

LORO-X Fill-and ventilation pipes

made of steel, hot-dip galvanised, without internal coating

for heating oil tanks DN 40 - DN 50

for pellet stores DN 100

General technical approval no. Z-38.4-194

Pipes and fittings for biodiesel on request.





LORO-X

Fill-and ventilation pipes for heating tanks

DN 40 - DN 50

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Technische Änderungen vorbehalten.

LORO-X Fill- and ventilation pipes for heating oil tanks, DN 40 - DN 50



Areas of application:

LORO-X filling and ventilation pipes have been used for over 40 years for the filling and ventilation of heating oil tanks. During this period the LORO-X pipe system has proven itself through material and installation advantages as well as the reliability of the push-fit socket connection that has been manufactured a million times over.

Fast installation:

A key feature is the LORO-X two-stage socket with special sealing elements for problem-free connection of the pipes. The decisive material and installation advantages and the reliability of the LORO-X push-fit socket connection – manufactured hundreds of millions of times – lead to building owners, planners and installers using LORO-X steel discharge pipes for the drainage of residential buildings, hotels, hospitals, schools, public buildings, industrial buildings and ship projects.

Die LORO-X Anchor clips

The LORO-X anchor clip can be regarded as being part of the filling pipe. According to official regulations it must be mounted on every socket joint of the filling pipe and also on the ventilation pipe if installed underground. With a glued sealing element, it prevents the inserted pipe being pushed out in the axial direction and indirectly increases the leak-tightness value of the LORO-X push-fit socket connection.



LORO-X Sealing elements



LORO-X Adhesive



LORO-X Anchor clips



Advantages of LORO-X Fill- and ventilation pipes for heating tanks:

- fast installation
- pressure-resistant to 10 bar with anchor clip
- shock proof and dimensionally stable
- fire proof
- extensive range of fittings for all installation situations
- for all types of heating oil tank
- protected against corrosion through hot-dip galvanisation inside and outside

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

Approval and area of application

LORO-X filling and ventilation pipes made of hot-dip galvanized steel are approved under the national technical approval **no. Z-38.4-194** from the German Institute for Building Technology. The subject of this national technical approval is the use of filling and ventilation pipes for pressureless heating oil tanks for the storage of heating oil according to DIN 51603-1.

The filling pipes are manufactured exclusively in the nominal diameter DN 50.

In accordance with TRbF 20 (technical regulations for inflammable liquids), issued May 2001, no. 9.1.2.3, the ventilation pipes can be manufactured in both nominal diameters DN 40 and DN 50.

The filling pipes may be operated with an operating pressure of maximally 10 bar at heating oil temperatures of up to 40 °C.

The leak-tightness values of the LORO-X push-fit socket connections are at least 0.5 bar.

In filling pipes and in ventilation pipes installed underground, the socket joints are to be additionally secured against axial thrust with the LORO-X anchor clip. The required leak-tightness values for the filling pipe of at least 10 bar are easily achieved with the anchor clip.

The local regulations must also be adhered to if the filling and ventilation pipes are to be used in a region that is at risk of earthquakes.

Due to the national technical approval, LORO-X filling and ventilation pipes do not require the suitability determination or the type approval according to Art. 63 of the Federal Water Act (of 31 July 2009).



Technical data



Pipe material

Quality precision steel pipe according to DIN EN 10305-3:2003-2,
 Tensile strength: R_m 310 - 410 N/mm²
 Elongation at rupture: A_5 min. 28 %
 Shear strength: around 65 - 75 % the tensile strength
 Dynamic modulus of elasticity: bei 20 °C = 55 W/m °C
 Length expansion coefficient: 0,0117 mm/m °C
 Example: 3 m pipe, temperature difference 25 °C
 Elongation = $3,0 \times 25 \times 0,0117 = 0,8775$ mm



Corrosion protection

Hot-dip galvanised inside and outside according to DIN EN 1123. The cut surfaces of pipes that have been cut to length do not corrode. The interactive zinc boundary layers produce the well-known cathodic protection



Sealing elements

NB (NBR) nitrile-butadiene rubber, trade name e.g. PERBUNAN N, DN 40 - DN 50, resistant to heating oil.



Fire resistance

According to DIN 4102 LORO-X steel discharge pipes are to be assigned to building material class A1, incombustible, and are classified as incombustible according to DIN 1986-100.

Overview of application area:

Hazard class of the liquid to be stored	Filling pipe		Ventilation pipe	
	above ground	underground	above ground	underground
A III (heating oil)	permissible with anchor clip	permissible with anchor clip*	permissible without anchor clip	permissible with anchor clip**

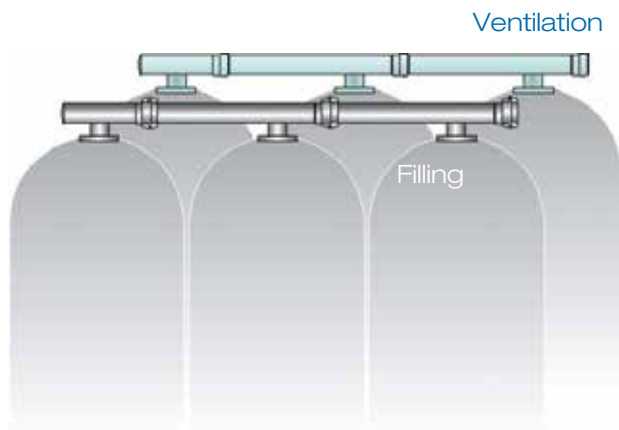
* Permissible only in a liquid-tight protection pipe or liquid-tight duct if the requirements of TRbF 50 (technical regulations for inflammable liquids), June 2002, no. 3, section (3) no. 2 are met.

** Parts of the ventilation pipe installed underground must be provided with corrosion protection in accordance with DIN 30672:2000-12.

Oil tank in the building

Tank connection by the tank manufacturer:

- Continuative LORO-X STEEL DISCHARGE PIPE is connected with a threaded connection
- Connections of the oil tank manufacturer are used



LORO-X pipe system

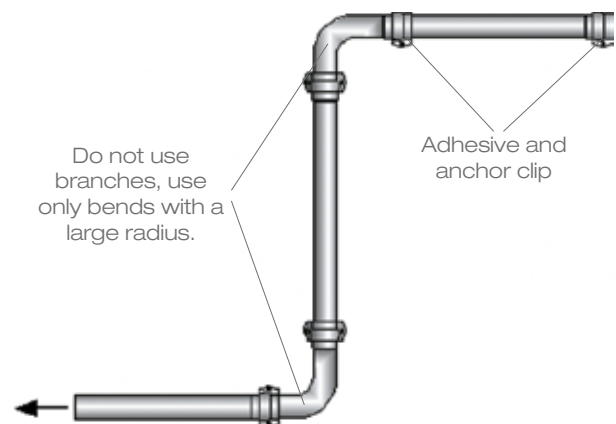
Observe the general requirements from the installation instructions:

- Original LORO-X steel discharge pipe without mixed installation with third-party product (see SHK information letter).
- Observe general building authority test certificate and installation instructions.
- Use LORO-X pipes and fittings with and without inside coating according to general building authority test certificate.
- Install socket joints in the direction of flow according to the installation instructions.

Filling

LORO-X filling pipe above ground:

- Use only LORO-X fittings that fit the LORO-X anchor clip (e.g. bends only with normal radius and not with tight radius).
- Connect push-fit sockets with LORO-X adhesive and anchor clips. Do not use lubricant.
- Always with a slope to the tank so that no „sacks“ are created in which oil can accumulate.
- Do not use branches.
- Use LORO-X NBR sealing elements with mixtures of heating oil EL and fatty acid methyl ester (FAME) (see expert's report no. 93636/10, SKZ - TeConA GmbH of 24/09/2010).
- 10 bar operating pressure (up to 15 bar withstood in internal tests).
- Glued double sockets with anchor clips are possible.
- Apply LORO-X adhesive to the inside of the socket chamber and the sealing element and the outside of the insert pipe.



Ventilation

LORO-X ventilation pipe, above ground

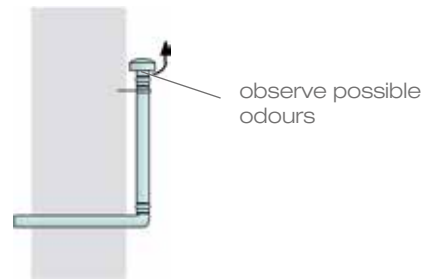
- LORO-X pipe system is fully usable.
- LORO-X push-fit socket connection with adhesive but without anchor clips.
- No strainer or constrictions in the pipe.



Connections on the building

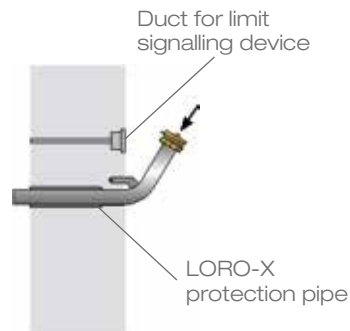
LORO-X ventilation:

- Outlet within view of the filling connector.
- Outlet with LORO-X vapour hood for protection against rainwater.
- To avoid odours, mount the outlet approx. 2 m above the ground and at least 0.5 m above the filling connector.
- Connect the ventilation pipe to an earthing cable.



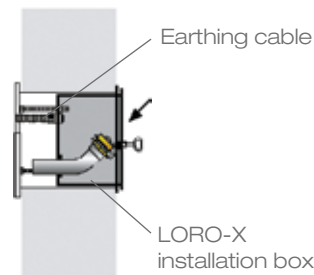
LORO-X filling connector without installation box:

- Select filling connector length according to wall thickness.
- Use of LORO-X protection pipe as a safe wall duct.



LORO-X filling connector with installation box:

- Select filling connector length according to wall thickness.
- Lockable installation box protects against oil theft.
- Installation box in cut-out complete from interior to exterior wall.
- Connect earthing cable for filling pipe.
- Duct for limit signalling device in installation box.



Underground ventilation pipe:

- Adhesive and anchor clips must also be used with the ventilation pipe when installing it underground!
- Corrosion protection according to DIN 30672.

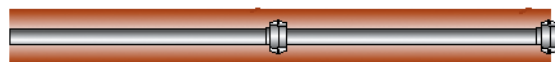


Underground filling pipe:

- Installation in protection pipe or duct

Underground filling pipe inside the duct:

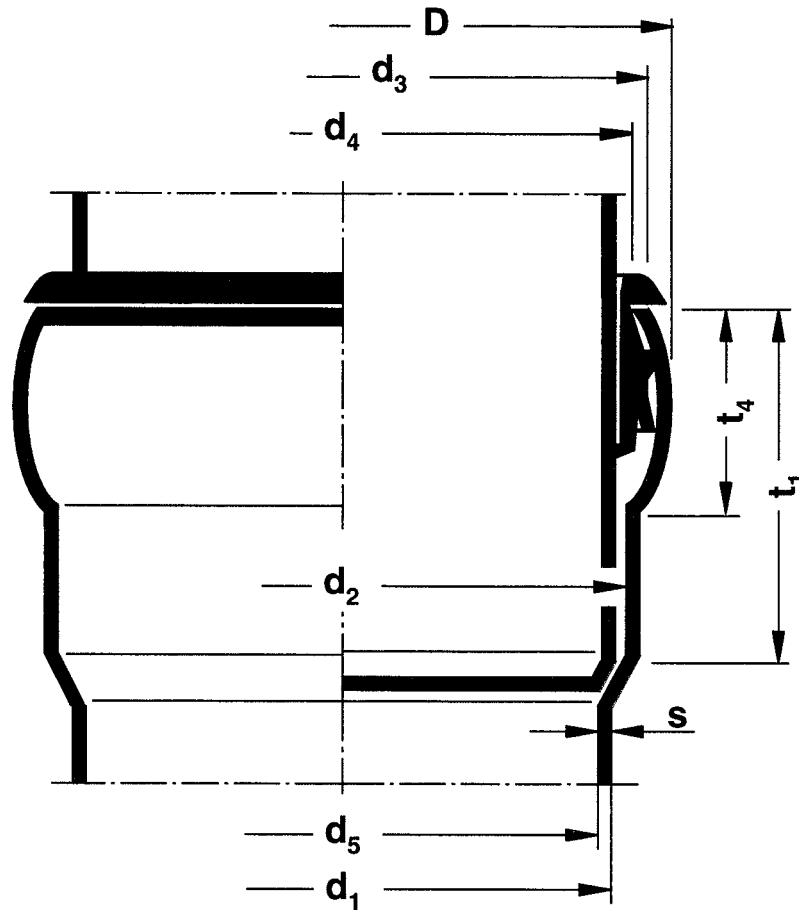
- Socket joints with anchor clip and glued-in sealing element.
- Minimisation through optimised pipe lengths.
- Proper installation.



System overview

		DN 40	DN 50
	Connector with internal thread		●
	Filling connector with external thread		●
	Protection pipes for wall penetration		●
	Connector with external thread	●	●
	Connector with internal thread	●	●
	Extension pipe for filling		●
	Angle bends	●	●
	Angle bends with external thread	●	●
	Ventilation pipes with external thread	●	●
	Ventilation pipes	●	●
	Safety vapour cover	●	●
	Pipes with two sockets	●	●
	Bends	●	●
	Double sockets	●	●
	Pipe clips	●	●
	Sealing elements	●	●
	Anchor clips	●	●
	MS-Filling pipe fastener		●
	Wall installation box		●

Dimensions and weights



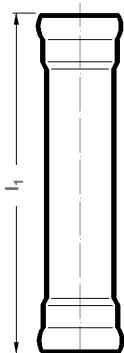
Pipe and socket dimensions (in mm)

DN	D	d ₁	d ₂	d ₃	d ₄	d ₅	s	t ₁	t ₄	F**
40	51	42	45	48,2	45	39	1,5	30	16	1194,6
50	63	53	56	60,2	56	50	1,5	38	19	1963,5

* Tolerance of dimensions for pipes and fittings, according to DIN EN 1123 part 2.

** F = cross section (mm²).

Pipes with two sockets



l ₁ = 250 mm		
Art.-No.	DN	kg
00140.0400	40	0,4
00140.0500	50	0,6

l ₁ = 500 mm		
Art.-No.	DN	kg
00130.0400	40	0,7
00130.0500	50	1,0

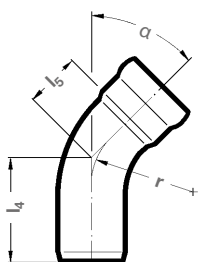
l ₁ = 750 mm		
Art.-No.	DN	kg
00121.0400	40	1,0
00121.0500	50	1,5

l ₁ = 1000 mm		
Art.-No.	DN	kg
00120.0400	40	1,6
00120.0500	50	2,0

l ₁ = 2000 mm		
Art.-No.	DN	kg
00110.0400	40	3,3
00110.0500	50	4,1

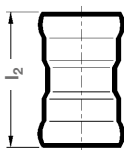
l ₁ = 3000 mm		
Art.-No.	DN	kg
00100.0400	40	4,8
00100.0500	50	6,3

Bends



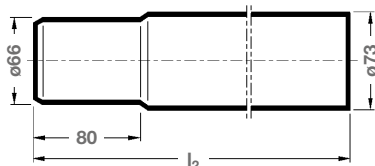
Art.-No.	DN	α	l ₄	l ₅	r	kg
00300.0400	40	87°	122	92	67,5	0,4
00300.0500	50		148	120	82,5	0,5
00310.0400	40	70°	105	75	67,5	0,3
00310.0500	50		128	100	82,5	0,5
00320.0400	40	45°	86	56	67,5	0,3
00320.0500	50		104	76	82,5	0,4
00330.0400	40	30°	76	46	67,5	0,3
00330.0500	50		92	64	82,5	0,4
00340.0400	40	15°	67	37	67,5	0,2
00340.0500	50		81	53	82,5	0,4

Double sockets

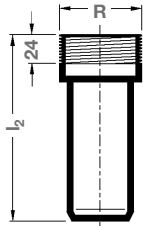


Art.-No.	DN	l ₂	kg
00560.0400	40	76	0,1
00560.0500	50	94	0,2

Protection pipes for wall penetration

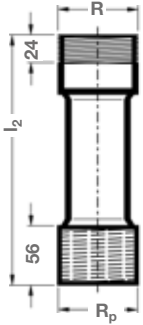


Art.-No.	DN	l ₂	kg
00716.0500	40	330	0,1
00718.0500	50	800	2,4



Filling connector straight version with external thread 2",
compatible to MS-Filling pipe plug

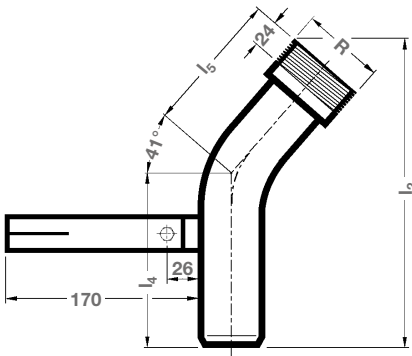
Art.-No.	DN	l ₂	R	kg
00700.050X	50	140	R 2	0,4



Extension pipe for filling connector

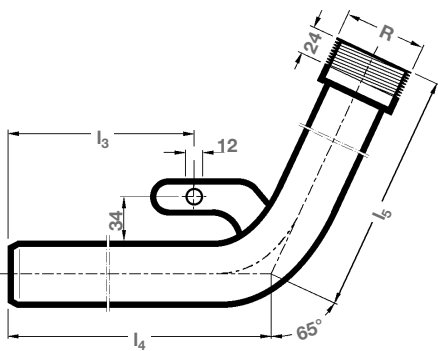
with internal and external thread 2" made of stainless steel, material-no. 1.4571

Art.-No.	DN	l ₂	R	R _p	kg
00727.050X	50	200	R 2	R _p 2	0,8



Filling connector with external thread,
with wall anchor, compatible to MS-Filling pipe plug

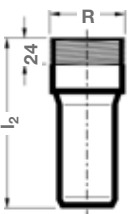
Art.-No.	DN	l ₂	l ₄	l ₅	R	kg
00708.050X	50	245	140	105	R 2	0,8



Filling connector with external thread,

with fastening anchor, for wall duct, compatible to MS-Filling pipe plug

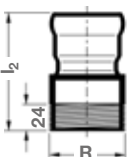
Art.-No.	DN	l ₃	l ₄	l ₅	R	kg
00715.050X	50	420	500	220	R 2	1,6
00717.050X	50	890	970	220	R 2	2,6



Filling connector for biodiesel

with external thread 2", made of stainless steel, material no. 1.4404

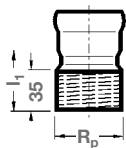
Art.-No.	DN	l ₂	R	kg
5.700.050C	50	140	R 2	0,3



Connector for biodiesel

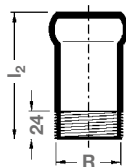
with external thread 2", for thread socket 2", made of stainless steel, material no. 1.4404

Art.-No.	DN	l ₂	R	kg
5.701.050C	50	100	R 2	0,3



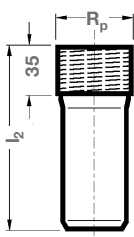
Connectors with internal thread by customary filling pipes

Art.-No.	DN	l_1	R_p	kg
00714.050X	50	54	$R_p 2$	0,3



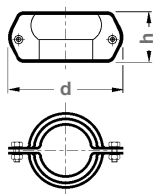
Connectors with external thread and socket

Art.-No.	DN	l_2	R	kg
00701.050X	50	105	R 2	0,4



Connectors with internal thread, for connection to LORO-X Socket

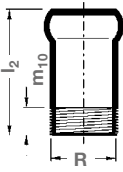
Art.-No.	DN	l_2	R_p	kg
00720.050X	50	140	$R_p 2$	0,4



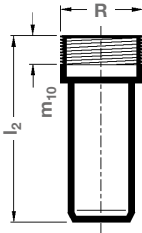
LORO-X Anchor clips against axial thrust

(Mandatory for each socket connection of filling pipelines; when installed underground, also mandatory for ventilation pipelines.)

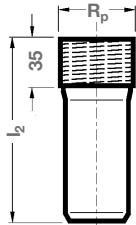
Art.-No.	DN	d	h	kg
00806.040X	40	85	49	0,2
00806.050X	50	108	60	0,4

Connectors with external thread and socket


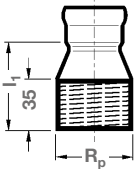
Art.-No.	DN	l_2	m_{10}	R	kg
00701.040X	40	100	19	R 1 1/2	0,3
00701.050X	50	105	24	R 2	0,4
00705.040X	40	100	19	R 1 1/4	0,2
00705.050X	50	105	19	R 1 1/2	0,3
00706.040X	40	105	24	R 2	0,3

Connectors with external thread


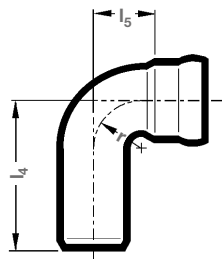
Art.-No.	DN	l_2	m_{10}	R	kg
00700.040X	40	140	19	R 1 1/2	0,3
00700.050X	50	140	24	R 2	0,4

Connectors with internal thread


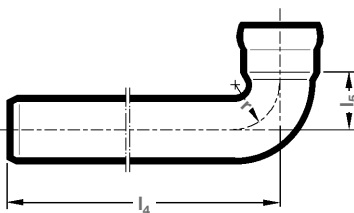
Art.-No.	DN	l_2	R_p	kg
00720.040X	40	140	$R_p 1 1/2$	0,3
00720.050X	50	140	$R_p 2$	0,4

Connectors with internal thread


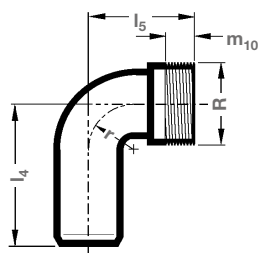
Art.-No.	DN	l_1	R_p	kg
00724.050X	50	55	$R_p 1 1/2$	0,3
00725.040X	40	65	$R_p 2$	0,4
00726.040X	40	65	$R_p 1 1/2$	0,3

Angle bends 90°


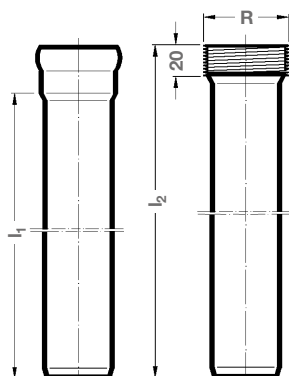
Art.-No.	DN	l_4	l_5	r	kg
00500.040O	40	80	35	26	0,2
00500.050O	50	100	45	36,5	0,4

Angle bends 90° for wall penetration


Art.-No.	DN	l_4	l_5	r	kg
00504.040O	40	500	35	26	0,9
00504.050O	50	500	45	36,5	1,2
00505.040O	40	1000	35	26	1,6
00505.050O	50	1000	45	36,5	2,2

Angle bends 90° with external thread


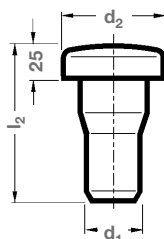
Art.-No.	DN	l ₄	l ₅	m ₁₀	R	r	kg
00521.040X	40	85	70	19	R1 1/2	26	0,3
00521.050X	50	100	75	24	R 2	36,5	0,4

Ventilation pipes 2,5 m


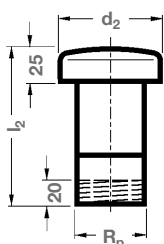
Art.-No.	DN	l ₁	kg
00102.040X	40	2530	4,1
00102.050X	50	2538	5,2

Ventilation pipes 2,5 m, with external thread

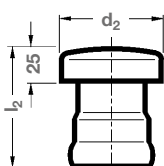
Art.-No.	DN	l ₂	R	kg
00101.040X	040	2500	R1 1/2	4,3
00101.050X	050	2500	R 2	5,2


Safety vapour cover

Art.-No.	DN	d ₁	d ₂	l ₂	kg
00801.040X	40	42	76	120	0,3
00801.050X	50	53	76	120	0,3


Safety vapour cover with internal thread

Art.-No.	DN	d ₂	l ₂	R _p	kg
00802.040X	40	76	110	R _p 1 1/2	0,4
00802.050X	50	76	110	R _p 2	0,4


Safety vapour cover with socket for socketless pipes ends

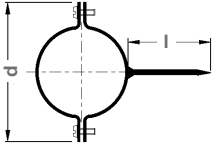
Art.-No.	DN	d ₂	l ₂	kg
00803.040X	40	76	90	0,2
00803.050X	50	76	90	0,3

Sealing elements



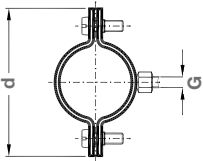
Art.-No.	DN	kg
00911.040X	40	0,008
00911.050X	50	0,012

Pipe clips with knockin pin, steel, galvanized, with knockin pin l = 80 mm (Standard)



Art.-No.	DN	d	kg
00990.040X	40	80	0,08
00990.050X	50	95	0,10

Pipe clips with connecting thread M8



Art.-No.	DN	d	G	kg
00973.040X	40	92	M 8	0,2
00973.050X	50	103	M 8	0,20

Accessories for pipe clips

Threaded pins*



Art.-No.	length in mm
09601.060X	M 8 x 60
09601.080X	M 8 x 80
09601.100X	M 8 x 100
09601.120X	M 8 x 120

Hanger bolts*



Art.-No.	length in mm
09603.100X	M 8 x 100
09603.120X	M 8 x 120

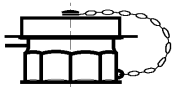
* packaging unit to 25 pieces

Original LORO-X Adhesive



Art.-No.	
00985.000X	Brush bottle (125 ccm)

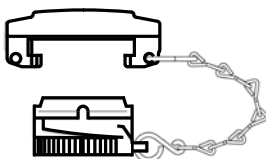
MS-Filling pipe fastener for filling connector 2 x 2 1/2"



Art.-No.	DN	kg
09831.000X	50	0,6

MS-Filling pipe fastener for filling connector 2"

with bayonet (VK50) for 2" filling connector. A quick-release fastener acc. to DIN EN 14420-6 is to be used for new installations in compliance with TRÖL 2.0 (Technical Rules for Oil Installations)



Art.-No.	DN	kg
09833.000X	50	0,8

Assembly and installation instructions

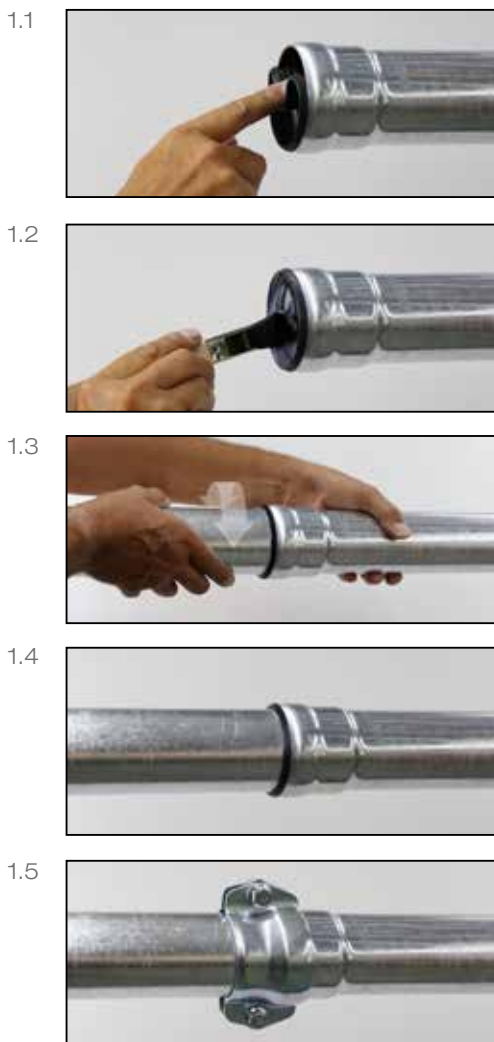
LORO-X Filling and ventilating pipes, DN 40 - DN 50

General technical approval no. Z-38.4-194

1. Assembling the LORO-X slip-in socket joint

In accordance with AbZ-38.4-194 point II 2.1, the LORO-X filling and ventilation pipes and their parts must comply with the special stipulations and appendices of the national technical approval (AbZ). The national technical approval (AbZ) can be downloaded at loro-x.com. Store LORO-X sealing elements at room temperature for easier assembly in case of lower outside temperatures.

- 1.1 Apply original LORO-X adhesive, no. 985X to the sealing chamber with a brush. Place sealing element in inclined position on the edge of the sealing chamber. Push in top sealing element with your finger and let it engage in the sealing chamber until the collar of the sealing element lies level on the socket edge.
- 1.2 Apply **original LORO-X adhesive, no. 985X** with a brush over the entire surface on the inside of the sealing element and the outside of the insert pipe.
- 1.3 Line up the socket and insert pipe and push together. Twist gently to secure. Push the insert pipe in as far as the socket base.
- 1.4 Finished LORO-X socket joint for **LORO-X ventilation pipe**
- 1.5 The **original LORO-X anchor clip no. 806X** is additionally prescribed for all socket joints of LORO-X filling pipes and for **LORO-X ventilation pipes installed underground**. Bolts for DN40: Use 15mm hex wrench, tighten with 30Nm, Bolts for DN50: Use 15mm hex wrench, tighten with 30Nm. Anchor clips may only be used once and must be replaced after loosening the screws.
Note: Only bends with a large radius may be used in the filling pipe.



2. Cutting to length

It is best to use a pipe cutter to cut the LORO-X pipes to length. When cutting, the zinc coating provides cathodic protection for the inner pipe and prevents under-rusting. They can also be cut at right angles to the pipe axis with an angle grinder with a parting wheel or saw. After chamfering, a post-treatment with cold zinc is recommended as additional corrosion protection.

The pipe ends must be deburred inside and outside.

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

Filling pipes and ventilation pipes installed underground are to be secured against axial thrust at the connection points at both ends of the pushed-on socket with anchor clips, no. 806X.

3. Pipe fastening

We offer the following pipe fasteners in our product range:
 - Pipe clips with knocking pin
 - Pipe clips with connecting thread for hanger bolt or set screw
 The LORO-X pipe clips are mounted on straight pipes at distances of ≤ 2.0 m when fastening filling or ventilation pipes to walls or ceilings.

4. Leak-tightness values of the filling pipe

The required leak-tightness values for the filling pipe of maximally 10 bar are achieved with the anchor clip.

5. Releasing the socket joint

Heat the insert pipe well with a soft soldering flame close to the socket rim until the pipe can be pulled out of the socket. The tip of the flame should be about 10 cm away from the pipe to be heated. The sealing element is to be renewed when reassembling the socket joint.

6. Underground installation

LORO-X ventilating pipes: If ventilation pipes of heating oil tanks are installed underground, the customer must provide them with corrosion protection according to DIN 30672:2000-12. If installed underground, the socket joints of the ventilation pipes must also be equipped with LORO-X anchor clips, no. 806X.

LORO-X filling pipes: Underground installation is permissible only in a liquid-tight protection pipe or liquid-tight duct if the requirements of TRbF 50 (technical regulations for inflammable liquids), June 2002, no. 3.3 are met.

Hazard class of the liquid to be stored	Filling pipe		Ventilation pipe	
	above ground	underground	above ground	underground
A III (heating oil)	permissible with anchor clip	permissible with anchor clip	permissible without anchor clip	permissible with anchor clip

The tank manufacturer's instructions must be observed.

7. Connection to tank systems

The connection of LORO-X pipes to various tank systems can take place:
 a) directly, with sealing element and original anchor clip (in the filling pipe), if the top filling and ventilation systems of battery tank systems consist of original LORO-X pipes or have already been provided by the tank manufacturer with an adaptor piece with LORO-X socket.
 b) with LORO-X connectors with internal and external thread - depending on the type of tank.

8. Approval and area of application

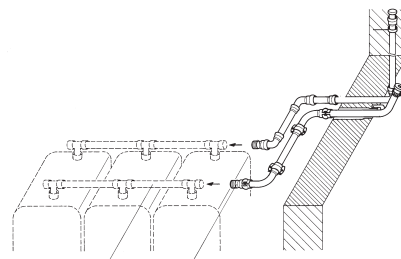
LORO-X filling and ventilation pipes made of hot-dip galvanized steel are approved under the national technical approval no. Z-38.4-194 from the German Institute for Building Technology. The subject of this national technical approval is the use of filling and ventilation pipes for pressureless heating oil tanks for the storage of heating oil according to DIN 51603-1. The filling pipes are manufactured exclusively in the nominal diameter DN 50. In accordance with TRbF 20 (technical regulations for inflammable liquids), issued May 2001, no. 9.1.2.3, the ventilation pipes can be manufactured in both nominal diameters DN 40 and DN 50. The filling pipes may be operated with an operating pressure of maximally 10 bar at heating oil temperatures of up to 40 °C. The leak-tightness values of the LORO-X push-fit socket connections are at least 0.5 bar. In filling pipes and in ventilation pipes installed underground, the socket joints are to be additionally

secured against axial thrust with the LORO-X anchor clip. The required leak-tightness values for the filling pipe of maximally 10 bar are achieved with the anchor clip.

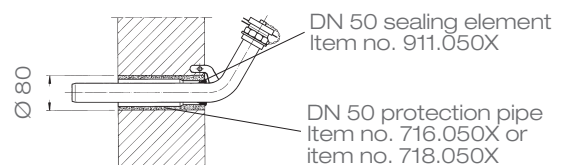
Local regulations also need to be adhered to if used in a region that is at risk of earthquakes. Due to the national technical approval, LORO-X filling and ventilation pipes do not require the suitability determination or the type approval according to Art. 63 of the Federal Water Act (of 31 July 2009). Labelling of the filling system: The permissible operating pressure must be permanently and clearly labelled on the completed LORO-X filling pipe in accordance with section 1 (4). Corresponding stickers are included in the scope of delivery of the filling connector.

9. Other fitting instructions

- 9.1 Pipes with corrosion protection (hot-dip galvanising) can afterwards no longer be welded.
- 9.2 The weight of continuative pipes must not exert a load on the tank system and must be supported for example, by the masonry. Furthermore, care must be taken that any small settlements are compensated by offsets (see illustration) in the continuative pipe.



- 9.3 To protect against mechanical damage, protection pipes no. 716X or no. 718X are recommended for the exterior wall duct.



The fastening anchor is to be permanently bricked into the wall on account of the twist protection.

10. Painting

Hot-dip galvanized steel discharge pipes can be painted. Use paints specially designed for hot-dip galvanized substrates.

11. Local conditions and regulations must be observed.



Installation examples

LORO-X filling and ventilating pipe
for **underground heating oil containers**
(underground tank)

Material

Filling pipe:

F 1 = LORO-X filling pipe for underground tanks, with
DN 50 immersion pipe

F 2 = Filling pipe fastener

Ventilation pipe: DN 40 or DN 50

E 1 = LORO-X connector with external thread

E 2 = LORO-X pipe, intermediate length depending on
system

E 3 = LORO-X angle bend with external thread 1 1/2"
or 2"

E 4 = detachable pipe fitting, flat-sealing, both ends with
internal thread (commercially available)

E 5 = LORO-X connector with external thread

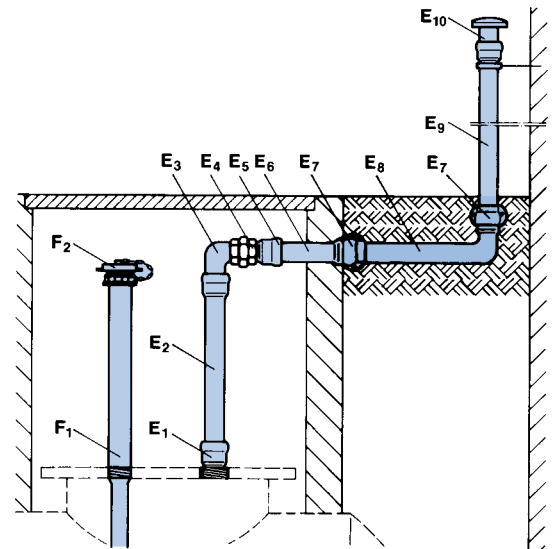
E 6 = LORO-X pipe, intermediate length depending on
system

E 7 = LORO-X anchor clip (underground installation,
provided with additional outside corrosion protection
by customer)

E 8 = LORO-X angle bend for wall duct (underground
installation, provided with additional outside corrosion
protection by customer)

E 9 = LORO-X ventilation pipe (provided with additional
outside corrosion protection by customer if installed
underground)

E 10 = LORO-X safety vapour cover



LORO-X filling and ventilating pipe
for **heating oil battery tanks**

Material

Filling pipe:

F = Top filling pipe belonging to the tank system,
ending at the last tank with 2" external thread or
with LORO-X socket for direct connection,
additionally with anchor clip

F 1 = LORO-X connector with 2" external thread or
internal thread and DN 50 socket, omitted in case
of direct connection option

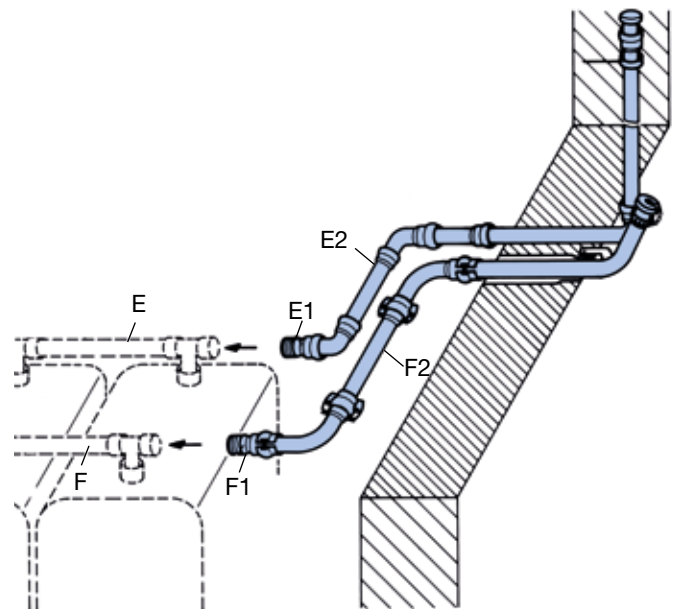
F 2 = continuative pipe with LORO-X filling pipe fittings
and pipes

Ventilation pipe: DN 40 or DN 50

E = Ventilation pipe belonging to the tank system,
ending at the last tank with 2" or 1 1/2" external
thread or 2" internal thread or for direct
connection

E 1 = LORO-X connector with 2" external thread or 2"
internal thread or 1 1/2" internal thread and
DN 40 or DN 50 socket, omitted in case of direct
connection option

E 2 = continuative pipe with LORO-X ventilation pipe
fittings and pipes



Installation instructions for wall installation box

LORO stainless steel wall installation box for heating oil filling pipe, to fit LORO-X DN 50 pipe suitable for wall thicknesses 240 mm - 360 mm

Art.-No. 00741.050X

Special features:

- Housing made entirely of rustproof stainless steel
- Filling connector does not protrude from the masonry
- Appealing optical design
- Delivered complete with:
 1. Filling connector DN 50-2" with fastening flange, 2" brass filling pipe fastener, cable conduit for customer's limit signalling device and fastening material, all as loose accessories
 2. Drill hole for acceptance of the limit signalling device connecting plug (DIN 6620/6625 sheet 1)
 3. Lockable, removable door with circumferential rubber seal, including square socket key

The LORO-X anchor clip is prescribed for every LORO-X socket joint in the filling pipe.

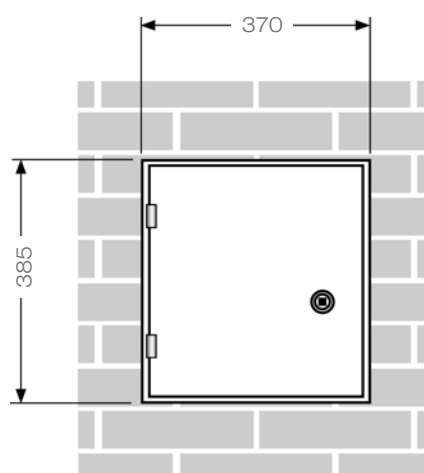
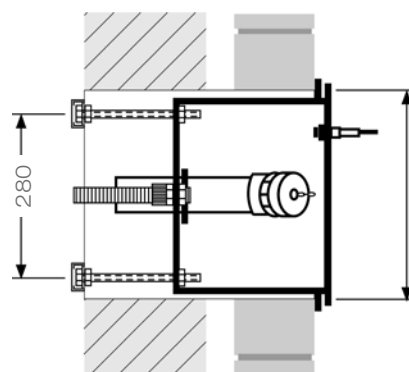
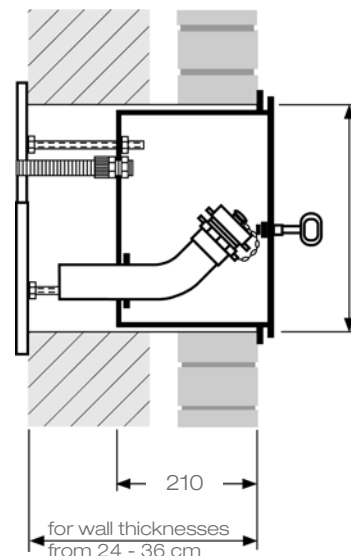
Observe the LOROWERK installation instructions and DIN 4755!

Apply only original LORO-X adhesive to the upper step of the socket and the LORO-X sealing element before inserting the pipe into the LORO-X socket.

Do not use lubricants or similar!

The LORO wall installation box is suitable for battery tanks made of steel, aluminium or plastic. In every case it offers a clean and purposeful solution with many extras in and on the box.

Particularly when it comes to the installation of oil tank pipes in accordance with the approval, it is especially important to pay attention to the labelling, that is required by the DIN standard, and the related system security. In order to be sure that you did not receive a mixed delivery unintentionally, pay attention to the original "LORO" labelling on the products delivered to your construction site.



LORO-X Pipe

for filling and ventilation of pellet-storerooms

made of steel, hot dip galvanized

Wood pellets for pellet heating are delivered by tank truck and blown directly into the storeroom.

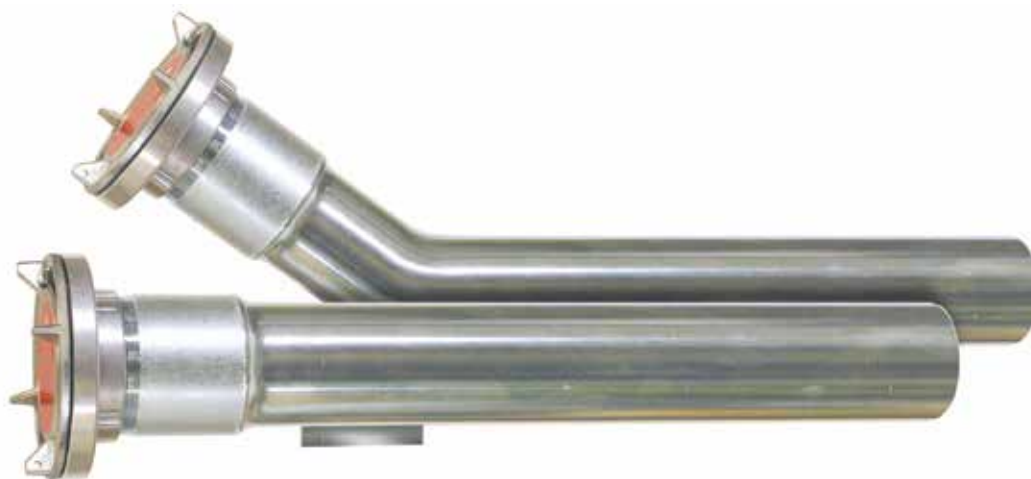
Filling and ventilating pipes with coupling and sealing cap are required for this and are fed through the exterior wall of the house.

Continuation pipes have to be used if the pellet storeroom is not located directly adjacent to an exterior wall. Loro-X pipes, hot-dip galvanized, without inside coating and with the push-fit socket connection that has proven itself a million times over, are ideal for this application.

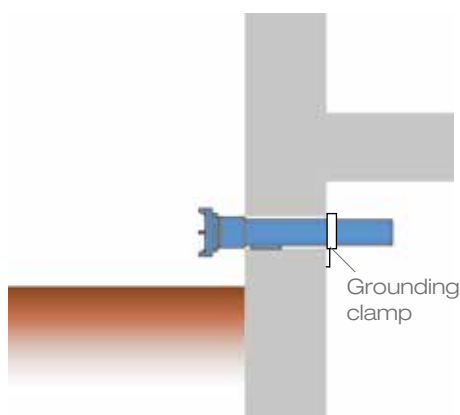
LORO-X pipes are:

- dimensionally stable
- incombustible
- pressure-resistant with LORO-X anchor clip

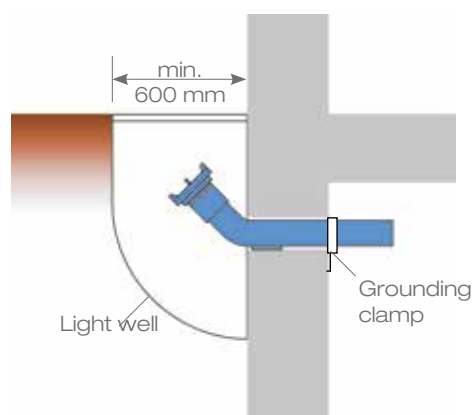
LORO-X pipes can also be used as extraction pipes for the transport of pellets from the storeroom to the heating room.



Installation examples for filling/ventilating connectors



Installation of the filling connector above ground

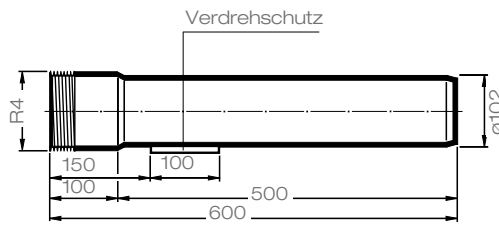


Installation of the 45° filling connector below ground with light well.

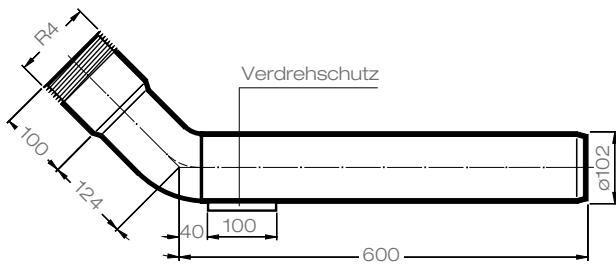
The distance between the filling connector and the ventilation pipe (exhaust pipe) should be at least 500 mm.

Technical status: April 2018
Subject to technical changes

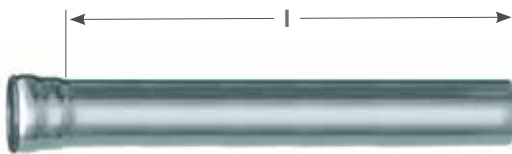
Dimensions and weights



LORO-X Filling- and ventilation pipe DN 100 with thread R4, steel galvanized
 Art.-No. 18350.100X Weight: 3,6 kg



LORO-X Filling- and ventilation bend DN 100 with thread R4, steel galvanized
 Art.-No. 18351.100X Weight: 4,7 kg



LORO-X Pipe with one socket, DN 100, without internal coating

l (mm)	Art.-No.	kg
1000	01201.1000	5,6
2000	01101.1000	11,2



LORO-X Pipe with two sockets, DN 100, the cut pipes can be used as two pipes with one socket
 Art.-No. 00120.1000 Weight: 5,1 kg



LORO-X Bends, 45°, (Bogen 90° are forbidden to be used) without internal coating
 Art.-No. 00320.1000 Weight: 1,3 kg



LORO-X Anchor clip, DN 100
 against axial thrust and for pipe mounting
 Art.-No. 00806.100X
 Weight: 1,0 kg



LORO-X Pipe clip, DN 100
 with connection thread M 10
 Art.-No. 00975.100X
 Weight: 0,33 kg



LORO-X Fastening clip, DN 100
 for filling connector
 Art.-No. 18980.100X
 Weight: 0,50 kg



Sealing element DN 100,
 Art.-No. 00911.100X
 Weight: 0,05 kg



Ventilation cover with fixed cover plate*,
 with thread Rp 4", made of aluminium (System Storz Typ A-110)
 Art.-No. 18354.000X
 Weight: 1,6 kg
 * Lockable by customary safety locks



Ventilation cover with fixed coupling,
 with thread Rp4", made of aluminium (System Storz Typ A-110) including key lock and chain
 Art.-No. 18355.000X
 Weight: 1,1 kg



Grounding clamp*
 Art.-No. 18357.000X
 Weight: 0,08 kg
 *For prevention of static electricity charge.



Lubricant
 250 g-Tube
 Art.-No. 00986.000X
 Weight: 0,15 kg

