WARP SYSTEMS

MANUAL

SpeeTherm
dry construction system

UNDERFLOOR HEATING

www.warp-systems.nl

THIN QUICK LIGHT WATER SUSTAINABLE

Mr. WARP will quickly help you during the installation.

Hello!
In this manual, I am going to help you with the installation. If you have questions, check the QR codes.

Mr. WARP

www.warp-systems.nl

Additional explanation in an instructional video.

Use Google Chrome or a QR code app to scan the code(s) in this brochure

Ask your plumber for connection to primary heat source and room thermostat

With tips and checklists! Most of the steps in the manual are suitable for any type of subfloor.

If there is something specific you must do for a particular type of subfloor, the steps to take are indicated by the following colours:

CONCRETE/CEMENT

WOOD

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Explanation

UNDERFLOOR HEATING

CAUTION!

HANDY TIP/ADVICE

PLEASE NOTE!

WATCH VIDEO

All the instructional videos are also available on the WARP Systems YouTube channel.

1. PREPARATION and SUBFLOOR

1.1 ☐ The subfloor should be insulated, if possible.

1.2 ☐ The subfloor must be completely flat. The floor does not need to be completely level.

1.3

CONCRETE/ CEMENT	WOOD
☐ Fill holes and sharp transitions. Recently poured cement or concrete residual moisture <3%.	☐ Sand any high areas flat or fill uneven areas.

1.4 ☐ The subfloor must be dry and clean.

1.5 ☐ Wear flat shoes with a soft sole.
This prevents damage during installation of the underfloor heating system.

1.6 ☐ Make sure you have the proper tools:
EPS burner, tube cutter, tube reel and AluTherm clipper.

INSTALLATION of manifold

2.1 Determine where the manifold will be mounted, preferably in a central location between the areas to be heated.

2.2

PLEASE NOTE!

- The diameter of the supply and return lines of the primary heat source (boiler or heat pump).
- When using a manifold with a pump, provide a power connection.
- Use of a measurement and control system requires an additional power socket.

Mount the manifold so it is level and in the correct location.

- Allow at least 30 cm of space between floor and underside of manifold so that the underfloor heating pipe connects to the manifold with a sweeping bend.
- Connect the ball valves and groups. Fit any components to the manifold according to the manifold's instructions for use.

CAUTION FOR PUMPUNIT:

- Incorrect placement of the thermostatic head can cause excessively hot water to flow through the underfloor heating, which can damage the final flooring.
- After mounting, set the thermostatic head to the lowest setting.
- Place the temperature sensor in the sensor pocket provided for this purpose. Make sure the temperature sensor cannot slide out of it's place.
- Place the thermomanometer in the hole provided for this purpose.

3. INSTALLATION – preparation

3.1 Lay out the necessary tools.

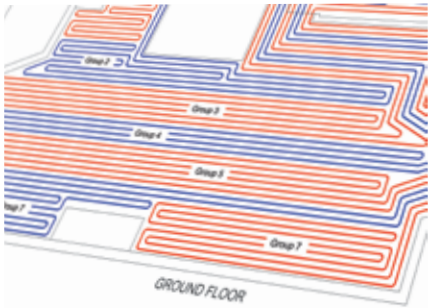
3.2 Before installation, watch the entire installation instruction video.

3.3 For the next steps in the installation, consult your own layout plan.

3.4 **PLEASE NOTE!**

The layout plan is just a general guide, and the actual installation may vary from it somewhat. The following steps include information about various choices that can be made in certain situations.

Example of a layout plan



3.5 As you start work on the installation, keep the area below the manifold free. The steps that can be taken here are explained in the ‘installation below the manifold’ section on page 11.

3.6 The following steps can be repeated for each group.

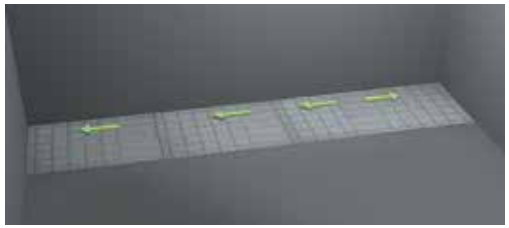
INSTALLATION

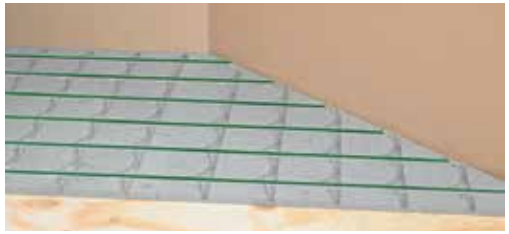
INSTALLATION of EPS

4.1 First watch the installation instruction video on how to install EPS.

4.2 Start the installation work with the first selected group.

4.3 PLEASE NOTE! EPS is fragile, so wear flat shoes to avoid damage. Before installing the underfloor heating system, consult your layout plan to see how the EPS boards must be placed in the room. It is easiest to install the SpeeTherm system one group at a time.





4.4 Place the first EPS board in the corner, with the bends against the wall.
Maintain a distance of 3 mm between walls and EPS boards.

4.5 Now continue laying EPS boards in the same row, in line with the first EPS board.
PLEASE NOTE! Be sure to lay the EPS boards in a straight line. Fill the space between the EPS boards and wall later.

4.6 The last EPS board in the row must also be placed with the bends towards the wall.

4.7 If the row of EPS boards does not fit exactly, the EPS board can be cut to size with a sharp utility knife.
Do this to one of the EPS boards in the row other than the first or last ones that are against the wall.

4.8 Use your layout plan and your own discretion to decide whether to cut the bends or the straight section.
Left-over pieces can be used later to fill empty spaces.

Use an AluTherm profile to cut straight.

4.9 Where possible, try to place the EPS boards so that bends can be made.
This may not be possible in all areas. In these areas extra slits must be made with an EPS burner.

4.10 **PLEASE NOTE!** If the room ends at an angled wall or there is an obstacle, cut the EPS board to size, and make sure it always lies in line with the other EPS boards.

INSTALLATION EPS

5. INSTALLATION of AluTherm

5.1 First watch the installation instruction video on how to install AluTherm.

5.2 Before installing the AluTherm, first check your layout plan to determine how the profiles must be laid in the EPS boards. It is easiest to install the AluTherm profiles one row at a time.

5.3 Start by placing the AluTherm profile in the slit of the first EPS board laid. As you do so, keep space free to make any bends.

5.4 Place the following AluTherm profiles in all the straight sections of the EPS boards where no bends will be made. Consult the layout plan to see how the SpeeTube must be laid in the first group.

5.5 Where necessary, cut the AluTherm profiles to size with a clipper.
Do this by cutting to either side of the radius.
Then break off the AluTherm profile over your knee and fold any sharp ends under.

5.6 Make sure that no two AluTherm profiles overlap and that they span between the EPS boards to join them. This helps keep the boards in place.

5.7 For the straight sections after a bend you can create the double meander pattern using the provided 20 cm pieces of AluTherm at the ends.

Once the AluTherm profiles are laid, a pattern develops: either a skyscraper or a stepped pattern.

INSTALLATION AluTherm

INSTALLATION of SpeeTube

6.1 First watch the installation instruction video on how to install SpeeTube.

6.2 Before installing the SpeeTube, consult the layout plan.

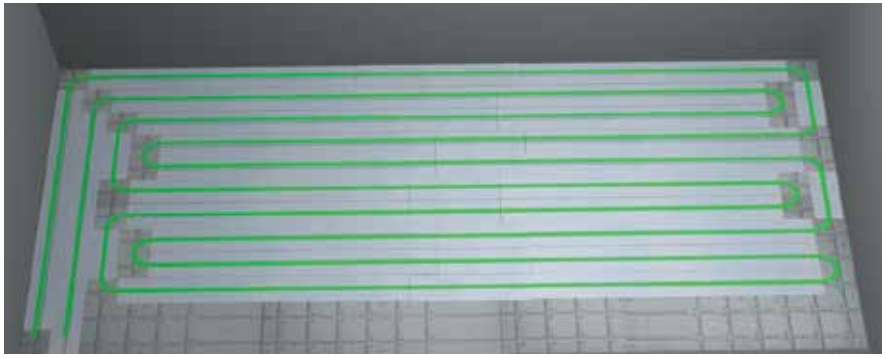
6.3 After installing the EPS boards and AluTherm profiles, the SpeeTube can be clicked into the AluTherm profiles in a double meander pattern.

6.4 **PLEASE NOTE!** The preferred direction of the SpeeTube when making the bends.
Make sure the pipe does not kink.

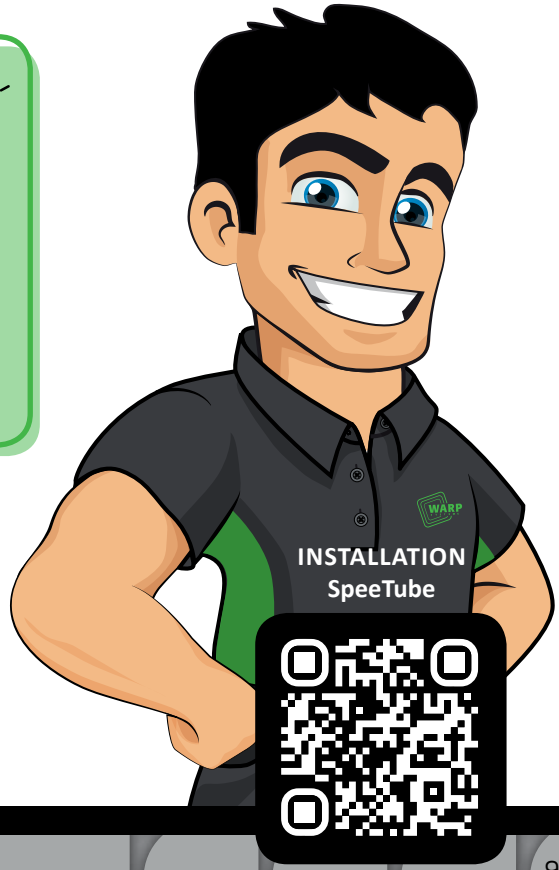
6.5 When there are not enough slits or bends in the EPS boards, more can be made with an EPS burner.

6.6 Cut the pipe to the correct length with a tube cutter. Leave enough pipe length below the manifold to allow for expansion and contraction of the pipe.

6.7 Use the CalibrationTool to deburr the cut pipe and make it round.



Length indications are printed on the SpeeTube heating pipe. These can be used to check whether the correct number of metres have been installed. Particularly when splitters are used, it is important that two groups are of the same length.



7. INSTALLATION – Special situations

7.1

If it turns out that you have to lay an odd number of SpeeTube rows, there are two ways to solve this.

OPTION 1: Eliminate the last two rows of the group.
OPTION 2: Burn extra slits in the EPS between two slits.
Ultimately, the SpeeTube heating pipe will be covered with AluTherm profiles.

7.2

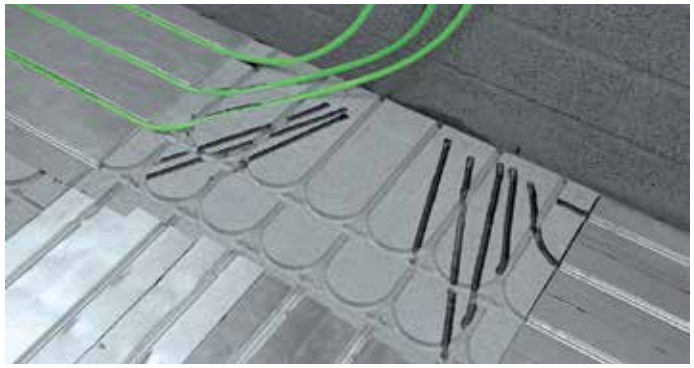
Along kitchen cabinets or a kitchen island, the EPS must be laid all the way to the adjustable cabinet legs for sturdiness.
No EPS material may be laid under kitchen cabinets.

7.3

It is recommended that a 5 mm gap be left around a crawlspace hatch.
This depends on the location of the crawlspace hatch. At a front door it is better not to lay underfloor heating. Place an inset doormat instead.

INSTALLATION – below the manifold

8.1 First watch the installation instruction video on burning slits.



8.2 In most cases, many SpeeTube heating pipes will come together in one place below the manifold. There will not be room for all the SpeeTube heating pipes in the EPS boards, so extra slits will have to be burned. Lay the EPS boards so they fill the entire room and to minimise the number of extra slits that have to be burned.

8.3 If desired, use a felt-tip pen to mark the places to be burned in the EPS boards. This clarifies the situation and available space below the manifold. While doing so, keep in mind the number of groups that must be connected to the manifold.

Use an AluTherm profile to cut straight.

8.4 From the start, try to keep the slits as close together as possible. This will help you avoid a situation in which there is too little space to connect the last groups.

8.5 This principle can be used in all situations in which many SpeeTube heating pipes must be laid in a small area. Also keep this in mind for halls, doors and doorways.

9. INSTALLATION of the manifold

9.1 Place the PushFit coupling on the manifold and insert the pipe in the PushFit coupling. You will feel some resistance as the SpeeTube passes the O-ring. Make sure the pipe is inserted deeply enough to prevent leaks. Leave one end of the pipe disconnected so the group can be filled and vented!

example of PushFit coupling

example of PushFit splitter

9.2 By flushing each group with water separately, you can fill and vent the system in one go.

- To do this, leave one end of the SpeeTube disconnected and fill the group via the end connected to the manifold.
- Connect the water supply to the manifold and open the fill valve.
- Turn the valve to open the group you want to fill.
- As soon as air-free water comes out of the open end of the pipe, insert it in the opposite PushFit connection on the manifold. This way, all air is eliminated from the loop.

example of a manifold

9.3 There is an automatic air bleeder valve on the manifold that removes any remaining air from the system.

9.4 Repeat this procedure for each group.

9.5 Once all groups have been filled, open them all.

Length indications are printed on the SpeeTube heating pipe. These can be used to check whether the correct number of metres have been installed. Particularly when splitters are used, it is important that two groups are of the same length.

See how to mount the manifold and fill the groups here

INSTALLATION of a manifold with pump

10.

10.1 Check that the thermostatic head is set to the lowest temperature.

10.2 Plug the pump into the mains socket. The pump starts running. Select the correct setting for the pumpunit. See ‘manifold and pumpunit manual’.

example of a manifold and pumpunit

10.3 The flowmeters start indicating flow. For a single group this is between 0.5 and 1 litre per minute. For a double group this is between 1 and 2 litres per minute. By turning the flowmeter, the flow rate can be adjusted. Make sure the flow is balanced.

PLEASE NOTE! The red ring at the bottom of the flowmeter is a locking ring. It must first be raised before the flowmeter can be turned. The flowmeter has a maximum position, after which it becomes difficult to turn.

10.4 If there is noise from the pump, there is still air in the system. In extreme cases this may even prevent flow through the groups.

10.5 Once the groups have been adjusted, the pump must be switched off again by removing the plug from the mains socket.

The section only applies to a manifold with a pumpunit.

11. INSPECTION after installation

11.1 Check that all the SpeeTube heating pipes are properly recessed in the AluTherm profiles.

11.2 For protection – before the final flooring is laid – place cardboard or a similar material on the floor.
This prevents damage.

11.3 When installing the pressure-resistant, rigid, floating final flooring, always follow the instructions provided by the flooring supplier.

11.4 Optionally, first place the heat foil on top of the underfloor heating (grey side face up) before you install the final flooring

12. FIRST USE PROTOCOL

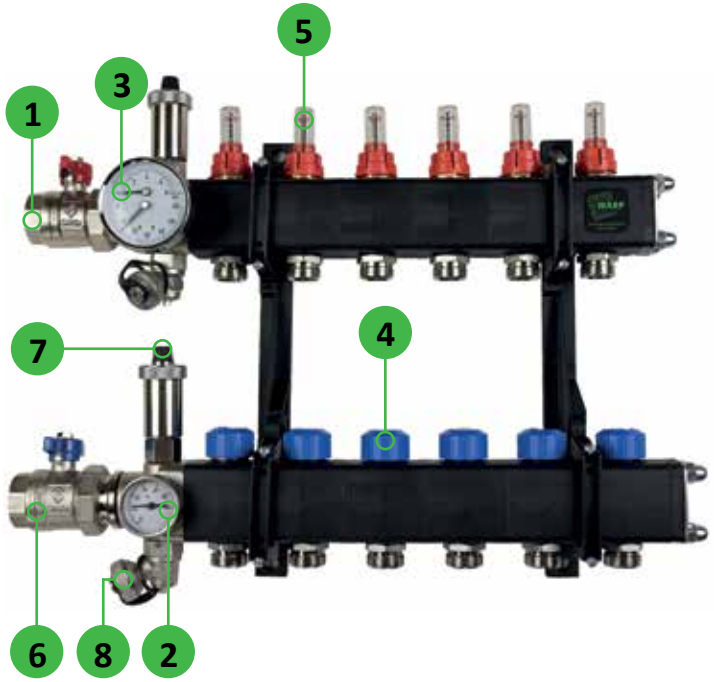
12.1 **PLEASE NOTE!** Install the final flooring first!

12.2 You can start using the system immediately after installing the final flooring and after connection to the primary heat source.
If applicable, follow the gradual heating protocol from the supplier of the final flooring.

12.3 **FOR PUMPUNITS**
Check that the thermostatic head is properly fitted and that the temperature sensor is fitted in the sensor pocket provided for this purpose. Check that the relief valve is fitted in the right place.

12.4 If the thermometer indicates a difference greater than 10 °C from the temperature on the thermostatic head, contact us!

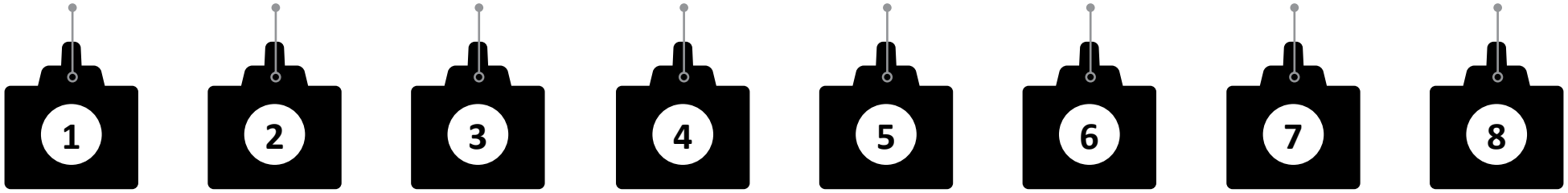
NOTES



1. Ball valve, supply from primary heat source
2. Thermometer
3. Thermomanometer
4. Blue cap, return valve
5. Flow meter, supply valve
6. Ball valve, return to primary heat source
7. Automatic air bleeder valve
8. Fill valve

GROUP MANIFOLD
Which room is which pipe in?

☐ LIVING ROOM	☐ LIVING ROOM	☐ LIVING ROOM	☐ LIVING ROOM	☐ _____	☐ _____	☐ _____	☐ _____
☐ KITCHEN	☐ KITCHEN	☐ KITCHEN	☐ KITCHEN	☐ _____	☐ _____	☐ _____	☐ _____
☐ BATHROOM	☐ BATHROOM	☐ BATHROOM	☐ BATHROOM	☐ _____	☐ _____	☐ _____	☐ _____
☐ BEDROOM	☐ BEDROOM	☐ BEDROOM	☐ BEDROOM	☐ _____	☐ _____	☐ _____	☐ _____



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