

LORO Steel Rainwater Pipes

來自德國

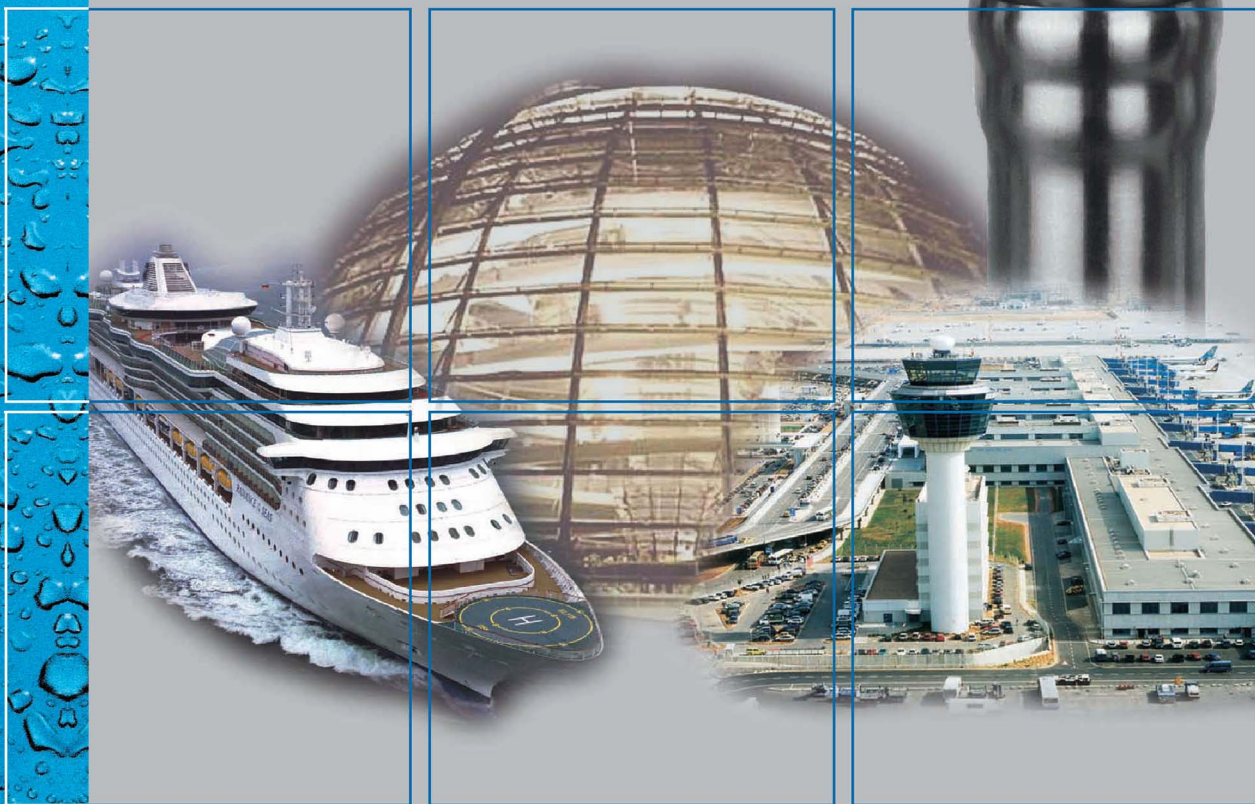
精緻工藝 傳承百年

LORO Steel Rainwater Pipes

DN 40-300

頂級不銹鋼管路系統

According to
DIN EN



- 虹吸式雨水排水管路系統
- 通氣及排水管路系統

LORO®

LORO-XCL 頂級不銹鋼排水管路系統

LORO-XCL STAINLESS STEEL PIPES

and fittings DN 40 - DN 150

according to DIN EN 1124-1

and EN 1124-3

- **for waste water**
- **for exhaust gas**
- **for exhaust air**
- 雨水及廢水管專用
- 化學、排氣管專用



Fields of application:

More and more aggressive media that need to be disposed of are generated in industry and business, in large-scale catering establishments and research institutions as well as in public facilities.

The piping used for this purpose is subjected to different kinds of mechanical, chemical and thermal stress. Conventional pipes do not meet these requirements at all or only to a limited extent.

The LORO- XCL STAINLESS STEEL PIPES (承插式配管 材質AISI 304或AISI 316L) with their proven socket connections are supplied with various sealing elements for different stress patterns and are made of stainless steel under material number 1.4301 (AISI 304) as standard or 1.4404 (AISI 316L)

Apart from being corrosion-proof, the LORO-XCL STAINLESS STEEL PIPES offer the numerous and proven properties of steel and are

- shock and impact resistant 耐水錘與耐衝擊
- non-flammable 耐火材。
- light in weight 質量輕。
- heat and cold-resistant 抗寒暑氣候。

The LORO-XCL connecting socket requires

- no welding - just inserting 免焊接，僅需承插即可。
- Quick installation 快速安裝。

All technical data and notes on standards, test decisions, technical specifications etc. correspond to the status at the time of going to print. No rights may be inferred from this information.

Technical data

Piping 材質規格

The pipes are welded according to DIN 2643, and made of austenitic corrosion-proof steel according to DIN 17440.

Available types:

-Material No. 1.4301 (AISI 304)

= Standard.

short description X 5 CrNi 18 10

-Material No. 1.4404 (AISI 316L)

= heavy duty

short description X 2 CrNiMo17 13 2

For manufacturing reasons, some fittings are only available in higher material quality AISI 316L (1.4404) or AISI 316 Ti (1.4571). Short name: X 10 CrNiMoTi 1810

Standard finish: thermally stress-relieved, pickled

Customized : Surface polished for extra charge

高抗腐蝕性

Corrosion resistance

Corrosion-proof types of steel are made of base iron. The austenitic chromium-nickel steel is resistant against a large number of chemical products and aggressive waste water polluted with detergents. This kind of steel has therefore a wide range of applications in the chemical, grease, soap and food industries as well as in dairies, the beverage industry, in large scale catering and similar facilities. Where increased acid resistance and reduced susceptibility to crevice corrosion is demanded, the use of molybdenum-alloyed chromium-nickel steel is recommended. This kind of steel is resistant against a number of organic and inorganic acids, although to a limited extent only against reducing acids and- under certain conditions-chloric media.

Sealing elements 密封材質

Available are sealing elements made of:

SB (SBR) Styrene-butadiene mixed polymer, trade name e.g. BUNA, DN 70 - DN 200

NB (NBR) Nitrile-butadiene rubber, trade name e.g. PERBUNAN N, DN 50 - DN 150.

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

SI (VMQ) a methyl-vinyl rubber, DN 50- DN 150

Chemical composition and temperature of the waste water determine the choice of gasket type.

A table showing the resistance of the different types of gaskets against various chemicals is available upon request.

Fire resistance 高防火性

LORO-XCL STAINLESS STEEL

PIPES must be allocated to construction material class A1 - incombustible in accordance with DIN 4102 and are classified as incombustible in accordance with DIN 1986, Part 4

LORO-XCL STAINLESS STEEL

Pipes have a high degree of temperature stability that comes along with a low expansion coefficient. The stretch of a 1 m piece of pipe amounts to 1.6mm at a temperature difference of 100°C.

Sound insulation 隔音性

LORO-XC Stainless Steel discharge

Pipes have favourable acoustic behaviour due to high specific weight of steel. Comparable scientific investigations confirm that LORO-XCL stainless Steel pipes have low-noise acoustic behaviour. The requirements of DIN 4109 are met if the pipes are assembled professionally. Experts reports on acoustics are available upon request.

Tightness Values 高緊密特性

The tightness values of the LORO-XCL slip in socket joint for all nominal bores exceed the requirements of EN 476 (internal and external gauge pressure 0 - 0.5 bar). For higher pressures, the socket joint can be anchored against axial force using the LORO-XCL anchor clip, No. 806C DN 40 - DN 125.

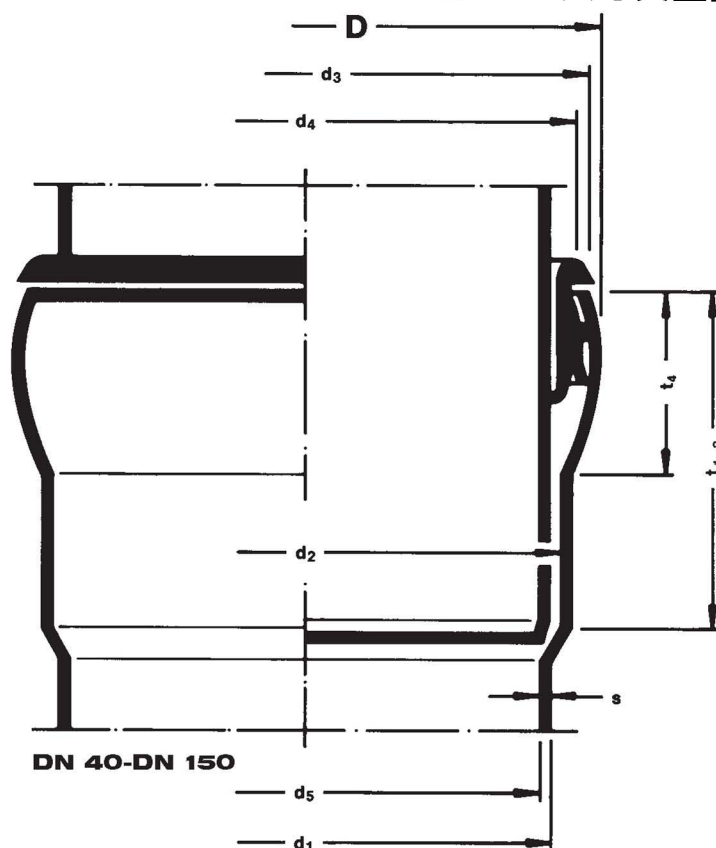
Supervision 嚴謹品管

LORO-XCL steel pipes are manufactured in accordance with DIN EN 1124-1, 3 and 4. Manufacturing supervision for pipes and fittings is carried out by the Material Testing Office in Würzburg, part of the Bavarian Trade Institute. Supervision for sealing elements is carried out by the Federal Material Testing Office of North Rhine-Westphalia in Dortmund (external supervision).



不銹鋼排水管

Dimensions and weights 尺寸與重量(承插式)



Pipe and socket dimensions (in mm)*

DN	D	d ₁	d ₂	d ₃	d ₄	d ₅	s	t ₁	t ₂	t ₃	t ₄	F**
40	51,8	42	44,8	46,8	44,8	39	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 for Pipes and Fittings according to DIN EN 1124 part 2.

** F=Free cross-sectional (mm²).

t₁ =normal socket

t₂ t₃ =long socket

t₄ =normal socket 1.step

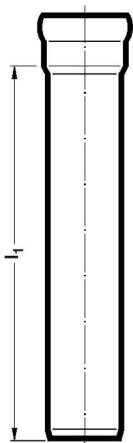
Please note: The dimensions of pipes and fittings are equal for both materials. In the measurement and weight tables the item numbers for AISI 304 are shown starting with **4**. If you wish to order AISI 316L please replace the **4** by a **5**.

Example: 1000mm pipe DN 100 with one socket

Material No. 1.4301 : Article No. 4.1201100C

Material No. 1.4404: Article No. 5.1201100C

Pipes and fittings of this table showing an item number starting with a **5** will only be manufactured in AISI 316L



不銹鋼承口式 直管型式

Pipe with one Socket 單承口式直管

l ₁ = 250 mm		
Art.-No.	DN	kg
5.1401040C	40*	0,3
4.1401050C	50	0,4
4.1401070C	70	0,6
5.1401080C	80*	0,7
4.1401100C	100	1,0
4.1401125C	125	1,7
4.1401150C	150	2,9

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

l ₁ = 1000 mm		
Art.-No.	DN	kg
5.1201040C	40*	1,0
4.1201050C	50	1,4
4.1201070C	70	2,6
5.1201080C	80*	2,8
4.1201100C	100	3,4
4.1201125C	125	5,6
4.1201150C	150	6,9

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

l ₁ = 2000 mm		
Art.-No.	DN	kg
5.1101040C	40*	1,9
4.1101050C	50	2,7
4.1101070C	70	5,0
5.1101080C	80*	5,4
4.1101100C	100	6,6
4.1101125C	125	10,9
4.1101150C	150	12,9

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

l ₁ = 3000 mm		
Art.-No.	DN	kg
5.1001040C	40*	2,8
4.1001050C	50	4,0
4.1001070C	70	7,4
5.1001080C	80*	8,1
4.1001100C	100	9,8
4.1001125C	125	15,4
4.1001150C	150	18,7

* Only available in material No. 1.4404 * 材質為 SUS 316L

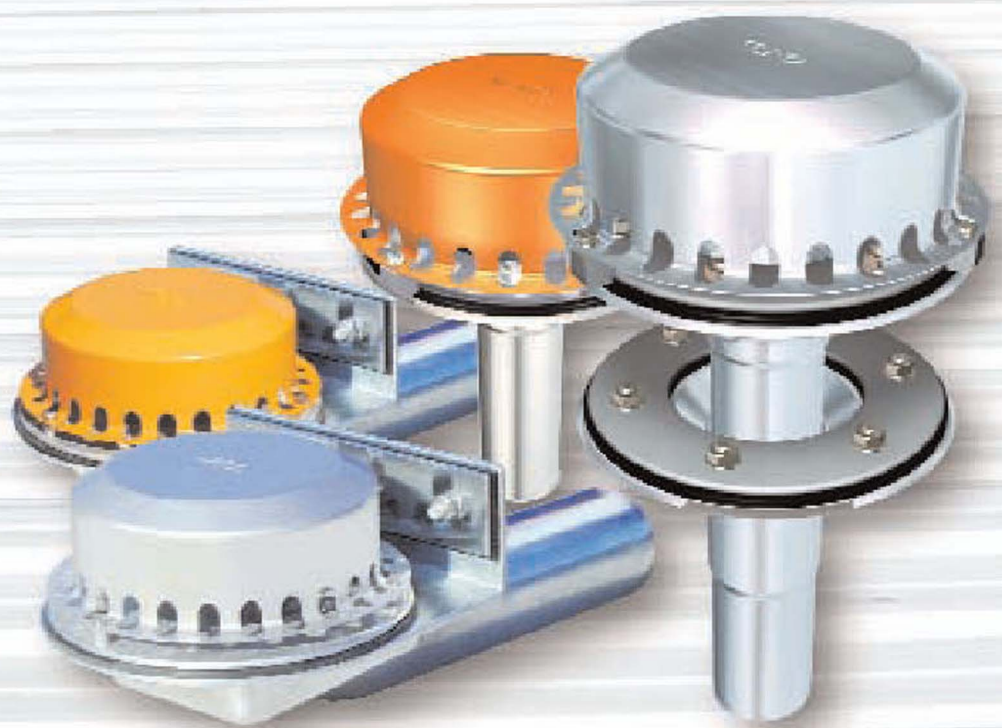
Please note:

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

LORO-Siphonic Roof Drainage Systems

虹吸式屋頂排水系統

LORO- Siphonic Roof Drainage Systems



- **LORO-DRAINJET® Drainage System**
- **LORO-RAINSTAR® Drainage System**

LORO®

Roof drainage by means of Siphonic action

虹吸式屋頂雨水排水

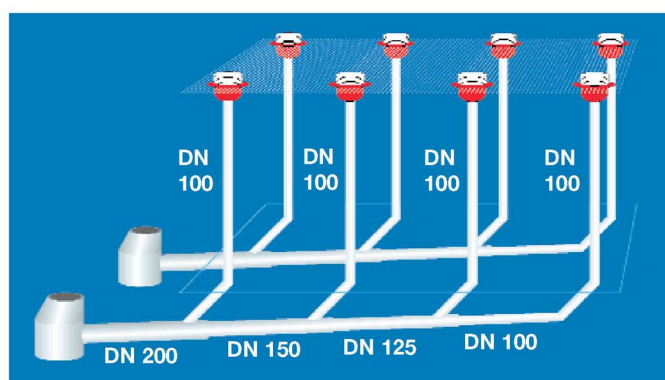
Roofs with a large surface can be drained on the basis of two different principles, either by means of gravity drainage or by means of Siphonic action. The drainage by means of open channels according to EN 12056 and DIN 1986-100 requires a maximum filling ratio of 0.7 (height/diameter = 0.7) for the necessary ventilation of the rain water drainage system.

In contrast to that, the siphonic drainage aims at a filling ratio of 1.0. This requirement is met by using specially developed roof and channel gullies which prevent the admission of air by a cap closed on the top. The gullies

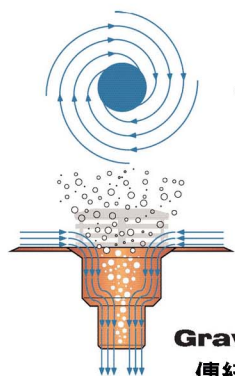
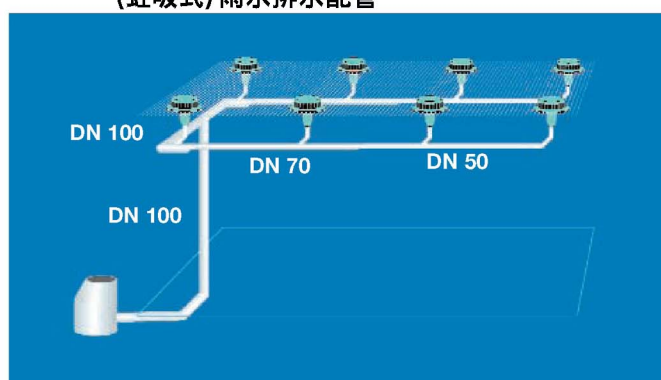
conform to EN 1253 "Gullies for buildings".

The siphonic drainage system has to be optimized by a hydraulic calculation in such a way that the pipelines fill up systematically in cases of heavy precipitation. The total height difference between the roof gully and the backflow level can then be used for the pipe dimensioning.

Gravity drainage (傳統重力式配管)

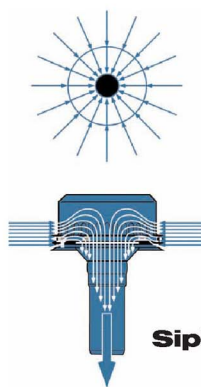


Siphonic action drainage (虹吸式) 雨水排水配管



傳統雨水落水頭

Gravity drainage
傳統重力排水方式



虹吸式雨水落水頭

Siphonic action drainage
虹吸式排水方式

Advantages of Siphonic drainage compared with conventional drainage:

先進虹吸式排水方式

VS

傳統重力排水方式

- **A higher discharge rate** 高排水能力
as a result of a closed flow circuit allows smaller dimensions
- **Space gained** 節省空間、不需水平洩水坡度
due to horizontal piping without gradient below the ceiling
- **Lower expenditure of material** 較少配管支數與管徑
due to the use of smaller pipe dimensions and shorter pipe lengths
- **Less input for the construction** 減低建物排水設施空間
due to fewer downpipes, foundation outlet connections and penetrations as well as shafts and pipes in the ground
- **High self-purifying power** 高速排力、具自清能力
of the system due to high flow velocities

不銹鋼虹吸式雨水落水頭尺寸與重量 Dimensions and weights

**LORO-DRAINJET® siphonic gullies, DN 70 and DN 100, made of stainless steel, with clamping flange, according to EN 1253, capacity:
DN 70 = 16,0 l/s, DN 100 = 27,0 l/s**

Complete single-part units

Type a (without thermal insulation)

DN 70: [Art.-No. 21111.070X](#)

Weight: 2,9 kg

DN 100: [Art.-No. 21111.100X](#)

Weight: 3,7 kg

consisting of:

gully, compression sealing*, loose flange, drainjet cover

Type b (with thermal insulation)

DN 70: [Art.-No. 21112.070X](#)

Weight: 3,0 kg

DN 100: [Art.-No. 21112.100X](#)

Weight: 3,8 kg

consisting of:

gully with thermal insulation, compression sealing*, loose flange, drainjet cover

Type c (with thermal insulation and heating)

DN 70: [Art.-No. 21113.070X](#)

Weight: 3,1 kg

DN 100: [Art.-No. 21113.100X](#)

Weight: 3,9 kg

consisting of:

gully with thermal insulation and heating, compression sealing*, loose flange, drainjet cover

Complete two-part units

Type a (without thermal insulation)

DN 70: [Art.-No. 21121.070X](#)

Weight: 4,7 kg

DN 100: [Art.-No. 21121.100X](#)

Weight: 5,5 kg

consisting of:

gully, compression sealing*, loose flange, drainjet cover, pot with compression sealing*, loose flange and sealing element

Type b (with thermal insulation)

DN 70: [Art.-No. 21122.070X](#)

Weight: 4,8 kg

DN 100: [Art.-No. 21122.100X](#)

Weight: 5,6 kg

consisting of:

gully, compression sealing*, loose flange, drainjet cover, pot with thermal insulation, compression sealing*, loose flange and sealing element

Type c (with thermal insulation and heating)

DN 70: [Art.-No. 21123.070X](#)

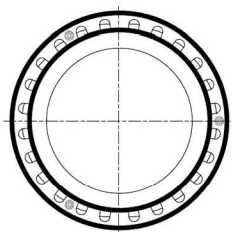
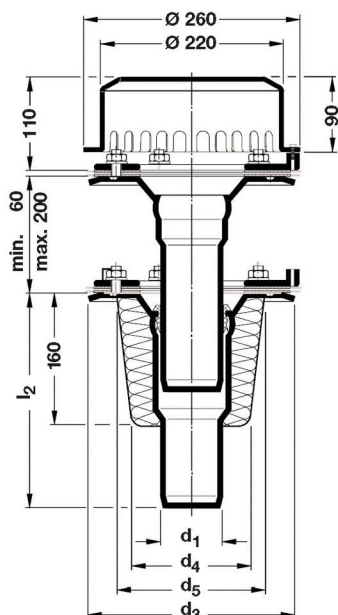
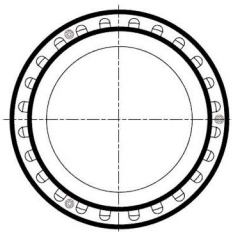
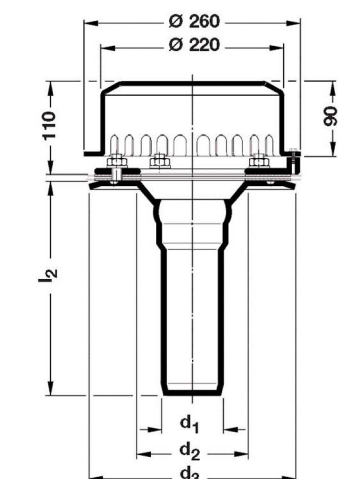
Weight: 5,2 kg

DN 100: [Art.-No. 21123.100X](#)

Weight: 6,0 kg

consisting of:

gully, compression sealing*, loose flange, drainjet cover, pot with thermal insulation and heating, compression sealing*, loose flange and sealing element



DN	d ₁	d ₂	d ₃	d ₄	d ₅	l ₂
70	73	125	245	120	150	260
100	102	145	300	160	190	270

* unnecessary in the case of waterproof bituminous roofing sheets

高級塗裝排水鋼管（雨水及污廢水專用）

LORO-X Steel discharge pipes and fittings DN 40 - DN 200 in accordance with DIN EN 1123

**For sewage drainage from land
and buildings (sanitary sewage and rainwater)**



LORO-X STEEL DISCHARGE PIPES have tried and tested in drainage systems for buildings and land for over 45 years.

Major construction material and installation advantages, as well as reliable and highly experienced manufacturing of LORO-X slip-in socket joints, encourage builders, planners and manufacturers to use LORO-X STEEL DISCHARGES PIPES for drainage in houses, hotels, hospitals, schools, municipal buildings, industrial buildings and shipping projects.

Together with anchor clips, LORO-X STEEL DISCHARGE PIPES are also being successfully used as pressure pipes among other things, e.g. for cooling water suction pipes.

特性：

LORO-X STEEL DISCHARGE PIPES offer the proven properties of the construction material STEEL:

- Impact-resistant and dimensionally stable 高耐衝擊及穩定度
- Incombustible 防火級
- Heat and cold-resistant 抗寒、暑、氣候

and the LORO-X slip-in socket:

- Stable seal chamber 高穩定的密合室空間設計
- Buckle-resistant 抗曲皺現象
- Quick installation 快速安裝

Hot-dip galvanising and an additional internal coating for all pipes and fittings provide optimum of corrosion protection.

As a new development, LORO has incorporated into its drainage programme steel discharge pipe systems without sockets for rainwater drainage in DN 250 and DN 300. Using a connection without a socket makes installation much easier.

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LORO-X socket 承插式直管

獨特承口空間設計

1. 採二級式承插設計。
2. 上部空間為密合墊，下部空間設計導為防止管線彎曲或承受單向壓縮，如水平配管時。
3. 成功地使用於重力排水及真空式馬桶排水或清潔系統。

The LORO-X socket is a two step socket. The upper socket chamber contains the sealing element. The centering bottom part protects the socket joint from pipeline buckling and one-sided compression of the sealing element if the pipe is installed horizontally.

The LORO-X slip-in socket joint has been used successfully in the past for gravity drainage and siphonic action drainage. Its stability guarantees safety and reliability. This, in itself, is good enough to stick with the LORO-X.

With special, newly developed LORO-XVAC sealing elements, LORO-X STEEL DISCHARGE PIPES are also used for negative pressure operation (e.g. vacuum WC systems, vacuum cleaning systems).



LORO-X socket

LORO-X sealing element

高性能密封墊

1. 採唇封式壓圈密合墊。
2. 可完全緊密與管材連接。
3. 當管中壓力上升時，壓圈式密合墊更緊密貼合管材。

The LORO-X sealing element is designed as a lip collar. It is inserted in the upper socket chamber. By inserting the pipe end, the sealing lips are pressed against the inner wall of the seal chamber and the outer wall of the plug-in pipe. The sealing element collar on the socket edge prevents it from being moved out of position upon insertion. The collar is visible all round and thus ensures problem-free socket connection. When pressure increases on the inside of the pipe, the sealing element lips are compressed more strongly against the pipe walls.



LORO-X sealing element



LORO-XVAC sealing element
for negative pressure operation
(真空用)

Quick installation Less space required

1. 採可快安裝，節省安裝空間。
2. 直管長度、種類多 (250m/m~6000m/m) 運用靈活。

LORO-X STEEL DISCHARGE PIPES are among the fastest pipes to install. This is clear from the time studies in SHK Niedersachsen's calculation handbook on sanitary technology. The time needed to install fastenings and fixed mountings is shorter than for other construction materials. The LORO-X slip-in socket allows tolerances to be compared during assembly. The practically and usefully designed pipe programme (250mm to 6000mm long) minimises pipeline separation. Pipes with two-sided sockets mean that there are no left-overs.

LORO-X STEEL DISCHARGE PIPES need only very small recesses. The pipeline saves space thanks to narrow external diameters, bends with small radii and pre-assembled special fittings.

Technical Data
Pipe Material (材質) 高強度鋼管

Quality precision steel pipe in accordance with DIN EN 10305-3 (DN 40 - DN 150) and DIN 2458 (DN 200 - DN 300)
 Tensile strength: R_m 310 - 410N/mm²
 Elongation: A_5 min. 28%
 Shear strength: Approx. 65 - 75% of tensile strength
 Dynamic elasticity module at 20°C = 212N/mm²
 Thermal conductivity: At 20 °C = 55W/m°C
 Length expansion coefficient: 0.0117mm/m°C
 Example: 3m pipe, temperature difference 25°C
 Expansion = 3.0 x 25 x 0.0117 = 0.8775mm

Corrosion Protection (高抗腐蝕性: 內外熱浸鍍鋅處理, 內部防蝕塗裝。)

Internal and external hot-dip galvanising in accordance with DIN EN 1123/DIN EN ISO 1461

with additional internal coating Colour: Auburn.

The internal coating provides corrosion protection against corrosive exhausts for surfaces not affected by sewage (e.g. ventilation pipes) and increases resistivity against the chemical and mechanical impact of domestic sewage, surface water and groundwater. Any deviations are to be reported to LOROWERK.

The smooth surface of the pipe reduces frictional resistance and incrustations.

Cutting faces of pipes which have been cut to length do not corrode. The zinc boundary layers interact to produce the well-known cathodic protection effect.

Sealing Elements (密封材)

Standard:

NB (NBR) Nitrile-butadiene rubber, trade name e.g. PERBUNAN N, DN 40 - DN 50, resistant for sewage temperatures up to 95°C.

SB (SBR) Styrene-butadiene mixed polymer, trade name e.g. BUNA, DN 70 - DN 200, resistant for sewage temperatures up to 95°C.

Further sealing element qualities upon request.

Fire Resistance (高防火性)

LORO-X steel discharge pipes must be allocated to construction material class A 1- incombustible in accordance with DIN 4102 and are classified as incombustible in accordance with DIN 1986, Part 4.

Sound Insulation (高隔音性)

LORO-X steel discharge pipes have favourable acoustic behaviour due to high specific weight of the steel. Comparable scientific investigations confirm that LORO-X steel discharge pipes have low-noise acoustic behaviour. The requirements of DIN 4109 are met if the pipes are assembled professionally. Experts' reports on acoustics are available upon request.

Tightness Values (高緊密特性)

The tightness values of the LORO-X slip-in socket joint for all nominal bores exceed the requirements of DIN 1986 Part 1 (internal and external gauge pressure 0 - 0.5bar).

For higher pressures, the socket joint can be anchored against axial force using the LORO-X anchor clip, No. 806X (DN 40 - DN 125). When installing with the LORO-X anchor clip or anchor hoop and adhesive sealing element, the following values are attained:

DN 40, DN 50	= 15 bar gauge pressure
DN 70, DN 80, DN 100	= 5 bar gauge pressure
DN 125	= 4 bar gauge pressure
DN 150	= 1.5 bar gauge pressure
DN 200	= 1.5 bar gauge pressure
DN 250	= 3.0 bar gauge pressure (with CV claw)
DN 300	= 3.0 bar gauge pressure (with CV claw)

For additional axial anchorage for pipe and fittings DN 150 and DN 200, LORO anchor hoop, No. 808X are available.

Cleaning pipes and closing plugs can be specially manufactured for pressures above 0.5 bar.


Supervision

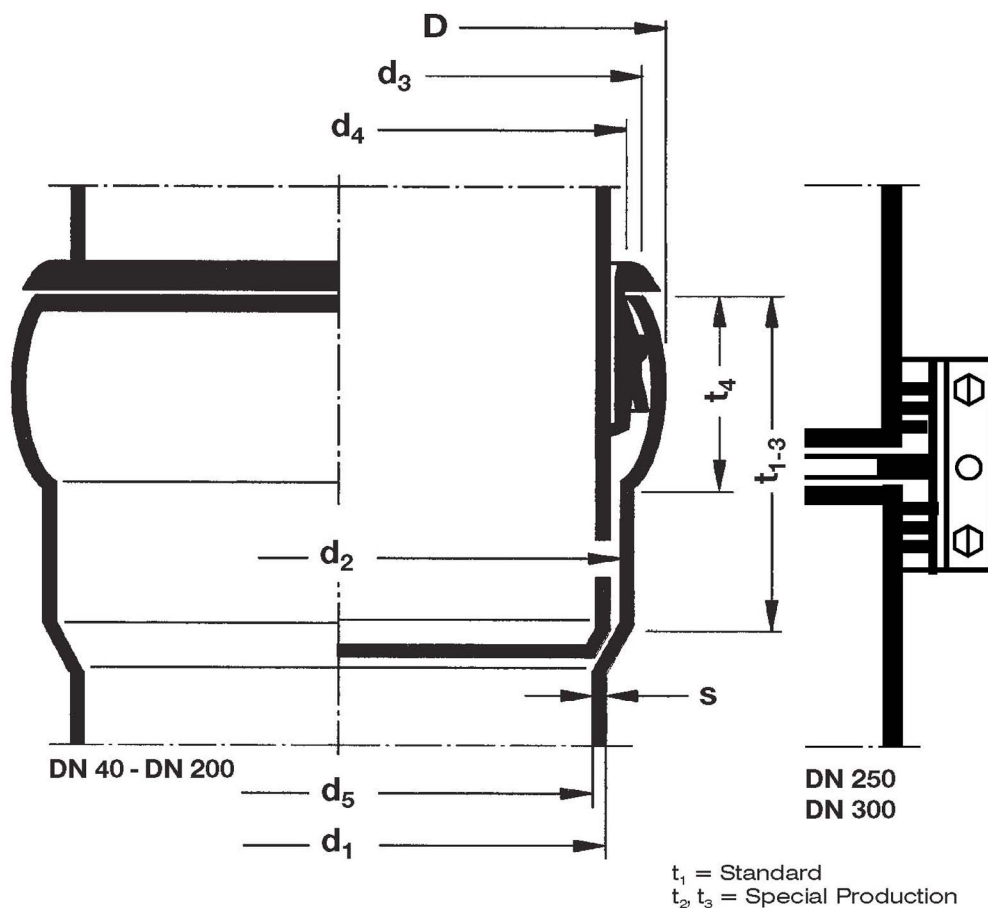
LORO-X steel discharge pipes are manufactured in accordance with DIN EN 1123.

Manufacturing supervision for pipes and fittings is carried out by the Material Testing Office in Würzburg, part of the Bavarian Trade Institute.

Supervision for sealing elements is carried out by the Federal Material Testing Office of North Rhine-Westphalia in Dortmund (external supervision).

尺寸與重量(承插式)-高級塗裝鋼管

Dimensions and Weights



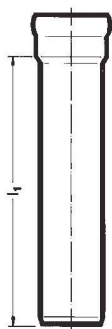
Pipe and Socket Dimensions*

DN	D	d ₁	d ₂	d ₃	d ₄	d ₅	s	t ₁	t ₂	t ₃	t ₄	kg/m	kg/m**	F***
40	51	42	45	48	45	39	1,5	30	70	100	16	1,5	2,6	1194,6
50	63	53	56	60	56	50	1,5	38	90	130	19	2,0	4,0	1963,5
70	84,2	73	76	81	76	69,8	1,6	55	120	175	27	3,0	6,8	3826,5
80	102,2	89	92	99	92	85,8	1,6	60	130	190	31	3,5	9,3	5781,8
100	118	102	106	114	107	98	2,0	70	150	220	38	4,9	12,4	7543,0
125	152	133	138	147	140	128	2,5	75	160	235	41	8,0	20,8	12868,0
150	281	159	164	176	168	154	2,5	80	170	250	46	9,6	28,2	18626,5
200	246,8	219	224	241	228	213,2	2,9	120	250	370	76	15,7	51,4	35699,7
250	-	273	-	-	-	265	4,0	-	-	-	-	24,2	81,7	55154,6
300	-	324	-	-	-	316	4,0	-	-	-	-	31,7	110,0	78426,7

* Subject to dimensional tolerances for Pipes and Fittings according to DIN EN 1123 part 2.

** kg/m when fully filled with water.

*** F=Free cross-sectional area (mm²).

Pipes with one Socket 單承口式直管

**高級塗裝鋼管
(單承口型)**

l ₁ = 250 mm		
Art.-No.	DN	kg
01401.040X	40	0,5
01401.050X	50	0,6
01401.070X	70	0,9
01401.080X	80	1,2
01401.100X	100	1,7
01401.125X	125	2,7
01401.150X	150	3,3
01401.200X	200	5,8

l ₁ = 750 mm		
Art.-No.	DN	kg
01211.040X	40	1,1
01211.050X	50	1,6
01211.070X	70	2,5
01211.080X	80	3,1
01211.100X	100	4,3
01211.125X	125	7,1
01211.150X	150	8,4
01211.200X	200	13,2

l ₁ = 1500 mm		
Art.-No.	DN	kg
01111.040X	40	2,5
01111.050X	50	3,2
01111.070X	70	4,7
01111.080X	80	6,0
01111.100X	100	9,1
01111.125X	125	13,3
01111.150X	150	16,5
01111.200X	200	25,4

l ₁ = 2500 mm		
Art.-No.	DN	kg
01004.040X	40	4,1
01004.050X	50	5,4
01004.070X	70	8,0
01004.080X	80	10,0
01004.100X	100	14,0
01004.125X	125	23,1
01004.150X	150	27,5
01004.200X	200	41,3

l ₁ = 3000 mm		
Art.-No.	DN	kg
01001.040X	40	5,0
01001.050X	50	6,4
01001.070X	70	9,5
01001.080X	80	12,0
01001.100X	100	16,6
01001.125X	125	25,8
01001.150X	150	32,1
01001.200X	200	48,4

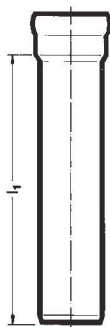
l ₁ = 500 mm		
Art.-No.	DN	kg
01301.040X	40	0,8
01301.050X	50	1,1
01301.070X	70	1,7
01301.080X	80	2,1
01301.100X	100	2,9
01301.125X	125	4,8
01301.150X	150	5,8
01301.200X	200	9,5

l ₁ = 1000 mm		
Art.-No.	DN	kg
01201.040X	40	1,4
01201.050X	50	2,1
01201.070X	70	3,2
01201.080X	80	4,2
01201.100X	100	5,6
01201.125X	125	9,0
01201.150X	150	10,8
01201.200X	200	17,2

l ₁ = 2000 mm		
Art.-No.	DN	kg
01101.040X	40	3,3
01101.050X	50	4,3
01101.070X	70	6,4
01101.080X	80	8,1
01101.100X	100	11,2
01101.125X	125	17,5
01101.150X	150	21,7
01101.200X	200	33,3

l ₁ = 2750 mm		
Art.-No.	DN	kg
01005.050X	50	5,9
01005.070X	70	8,8
01005.080X	80	10,3
01005.100X	100	15,4
01005.125X	125	25,3

l ₁ = 4000 mm		
Art.-No.	DN	kg
01011.050X	50	8,1
01011.070X	70	12,2
01011.080X	80	16,0
01011.100X	100	21,2
01011.125X	125	34,3
01011.150X	150	42,5
01011.200X	200	64,7


Pipes with one Socket

l ₁ = 5000 mm		
Art.-No.	DN	kg
01013.070X	70	15,2
01013.080X	80	19,8
01013.100X	100	26,4
01013.125X	125	42,7
01013.150X	150	52,9

l ₁ = 6000 mm		
Art.-No.	DN	kg
01014.070X	70	18,2
01014.080X	80	23,7
01014.100X	100	31,6
01014.125X	125	51,7
01014.150X	150	63,3

Pipes with long Socket* (長型承口型-陽台專用)

l ₁ = 2500* mm		
Art.-No.	DN	kg
01002.050X	50	5,2
01002.070X	70	7,9
01002.100X	100	14,0

l ₁ = 2750* mm		
Art.-No.	DN	kg
01003.050X	50	5,7
01003.070X	70	8,7
01003.100X	100	15,3
01003.125X	125	25,3

*Specally for connections from floor to floor
in connection with LORO-balcony drains



**高級塗裝鋼管
(雙承口型)**

Pipes with two Sockets (雙承口式直管)

l ₂ = 250 mm		
Art.-No.	DN	kg
00140.040X	40	0,4
00140.050X	50	0,5
00140.070X	70	0,8

l ₂ = 500 mm		
Art.-No.	DN	kg
00130.040X	40	0,7
00130.050X	50	1,0
00130.070X	70	1,5
00130.100X	100	2,8

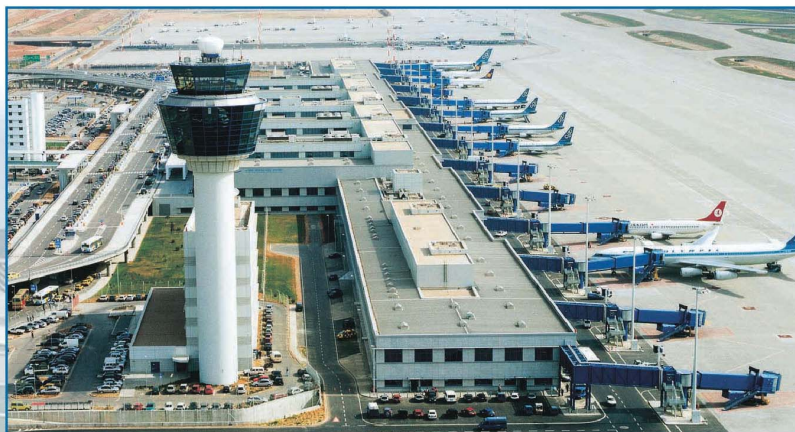
l ₂ = 750 mm		
Art.-No.	DN	kg
00121.040X	40	1,2
00121.050X	50	1,5
00121.070X	70	2,5
00121.080X	80	3,0
00121.100X	100	4,0

l ₂ = 1000 mm		
Art.-No.	DN	kg
00120.040X	40	1,6
00120.050X	50	2,0
00120.070X	70	3,0
00120.080X	80	3,8
00120.100X	100	5,2

l ₂ = 2000 mm		
Art.-No.	DN	kg
00110.040X	40	2,8
00110.050X	50	4,2
00110.070X	70	6,2
00110.080X	80	7,9
00110.100X	100	10,9

l ₂ = 3000 mm		
Art.-No.	DN	kg
00100.040X	40	4,8
00100.050X	50	6,3
00100.070X	70	9,3
00100.080X	80	11,7
00100.100X	100	16,3

適用場合：高級住宅、飯店、醫院、學校、公共建築、工業廠房
及高級船舶、郵輪等。



Flughafen Athen 雅典機場



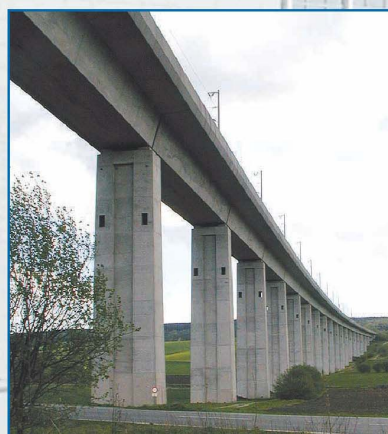
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ICE 高鐵車箱排水



DB Trasse (Brückenbau) 高架橋



Parkhaus Messe, Hannover 立體停車場

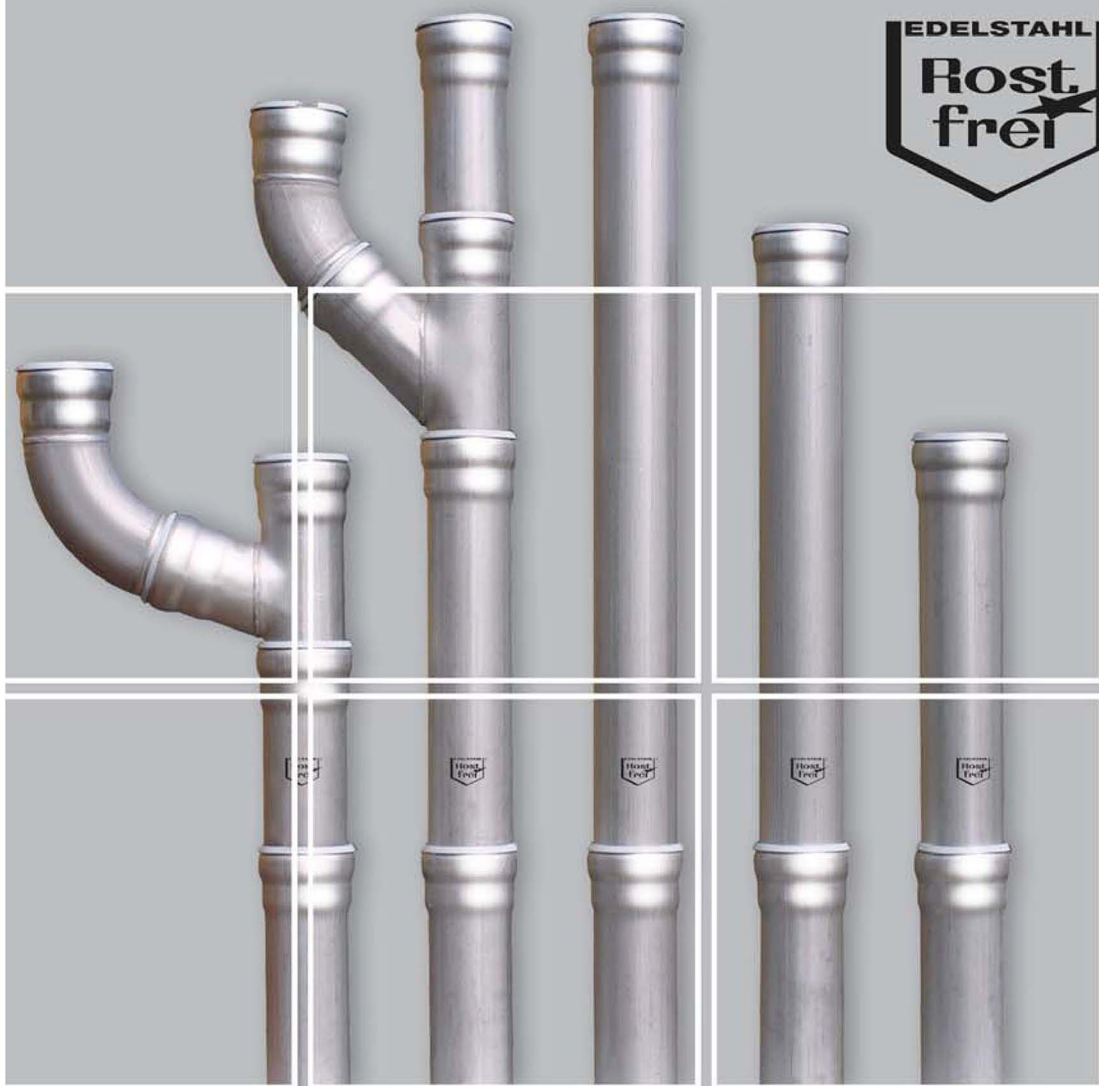


Arena 'Auf Schalke', Gelsenkirchen 多功能活動中心



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