EMS 62 sap flow system
Sensor installation procedure

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Choose the part of stem/branch for sensor installation. Sensor with radiation shield needs up to 30 cm of stem length

Clean the stem in order to remove dust, rest of bark, rough parts etc. Use bare hand, a glove and/or a knife if necessary.

Remove needles or some small leaves.

Fix the thermocouple assembly to the stem with the plastic clip

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Put the thermocouple needles through soft stem tissues and mark the position for possible necessary drilling holes.

Drill holes in marked positions. Note the needles are 7 mm long. Do not drill holes much deeper.

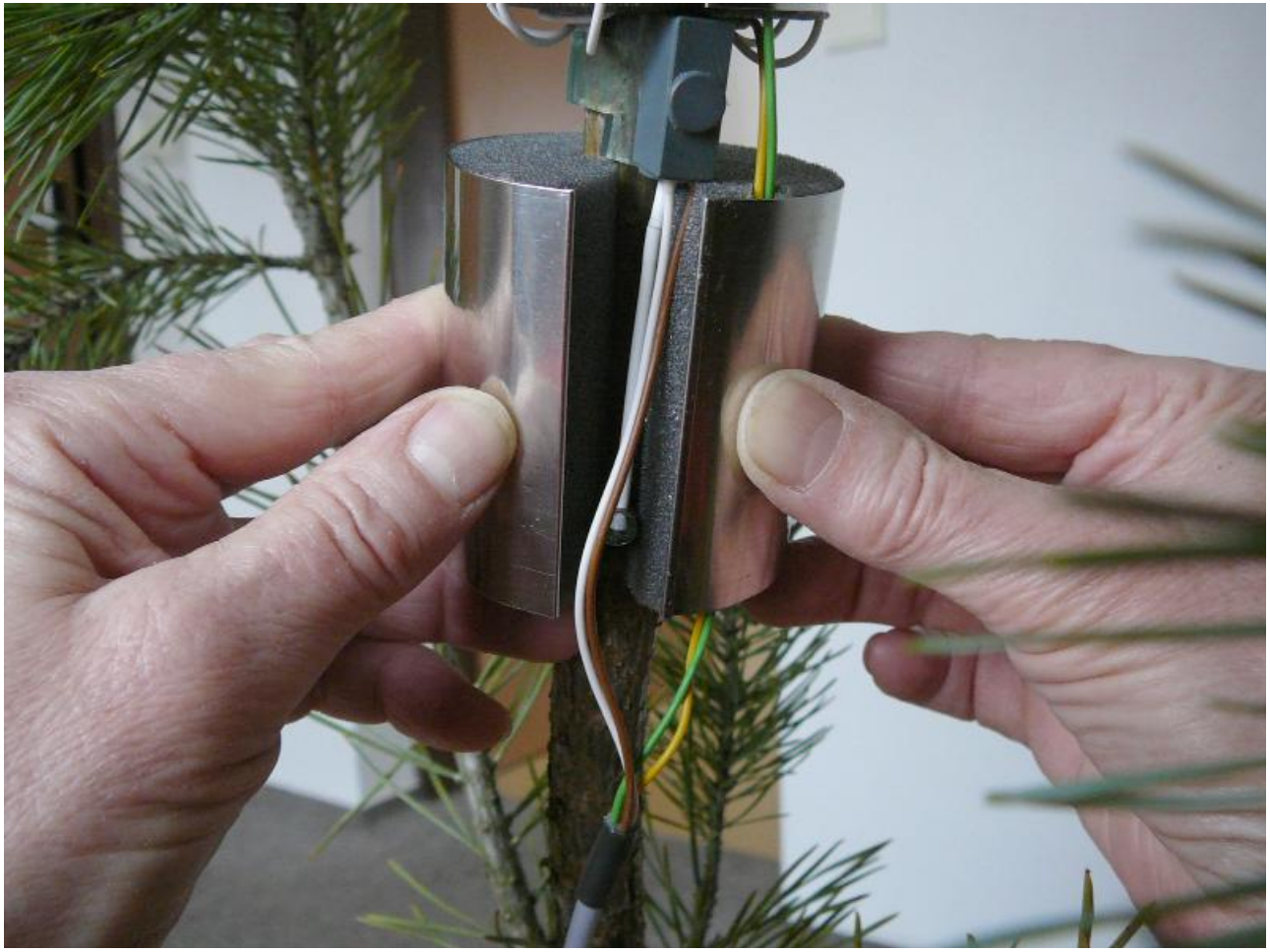
Insert both needles into prepared holes. Note the wires from the cube pointing downwards.

Wrap up the upper sensor part (with heating elements) to the stem.

Watch the correct position – the foam has to be in touch with the central cube and the thermocouple head should be pressed between both foam edges. The part has to be put symmetrically around the stem axis.

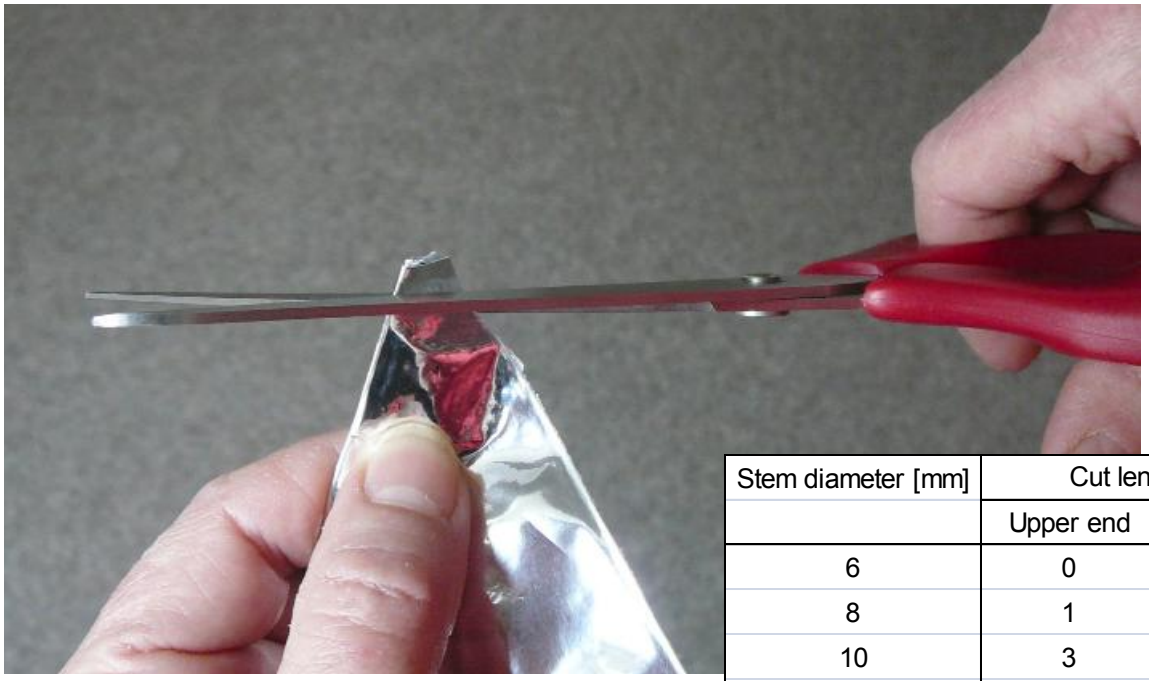
Wrap up the lower sensor part to the stem.

Watch the correct position – the foam has to be in touch with the central cube and the thermocouple head should be pressed between both foam edges. The wires should be co-pressed by foam above the thermocouple head. The sensor part has to be put symmetrically around the stem axis.



Finished sensor installation.

Radiation shield.
Cut both ends with respect to the stem diameter according the table



Stem diameter [mm]	Cut length [mm]	
	Upper end	Lower end
6	0	2
8	1	3
10	3	5
12	5	7
14	7	9
16	9	10
18	11	12
20	13	14

Unfold the radiation shield carefully.

Put it over the sensor ...

... and close it.

Make sure that the radiation shield is installed symmetrically around the sensor.

Wrap the upper end of the shield with plastic tape.

Use PVC tape only in order to avoid strangulation due to the growth.
Taping should be watertight.

Tape the lower end of the radiation shield.

Let a gap between the cable and the stem for drainage of condensed water. Fix the cable with the tape, too.

Finished installation.