# LK Manifold Cabinet UNI HP2 and HP4

# Design

- The LK Manifold Cabinet UNI HP is intended for use when connecting heat sources to wall pipes.
- The LK Manifold cabinet UNI HP, with accompanying assembly instructions, fulfils Sweden's plumbing safety regulations. The cabinet has a sealed base with rubber pipe lead-throughs. The base of the cabinet is fitted with a drainage opening which allows any water leakage to run off to a location that can be inspected. Manufactured from 1 mm powder-coated steel plate, RAL 9016. The cabinet is designed to be built into a wall or surface-mounted on a wall. Minimum joist depth when built in is 70 mm. The cabinet must be installed in accordance with Sweden's plumbing safety regulations (safe water <u>www.sakervatten.se)</u>.
- The LK Manifold Cabinet UNI HP2 and HP4 are sold separately and supplied with a twotwo-part splash protection with membrane seals, four LK T-pipes with plain adapters and G20 caps, insulation board to separate the cold water from other connections, pipe leadthroughs, complete V2 drainage elbow and assembly components. LK Hatch UNI HP is sold separately and

comes in three designs, HP2, HP4 and HP6. HP6 is used when LK Manifold Cabinets UNI HP2 and HP4 are mounted side by side.

• Holes at the top, similar to those at the bottom of the cabinet, enable pipes to be fitted above the cabinet. These holes are plugged with uncut pipe lead-throughs if they are not used.



LK Manifold Cabinet UNI HP2 with splash protection.



LK Manifold Cabinet UNI HP4 with splash protection.



LK Manifold Cabinet Hatch UNI HP 2,4 and 6.

The cabinet is tested according to SP method 5676.



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No.	Designation	Quantity	Art. no.
1	Manifold Cabinet UNI HP2	1 pc.	188 27 08
2	T-pipe HP	2 pcs.	29 648, 1 pc/pack
3	Flange nut M5	6 pcs.	6 pcs. in pack with pos.3-5
4	Plain adapter G20	2 pcs.	187 06 78, 2 pcs.in pack with pos.3-5
5	Screw plug G20	2 pcs.	187 06 68, pcs.in pack with pos. 3-5
6	Lk Pipe inlet 20-25 LP	4 pcs.	188 27 23, 1 pcs/pack
7	Screw M5x12	2 pcs.	-
8	Water spray shield with fitted membrane seal	1 pc	1 pc/pack
9	LK Drainage Elbow V2, angle	1 pc	188 26 12 pcs.in pack with pos. 9-12
10	LK Outlet Plate V2, white.	1 pc	188 26 13 pcs.in pack with pos. 9-12
11	Installation screws for Drainage elbow V2	2 pcs.	In pack with pos.9-12
12	Bellow sleeve 25 LP	1 pc	188 27 42 pcs.in pack with pos. 9-12
-	Wooden screw 5X35 mm	4 pcs.	4 pcs.in pack.
-	Seal for wooden screw	4 pcs.	4 pcs.in pack. Seal for wooden screw.



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SUPPLIED	WITH LK	MANIFOLD	CABINET	UNI HP 4
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No.	Designation	Qunatity	Art. No.
1	Manifold Cabinet UNI HP4	1 pc.	188 27 09
2	T-pipe HP	4 pcs.	29 648, 1 pc/pack.
3	Flange nut M5	8 pcs	8 pcs. in pack with pos.3-6.
4	Plain adapter G20	4 pcs	187 06 78, 2 pcs. in pack with pos 3-6.
5	Screw plug G20	4 pcs	187 06 68, 2 pcs. in pack with pos 3-6.
6	Insulation clip	1 pc	1pc. in pack with pos 3-6.
7	Pipe inlet 20-25 LP	8 pcs	188 27 23
8	Water spray shield with fitted membrane seal	1 pc	2 pcs. in pack.
9	LK Drainage Elbow V2	1 pc	188 26 12 in pack with pos 9-12.
10	LK Outlet Plate V2, white.	1 pc	188 26 13 in pack with pos. 9-12.
11	Installation screws for Drainage elbow V2	2 pcs	In pack with pos 9-12.
12	Bellow sleeve 25 LP	1 pc	188 27 42 in pack with pos 9-12.
13	Insulation board partition 345x66x30	1 pc	1 pc/pack
-	Wood screw (5 x 35 mm)	4 pcs	4 pcs. in pack. Seal for wooden screw.
-	Seal for wood screw	4 pcs	4 pcs. in pack. Seal for wooden screw.



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## **INSTALLATION REQUIREMENTS**

In-wall installation

- A stud-frame thickness of at least 70 mm is required for in-wall installations.
- The manifold cabinet cannot be installed in walls with a waterproofing layer.

Installation height for in-wall installations

• The design of the installation must enable perpendicular pipe penetration in relation to the cabinet bottom. The cabinet should be mounted at least 250 mm above the floor so that the drainage pipe can be laid with a drop along its entire length. To facilitate perpendicular fixing, LK Fixing Plate PIP 25 can be mounted 50-150 mm below the cabinet.



Stud wall installation, example illustration.

## **On-wall installation**

• When installing close to stud wall, at least 20 mm is required from the outside of the cabinet to adjoining walls to provide space for the two-piece hatch.

## WORKFLOW

- 1 Preparing pipe lead-throughs
  - Prepare pipe lead-throughs for feeding pipes and coupling pipes by adapting/cutting leadthroughs to the correct size based on the pipe dimension used.



Cutting LK Pipe lead-through 20-25 LP.

Cutting level	Dim. pipe			
1	Ø12	-		
2	Ø16-20	-		
3	Ø25	Ø25		
4	Ø32	Ø34		



A cross-section of the LK Pipe lead-through LP 20-25 shows the position of the pipe seal.

- 2 Fitting pipe lead-throughs
  - Fit the adjusted pipe lead-throughs before the cabinet is fitted into place. Pay particular attention when fitting the pipe lead-throughs to ensure the cabinet base is sealed.



Fitting cabinet pipe inlets and sealing plugs, example illustration.

## 3 - Installing the cabinet(s)

LK Manifold Cabinet UNI HP2 and HP 4 kan be installed separately or side by side.

1. If LK Manifold Cabinet UNI HP2 and HP 4 are to be used together, assemble the cabinets together with two screws and two nuts.



2. Mount the manifold cabinet to the building structure. For timber stud constructions, use the screws and sealing plates supplied. The cabinet can also be mounted using the LK Leg Stand. Refer to *installation using LK Leg Stand* section.



**NOTE!** The cabinet must be installed flush with the finished wall.

• If the cabinet is mounted recessed in an outer wall, it has to be installed on the heated side of the structure, inside the airtight foil.



Mounting cabinet on a stud wall.

## 4 - Fit insulation plate and HP T-pipes

- 1. Decide the position of the insulation plate and its fixture. This could be between the cold water and hot water or the tapwater or heating system, depending on position.
- 2. Twist the insulation plate into its position.



Installing the insulation plate.

- 3. Place the HP T-pipe over the M5 screws.
- 4. Fit the locking plate for the insulation plate.
- 5. Fit the flange nuts on the screws.



#### Installing a HP T-pipe.

## 5 - Pipe lead-throughs

- 1. Feed coupling pipe through the pipe leadthroughs. This step can be made easier if the pipe is lubricated with soapy water or equivalent.
- 2. The pipes are then connected to the T-pipes. It is important to insert the pipes straight at right angles to the cabinet to ensure the base is sealed.



#### NOTE!

Check to ensure the pipe lead-through is correctly fitted once all pipes have been installed.

#### Pressure and tightness check

Pressure and tightness check must be carried out in accordance with "*Assembly instructions for LK PE-X, PAL and PE-RT pipes*" or according to industry regulations on "*Safe water installation*".



NOTE!

A pressure and tightness check should be carried out before the wall covering is to be installed.

#### 6 - Installing cabinet drainage

- Drainage outlets from cabinets with tap water installation must always run off in an area with waterproof flooring. Drainage outlets from cabinets in heating system installations can run off from the wall surface under the cabinet in rooms normally in use to detect any leakage.
- For pipe lead-throughs in walls, the distance between the pipe and the adjacent wall or the

floor's waterproofing layer must be at least 60 mm. Leakage indication sensors must not be fitted in bathrooms or shower areas.

- There are several ways to install the drainage elbow:
- 6a. Drainage elbow connected directly to the cabinet's outlet pipe
- 1. Drainage run off from the wall surface under the cabinet. Connect the drainage elbow directly to the cabinet's outlet pipe after all pipe inlets and sealing plugs have been installed.
- 2. Then attach the drainage elbow with a stainless-steel clip, size 25-40 mm).



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

## 6b - Drainage elbow connected via conduit

- Connect the conduit to the cabinet's drainage pipe using the bellow sleeve. The bellow sleeve must not be kinked as this could prevent the flow of any water leakage.
- 2. Then connect the drainage elbow to the conduit. Note that the pipe must be pushed all the way into the drainage elbow, approximately 20 mm deep.
- 3. Mount the drainage elbow to a wall stud in a suitable position. Use the two installation screws supplied for the fixing holes.
- 4. Ensure that the entire conduit is installed with a fall towards the outlet and that the conduit is secured.



Illustration Drainage elbow connected via a conduit.



## 6c - Connecting 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 the LK Drainage Kit 25 Duo. Mount the drainage elbow to a wall stud in a suitable position. Use the two installation screws supplied for the fixing holes.
- 2. Ensure that the conduit is installed with a fall towards the outlet and that the conduit is secured.



Illustration Connecting drainage pipes.

## 7 - Installation of outlet plate

- Install a wall panel with a hole for the drainage elbow's outlet pipe. Hole diameter approx. 26 mm.
- 2. Apply any waterproofing layer as per the instructions from the waterproofing supplier. Although LK Systems can supply the LK Pipe Membrane, the waterproofing contractor should carry out the installation and be responsible for the adhesive characteristics of the waterproofing 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).
- 3. Once the wall panelling is installed, the drainage elbow should be cut to size using the LK Pipe Mill V2. Alternatively, the drainage elbow can be cut to a suitable length using a tool such as a hacksaw blade. Be careful not to damage the surface layer, leave 6-9 mm of the outlet pipe protruding from the wall.
- 4. Fit the LK Outlet Plate V2 to the outlet pipe. The LK Outlet Plate V2 Chrome is available as an accessory for a more stylish finish.



Illustration Installing the LK Outlet Plate V2.

# Tillbehör







LK Pipe Mill V2 1882615.

- 8 Installation of splash protection
- Fit the splash protection supplied over the T-pipes before connecting to the heat source. It should be fitted during construction work in order to prevent dirt and dust getting into the cabinet. The splash protection prevents water damage to the cabinet, and it must always be fitted.



Installing the splash protection.

- 9 Installation of two-piece hatch
  - The hatch covers an area 15 mm beyond the edges of the cabinet. Fit the hatch with the M5 screws and cover caps supplied. Use longer screws (not included) if the cabinet is mounted deeper into in the wall structure.

#### Installation

The LK Leg Stand make is easier to mount cabinets on prefabricated concrete joists. Manufactured from galvanised steel plate. The LK Leg Stand is supplied in pairs with 4 self-tapping screws that are screwed through the holes on the inside of the cabinet to attach the legs. The feet on the leg stand have 6 mm holes to attach it to the concrete floor structure. The legs are attached using, for instance, bolts or steel nail plug (not supplied).



LK Leg Stand.

## PIPE DIMENSIONS

The table below shows which dimensions and pipe typed can be connected to the LK Manifold Cabinet UNI HP. For more information about the included products, visit <u>www.lksystems.se</u>

Pipe lead-through	PE pipe	Steel pipe	PiP (pipe in pipe) conduit dimension
Pipe lead-through 20-25 LP for feed pipe in PE	20, 25 & 32 mm	22 & 28 mm	34 mm
LK Pipe Inlet 32 PiP LP*	32 mm	-	40-44 mm

\*Ordered separately.



## **DIMENSION DRAWINGS**

## LK Manifold Cabinet UNI HP4



LK Manifold Cabinet UNI HP2



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LK Hatch UNI HP2 188 27 30



LK Hatch UNI HP4 188 27 31







LK Hatch UNI HP6 188 27 32





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