System height from 3.2 to 5cm including the final floor. Basic feature of the system is the special gypsum floorboards which are produced under pressure from special gypsum which is reinforced with cellulose fibers and specially processed with hydrophobic additives for moisture resistance.

Ideal system for installing building floors from air carried wounds.

Ability of placing any final floor.

Ideal system for old and new residences.

Flexible PEX MD 10mm pipe with high thermal conductivity for energy saving.

Immediate heating distribution and elimination of inertia phenomenon. Due to its small mass and its high thermal conductivity as a system (pipe and board), it heats the room instantly, it distributes heat 8% quicker than the typical heating radiators.

Compared to the typical under-floor heating systems, it saves up to 20% energy and 50% compared to the heating radiators. The new system achieves almost the same heat output per square meter with the typical under-floor heating systems and, at the same time, contains 60% less water in its hydraulic network.

Low weight. The total weight of this system is 20kg/m² without the final floor, instead of 90kg/m² of the typical ones.

Certified system output with standard thermal conductivity coefficient which does not depend on other factors (e.g. thermal concrete).

The new system does not need thermal concrete. No drying procedure is needed. Low floor thermal expansion. Smaller cabinets and manifolds. It is combined with all heat sources.

Certifications

C E R T I F I C A T I O N S

EMPHASIS ARTWORKS ADV  2310 300 338

ZIK Croatia

PCT Russia

AENOR Spain

WRAS Great Britain

CSA Canada

SKZ Germany

PEX MD

MPA-NRW Germany

SKZ Germany

Como-pex pipes and fittings meet and exceed the specifications set by European Standards, the internationally accepted German DIN, the Spanish UNE and the British BS standards.

As a result, Aqua-plus does not present so much as a single failure in the regular test results carried out by official institutes on random samples from production and the warehouse.

The outcome of all the above is that Aqua-plus has been certified as a final product by the following organizations:

- ISO 9001 by TÜV Germany
- AENOR Spain, CSA Canada, ZIK Croatia, PCT Russia, SEPRO Ukraine, EVETAM Greece and ISS Serbia for the mechanical strengths of the pipe.
- MPA-NRW Germany for oxygen permeability
- WRAS Great Britain, ZIK Croatia and PCT Russia for the suitability of Conco-Pex pipes for drinking water.

Furthermore, the pipes are also checked by the State General Laboratory for their suitability for drinking water.

www.interplast.gr
The installation of the gypsum fiberboard requires a flat and clean surface without intensive height differences. The features of this new product are different than the typical gypsum boards or the concrete boards. This new product is hydrophobic, with high density and high thermal conductivity. By using typical wood tools, cutting and shaping the gypsum fiberboards is easy. Interplast provide four types of gypsum fiberboards. A 15mm thickness board with knots, a 15mm thickness board without notches and a 9mm thickness board without notches. A special plaster for filling the empty spots, where no pipe is placed, and, also, to fill the gap between pipe and board, reinforces mechanically the empty spaces and bridge thermally the pipe with the board, helping in the efficient heat transmission. It is offered in 25kg bags. It is mixed with water in ratio 6lt/25kg. Covers 1kg/m². It is produced and is offering to the market a new revolutionary floor profile, dry screened system of Underfloor heating.

**MANIFOLD - CABINET**

In the supply we connect a supply nipple of 1” with a thermometer and in the returns we connect return sockets of 3/4” with thermometers for better and easier system setting. In each manifold outlet we install a reduction ¾” to 3/8” with a splitter and a thermometer for better and easier system setting. In each manifold outlet we install a reduction ¾” to 3/8”. In this way, the system's application. The customer is informed with a pre-estimation of the project's cost according to his request and the details given. After the project assessment a detailed study is carried out by our Energy & Technical support team. This study is sent to the installer together with the products.

**AUTOMATIONS**

Digital communication base, room autonomy

Digital communication base suitable for any building. It manages the required temperature for every room with the ability to control up to 32 actuators and 8 room thermostats. It has a built-in weather compensation system using an ambient temperature sensor. Recognizes and displays possible mistakes, it can be connected in a BMS system and, if required, more than one base can be connected in series.

**Thermal Efficiency Table for the dry screed under-floor heating system**

The data of the thermal efficiency were calculated with arithmetic simulation according to EN15377. Thermal flow and density and temperature limits are according to EN1264.

<table>
<thead>
<tr>
<th>Room</th>
<th>Temperature</th>
<th>Final Flooring 95W/m²</th>
<th>Ceramic Tiles 80W/m²</th>
<th>Parquet / Laminate 60W/m²</th>
<th>Thick carpet (max 10mm) 53,7W/m²</th>
<th>Thick carpet (max 20mm) 46,0W/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta 20°C</td>
<td>36,4</td>
<td>27,4</td>
<td>25,7</td>
<td>25,7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ts 20°C</td>
<td>39,0</td>
<td>28,6</td>
<td>28,2</td>
<td>28,2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GYPSEM FIBERBOARD**

This new pipe is a result of a three years research of Interplast in corporation with Aristotle University of Thessaloniki, by whose report we are mentioning some of the pipe’s characteristics and results from their use.

- Increased mechanical strength compared to the typical ones
- Increased Elasticity by 50%
- Increased yield stress by 30%
- Absolute material homogenization
- Decrease of inverter phenomenon during the start of the system
- More economic operation due to the double thermal conductivity of the pipes

**INTERPLAST Ø10 x 1,1mm pipe**

850 x 1,3mm pipe, containing a special additive which doubles the pipe’s thermal conductivity.