Elegance that saves space and energy

Floor convectors
Floor convectors HPM Therm

ATTENTION! Up-to-date offer

Floor convectors BK and BKV in two qualitative versions:

**EXKLUZÍV BK and BKV**
- the major emphasis paid to aesthetic and craftsman design
- frame and grill of the identical material
- large selection from dimensional sizes (length/width/depth)
- wide scale of performances
- possibility of production of atypical dimensions
- possible selection of colour of a tank and exchanger for the same price
  - black (copper/aluminium exchanger + zinc plated tank → powdered)
  - natural (copper/aluminium exchanger + tank → stainless steel)
- frame and grill made of solid wood - furniture category

**EKONOMY BKE and BKVE**  Brand new
- super price
- simple narrow, stainless steel frame
  - possibility of tank concreting in advance without decision on the type of a grill
  - delivery or selection of grill additionally
- stainless steel tank without further surface treatments
- grills in the version of Al (2 types) and wood (3 types)
- 7 dimensions for length
- uniform width of 270 mm and 2 depths of 112 and 85 mm, with and without ventilator
- delivery term 2 and 6 working days
- production only of standard dimensions
- version with designation of maxi – max. performance (it heats up only with ventilator)

Do not overlook any other interesting information:

1. Own production of thermal exchangers of high quality on the basis of copper/aluminium.
2. EXKLUZÍV and EKONOMY are offered for forced and natural convection of air.
3. Grills in a craftsman design of a very high quality (elox aluminium and solid wood).
4. Unique application of convector frame made of solid wood in EXKLUZÍV version.
5. Used tangential ventilators for safe voltage of 12V.
6. Offered depths of floor convectors:
   - min. depth of 8 cm, max. depth of 30 cm.
   - the most used depth of BK 8 cm and 11 cm, BKV 8.5 cm and 12 cm.
7. BKV (with ventilator) heat up also without using ventilators.
8. BKV are usable also for additional cooling of interiors.
9. Water volume from 0.5 to 3 l/1 m of convector, immediate response to the change in water temperature.
11. Price list price covers the complete equipment of convectors without self-regulation.
12. Delivery term for EXKLUZÍV version 3 to 12 working days.
13. Connection of exchanger via flexible hoses, as a standard Eurokonus.
14. Flexible connection enables the lifting of exchanger for the purpose of wet cleaning.
15. Connection of flexi hose and valve via Eurokonus, i.e. without sealing, fast assembly and disassembly.
16. In the case of construction problems with building-in of floor convectors into the ground, we shall provide you with aesthetical solution of bench convectors (FK) - HPM Therm product.
   - the lowest FK only 128 mm
   - the highest FK 290 mm
   - wide scale of lengths and performances

Require corporate materials “Bench convectors”

*We are pleased by increasing interest and satisfaction with our products*
Floor convectors in a word and picture

Harmony of elegant and economic heating

The development of market in floor hot-water convectors (FAN-COILS) recorded a significant expansion within the recent year, in particular thanpces to the developing trend of he application of large glassed areas. Even our company, due to the reasons of interest of European and domestic demand, gradually expands the assortment in the field of heating equipment. This is not the system of broadcast heating, but a purposeful location of heating elements in exposed places of interior, in particular large glassed areas.

Floor convectors made by HPM Therm are intended for a large spectrum of application of additional heating of living rooms. Our products address more and more architects, designers, as well as the investors themselves. Thanpces to constructional and craftsman design, they build up a stable position on the European market in heating equipment. Technical data are based upon experiments of accredited testing laboratory.

They can be assigned several functions:
- they create thermal curtain for glassed areas
- they protect glasses from water vapour condensation
- indispensable is also the share in the heating of a living room according to the location of heat exchanger (closer to a window or farther from it)
- large thermal output and small capacity of heating element gives the floor convector the ability to dynamically response to required increase in heat intensity and at the same time it saves energy necessary for heating up of water.

Properties

Floor convector made by HPM Therm shall satisfy with its design also the most demanding users. The elegance of the design categorizes our floor convector to furniture category. On contrary to classical radiator elements is visually invisible, it does not disrupt the view to surroundings via glassed walls.
Floor convector BK

Natural convection of air

- floor convector BK for natural circulation of air
- produced as a standard according to drawings in 9 lengths and 6 depths
- it heats up and tempers without the use of forced circulation of air
- possibility of production of tank from stainless steel even with oblique bottom with a drain (without additional surface treatment)
- all types of grills are walkable (Al, beech, oak, maple), easily removable, laterally rolling as a standard (Al), or solid (wood)
- used exchangers (HE) 2, 3, 4, 6 and 8 pipes terminated with ¼” thread
- frame material is identical with grill material
- BK is height adjustable and fixable

Produced types:

1. BK2 /243/80
2. BK2 /243/112
3. BK2 /318/112
4. BK3 /350/112
5. BK2 /318/150
6. BK3 /350/150
7. BK2x2 /350/150
8. BK2x3 /350/150
9. BK2x3 /350/190
10. BK2x4 /420/190
11. BK2x4 /420/230
12. BK2x3 /350/230
13. BK2x4 /420/230
14. BK2x3 /350/300
15. BK2x4 /420/300

Version with a drain
Valid for all types

Used Cu/Al exchangers

- Type designation
- produced types:

2R
3R
2x2R
2x3R
2x4R

- used exchangers (HE) 2, 3, 4, 6 and 8 pipes terminated with ¼” thread
- frame material is identical with grill material
- BK is height adjustable and fixable

- tank with a drain of Ø15mm
### Thermal output Q [W]

<table>
<thead>
<tr>
<th>Length [cm]</th>
<th>Depth [mm]</th>
<th>80</th>
<th>112</th>
<th>150</th>
<th>190</th>
<th>230</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>243</td>
<td>243</td>
<td>319</td>
<td>350</td>
<td>318</td>
<td>350</td>
</tr>
<tr>
<td>950</td>
<td>ΔT_{\alpha}</td>
<td>322</td>
<td>347</td>
<td>417</td>
<td>473</td>
<td>447</td>
<td>524</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>244</td>
<td>263</td>
<td>316</td>
<td>358</td>
<td>339</td>
<td>397</td>
</tr>
<tr>
<td>1250</td>
<td>ΔT_{\alpha}</td>
<td>470</td>
<td>507</td>
<td>610</td>
<td>691</td>
<td>554</td>
<td>766</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>356</td>
<td>384</td>
<td>462</td>
<td>523</td>
<td>495</td>
<td>580</td>
</tr>
<tr>
<td>1550</td>
<td>ΔT_{\alpha}</td>
<td>616</td>
<td>668</td>
<td>803</td>
<td>909</td>
<td>890</td>
<td>1009</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>466</td>
<td>506</td>
<td>600</td>
<td>699</td>
<td>652</td>
<td>764</td>
</tr>
<tr>
<td>1850</td>
<td>ΔT_{\alpha}</td>
<td>767</td>
<td>828</td>
<td>995</td>
<td>1127</td>
<td>1066</td>
<td>1240</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>561</td>
<td>627</td>
<td>754</td>
<td>854</td>
<td>808</td>
<td>946</td>
</tr>
<tr>
<td>2150</td>
<td>ΔT_{\alpha}</td>
<td>916</td>
<td>988</td>
<td>1188</td>
<td>1345</td>
<td>1273</td>
<td>1491</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>694</td>
<td>748</td>
<td>900</td>
<td>1019</td>
<td>994</td>
<td>1130</td>
</tr>
<tr>
<td>2450</td>
<td>ΔT_{\alpha}</td>
<td>1004</td>
<td>1148</td>
<td>1380</td>
<td>1563</td>
<td>1479</td>
<td>1733</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>806</td>
<td>967</td>
<td>1045</td>
<td>1164</td>
<td>1120</td>
<td>1313</td>
</tr>
<tr>
<td>2750</td>
<td>ΔT_{\alpha}</td>
<td>1213</td>
<td>1308</td>
<td>1573</td>
<td>1781</td>
<td>1666</td>
<td>1975</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>916</td>
<td>1001</td>
<td>1192</td>
<td>1340</td>
<td>1277</td>
<td>1468</td>
</tr>
<tr>
<td>3050</td>
<td>ΔT_{\alpha}</td>
<td>1381</td>
<td>1489</td>
<td>1766</td>
<td>1996</td>
<td>1852</td>
<td>2217</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>1031</td>
<td>1113</td>
<td>1338</td>
<td>1514</td>
<td>1433</td>
<td>1680</td>
</tr>
<tr>
<td>3350</td>
<td>ΔT_{\alpha}</td>
<td>1510</td>
<td>1629</td>
<td>1958</td>
<td>2217</td>
<td>2068</td>
<td>2408</td>
</tr>
<tr>
<td></td>
<td>ΔT_{\eta}</td>
<td>1144</td>
<td>1234</td>
<td>1483</td>
<td>1660</td>
<td>1569</td>
<td>1802</td>
</tr>
</tbody>
</table>

### Materials of frames (yy)

- a/ aluminium - natural elox (NE, NE)
- b/ aluminium - bronze elox (SB, SB)
- c/ wood - beech (BK)
- d/ wood - oak (DU)
- e/ wood - maple (JA)

### Sample of order:

**BK2/243/112** - xxxx - yy - zz / type of tank

**BK2/243/112** - type designation

- xxxx - length L_{x} [mm]
- yy - frame material
- zz - grill type

### Details of “frame – floor”

**BEECH FRAMES**

**Frame Al:**

\[ B \times L_{x} \text{ - see pictures and tables} \]

**Wooden frame:**

\[ B \times L_{x} = \text{AL rám + 14 mm} \]

### Type and material of a grill (zz)

- **Solid grill (PM):**
  - a/ aluminium - natural elox
  - b/ aluminium - bronze elox
  - c/ wood - beech
  - d/ wood - oak

- **Rolling grill (RM):**
  - a/ aluminium - natural elox
  - b/ aluminium - bronze elox

### Correction factor \( k_{f} \) for \( \Delta T \)

\[
\begin{array}{cccccc}
  \Delta T & 15 & 20 & 22 & 24 & 28 \\
  k_{f} & 0.160 & 0.246 & 0.287 & 0.327 & 0.370 \\
  \Delta T & 28 & 30 & 32 & 34 & 36 \\
  k_{f} & 0.414 & 0.460 & 0.507 & 0.556 & 0.607 \\
  \Delta T & 38 & 40 & 44 & 48 \\
  k_{f} & 0.058 & 0.072 & 0.083 & 0.099 \\
  \Delta T & 48 & 50 & 52 & 56 \\
  k_{f} & 0.940 & 1.000 & 1.061 & 1.124 \\
  \Delta T & 58 & 60 & 62 & 66 \\
  k_{f} & 1.253 & 1.320 & 1.397 & 1.456 \\
\end{array}
\]

- **Longitudinal elox grill upon a special request:**

---

### Notes:

- For \( \Delta T \): \( E_q: BK2/243/80 \cdot 1850 \) na \( \Delta T=38BK \)

\[
Q = Q_{\text{imp}} \cdot k_{f} \cdot 0.659 \cdot 382.0 \text{ W}
\]
**Floor convector BKV BKV**

**Forced circulation of air**

Produced types:
- BKV1 /243/120
- BKV2 /318/120
- BKV2 /318/85

- floor convector BKV, produced as a standard with tangential ventilator with powering voltage of 12V
- it heats up, temperates also at switched off ventilator
- silent operation of ventilator, noise level at the highest output of max. 40 dB
- 3-grade regulation of revolutions
- possibility of production of a tank from stainless steel with an oblique bottom also with drain (without further surface treatment)
- all types of grills are walkable (Al, beech, oak, maple), easily removable, laterally rolling as a standard (Al), or solid (wood)
- frame material is identical with grill material
- used heat exchangers (HE) 1 and 2 pipes terminated with \( \frac{1}{2} \text{"} \) thread
- BKV is height adjustable and fixable

**Thermal output \( Q [W] \)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Widths [mm]</th>
<th>Depths [mm]</th>
<th>Length [mm]</th>
<th>Revolutions of ventilator switched off</th>
<th>1 Revolutions of ventilator minimal</th>
<th>2 Revolutions of ventilator medium</th>
<th>3 Revolutions of ventilator medium</th>
<th>Electric input of ventilator ( P_{in} [W] )</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKV1</td>
<td>243</td>
<td>120</td>
<td>950</td>
<td>267</td>
<td>202</td>
<td>465</td>
<td>381</td>
<td>528</td>
</tr>
<tr>
<td></td>
<td>1250</td>
<td></td>
<td>513</td>
<td>295</td>
<td>682</td>
<td>566</td>
<td>772</td>
<td>632</td>
</tr>
<tr>
<td></td>
<td>1650</td>
<td></td>
<td>636</td>
<td>482</td>
<td>1112</td>
<td>910</td>
<td>1260</td>
<td>1031</td>
</tr>
<tr>
<td></td>
<td>2150</td>
<td></td>
<td>759</td>
<td>575</td>
<td>1326</td>
<td>1297</td>
<td>1453</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td>2450</td>
<td></td>
<td>882</td>
<td>888</td>
<td>1842</td>
<td>1282</td>
<td>1746</td>
<td>1426</td>
</tr>
<tr>
<td></td>
<td>2750</td>
<td></td>
<td>1005</td>
<td>761</td>
<td>1758</td>
<td>1439</td>
<td>1690</td>
<td>1626</td>
</tr>
<tr>
<td></td>
<td>3050</td>
<td></td>
<td>1128</td>
<td>855</td>
<td>1973</td>
<td>1015</td>
<td>2234</td>
<td>1628</td>
</tr>
<tr>
<td></td>
<td>3350</td>
<td></td>
<td>1251</td>
<td>948</td>
<td>2188</td>
<td>1791</td>
<td>2478</td>
<td>2028</td>
</tr>
<tr>
<td>BKV2</td>
<td>318</td>
<td>120</td>
<td>950</td>
<td>473</td>
<td>360</td>
<td>1148</td>
<td>926</td>
<td>1266</td>
</tr>
<tr>
<td></td>
<td>1250</td>
<td></td>
<td>693</td>
<td>527</td>
<td>1677</td>
<td>1372</td>
<td>1863</td>
<td>1549</td>
</tr>
<tr>
<td></td>
<td>1550</td>
<td></td>
<td>911</td>
<td>693</td>
<td>2207</td>
<td>1806</td>
<td>2452</td>
<td>2039</td>
</tr>
<tr>
<td></td>
<td>1850</td>
<td></td>
<td>1130</td>
<td>860</td>
<td>2736</td>
<td>2239</td>
<td>3089</td>
<td>2526</td>
</tr>
<tr>
<td></td>
<td>2150</td>
<td></td>
<td>1349</td>
<td>1262</td>
<td>3266</td>
<td>2573</td>
<td>3687</td>
<td>3017</td>
</tr>
<tr>
<td></td>
<td>2450</td>
<td></td>
<td>1567</td>
<td>1162</td>
<td>3796</td>
<td>3196</td>
<td>4200</td>
<td>3507</td>
</tr>
<tr>
<td></td>
<td>2750</td>
<td></td>
<td>1786</td>
<td>1289</td>
<td>4325</td>
<td>3539</td>
<td>4885</td>
<td>3996</td>
</tr>
<tr>
<td></td>
<td>3050</td>
<td></td>
<td>2006</td>
<td>1525</td>
<td>4856</td>
<td>3973</td>
<td>5481</td>
<td>4485</td>
</tr>
<tr>
<td></td>
<td>3350</td>
<td></td>
<td>2223</td>
<td>1601</td>
<td>5384</td>
<td>4406</td>
<td>6080</td>
<td>4075</td>
</tr>
<tr>
<td>BKV2</td>
<td>318</td>
<td>85</td>
<td>950</td>
<td>726</td>
<td>618</td>
<td>855</td>
<td>700</td>
<td>1034</td>
</tr>
<tr>
<td></td>
<td>1250</td>
<td></td>
<td>1103</td>
<td>903</td>
<td>1249</td>
<td>1022</td>
<td>1511</td>
<td>1236</td>
</tr>
<tr>
<td></td>
<td>1550</td>
<td></td>
<td>1451</td>
<td>1137</td>
<td>1643</td>
<td>1345</td>
<td>1988</td>
<td>1627</td>
</tr>
<tr>
<td></td>
<td>1850</td>
<td></td>
<td>1799</td>
<td>1472</td>
<td>2037</td>
<td>1667</td>
<td>2465</td>
<td>2017</td>
</tr>
<tr>
<td></td>
<td>2150</td>
<td></td>
<td>2147</td>
<td>1757</td>
<td>2431</td>
<td>1986</td>
<td>2942</td>
<td>2408</td>
</tr>
<tr>
<td></td>
<td>2450</td>
<td></td>
<td>2496</td>
<td>2043</td>
<td>2826</td>
<td>2313</td>
<td>3419</td>
<td>2738</td>
</tr>
<tr>
<td></td>
<td>2750</td>
<td></td>
<td>2844</td>
<td>2327</td>
<td>3220</td>
<td>2636</td>
<td>3896</td>
<td>3198</td>
</tr>
<tr>
<td></td>
<td>3050</td>
<td></td>
<td>3192</td>
<td>2512</td>
<td>3614</td>
<td>2967</td>
<td>4373</td>
<td>3579</td>
</tr>
<tr>
<td></td>
<td>3350</td>
<td></td>
<td>3540</td>
<td>2897</td>
<td>4006</td>
<td>3280</td>
<td>4950</td>
<td>3989</td>
</tr>
</tbody>
</table>

**Correction factor \( k_f \) for \( \Delta T \)**

<table>
<thead>
<tr>
<th>( \Delta T )</th>
<th>15</th>
<th>20</th>
<th>22</th>
<th>24</th>
<th>26</th>
<th>28</th>
<th>30</th>
<th>32</th>
<th>34</th>
<th>36</th>
<th>38</th>
</tr>
</thead>
<tbody>
<tr>
<td>( k_f )</td>
<td>0.269</td>
<td>0.365</td>
<td>0.405</td>
<td>0.446</td>
<td>0.487</td>
<td>0.528</td>
<td>0.570</td>
<td>0.612</td>
<td>0.654</td>
<td>0.697</td>
<td>0.739</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>( \Delta T )</th>
<th>40</th>
<th>42</th>
<th>44</th>
<th>46</th>
<th>48</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>( k_f )</td>
<td>0.782</td>
<td>0.625</td>
<td>0.869</td>
<td>0.912</td>
<td>0.966</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Sample of order:**

BKV2 /318/120 - xxxx - yy - zz / type of a tank

- **BKV2 /318/120** - type designation
- xxxx - length \( L [\text{mm}] \)
- yy - frame material
- zz - grill type

**Tangential ventilators**

- Both-sided
- Single-sided

**Dependence of pressure loss at mass flow**

**Correlation of order**

<table>
<thead>
<tr>
<th>Thermal output [W]</th>
<th>( T_{in} / T_{out} )</th>
<th>( T_{in} = 60^\circ \text{C}, T_{out} = 50^\circ \text{C} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \Delta T )</td>
<td>60/75°C</td>
<td>75/65°C</td>
</tr>
</tbody>
</table>

- HE 1R - 2R
- HE 2R - 2R

- N - stainless steel tank
- No - with drain
Floor convectors BK2E, BKV2E - EKONOMY

natural convection of air

Forced circulation of air

Thermal output $Q$ [W]

<table>
<thead>
<tr>
<th>Produced types:</th>
<th>BKV2E /270/85</th>
<th>BKV2E /270/112</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta T$ 1000</td>
<td>443</td>
<td>340</td>
</tr>
<tr>
<td>$\Delta T$ 1250</td>
<td>593</td>
<td>454</td>
</tr>
<tr>
<td>$\Delta T$ 1500</td>
<td>743</td>
<td>560</td>
</tr>
<tr>
<td>$\Delta T$ 1750</td>
<td>893</td>
<td>664</td>
</tr>
<tr>
<td>$\Delta T$ 2000</td>
<td>1042</td>
<td>760</td>
</tr>
<tr>
<td>$\Delta T$ 2500</td>
<td>1342</td>
<td>1028</td>
</tr>
<tr>
<td>$\Delta T$ 3000</td>
<td>1641</td>
<td>1258</td>
</tr>
</tbody>
</table>

Correction factor $k_f$ for $\Delta T$

<table>
<thead>
<tr>
<th>$\Delta T$</th>
<th>15</th>
<th>20</th>
<th>22</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>28</th>
<th>30</th>
<th>32</th>
<th>34</th>
<th>36</th>
<th>38</th>
</tr>
</thead>
<tbody>
<tr>
<td>$k_f$</td>
<td>0.194</td>
<td>0.253</td>
<td>0.329</td>
<td>0.333</td>
<td>0.375</td>
<td>0.416</td>
<td>0.455</td>
<td>0.512</td>
<td>0.561</td>
<td>0.611</td>
<td>0.693</td>
<td></td>
</tr>
</tbody>
</table>

Thermal output $Q$ [W] – BKV2E maxi*

<table>
<thead>
<tr>
<th>Produced types:</th>
<th>BKV2E /270/85</th>
<th>BKV2E /270/112</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta T$ 1000</td>
<td>831</td>
<td>731</td>
</tr>
<tr>
<td>$\Delta T$ 1250</td>
<td>996</td>
<td>860</td>
</tr>
<tr>
<td>$\Delta T$ 1500</td>
<td>1125</td>
<td>964</td>
</tr>
<tr>
<td>$\Delta T$ 1750</td>
<td>1763</td>
<td>1506</td>
</tr>
<tr>
<td>$\Delta T$ 2000</td>
<td>2058</td>
<td>1729</td>
</tr>
<tr>
<td>$\Delta T$ 2500</td>
<td>2505</td>
<td>1932</td>
</tr>
<tr>
<td>$\Delta T$ 3000</td>
<td>3521</td>
<td>2718</td>
</tr>
</tbody>
</table>

Correction factor $k_f$ for $\Delta T$

<table>
<thead>
<tr>
<th>$\Delta T$</th>
<th>15</th>
<th>20</th>
<th>22</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>28</th>
<th>30</th>
<th>32</th>
<th>34</th>
<th>36</th>
<th>38</th>
</tr>
</thead>
<tbody>
<tr>
<td>$k_f$</td>
<td>0.716</td>
<td>0.770</td>
<td>0.826</td>
<td>0.832</td>
<td>0.941</td>
<td>1.000</td>
<td>1.081</td>
<td>1.122</td>
<td>1.182</td>
<td>1.249</td>
<td>1.315</td>
<td></td>
</tr>
</tbody>
</table>

- floor convectors EKONOMY are produced as a standard with a tank made of stainless steel, exchanger in natural version
- participation in economy of floor convectors has:
  - a simple frame made of stainless steel
  - colourless surface treatment of a tank, exchanger
  - use of standard 12V tangential ventilators, noise level up to 40 dB
  - lower number of ventilators than for BKV2
  - narrowed type range - 7 lengths, 1 width and 2 depths
  - sufficient output range
  - it temperates also at switched off ventilator
  - increase in performance shall be achieved by using BKV2E maxi
  - hot-water area increased by ca 35%
  - BKV2E maxi operable only with switched on ventilator
- other details are identical with EXKLUSÍV types
- BK is height adjustable and fixable
- possibility of tank concreting in advance without the decision on the type of a grill, selection and delivery of a grill additionally
Regulation of floor convectors

Thermal output of convectors may be regulated:

- **At the side of water**
  - by change of temperature of water in exchanger
  - by change of flow by means of thermostatic head with capillary

- **At the side of air**
  - by change of revolutions of ventilator
    - single-stage regulation (medium revolutions of ventilators)
    - three-stage regulation (min./medium/max. revolutions of ventilators)

**Three-stage regulation**

Change in speed of revolutions of ventilator by switching over the voltage of autotransformer

**Single-stage regulation**

Medium revolutions of ventilator, switching on by means of thermostat

**Permitted load for electric elements:**

- **Thermostat with revolution switching over**
  - TE / PO (KLR – E 7015) - 230V/3A
- **Thermostat**
  - TE (RTR – E 6121) - 230V/3A
- **Transformers AT (230V/190V/170V) - BT (230V/10V/12V)**
  - AT-BT 100 - 100VA
  - AT-BT 300 - 300VA
  - AT-BT 400 - 400VA
  - AT-BT 550 - 550VA

i.e. transformers AT-BT 400 may be connected to a group of convectors with max. electric input of ventilators of 400W.

For example:

- BKV2/243/112-1850...........1ks...........96x1= 96W
- BKV2/243/112-2450...........2ks........144x2=288W
- 384W

According to the requirements of the customer, it is possible to combine the regulation of convectors with various regulation elements. The combinations may be made with regards to the number of regulated convectors, i.e. to the permitted electric load of the individual components.

**Important:**

From the point of view of electrical connection, design and assembly of floor convector with ventilator must be in accord with STN and valid regulations. While designing and assembling it is necessary to adhere to max. permitted load and safeguarding of the individual electrical elements. Prior to putting into operation, it is necessary to carry out initial revision of electric device with record made to warranty certificate.
1. Tank – zinc plated as a standard, alternatively made of stainless steel
2. Easily removable lid for water intake (ø 35mm)
3. Al frame – elox
4. Protective frame foil
5. Setting screws of the height position of a tank
6. Fixation dowel pin with a screw
7. Recommended insulation (e.g. polystyrene min. 1cm)
8. Washers for setting screws
9. Regulation valves
10. Flexible connecting hoses with end-pieces Eurokonus
11. Heat exchangers with deareation valve and connections of G ½"
12. Plastic pad enabling the dilatation of exchanger
13. Transition piece for el. wiring
14. Side plastic pad
15. Side Al lath enhancing the chimney effect
16. Tangential ventilator 12V
17. Electric terminal board
18. Frame of protective mat
19. Holder of protective mat
20. Protective mat
21. Securing element of a mat
22. Al rolling grill
23. Draining of stainless steel tank (pipe of ø 15mm)
Floor convectors BK, BKV, BKE, BKVE

assembly connection dimensions

1. BKV2E/270/85
   BKV2E/270/112

2. BK2E/270/85
   BK2E/270/112

3. BK2/243/80
   BK2/243/112

4. BK2/318/112
   BK2/318/150

5. BK3/350/112
   BK3/350/150

6. BK2x2/350/150

7. BK2x3/420/150

8. BK2x3/350/190
   BK2x3/350/230
   BK2x3/350/300

9. BK2x4/420/190
   BK2x4/420/230
   BK2x4/420/300

10. BKV2/318/85
    BKV2/318/120

11. BKV1/243/120

* – such designated dimensions are valid for frame Al elox

Figure No. | Type          | D  | E  |
-----------|---------------|----|----|
1.         | BKV2E/270/112 | 63 | 48 |
2.         | BKV2E/270/85  | 63 | 48 |
3.         | BK2/243/112   | 63 | 60 |
4.         | BK2/318/150   | 63 | 60 |
5.         | BK2/318/112   | 95 | 60 |
6.         | BK2/243/112   | 63 | 60 |
7.         | BK2x3/350/300 | 120|     |
8.         | BK2x3/350/190 |     | 175|
9.         | BK2x4/420/200 | 210|     |
10.        | BK2/318/120   | 63 | 60 |
11.        | BKV1/243/120  | 105| 60 |

Eurokonus
Connection without sealing

fig. 3 and 10 – The most popular and best selling types
In addition to a standard dimensions, the Slovak producer HPM Therm offers also the professional custom-made solutions of various lengths and angles $90 \leq \alpha \leq 180^\circ$ for extra price (see price list).

Regulation of temperature by thermostatic valve with a capillary is an elegant solution of regulation of temperature of a space. **Do not forget!** To build in the capillary into a wall - the best solution via installed electrical installation pipe in a wall.

Recommendations for solution of transfer of floor convector - floor:

- cementation
- transitional lath
- end profile
- corner lath

Legend:

- $v_o$ - external thread $G \frac{3}{4}$
- $v_n$ - internal thread $G \frac{3}{4}$
- $E_k$ - Eurokonus $G \frac{3}{4}$
Assembly instructions
- convector is to be installed into a prepared opening in a floor including frame
- distance from a wall 50 ÷ 100 mm (1)
- we recommend to wrap the external surface of a tank by thermo-insulation material (1)
- the upper edge of a frame (grill) at the level of future floor, (6)
- use setting screws (4) for this purpose
- use assembly cover against impurities and damage, which is the part of convector - not walkable (4)
- insert the attached struts into the frame, that shall prevent the deformation of a frame (5) prior to concreting
- protect grill against damage, as a standard, the grill is wrapped in PVC foil (1)
- we recommend to use the attached flexible hoses due to a possible lifting of exchanger in the case of necessity of a thorough tank cleaning (3)
- connect hot water to a pipe that is further from the intake of cold air or ventilator (at the location of intake/outlet above each other - hot water to the upper connection branch)
- convectors with ventilator must be connected to a spatial thermostat and regulation transformer (see wiring diagram)
- after pouring water into the system, regulate hydraulics of the system and deareate (6)
- use some of the premoulded openings of Ø 35 mm for the pipe of hot and cold water

Maintenance
- after assembly of heating system it is necessary to thoroughly clean a tank, grill and frame of convector
*practice assures us of the inconsistency of cleaning
- always prior to heating season, we recommend to vacuum dust or wet clean
- outside the heating season, we recommend to locate a protective foil under the grill, that shall prevent the sedimentation of a dust in summer months

Scope of delivery
- tank coated by a black powdered paint or stainless steel with setting screws and washers
- Cu/Al heat exchanger with surface treatment according to the type of a tank (black, natural)
- the relevant frame with a grill in a protective foil
- connecting flexible hoses with stainless steel casing + regulation valves
- assembly cover with struts
- for BKV types, tangential ventilators connected to terminal board (according to order AT+BT, thermostat with revolution switching over)
- the part of delivery are assembly instructions and warranty certificate

Warranty
- 10 years for lamellar Cu/Al exchanger
- 10 years against corrosion of a tank
- 2 years for ventilators and other used parts

The warranty does not apply to the following:
- damages caused by mishandling
- mechanical damage caused by unprofessional handling

Packing
- individually reinforced by fibreboard and PVC foil
- as a group on wooden palette or simple wooden siding

Your vendor: