plug-in

Art.-No.	DN 1	DN 2	l_1	l_4	d_2	t_5	f	kg
02095.CB0X	70	50	260	70	69	25	60	1,0
02095.DB0X	100	50	285	85	95	25	95	1,2
02095.DC0X	100	70	285	85	95	35	95	1,5


Connectors, with socket, with reduced plug-in

Art.-No.	DN	l_1	d_2	t_5	f	kg
08009.070X	70	190	69	27	60	1,0
08009.100X	100	155	95	38	95	1,8

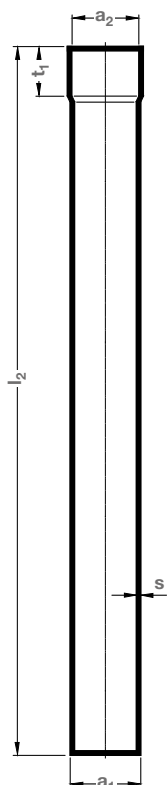

End cap for LORO-X reduced plug-in downpipes

Art.-No.	DN	d_2	d_{14}	v_1	kg
08005.070X	70	69	90	60	0,4
08005.100X	100	95	118	75	0,7

Cleaning pipes:

Use Cleaning pipe No. 550X, with push fit socket or cleaning pipe with reduced plug-in connection as customized part on request

Please order sealing elements for each socket connection additionally, see page 27

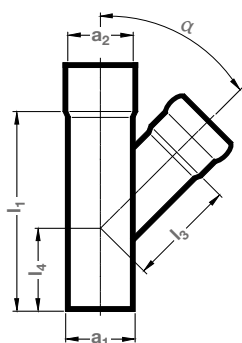


Downpipes made of steel quadratic

with socket, without seal, DN 70 - DN 100

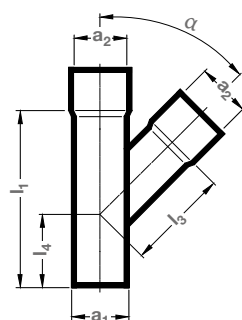
(Pipe dimensions see page 12)

Art.-No.	a ₁	DN	l ₂	a ₂	s	t ₁	kg
55680.070X	□ 70	70	1000	□ 72	2,0	55	3,0
55681.070X	□ 70	70	1500	□ 72	2,0	55	7,3
55682.070X	□ 70	70	2000	□ 72	2,0	55	9,7
55683.070X	□ 70	70	3000	□ 72	2,0	55	14,4
55684.070X	□ 70	70	4000	□ 72	2,0	55	19,1
55680.080X	□ 80	80	1000	□ 82	3,0	60	7,1
55681.080X	□ 80	80	1500	□ 82	3,0	60	10,7
55682.080X	□ 80	80	2000	□ 82	3,0	60	15,6
55683.080X	□ 80	80	3000	□ 82	3,0	60	21,3
55684.080X	□ 80	80	4000	□ 82	3,0	60	28,4
55680.100X	□ 100	100	1000	□ 102,3	3,0	70	10,3
55681.100X	□ 100	100	1500	□ 102,3	3,0	70	15,1
55682.100X	□ 100	100	2000	□ 102,3	3,0	70	19,9
55683.100X	□ 100	100	3000	□ 102,3	3,0	70	29,5
55684.100X	□ 100	100	4000	□ 102,3	3,0	70	39,1



Branches quadratic/round

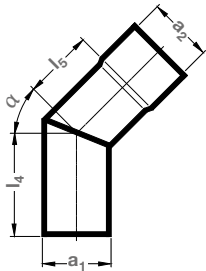
Art.-No.	a ₁	DN	α	l ₁	l ₃	l ₄	a ₂	kg
55694.CC0X	□ 70	70	87°	165	60	100	□ 72	1,4
55695.CC0X	□ 70	70	45°	225	110	100	□ 72	1,9
55694.DD0X	□ 100	100	87°	245	85	150	□ 102,3	4,0
55695.DD0X	□ 100	100	45°	290	151	120	□ 102,3	4,8



Branches quadratic/quadratic

Art.-No.	a ₁	DN	α	l ₁	l ₃	l ₄	a ₂	kg
55690.MM0X	□ 80	80	87°	205	80	125	□ 82	3,3
55691.MM0X	□ 80	80	45°	245	140	100	□ 82	4,3

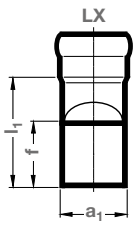
Please order sealing elements for each socket connection additionally, see page 27

Bends


Art.-No.	a ₁	DN	α	l ₄	l ₅	a ₂	kg
55697.070X	□ 70	70	87°	100	65	□ 72	1,0
55698.070X	□ 70	70	45°	80	65	□ 72	0,8
55697.080X	□ 80	80	87°	120	70	□ 82	1,9
55698.080X	□ 80	80	45°	120	60	□ 82	1,8
55697.100X	□ 100	100	87°	150	80	□ 102,3	2,9
55698.100X	□ 100	100	45°	150	100	□ 102,3	2,9

Transition pipes

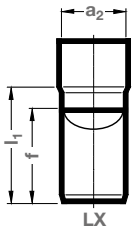
from LORO-X Pipes (LX), round, to quadratic pipe (without seal)



Art.-No.	a ₁	DN(LX)	l ₁	f	kg
55686.070X	□ 70	70	145	100	1,0
55686.080X	□ 80	80	180	100	1,2
55686.100X	□ 100	100	163	100	1,7

Transition pipes

from quadratic pipe (without seal) to LORO-X (LX) socket, round



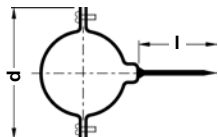
Art.-No.	a ₂	DN(LX)	l ₁	f	kg
55688.070X	□ 72	70	145	100	1,0
55688.080X	□ 82	80	180	100	1,2
55688.100X	□ 102,3	100	170	100	1,8

Please order sealing elements for each socket connection additionally, see page 27

Accessories for stand and downpipes made of steel:

Pipe clips round, with knocking pin

galvanized, knocking pin standard



Art.-No.	DN	d	l	kg
00990.070X	70	110	80	0,13
09917.070X	70	110	150	0,19
00990.080X	80	125	80	0,15
00990.100X	100	138	100	0,16
09917.100X	100	138	150	0,23
09918.100X	100	138	200	0,17
09919.100X	100	138	300	0,50
00990.125X	125	183	120	0,20
09917.125X	125	183	150	0,45
00990.150X	150	210	120	0,30
00990.150X	200	270	150	0,60

with knocking pin l = 150 mm

Art.-No.	DN	d	l	kg
09917.070X	70	110	150	0,19
09917.100X	100	138	150	0,23

with knocking pin l = 200 mm

Art.-No.	DN	d	l	kg
09918.100X	100	138	200	0,17

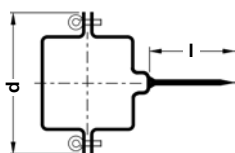
with knocking pin = 300 mm

Art.-No.	DN	d	l	kg
09919.100X	100	138	300	0,50

Pipe clips with knockin pin, round, with thermal insulation, on request.

Pipe clips quadratic, with knockin pin

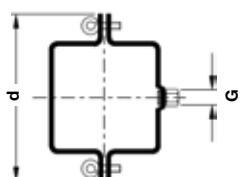
galvanized, without sound insulation



Art.-No.	DN	d	l	kg
00993.070X	70	118	100	0,12
00993.080X	80	123	100	0,20
00993.100X	100	146	100	0,23

Pipe clips quadratic, for set screws or threaded rods

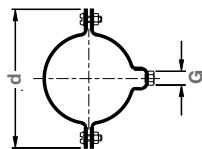
galvanized, without sound insulation



Art.-No.	DN	d	G	kg
00991.070X	80	140	M 10	0,20
00991.080X	100	162	M 10	0,20
00991.100X	125	176	M 10	0,20

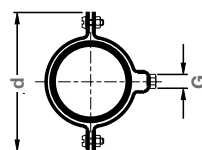
Pipe clips round, with connecting thread,

galvanized, for wall and ceiling installation suitable for threaded rods and hanger bolts M 8, M 10 bzw. M 12



without sound insulation

Art.-No.	DN	d	G	kg
00973.070X	70	123	M 8	0,25
00975.080X	80	139	M 10	0,40
00975.100X	100	152	M 10	0,30
00977.125X	125	183	M 12	0,50
00977.150X	150	209	M 12	0,60
00977.200X	200	269	M 12	1,00



with sound insulation

Art.-No.	DN	d	G	kg
00972.070X	70	133	M 8	0,4
00974.080X	80	152	M 10	0,4
00974.100X	100	162	M 10	0,4
00976.125X	125	193	M 12	0,8
00976.150X	150	219	M 12	0,9
00976.200X	200	279	M 12	1,0

Threaded pins*


Art.-No.	Length in mm
09601.060X	M 8 x 60
09601.080X	M 8 x 80
09601.100X	M 8 x 100
09602.060X	M 10 x 60
09602.100X	M 10 x 100
09602.120X	M 10 x 120
09612.120X	M 12 x 120

Threaded rods**

Art.-No.	Length in mm
09613.000X	M 8 x 1000
09614.000X	M 10 x 1000
09615.000X	M 12 x 1000

Hanger bolts*


Art.-No.	Length in mm
09603.100X	M 8 x 100
09603.120X	M 8 x 120
09603.200X	M 8 x 200
09604.100X	M 10 x 120
09604.120X	M 10 x 120
09604.200X	M 10 x 200
09622.100X	M 12 x 100
09622.120X	M 12 x 120
09622.200X	M 12 x 200

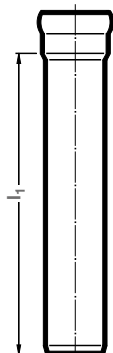
* Packaging unit to 25 pieces

** Packaging unit to 10 pieces

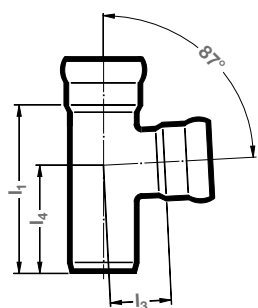
Downpipes made of copper, round

with socket, DN 70 - DN 100

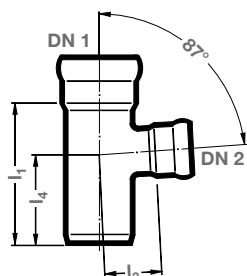
(Pipe dimensions see page 12)



Art.-No.	DN	l_1	kg
01401.070N	70	250 mm	1,0
01401.080N	80		1,3
01401.100N	100		1,8
01301.070N	70	500 mm	1,8
01301.080N	80		2,5
01301.100N	100		3,3
01201.070N	70	1000 mm	3,4
01201.080N	80		4,0
01201.100N	100		6,1
01111.070N	70	1500 mm	4,9
01111.080N	80		6,8
01111.100N	100		8,9
01101.070N	70	2000 mm	6,5
01101.080N	80		9,1
01101.100N	100		11,7
01001.070N	70	4000 mm	9,8
01001.080N	80		13,8
01001.100N	100		17,4

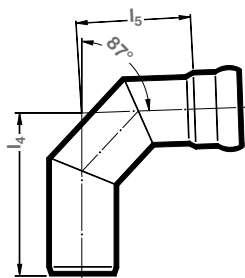

Branches

Art.-No.	DN	α	l_1	l_3	l_4	kg
00200.CC0N	70	87°	175	65	110	1,0
00200.MM0N	80		205	78	135	1,5
00200.DD0N	100		230	90	140	2,3
00220.CC0N	70	45°	200	115	85	1,1
00220.MM0N	80		235	138	97	1,5
00220.DD0N	100		265	155	110	2,7


Reducing branches

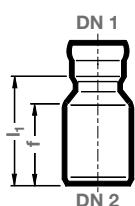
Art.-No.	DN 1	DN 2	α	l_1	l_3	l_4	kg
00230.DC0N	100	70	87°	200	80	125	1,8
00250.DC0N	100	70	45°	230	136	90	2,0

Please order sealing elements for each socket connection additionally, see page 27

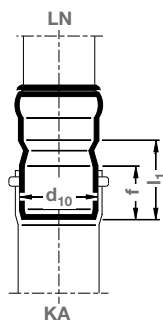

Bends

Art.-No.	DN	α	l_4	l_5	kg
03500.070N	70	87°	120	52	0,7
03500.080N	80		133	61	1,1
03500.100N	100		160	74	1,6
03502.070N	70	45°	95	25	0,6
03502.080N	80		100	30	0,9
03502.100N	100		125	40	1,4

Bends, DN 125, on request


Transition pipes (concentric)

Art.-No.	DN 1	DN 2	l_1	f	kg
00600.CM0N	70	80	130	85	0,6
00600.CD0N	70	100	140	100	0,9
00600.MD0N	80	100	140	100	1,0


Connectors for the connection to plastic pipe socket (KA)

Art.-No.	DN(LN)	DN(KA)	l_1	d_{10}	f	kg
00630.070N	70	100	120	110	80	0,9
00630.080N	80	100	120	110	80	1,0
00630.100N*	100	100	110	110	80	1,1

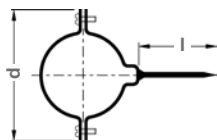
* direct connection possible using sealing element, Nr. 937X

Please order sealing elements for each socket connection additionally, see page 27

Accessories for stand and downpipes made of **copper**:

Pipe clips round, with knockin pin

made of copper, with knockin pin standard



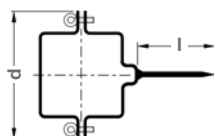
Art.-No.	DN	d	l	kg
00990.070N	70	120	100	0,2
00990.080N	80	134	100	0,2
00990.100N	100	150	100	0,2
00990.125N	125	193	120	0,3
00990.150N	150	215	120	0,3

with knockin pin l = 150 mm

Art.-No.	DN	d	l	kg
09917.070N	70	120	150	0,22
09917.080N	80	134	150	0,24
09917.100N	100	150	150	0,26
09917.125N	125	193	150	0,30

Pipe clips quadratic, with knockin pin

made of copper, with knockin pin standard



Art.-No.	DN	d	l	kg
00993.100N	100	150	100	0,16

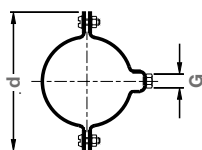
with knockin pin l = 150 mm

Art.-No.	DN	d	l	kg
00992.100N	100	150	150	0,28

Pipe clips round, with connection thread*

made of copper, for wall and ceiling installation suitable for threaded rods and hanger bolts M 8, M 10 bzw. M 12

without sound insulation



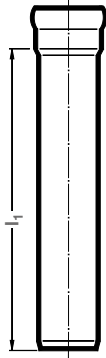
Art.-No.	DN	d	G	kg
00973.070N	70	123	M 8	0,20
00975.080N	80	139	M 10	0,22
00975.100N	100	152	M 10	0,24
00977.125N	125	183	M 10	0,33

* Threaded rods, hanger bolts, made of stainless steel see page 39.

Dimensions and weights
**Extract from the technical information about LORO-XCL
Stainless steel discharge pipes**
Downpipes made of stainless steel, round

with socket, material number 1.4301

(Pipe dimensions see page 12)

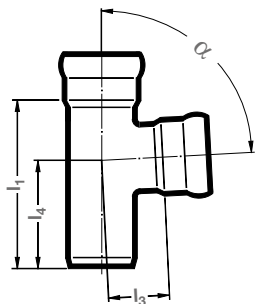


Art.-No.	DN	l ₁	kg
4.1401070C	70	250 mm	0,7
5.1401080C	80*		0,8
4.1401100C	100		1,0
4.1401125C	125		1,6
4.1401150C	150		2,0
4.1301070C	70	500 mm	1,3
5.1301080C	80*		1,5
4.1301100C	100		1,8
4.1301125C	125		2,8
4.1301150C	150		3,4
4.1201070C	70	1000 mm	2,4
5.1201080C	80*		2,9
4.1201100C	100		3,4
4.1201125C	125		5,3
4.1201150C	150		6,4
4.1111070C	70	1500 mm	3,9
5.1111080C	80*		4,3
4.1111100C	100		5,0
4.1111125C	125		7,8
4.1111150C	150		9,3
4.1101070C	70	2000 mm	4,6
5.1101080C	80*		5,7
4.1101100C	100		6,3
4.1101125C	125		10,2
4.1101150C	150		12,3
4.1001070C	70	3000 mm	6,9
5.1001080C	80*		8,4
4.1001100C	100		9,3
4.1001125C	125		15,1
4.1001150C	150		18,2

* only available in material No 1.4404

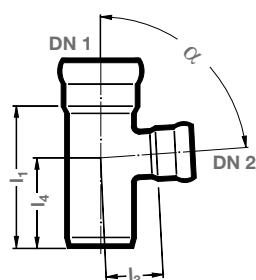
Please note: When placing orders involving material No 1.4404, the digit **4** in front of the article No must be replaced by a **5**

Please order sealing elements for each socket connection additionally, see page 27

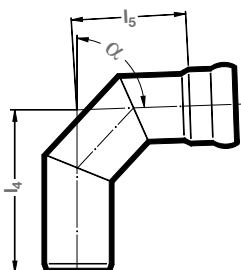

Branches

Art.-No.	DN	α	l_1	l_3	l_4	kg
4.200.CC0C	70	87°	175	65	110	0,7
5.200.MM0C	80*		205	78	135	1,0
4.200.DD0C	100		230	90	140	1,2
4.200.EE0C	125		285	120	170	2,5
4.200.FF0C	150		320	135	190	3,3
4.220.CC0C	70	45°	200	115	85	1,0
5.220.MM0C	80*		235	138	97	1,1
4.220.DD0C	100		265	155	110	1,8
4.220.EE0C	125		340	210	130	2,9
4.220.FF0C	150		380	240	140	3,6

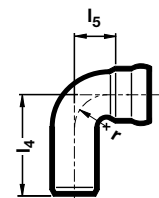
* only available in material No 1.4404


Reducing branches

Art.-No.	DN 1	DN 2	α	l_1	l_3	l_4	kg
4.230.DC0C	100	70	87°	200	80	125	1,0
4.230.ED0C	125	100		255	105	155	1,9
4.230.FE0C	150	125		290	134	175	2,7
5.220.MM0C	100	70	45°	230	136	90	1,2
4.220.DD0C	125	100		290	176	105	2,2
4.220.EE0C	150	125		340	230	120	3,2

Bends


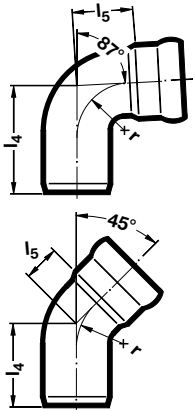
Art.-No.	DN	α	l_4	l_5	kg
4.300.070C	70	87°	185	146	0,8
5.300.080C	80*		190	130	1,0
4.300.100C	100		237	167	1,3
4.300.125C	125		280	205	2,5
4.300.150C	150		321	241	3,4
4.320.070C	70	45°	122	83	0,6
5.320.080C	80*		122	62	0,7
4.320.100C	100		148	78	0,9
4.320.125C	125		175	100	1,7
4.320.150C	150		195	115	2,4


Angle bends

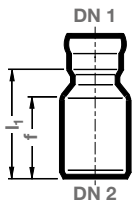
Art.-No.	DN	α	l_4	l_5	r	kg
5.500.040C*	40	90°	80	45	26,0	0,2
4.500.050C	50		100	57	36,5	0,3
4.500.070C	70		123	63	50,0	0,5
5.500.080C*	80		140	75	60,0	0,6
4.500.100C	100		165	90	70,0	0,9

Please note: When placing orders involving material No 1.4404, the digit **4** in front of the article No must be replaced by a **5**

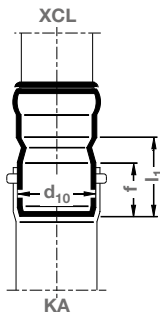
Please order sealing elements for each socket connection additionally, see page 27


Bends with small radius

Art.-No.	DN	α	l_4	l_5	r	kg
5.350.050C	50	87°	98	55	36,5	0,3
5.350.070C	70		118	58	50,0	0,5
5.350.080C	80		137	72	60,0	0,7
5.350.100C	100		161	91	70	0,9
5.352.050C	50	45°	79	24,5	36,5	0,3
5.352.070C	70		91	33	50	0,5
5.352.080C	80		105	30	60	0,5
5.352.100C	100		124	54	70	0,7

Transition pipes (concentric reducers)*


Art.-No.	DN 1	DN 2	l_1	f	kg
5.600.CM0C	70	80	130	85	0,5
5.600.CD0C	70	100	140	100	0,5
5.600.MD0C	80	100	140	100	0,6
5.600.DE0C	100	125	160	100	1,0
5.600.EF0C	125	150	150	110	1,2

Connectors for the connection to plastic pipe socket (KA)*


Art.-No.	DN(XCL)	DN(KA)	l_1	d_{10}	f	kg
5.630.100C	100**	100**	110	110	80	0,7
5.642.125C	125	125	130	125	85	1,0
-	150	150	direct			

* only available in Material No 1.4404

** direct connection possible using sealing element, Nr. 937X

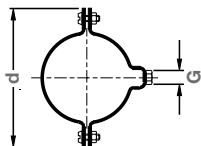
Please note: When placing orders involving material No 1.4404, the digit **4** in front of the article No must be replaced by a **5**

Please order sealing elements for each socket connection additionally, see page 27

Accessories for stand- and downpipes made of stainless steel
Pipe clips round with connecting thread

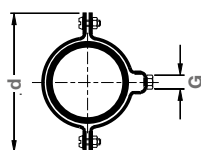
made of stainless steel, for wall and ceiling installation suitable for threaded rods and hanger bolts M 8, M 10 bzw. M 12

without sound insulation



Art.-No.	DN	d	G	kg
4.975.080C	80	139	M 10	0,14
4.975.100C	100	152	M 10	0,27
4.977.125C	125	183	M 12	0,22

with sound insulation



Art.-No.	DN	d	G	kg
4.974.080C	80	152	M 10	0,24
4.974.100C	100	162	M 10	0,20
4.976.125C	125	193	M 12	0,32


Threaded pins*

Art.-No.	Length in mm
4.9602080C	M 10 x 80
4.9602100C	M 10 x 100
4.9602120C	M 10 x 120
4.9602150C	M 10 x 150
4.9612120C	M 12 x 120


Hanger bolts*

Art.-No.	Length in mm
4.9604100C	M 10 x 100
4.9604120C	M 10 x 120
4.9622100C	M 12 x 100
4.9622120C	M 12 x 120

* packaging unit to 25 pieces

Please note: When placing orders involving material No 1.4404, the digit **4** in front of the article No must be replaced by a **5**
Please order sealing elements for each socket connection additionally, see page 27

Installation instructions

LORO-X steel discharge pipes DN 70 - DN 200

LORO-X steel discharge pipes are planned and installed in accordance with the technical rules and regulations of DIN EN 12056 (Gravity Drainage Systems inside Buildings) and DIN 1986 Parts 3, 4 and 100 (Drainage Systems for

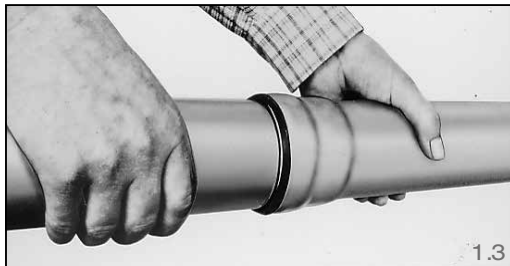
Land and Buildings); DIN 4102 (Fire Prevention in Buildings) and DIN 4109 (Noise Control in Buildings) are to be observed amongst others.



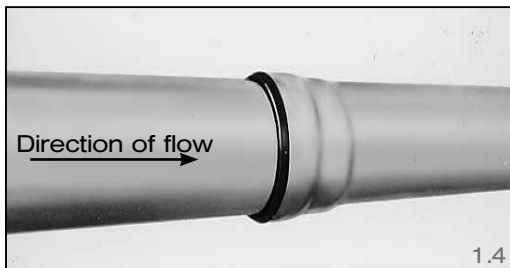
1.1



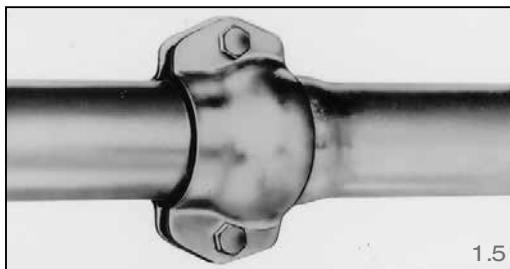
1.2



1.3



1.4



1.5

1. Manufacture of the push-fit socket connection

1.1 Place sealing element in inclined position on the edge of the sealing chamber.
Use only original LORO-X sealing elements. Store LORO-X sealing elements at room temperature for easier assembly.

1.2 Push in top sealing element with your finger and let it engage in the sealing chamber until the collar of the sealing element lies level on the socket edge.
Smear only original LORO-X lubricant no. 986X or 9861X over the entire surface on the inside of the sealing element and the outside of the insert pipe. The use of other lubricants can lead to impairments.

1.3 Line up the socket and insert pipe and push together. Twist gently to secure. Push the insert pipe in as far as the socket base. Surplus lubricant is to be removed.
When installing pipes of a larger nominal size (DN 100 – DN 200), an assembly aid can be borrowed from the factory.

1.4 Finished LORO-X socket joint complies with DIN 1986 (durable tightness for internal and external gauge pressure of 0 - 0.5 bar).

1.5 If higher pressures are expected, the socket joint can be secured by the LORO-X anchor clip, no. 806X (DN 40 – DN 125) or by the LORO-X anchor hoop, no. 808X (DN 150 – DN 200). Use the LORO-XCL anchor clip, no. 4.806C with stainless steel pipes. Tighten the screws of the LORO-X or LORO-XCL anchor clip evenly to 30 Nm. In the case of the LORO-X anchor hoop, tighten the screws all round evenly to 50 Nm.

2. Cutting to length

LORO-X pipes can be best cut to length with a **pipe cutter** with 3 or 4 sharp cutting wheels and without guide rollers.

The pipe can also be cut to length at a right angle to the pipe axis with an angle grinder or saw (in the case of the LORO-XCL stainless steel pipes, use HSS fine-toothed saw blades and a cutting speed of 7 - 10 m/min).

Deburr the insert ends inside and out.

At the cut surfaces the surrounding zinc layer provides for cathodic protection and prevents under-rusting.

When cutting to length using an angle grinder with subsequent chamfering of the cut surface, it is recommended to provide the chamfered area with zinc plating.

LORO-X pipes can be supplied with two sockets up to DN 100. This prevents waste pieces without sockets being produced when cutting to length. The cut-to-length pipe ends with sockets can be used as adaptors. Waste is reduced as a result.

If a pipe section has no socket, add a LORO-X double socket no. 560X, to turn it into a socket pipe. Glue the double socket onto the remaining pipe with the LORO-X sealing element, no. 911X, and LORO-X adhesive no. 985X.

Sockets in frost-exposed areas (including double sockets) must not be facing the opposite way to the flow direction.

3. Fastenings

The following weights must be taken into account for the fastening of LORO rain standpipes and rainwater downpipes. Weight of 1 m pipe completely filled with water:

DN 70 approx. 6.8 kg	DN 125 approx. 20.8 kg
DN 80 approx. 9.3 kg	DN 150 approx. 28.2 kg
DN 100 approx. 12.4 kg	DN 200 approx. 51.4 kg

4. Releasing the socket joint

Heat the insert pipe well with a soft soldering flame close to the socket rim until the pipe can be pulled out of the socket. The tip of the flame should be about 10 cm away from the pipe to be heated. After that, **replace the sealing element** in all cases.

5. Connection to rainwater downpipes

The sockets of LORO rain standpipes are formed as LORO-X long sockets in the sizes DN 70, 80, 100, 125 and 150. For connection to rainwater downpipes made from zinc, copper, PVC or LORO-X steel discharge pipes, see overview "Connection of rainwater downpipes to LORO rain standpipe socket".

The spigot end of the rainwater downpipe is to be cleanly deburred and if necessary chamfered in order to avoid damage to the sealing element.

In the case of plastic downpipes, the greater elongation compared to steel in the case of temperature fluctuations must be taken into account. Therefore the spigot end must not be inserted right to the base of the socket.

6. Connection to underground pipe/ underground installation

In order to enable a standard-compliant connection of the LORO rain standpipes and rainwater downpipes to the underground pipe, appropriate connectors must be used. LOROWERK offers LORO-X connectors for the various pipe materials and nominal diameters (see overview below: "Connectors for transition from LORO rain standpipes to underground pipes").

If connectors and/or standpipes are located in the soil, the customer must provide the exterior surfaces of the pipe surrounded by soil with anti-corrosion protection according to DIN 30672.

7. Painting

Use paints specially designed for hot-dip galvanized substrates.

8. Other fitting instructions

1. Pipes exposed to corrosion by electrical current, corrosive liquids, gases or fumes, must be protected in a suitable manner.
2. Pipes with corrosion protection (hot-dip galvanising with added inside coating) cannot be welded.
3. Sockets in frost-exposed areas (including double sockets) must not be facing the opposite way to the flow direction.

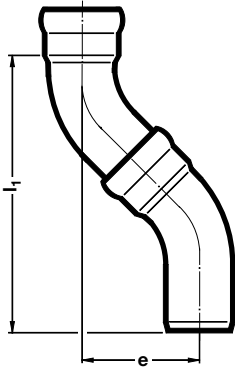
9. Auxiliary tools

Available to hire on request for assistance with the assembly:

- Assembly tool for making socket joint
- Pipe cutter

10. Possibilities to connect rainwater downpipes to LORO rain standpipe sockets

	Exterior Ø	to LORO rain standpipe socket
Zinc sheet/copper sheet		
8-piece	76 mm	DN 70: direct, without sealing element
7-piece	80 mm	DN 80: Sealing element 00911.080X
6-piece	100 mm	DN 100: Sealing element 00911.100X
5-piece	120 mm	DN 125: Sealing element 00944.125X
PVC		
DN 70	75 mm	DN 70: direct, without sealing element
DN 80	85 mm	DN 80: Sealing element 00911.080X
DN 100	110 mm	DN 100: Connector 00750.100X Sealing element 00911.100X
DN 125	125 mm	DN 125: Sealing element 00944.125X
LORO-X pipe/LORO-N pipe		
DN 70	73 mm	DN 70: Sealing element 00911.070X
DN 80	89 mm	DN 80: Sealing element 00911.080X
DN 100	102 mm	DN 100: Sealing element 00911.100X
DN 125	133 mm	DN 125: Sealing element 00911.125X
DN 150	159 mm	DN 150: Sealing element 00911.150X
Zinc sheet □		
DN 70	70 mm	direct, without sealing element
DN 100	100 mm	direct, without sealing element
Copper sheet □		
DN 100	100 mm	direct, without sealing element


1 1. Dimensions of offset pipes made of steel by using two bends

α	15°		30°		45°		70°		87°	
DN	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1
70	36	273	86	319	145	350	258	369	331	348
80	43	326	101	376	169	407	297	425	383	404
100	36	271	79	294	126	304	205	293	252	265
125	39	293	82	305	134	323	218	311	276	291
150	41	315	105	392	170	411	284	403	353	372
200	54	413	105	391	308	744	577	824	764	806


Dimensions of offset pipes made of copper by using two bends

α	15°		30°		45°		70°		87°	
DN	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1
70	-	-	-	-	85	205	-	-	171	181
80	-	-	-	-	92	222	-	-	194	204
100	-	-	-	-	117	282	-	-	233	246


Dimensions of offset pipes made of stainless steel by using two bends

α	15°		30°		45°		70°		87°	
DN	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1	e (mm)	l_1
70	36	273	86	319	145	350	258	369	331	348
80	36	275	76	283	130	314	234	335	320	337
100	41	315	91	340	160	385	293	419	403	425
125	42	316	113	420	194	469	354	506	484	510
150	44	334	125	467	219	529	407	582	561	591

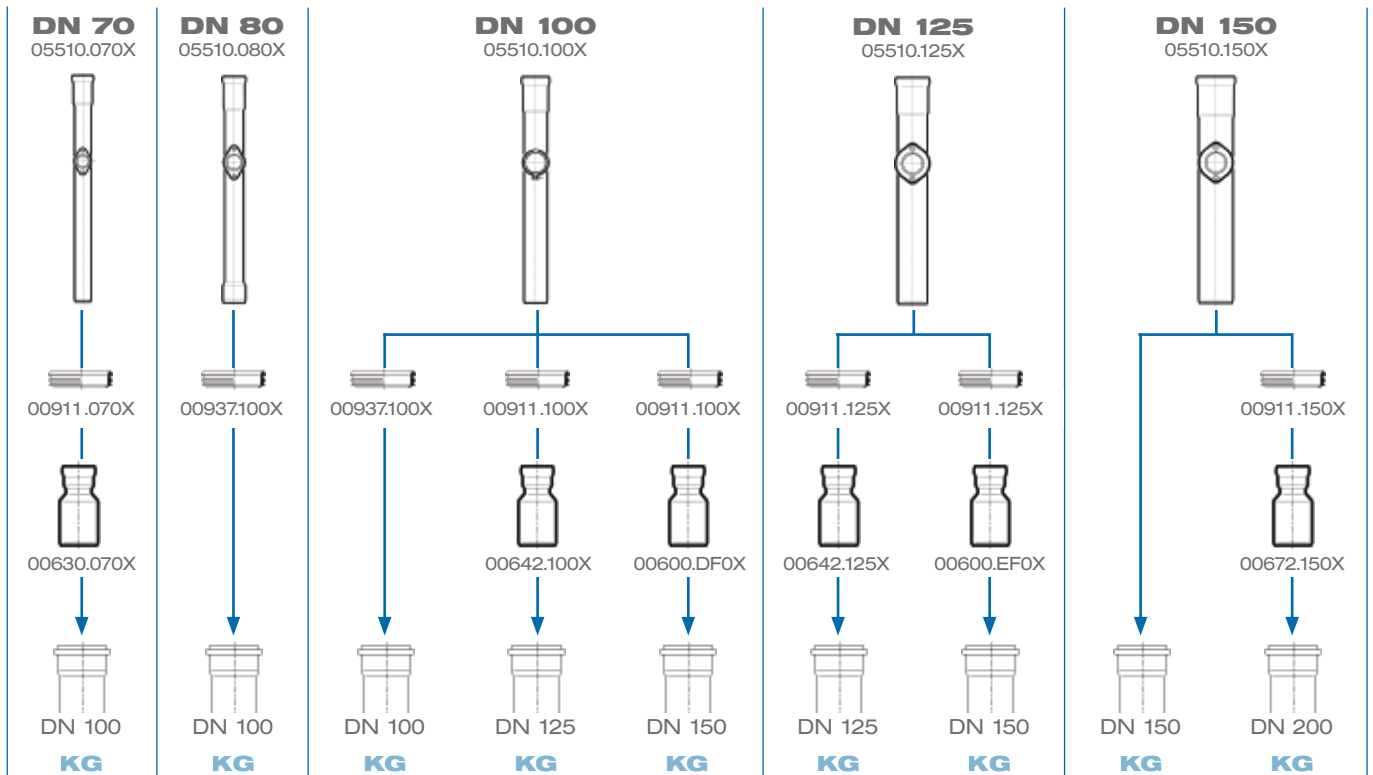


Double bend see page 27

12. Transition

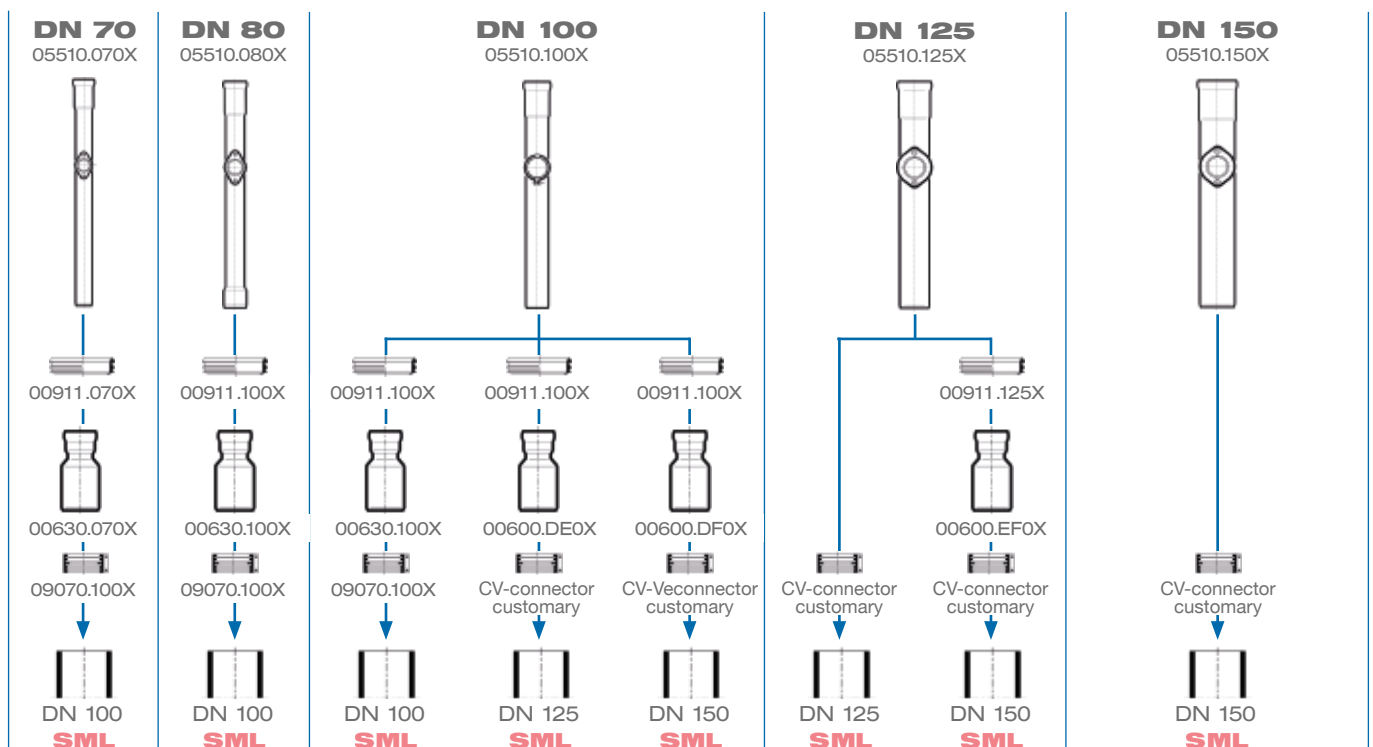
to sewer made of plastic "KG-Pipe"

Standpipe round, 1000 mm



to sewer made of **Cast iron pipes (SML)**

Standpipe round, 1000 mm



Renovation length 1000 mm

DN 100
05554.100X



KG

DN 125
05554.125X



KG

quadratic to round, 102 mm

70 x 70
05505.070X



00937.100X



KG

80 x 80
05505.080X



00911.100X

00642.100X



KG

100 x 100
05505.100X



00911.100X

00600.DFOX



KG

Renovation, length 1000 mm

DN 100
05554.100X



09070.100X



SML

quadratic to round, 102 mm

70 x 70
05505.070X



00911.100X

00630.100X

09070.100X



SML

80 x 80
05505.080X



00911.100X

00600.DE0X

CV-connector
customary



SML

100 x 100
05505.100X



00911.100X

00600.DFOX

CV-connector
customary



SML

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