Bench Heated floor

Underfloor heating installation and discovery kit

Families of components covered

Heat emission (Floor heating)
Thermal regulation (3-way valve and aquastat regulation)
Measurement (Flow, Energy, Temperature, Power)

Educational activities

✓ Installation of underfloor heating and connection to a heat generator
✓ Commissioning, settings and maintenance
✓ Measurement of temperature changes and interpretation
✓ Analysis of operation in heating and cooling modes

Hydraulic floor heating bench (PV20)

This sub-assembly allows the installation and the study of the functioning of a heating floor.

This sub-assembly with a surface area of 16m² (adaptable on request) is delivered in kit form, ready to install.
It is mainly made up of:

- Peripheral insulation (Thickness: 5mm - Height: 150mm - Roll length: 50m)

(Cross-linked polyethylene foam, with closed cells, allowing to mechanically, thermally and acoustically decouple the floating slab from the vertical structures of the building)
(This insulation is waterproof over its entire height (slab and floor covering)

- Insulation slabs with pipe guide studs (Height: 24mm, excluding studs - Length: 1200m - Width: 800mm), made of polystyrene, ensuring the disassociation of the floor, the thermal insulation, the guiding and holding of the pipes
- A 120ml ring of high density cross-linked polyethylene pipe (Diameter: DN12x1.1)
- A 4-circuit underfloor heating manifold with flow meters
- An aquastat for a 3-way valve controller
- A 50mm high aluminium frame to create a 16m² floor space for the underfloor heating system is also supplied

Once the pipes have been laid, the underfloor heating system can be covered with melamine/medium panels to allow easy circulation in the space

Highlights

✓ Study and practice of underfloor heating, an increasingly widespread technique
✓ Bench that can be dismantled and reassembled for practical activities

References

PV20: Underfloor heating bench (Installation with PC60 heat pump. For an independent installation, please contact us)
PV11: Underfloor heating thermal measurement option
PV21: Mixed flow for underfloor heating (Circulator, V3V and Controller)
PC22: Multi-channel temperature recorder and sensor for underfloor heating

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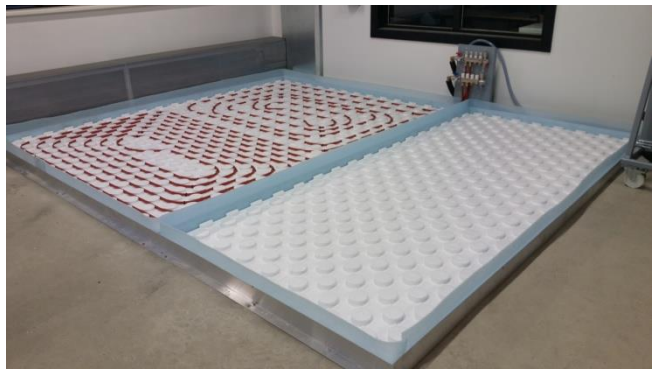

Mixed flow with variable speed pump, V3V and controller (Ref: PV21)

This set consists mainly of:

- Wilo pump, High-efficiency, Self-regulating, DN25, Centre distance 180mm
- Motorised 3-way valve and water law controller with simulated outdoor sensor
- Pump union and isolation valves
- 2 Thermometers on the flow and return of the circuit
- Float flow meter with flow regulator
- Secondary circuit side quick coupling set

This mixed start is necessary for the benches
The following heat/cold emission factors are used:

- Heated floor bench (PV20)

Underfloor heating thermal measurement option (Option PV11)

This subset is constituted:
✓A thermal energy meter (flow, temperature, power, volume)

The thermal energy meter is installed on the underfloor heating return to measure the power dissipated by the underfloor heating.

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Example of a hydraulic underfloor heating system (PV20) with a 6kW reversible inverter air/water heat pump (PC60)

RELATED & COMPLEMENTARY PRODUCTS

PC22 " 4 channel thermometer with display and PC acquisition

- ✓ 4-channel thermometer with instantaneous display of the 4 channels and data recovery (8000 points) on PC for analysis with dedicated software
- ✓ Supplied with 8 wired temperature sensors (Thermocouple)
- ✓ This tool allows temperature measurements to be taken at key points in the air, water and refrigeration systems.