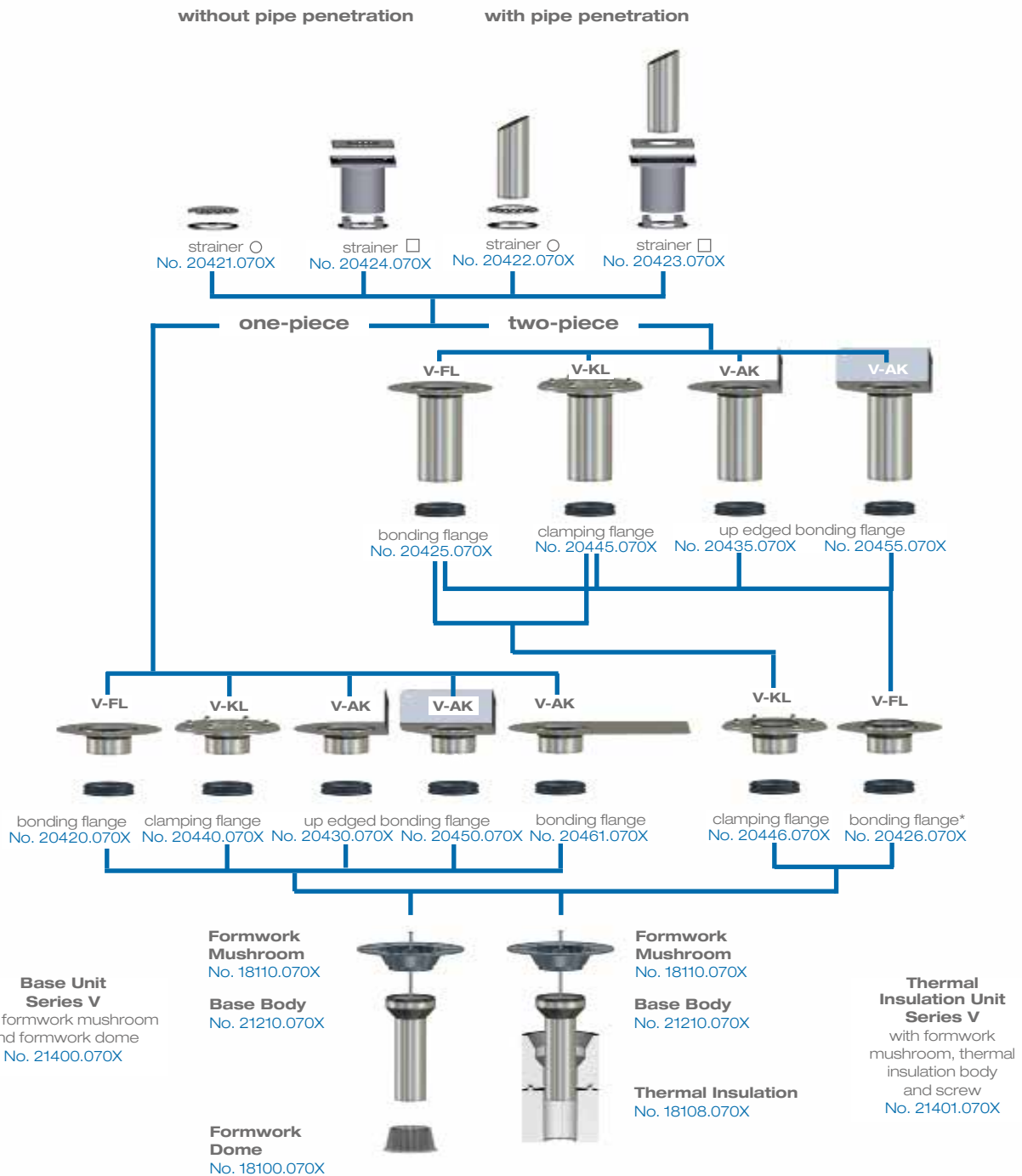


System Set Up LORO-X Balcony Drainage, Series V made of stainless steel, DN 70

Variable balcony drainage system with only one base body and modular set up elements, for application on balconies with liquid plastic sealing or sealing sheets



Attention: Please order downpipes separately.

* Adapt the flange during installation in Series V-AK.

LORO-X Balcony Drainage, Series V

Installation of the base body in a balcony made of in-situ concrete or prefabricated balcony parts in **cold roof version**



Basebody, formwork mushroom* and formwork dome taken together amount to the thickness of the balcony slab. The base body has to be cut to length accordingly.



Screw base body with formwork mushroom* and formwork dome at the penetration point on the formwork**. Cast the balcony slab. For an easier deinstallation it is recommended to moisten the formwork dome with formwork oil.

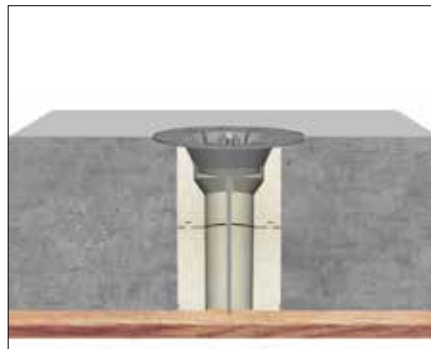


Remove the formwork mushroom and the formwork. The installed, non-insulated base body is ready for adding further balcony structures and connecting pipes.

in **warm roof** version



Formwork mushroom* and thermal insulation body taken together amount to the thickness of the balcony slab. The thermal insulation body has to be cut to length accordingly.



Screw thermal insulation body with formwork mushroom* and formwork dome at the penetration point on the formwork**. Cast the balcony slab.



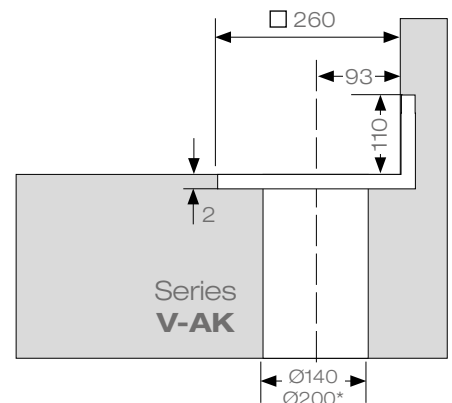
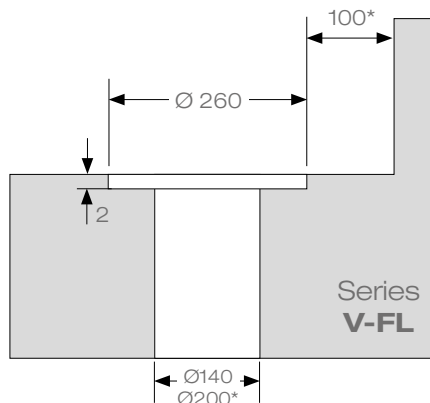
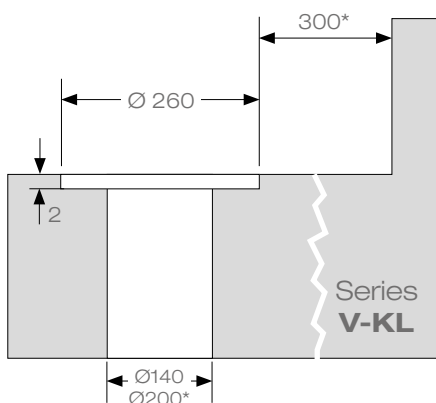
Remove formwork mushroom and formwork and put the base body Series V into the installed thermal insulation body. The thermally insulated base body is ready for adding further balcony structures and connecting pipes.

* The hole in the formwork mushroom has to be enlarged to $\varnothing 6,0$ mm.

**Before pouring the concrete, the screw head (M8 x 320, Art.-No. 18109.320X) should be taped.

Tapping hole and recess dimensions

for new construction or renovation



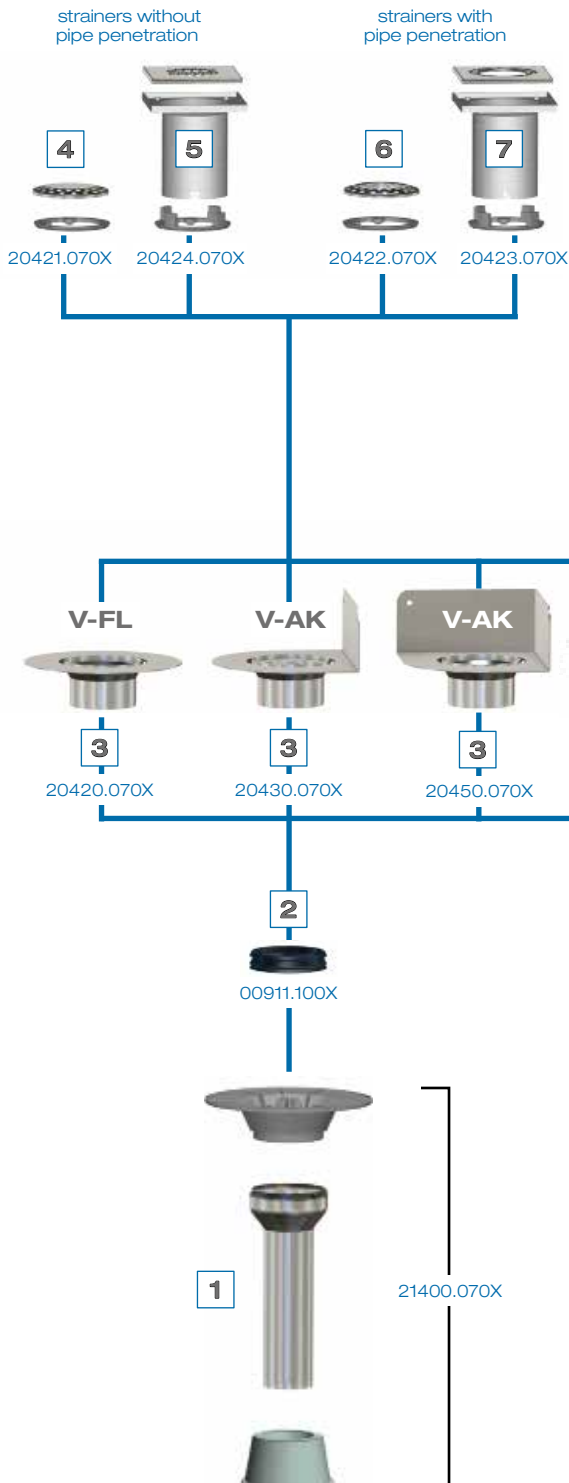
* Tapping hole when using thermal insulation body Art.-No. 21401X or 18108X (two-piece version)

** according to DIN 18531-5 July 2017

LORO-X Balcony Drainage, Series V-FL / Series V-AK

- Balcony sealing with liquid plastic
- Cold roof

Installation of the base body see page 14.



- 1 Check the in concrete embedded **base bodies**. Remove concrete remains, if necessary.
- 2 Place **LORO-X sealing element** DN 100 into the socket of the base body and completely lubricate it with LORO-X lubricant.
Attention: Pay attention to the proper positioning of the sealing element in order to guarantee backwater protection.
- 3 **Set up elements Series V-FL/V-AK:**
 - Series V-FL, with bonding flange
 - Series V-AK, with up edged flange
 - Series V-AK, with up edged corner flange
 Lubricate the outlet end of the set up element with lubricant and insert it into the sealing element of the base body. If necessary, backfill the gaps with mortar.
- 4 **Installation of strainer** ○
For balcony structures without additional covering,
- 6 installation of the strainers ○ without height adjustment in combination with the installation of the pipe (see page 19).

Installation of strainer and strainer support □

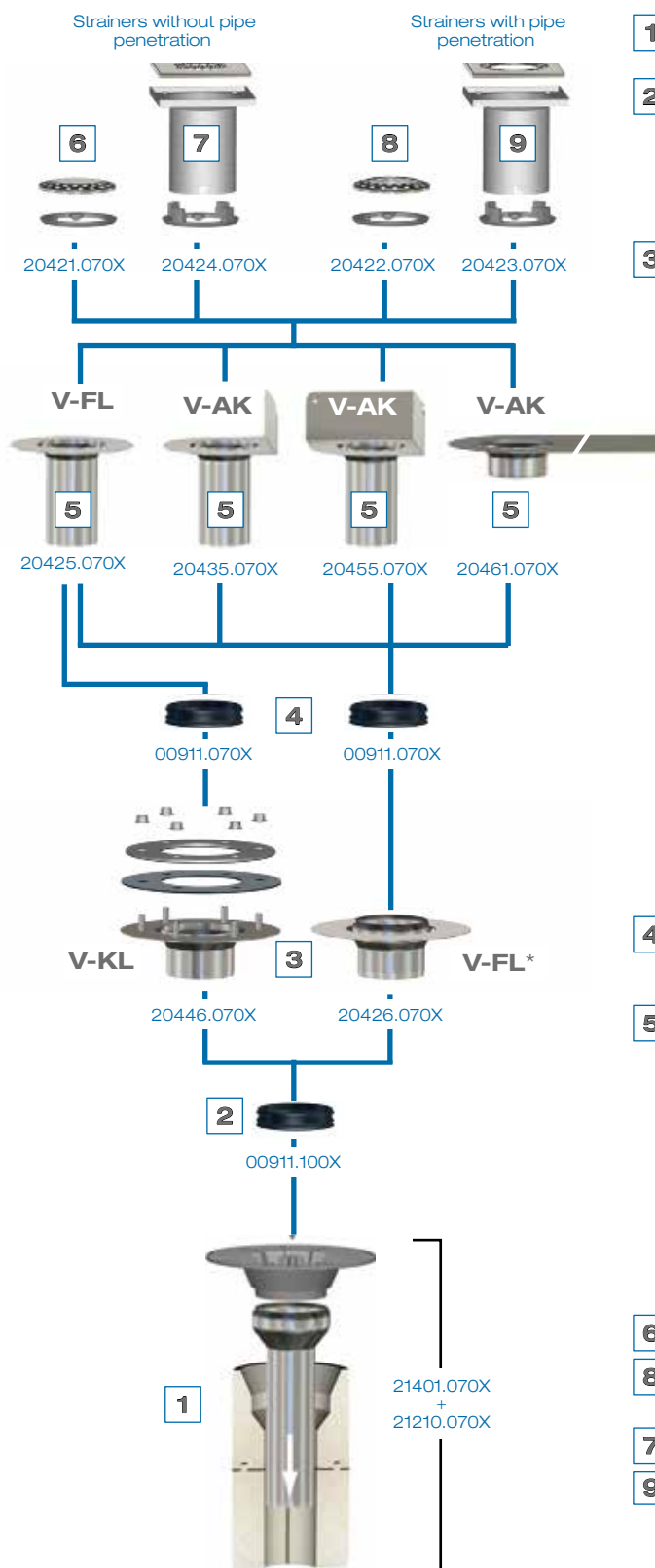
- 5 For balcony structures with additional covering such as tiles in mortal bed, tiles in gravel bed or on supported slabs.
- 7 Installation of the strainers and strainer supports □ with height adjustment in combination with the installation of the pipe (see page 19).

LORO-X Balcony Drainage, Series V-FL / Series V-AK

• Balcony sealing with liquid plastic

• Warm roof

Installation of the base body see page 14.



* adjust the flange when installing in Series V-AK

1 Insert the **base body** into the thermal insulation body that is embedded in concrete.

2 Place **LORO-X sealing element** DN 100 into the socket of the base body and completely lubricate it with LORO-X lubricant.

Attention: Pay attention to the proper positioning of the sealing element in order to guarantee backwater protection.

3 Set up elements Series V-FL/V-KL: Lubricate the outlet end of the set up element with lubricant and insert it into the sealing element of the base body. If necessary, backfill the gaps with mortar.

Please note:

- Set up element Series V-FL, with bonding flange When installing the extension units Series V-AK, the bonding flange of the set up element has to be placed at the wall.

- Set up element Series V-KL, with clamping flange For prepunching the vapor barrier, the loose flange can be used as hole template.

When using a plastic vapor barrier, the **compression seal*** has to be positioned on the fixed flange under the vapor barrier. **When using vapor barriers made of bitumen no compression seal is used.**

In order to clamp the vapor barrier, screw together the fixed and the loose flange with the six enclosed hexagonal flange nuts M 10.

Tightening torque: 15 Nm.

Follow the processing guidelines of the roofing sheet producers.

According to the technical rules for sealings (flat roof guidelines, edition December 2016), the nuts of the flange connection have to be tightened 3x. The last tightening should take place at the earliest after 24 hours.

4 Place **LORO-X sealing element** DN 100 into the socket of the base body and completely lubricate it with LORO-X lubricant (see point 2).

5 Extension cartridge Series V-FL / V-AK:

Cut the extension cartridge to the desired length (thermal insulation height).

Lubricate the outlet end of the extension cartridge with lubricant and insert it into the sealing element of the set up element.

Attention:

- The installation of the extension cartridge of Series V-FL is possible in combination with all set up elements.
- The installation of the extension cartridges of Series V-AK is not possible in combination with the set up element of Series V-KL.

6 Installation of strainer ○

For balcony structures without additional covering, installation of the strainers ○ without height adjustment in combination with the installation of the pipe (see page 19).

7 Installation of strainer and strainer support □

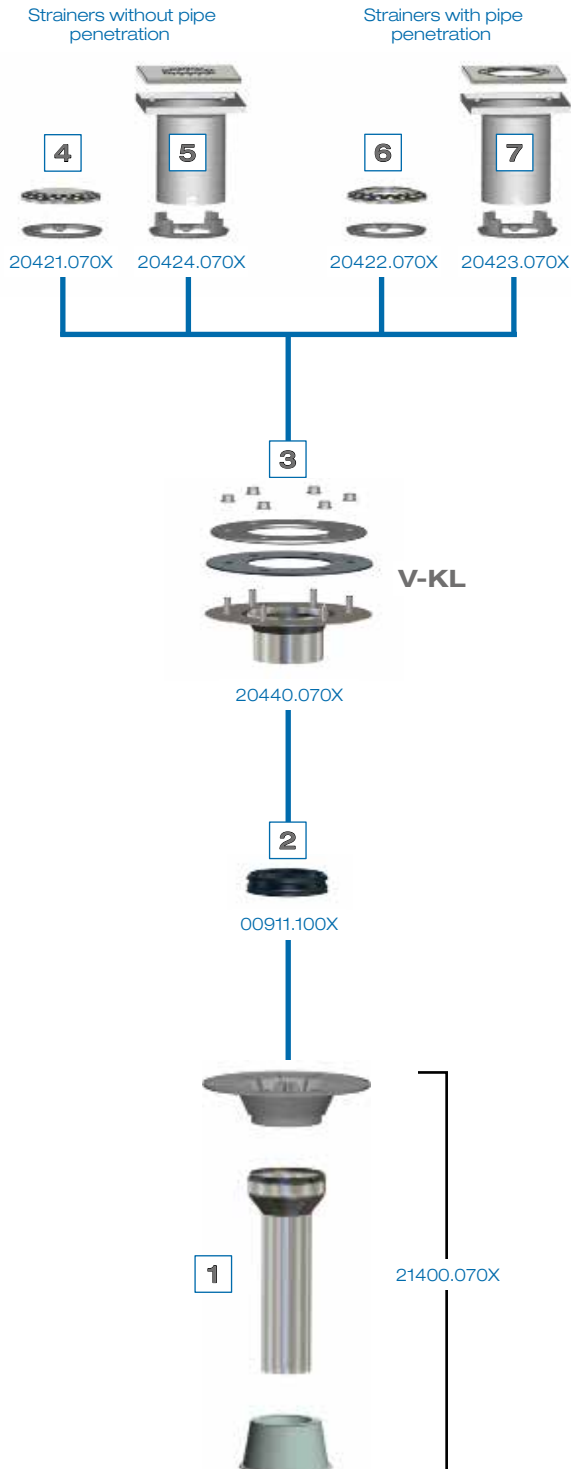
For balcony structures with additional covering such as tiles in mortar bed, tiles in gravel bed or on supported slabs.

Installation of the strainers and strainer supports □ with height adjustment in combination with the installation of the pipe (see page 19).

* If a second compression seal is needed, the material of the roofing sheet can be used to produce one on site. Otherwise one can be ordered from LOROWERK.

LORO-X Balcony Drainage, Series V-KL

- Balcony sealing with sealing sheets
- Cold roof



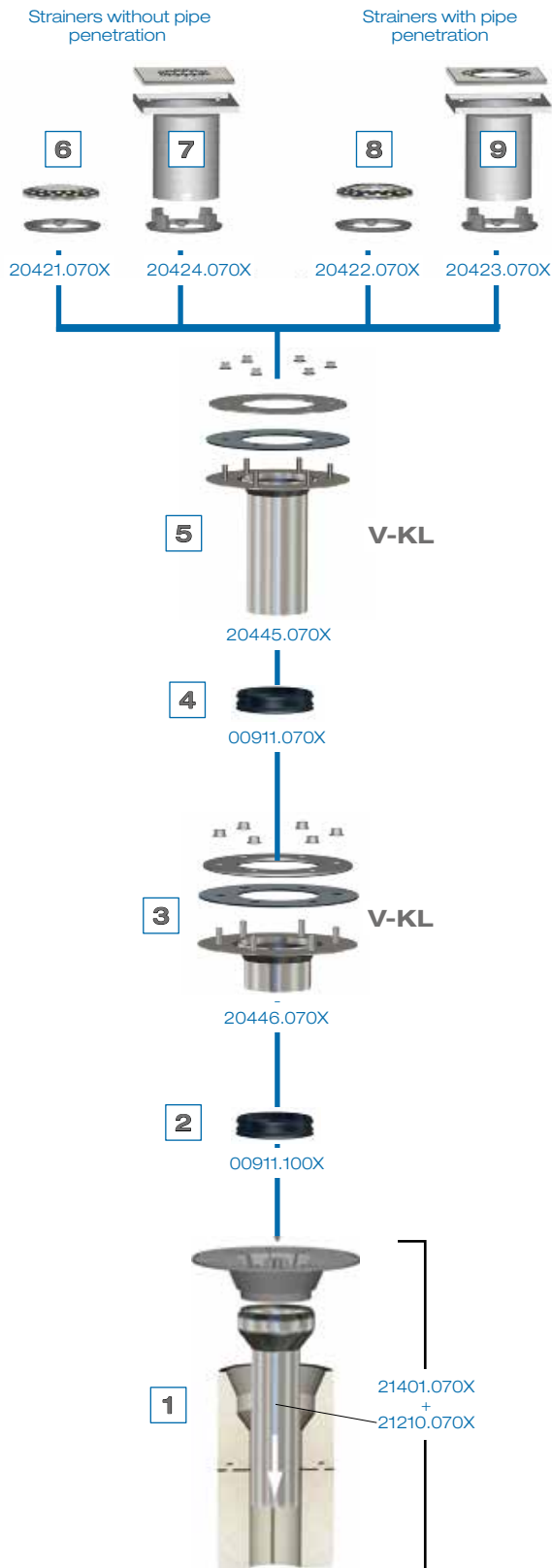
Installation of the base body see page 14.

- 1 Check the in concrete embedded **base bodys**. Remove concrete remains, if necessary.
- 2 Place **LORO-X sealing element** DN 100 into the socket of the base body and completely lubricate it with LORO-X lubricant.
Attention: Pay attention to the proper positioning of the sealing element in order to guarantee backwater protection.
- 3 **Set up element Series V-KL:**
Lubricate the outlet end of the set up element with lubricant and insert it into the sealing element of the base body. If necessary, backfill the gaps with mortar. In order to clamp the vapor barrier, screw together the fixed and the loose flange with the six enclosed hexagonal flange nuts M 10. Tightening torque: 15 Nm. The **compression sealing*** has to be positioned on the fixed flange below the vapor barrier.
When using bituminous sealing sheets, no compression sealing is necessary.
Follow the processing guidelines of the roofing sheet producers.
According to the technical rules for sealings (flat roof guidelines, edition December 2016), the nuts of the flange connection have to be tightened 3x. The last tightening should take place at the earliest after 24 hours.
- 4 **Installation of strainer** ○
For balcony structures without additional covering,
- 6 installation of the strainers ○ without height adjustment in combination with the installation of the pipe (see page 19).
- 5 **Installation of strainer and strainer support** □
- 7 For balcony structures with additional covering such as tiles in mortar bed, tiles in gravel bed or on supported slabs.
Installation of the strainers and strainer supports □ with height adjustment in combination with the installation of the pipe (see page 19).

* If a second compression seal is needed, the material of the roofing sheet can be used to produce one on site. Otherwise one can be ordered from LOROWERK.

LORO-X Balcony Drainage, Series V-KL

- Balcony sealing with sealing sheets
- **Warm roof**



Installation of the base body see page 14.

- 1 Insert the **base body** into the thermal insulation body that is embedded in concrete.
- 2 Place **LORO-X sealing element** DN 100 into the socket of the base body and completely lubricate it with LORO-X lubricant.
Attention: Pay attention to the proper positioning of the sealing element in order to guarantee backwater protection.
- 3 **Set up element Series V-KL:**
Lubricate the outlet end of the set up element with lubricant and insert it into the sealing element of the base body. If necessary, backfill the gaps with mortar. For prepunching the vapor barrier the loose flange can be used as hole template.

In order to clamp the vapor barrier, screw together the fixed and the loose flange with the six enclosed hexagonal flange nuts M 10. Tightening torque: 15 Nm.
The **compression sealing*** has to be positioned on the fixed flange below the vapor barrier.

When using bituminous sealing sheets, no compression sealing is necessary.

Follow the processing guidelines** of the roofing sheet producers.

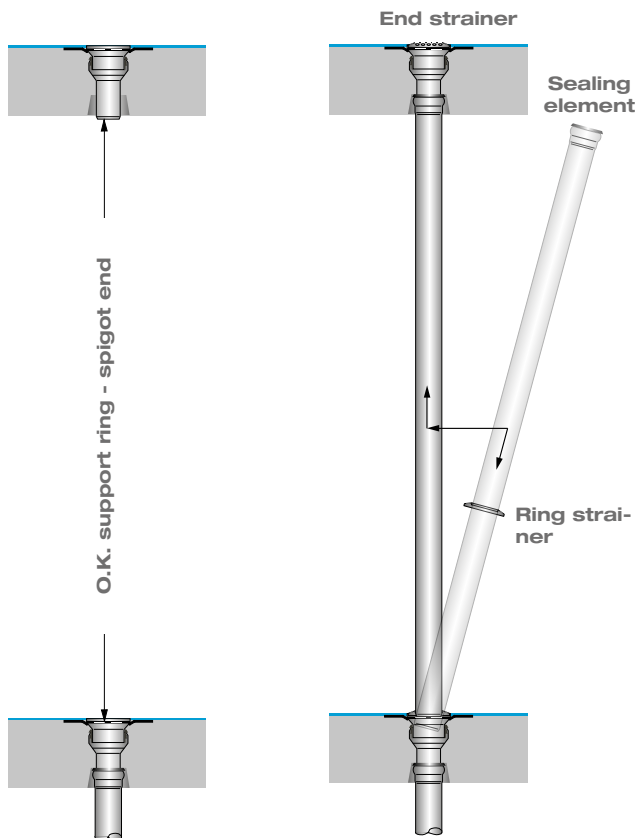
- 4 Insert the LORO-X sealing element DN 100 into the socket of the set up element and completely lubricate it with LORO-X lubricant.
Attention: Pay attention to the proper positioning of the sealing element in order to guarantee backwater protection.
- 5 **Extension cartridge Series V-KL:**
Cut the extension cartridge to the desired length (thermal insulation height).
Lubricate the outlet end of the extension cartridge with lubricant and insert it into the sealing element of the set up element, Series V-KL.
Vorgehensweise bei Einklemmen der Abdichtungsbahn analog Punkt 3 Einklemmen der Dampfsperre.

- 6 **Installation strainer ○**
For balcony structures without additional covering,
- 8 installation of the strainers ○ without height adjustment in combination with the installation of the pipe (see page 19).
- 7 **Installation of strainer and strainer support □**
- 9 For balcony structures with additional covering such as tiles in mortar bed, tiles in gravel bed or on supported slabs.

Installation of the strainers and strainer supports □ with height adjustment in combination with the installation of the pipe (see page 19).

* If a second compression seal is needed, the material of the roofing sheet can be used to produce one on site. Otherwise one can be ordered from LOROWERK.

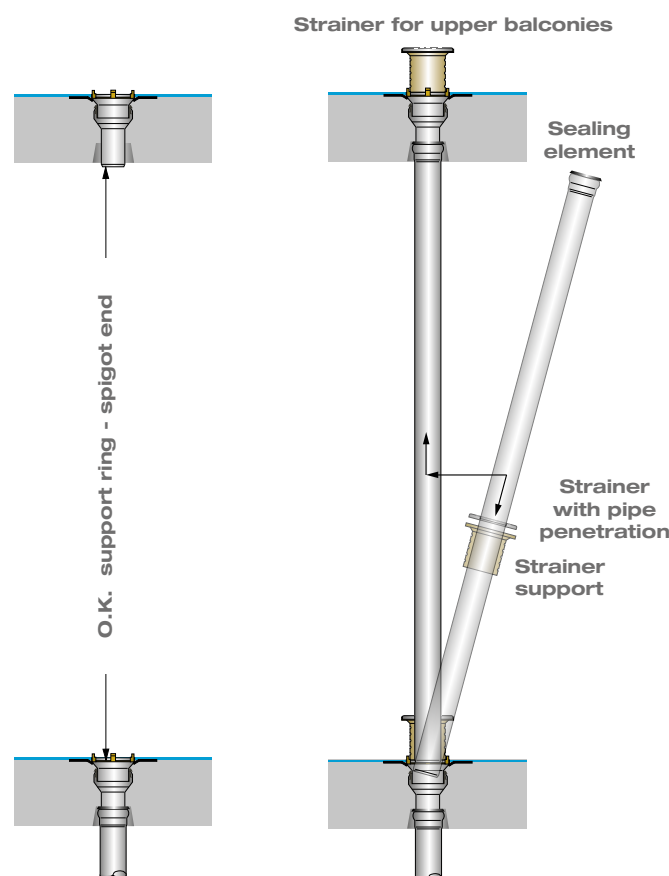
** According to the technical rules for sealings (flat roof guidelines, edition December 2016), the nuts of the flange connection have to be tightened 3x. The last tightening should take place at the earliest after 24 hours.



Installation of the downpipe

a) for strainer without height adjustment

- 1) Check the LORO balcony drains that are set in concrete. Remove concrete remains, if necessary.
- 2) Determine the distance from the upper edge of the support ring of the lower balcony drain up to the spigot end of the upper balcony drain. Add 25 mm. That way the pipe length is calculated.
- 3) Cut the downpipe to the desired length, insert the sealing element and lubricate it with lubricant, put the ring strainer onto the downpipe (round side of the strainer upwards).
- 4) Push the downpipe slantingly through the support ring into the lower balcony drain, position it vertically and put the socket onto the plug-in of the upper balcony drain. Pay attention to the proper positioning of the sealing element.
- 5) Place the downpipe onto the support ring of the lower balcony drain and push the ring strainer into the set up element. That way the downpipe is fixed.
- 6) Push the end strainer into the set up element at the top balcony.



b) for strainer with height-adjustable strainer support

- 1) Check the LORO balcony drains that are set in concrete. Remove concrete remains, if necessary.
- 2) Determine the distance from the upper edge of the support ring of the lower balcony drain up to the spigot end of the upper balcony drain. Add 25 mm. That way the pipe length is calculated.
- 3) Cut the downpipe to the desired length, insert the sealing element and lubricate it with lubricant. Put the strainer with the pipe penetration and the strainer support onto the downpipe.
- 4) Push the downpipe slantingly through the support ring into the lower balcony drain, position it vertically and put the socket onto the plug-in of the upper balcony drain. Pay attention to the proper positioning of the sealing element.
- 5) Place the downpipe onto the support ring of the lower balcony drain. On site, cut the strainer support to the desired height and insert it into the support ring with drainage openings. Push the strainer with pipe penetration into the strainer support. That way the downpipe is fixed.
- 6) On site, cut the strainer support at the top balcony to the desired length and insert it into the support ring with drainage openings. Push the strainer into the strainer support.

LOROWERK K.H. Vahlbrauk GmbH & Co. KG

Kriegerweg 1 • 37581 Bad Gandersheim, Postfach 13 80 • 37577 Bad Gandersheim

Tel. +49 5382 71 0 • Telefax +49 5382 71 2 03 • Internet: www.loro-x.de • e-mail: infocenter@lorowerk.de