

LK Manifold Cabinet HX

SCOPE

These assembly instructions are intended to be used for LK Manifold Cabinet HX. **Installation must be carried out in accordance with industry regulations Safe Water Installation.**

LK Manifold Cabinet HX

LK Manifold Cabinet HX is designed for use where there is a requirement to conceal LK Heat Exchanger Pack -10n2 and LK Manifold RF up to size VKF-RF 5. The manifold cabinet must be supplemented with a frame/hatch.

LK Frame/Hatch UFH INB

Used for LK Manifold Cabinet HX as this cabinet is built into the wall. The frame/door has a drop-out frame to cover the hole punching around the cabinet.

LK Frame/Hatch UFH UTV

Used for LK Manifold Cabinet HX as this cabinet is mounted externally on the wall. The frame/hatch ends flush with the outside of the cabinet.

LK Base UFH

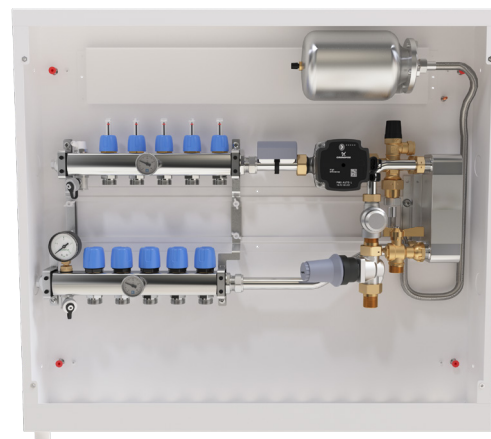
Complement LK Frame/Hatch UFH which hides the pipe installation between cabinet and floor. **Note that the LK Base can be adjusted in height between 231-291 mm.**

LK Wet zone hatch PRESEAL

In rooms with a waterproofing layer on the wall, LK Manifold Cabinets should be supplemented with LK Wet zone hatch PRESEAL which is connected to the waterproofing layer of the wall. **The service opening (wet zone hatch) must not be placed near the bath or shower.** For more information, see the separate product range and assembly instructions for LK Wet zone hatch PRESEAL.



LK Manifold Cabinet HX



LK Manifold Cabinet HX (with the assembly of the Heat Exchanger Pack -10n2 and LK Manifold RF)

TABLE OF CONTENT

Scope	1
Assembly requirements	2
Supplied with the product	3
Working procedure	4
Assembly aids	8
Dimension drawings	10
Pipe dimensions	11
Article data	11

INSTALLATION REQUIREMENTS



NOTE!

Service openings must not be fitted in bathrooms or shower areas.

Wet zone 1.



Wet zone 1 for baths and showers.



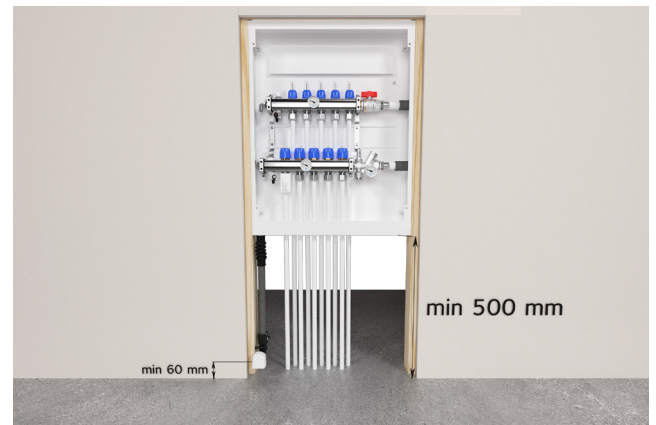
Wet zone 1 for showers.

Installation in stud walls

- A stud-frame thickness of at least 95 mm is required for in-wall installations.
- When installing in rooms with wall sealing layers, the LK Wet zone hatch PRESEAL requires an installation depth of at least 75 mm measured from the wet room sheet to the front edge of the shunt cabinet. For more information, see separate product range and assembly instruction sheets for LK Wet zone hatch PRESEAL.
- Pay extra attention to how deep the cabinet is fitted in relation to any insulated feed pipes. Refer to the illustration given in *Working procedure Step - 4*.

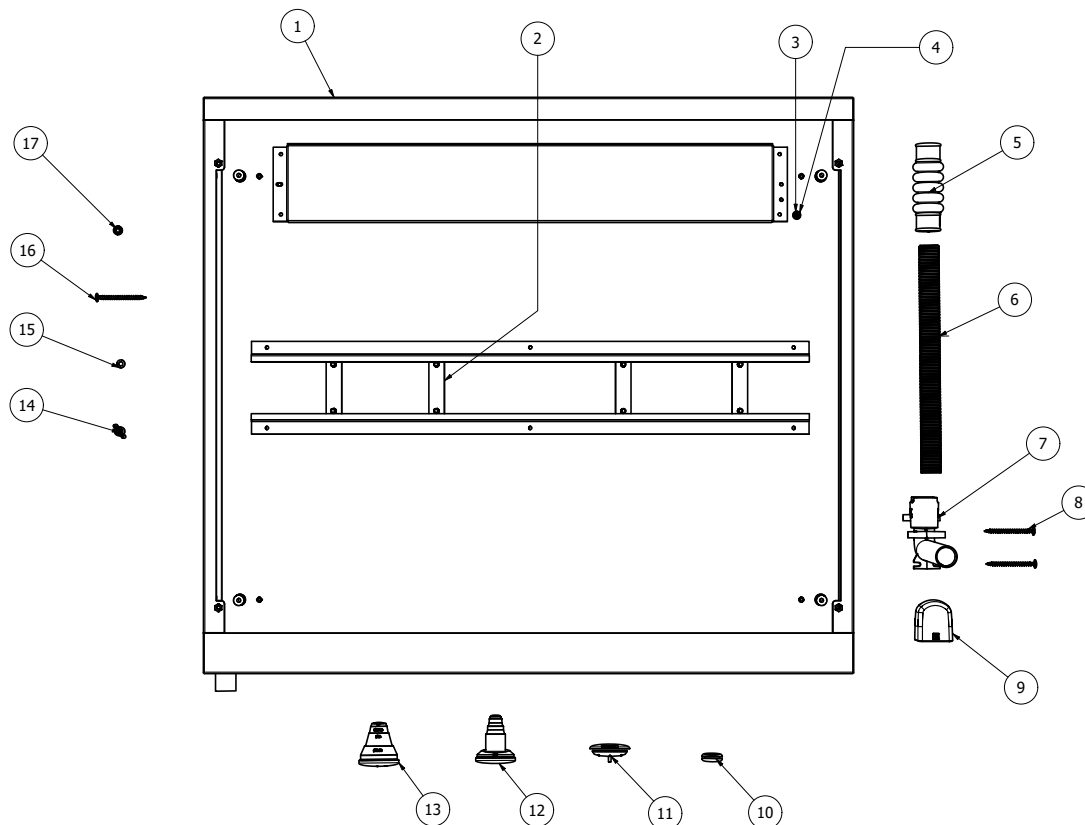
Installation height

If the design of the structure does not allow the pipes to be fitted at right angles for lower installations, the base of the cabinet must be placed at least 500 mm above the top of the upper edge of the floor joist.



Example picture of mounting the cabinet with a distance of 500 mm from the floor surface.

SUPPLIED WITH PRODUCT




No.	Name	Quantity	Article no
1	Manifold Cabinet VVX	1	-
2	Bracket manifold	4	2 pcs is included in package 33950 + 2 extra
3	Threaded Earthing pin M5	1	- preinstalled in cabinet
4	Internal tooth Lock Washer and Locking Nut M5	1	- preinstalled in cabinet
5	Bellow sleeve 25 LP	1	188 27 42 (also incl. in package 188 21 43)
6	Conduit Ø25	1.5 m	187 06 65
7	LK Drainage elbow V2	1	188 26 12 (also incl. in package 188 26 11)
8	Assembly screws for Drainage Elbow	2	incl. in package 188 26 11
9	LK Outlet plate V2, white	1	188 26 13 (also incl. in package 188 26 11)
10	Cable grommet	10	33952 (also incl. in package 33950)
11	Sealing plug, black 40 LP	10	188 27 21 (10-p)
12	Pipe grommet 8-20 LP	20	298 61 50
13	Pipe grommet, supply pipe 20-25 LP	2	188 27 23 incl. in package 33027, 4 pcs/bag
14	Wingnut M6	4	incl. in package 33027, 4 pcs/bag
15	Washer M6	4	-
16	Wood screw (5 x 35 mm)	4	incl. in package 33950
17	Seal for wood screw	4	-
-	Internal tooth Lock Washer M5	1	- preinstalled in cabinet
-	Lock Nut M5	1	- preinstalled in cabinet
-	Splash protection 705 x 400	2	188 24 07
-	Splash protection 705 x 200	1	188 24 08



WORKING PROCEDURE

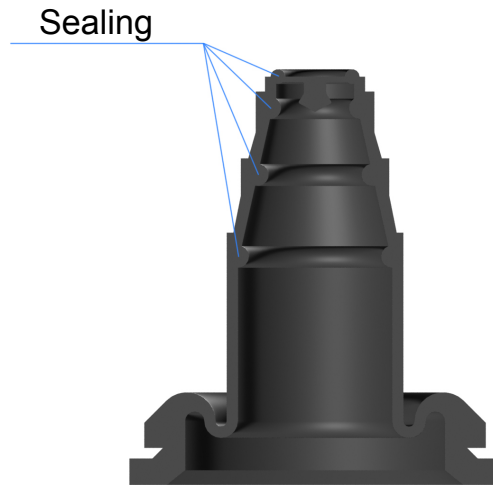
1 - Prepare Pipe grommets

Prepare the pipe grommets for feed pipes and underfloor heating pipes by adapting/cutting the grommets to the right size based on the pipe dimensions used.

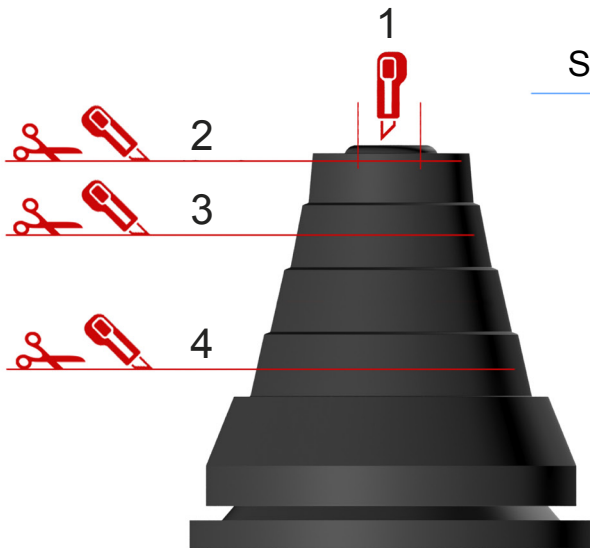
 If the seal for the pipe dimension is damaged when cutting, then it must be replaced with a new seal.



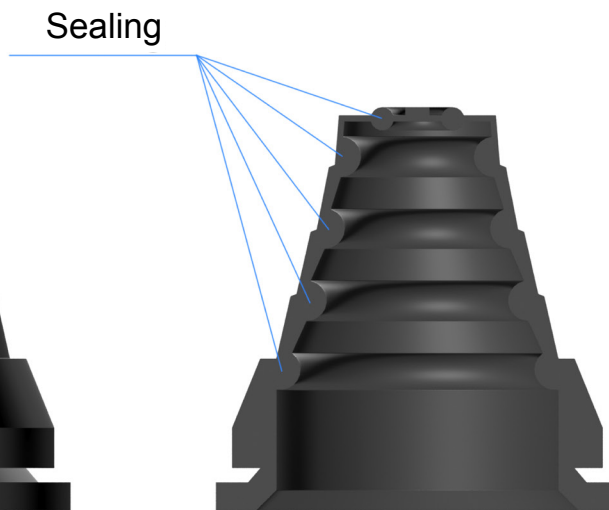
Cutting of pipe grommet.



A cross-section of the pipe grommet shows the placement of the pipe seal.



Cutting of pipe grommet.



A cross-section of the pipe grommet shows the placement of the pipe seal.

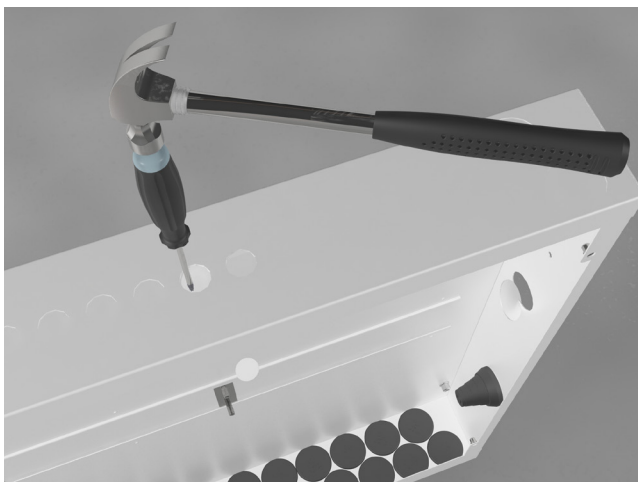
Cutting level	Dim. Pipe	Dim. Conduit (PiP)
1	Ø12	–
2	Ø16-20	–
3	Ø25	Ø25
4	Ø32	Ø34



2 - Knock-out

Remove the required number of knock-out holes for cables to room control. Install the cable grommets.

If the feed pipes are to be connected from the side, the knock-out holes are removed from the side of the cabinet. The pipe grommets are then installed for the feed pipes.



Remove the knock-out holes using a hammer and screwdriver

3 - Assemble the pipe grommets and sealing plugs

Fit the adapted pipe grommets and the LK Sealing Plug before the cabinet is installed in its final location.

Pay particular attention during the assembly of pipe grommets and sealing plugs so the cabinet base is sealed.

LK Sealing Plugs are fitted so the LK Logo can be seen inside the cabinet.



Assemble the pipe grommets and sealing plugs

4 - Install the cabinet



The cabinet should never be installed further out than edge to edge with the stud-frame, so the Frame/hatch GV INB can be installed.

Install the cabinet in the stud-frame externally on an existing wall taking into account the heading ***Installation Requirements***.

Fix the manifold cabinet in the building structure. For wood stud constructions, use the screws and sealing plates supplied. The cabinet can also be fixed using the LK Leg Stand. See the heading ***Assembly using LK Legs***. Pay attention to the depth of the cabinet's placement so there is also space for any pipe insulation.

If the cabinet is placed on an outer wall, it should be installed on the warm side of the construction, inside the airtight foil.

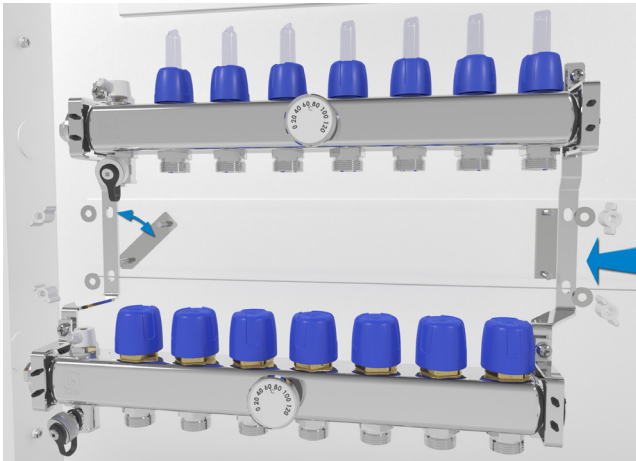


Securing the cabinet in a stud-frame

5 - Install Manifold and Heat Exchanger Pack

Install the four brackets on the cabinet rail. Refer to picture below, *Assembling the LK Manifold RF*.


LK Heat Exchanger Pack and LK Manifold is then installed on the brackets. Follow then the included instructions for installation of the Heat Exchanger Pack, Manifold and pressure and tightness test its pipe connections.



Assembling the LK Manifold RF


6 - Pipe grommets

Push underfloor heating pipes and feeding pipes through the pipe grommets. This operation is facilitated if the pipe is lubricated with soapy water or similar. The pipes are then connected to the manifold and Heat Exchanger in accordance with the instructions for the products.




Check that the pipe penetration is correct fitted after all pipes have been fitted as per point 6 above.

7 - Installing the cabinet drainage



NOTE!
Drainage outlets from cabinets with a tap water installation must always open into a space with a floor drain or a waterproof floor.



NOTE, EXCEPTION!
Cabinets placed in stairwells may have leakage indicators that open into the stairwell on a waterproof or water-repellent floor. The exception does not apply to detached houses.

- Drain outlet from cabinet with installation for heating systems can flow out from the wall surface under the cabinet in rooms where you normally stay and any leakage can be easily detected.

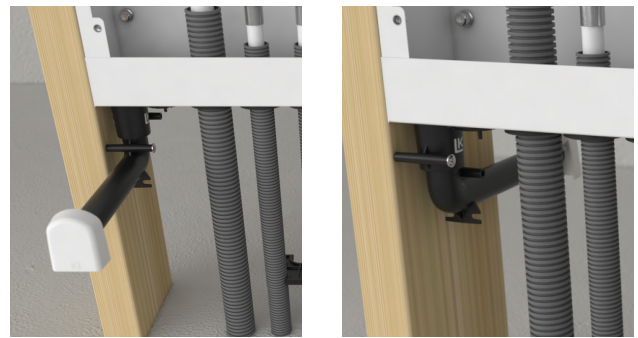
- For pipe penetrations in the wall, get measurements between pipe and adjacent wall or the floor's waterproofing layer must not be less than 60 mm.
- A leak indicator must not be placed in a bath or shower area.

7a - Drainage elbow directly joined to the cabinet's outlet drainage

The drainage is from the wall surface under the cabinet. Ensure that the white rubber seal is correctly mounted in the drainage elbow.

Connect the drainage elbow directly to the cabinet's outlet drainage when all pipe inlets and sealing plugs have been mounted.

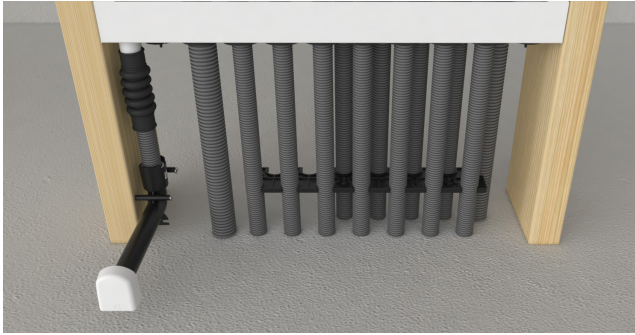
For cabinets mounted externally on the wall, the drainage elbow opens out into the pre-drilled hole in the base.



Principle picture. Drainage bend directly connected to the cabinet's outlet opens in the same room as the cabinet's service opening, alternatively in the room behind.

7b - Drainage elbow connected via a conduit

1. Connect the conduit to the cabinet's drainage pipe using the bellow sleeve. The bellow sleeve must not be deformed in a manner that prevents the flow of any water leaks.
2. Connect the drainage elbow to the conduit. Note that the pipe should rest in the drainage elbow at a depth of approximately 20 mm.
3. Fix the drainage elbow to a wall stud in a suitable position. Insert the two installation screws supplied in any of the fixing holes.
4. Ensure that the conduit is installed sloping downwards towards the outlet and that the conduit is secured.

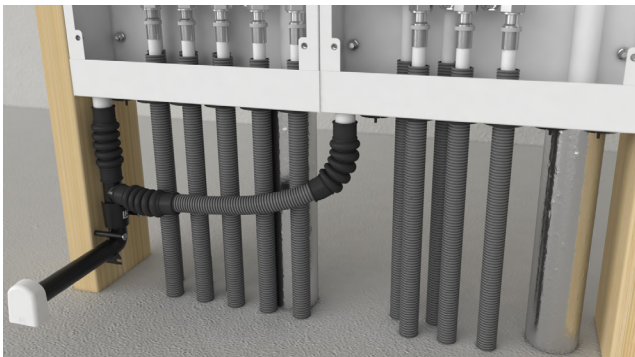


Drainage elbow connected via a conduit.

7c - Connection of drainage pipes

It is possible to connect drainage pipes from two cabinets. The illustration below shows side-by-side installation but drainage pipes can also be connected when the cabinets are mounted further apart.


1. Use LK Drainage Kit 25 Duo.
2. Fix the drainage elbow to a wall stud in a suitable position. Insert the two installation screws supplied in any of the fixing holes.
3. Ensure that the conduit is installed sloping downwards towards the outlet and that the conduit is secured.



Connection of drainage pipes.

8 - Install outlet plate

Installation of outlet plate



NOTE!
Although LK Systems can supply the LK Pipe Membrane, the sealing contractor should carry out the installation and be responsible for the waterproofing characteristics of the sealing layer in accordance with industry regulations issued by the Swedish Ceramic Tile Council (BBV), Swedish Flooring Trade Association Wet Room Control (GVK) or the Swedish Painting Industry Wet Room Control (MVK).

1. Install a wall panel with a hole for the drainage elbow's outlet pipe. Hole diameter approx. 26 mm. Connect any sealing layer as per the instructions of the supplier of the sealing layer.
2. Once the wall panelling is installed, the drainage elbow should be cut to size using the LK Drainage elbow cutter V2. Alternatively, the drainage elbow can be cut to a suitable length using a tool such as a hacksaw blade.
3. Be careful not to damage the surface layer, leave 2-3 mm of the outlet pipe protruding from the wall. In rooms with a waterproof layer on the wall leave 6-9 mm.
4. Install the LK Outlet Plate V2 in the outlet pipe. For a more luxurious finish, the LK Outlet Plate V2 Chrome is available as an accessory.

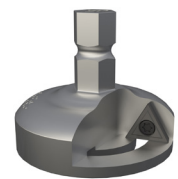


Installation of the LK Outlet Plate V2.

Accessories



LK Outlet Plate V2 Chrome, article no. 188 26 14.



LK Drainage elbow cutter V2 article no. 188 26 15.

9 - Install Splash protection

Assemble the splash protection supplied. Be careful that the protection is pushed out to the side so the entire cabinet width is covered. These should be mounted during the construction to prevent dirt and dust getting into the cabinet. It is the splash protection that makes the cabinet safe from water damage. Make sure the splash protection is in place inside the cabinet.

10- Install Frame/hatch

There are two types of frames/hatches depending on whether the cabinet is mounted inside or outside on an interior wall. In rooms with a waterproofing layer on the wall, the LK Manifold Cabinet must be supplemented with the LK Wet Zone Hatch PRESEAL, which is connected to the wall's waterproofing layer.

Service opening (wet zone hatch) must not be placed in place of bath or shower. For more information on the product range and installation instructions for the LK Wet Zone Hatch PRESEAL, see www.lksystems.se/en.

10a - Install Frame/hatch UFH INB

When the cabinet is built into a wall, the LK Frame/hatch UFH INB is used which has a precipitating frame in order to cover the hole around the cabinet. The frame covers an area of 15 mm beyond the edge of the cabinet.

Install the LK Frame/hatch using the M5 screws provided. If the cabinet is installed so far into the construction that the screws are too short, then these should be replaced with longer screws (not included).

10b - Install Frame/hatch UFH UTV

When the cabinet is installed externally on a wall, the LK Frame/hatch UFH UTV is used, which fits edge to edge with the outsides of the cabinet.

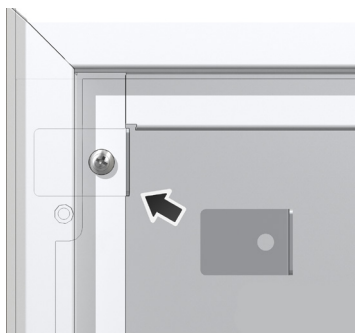


Plate and screws for the LK Frame/hatch UFH UTV

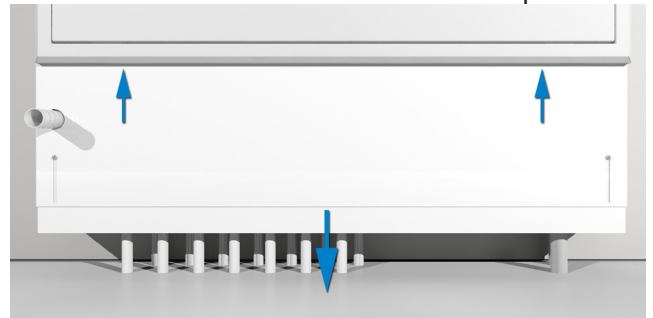
Install the frame using the screws and mounting plate provided, see picture above. Fit the four white cover plugs on the end of the cabinet.

11 - Install Base

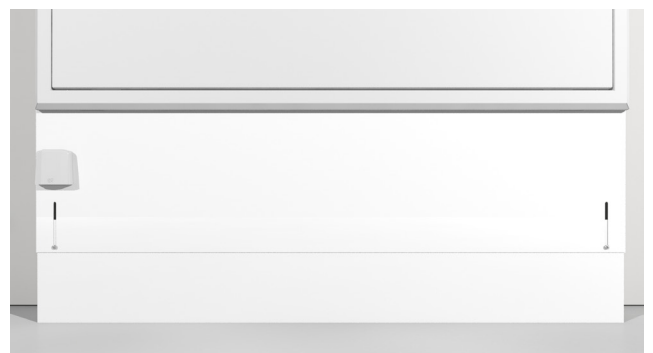
When installing LK Manifold Cabinet HX externally, install LK Base by first securing the upper part of the base in the designated grooves in the cabinet frame. Also make sure that the drainage elbow opens out into the designated hole. The lower part of the base is then pulled out to meet the floor.

When the correct height has been reached, the installation is secured using the screws on the front of the base.

Then adapt the length of the drainage elbow to the outside of the base and install the outlet plate.



LK Base installation



Outlet plate fitted on base

ASSEMBLY AIDS

Assembly using LK Cabinet Stand L2

The back of the cabinet is fitted with four anchor points (M8 nuts) which can be used to assemble the cabinet before the concrete base is cast. The LK Cabinet Stand L2 can be used as an aid and is assembled as below.



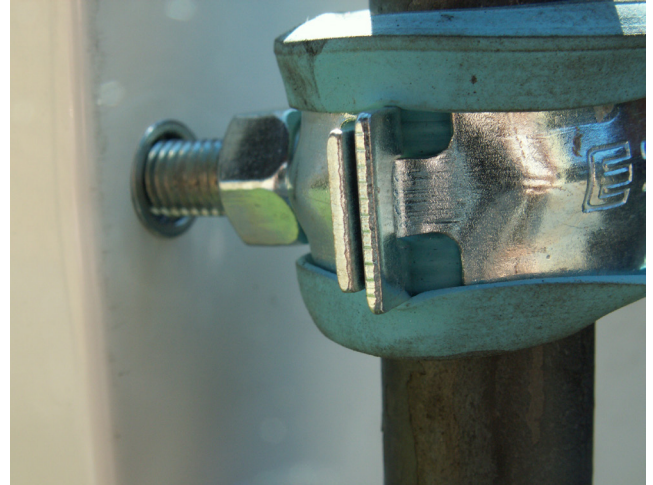
LK Cabinet Stand L2 with anchor clips.

Mount the four M8 nuts provided in the back of the cabinet. Attach pipe fixings to the extended bolts. Slip on the round bar and attach the conduit pieces provided with the stand. The conduits stop the stand from becoming set in the concrete, making it reusable.

Knock down the round bars through the insulation and into the sand until the installation feels stable. Lift up the cabinet to a suitable height and tighten the fixings. Tape the conduits to the legs of the stand to stop the conduits from moving when pouring the concrete.



Mounted cabinet stand L2.



Close-up of fastening to cabinet.

Assembly using LK Legs

The LK Leg Stand simplifies cabinet assembly on prefabricated concrete joists. Manufactured from galvanised steel plate.

Supplied in pairs inc. 4 x self-tapping sheet metal screws with gasket for attachment to the manifold cabinet. The foot of the legs has a 6 mm hole for attachment to the concrete joists. The legs are secured using a bolt or metal nail plug (not supplied).

In cases where the manifold cabinet is not adequately secured by the leg stand, then the cabinet should also be secured to the wall

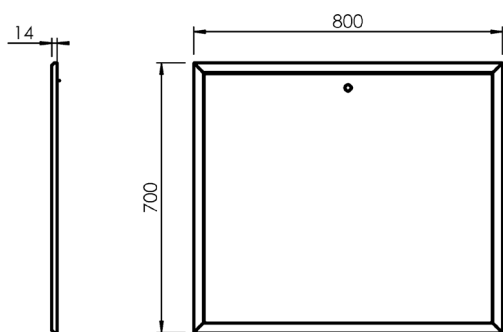


LK Leg Stand

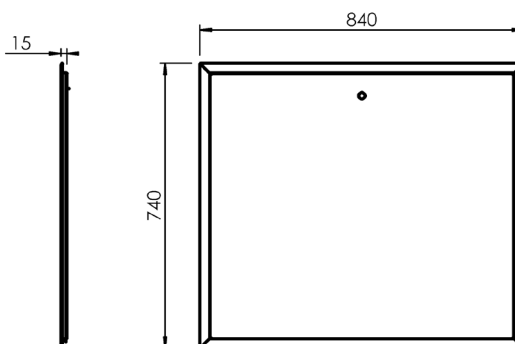


DIMENSION DRAWINGS

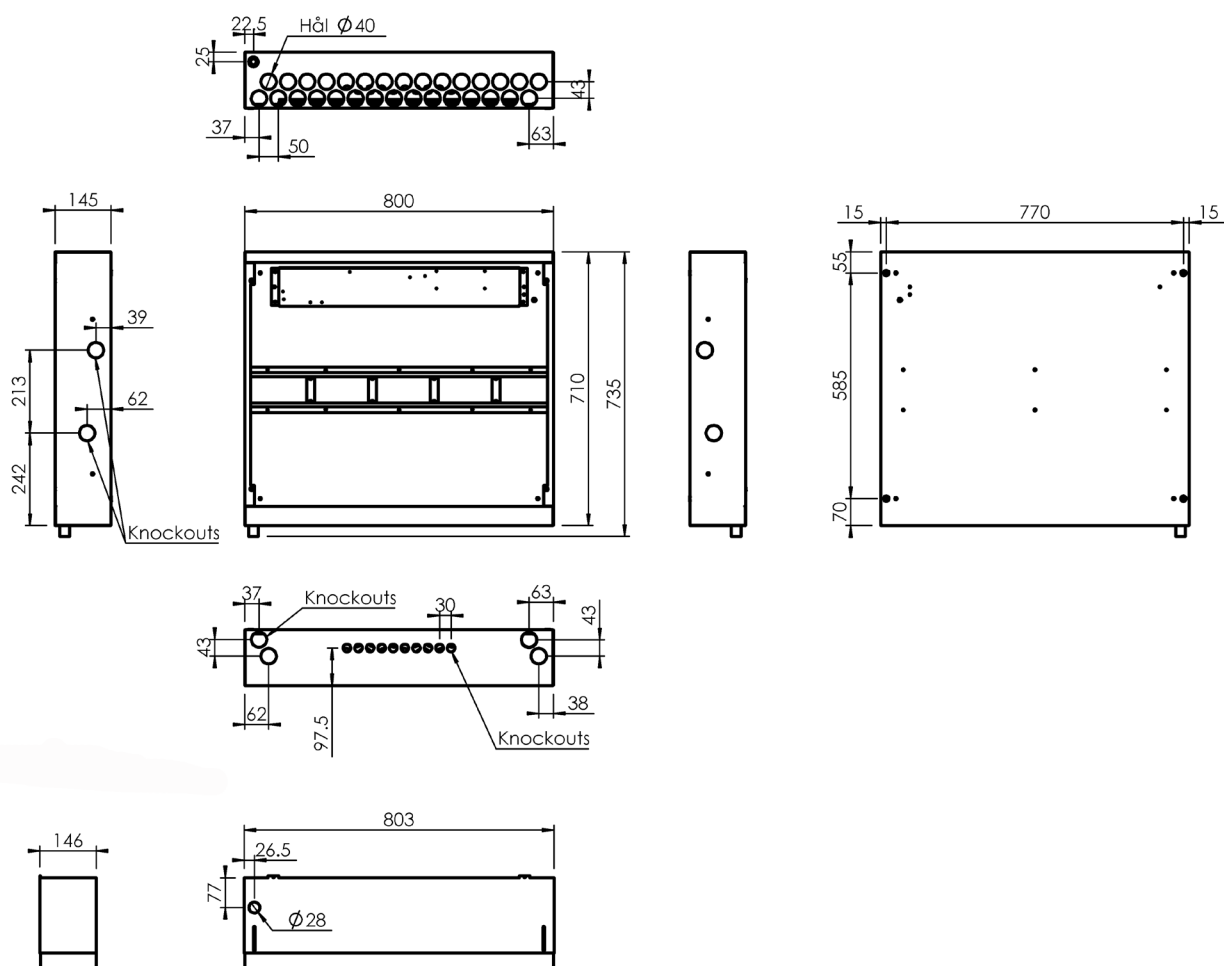
LK Manifold GV



LK Manifold GV, INB



LK Manifold Cabinet HX



LK Base



PIPE DIMENSIONS

The table below shows which dimensions and pipe types can be connected to LK Manifold Cabinet HX. For more information of LK Floor Heating systems, visit

www.lksystems.se/en (products/lk underfloor heating/products/pipes)

Pipe grommet	PE pipe	Metal pipe	RiR (pipe in pipe) conduit dimensions
Pipe grommet 8-20 LP	8, 12, 16 and 20 mm	-	-
Pipe grommet 20-25 LP for PE supply pipe	20, 25 and 32 mm	22 and 28 mm	34 mm
LK Pipe grommet 8, Quattro*	8 mm	-	-
LK Pipe grommet 32 RiR LP*	32 mm	-	40-44 mm

* ordered separately.

ARTICLE DATA

Name	Art no.	Comment
LK Manifold Cabinet HX	241 03 18	For LK Heat Exchanger Pack -10n2 and VKF-RF 2-5
LK Frame/hatch UFH 800 INB	243 46 79	Designed for UFH 800 cabinets built into wall
LK Frame/hatch UFH 800 UTV	243 46 78	Designed for UFH 800 cabinets installed externally
LK Base 800 (depth 145)	243 52 42	Accessories for external installation
LK Key Lock	188 23 52	Accessories
LK Pipe grommet 8-20 LP	298 61 50	Spare part
LK Pipe grommet 20-25 LP	188 27 23	Spare part
LK Sealing Plug 40 LP	188 27 21	Spare part
LK Bottom Plug	188 84 88	Accessories
LK Pipe grommet 32 RiR LP with 40 mm conduit	188 27 24	Accessories (sold in pairs)
LK Pipe grommet 8 mm, Quattro	241 94 61	Accessories
LK Cabinet Stand L2	243 55 16	Accessories
LK Plastic clamp conduit 25	188 07 62	Spare part
LK Legs UNI/GV	187 82 02	Accessories

