



LORO-X Series 43 Parapet-Direct

Parapet drainage with silent gravity flow

Main drainage		Emergency drainage	
Gravity flow	Water height 35 mm	Gravity flow	Water height 75 mm
Silent			

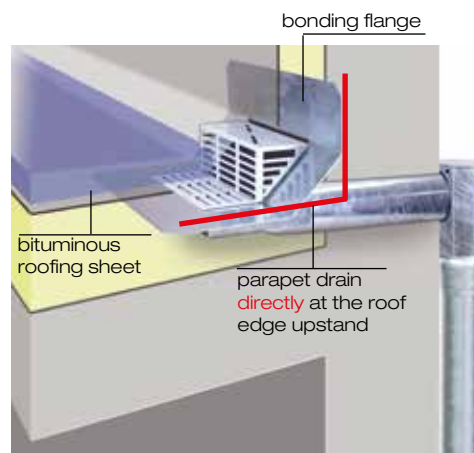
Due to their space-saving form and the silent gravity flow, the parapet drainage systems of Series 43 are especially suitable for the drainage of used flat roofs and roof terraces with closed roof edge (parapet).

The patented LORO flagships of this series comply with the DIN standard for gravity flow roof drains where a discharge rate of 4.5 l/s at a water height of 35 mm is required, also when draining via a spout without downpipe.

In case of the emergency drainage, the minimum discharge rates that are required by DIN standard can be reached at a water height of only 35 mm above the congestion element.

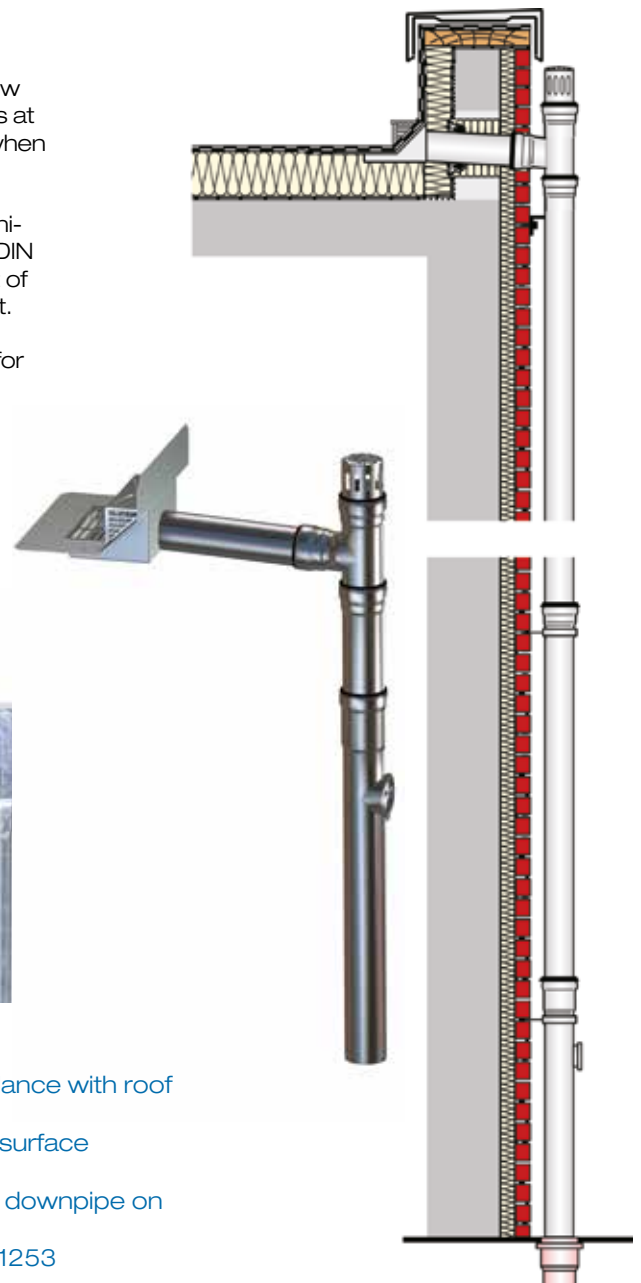
The silent gravity flow is especially suitable for the following types of rooms and buildings:

- offices, business rooms, school rooms
- living and sleeping spaces
- hospitals and sanatoria
- roof terraces and used flat roofs



Advantages:

- silent gravity flow
- discharge rate up to 4.5 l/s in accordance with roof drainage standard DIN EN 1253
- no penetration of the horizontal roof surface
- no drainage pipes inside the building
- discharge of the rainwater through a downpipe on the outside or as spout
- bonding flange according to DIN EN 1253



LORO-X Series 43 Parapet-Direct

Parapet drainage with silent gravity flow

The specification in this News

The parapet drainage LORO-X Parapet-Direct will be specified for planning, production and application as roof drainage system with the following resources. These are also available via the LORO-X Online Service.

The internal and field service LORO-X team is looking forward to a personal discussion.



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LORO Roof Drainage Technology and Specification

The parapet drainage LORO-X Parapet-Direct constitutes a roof drainage system that reliably provides optimum drainage - both as spout or as downpipe. The optimisation qualities correspond to the optimisation of certain features, which are presented with their optimisation values on page 3.

Roof drainage that reliably provides optimum drainage needs a good specification and thus good communication between everyone involved in the task fields of research, development, planning, design, production, operation, assembly, installation, sales, consulting, testing, administration, patents and standards - with the support of the LORO internal and field service team.

When tendering the LORO roof drainage technology products that are bound to a tender, the precise specification is particularly important. This News is also a product description of the roof drainage technology, including the LORO-X specification sheet with the precise, uniform features and feature values of each LORO-X roof drainage system. This supports an easy selection on the basis of the specification of a roof drainage system with objectively comparable features as well as a feature bar. Furthermore, it illustrates the particular performance of the LORO-X roof drainage systems.

All LORO-X roof drainage systems are described by clear features for system shape and system performance, in particular the shape features which are important for the performance features.

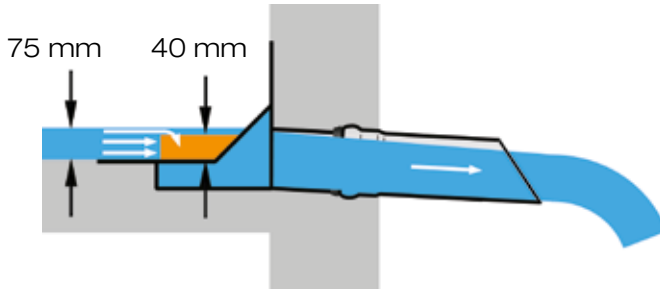
LORO-X Series 43 Parapet-Direct

for installation directly in the parapet

The 6 Star Optimisation Qualities



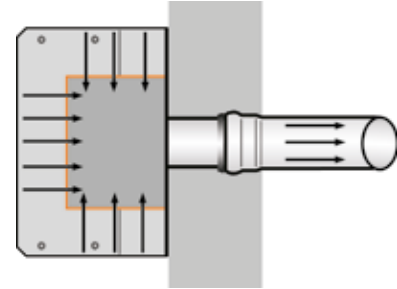
Fast



A high discharge is already achieved with a low water level on the roof.



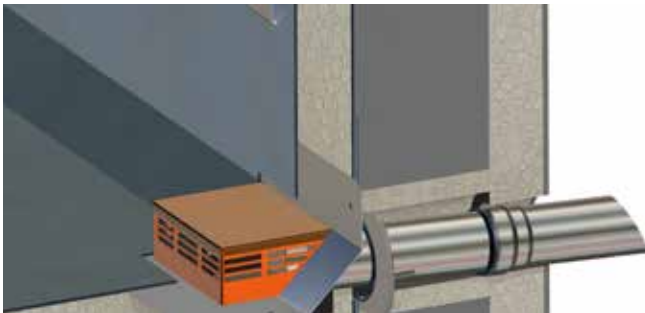
Sturdy



Optimised designs enable a high discharge rate from the roof even without downpipe, but with safe gravity flow. The long overflow edge of the congestion element „collects“ the water on the roof from 3 sides.



Quiet



Secure gravity flow for little noise development. Perfect for residential buildings, offices and used roof areas.



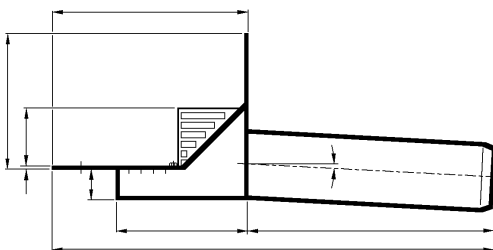
Secure



Secure main drainage for normal rain with additional secure emergency drainage for heavy rain.



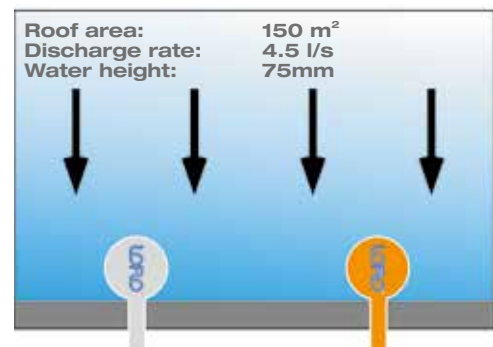
Space-saving



LORO-X parapet-direct drains only need little space due to the installation directly in the parapet upstand and due to space-saving strainer baskets.



Money-saving



A high discharge rate reduces the number of necessary drains which means cost of material and installation effort can be reduced significantly.

System Overview

	Main drainage					
	Gravity flow					
	Silent					
Roof penetration depth 						
Diameter	DN 70	DN 100	DN 70	DN 100	DN 100	DN 100
LX-Number	LX 620	LX 621	LX 650	LX 647	LX 653	LX 694
Flange form	Bonding flange 45°/90°	Bonding flange 45°/90°	Bonding flange 45°	Bonding flange 45°	Bonding flange 45°	Bonding flange 45°
Weir height h [mm] 	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm
Water height h [mm] 	35 mm	35 mm	35 mm	35 mm	35 mm	35 mm
Roof area A [m²]*	26	40	76	100	150	150
Discharge rate Q [l/sec] 	0.8 l/s	1.2 l/s	2.3 l/s	3.0 l/s	4.5 l/s	4.5 l/s
Sound (dB) 	Silent	Silent	Silent	Silent-Power	Silent-Power	Silent-Power

*Assumption: The calculation of the roof area is based on the following assumptions:
 Local rainfall intensity for normal rain: $r_5 = 0.03 \text{ l/s/m}^2$
 Local rainfall intensity for heavy rain: $r_{100} = 0.06 \text{ l/s/m}^2$
 Discharge coefficient $C = 1$ for smooth surfaces of the roof

		Emergency drainage						
		Gravity flow						
		Silent						
103 mm	0 mm	0 mm	0 mm	0 mm	0 mm	52 mm	52 mm	
DN 100	DN 100	DN 70	DN 70	DN 100	DN 100	DN 100	DN 100	
LX 727	LX 1110	LX 1573	LX 1574	LX 1575	LX 1576	LX 1605	LX 1606	
Clamping flange 45°	Clamping flange 45°	Bonding flange 45°/90°	Bonding flange 45°	Bonding flange 45°/90°	Bonding flange 45°	Bonding flange 45°	Bonding flange 45°	
0 mm	0 mm	40 mm	60 mm	40 mm	60 mm	40 mm	60 mm	
	35 mm	75 mm	75 mm	75 mm	75 mm	75 mm	75 mm 95 mm	
150	56	56	46	83	43	150	53	
4.0 l/s 8.0 l/s	1.7 l/s	1.7 l/s	1.4 l/s	2.5 l/s	1.3 l/s	4.5 l/s	1.6 l/s 4.7 l/s	
Silent	Silent	Silent	Silent	Silent	Silent	Silent	Silent-Power	

LORO-X Series 43 Parapet Direct Drains

Comparison

Version: without roof penetration DN 70 (1)
Version: without roof penetration DN 100 (1)

Without penetration into the roof area (thermal insulation), the drains of the versions without roof penetration 3 are especially interesting for areas with a thin thermal insulation layer or for other solutions where the installation of the drain in the surface is difficult.

The drains achieve a discharge rate of 0.8 l/s (DN70) and 1.2 l/s (DN100) at a water height of 35 mm.

- **lowest penetration depth (0 mm)**

Version 1		
		
DN70	01316.070X 01331.070X	LX 620
Version 1		
		
DN100	01316.100X 01331.100X	LX 621

Version: emergency, weir 40 mm, spout DN 70 (1)
Version: emergency, weir 60 mm, spout DN 70 (1)
Version: emergency, weir 40 mm, spout DN 100 (1)
Version: emergency, weir 60 mm, spout DN 100 (1)

The emergency drainage without roof penetration enables an easy sealing of the emergency drainage in the parapet.

The pipe with its weir at the same height as the roof level ensures a stronger discharge in comparison to conventional spouts.

- **lowest penetration depth (0 mm)**
- **high performance even as spout**

Version 1		
		
DN70	01325.070X 01329.070X	LX1573
Version 1		
		
DN70	01326.070X	LX1574
Version 1		
		
DN100	01325.100X 01329.100X	LX1575
Version 1		
		
DN100	01326.100X	LX1576

Version: without roof penetration with clamping flange (2)

Without penetration into the roof surface (thermal insulation), the drains of the versions without roof penetration 3 are especially interesting for areas with a thin thermal insulation layer or for other solutions where the installation of the drain in the surface is difficult.

The drains achieve a discharge rate of 0.8 l/s (DN70) and 1.2 l/s (DN100) at a water height of 35 mm.

- **lowest penetration depth (0 mm)**

Version 2		
		
DN100	01333.100X	LX 1110

Version: with basin DN 70 (3)
Version: with basin DN 100 (3)

With a collecting basin and a penetration depth of ca. 52 mm, the drains 4 and 5 guarantee a significantly higher discharge rate of 2.3 l/s (DN70) and 3.0 l/s (DN100) at a water height of 35 mm. It has to be considered that the higher discharge rate of the smaller nominal diameter results from a higher filling degree of the downpipe.

- **increased discharge rate**

Version 3



DN70 | 01330.070X | **LX 650**

Version 3



DN100 | 01330.100X | **LX 647**

Version: with double pipe (4)

With an additional minimised penetration depth of 52 mm, the double pipe drain shown in picture 5 achieves a standard discharge rate of 4.5 l/s for areas where the roof shall not be penetrated deeply.

- **standard discharge rate 4.5 l/s**
- **low penetration depth**

Version 4



DN100 | 01320.100X | **LX 653**

Version: with basin and lowered pipe (5)
Version: double pipe main-emergency-combination (6)

A lowered pipe (penetration depth 103 mm) in addition to the collecting basin guarantees a discharge rate of 4.5 l/s at a water height of 35 mm. This complies with the discharge rate for flat roof drains with gravity flow mentioned in DIN EN 1253-1 (2003). The discharge rate is achieved through the two-stage acceleration of the water inside the drain.

- **standard discharge rate 4.5 l/s**
- **1 pipe**

Version 5



DN100 | 01350.100X | **LX 694**

Version 6



DN100 | 01324.100X | **LX 727**

Version: emergency, weir 40 mm, with basin, spout DN 100 (7)

The discharge rate of 4.5 l/s that is required by DIN standard is exceeded with this emergency drain at a water height of 75 mm on the roof. The great size of the congestion element ensures a high-performance overflow. 40 mm weir

- **standard discharge rate 4.5 l/s, also as spout at 75 mm**

Version 7



DN100 | 01334.100X | **LX1605**

Version: emergency, weir 60 mm, with basin, spout DN100 (8)

60 mm weir 1.6 l/s at a water height of 75 mm
 60 mm weir 4.5 l/s at a water height of 95 mm

- **standard discharge rate 4.5 l/s, also as spout at 95 mm**

Version 8



DN100 | 01336.100X | **LX1606**

Example of Application for Terraces and Small Flat Roofs

SERIES 43 LORO-X PARAPET-DIRECT

- with SILENT gravity flow
- perfect for residential buildings and offices

Example "Terrace":

A terrace covering an area of 40 m², with a 77 mm high gravel/paving slab and an incline towards the terrace parapet shall be drained professionally. According to the DIN standard calculation on www.loro-x.com, 1.2 litre per second have to be drained from the non-roofed terrace for the main and emergency drainage on the basis of an average rainfall intensity of 300/600 l/(s*ha).

Special Requirements:

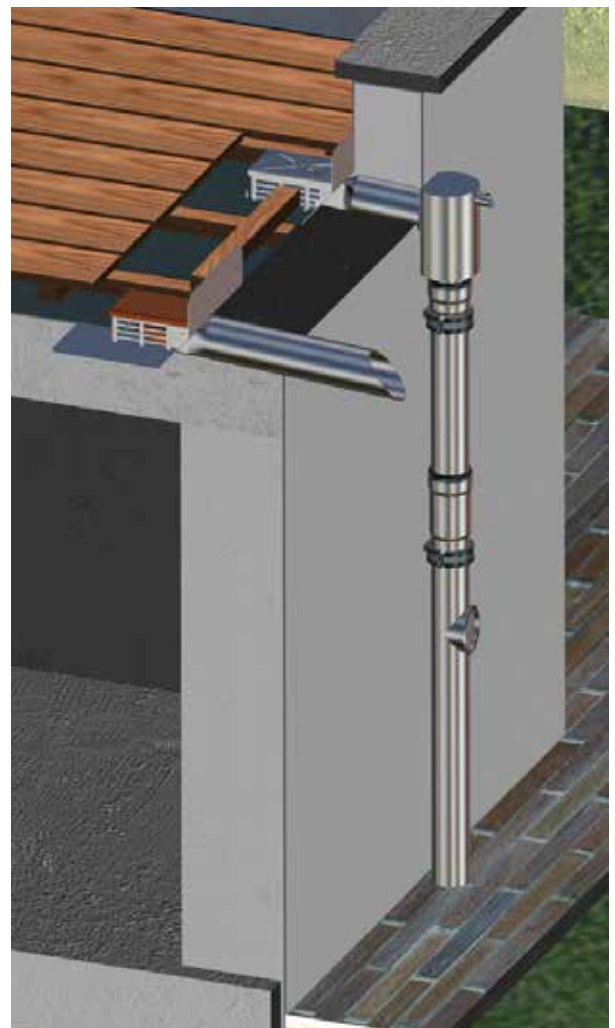
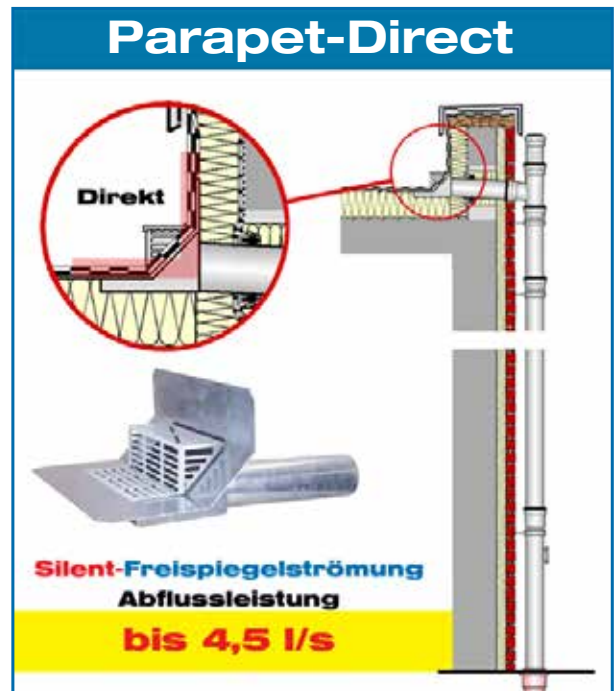
When draining residential buildings and offices, the focus is not on a high discharge rate, but on the small noise development of the drainage. Moreover, when draining used roof areas such as terraces or accessible flat roofs, space-saving drains that optimally adapt to possible gravel layers and paving slabs are important. In order to be able to use the interior of a building optimally, pipes at the outside are often preferred.

Drainage Example:

LORO-X PARAPET-DIRECT drains are optimised for silent gravity flow. Thus, in a drainage system, the transition into the down-pipe can be accomplished with a collector box or a ventilated branch. In the case of the emergency drainage, the installation as spout is also possible, but only if the water is drained to a free floodable area where no damage can be done. The strainer basket of the drain keeps out gravel. In this drainage example one main drainage as well as one emergency drainage, each without penetration into the roof and a nominal diameter of DN 100, have been chosen. That way, the required discharge rate of 1.2 l/sec is achieved silently and securely at a water height of 35 mm or 75 mm (main/emergency).

Advantages:

- Silent gravity flow optimal for residential buildings
- upstand with bonding flange for easy installation in the parapet upstand
- space-saving due to direct installation in the parapet upstand
- ideal for small up to medium-size areas



Performance Through Shape

LORO-X PARAPET-DIRECT

for installation directly in the parapet upstand



LORO-X
PARAPET-DIRECT
Further details
on www.loro-x.com:



PENETRATION DEPTH

Penetration depth: 0 mm

Version: without roof penetration

Parapet-Direct drains without roof penetration guarantee secure drainage and sealing also for "low" roof constructions because there is no further box below the sealing level.

Discharge rate for small areas 1.2 l/s at a water height of 35 mm.



Roof area up to 40 m²



1.2 l/s
at a water height of 35 mm
01316.100X



1.2 l/s
at a water height of 75 mm
01325.100X

Penetration depth: 52 mm²

Version: with basin

A stronger drainage with gravity flow requires a slightly "deeper" substructure of the drain below the sealing level in order to accelerate the water from the roof area downwards.

Discharge rate of 3.0 l/s at a water height of 35 mm.



Roof area up to 100 m²



3.0 l/s
at a water height of 35 mm
01330.100X



4.5 l/s
at a water height of 75 mm
01334.100X

Penetration depth: 103 mm²

Version: with lowered pipe or double pipe

The strongest drainage is possible with the patented LORO drain with "lowered pipe". With this drain the water is accelerated in two steps - first in the basin and then in the lowered pipe.

Discharge rate of 4.5 l/s at a water height of 35mm.



Roof area up to 150 m²



4.5 l/s
at a water height
of 35 mm
01350.100X

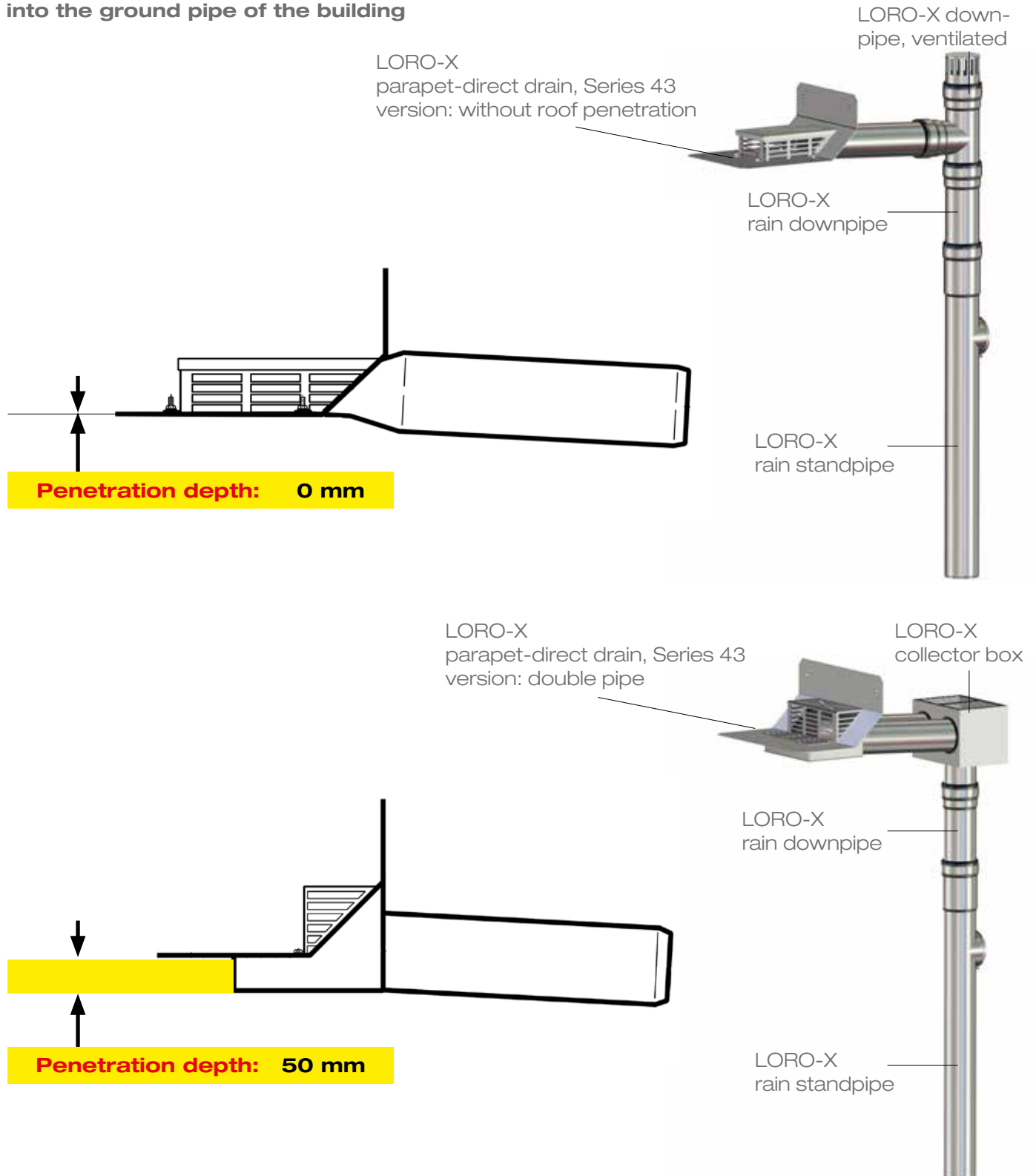


4.5 l/s
at a water height
of 75 mm
01334.100X

Parapet Drainage Series 43

Main drainage

Drainage via collector box with ventilation, downpipe and rain downpipe into the ground pipe of the building



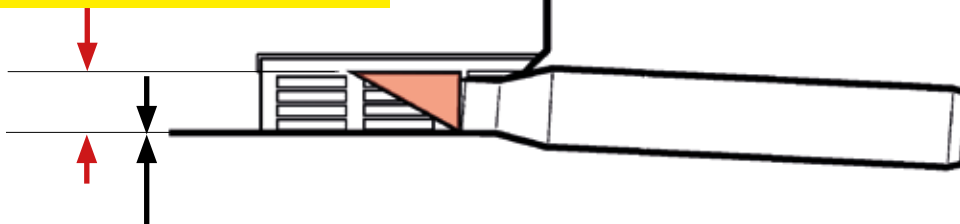
Emergency drainage

Drainage after exceeding of the weir height via spout into the open

LORO-X parapet-direct drain,
as spout, Series 43
version: without roof penetration

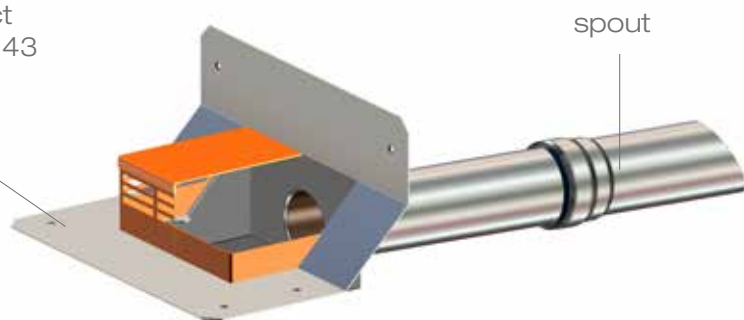


Weir height: 60 mm

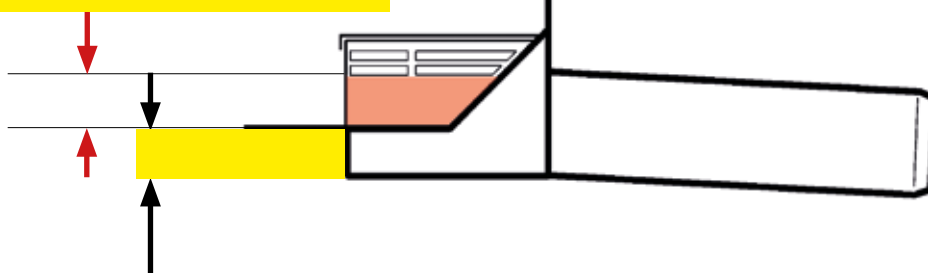


Penetration depth: 0 mm

LORO-X parapet-direct
drain, as spout, Series 43
version: with basin



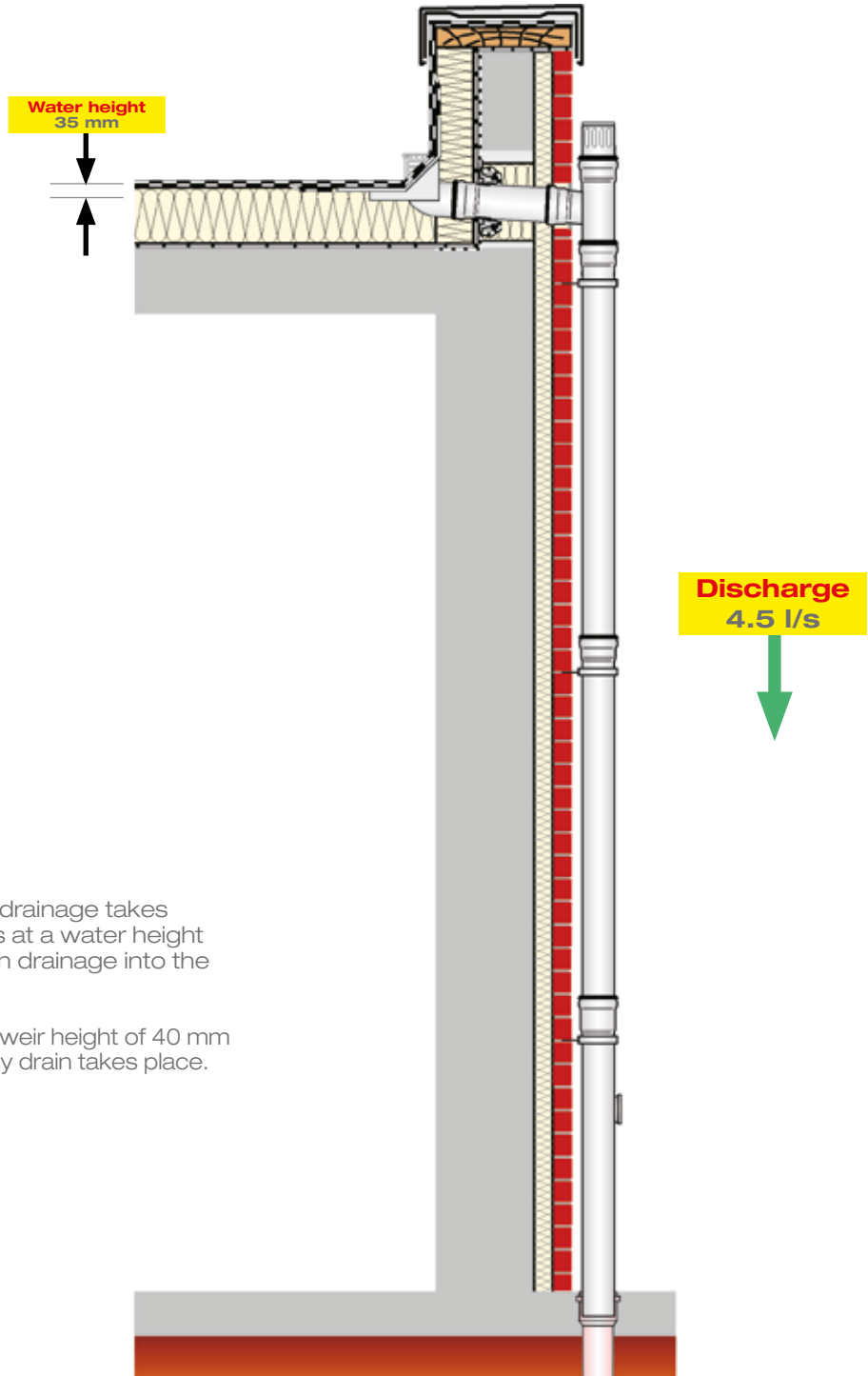
Weir height: 40 mm



Penetration depth: 50 mm

Case 1: Normal rain

Main drainage



Main drainage
(LORO-X discharge graph LX694)

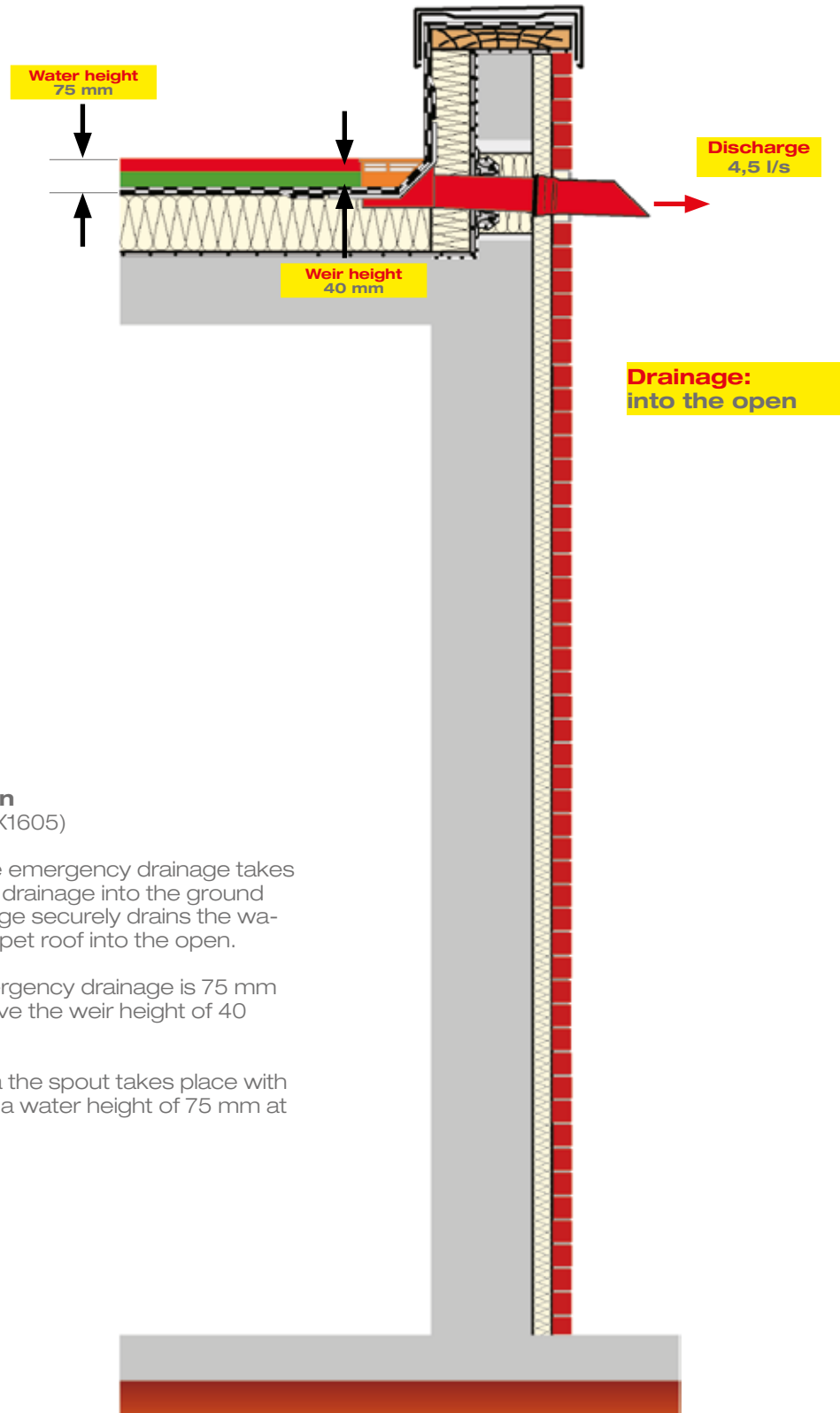
In the case of normal rain, the main drainage takes place with a discharge rate of 4.5 l/s at a water height of 35 mm from the parapet roof with drainage into the ground pipe.

The water height is always below the weir height of 40 mm so that no drainage via the emergency drain takes place.

Drainage: into ground pipe

Case 2: Heavy rain

Emergency drainage



Emergency drainage in the case of heavy rain
(LORO-X discharge graph LX1605)

In the case of heavy rain, the emergency drainage takes place in addition to the main drainage into the ground pipe. The emergency drainage securely drains the water via a spout from the parapet roof into the open.

The water height of the emergency drainage is 75 mm during heavy rain. Thus, above the weir height of 40 mm.

The emergency drainage via the spout takes place with a discharge rate of 4.5 l/s at a water height of 75 mm at the parapet roof.

Example of Application for Terraces and Small Flat Roofs

Requirement Specification

SERIES 43 LORO-X PARAPET-DIRECT

- with SILENT gravity flow
- perfect for residential buildings and offices

Tender

Example "Terrace":

A terrace covering an area of 150 m², with paving slab and an incline towards the terrace parapet shall be drained professionally.

With an average rainfall intensity of 300/600 l/(s*ha), the discharge rate for the main and emergency drainage has to be calculated according to DIN standard.

Special Requirements:

When draining residential buildings and offices, the focus is not on a high discharge rate, but on the small noise development of the drainage.

Moreover, when draining used roof areas such as terraces or accessible flat roofs, space-saving drains that optimally adapt to the parapet edge are important. In order to be able to use the interior of a building optimally, pipes at the outside are often preferred.

Drainage Example:

LORO-X PARAPET-DIRECT drains are optimised for silent gravity flow.

Thus, in a drainage system, the transition into the down-pipe can be accomplished with a collector box or a ventilated branch. In the case of the emergency drainage, the installation as spout is also possible, but only if the water is drained to a free floodable area where no damage can be done.

In this drainage example one main drainage as well as one emergency drainage, each with a nominal diameter of DN 100, have been chosen. That way, the required drainage of 4.5 l/sec and another 4.5 l/sec is achieved silently and securely at a water height of 35 mm or 75 mm (main/emergency).

Especially Space-Saving:

The smaller the roof area, the more important is the space. The installation directly in the parapet is optimal.



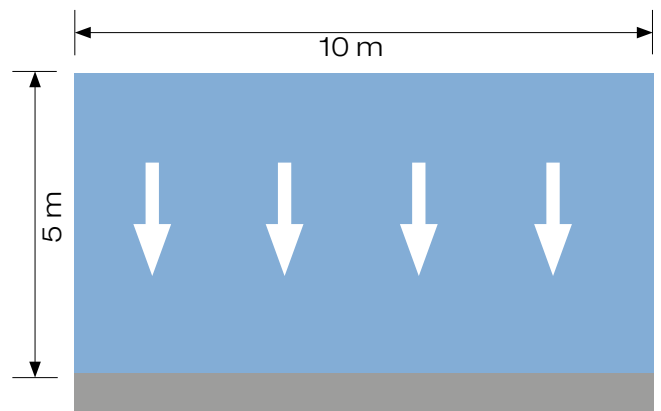
LORO-X
PARAPET-DIRECT
Further details
on www.loro-x.com:



Online Calculation

Tender							
Requirement Specifications							
A	C	r _(5,5)	r _(5,100)	Q _r	Q _{Not}	h	dB
[m]		[l/(s · m ²)]	[l/(s · m ²)]	[l/s]	[l/s]	[mm]	[dB]
150	1	300	-	4,5		35	80
150	1	-	600		4,5	75	75

- Main drainage
- Emergency drainage



Calculation

Calculation Example*

- Parapet roof of a building with effective precipitation area $A = 150 \text{ m}^2$ (no partial area)
- Discharge coefficient $c = 1,0$
- Rainfall intensity $r_{5,5} = 300 \text{ l/(s x ha)}$
- Rainfall intensity $r_{5,100} = 600 \text{ l/(s x ha)}$
- Water height for the main drainage 35 mm
- Water height for the emergency drainage 75 mm
- LORO-X Parapet-Direct with gravity flow for main and emergency drainage

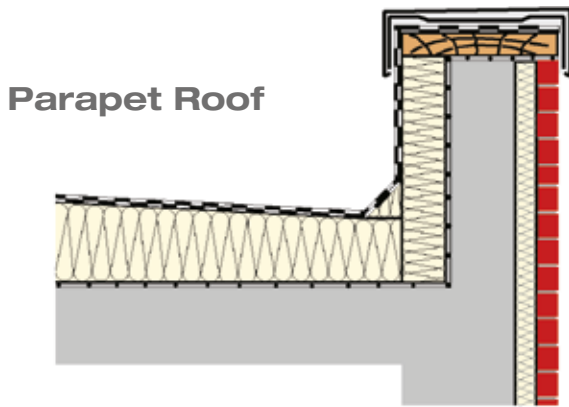


Table 6 - Discharge coefficient C according to DIN 1986-100 for the determination of the rain water discharge (excerpt)

No.	Type of Area	C*
1	Waterproof surfaces, e. g.	1.0
	- Roof areas	1.0
	- Concrete surfaces	1.0
	- Ramps	1.0
	- Surfaces fastened in place with sealed joints	1.0
	- Blacktops (asphalt)	1.0
	- Paving with sealed joints	0.5
	- Gravel roofs	0.3
	- Green roof areas	0.3
	- for intensive roof greening	0.3
	- for extensive roof greening from 10 cm thickness	0.3
- for extensive roof greening below 10 cm thickness	0.5	

Required discharge rate of the main drainage

Q_r

Determining the design rainfall intensity:

$$Q_r = \frac{A \cdot r_{5,5} \cdot C}{10000}$$

Q_r [l/s] = design rainfall intensity
 A [m²] = effective roof surface or partial surface
 $r_{5,5}$ [l/(s · ha)] = rainfall intensity (5 min., every 5 years)
 C [-] = discharge coefficient

$$Q_r = \frac{150 \cdot 300 \cdot 1,0}{10000}$$

$Q_r = 4.5 \text{ l/s}$

Required discharge rate of the emergency drainage

Q_{not}

Determining the volumetric overflow rate for emergency drains:

$$Q_{not} = \frac{A \cdot (r_{5,100} - r_{5,5} \cdot C)}{10000}$$

Q_{not} [l/s] = volumetric overflow rate
 A [m²] = effective roof surface or partial surface
 $r_{5,100}$ [l/(s · ha)] = rainfall intensity (5 min., every 100 years)
 C [-] = discharge coefficient

$$Q_{not} = \frac{150 \cdot (600 - 300 \cdot 1,0)}{10000}$$

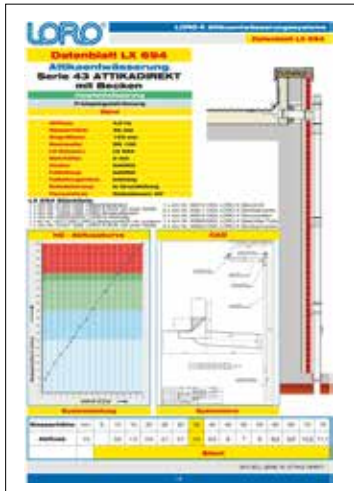
$Q_{not} = 4.5 \text{ l/s}$

Execution Specification:

Specification of the Roof Drainage System

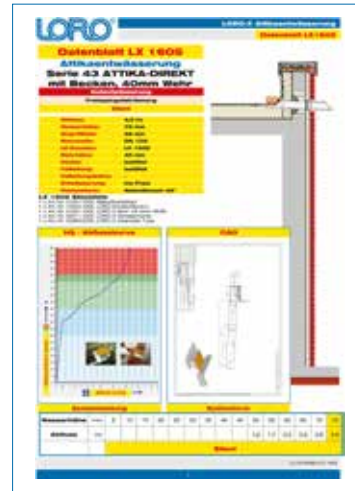
Runoff coefficients taken from
Specification sheet LX 694
of LORO-X Parapet-Direct parapet drainage

Runoff coefficients taken from
Specification sheet LX 1605
of LORO-X Parapet-Direct parapet drainage



Available discharge rate of the **main drainage**

$$Q_{DA \text{ Haupt}} = 4.5 \text{ l/s}$$



Available discharge rate of the **emergency drainage**

$$Q_{DA \text{ Not}} = 4.5 \text{ l/s}$$

Accomplished Discharge

Execution											
Execution Specification (Specification sheet)											
								Discharge rate, available			
	Series		Version	Type			LX-No.	Q _r	Q _{Not}	h	dB
	No.	Name		No.	DN	Weir		[l/s]	[l/s]	[mm]	[dB]
Main drainage	43	Parapet-Direct	Main drain with basin	1	100	-	LX654	4.5	-	35	80
Emergency drainage	43	Parapet-Direct	Emergency drain with spout with basin	5	100	40	LX1605	-	4.5	75	75

Determining the number of drains for the main drainage

$$n_{DA} = \frac{Q_r}{Q_{DA \text{ Haupt}}} \quad \text{number of items}$$

- n_{DA} [-] = number of main drains
- Q_r [l/s] = discharge rate of the main drainage
- $Q_{DA \text{ Haupt}}$ [l/s] = discharge rate of a main drainage with a fixed water height of 35 mm at the main drain

$$n_{DA} = \frac{4.5 \text{ l/s}}{4.5 \text{ l/s}} = 1 \text{ drain}$$

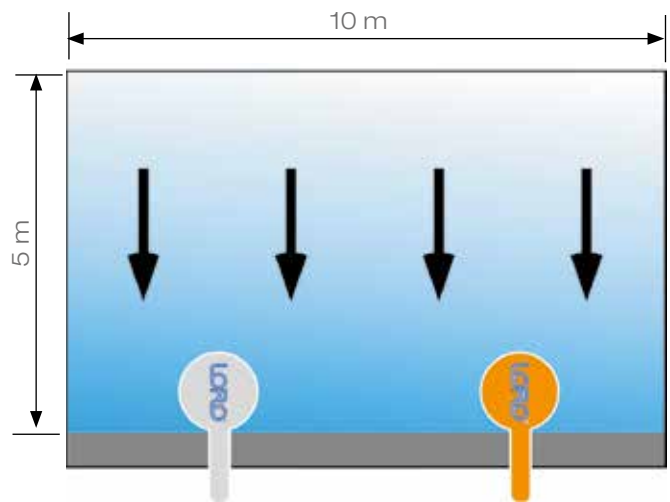
**Number of the required LORO-X PARAPET-DIRECT main drains = 1 piece
emergency drains = 1 piece**

Determining the number of drains for the emergency drainage

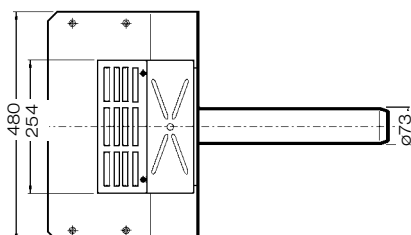
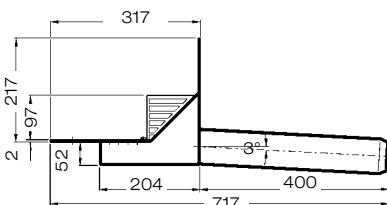
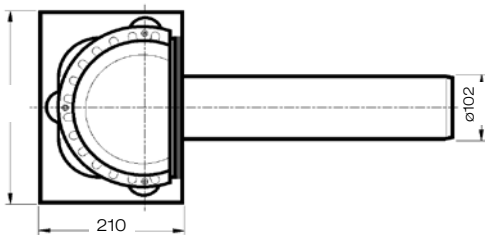
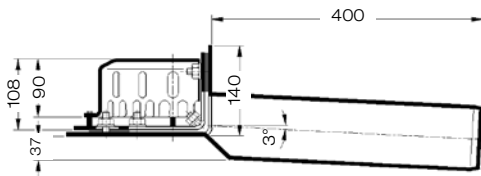
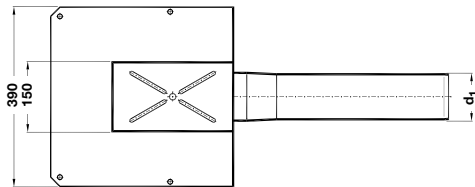
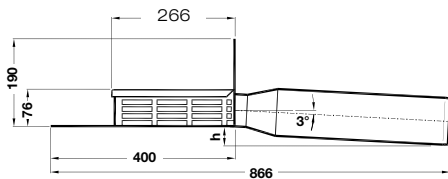
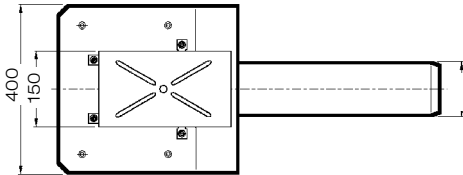
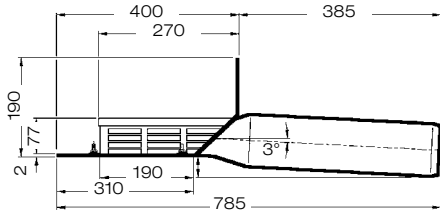
$$n_{Not} = \frac{Q_{Not}}{Q_{DA \text{ Not}}} \quad \text{number of items}$$

- n_{Not} [-] = number of emergency drains
- Q_{Not} [l/s] = discharge rate of the emergency drainage
- $Q_{DA \text{ Not}}$ [l/s] = discharge rate of an emergency drainage with a fixed water height of 75 mm at the emergency drain

$$n_{Not} = \frac{4.5 \text{ l/s}}{4.5 \text{ l/s}} = 1 \text{ emergency drain}$$



Please contact the internal and field LORO-X service team if you have any questions regarding the design of roof drains.



Dimensions and Weights

LORO-X Parapet direct drains, DN 70 and DN 100, with bonding flange, 45 degree, Series 43

for bituminous roofing sheets

made of galvanized steel

Discharge rate according to specification sheet:

DN 70: 0.8 l/s*

DN 100: 1.2 l/s*

LX 620
LX 621

DN 70: Art.-No. 01316.070X weight: 5.7 kg
DN 100: Art.-No. 01316.100X weight: 5.1 kg

LORO-X Parapet direct drains, DN 70 and DN 100, with bonding flange, 90 degree, Series 43

for liquid plastic

made of galvanized steel

Discharge rate according to specification sheet:

DN 70: 0,8 l/s*

DN 100: 1,2 l/s*

LX 620
LX 621

DN 70: Art.-No. 01331.070X weight: 5,7 kg
DN 100: Art.-No. 01331.100X weight: 5,1 kg

LORO-X parapet direct drain, DN 100, with clamping flange, without penetration into the roof, Series 43

for plastic roofing sheets

made of stainless steel

Discharge rate according to specification sheet:

DN 100: 1.7 l/s*

LX 1110

DN 100: Art.-No. 01333.100X weight: 5.5 kg

LORO-X parapet direct drains, DN 70 and DN 100, with bonding flange, with basin, Series 43

for bituminous roofing sheets

made of galvanized steel

Discharge rate according to specification sheet:

DN 70: 0.8 l/s*

DN 100: 3.0 l/s*

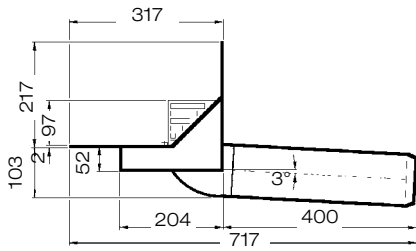
LX 1110
LX 647

DN 70: Art.-No. 01330.070X weight: 7.0 kg
DN 100: Art.-No. 01330.100X weight: 9.2 kg

* In compliance with test specification according to DIN EN 1253

Dimensions and Weights

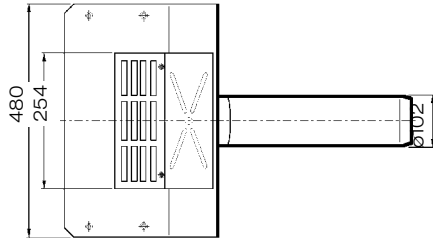
LORO-X parapet direct drain, DN 100, with bonding flange, with basin and lowered pipe, Series 43 for bituminous roofing sheets



made of galvanized steel

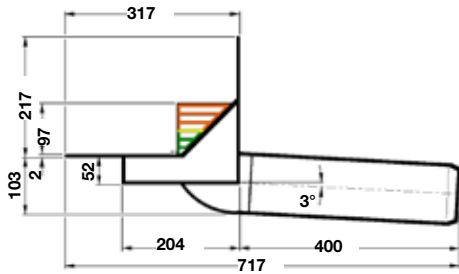
Discharge rate according to specification sheet:

LX 694 DN 100: 4.5 l/s*



DN 100: Art.-No. 01350.100X weight: 8.0 kg

LORO-X main-emergency combination double pipe parapet direct drain, DN 100, with bonding flange, with basin and lowered pipe, Series 43 for bituminous roofing sheets

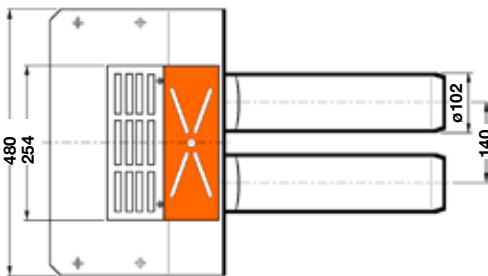


made of galvanized steel, with additional internal coating, plastic-coated strainer

consisting of:
strainer, drain body

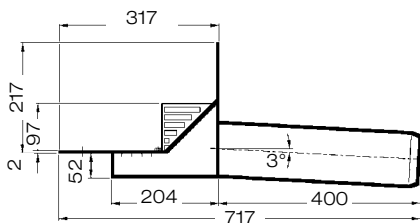
Discharge rate according to specification sheet:

LX 727 Main: 4.0 l/s*
Emergency: 4.0 l/s*
Combination: 8.0 l/s*



DN 100: Art.-No. 01324.100X weight: 10.7 kg

LORO-X double pipe parapet direct drain, DN 100, with bonding flange and basin, Series 43 for bituminous roofing sheets

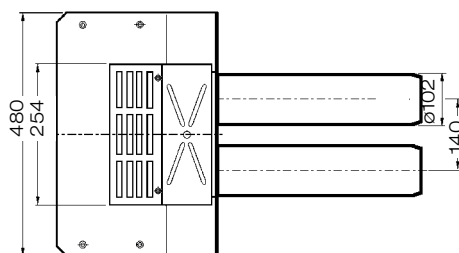


made of galvanized steel

Discharge rate according to specification sheet:

DN 100: 4.5 l/s*

LX 653



DN 100: Art.-No. 01320.100X weight: 8.4 kg

* In compliance with test specification according to DIN EN 1253

Dimensions and Weights

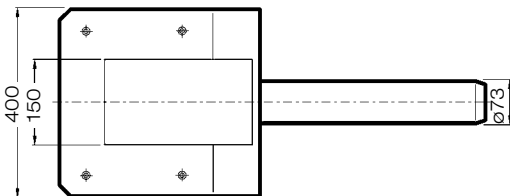
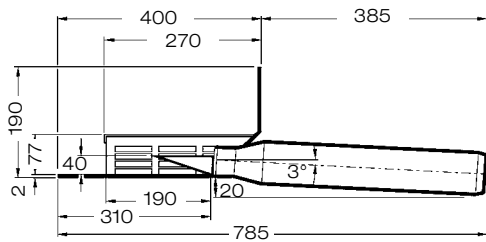
LORO-X parapet direct emergency drains, DN 70 and DN 100, weir height 40 mm, with bonding flange, Series 43 for bituminous roofing sheets

made of galvanized steel

Discharge rate according to specification sheet:

LX 1573 DN 70: 1.7 l/s*
LX 1575 DN 100: 2.5 l/s*

DN 70: [Art.-No. 01325.070X](#) weight: 6.0 kg
 DN 100: [Art.-No. 01325.100X](#) weight: 7.2 kg



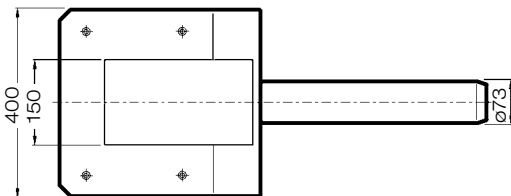
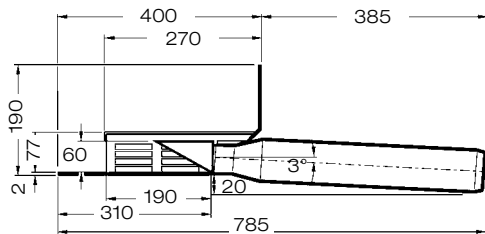
LORO-X parapet direct emergency drains, DN 70 and DN 100, weir height 60 mm, with bonding flange, Series 43 for bituminous roofing sheets

made of galvanized steel

Discharge rate according to specification sheet:

LX 1574 DN 70: 1.4 l/s*
LX 1576 DN 100: 1.3 l/s*

DN 70: [Art.-No. 01326.070X](#) weight: 5.8 kg
 DN 100: [Art.-No. 01326.100X](#) weight: 7.4 kg



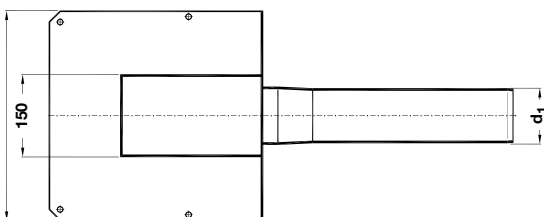
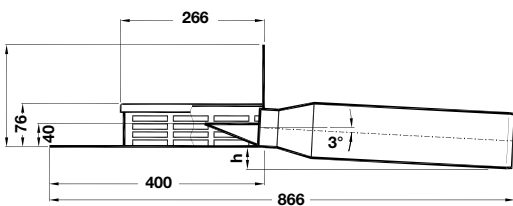
LORO-X parapet direct emergency drains, DN 70 and DN 100, weir height 40 mm, with bonding flange 90 degree, Series 43 for liquid plastic

made of galvanized steel

Discharge rate according to specification sheet:

LX 1573 DN 70: 1,7 l/s*
LX 1575 DN 100: 2,5 l/s*

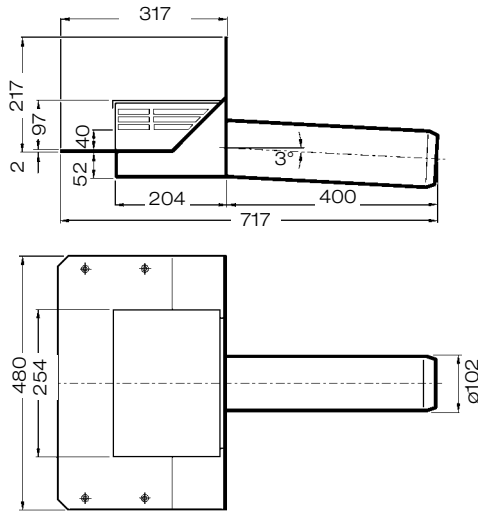
DN 70: [Art.-No. 01329.070X](#) weight: kg
 DN 100: [Art.-No. 01329.100X](#) weight: kg



DN	d ₁	h
70	73	34,5
100	102	40,5

* In compliance with test specification according to DIN EN 1253

Dimensions and Weights



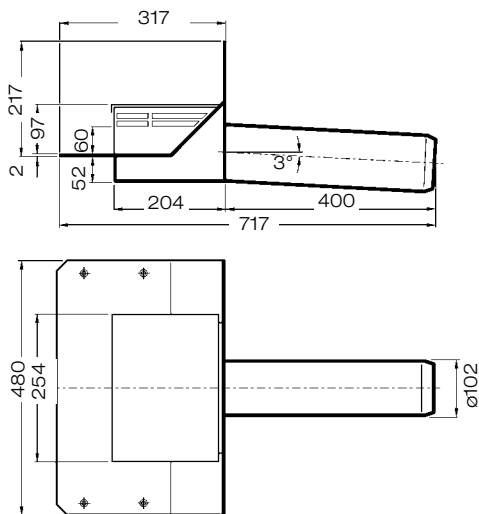
LORO-X parapet direct emergency drain, DN 100, weir height 40 mm, with bonding flange, with basin, Series 43 for bituminous roofing sheets

made of galvanized steel

Discharge rate according to specification sheet:

LX 1605 DN 100: **4.5 l/s***

DN 100: [Art.-No. 01334.100X](#) weight: 7.6 kg



LORO-X parapet direct emergency drain, DN 100, weir height 60 mm, with bonding flange, with basin, Series 43 for bituminous roofing sheets

made of galvanized steel

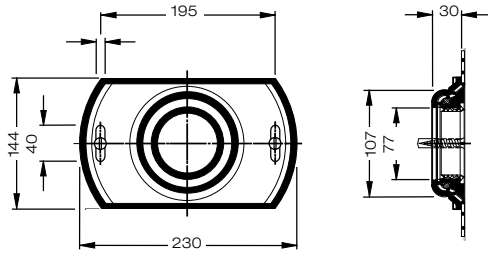
Discharge rate according to specification sheet:

LX 1606 DN 100: **1.6 l/s***

DN 100: [Art.-No. 01336.100X](#) weight: 8.0 kg

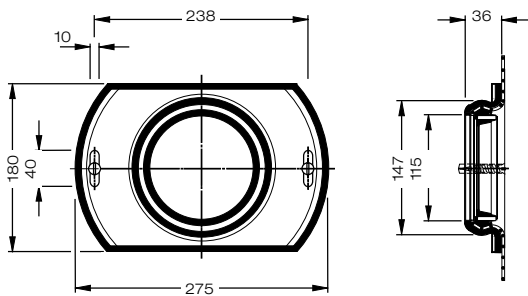
* In compliance with test specification according to DIN EN 1253

Dimensions and Weights



**LORO sliding flange, DN 70
with connecting sleeve,
for bonding the vapor barrier**
made of galvanized steel

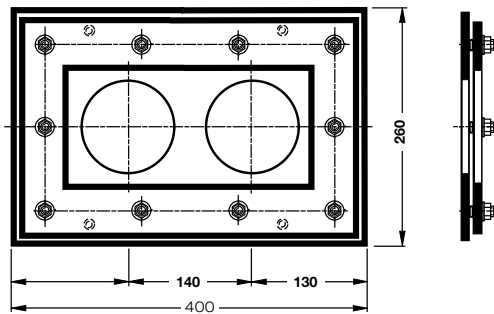
for vapour barrier of bituminous sealing sheets
Art.-No. 13235.070X weight: 1.4 kg



**LORO sliding flange, DN 100
with connecting sleeve,
for bonding the vapor barrier**
made of galvanized steel

for vapour barrier of bituminous sealing sheets
Art.-No. 13235.100X weight: 1.7 kg

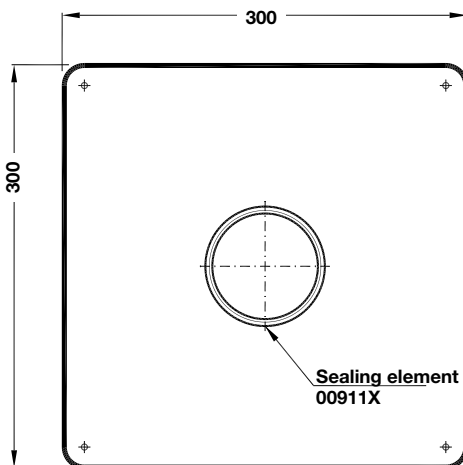
for vapour barrier of plastic sealing sheets
Art.-No. 13236.100X weight: 1.5 kg



**LORO sliding flange, DN 100
for LORO-X double pipe parapet direct
drains, for bonding the vapor barrier**
made of galvanized steel

Art.-No. 13228.100X weight: 4.9kg

including sealing elements



**LORO sliding flange
for bending on site**

made of stainless steel

Art.-No. 15073.070X weight 0,7 kg

Art.-No. 15073.100X weight 1,2 kg

including sealing element

Dimensions and Weights

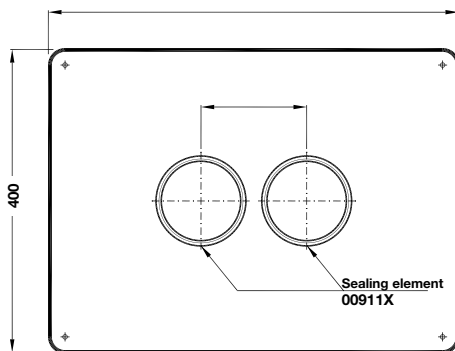
LORO sliding flange for double pipe for bending on site

made of stainless steel

Art.-No. 13073.070X weight: 1,7 kg

Art.-No. 13073.100X weight: 1,6 kg

including sealing elements



LORO collector box

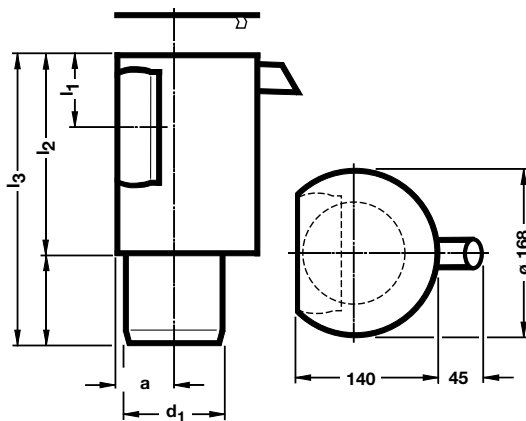
for LORO-RAINSTAR® parapet drains and LORO-X parapet direct drains

made of galvanized steel,
with additional internal coating

DN 70: Art.-No. 04379.070X weight: 2.8 kg

DN 100: Art.-No. 04379.100X weight: 3.0 kg

DN	a	f	d ₁	l ₁	l ₂	l ₃
70	70	70	73	55	205	275
100	80	85	102	70	205	290

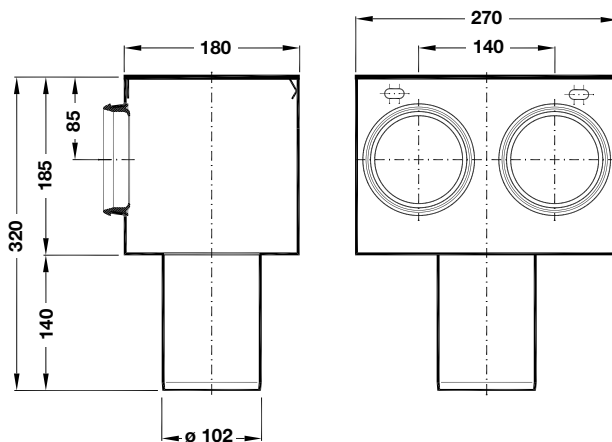


LORO collector box

for LORO-X double pipe parapet direct drains

made of galvanized steel,
with additional internal coating

DN 100: Art.-No. 00440.100X weight: 5.4 kg

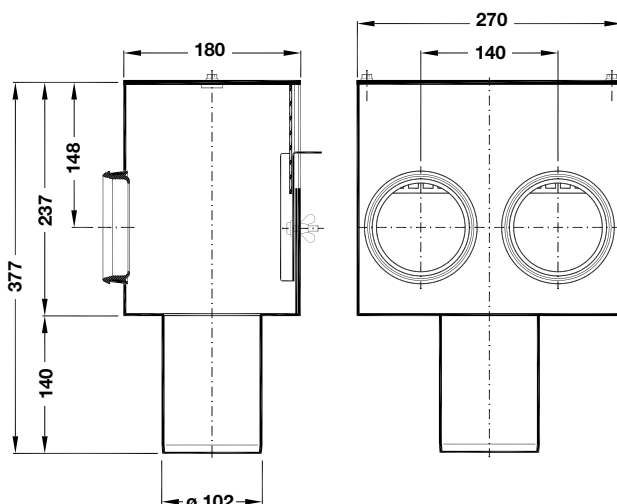


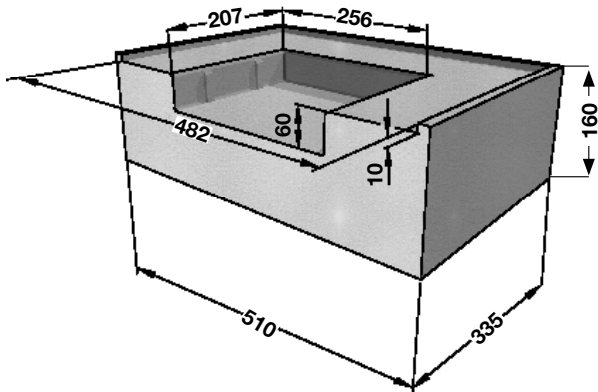
LORO collector box

for LORO-X main-emergency combination double pipe parapet direct drains, with height-adjustable weir

made of galvanized steel,
with additional internal coating

DN 100: Art.-No. 00445.100X weight: 5.0 kg



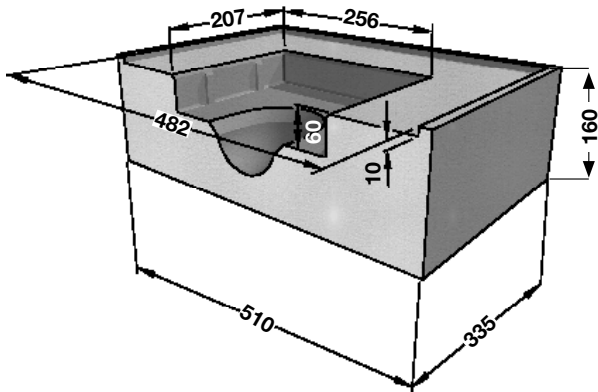


LORO-Thermal insulation block
universally for **Series 43, Attika-Direkt**

LORO-Thermal insulation block
made of Styropor SE WLG 0,35

building material calss B2
[Art.-No. 01317.000X](#)

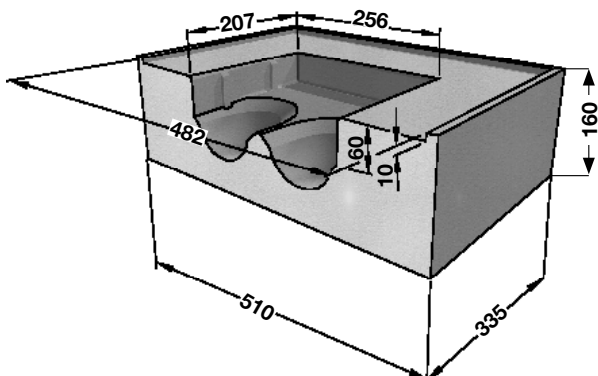
universally for Series 43:
01320.100X, 01327.070X, 01328.070X, 01330.070X,
01330.100X, 01334.100X, 01336.100X,



LORO-Thermal insulation block
made of Styropor SE WLG 0,35

building material calss B2
[Art.-No. 01319.000X](#)

universally for Series 43:
01350.100X



LORO-Thermal insulation block
made of Styropor SE WLG 0,35

building material calss B2
[Art.-No. 01321.000X](#)

universally for Series 43:
01323.100X, 01324.100X,

Specification sheet LX 620 Parapet drainage system Series 43 Parapet-Direct for small roof areas

Main drainage

Gravity flow

Silent

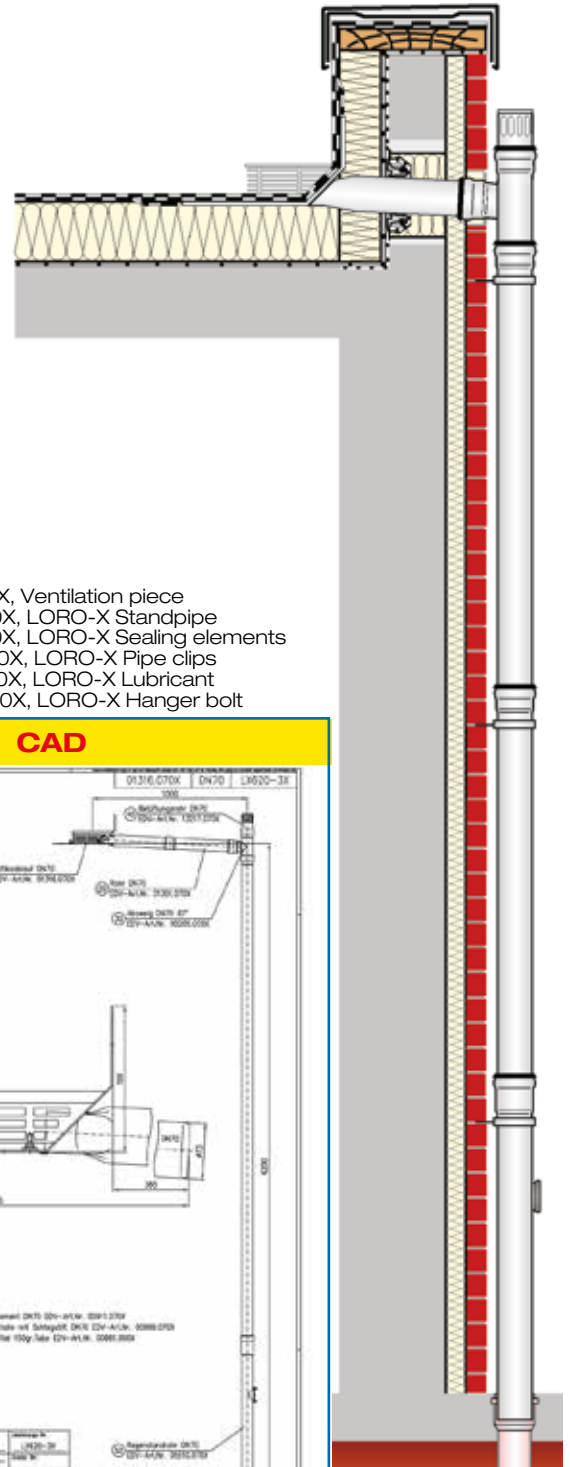
Discharge rate:	0.8 l/s
Water height:	35 mm
Roof penetration:	0 mm
Diameter:	DN 70
LX-Number:	LX 620
Weir height:	0 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	4.2 m
Drainage:	in sewer
Flange form:	bonding flange

LX 620 Piece list

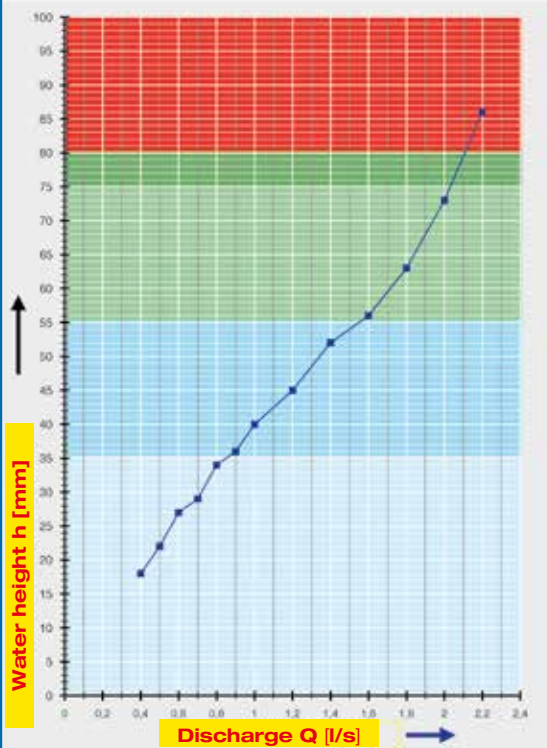
1 x Art.-No. choose drain on page two!

- 1 x Art.-No. 01301.070X, LORO-X Pipe with one socket
- 1 x Art.-No. 13235.070X, LORO Sliding flange
- 1 x Art.-No. 00200.CC0X, LORO-X Branch
- 1 x Art.-No. 01001.070X, LORO-X Pipe with one socket

- 1 x Art.-No. 13217.070X, Ventilation piece
- 1 x Art.-No. 05510.070X, LORO-X Standpipe
- 5 x Art.-No. 00911.070X, LORO-X Sealing elements
- 3 x Art.-No. 00973.070X, LORO-X Pipe clips
- 1 x Art.-No. 00986.000X, LORO-X Lubricant
- 3 x Art.-No. 09603.200X, LORO-X Hanger bolt

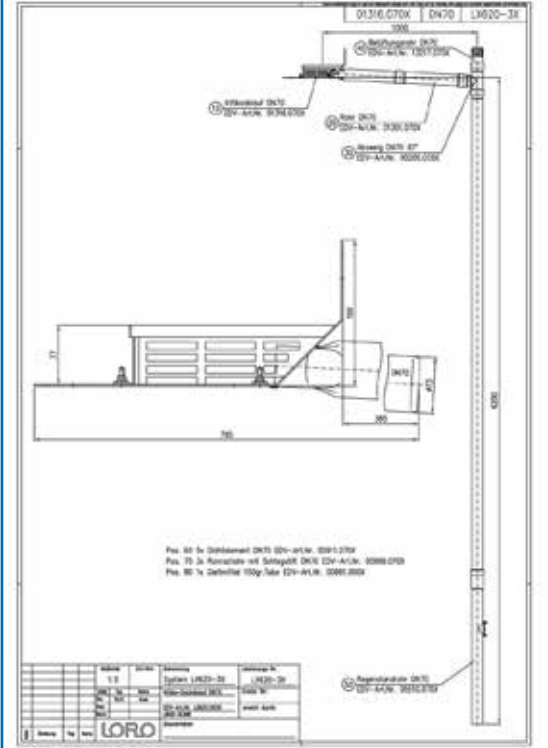


hQ - Discharge curve



System power

CAD



System shape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/s				0.4	0.5	0.7	0.8	1	1.2	1.3	1.6	1.7	1.8	1.9	2.1
Silent																

Chosse drain for piece list on page one!

DN 70

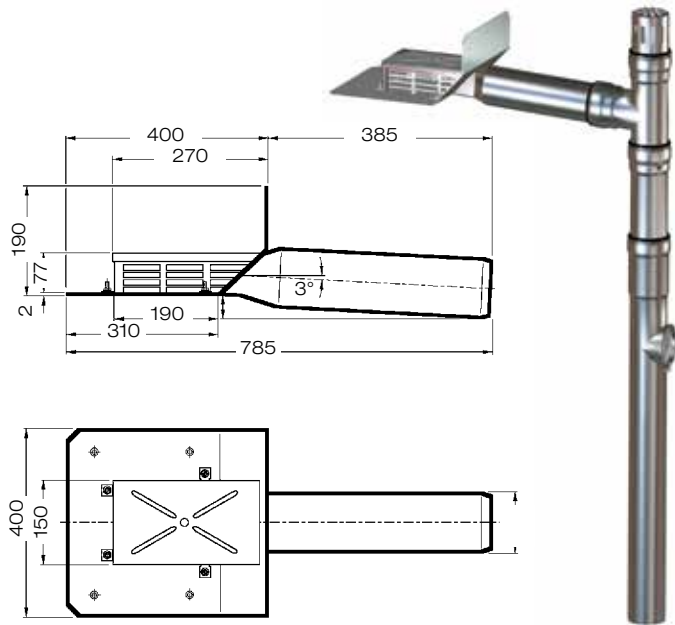
LX620-3X

Series 43

Drain Art.-No. 01316.070X

Weight: 5.7 kg

with bonding flange
for bituminous roofing sheets

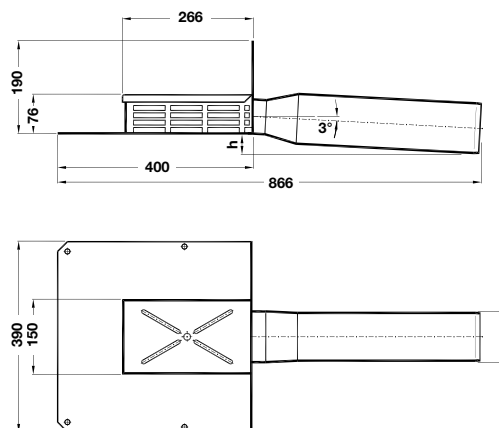


LX620-21X

Series 43

Drain Art.-No. 01331.070X

with bonding flange 90 degree
for liquid plastic

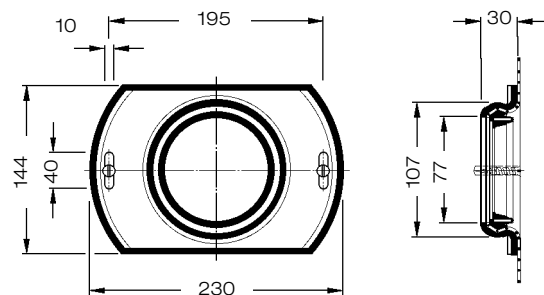


Sliding flange for LORO parapet direct drains

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws

Art.-No. 13235.070X

Weight: 1.4 kg

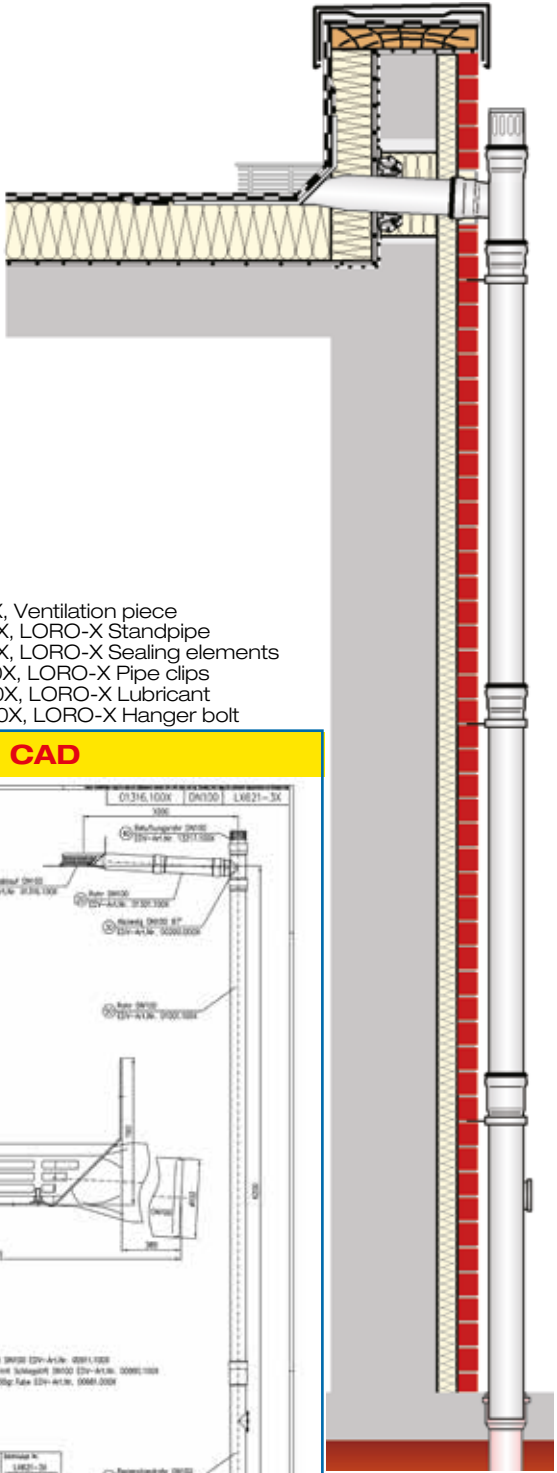


Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 621

**Parapet drainage system
Series 43 Parapet-Direct
for small roof areas**

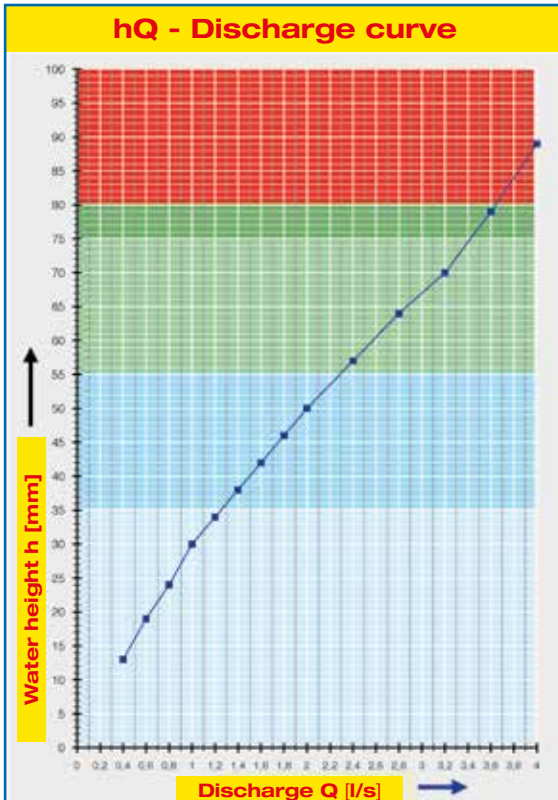
Main drainage	
Gravity flow	
Silent	
Discharge rate:	1.2 l/s
Water height:	35 mm
Roof penetration:	0 mm
Diameter:	DN 100
LX-Number:	LX 621
Weir height:	0 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	4.2 m
Drainage:	in sewer
Flange form:	bonding flange



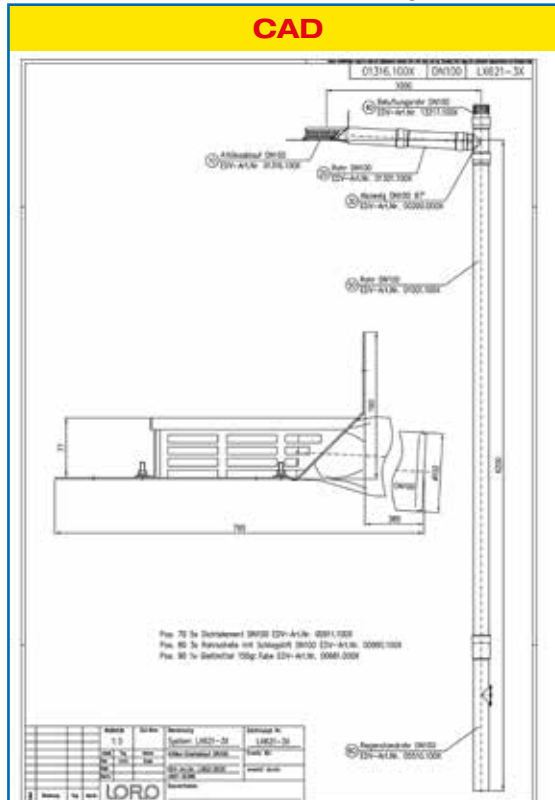
LX 621 Piece list

- 1 x Art.-No. choose drain on page two!
- 1 x Art.-No. 01301.100X, LORO-X Pipe with one socket
- 1 x Art.-No. 13235.100X, LORO Sliding flange
- 1 x Art.-No. 00200.DD0X, LORO-X Branch
- 1 x Art.-No. 01001.100X, LORO-X Pipe with one socket

- 1 x Art.-No. 13217.100X, Ventilation piece
- 1 x Art.-No. 05510.100X, LORO-X Standpipe
- 5 x Art.-No. 00911.100X, LORO-X Sealing elements
- 3 x Art.-No. 00975.100X, LORO-X Pipe clips
- 1 x Art.-No. 00986.000X, LORO-X Lubricant
- 3 x Art.-No. 09604.200X, LORO-X Hanger bolt



System power



System shape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/s			0.4	0.6	0.8	1.0	1.2	1.5	1.7	2	2.3	2.6	2.8	3.2	3.4
Silent																

Chosse drain for piece list on page one!

DN 100

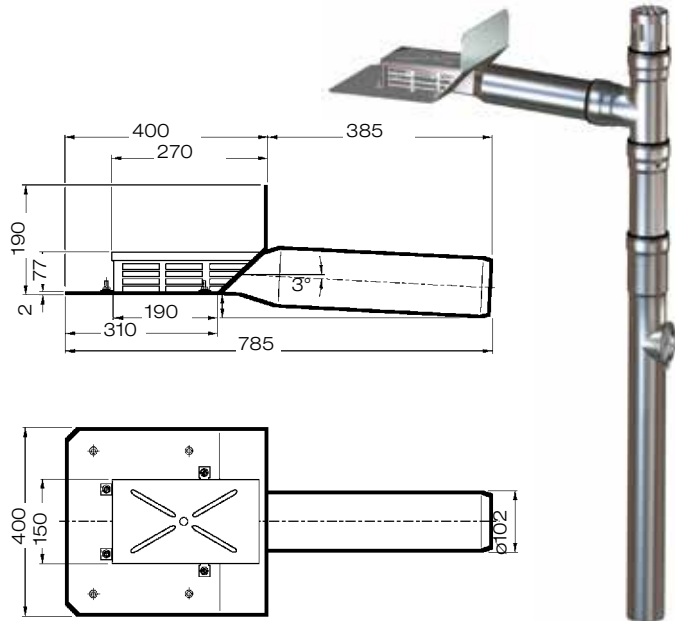
LX621-3X

Series 43

Drain Art.-No. 01316.100X

Weight: 5.1 kg

with bonding flange
for bituminous roofing sheets

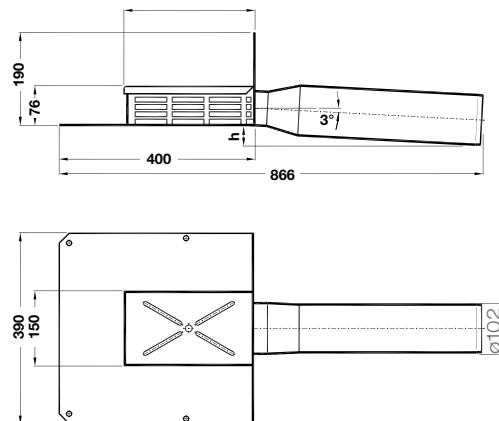


LX621-21X

Series 43

Drain Art.-No. 01331.100X

with bonding flange 90 degree
for liquid plastic

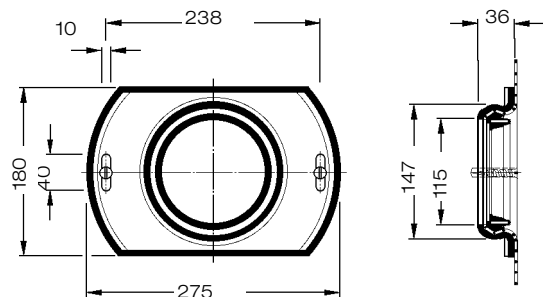


Sliding flange for LORO parapet direct drains

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws

Art.-No. 13235.100X

Weight: 1.7 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

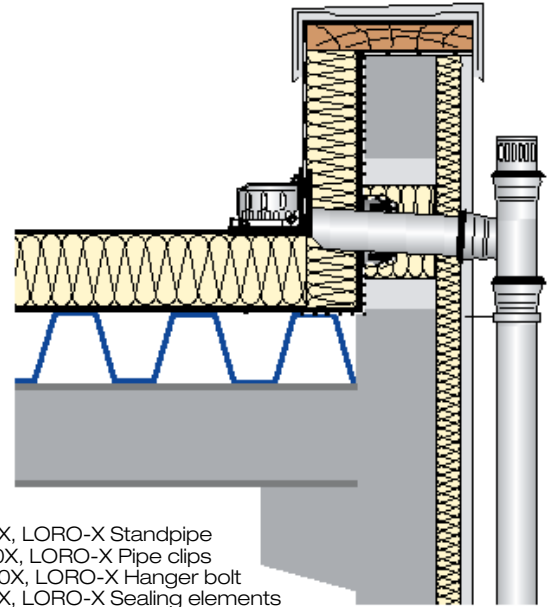
Specification sheet LX 1110 Parapet drainage system Series 43 Parapet-Direct without roof penetration

Main drainage

Gravity flow

Silent Power

Discharge rate:	1.7 l/s
Water height:	35 mm
Roof penetration:	0 mm
Diameter:	DN 100
LX-Number:	LX 1110
Weir height:	0 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	variable
Drainage:	in sewer
Flange form:	clamping flange 90°

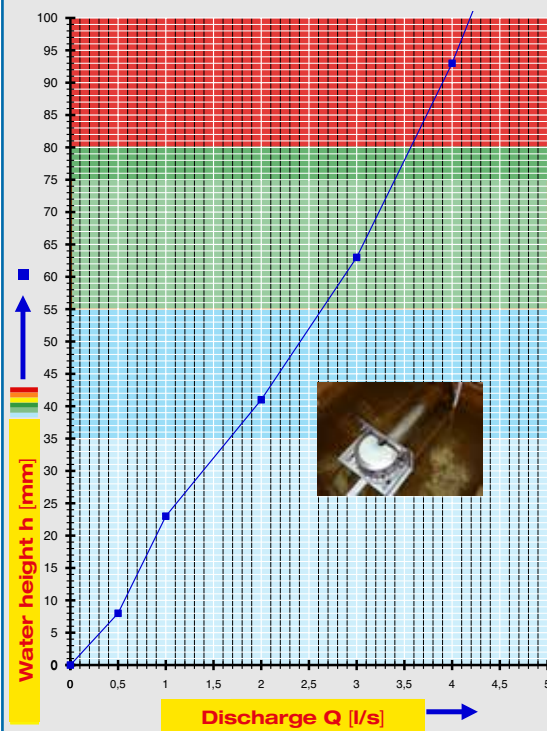


LX 1110 Piece list

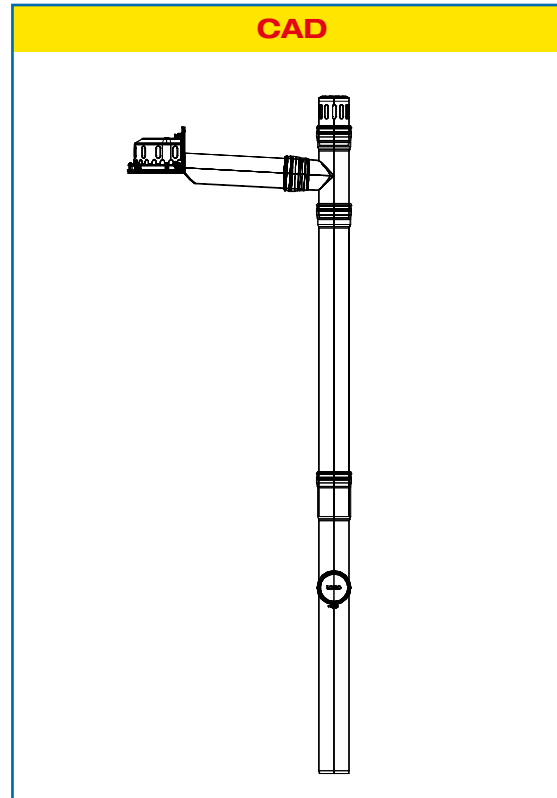
- 1 x Art.-No. 01333.100X, Parapet direct drain
- 1 x Art.-No. 13236.100X, LORO-X Sliding flange
- 1 x Art.-No. 00200.DDOX, LORO Branch
- 1 x Art.-No. 13217.100X, Ventilation piece
- 1 x Art.-No. 01001.100X, LORO-X Pipe with one socket

- 1 x Art.-Nr. 05510.100X, LORO-X Standpipe
- 3 x Art.-Nr. 00975.100X, LORO-X Pipe clips
- 3 x Art.-Nr. 09604.200X, LORO-X Hanger bolt
- 4 x Art.-Nr. 00911.100X, LORO-X Sealing elements
- 1 x Art.-Nr. 00986.000X, LORO-X Lubricant

hQ - Discharge curve



CAD



System power

System shape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/s		0.5	0.7	0.9	1.1	1.4	1.7	1.9	2.2	2.4	2.5	2.8	3.1	3.2	3.4
Silent																

LORO-X Parapet-Direct, without roof penetration

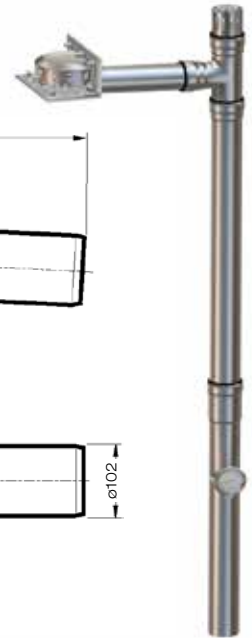
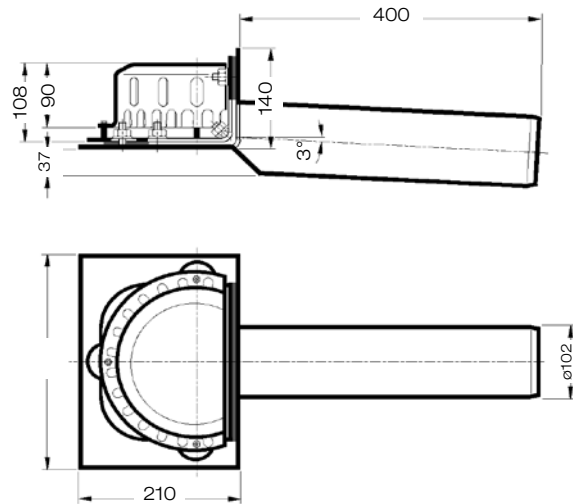
DN 100

LX1110-1X

Series 43

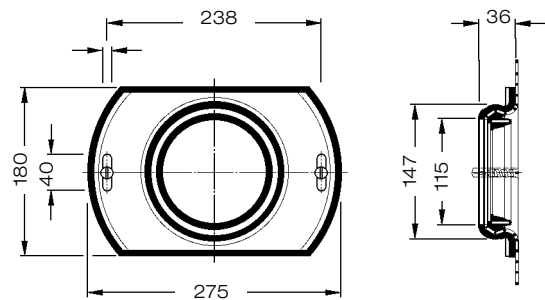
Drain Art.-No. 01333.100X
Weight: 5.5 kg

with clamping flange 90°
for plastic roofing sheets



Sliding flange for LORO parapet direct drains

with pre-installed connection sleeve for vapor barrier made of plastic roofing sheets, made of galvanized steel, including fastening screws
Art.-No. 13236.100X
Weight: 1.5 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 650

Parapet drainage system

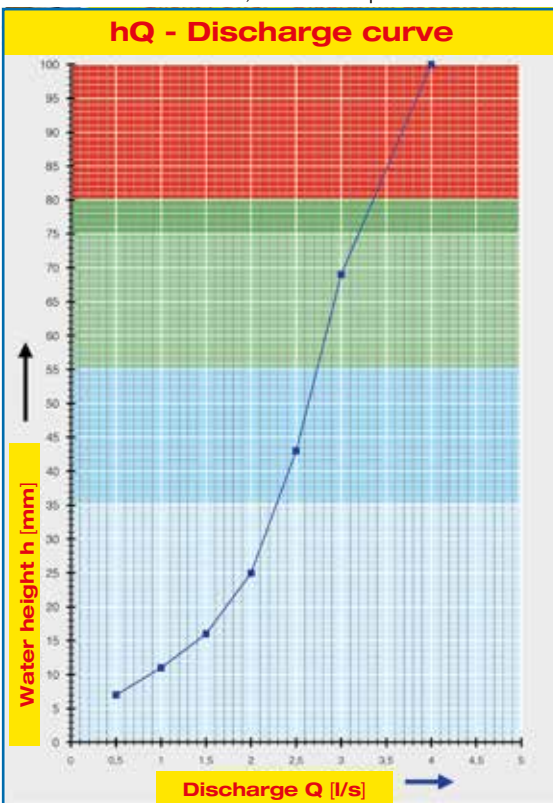
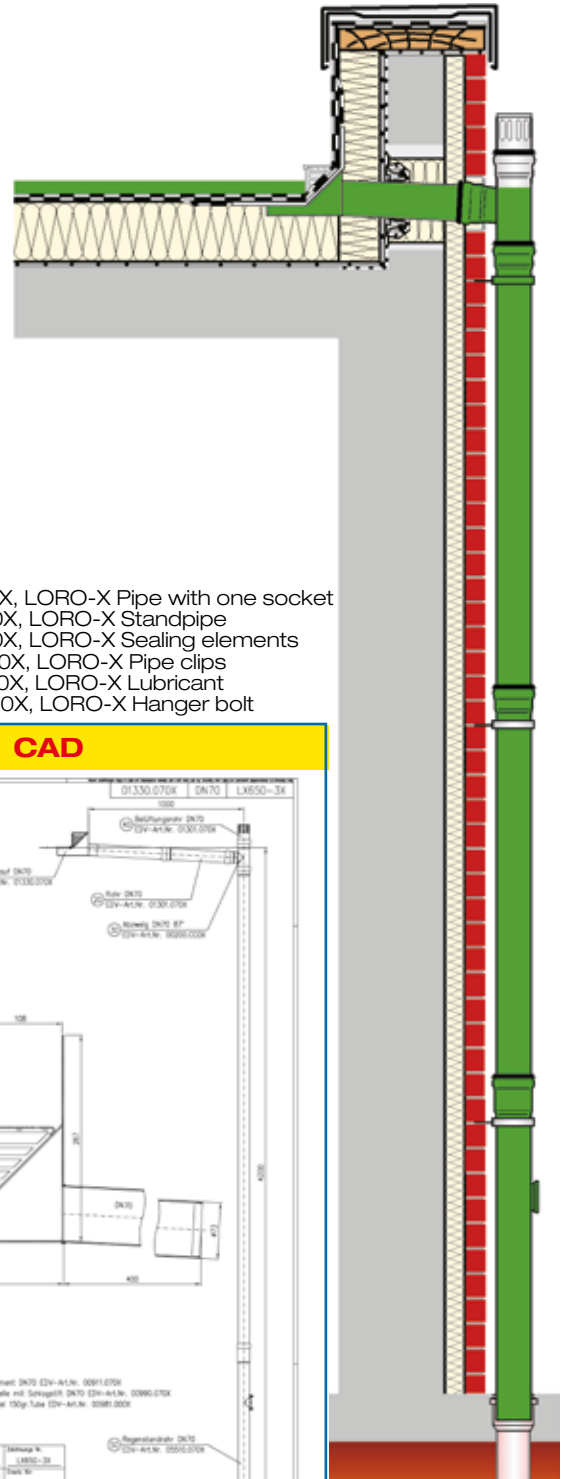
Series 43 Parapet-Direct with basin

Main drainage	
Gravity flow	
Silent	
Discharge rate:	2.3 l/s
Water height:	35 mm
Roof penetration:	52 mm
Diameter:	DN 70
LX-Number:	LX 650
Weir height:	0 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	4.2 m
Drainage:	in sewer
Flange form:	bonding flange 45°

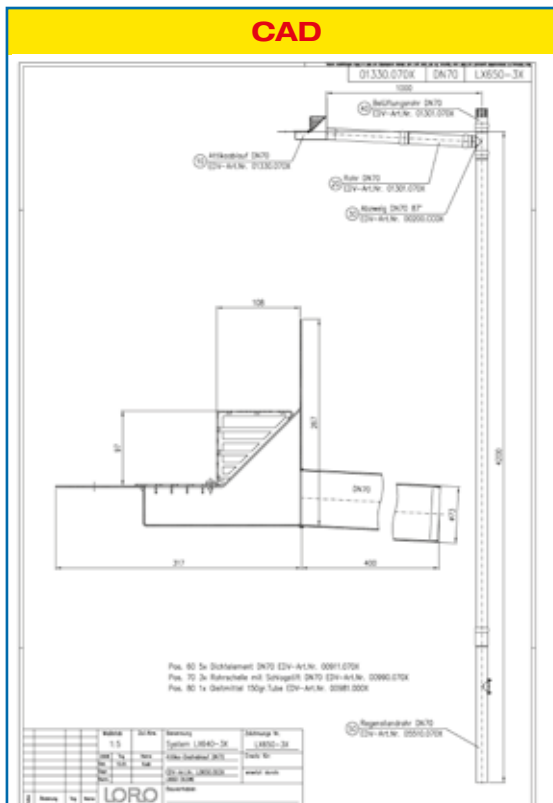
LX 650 Piece list

- 1 x Art.-No. 01330.070X, Parapet direct drain
- 1 x Art.-No. 01317.000X, LORO-X insulation block
- 1 x Art.-No. 13235.070X, LORO Sliding flange
- 1 x Art.-No. 01301.070X, LORO-X Pipe with one socket
- 1 x Art.-No. 00200.CC0X, LORO-X Branch
- 1 x Art.-No. 13217.070X, Ventilation piece

- 1 x Art.-No. 01001.070X, LORO-X Pipe with one socket
- 1 x Art.-No. 05510.070X, LORO-X Standpipe
- 5 x Art.-No. 00911.070X, LORO-X Sealing elements
- 3 x Art.-No. 00973.070X, LORO-X Pipe clips
- 1 x Art.-No. 00986.000X, LORO-X Lubricant
- 3 x Art.-No. 09603.200X, LORO-X Hanger bolt



System power



System shape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/s		0.9	1.4	1.7	2.0	2.1	2.3	2.4	2.6	2.7	2.8	2.9	2.9	3	3.2
Silent																

LORO-X Parapet-Direct, with basin

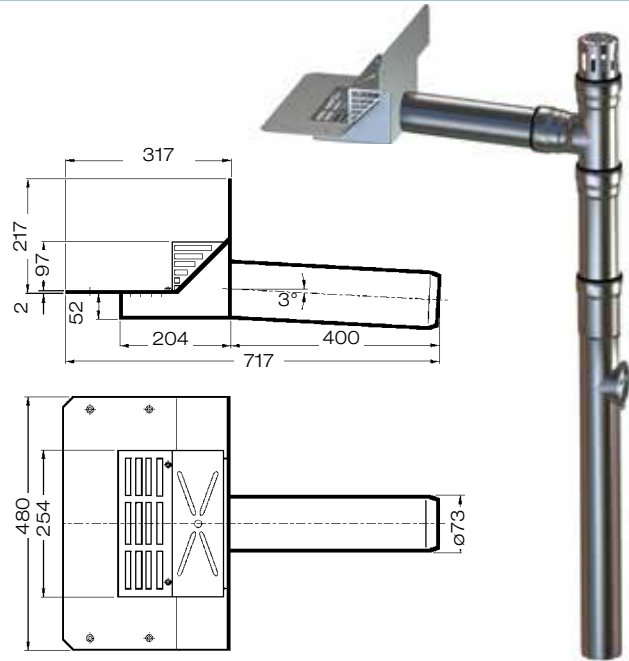
DN 70

LX650-3X

Series 43

Drain Art.-No. 01330.070X
Weight: 7.0 kg

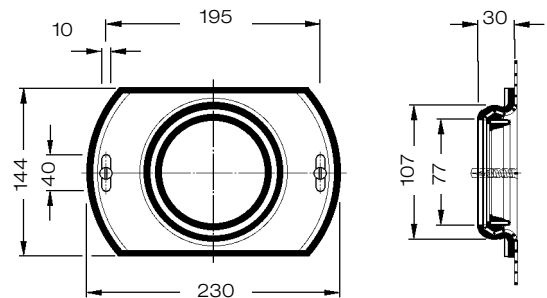
with bonding flange
for bituminous roofing sheets



Sliding flange for

LORO parapet direct drains

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws
Art.-No. 13235.070X
Weight: 1.4 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 647

Parapet drainage system Series 43 Parapet-Direct with basin

Main drainage

Gravity flow

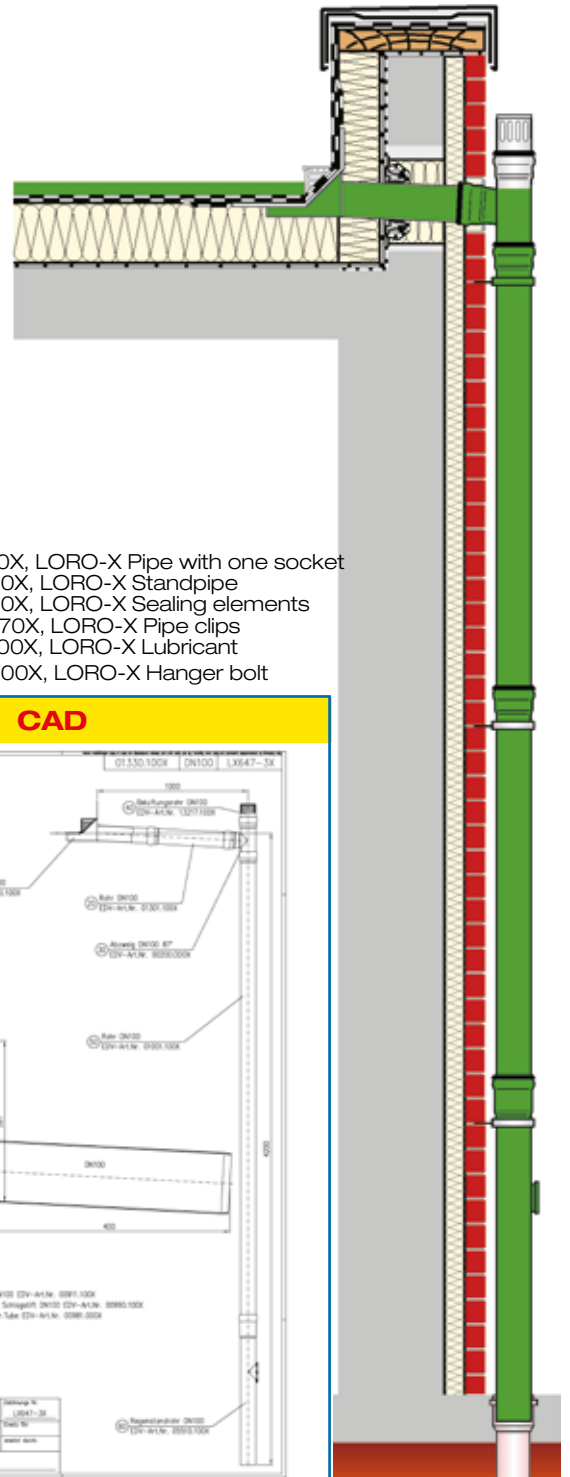
Silent

Discharge rate:	3.0 l/s
Water height:	35 mm
Roof penetration:	52 mm
Diameter:	DN 100
LX-Number:	LX 647
Weir height:	0 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	4.2 m
Drainage:	in sewer
Flange form:	bonding flange 45°

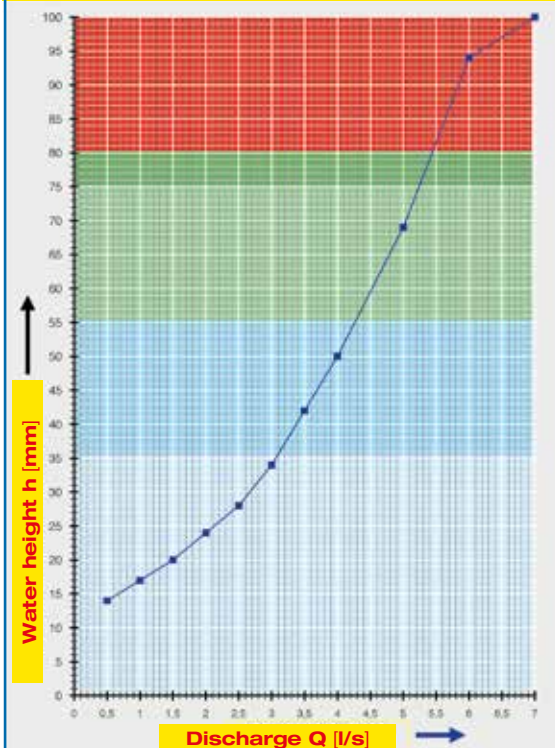
LX 647 Piece list

- 1 x Art.-No. 01330.100X, Parapet direct drain
- 1 x Art.-No. 01317.000X, LORO-X insulation block
- 1 x Art.-No. 13235.100X, LORO Sliding flange
- 1 x Art.-No. 01301.100X, LORO-X Pipe with one socket
- 1 x Art.-No. 00200.DD0X, LORO-X Branch
- 1 x Art.-No. 13217.100X, Ventilation piece

- 1 x Art.-No. 01001.100X, LORO-X Pipe with one socket
- 1 x Art.-No. 05510.100X, LORO-X Standpipe
- 5 x Art.-No. 00911.100X, LORO-X Sealing elements
- 3 x Art.-No. 00975.070X, LORO-X Pipe clips
- 1 x Art.-No. 00986.000X, LORO-X Lubricant
- 3 x Art.-No. 09604.200X, LORO-X Hanger bolt

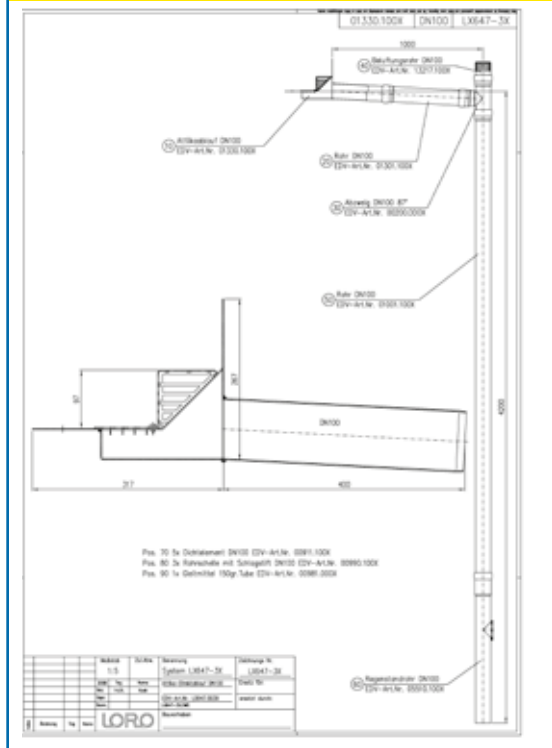


hQ - Discharge curve



System power

CAD



System shape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/s			0.8	1.5	2.1	2.6	3.0	3.4	3.7	4	4.3	4.5	4.8	5	5.2
Silent																

LORO-X Parapet-Direct, with basin

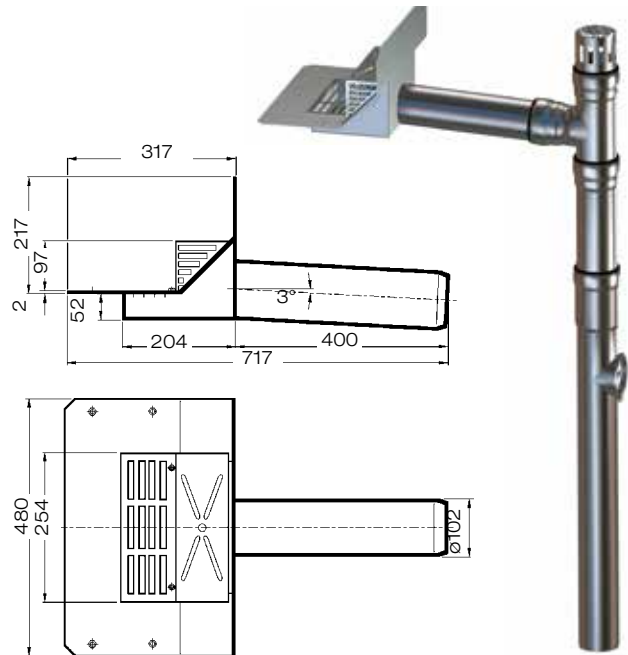
DN 100

LX647-3X

Series 43

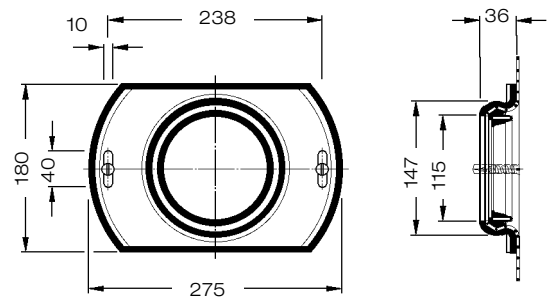
Drain Art.-No. 01330.100X
Weight: 9.2 kg

with bonding flange
for bituminous roofing sheets



Sliding flange for LORO parapet direct drains

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws Art.-No. 13235.100X
Weight: 1.7 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 694

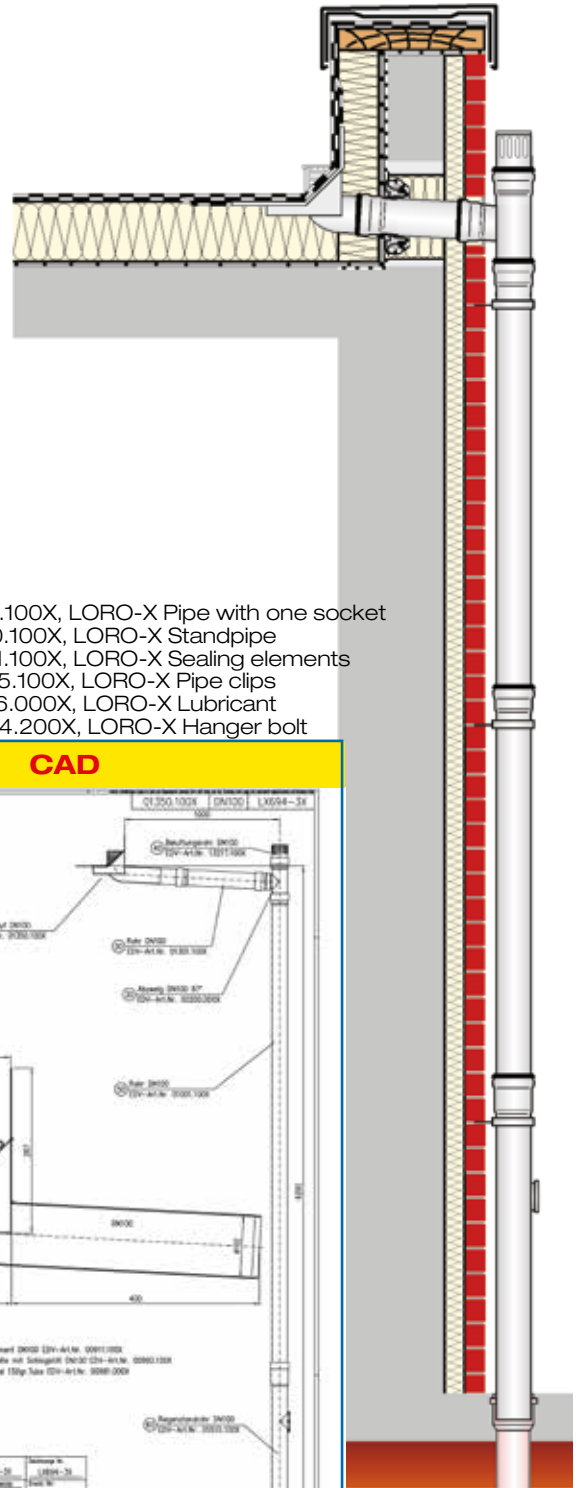
Parapet drainage system Series 43 Parapet-Direct with basin

Main drainage

Gravity flow

Silent

Discharge rate:	4.5 l/sec
Water height:	35 mm
Roof penetration:	103 mm
Diameter:	DN 100
LX-Number:	LX 694
Weir height:	0 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	4.2 m
Drainage:	in sewer
Flange form:	bonding flange 45°

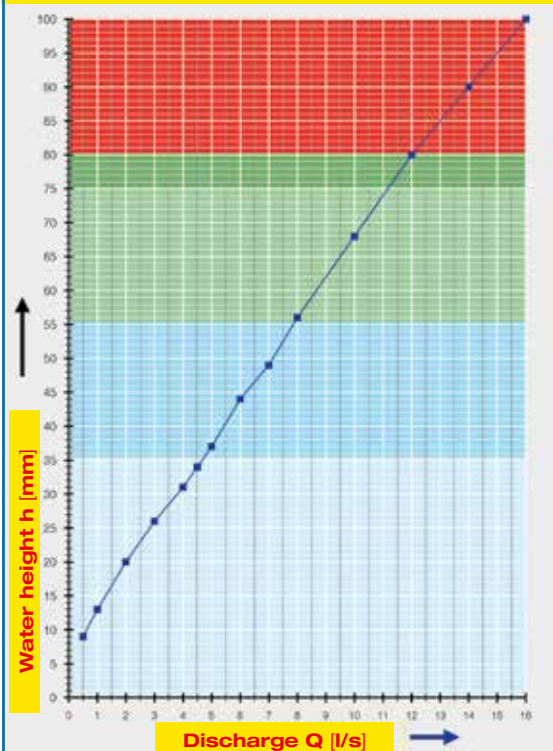


LX 694 Piece list

- 1 x Art.-No. 01350.100X, Parapet direct drain
- 1 x Art.-No. 01319.000X, LORO-X insulation block
- 1 x Art.-No. 01301.100X, LORO-X Pipe with one socket
- 1 x Art.-No. 13235.100X, LORO Sliding flange
- 1 x Art.-No. 00200.DD0X, LORO-X Branch
- 1 x Art.-No. 13217.100X, LORO-X Ventilation piece

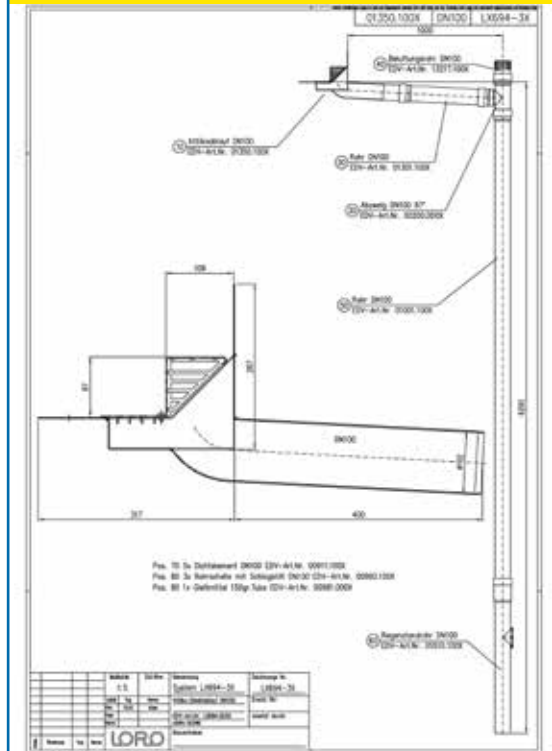
- 1 x Art.-No. 01001.100X, LORO-X Pipe with one socket
- 1 x Art.-No. 05510.100X, LORO-X Standpipe
- 5 x Art.-No. 00911.100X, LORO-X Sealing elements
- 3 x Art.-No. 00975.100X, LORO-X Pipe clips
- 1 x Art.-No. 00986.000X, LORO-X Lubricant
- 3 x Art.-No. 09604.200X, LORO-X Hanger bolt

hQ - Discharge curve



System power

CAD



System shape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/s		0.6	1.2	2.0	2.7	3.7	4.5	5.5	6	7	8	8.2	9.5	10.2	11.1
Silent																

LORO-X Parapet-Direct, with basin

DN 100

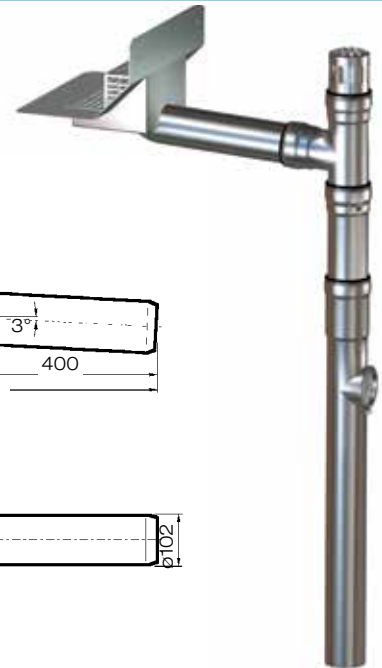
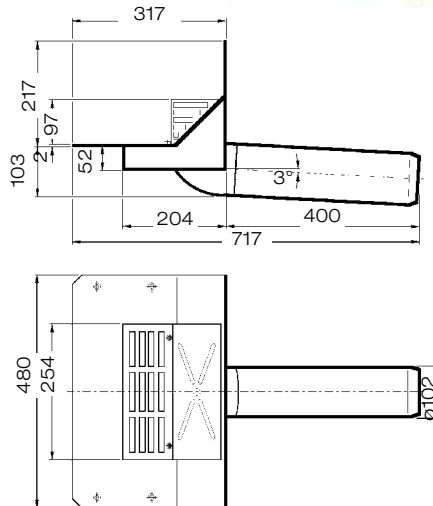
LX694-3X

Series 43

Drain Art.-No. 01350.100X

Weight: 8.0 kg

with bonding flange
for bituminous roofing sheets

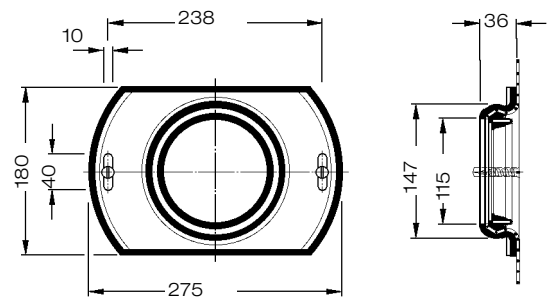


Sliding flange for LORO parapet direct drains

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws

Art.-No. 13235.100X

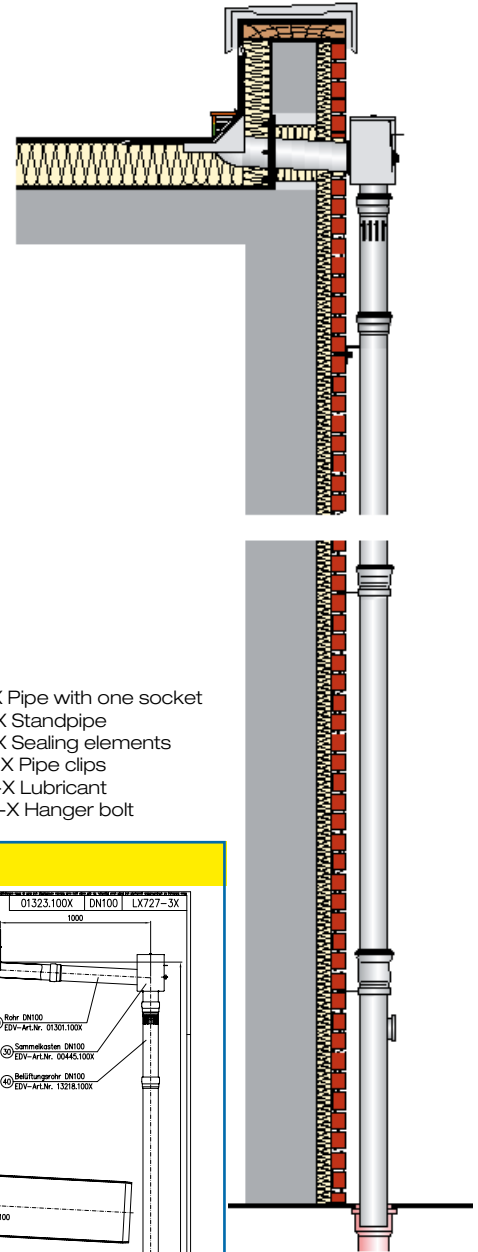
Weight: 1.7 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 727

Parapet Drainage Series 43 Parapet-Direct main emergency combination

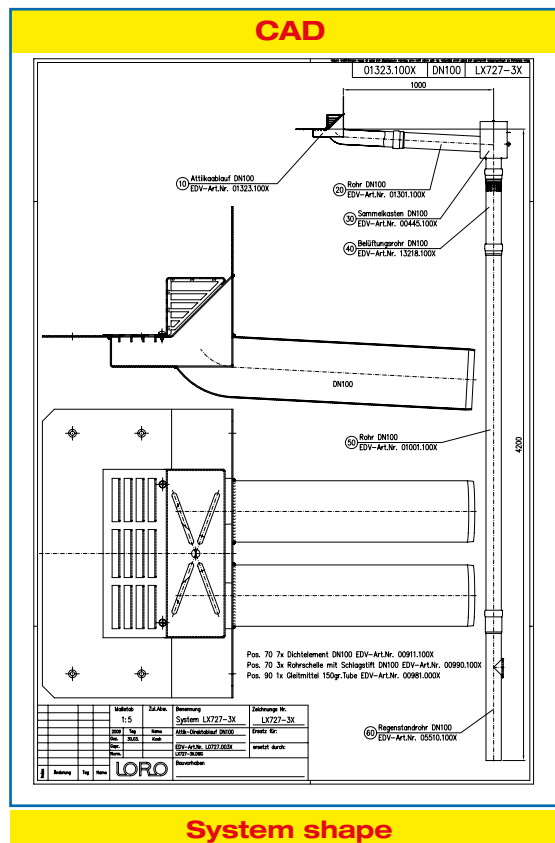
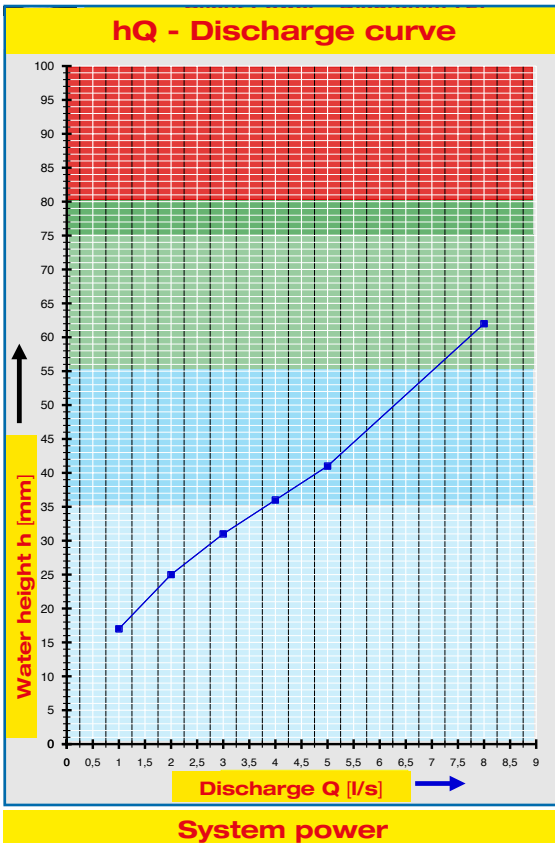


main emergency combination		main emergency combination	
Gravity flow		Gravity flow	
Silent		Silent	
Discharge rate:	4.0 l/s	Discharge rate:	4.0 l/s
Water height:	35 mm	Water height:	75 mm
Roof penetration:	103 mm	Roof penetration:	103 mm
Diameter:	DN 100	Diameter:	DN 100
LX-Number:	LX 727	LX-Number:	LX 727
Weir height:	0 mm	Weir height:	variable
Drain:	ventilated	Drain:	ventilated
Downpipe:	ventilated	Downpipe:	-
Downpipe height:	min 4.2 m	Downpipe height:	0 m
Drainage:	in sewer	Drainage:	into the open
Flange form:	bonding flange	Flange form:	bonding flange

LX 727 Piece list

- 1 x Art.-No. 01324.100X, Double pipe parapet direct drain
- 1 x Art.-No. 01321.000X, LORO-X insulation block
- 2 x Art.-No. 01301.100X, LORO-X Pipe with one socket
- 1 x Art.-No. 13228.100X, LORO Sliding flange
- 1 x Art.-No. 00445.100X, LORO-X Collector box for double pipe
- 1 x Art.-No. 13218.100X, LORO-X Ventilation piece

- 1 x Art.-Nr. 01001.100X, LORO-X Pipe with one socket
- 1 x Art.-Nr. 05510.100X, LORO-X Standpipe
- 6 x Art.-Nr. 00911.100X, LORO-X Sealing elements
- 3 x Art.-Nr. 00975.100X, LORO-X Pipe clips
- 1 x Art.-Nr. 00986.000X, LORO-X Lubricant
- 3 x Art.-Nr. 09604.200X, LORO-X Hanger bolt

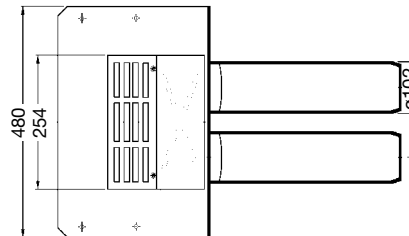
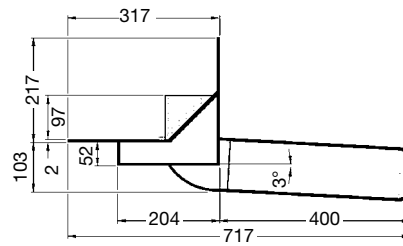


Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	
Discharge	l/s			0.9	1.7	2.0	2.9	4.0	4.7	5.5	6.7	7.0	7.7	8.0	8.0	8.0	
		Silent							Silent Power								

LORO-X double pipe parapet direct drain, with basin

Individual component
LORO-X double pipe
parapet direct drain
 with bonding flange for
bituminous roofing sheets

Drain: Art.-No. 01324.100X
 Weight: 10.7 kg



Individual component
LORO-X drain collector box

for LORO-X main emergency combination
 double pipe parapet direct drain with height-adjustable weir,
 made of galvanized steel, DN 100
 Art.-No. 00445.100X
 Weight: 5.0 kg



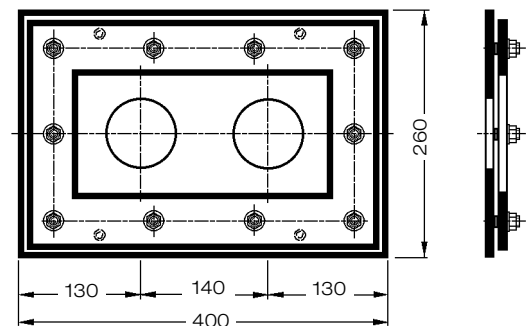
Individual component
LORO-X ventilation pipe

for LORO-X main emergency combination
 double pipe parapet direct drain,
 made of galvanized steel, DN 100
 Art.-No. 13218.100X
 Weight: 3.7 kg



Individual component
Sliding flange for
LORO-X parapet direct drains

for attaching the vapor barrier,
 as fixed and loose flange construction,
 made of galvanized steel,
 including sealing elements
 Art.-No. 13228.100X
 Weight: 4.9 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 653

Parapet Drainage Series 43 Parapet-Direct with double pipe

Main drainage

Gravity flow

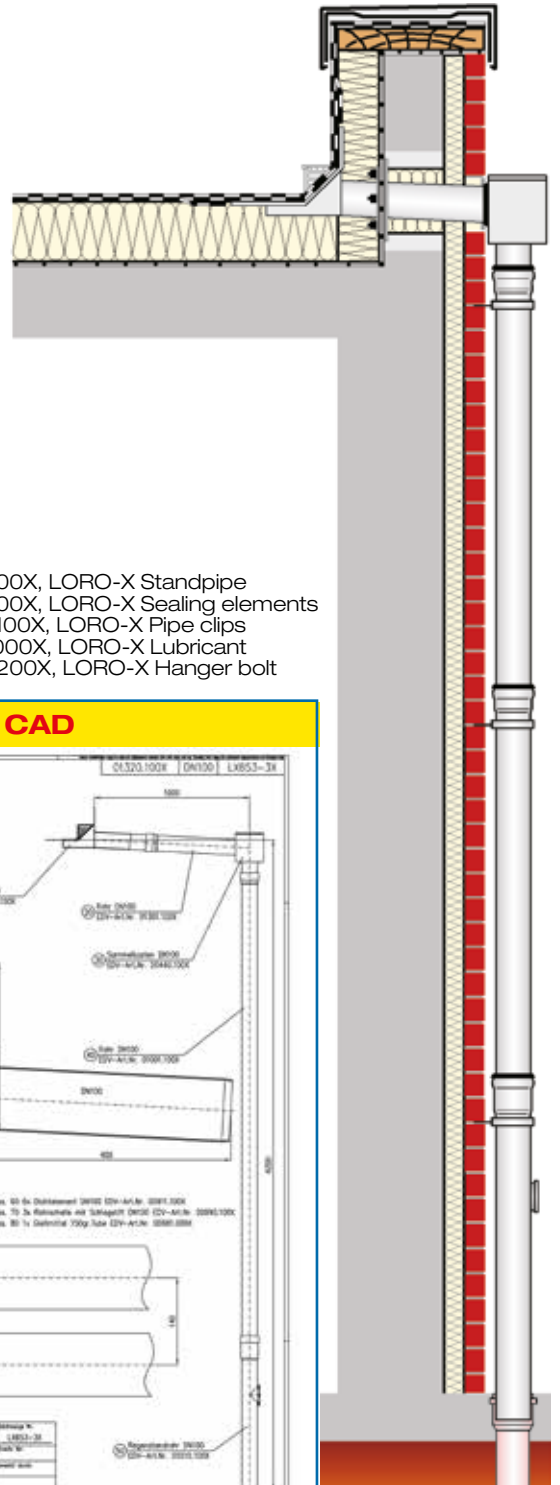
Silent

Discharge rate:	4.5 l/s
Water height:	35 mm
Roof penetration:	52 mm
Diameter:	DN 100
LX-Number:	LX 653
Weir height:	0 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	4.2 m
Drainage:	in sewer
Flange form:	bonding flange 45°

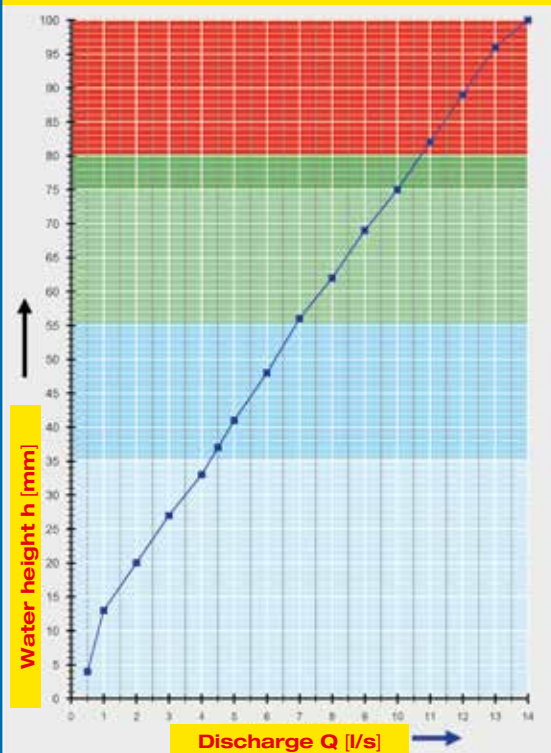
LX 653 Piece list

1 x Art.-No. 01320.100X, Parapet direct drain
 1 x Art.-No. 01317.000X, LORO-X insulation block
 1 x Art.-No. 01301.100X, LORO-X Pipe with one socket
 1 x Art.-No. 13228.100X, LORO Sliding flange
 1 x Art.-No. 00440.100X, LORO-X Collector box
 1 x Art.-No. 01001.100X, LORO-X Pipe with one socket

1 x Art.-No. 05510.100X, LORO-X Standpipe
 6 x Art.-No. 00911.100X, LORO-X Sealing elements
 3 x Art.-No. 00975.100X, LORO-X Pipe clips
 1 x Art.-No. 00986.000X, LORO-X Lubricant
 3 x Art.-No. 09604.200X, LORO-X Hanger bolt

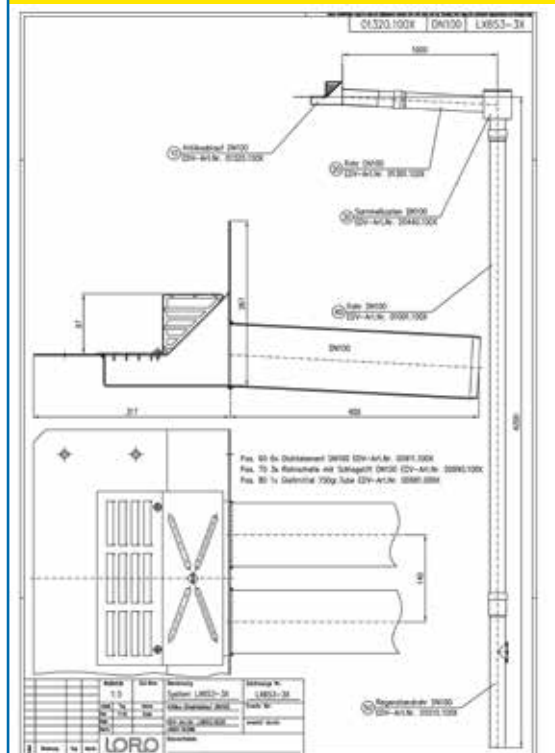


hQ - Discharge curve



System power

CAD



System shape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/s	0.4	0.8	1.2	2.0	2.7	3.5	4.5	5	5.5	6.2	7	7.8	8.4	9	10
Silent																

LORO-X Parapet-Direct, with double pipe

DN 100

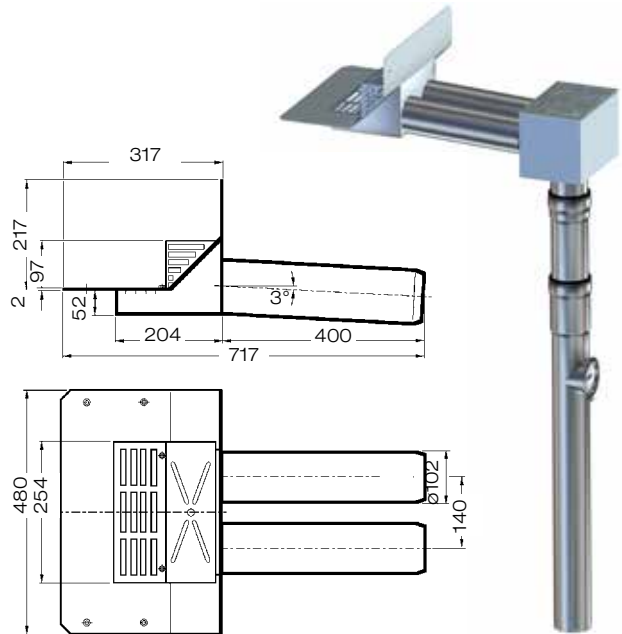
LX653-3X

Series 43

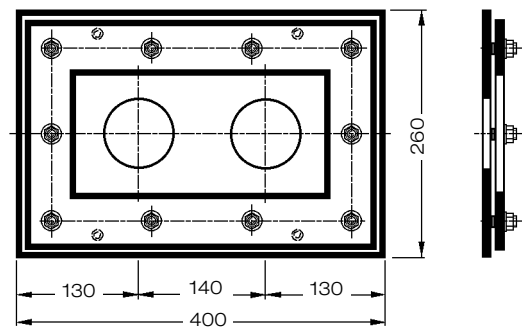
Drain Art.-No. 01320.100X

Weight: 8.4 kg

with bonding flange
for bituminous roofing sheets



Sliding flange for LORO parapet direct drains
for attaching the vapor barrier, fixed and loose flange construction, made of galvanized steel, including sealing elements
Art.-No. 13228.100X
Weight: 4.9 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 1605

Parapet Drainage Series 43 Parapet-Direct with basin, 40 mm weir

Emergency drainage

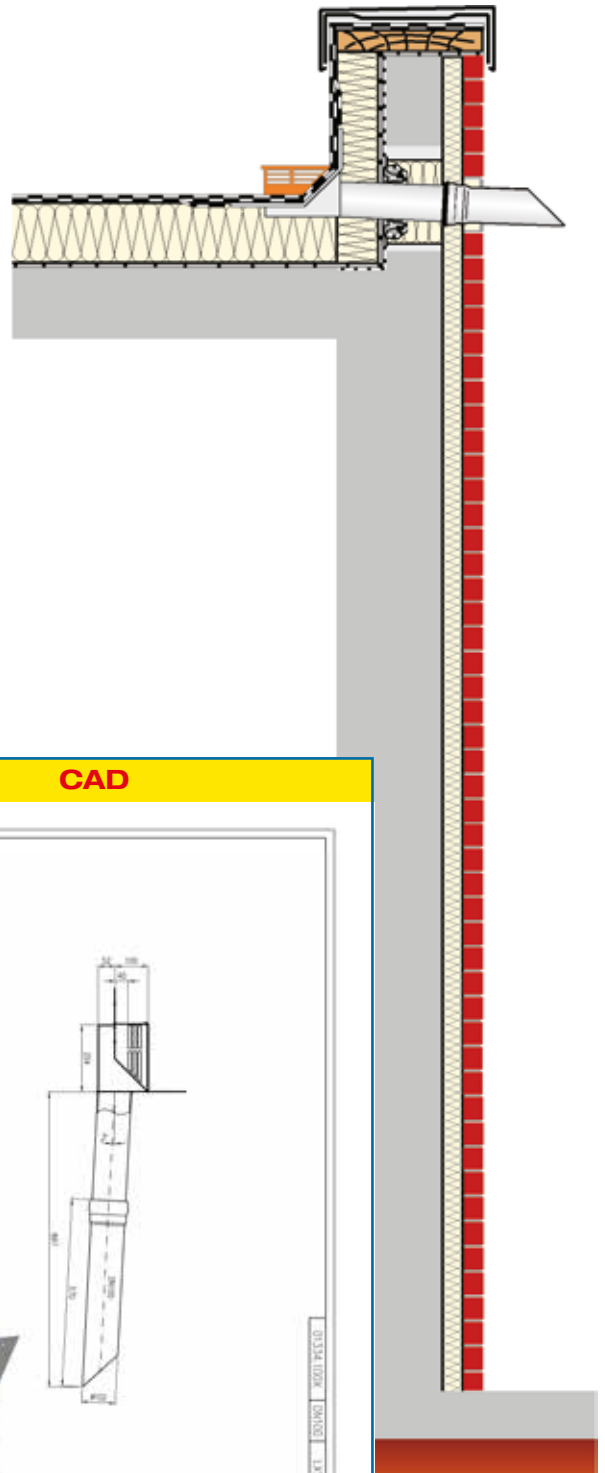
Gravity flow

Silent

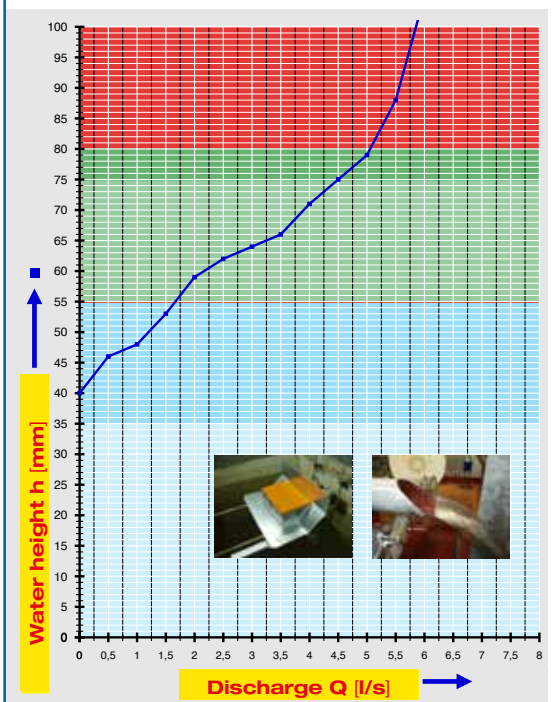
Discharge rate:	4.5 l/s
Water height:	75 mm
Roof penetration:	52 mm
Diameter:	DN 100
LX-Number:	LX 1605
Weir height:	40 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	-
Drainage:	into the open
Flange form:	bonding flange 45°

LX 1605 Piece list

- 1 x Art.-No. 01334.100X, Parapet direct drain
- 1 x Art.-No. 01317.000X, LORO-X insulation block
- 1 x Art.-No. 15199.100X, LORO-X Spout
- 1 x Art.-No. 13235.100X, LORO-X Sliding flange
- 1 x Art.-No. 00911.100X, LORO-X Sealing elements
- 1 x Art.-No. 00986.000X, LORO-X Lubricant

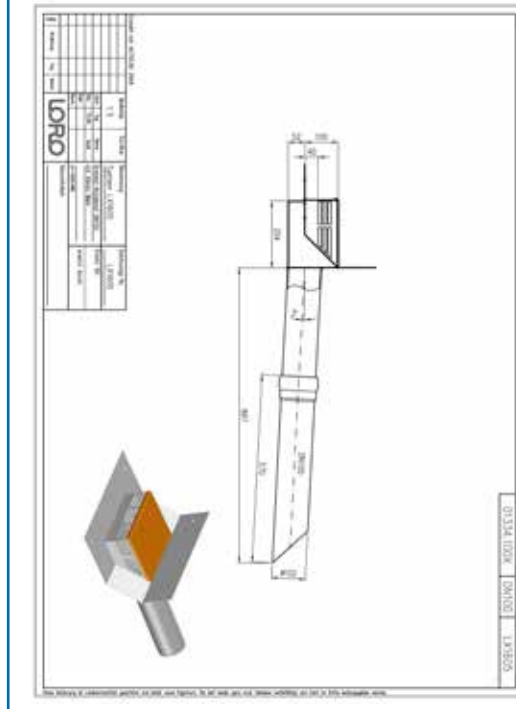


hQ - Discharge curve



System power

CAD



System shape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/s										1.2	1.7	2.2	3.3	3.9	4.5
Silent																

LORO-X Parapet-Direct emergency drainage, with basin, weir height 40 mm and DIN standard discharge rate of 4.5 l/s

DN 100

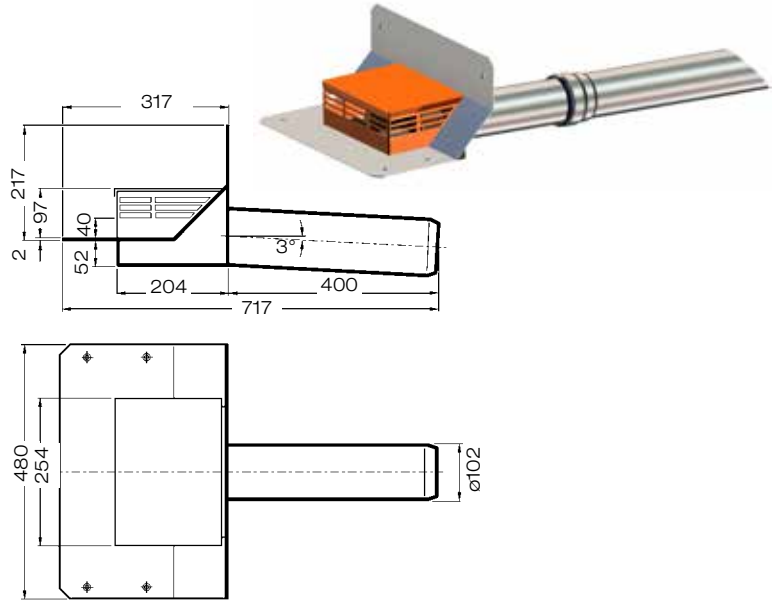
LX1605-3X

Series 43

Drain Art.-No. 01334.100X

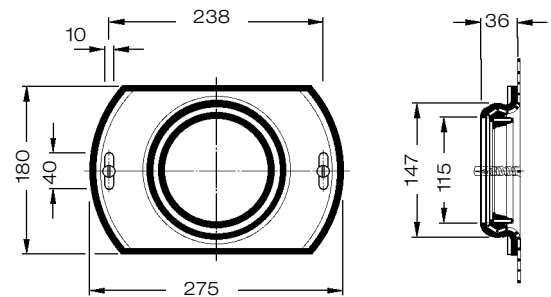
Weight: 7.6 kg

with bonding flange
for bituminous roofing sheets
weir height 40 mm



Sliding flange for LORO parapet direct drains

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws
Art.-No. 13235.100X
Weight: 1.7 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 1606

Parapet Drainage Series 43 Parapet-Direct with basin, 60 mm weir

Emergency drainage

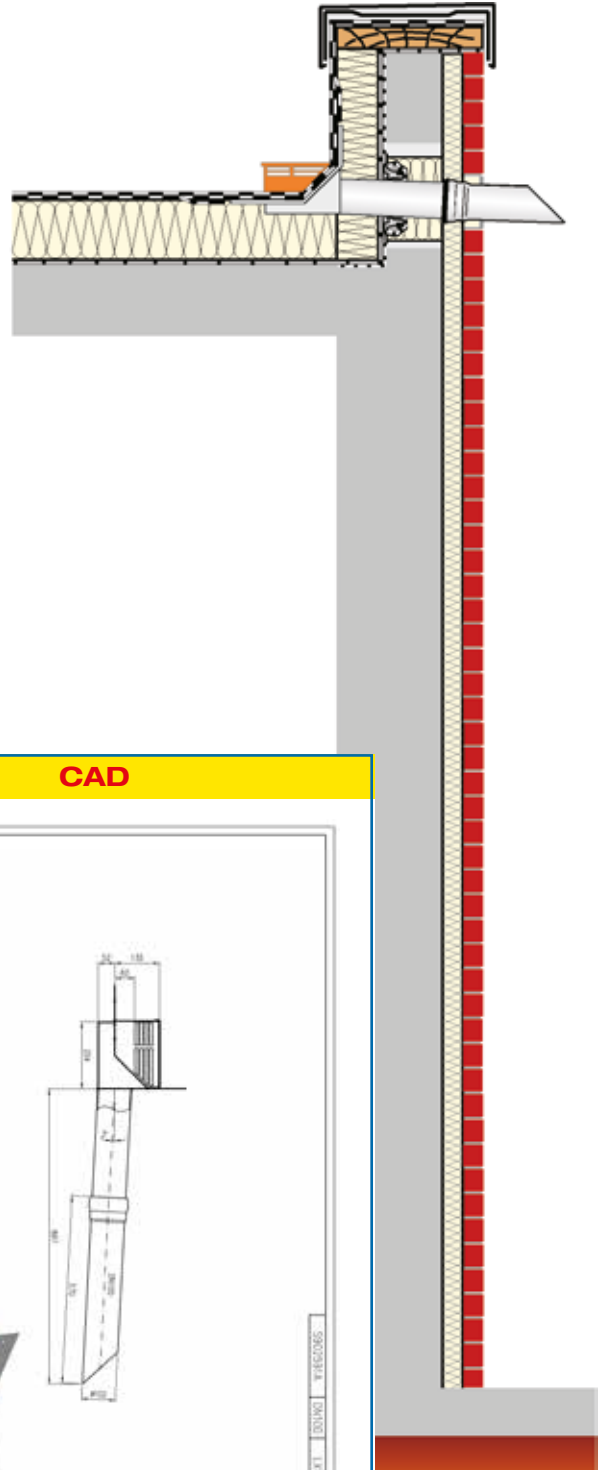
Gravity flow

Silent

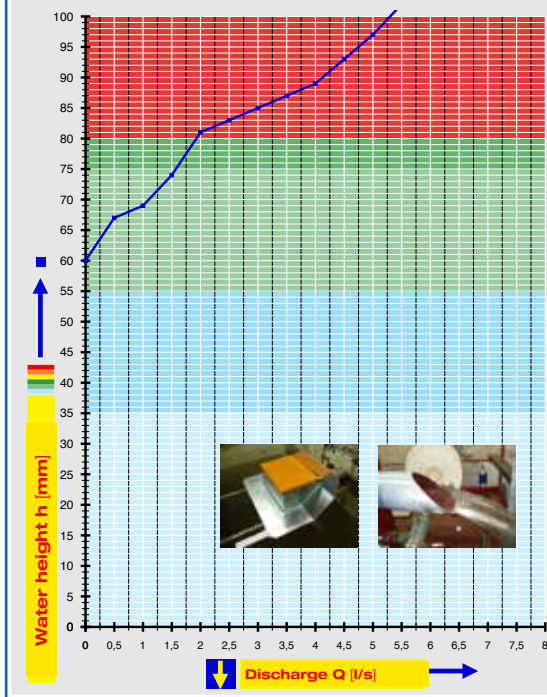
Discharge rate:	1.6 l/s
Water height:	75 mm
Roof penetration:	52 mm
Diameter:	DN 100
LX-Number:	LX 1606
Weir height:	60 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	-
Drainage:	on floor
Flange form:	bonding flange 45°

LX 1606 Piece list

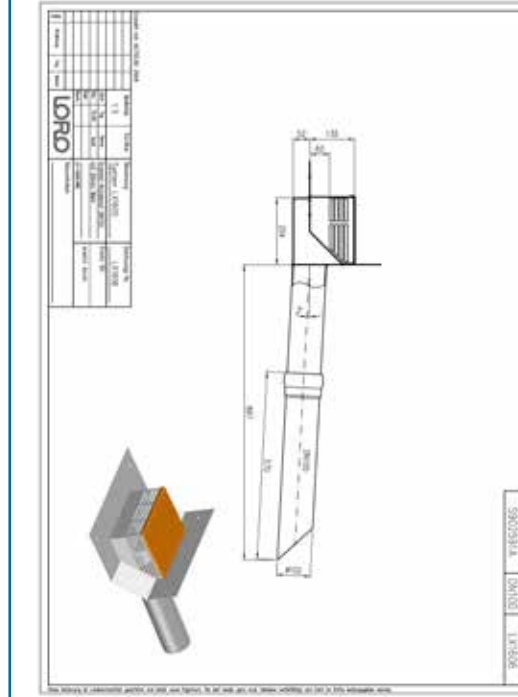
- 1 x Art.-No. 01336.100X, Parapet direct drain
- 1 x Art.-No. 01317.000X, LORO-X insulation block
- 1 x Art.-No. 15199.100X, LORO-X Spout
- 1 x Art.-No. 13235.100X, LORO-X Sliding flange
- 1 x Art.-No. 00911.100X, LORO-X Sealing elements
- 1 x Art.-No. 00986.000X, LORO-X Lubricant



hQ - Discharge curve



CAD



System power

System shape

Water height	mm	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Discharge	l/s	-	-	-	-	-	-	-	-	-	-	1.2	1.6	1.9	3.0	4.1	4.7	5.3
Silent																		

LORO-X Parapet-Direct emergency drainage, with basin, weir height 60 mm

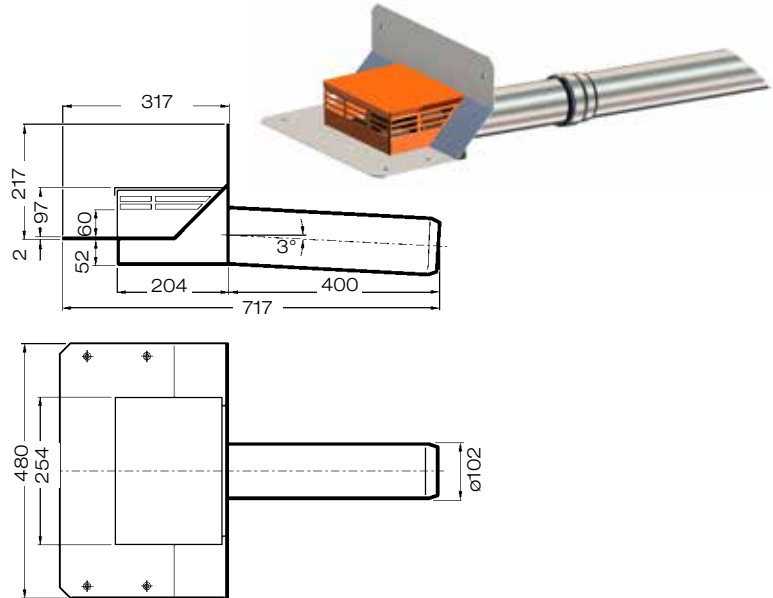
LX1606-3X

Series 43

Drain Art.-No. 01336.100X

Weight: 8.0 kg

with bonding flange
for bituminous roofing sheets
weir height 60 mm

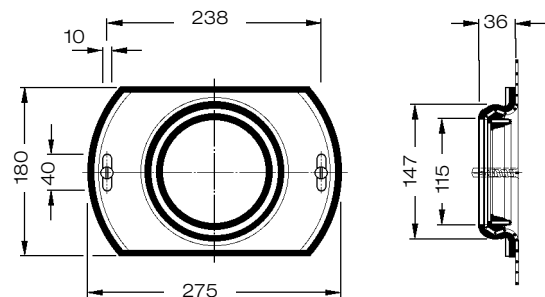


Sliding flange for LORO parapet direct drains

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws

Art.-No. 13235.100X

Weight: 1.7 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 1573

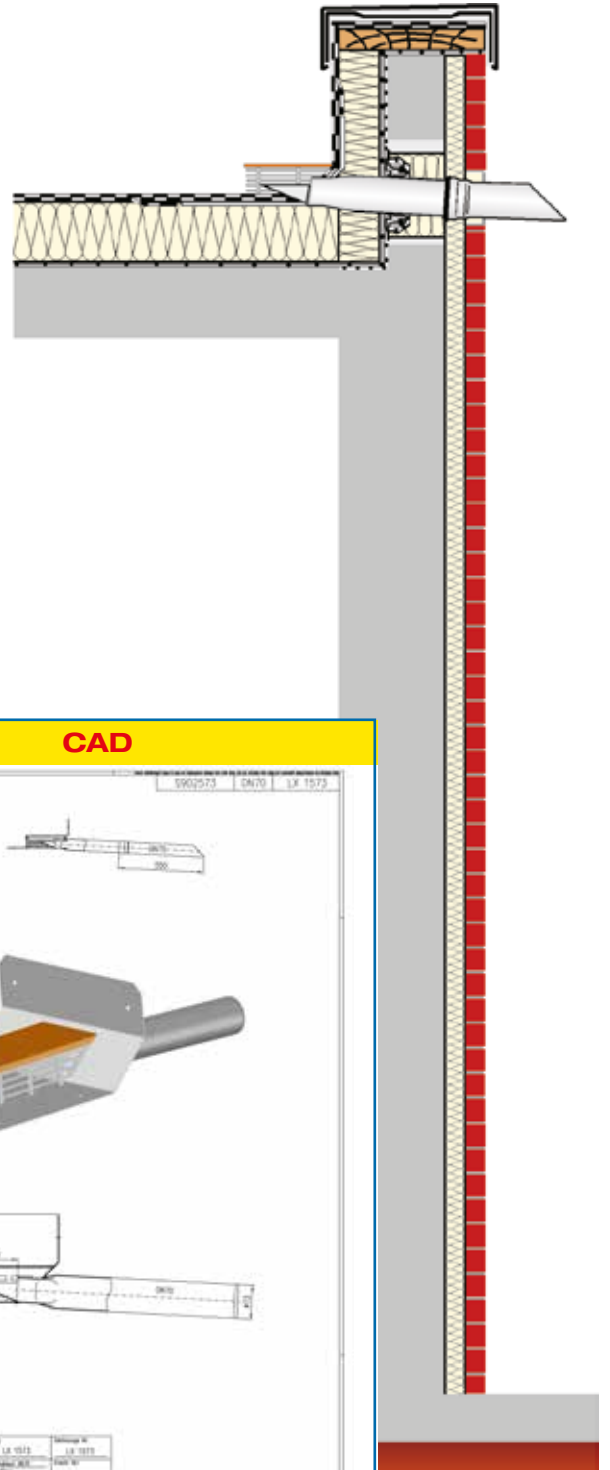
Parapet drainage system Series 43 Parapet direct for small roof areas, weir height 40 mm

Emergency drainage

Gravity flow

Silent

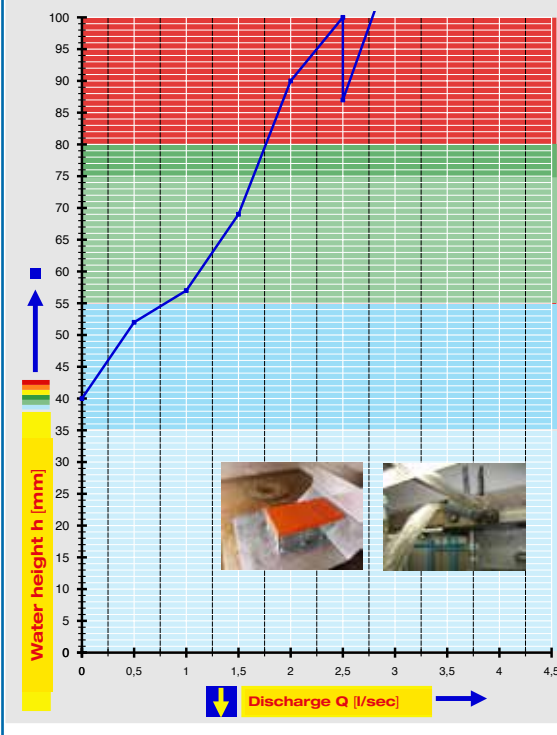
Discharge rate:	1,7 l/sec
Water height:	75 mm
Roof penetration:	0 mm
Diameter:	DN 70
LX-Number:	LX 1573
Weir height:	40 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	-
Drainage:	on floor
Flangeform:	Bonding flange



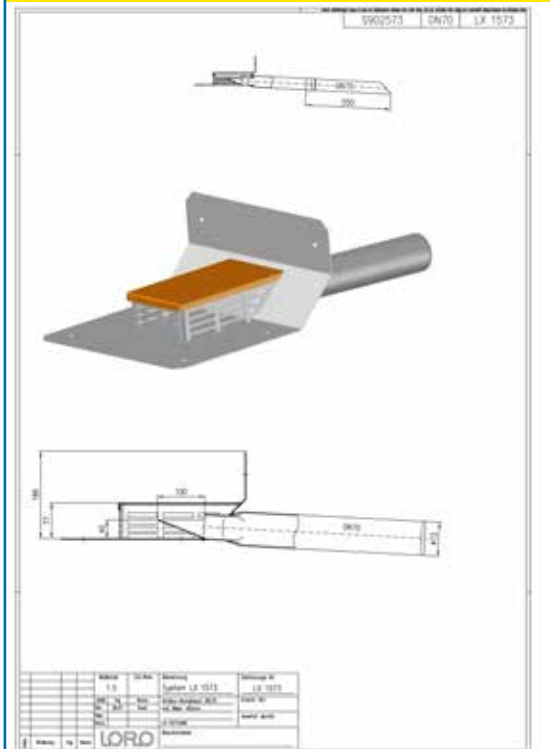
LX 1573 Piece list

- 1 x Art.-No. chose drain on page two!
- 1 x Art.-No. 15199.070X, LORO-X Spout
- 1 x Art.-No. 13235.070X, LORO-X Sliding flange
- 1 x Art.-No. 00911.070X, LORO-X Sealing element
- 1 x Art.-No. 00986.000X, LORO-X Lubricant

hQ - Head-Discharge curve



CAD



Systempower

Systemshape

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/sec											0,8	1,1	1,3	1,5	1,7
Silent																

Chosse drain for piece list on page one!

DN 70

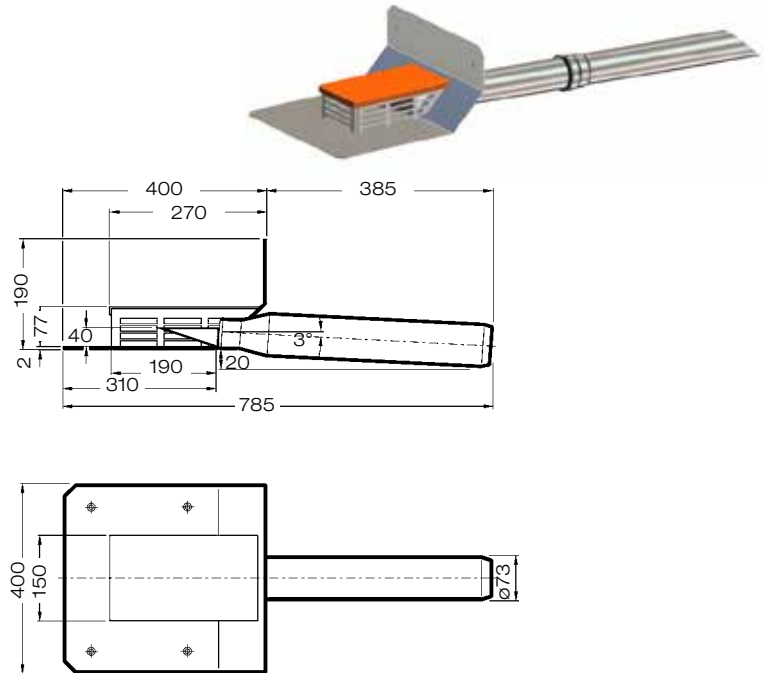
LX1573-3X

Series 43

Drain Art.-No. 01325.070X

Weight: 5,4 kg

with bonding flange
for bituminous roofing sheets
Weir height 40 mm



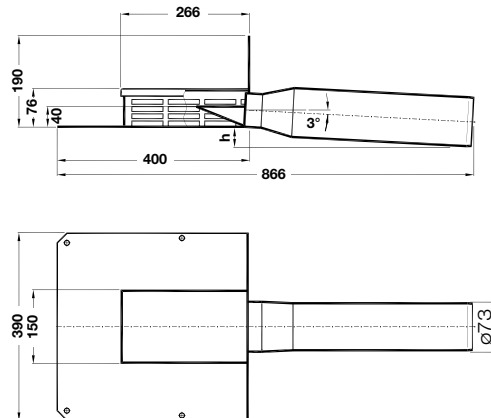
LX1573-21X

Series 43

Drain Art.-No. 01329.070X

Weight: 5,4 kg

with bonding flange 90°
for liquid plastic
40 mm weir height

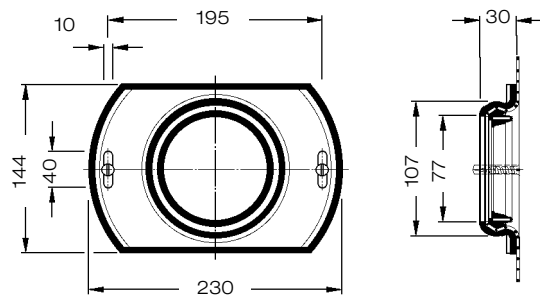


LORO-X Sliding flange

with pre-installed connection sleeve for vapor barrier made of bituminous or plastic-roofing sheets (please indicate manufacturer and material of the sealing sheet to be attached), made of galvanized steel, including fastening screws

Art.-No 13235.070X

Weight: 1,4 kg



Heat tracing: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be upgraded with heat tracing.

Specification sheet LX 1574

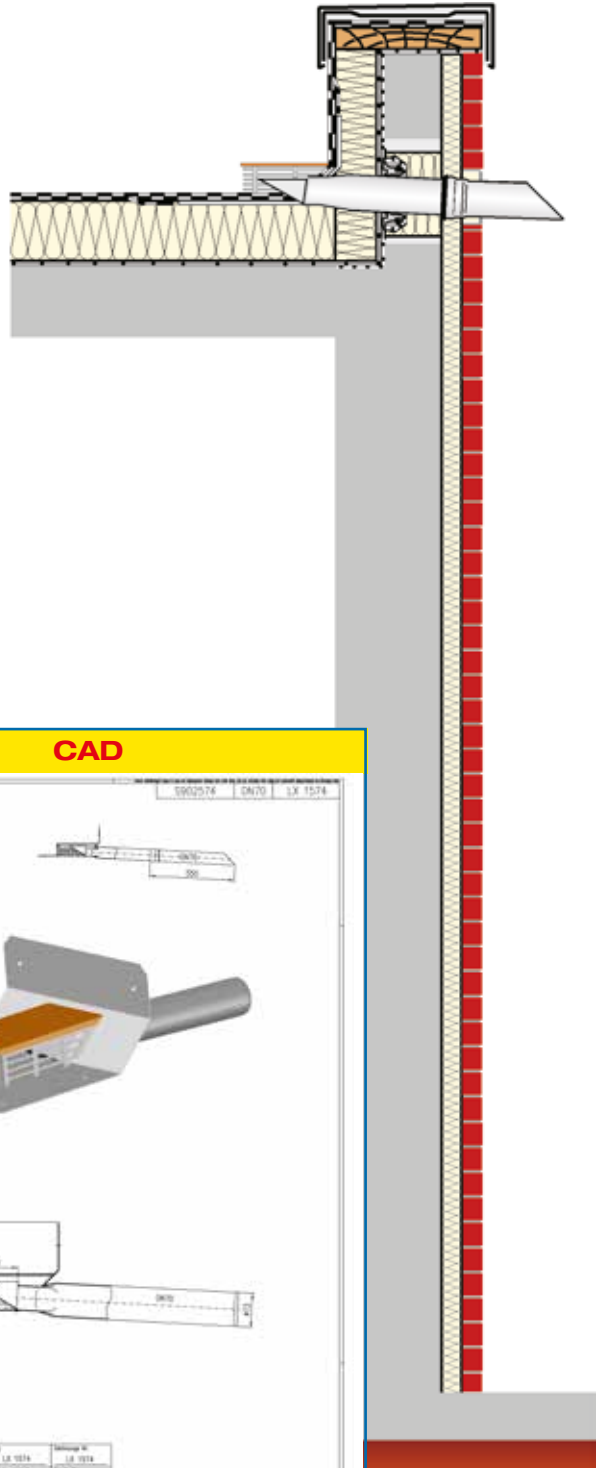
Parapet Drainage Series 43 Parapet-Direct for small roof areas, 60 mm weir

Emergency drainage

Gravity flow

Silent

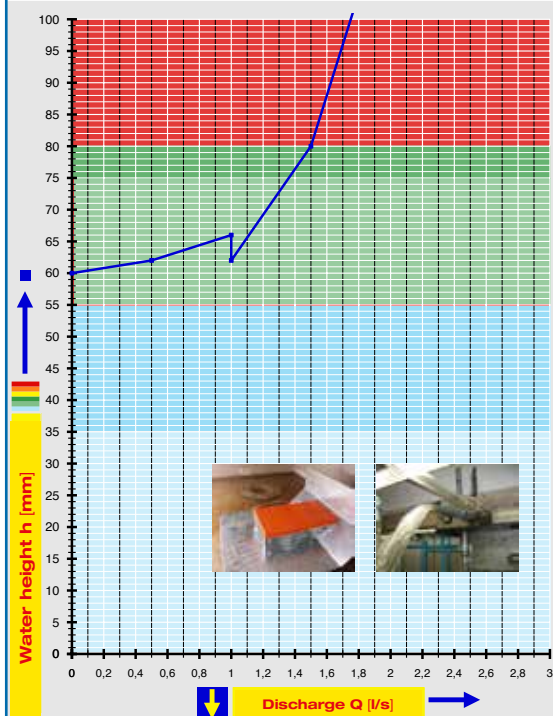
Discharge rate:	1.4 l/s
Water height:	75 mm
Roof penetration:	0 mm
Diameter:	DN 70
LX-Number:	LX 1574
Weir height:	60 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	-
Drainage:	on floor
Flange form:	bonding flange 45°



LX 1574 Piece list

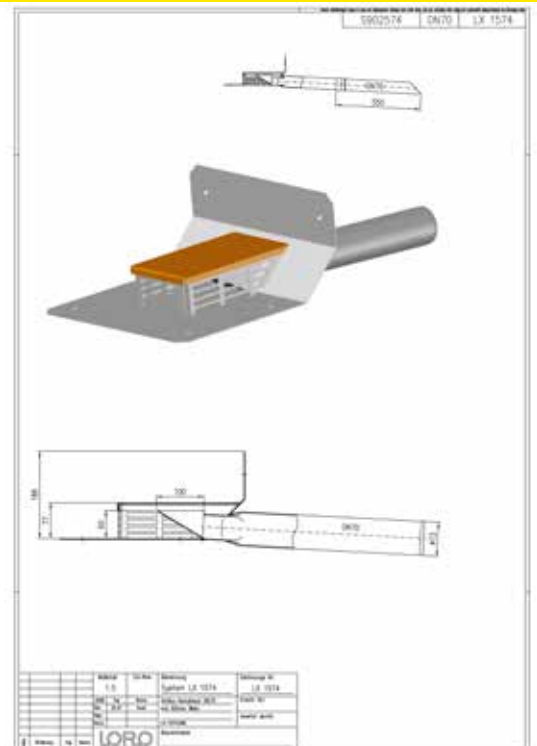
- 1 x Art.-No. 01326.070X, Parapet direct drain
- 1 x Art.-No. 15199.070X, LORO-X Spout
- 1 x Art.-No. 13235.070X, LORO-X Sliding flange
- 1 x Art.-No. 00911.070X, LORO-X Sealing elements
- 1 x Art.-No. 00986.000X, LORO-X Lubricant

hQ - Discharge curve



System power

CAD



System shape

Water height	mm	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Discharge	l/s	-	-	-	-	-	-	-	-	-	0.9	1.2	1.4	1.5	1.6	1.6	1.7	1.8
Silent																		

LORO-X Parapet-Direct emergency drainage, for small roof areas, weir height 60 mm

DN 70

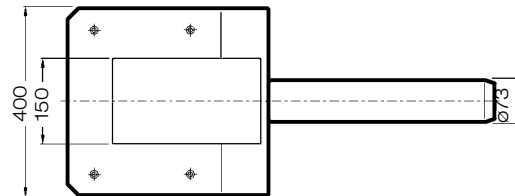
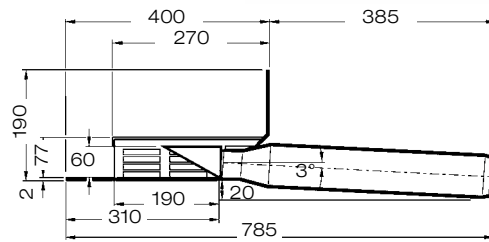
LX1574-3X

Series 43

Drain Art.-No. 01326.070X

Weight: 5.8 kg

with bonding flange
for bituminous roofing sheets
weir height 60 mm

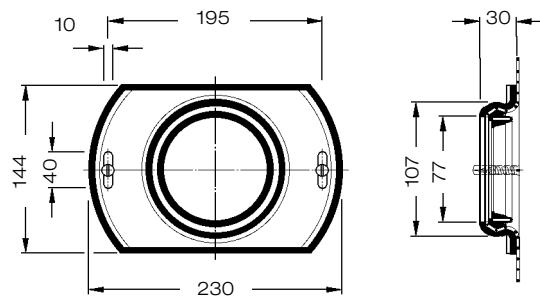


**Sliding flange for
LORO parapet direct drains**

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws

Art.-No. 13235.070X

Weight: 1.4 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Specification sheet LX 1575

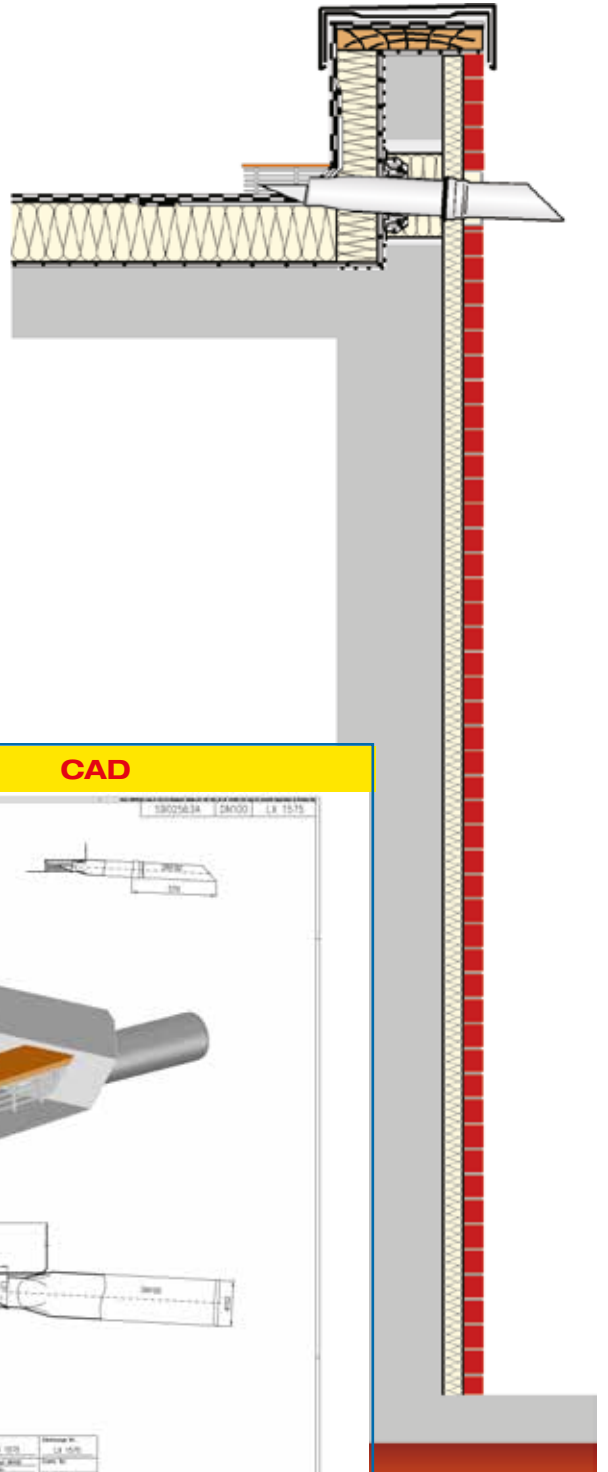
Parapet drainage system Series 43 Parapet direct for small roof areas, weir height 40 mm

Emergency drainage

Gravity flow

Silent

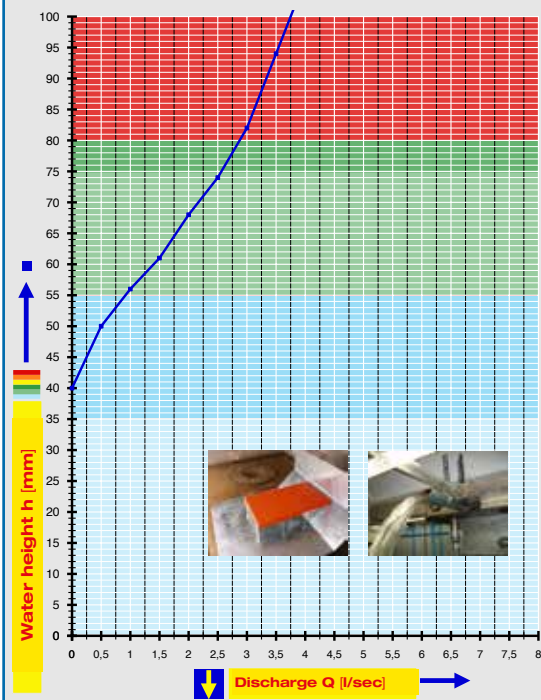
Discharge rate:	2,5 l/sec
Water height:	75 mm
Roof penetration:	0 mm
Diameter:	DN 100
LX-Number:	LX 1575
Weir height:	40 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	-
Drainage:	on floor
Flangeform:	Bondging flange



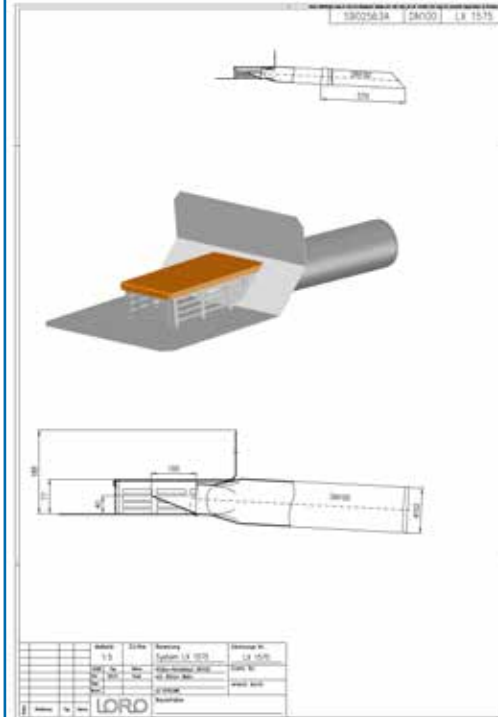
LX 1575 Piece list

- 1 x Art.-No. chose drain on page two!
- 1 x Art.-No. 15199.100X, LORO-X Spout
- 1 x Art.-No. 13235.100X, LORO-X Sliding flange
- 1 x Art.-No. 00911.100X, LORO-X Sealing element
- 1 x Art.-No. 00986.000X, LORO-X Lubricant

hQ - Head Discharge curve



CAD



Systemshape

Systemform

Water height	mm	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Discharge	l/sec										0,5	0,9	1,4	1,8	2,2	2,5
Silent																

Chosse drain for piece list on page one!

DN 100

LX1575-3X

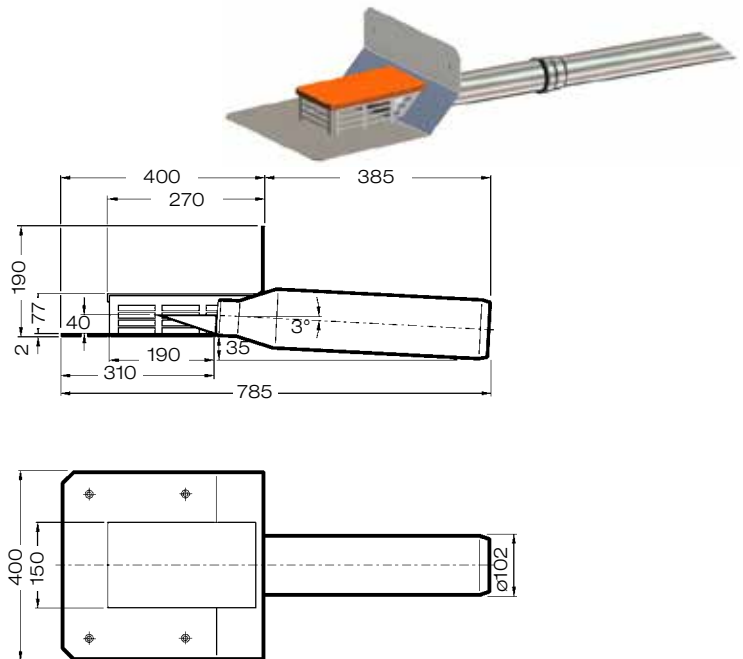
Series 43

Drain Art.-No. 01325.100X

Weight: 5,4 kg

for bituminous roofing sheets

Weir height 40 mm



LX1575-21X

Series 43

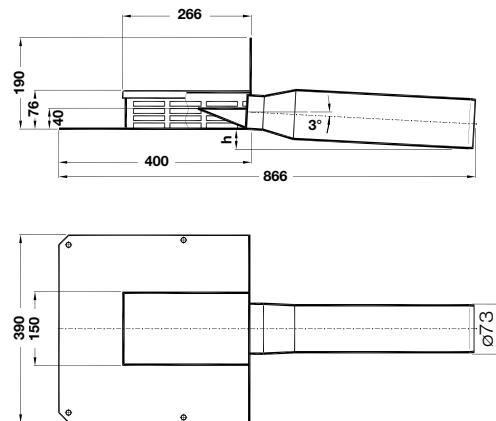
Drain Art.-No. 01329.100X

Weight: 6,9 kg

with bonding flange 90°

for liquid plastic

40 mm weir height

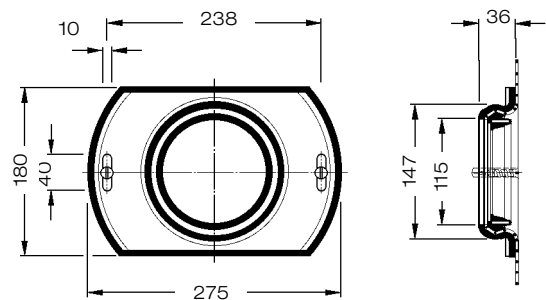


LORO-X Sliding flange

with pre-installed connection sleeve for vapor barrier made of bituminous or plastic-roofing sheets (please indicate manufacturer and material of the sealing sheet to be attached), made of galvanized steel, including fastening screws

Art.-No 13235.100X

Weight: 1,7 kg

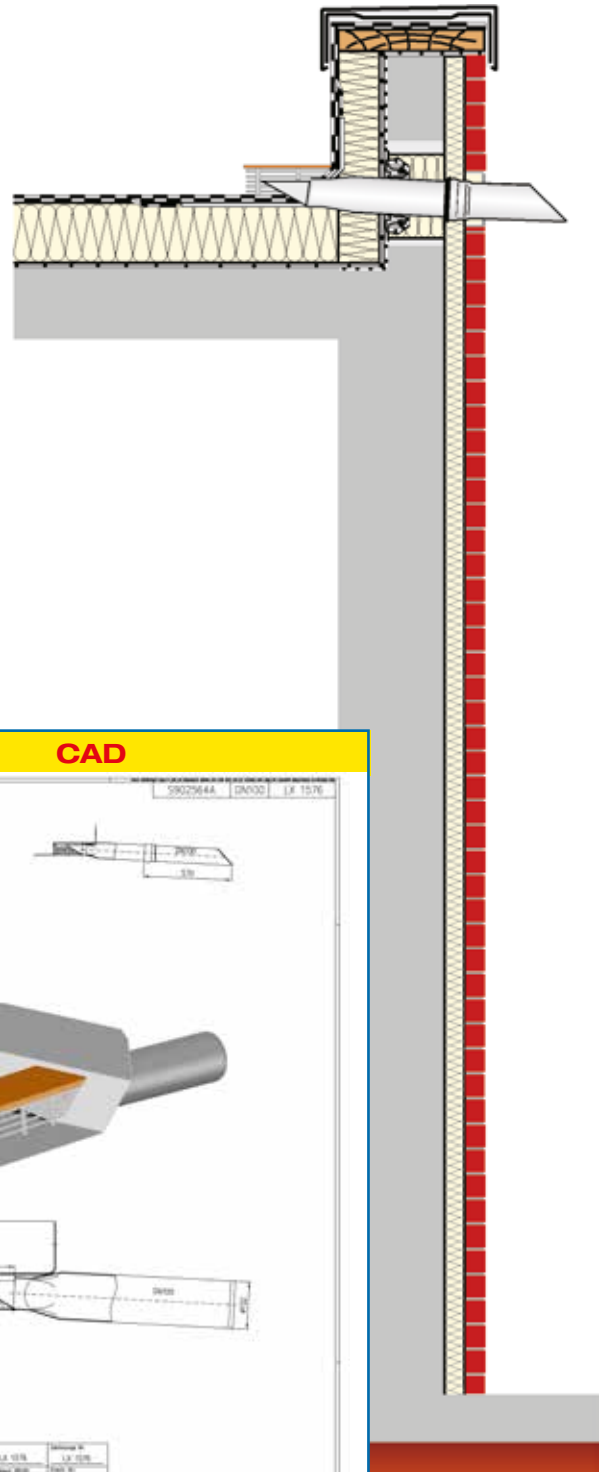


Heat tracing: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be upgraded with heat tracing.

Specification sheet LX 1576

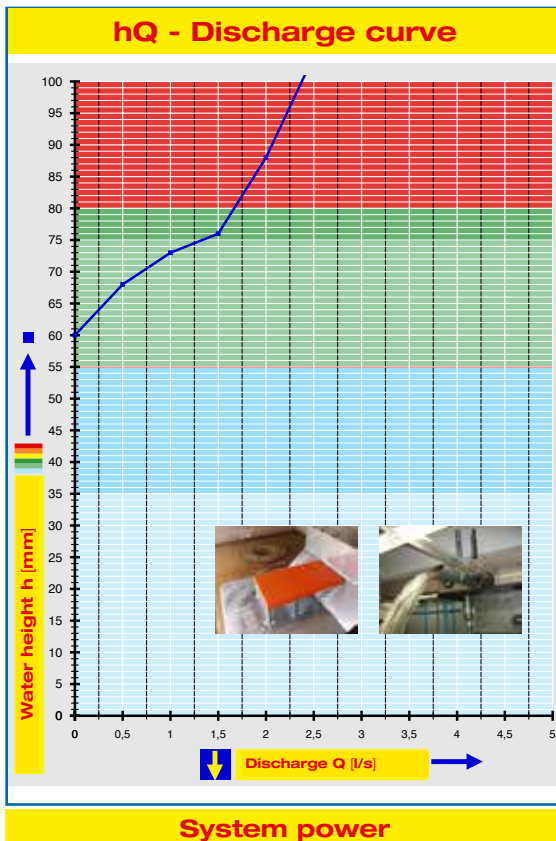
Parapet Drainage Series 43 Parapet-Direct for small roof areas, 60 mm weir

Emergency drainage	
Gravity flow	
Silent	
Discharge rate:	1.3 l/s
Water height:	75 mm
Roof penetration:	0 mm
Diameter:	DN 100
LX-Number:	LX 1576
Weir height:	60 mm
Drain:	ventilated
Downpipe:	ventilated
Downpipe height:	-
Drainage:	on floor
Flange form:	bonding flange 45°

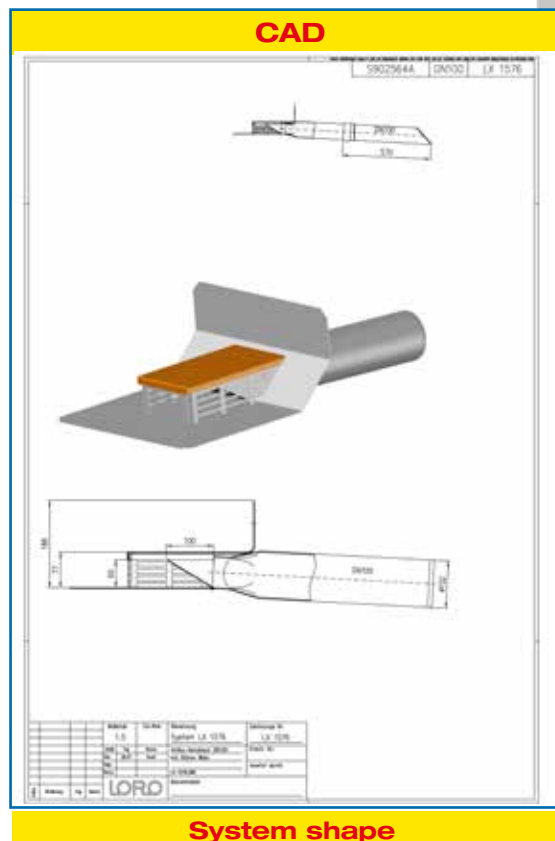


LX 1576 Piece list

- 1 x Art.-No. 01326.100X, Parapet direct drain
- 1 x Art.-No. 15199.100X, LORO-X Spout
- 1 x Art.-No. 13235.100X, LORO-X Sliding flange
- 1 x Art.-No. 00911.100X, LORO-X Sealing elements
- 1 x Art.-No. 00986.000X, LORO-X Lubricant



System power



System shape

Water height	mm	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Discharge	l/s	-	-	-	-	-	-	-	-	-	-	0.7	1.3	1.7	1.9	2.0	2.2	2.4
Silent																		

LORO-X Parapet-Direct emergency drainage, for small roof areas, weir height 60 mm

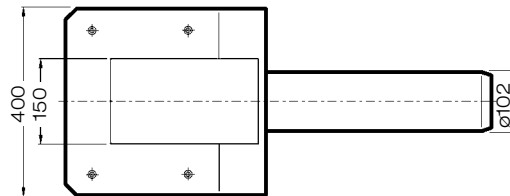
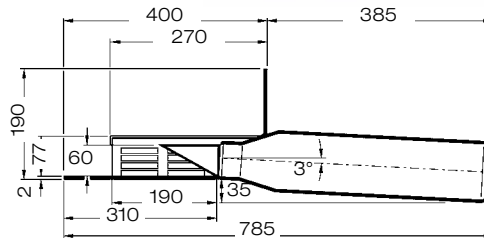
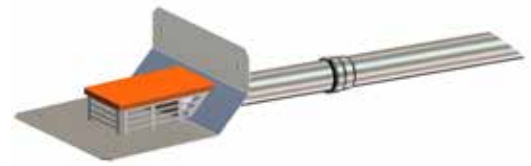
DN 100

LX1576-3X

Series 43

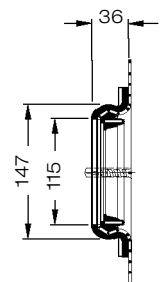
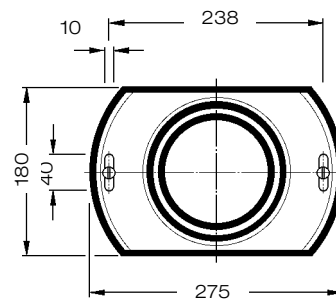
Drain Art.-No. 01326.100X
Weight: 7.4 kg

with bonding flange
for bituminous roofing sheets
weir height 60 mm



**Sliding flange for
LORO parapet direct drains**

with pre-installed connection sleeve for vapor barrier made of bituminous roofing sheets, made of galvanized steel, including fastening screws
Art.-No. 13235.100X
Weight: 1.7 kg



Trace heating: Lorowerk recommends to check all drains and pipes with regard to their frost-sensibility. Where necessary, these parts should be equipped with a trace heating.

Advantages of LORO-X pipe systems made of steel with LORO-X push-fit socket

