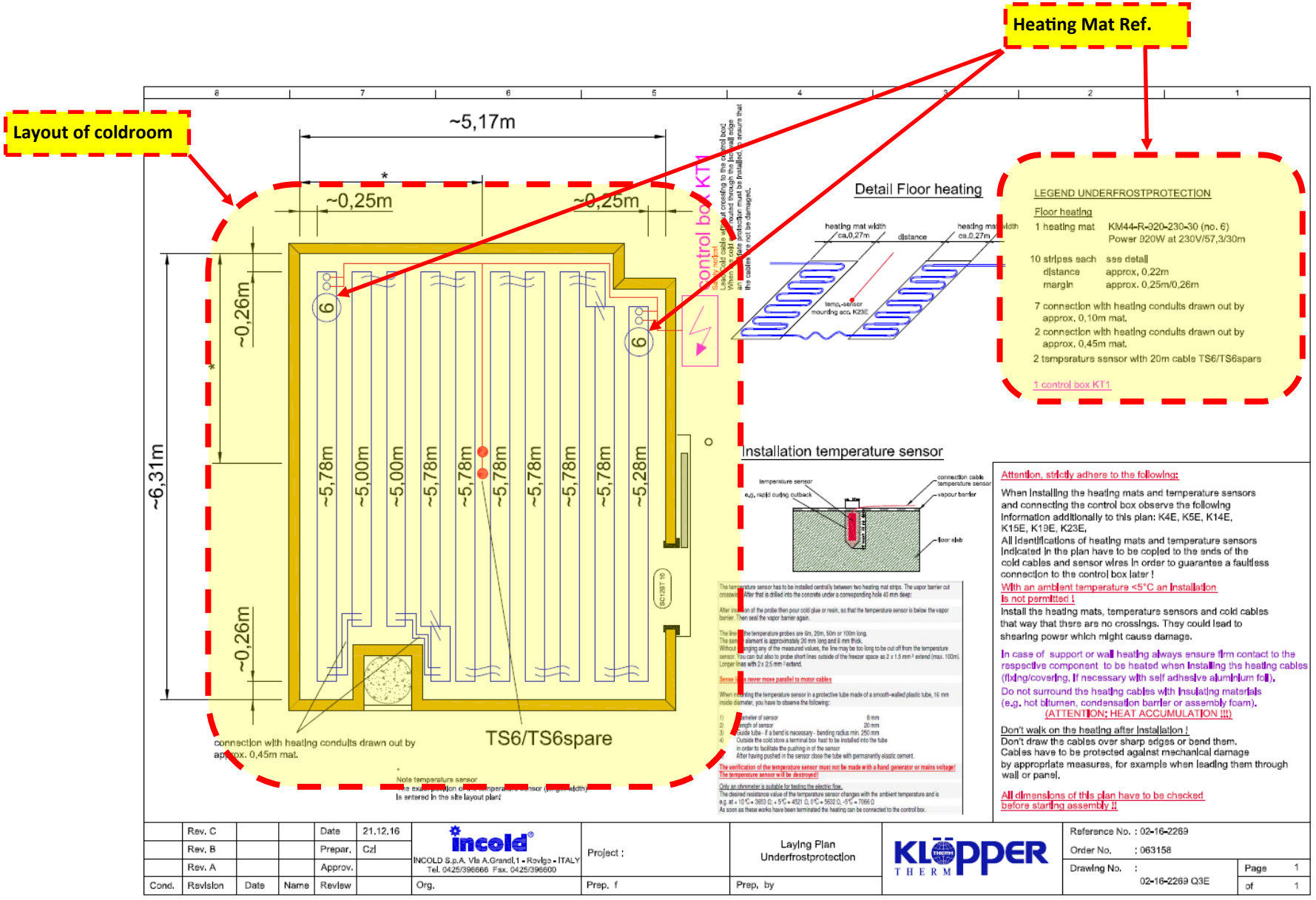
Instructions for installation of Heating Mats

Rev.00 - 2020.06.08

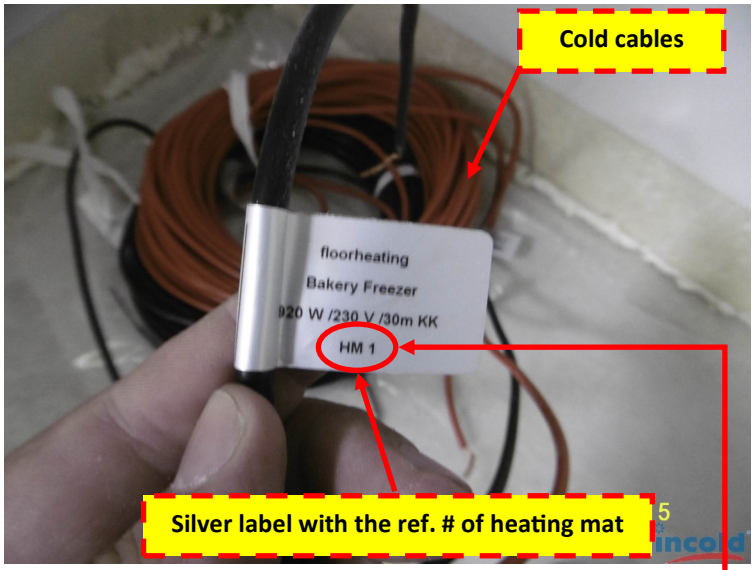
Step 1: identify the correct heating mat for your cold room

EXAMPLE:



Step 1: identify the correct heating mat for your cold room

Unbox the heating mat, and find the one with the same reference (the ref. is printed in the the silver label at the ends of cold cable



LEGEND UNDERFROSTPROTECTION

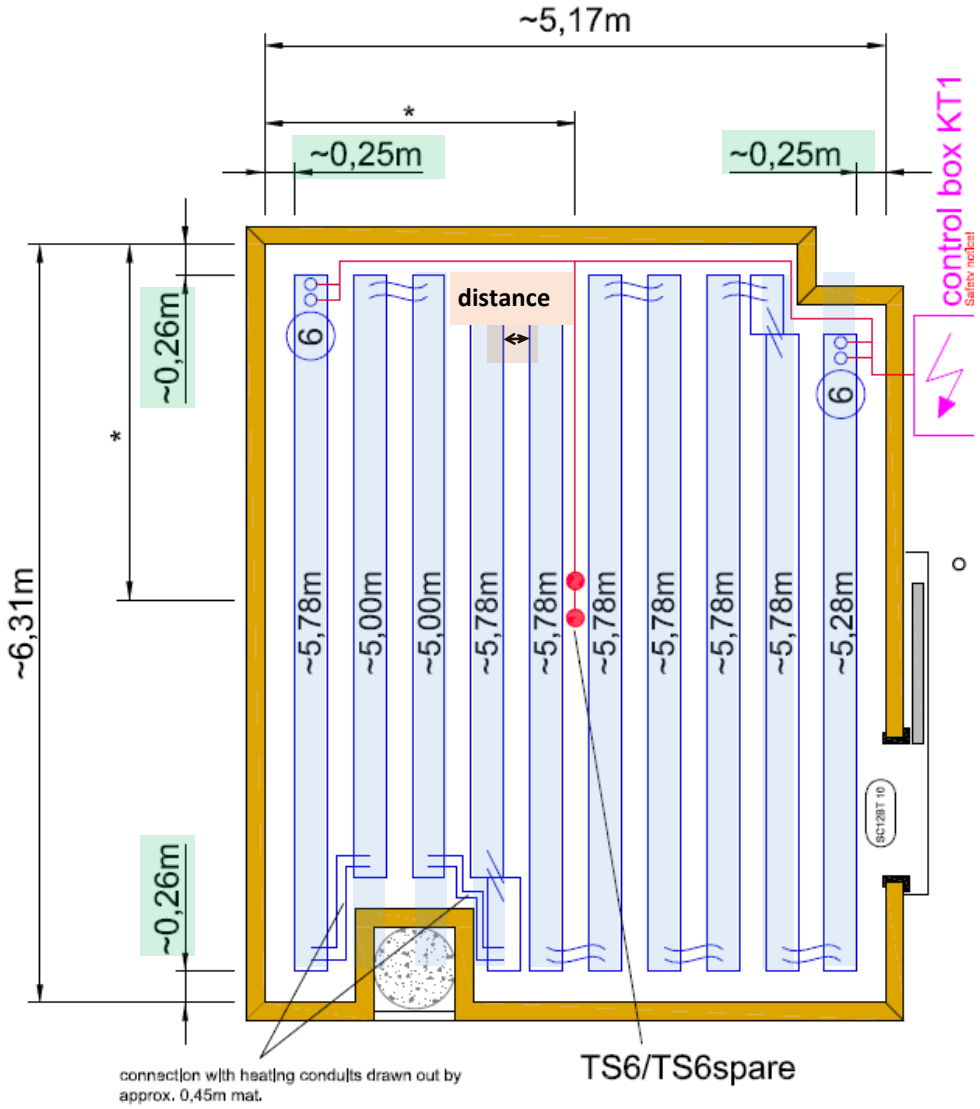
Floor heating

1 heating mat

KM44-R-920-230-30 (no. 6)
Power 920W at 230V/57,3/30m

Disclaimer: *this document is made with sample pictures from other sites. The references may be not the same of your project.*

Step 2: read the layout, check the dimension and mark it's on the floor (above the first layer of vapour barrier)



10 stripes each	see detail
distance	approx. 0,22m
margin	approx. 0,25m/0,26m

7 connection with heating conduits drawn out by approx. 0,10m mat.

2 connection with heating conduits drawn out by approx. 0,45m mat.

2 temperature sensor with 20m cable TS6/TS6spare

1 control box KT1

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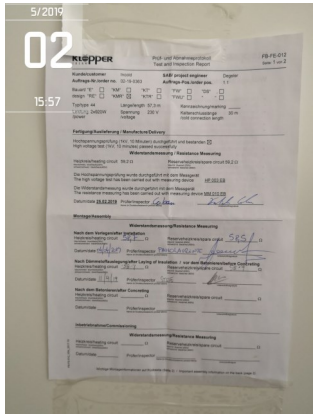
Step 2: read the layout, check the dimension and mark it's on the floor (above the first layer of vapour barrier)

Take out the test report from the heating mat

Before install the heating mat, check the continuity of both circuits (normal + spare) with the ohmeter

Correct setup of multimeter



Test report filled out

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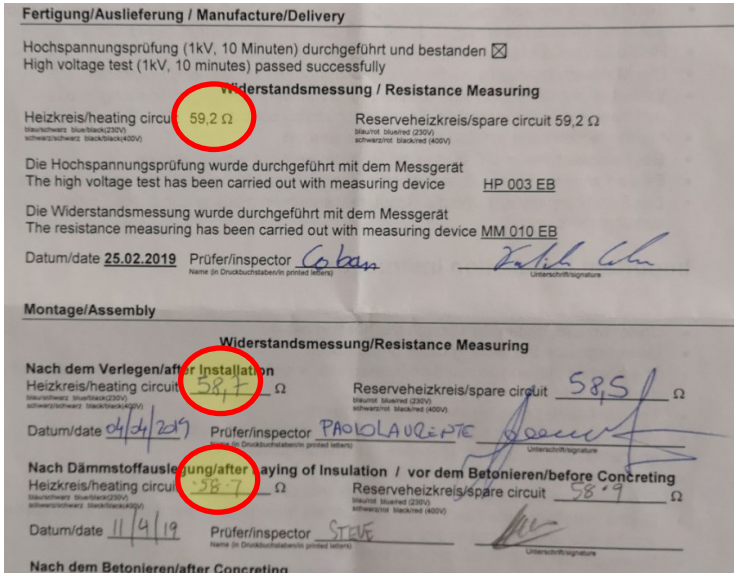
Step 2: read the layout, check the dimension and mark it's on the floor (above the first layer of vapour barrier)



Fertigung/Auslieferung / Manufacture/Delivery

Hochspannungsprüfung (1kV, 10 Minuten) durchgeführt und bestanden ☒
High voltage test (1kV, 10 minutes) passed successfully

Widerstandsmessung / Resistance Measuring

Heizkreis/heating circuit 59,2 Ω — Reserveheizkreis/spare circuit 59,2 Ω

Die Hochspannungsprüfung wurde durchgeführt mit dem Messgerät
The high voltage test has been carried out with measuring device HP 003 EB

Die Widerstandsmessung wurde durchgeführt mit dem Messgerät
The resistance measuring has been carried out with measuring device MM 010 EB

Datum/date 25.02.2019 Prüfer/inspector Cobas

Montage/Assembly

Widerstandsmessung/Resistance Measuring

Nach dem Verlegen/after Installation
Heizkreis/heating circuit 58,7 Ω — Reserveheizkreis/spare circuit 58,5 Ω

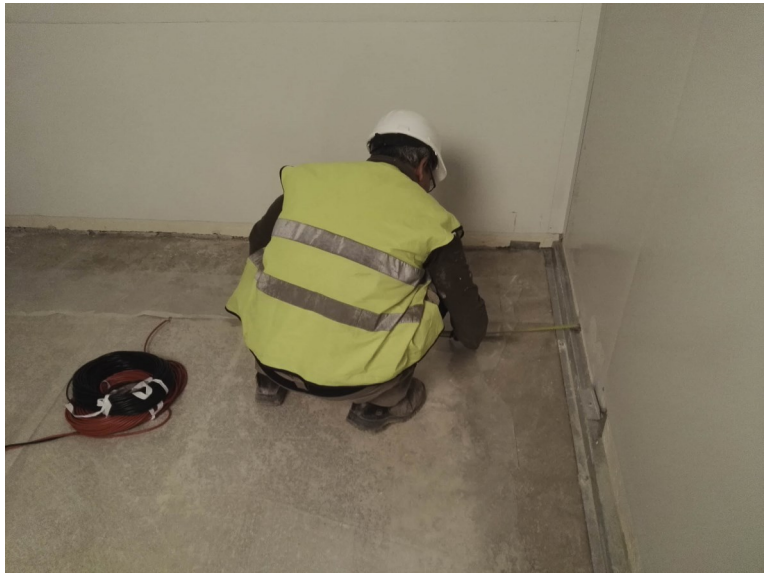
Datum/date 04/04/2019 Prüfer/inspector PAOLOLAURENTE

Nach Dämmstoffauslegung/after laying of Insulation / vor dem Betonieren/before Concreting
Heizkreis/heating circuit 58,7 Ω — Reserveheizkreis/spare circuit 58,9 Ω

Datum/date 11/4/19 Prüfer/inspector STEVE

Nach dem Betonieren/after Concreting

The test results on site can have maximum +/- 2% of discrepancy, depending on precision of instruments used



Mark the measurements on the floor.

Put down the beginning of the stipe, and fix firmly the first end

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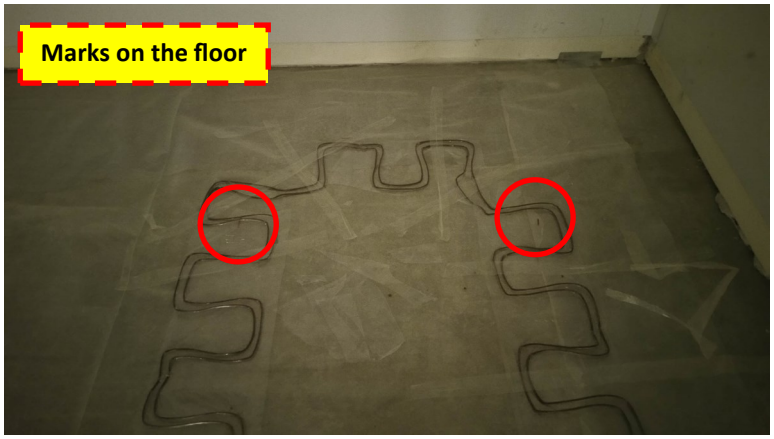
Step 3: unroll the heating mat an make the turns

unroll



Turns. Cut only the support film and turn the cable. Be carful, never cross the cables!!!

If is necessary, remove the film . Never cross the cables!!!

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Rev.00 - 2020.06.08

Step 4: install the temperature sensor

Installation temperature sensor

10 stripes each see detail
distance approx. 0,22m
margin approx. 0,25m/0,26m

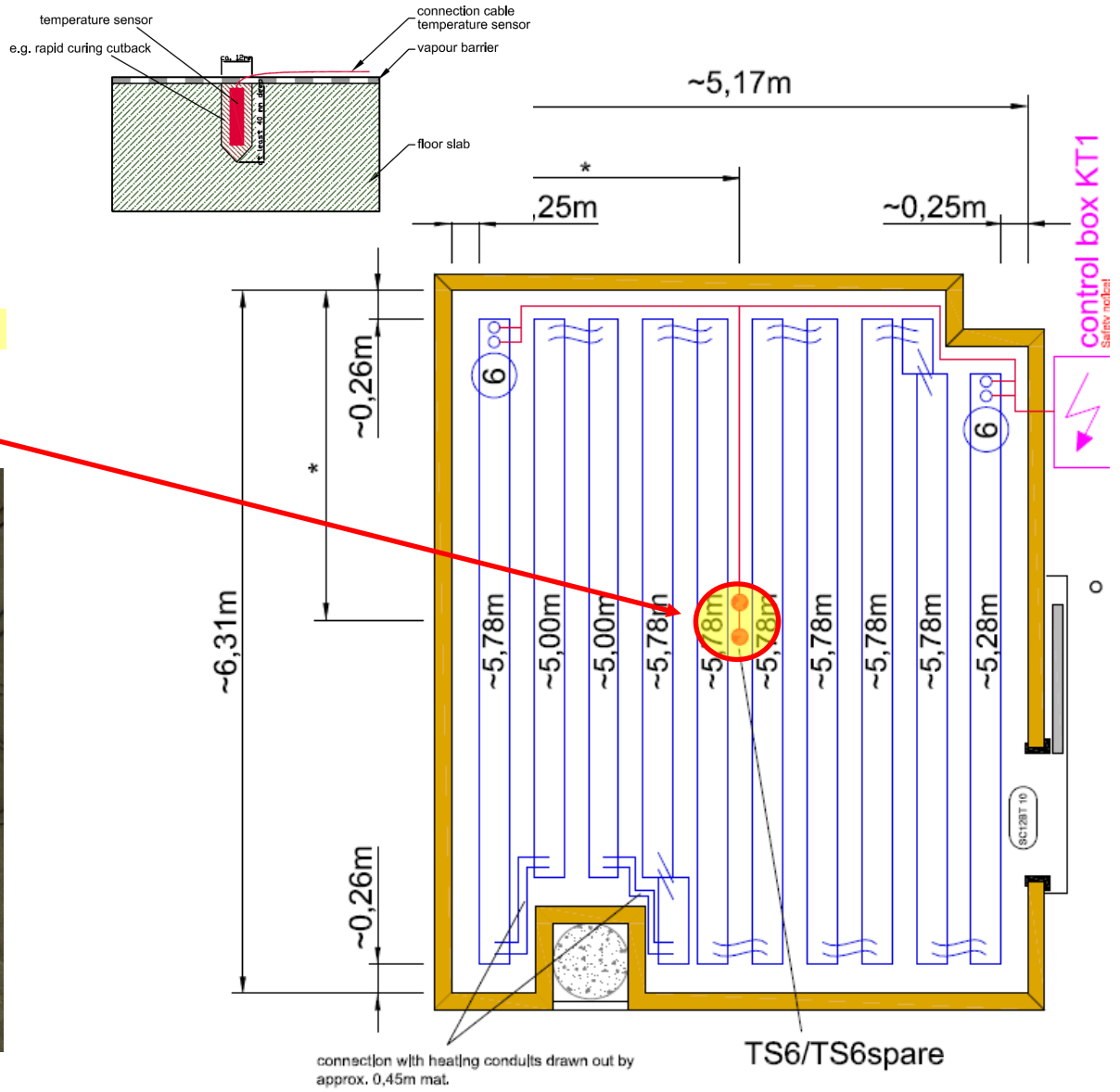
7 connection with heating conduits drawn out by approx. 0,10m mat.

2 connection with heating conduits drawn out by approx. 0,45m mat.

2 temperature sensor with 20m cable TS6/TS6spare

1 control box KT1

The cables have to be placed without any crossing



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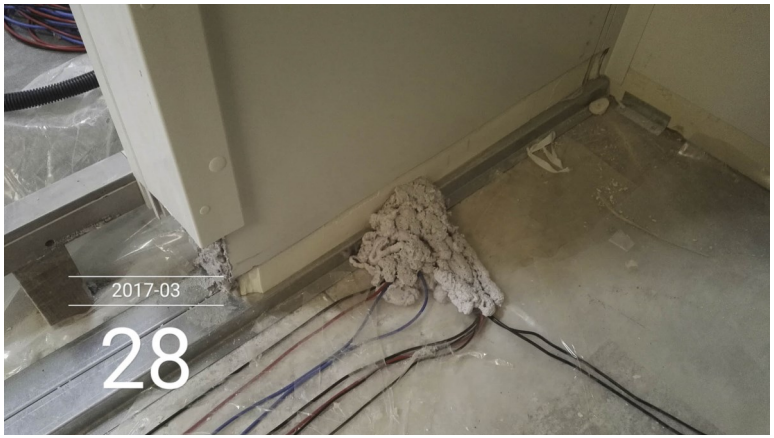
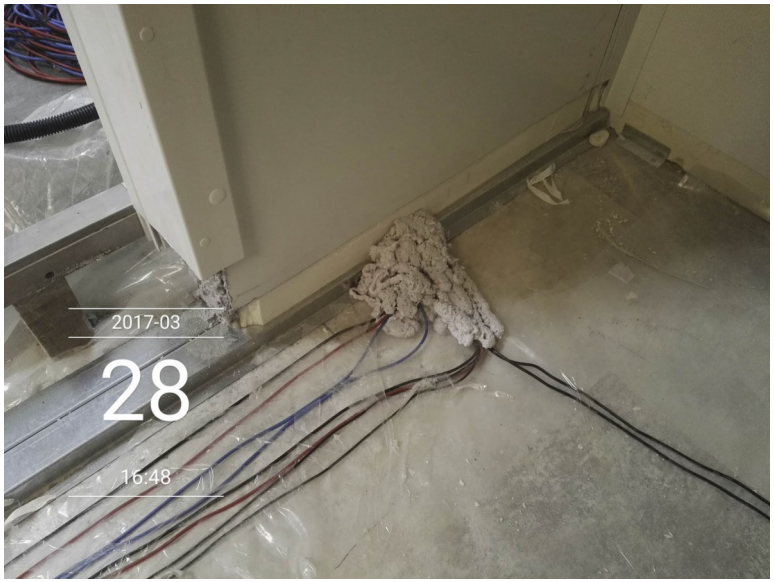
Step 5: put out the cables under the position of control box





The cables have to be placed without any crossing

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Step 6: check the continuity of circuits before lay down the insulation...

heating mats for frost protection						
power	voltage	resistance	current	colours of connecting conduits normal heating	reserve heating	heating circuit fine fuse
230 W	230 V	230Ohm	1,0A	blue - black		1,6 A
255 W	230 V	207Ohm	1,1 A	blue - black	blue - red	1,6 A
275 W	230 V	192Ohm	1,2A	blue - black	blue - red	1,6 A
520 W	230 V	102Ohm	2,25 A	blue - black	blue - red	3,15 A
695 W	230 V	76Ohm	3,0A	blue - black	blue - red	5,0A
920 W	230 V	57Ohm	4,0A	blue - black	blue - red	5,0A
1205 W	400 V	133Ohm	3,0A	black - black	black - red	5,0A
1600 W	400 V	100Ohm	4,0A	black - black	black - red	6,3A

Normal heating (blue-black cables)

Reserve heating (blue-red cables)

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Step 6: … and check the temperature sensor

Temperature [°C]	Resistance [Ω]
- 20	14616
- 18	13211
- 16	11958
- 14	10839
- 12	9838
- 10	8941
- 8	8132
- 6	7405
- 4	6752
- 2	6164
0	5634
+ 2	5155
+ 4	4721
+ 6	4329
+ 8	3974
+10	3652
+12	3360
+14	3094
+16	2852
+18	2632
+20	2431

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Step 7: Now you are ready for lay down the insulation

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