

# LORO-XCL Stainless Steel pipes

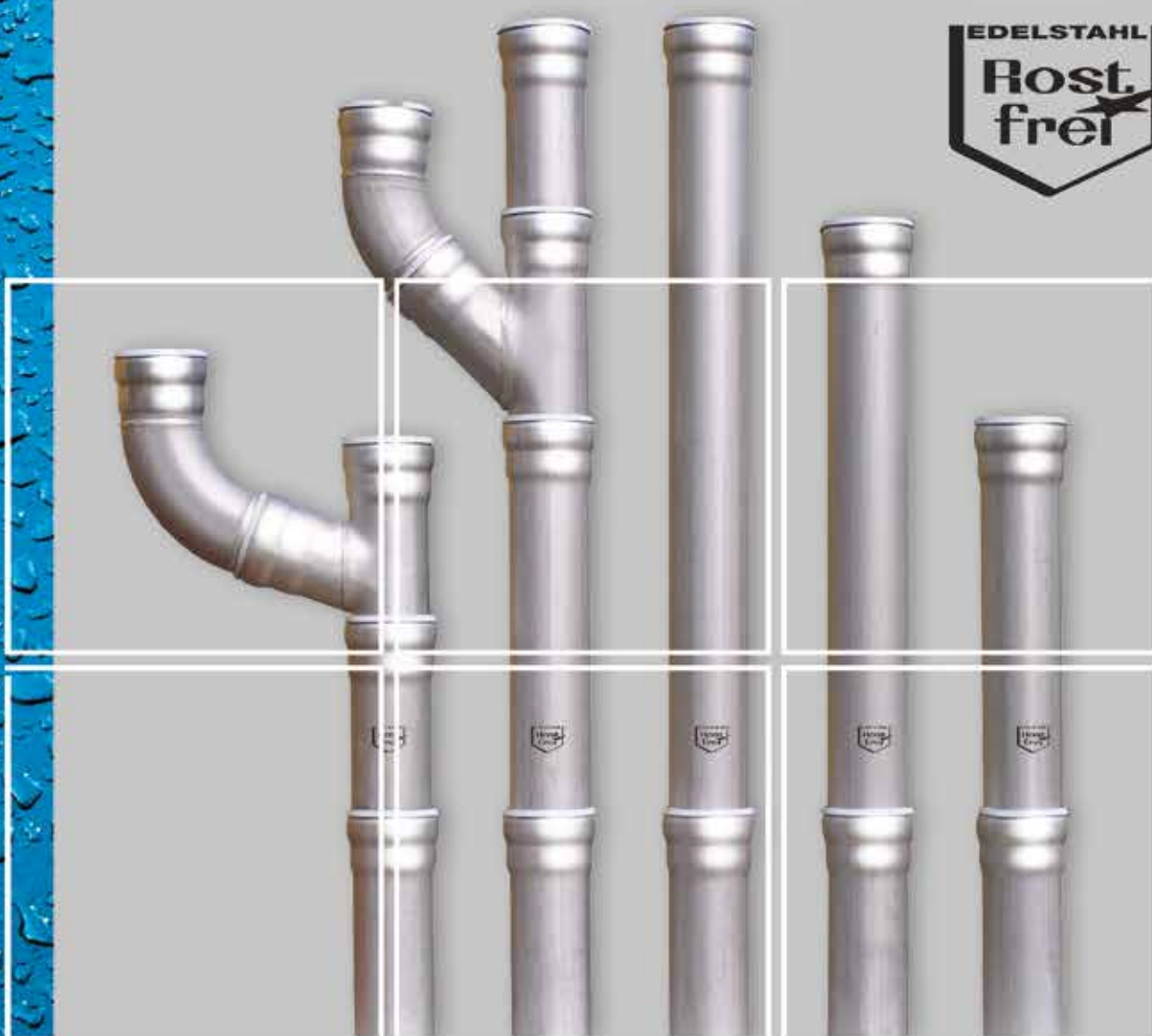
## **LORO-XCL** **Stainless steel pipes and fittings**

### **DN 40 - DN 150**

according to DIN EN 1124-1 and EN 1124-3

Material No. 1.4301 (AISI 304)

and 1.4404 (AISI 316 L)












**LORO**<sup>®</sup>








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# LOROWERK

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## LORO-XCL STAINLESS STEEL PIPES and fittings DN 40 - DN 150 according to DIN EN 1 124-1 and EN 1 124-3

- for wastewater
- for exhaust gas
- for exhaust air

### Areas of application:

Increasingly aggressive media have to be disposed of in trade and industry, in commercial kitchens and research facilities as well as in public facilities. Pipelines are thereby exposed to different mechanical, chemical and thermal stresses. Conventional pipes either cannot meet these requirements at all, or only with major restrictions.

LORO-XCL STAINLESS STEEL PIPES meet these requirements. They are manufactured from 'rustproof' stainless steel in the material numbers 1.4301 (AISI 304) as standard and 1.4404 (AISI 316L) for heavier loads.

**Fast installation:** A key feature is the LORO-X two-stage socket with special sealing elements for problem-free connection of the pipes. The decisive advantages in terms of material and installation, in conjunction with the reliability of the LORO-X push-fit socket connection – manufactured hundreds of millions of times – offer planners and installers maximum security.

**Fittings:** A versatile range of fittings solves every installation case.

### Advantages of LORO-XCL stainless steel pipe:

- shock proof and dimensionally stable
- resistant to aggressive media
- not susceptible to heat or cold
- low fastening expenditure

### Advantages of the LORO-X push-fit socket connection:

- backflow-safe
- stable sealing chamber
- resistant to buckling
- fast installation



All technical data and references to standards, test reports, technical specifications, etc. correspond to the status at the time of going to print. No rights can be derived from this information.

**System overview**

<b>LORO-XCL stainless steel pipe</b>		<b>DN</b>	<b>40</b>	<b>50</b>	<b>70</b>	<b>80</b>	<b>100</b>	<b>125</b>	<b>150</b>
	Pipes with one socket		•	•	•	•	•	•	•
	Branches		•	•	•	•	•	•	•
	Reducing branches		•	•	•	•	•	•	•
	Bends		•	•	•	•	•	•	•
	Angle bends		•	•	•	•	•	-	-
	Bends with tight radius		-	•	•	•	•	-	-
	Cleaning pipes		-	•	•	•	•	•	•
	Double sockets		•	•	•	•	•	•	•
	Slip-in sockets		•	•	•	•	•	•	•
	Transition pipes		•	•	•	•	•	•	•
	Connectors to other types of pipe		-	•	•	•	•	•	•
	Closing plug		•	•	•	•	•	•	•
	Sealing elements		•	•	•	•	•	•	•
	Anchor clips		•	•	•	•	•	•	•
	Pipe clips		-	•	•	•	•	•	•

**DN 200 by request**

## Technical data



### Pipe material

Pipes made of austenitic, non-rusting steels according to DIN EN ISO 1127. The following are available:

#### Standard

Material no. 1.4301 (AISI 304)

Short name X 5 CrNi 18 10

#### Higher resistance

Material no. 1.4404 (AISI 316L)

Short name X 2 CrNiMo 17 13 2

Some fittings are manufactured only in the higher quality 1.4404 or from material number 1.4571 (AISI 3162) for manufacturing reasons.

Short name X 10 CrNiMoTi 1810

Execution: annealed, pickled

Special execution: polished surface at extra cost.



### Tightness values

The tightness values (internal and external overpressure 0 to 0.5 bar) demanded in EN 476 are fulfilled by LORO-XCL STAINLESS STEEL PIPES. If higher pressures are expected, the socket joint in the nominal sizes DN 40 – DN 125 can additionally be secured against axial thrust by the LORO-XCL stainless steel anchor clip, no. 806 C.



### Corrosion protection

Non-rusting steels are organic and inorganic materials on an iron basis. The austenitic chromium steels are, however, only conditionally nickel steels and resistant to many reducing acids and chemical products; under certain conditions they are also resistant to aggressive wastewater with cleaning agents as well as media containing chlorine. They are therefore put to various uses in the chemical industry, in the grease and soap industries, in the foodstuffs business, in dairies, in the beverages industry and in commercial kitchens and similar areas.

The use of molybdenum-alloyed chrome-nickel steels is recommended where increased resistance to acids and reduced susceptibility to pitting corrosion are called for. These steels are resistant to a number of organic and inorganic acids. However, they are only conditionally resistant to reducing acids and under certain conditions to media containing chlorine.



### Fire resistance

According to DIN 4102 LORO-XCL STAINLESS STEEL PIPES are to be assigned to building material class A1, incombustible, and are classified as incombustible by DIN 1986, Part 4. LORO-XCL STAINLESS STEEL PIPES are extremely temperature resistant and have low coefficients of expansion. The increase in length amounts to 1.6 mm when heating a pipe section of 1 metre in length by a temperature difference of 100 °C.

### Supervision

LORO-XCL stainless steel pipes are manufactured according to DIN EN 1124-1, 3 and 4.

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.



### Sealing elements

Sealing elements made of the following materials are available:

SB (SBR) styrene-butadiene copolymer, DN 70 – DN 150.

NB (NBR) nitrile-butadiene rubber, DN 40 – DN 150.

EP (EPDM) ethylene-propylene rubber, DN 40 – DN 150.

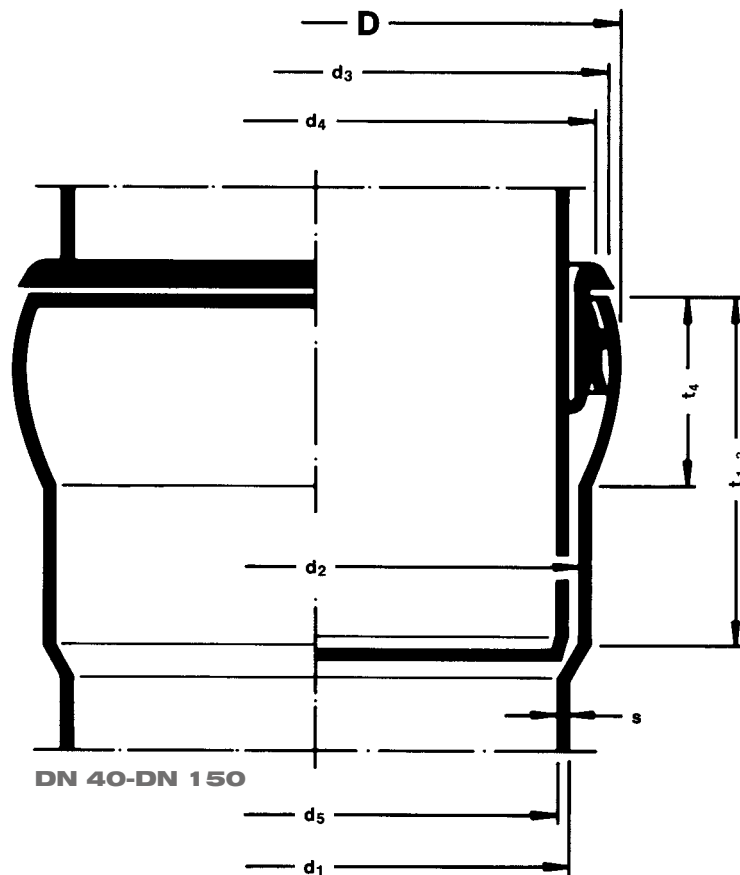
SI (VMQ) methyl-vinyl rubber DN 50 – DN 150.

Usage depends on the wastewater medium and the temperature. A list is available containing data for the resistance of the various sealing elements to materials with various chemical compositions.

Please contact LOROWERK.





**Dimensions and weights**

**Pipe and socket dimensions (in mm)\***

DN	D	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	d <sub>5</sub>	s	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	F**
40	49.8	42	44.8	46.8	44.8	40	1.0	30	70	100	16	1256.6
50	61.8	53	55.8	57.8	55.8	51	1.0	38	90	130	19	2042.8
70	83.2	73	75.8	78.2	75.8	70.6	1.2	55	120	175	27	3914.0
80	101.1	88.9	91.7	94.1	91.7	86.5	1.2	60	130	190	31	5875.4
100	115.8	101.6	105.4	108.8	106.4	99.2	1.2	70	150	220	38	7727.4
125	149.8	133	137.8	142.8	139.8	130	1.5	75	160	235	41	13273.2
150	178.8	159	163.8	170.8	167.8	156	1.5	80	170	250	46	19113.4

\* = Subject to dimensional tolerances according to EN 1124 part 3.

\*\*F = free cross-section (mm<sup>2</sup>).

t<sub>1</sub> = Standard.

t<sub>2</sub>, t<sub>3</sub> = Custom made.

**Note:**

The dimensions of the pipes and fittings are the same for both materials.

In the dimensions and weights tables the item numbers are listed beginning with 4 for the execution in stainless steel, material no. 1.4301.

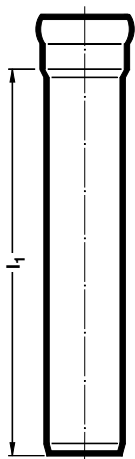
When ordering the material number 1.4404, the first digit in the article number, **4**, is to be replaced by a **5**.

**Example: Pipe 1000 mm DN 100 with one socket**

**For material number 1.4301: Item number 4.1201100C**

**For material number 1.4404: Item number 5.1201100C**

Pipes and fittings listed in these tables with an item number beginning with a **5** are manufactured only in stainless steel, material no. 1.4404.


**Pipes with one socket**

l <sub>1</sub> = 250 mm		
Art.-No.	DN	kg
5.1401040C	40*	0,3
4.1401050C	50	0,4
4.1401070C	70	0,7
5.1401080C	80*	0,8
4.1401100C	100	1,0
4.1401125C	125	1,6
4.1401150C	150	2,0

l <sub>1</sub> = 500 mm		
Art.-No.	DN	kg
5.1301040C	40*	0,6
4.1301050C	50	0,7
4.1301070C	70	1,3
5.1301080C	80*	1,5
4.1301100C	100	1,8
4.1301125C	125	2,8
4.1301150C	150	3,4

l <sub>1</sub> = 1000 mm		
Art.-No.	DN	kg
5.1201040C	40*	1,1
4.1201050C	50	1,4
4.1201070C	70	2,4
5.1201080C	80*	2,9
4.1201100C	100	3,4
4.1201125C	125	5,3
4.1201150C	150	6,4

l <sub>1</sub> = 1500 mm		
Art.-No.	DN	kg
5.1111040C	40*	1,6
4.1111050C	50	2,0
4.1111070C	70	3,9
5.1111080C	80*	4,3
4.1111100C	100	5,0
4.1111125C	125	7,8
4.1111150C	150	9,3

l <sub>1</sub> = 2000 mm		
Art.-No.	DN	kg
5.1101040C	40*	2,1
4.1101050C	50	2,7
4.1101070C	70	4,6
5.1101080C	80*	5,7
4.1101100C	100	6,5
4.1101125C	125	10,2
4.1101150C	150	12,3

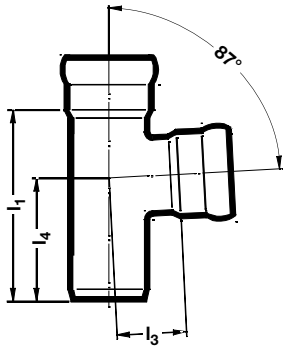
l <sub>1</sub> = 2750 mm		
Art.-No.	DN	kg
5.1005040C	40*	2,9
4.1005050C	50	3,6
4.1005070C	70	6,1
5.1005080C	80*	7,4
4.1005100C	100	8,5
4.1005125C	125	13,9
4.1005150C	150	16,7

l <sub>1</sub> = 3000 mm		
Art.-No.	DN	kg
5.1001040C	40*	3,1
4.1001050C	50	4,0
4.1001070C	70	6,8
5.1001080C	80*	8,4
4.1001100C	100	11,7
4.1001125C	125	15,1
4.1001150C	150	18,2

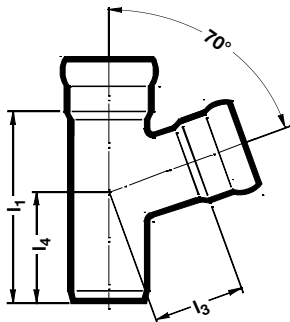
\* only available in Material No. 1.4404

**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**

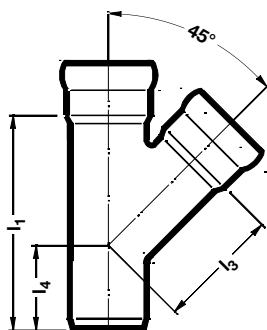


**Branches 87°**


Art.-No.	DN	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>	kg
5.200.AA0C	40/40*	110	40	70	0,2
4.200.BB0C	50/50	130	50	80	0,3
4.200.CC0C	70/70	175	65	110	0,7
5.200.MM0C	80/80*	205	78	135	1,0
4.200.DD0C	100/100	230	90	140	1,2
4.200.EE0C	125/125	285	120	170	2,5
4.200.FF0C	150/150	320	135	190	3,3

**Branches 70°**


Art.-No.	DN	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>	kg
5.210.AA0C	40/40*	110	50	60	0,2
4.210.BB0C	50/50	130	60	70	0,3
4.210.CC0C	70/70	175	75	95	0,7
5.210.MM0C	80/80*	205	91	117	1,1
4.210.DD0C	100/100	230	110	125	1,3
4.210.EE0C	125/125	285	145	150	2,7
4.210.FF0C	150/150	320	160	160	3,5

**Branches 45°**


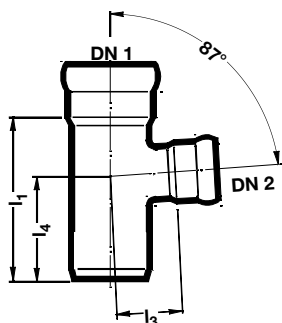
Art.-No.	DN	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>	kg
5.220.AA0C	40/40*	125	70	55	0,3
4.220.BB0C	50/50	150	90	65	0,4
4.220.CC0C	70/70	200	115	85	1,0
5.220.MM0C	80/80*	235	138	97	1,1
4.220.DD0C	100/100	265	155	110	1,6
4.220.EE0C	125/125	340	210	130	2,9
4.220.FF0C	150/150	380	240	140	3,6

\* only available in Material No. 1.4404

**Please note:**

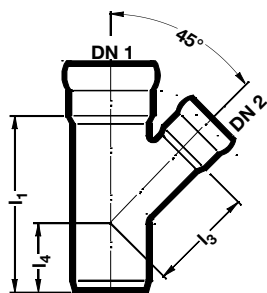
When placing orders involving material No. 1.4404, the digit **4** in front of the article No. must be replaced by a **5**

#### Reducing branches 87°



Art.-No.	DN 1	DN 2	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>	kg
5.230.BA0C	50*	40*	120	46	75	0,3
5.230.CA0C	70*	40*	140	57	95	0,5
4.230.CB0C	70	50	150	61	100	0,5
4.230.DB0C	100	50	180	76	115	0,8
4.230.DC0C	100	70	200	80	125	1,0
5.230.DM0C	100*	80*	210	85	135	1,1
4.230.ED0C	125	100	255	105	155	1,9
4.230.FD0C	150	100	255	119	155	2,3
4.230.FE0C	150	125	290	134	175	2,7

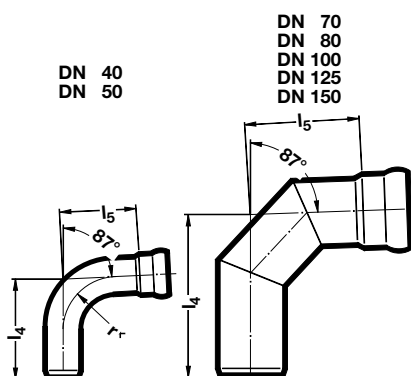
#### Reducing branches 45°



Art.-No.	DN 1	DN 2	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>	kg
5.250.BA0C	50*	40*	130	79	50	0,3
5.250.CA0C	70*	40*	150	95	60	0,5
4.250.CB0C	70	50	175	106	75	0,6
4.250.DB0C	100	50	200	127	75	0,9
4.250.DC0C	100	70	230	136	90	1,2
5.250.DM0C	100*	80*	250	146	100	1,4
4.250.ED0C	125	100	290	176	105	2,2
4.250.FD0C	150	100	290	195	95	2,5
4.250.FE0C	150	125	340	230	120	3,2

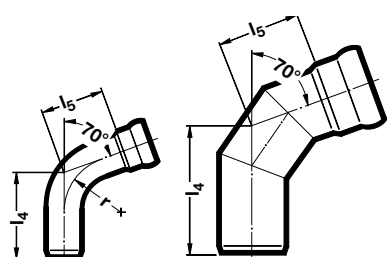
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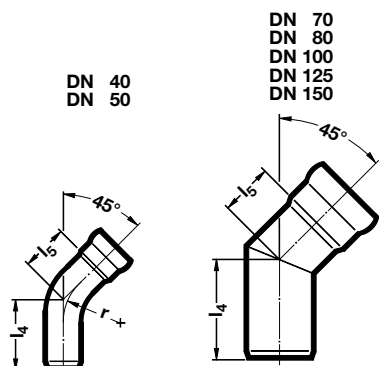
#### Bends 87°

Art.-No.	DN	r	l <sub>4</sub>	l <sub>5</sub>	kg
5.300.040C*	40	67,5	122	92	0,3
4.300.050C	50	82,5	148	120	0,3
4.300.070C	70**	-	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



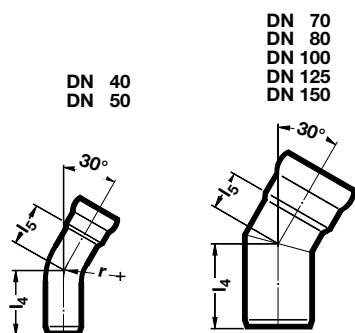
#### 70°

Art.-No.	DN	r	l <sub>4</sub>	l <sub>5</sub>	kg
5.310.040C*	40	67,5	105	75	0,2
4.310.050C	50	82,5	128	100	0,3
4.310.070C	70**	-	157	118	0,7
5.310.080C*	80**	-	155	95	0,8
4.310.100C	100**	-	191	121	1,1
4.310.125C	125**	-	226	151	2,1
4.310.150C	150**	-	257	177	2,9



#### 45°

Art.-No.	DN	r	l <sub>4</sub>	l <sub>5</sub>	kg
5.320.040C*	40	67,5	86	56	0,2
4.320.050C	50	82,5	104	76	0,3
4.320.070C	70**	-	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



#### 30°

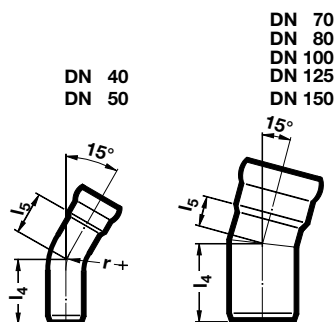
Art.-No.	DN	r	l <sub>4</sub>	l <sub>5</sub>	kg
5.330.040C*	40	67,5	76	46	0,2
4.330.050C	50	82,5	92	64	0,3
4.330.070C	70**	-	105	66	0,6
5.330.080C*	80**	-	106	46	0,6
4.330.100C	100**	-	126	56	0,8
4.330.125C	125**	-	150	75	1,5
4.330.150C	150**	-	165	85	2,0

\* only available in Material No. 1.4404

\*\* In segment construction

#### Please note:

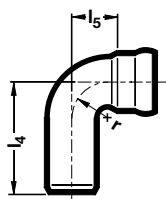
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#### Bogen 15°

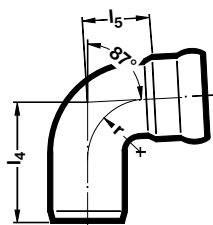
Art.-No.	DN	r	l <sub>4</sub>	l <sub>5</sub>	kg
5.340.040C*	40	67,5	67	37	0,1
4.340.050C	50	82,5	81	53	0,2
4.340.070C	70**	-	89	50	0,4
5.340.080C*	80**	-	100	40	0,5
4.340.100C	100**	-	115	45	0,7
4.340.125C	125**	-	116	45	1,2
4.340.150C	150**	-	125	45	1,5

\*\* In segment construction



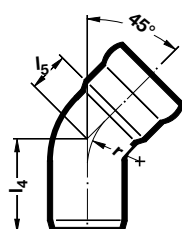
#### Angel bends 90°, with standard socket

Art.-No.	DN	r	l <sub>4</sub>	l <sub>5</sub>	kg
5.500.040C*	40	26,0	80	45	0,2
4.500.050C	50	36,5	100	57	0,3
4.500.070C	70	50,0	123	63	0,5
5.500.080C*	80	60,0	140	75	0,6
4.500.100C	100	70,0	165	90	0,9



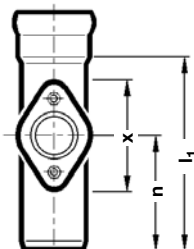
#### Bends with small radius 87°\*

Art.-No.	DN	r	l <sub>4</sub>	l <sub>5</sub>	kg
5.350.050C	50	36,5	98	55	0,3
5.350.070C	70	50,0	118	58	0,5
5.350.080C	80	60,0	137	72	0,7
5.350.100C	100	70	161	91	0,9



#### Bends with small radius 45°\*

Art.-No.	DN	r	l <sub>4</sub>	l <sub>5</sub>	kg
5.352.050C	50	36,5	79	24,5	0,3
5.352.070C	70	50	91	33	0,5
5.352.080C	80	60	105	30	0,5
5.352.100C	100	70	124	54	0,7

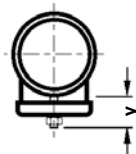


#### Cleaning pipes with circular clean-out opening\*\*\*

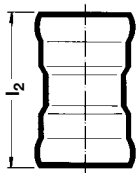
Art.-No.	DN	l <sub>1</sub>	n	x	y	kg
5.550050C	50	150	95	85	15	0,5
5.550070C	70	200	125	100	15	1,0
5.550080C*	80	240	145	125	16	1,2
5.550100C	100	265	165	125	20	2,1
5.550125C	125	290	180	165	25	3,5
5.550150C	150	320	190	190	25	3,6

\*\*\* Sealing ring in the cleanout cover made of EPDM.  
Other qualities on request.

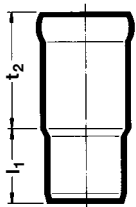
\* only available in Material No. 1.4404



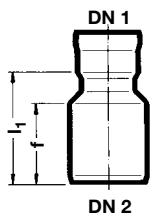
**Please note:** When placing orders involving material No. 1.4404, the digit **4** in front of the article No. must be replaced by a **5**

**Double sockets**


Art.-No.	DN	$l_2$	kg
5.560.040C	40*	76	0,1
4.560.050C	50	94	0,2
4.560.070C	70	135	0,3
5.560.080C	80*	145	0,4
4.560.100C	100	180	0,6
4.560.125C	125	190	1,0
4.560.150C	150	200	1,2

**Slip-in sockets with long socket**


Art.-No.	DN	$l_2$	$t_2$	kg
5.810.040C	40*	50	70	0,1
4.810.050C	50	60	90	0,2
4.810.070C	70	70	130	0,4
5.810.080C	80*	80	130	0,6
4.810.100C	100	90	150	0,7
4.810.125C	125	100	160	1,3
4.810.150C	150	115	170	1,7

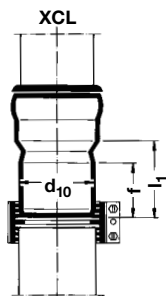
**Transition pipes (Concentric reducers)\***


Art.-No.	DN 1	DN 2	$l_1$	f	kg
5.600.ABOC	40	50	85	60	0,1
5.600.BC0C	50	70	110	70	0,3
5.600.BD0C	50	100	160	100	0,5
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.DF0C	100	150	170	107	1,1
5.600.EF0C	125	150	150	110	1,2

\* only available in Material No. 1.4404

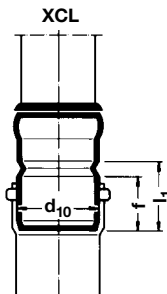
**Please note:**

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

**Connectors for LORO-XCL to different types of pipes (with socket or without socket)**
**Connectors from LORO-XCL Pipe to cast iron pipes (SML) Material No. 1.4404**

**Cast iron**

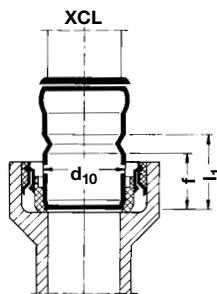
Art.-No.	DN (XCL)	DN (SML)	$l_1$	f	$d_{10}$	kg
5.624.070C	70	80	60	40	83	0,3
5.625.080C	80	80	100	53	83	0,5
5.630.100C	100	100	110	80	110	0,7
5.600.DE0C	100	125	160	100	133	1,0
-	125	125	direct*			
5.600.EF0C	125	150	150	110	160	1,2
-	150	150	direct*			

\* LORO-XCL pipes DN125, DN 150 can be connected directly to SML-pipes

**Connectors from LORO-XCL pipe to plastic pipe socket (KA) Material No. 1.4404**

**KA**

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

\*\* LORO-XCL pipes DN 150 can be connected directly in KA-sockets 150 mm

**Connectors from LORO-XCL Pipe to pottery-socket (ST) Material No. 1.4404**

**Pottery socket**

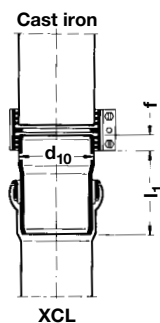
Art.-No.	DN (XCL)	DN (St)	$l_1$	f	$d_{10}$	kg
5.630.100C	100	100	110	80	110	0,7
5.600.DE0C	100	125	160	100	133	1,0
5.600.DF0C	100	150	170	110	160	1,1
-	125	125	direct***			
5.600.EF0C	125	150	150	110	160	1,2
-	150	150	direct***			

**Attention:** Connectors from LORO-XCL Pipes to pottery-sockets are identical with connectors to SML-pipes. They have to be used in combination with the transit ring for cast iron pipes of the pottery producer.

\*\*\* LORO-XCL pipes DN 125 and DN150 can be connected with the transit ring for cast iron pipes of the pottery producer.

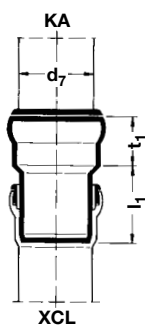
**Please note:**

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

**Connectors for transition from other types of pipes to LORO-XCL Socket**

**Connectors from cast iron pipe (SML) to LORO-XCL Socket**

Art.-No.	DN (SML)	DN (XCL)	$l_1$	f	$d_{10}$	kg
5.710.070C	70	70	73	35	78	0,3
5.710.080C	80	80	75	40	83	0,4
5.710.100C	100	100	92	40	110	0,5
-	125	125	direct*			
-	150	150	direct*			

\* SML pipes DN 125 and DN 150 can be connected to LORO-XCL Sockets with sealing element No. 911X.


**Connectors from plastic pipe (KA) to LORO-XCL Socket**

Art.-No.	DN (KA)	DN (XCL)	$l_1$	$t_1$	$d_7$	kg
09152.050X*	50	50	Connection with sealing element 09152X			
5.750.070C**	70	70	95	55	75	0,4
5.750.100C***	100	100	110	70	110	0,8
09446.125X	125	125	Connection with sealing element 09446X			
-	150	150	direct****			

\* EPDM sealing element.

\*\* including EPDM sealing element.

\*\*\* Viton sealing element.

\*\*\*\* KA-pipes DN 150 can be connected directly to LORO-XCL Sockets DN 150 with sealing element No. 911X.

**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**




**Sealing elements EPDM (Äthylen-Propylen-Kautschuk)**

Art.-No.	DN	kg
<a href="#">09112.040X</a>	40	0,010
<a href="#">09112.050X</a>	50	0,012
<a href="#">09112.070X</a>	70	0,022
<a href="#">09112.080X</a>	80	0,035
<a href="#">09112.100X</a>	100	0,055
<a href="#">09112.125X</a>	125	0,100
<a href="#">09112.150X</a>	150	0,150

**Sealing elements SI (Methyl-Vinyl-Kautschuk)**

Art.-No.	DN	kg
<a href="#">09114.050X</a>	50	0,012
<a href="#">09114.070X</a>	70	0,022
<a href="#">09114.080X</a>	80	0,035
<a href="#">09114.100X</a>	100	0,055
<a href="#">09114.125X</a>	125	0,100
<a href="#">09114.150X</a>	150	0,150

**Sealing elements (Styrol-Butadien-Kautschuk)**

Art.-No.	DN	kg
<a href="#">00911.040X</a>	40	0,008
<a href="#">00911.050X</a>	50	0,012
<a href="#">00911.070X</a>	70	0,022
<a href="#">00911.080X</a>	80	0,035
<a href="#">00911.100X</a>	100	0,055
<a href="#">00911.125X</a>	125	0,100
<a href="#">00911.150X</a>	150	0,150

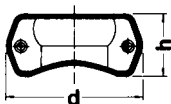
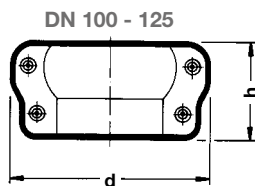
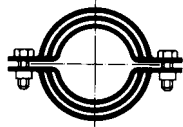
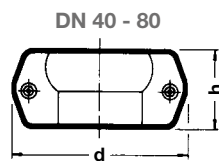
**Sealing elements NBR (Nitril-Butadien-Kautschuk)**

Art.-No.	DN	kg
<a href="#">00911.040X</a>	40	0,010
<a href="#">00911.050X</a>	50	0,012
<a href="#">09111.070X</a>	70	0,022
<a href="#">09111.080X</a>	80	0,035
<a href="#">09111.100X</a>	100	0,055
<a href="#">09111.125X</a>	125	0,100
<a href="#">09111.150X</a>	150	0,150

**More Sealing elements available on request**

**LORO-X Closing plugs with threaded coupling  
Material No. Unterteil 1.4571 / Deckel 1.4301**


Art.-No.	DN	kg
00805.040X	40	0,1
00805.050X	50	0,1
00805.070X	70	0,2
00805.080X	80	0,3
00805.100X	100	0,5
00805.125X	125	0,8
00805.150X	150	1,1

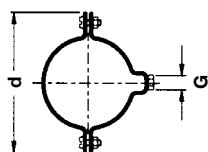

**LORO-X Anchor clips  
Material No. 1.4301**

Art.-No.	DN	d	h	kg
4.806.040C	40	85	49	0,2
4.806.050C	50	110	60	0,3
4.806.070C	70	135	64	0,5
4.806.080C	80	150	70	0,6
4.806.100C	100	185	81	0,9
4.806.125C	125	220	90	1,3

**with couout for the connection of pipes and branches  
Material No. 1.4301**

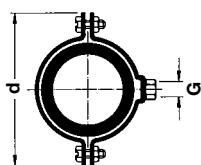
Art.-No.	DN	d	h	kg
4.8061040C	40	85	49	0,2
4.8061050C	50	110	60	0,3
4.8061070C	70	135	64	0,4
4.8061080C	80	150	70	0,5
4.8061100C	100	185	81	0,8
4.8061125C	125	220	90	1,2

**LORO-X Pipe clips with connecting thread** without sound insulation, for set screws or threaded rods  
Material No. 1.4301



Art.-No.	DN	d	G	kg
<a href="#">4.973.050C</a>	50	107	M8	0,25
<a href="#">4.973.070C</a>	70	127	M8	0,34
<a href="#">4.975.080C</a>	80	143	M 10	0,42
<a href="#">4.975.100C</a>	100	157	M 10	0,48
<a href="#">4.977.125C</a>	125	187	M 12	0,66
<a href="#">4.977.150C</a>	150	213	M 12	0,83

**LORO-X Pipe clips with connecting thread** with sound insulation, for set screws or threaded rods  
Material No. 1.4301



Art.-No.	DN	d	G	kg
<a href="#">4.972.050C</a>	50	117	M8	0,20
<a href="#">4.972.070C</a>	70	137	M8	0,25
<a href="#">4.974.080C</a>	80	157	M 10	0,30
<a href="#">4.974.100C</a>	100	167	M 10	0,33
<a href="#">4.976.125C</a>	125	197	M 12	0,49
<a href="#">4.976.150C</a>	150	222	M 12	0,61

#### Threaded pins\* Material No. 1.4301



Art.-No.	Length in mm
<a href="#">4.9601080C</a>	M8 x 80
<a href="#">4.9601100C</a>	M8 x 100
<a href="#">4.9602080C</a>	M 10 x 80
<a href="#">4.9602100C</a>	M 10 x 100
<a href="#">4.9602120C</a>	M 10 x 120
<a href="#">4.9602150C</a>	M 10 x 150
<a href="#">4.9612120C</a>	M 12 x 120

#### Hanger bolts\* Werkstoffnummer 1.4301



Art.-No.	Length in mm
<a href="#">4.9603100C</a>	M8 x 100
<a href="#">4.9603120C</a>	M8 x 120
<a href="#">4.9604100C</a>	M 10 x 100
<a href="#">4.9604120C</a>	M 10 x 120
<a href="#">4.9622100C</a>	M 12 x 100
<a href="#">4.9622120C</a>	M 12 x 120

\* packaging unit to 25 pieces

# Installation instructions

## LORO-XCL

### Stainless steel discharge pipes

#### DN 40 - DN 150

Stainless steel discharge pipes



1.1



1.2



1.4



1.5



1.6

#### 1. Manufacturing the LORO-XCL 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.

- 1.3 Smear 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.**

- 1.4 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.

When installing pipes of a larger nominal size (DN 100 – DN 150), an assembly aid can be borrowed from the factory.

- 1.5 Finished LORO-XCL socket joint (permanent seal with an internal and external overpressure of 0 – 0.5 bar).

- 1.6 If higher pressures than 0 – 0.5 bar are expected, the socket joint can additionally be secured against axial thrust by the LORO-XCL anchor clip. The following tightness values are achieved with the LORO-XCL anchor clip:

- DN 40: 15 bar
- DN 50: 15 bar
- DN 70: 5 bar
- DN 80: 5 bar
- DN 100: 5 bar
- DN 125: 4 bar

#### 2. Cutting to length

It is best to cut the LORO-XCL stainless steel pipes with a **pipe cutter** with 3 or 4 cutting wheels without guide rollers or with a saw (HSS saw blade with fine teeth, cutting speed approx. 7 – 10 m/min).

Intensive cleaning of all cutting tools is essential before use due to the danger of extraneous rust.

#### Deburr the insert ends inside and out.

Then thoroughly clean the cut surfaces.

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

### 3. Fastenings

Pipe clips from our product range with connecting threaded socket, with and without sound-damping, can be used to fasten the pipes.

The following weights must be taken into account when fastening LORO-XCL stainless steel pipes with clips or suspension mountings:

Weight of 1 m LORO-XCL stainless steel pipe completely filled with water:

DN 40	approx.	2.5 kg
DN 50	approx.	4.0 kg
DN 70	approx.	7.0 kg
DN 80	approx.	9.1 kg
DN 100	approx.	12.1 kg
DN 125	approx.	20.4 kg
DN 150	approx.	28.1 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 other types of pipe

LORO-XCL connectors are to be used to connect LORO-XCL stainless steel pipes to other types of pipe (cast iron pipe, plastic pipe, stoneware pipe). The sealing elements to match the LORO-XCL sockets of the connectors are supplied by LOROWERK.

Original sealing elements for the sockets of the external makes are not part of our scope of supply. LOROWERK supplies special sealing elements for the connection of odour traps of sanitary objects.

### 6. Trace heating

After checking the roof drains and pipes in areas endangered by frost, we recommend that customers install trace heating if necessary (see EN 12056, Part 1, or DIN 1986, Part 100).

### 7. Underground installation

According to DIN 1986-4, LORO-XCL stainless steel discharge pipes are also approved for underground installation. In this case, depending on the load, LORO-XCL stainless steel discharge pipes must be provided on site with corrosion protection according to DIN 30672.

### 8. Cast-in

The coefficient of expansion of the stainless steel discharge pipe is approximately equivalent to that of the concrete. The casting-in of stainless steel discharge pipes has been the state of the art for years. If using additives in the concrete (antifreeze, delayers, rapid binders) the pipe is to be given an outer coating in the factory (special order) or should be painted with standard structural protection on site.

All contact with iron reinforcements is to be avoided.

It is advantageous to use LORO-X clips with an insulation layer for fixing in the concrete. For socket joints inside the concrete, the LORO-X anchor clip or anchor hoop can be used as an additional safety measure. When using the LORO-X anchor clip or anchor hoop, the socket joint is secured against axial thrust.