ALFEA EXCELLIA

Split air-to-water heat pump for improved performances
High performance solution for big houses and/or cold climate

**DESCRIPTION**
- Suitable for new build and renovation
- 2 models: 11 an 14 kW - single-phase
- 3 models: 11, 14 and 16 kW - three-phase
- Heating only
- Performing heat pump working with outside temperature from -25°C to +35°C
- Working temperature of 60°C, up to -20°C outside temperature
- COP: up to 4.3 (+7°C / +35°C)
- Compatible with all kinds of low temperature transmitters (underfloor heating/cooling, fan coil)
- Intuitive control and simplified use
- NAVISTEM 200S regulator
- Perfect solution for high heating demand
- 16L buffer tank integrated
- Patented coaxial heat exchanger
- Inverter regulation
- Class A low energy consumption circulation pump
- Possibility to manage an electric radiator heating zone from the heat pump control panel (optional)

**AVAILABLE OPTIONS**
- 2nd circuit kit (plug-and-play kit)
- Cooling kit
- Separated hot water tank
- Electric back-up heater
- Boiler connection kit
- Control unit

**SUPPLIES**

**Outdoor Inverter unit**
- Refrigerant circuit uses liquid reinjection technology during compression phase (R410A)
- Twin Rotary compressor
- Double fan

**Indoor hydraulic module**
- Coaxial exchanger immersed in buffer tank
- Class A low consumption circulation pump
- Expansion vessel, valve, etc.
- Electric panel and terminal blocks

Outdoor Inverter unit

Indoor hydraulic module
**INDOOR HYDRAULIC MODULE**

1. Electric board
2. User interface/regulator
3. Manometer
4. Class A low consumption circulation pump
5. Heating flow
6. Heating return
7. Refrigerant connections
8. Expansion vessel
9. Safety valve
10. Condenser

**OUTDOOR INVERTER UNIT**

1. Low-noise, high-output coil
2. Electric variable speed "Inverter" motor
3. "Inverter" control module
4. Control lights and buttons
5. Connector terminal blocks (power supply and interconnection)
6. Refrigerant accumulator bottle
7. Cycle reversing valve
8. Anti-corrosion treated metal cover
9. High performance exchange surface evaporator; anti-corrosion treated hydrophilic aluminium fins and grooved copper tubes
10. Electronic expansion valve
11. Noise and temperature insulated "Inverter" compressor
12. Refrigerating connection valves (flared connectors) with protective cover

**Energy class**

- A++
- 35 °C
- 55 °C
- A+
**TECHNICAL CHARACTERISTICS AND PERFORMANCES**

<table>
<thead>
<tr>
<th>ALFÉA EXCELLIA 11</th>
<th>ALFÉA EXCELLIA 14</th>
<th>ALFÉA EXCELLIA TRI 11</th>
<th>ALFÉA EXCELLIA TRI 14</th>
<th>ALFÉA EXCELLIA TRI 16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REFRIGERANT</strong></td>
<td><strong>REFRIGERANT</strong></td>
<td><strong>REFRIGERANT</strong></td>
<td><strong>REFRIGERANT</strong></td>
<td><strong>REFRIGERANT</strong></td>
</tr>
<tr>
<td></td>
<td>R410A</td>
<td>R410A</td>
<td>R410A</td>
<td>R410A</td>
</tr>
<tr>
<td><strong>MAIN CHARACTERISTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heating capacity +7°C/+35°C – Floor Heating kW</td>
<td>10.80</td>
<td>13.50</td>
<td>10.80</td>
<td>13.00</td>
</tr>
<tr>
<td>COP +7°C/+35°C – Floor Heating</td>
<td>4.25</td>
<td>4.18</td>
<td>4.30</td>
<td>4.18</td>
</tr>
<tr>
<td>Heating capacity -7°C/+35°C – Floor Heating kW</td>
<td>10.38</td>
<td>11.54</td>
<td>10.38</td>
<td>12.20</td>
</tr>
<tr>
<td>COP -7°C/+35°C – Floor Heating</td>
<td>2.40</td>
<td>2.27</td>
<td>2.43</td>
<td>2.38</td>
</tr>
<tr>
<td>Heating capacity +7°C/+45°C – Low T°radiator kW</td>
<td>9.05</td>
<td>11.32</td>
<td>9.90</td>
<td>12.10</td>
</tr>
<tr>
<td>COP +7°C/+45°C – Low T°radiator</td>
<td>3.21</td>
<td>3.07</td>
<td>3.32</td>
<td>3.20</td>
</tr>
<tr>
<td>Heating capacity -7°C/+45°C – Low T°radiator kW</td>
<td>9.16</td>
<td>11.41</td>
<td>9.98</td>
<td>10.70</td>
</tr>
<tr>
<td>COP -7°C/+45°C – Low T°radiator</td>
<td>2.00</td>
<td>1.93</td>
<td>2.16</td>
<td>2.08</td>
</tr>
<tr>
<td>Heating capacity +7°C/+55°C – Radiator kW</td>
<td>7.59</td>
<td>9.48</td>
<td>9.29</td>
<td>10.60</td>
</tr>
<tr>
<td>COP +7°C/+55°C – Radiator</td>
<td>2.47</td>
<td>2.40</td>
<td>2.64</td>
<td>2.41</td>
</tr>
<tr>
<td>Heating capacity -7°C/+55°C – Radiator kW</td>
<td>7.57</td>
<td>9.20</td>
<td>9.27</td>
<td>10.10</td>
</tr>
<tr>
<td>COP -7°C/+55°C – Radiator</td>
<td>1.66</td>
<td>1.81</td>
<td>1.82</td>
<td>1.79</td>
</tr>
<tr>
<td>Heating capacity +7°C / +60°C – Radiator kW</td>
<td>7.05</td>
<td>8.81</td>
<td>9.25</td>
<td>11.50</td>
</tr>
<tr>
<td>Heating capacity +7°C / +60°C – Radiator kW</td>
<td>6.71</td>
<td>8.42</td>
<td>8.48</td>
<td>10.10</td>
</tr>
<tr>
<td>Additional adjustable electric back-up in option kW</td>
<td>adjustable 3 ou 6</td>
<td>adjustable 3 ou 6</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

---

**ENERGY EFFICIENCY & ACOUSTIC CHARACTERISTICS WITH OUTDOOR SENSOR**

<table>
<thead>
<tr>
<th>ALFÉA EXCELLIA 11</th>
<th>ALFÉA EXCELLIA 14</th>
<th>ALFÉA EXCELLIA TRI 11</th>
<th>ALFÉA EXCELLIA TRI 14</th>
<th>ALFÉA EXCELLIA TRI 16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENERGY CLASS</strong></td>
<td><strong>ENERGY CLASS</strong></td>
<td><strong>ENERGY CLASS</strong></td>
<td><strong>ENERGY CLASS</strong></td>
<td><strong>ENERGY CLASS</strong></td>
</tr>
<tr>
<td>Heating (35°C/55°C) kW</td>
<td>11 / 9</td>
<td>13 / 11</td>
<td>11 / 9</td>
<td>13 / 11</td>
</tr>
<tr>
<td>Rated heat output (35°C/55°C) kW</td>
<td>153 / 111</td>
<td>155 / 115</td>
<td>156 / 114</td>
<td>152 / 119</td>
</tr>
<tr>
<td>Seasonal energy efficiency - Heating (35°C/55°C) %</td>
<td>150 / 115</td>
<td>156 / 114</td>
<td>156 / 114</td>
<td>152 / 119</td>
</tr>
<tr>
<td>Annual energy consumption - Heating (35°C/55°C) kWh</td>
<td>6062 / 6842</td>
<td>6824 / 8041</td>
<td>5930 / 6969</td>
<td>6738 / 7803</td>
</tr>
<tr>
<td>Sound power level (indoor/outdoor) dB(A)</td>
<td>46 / 69</td>
<td>46 / 70</td>
<td>46 / 68</td>
<td>46 / 69</td>
</tr>
</tbody>
</table>

---

**INDOOR HYDRAULIC MODULE**

<table>
<thead>
<tr>
<th>ALFÉA EXCELLIA 11</th>
<th>ALFÉA EXCELLIA 14</th>
<th>ALFÉA EXCELLIA TRI 11</th>
<th>ALFÉA EXCELLIA TRI 14</th>
<th>ALFÉA EXCELLIA TRI 16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Noise level</strong></td>
<td>dB(A)</td>
<td>39</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>Dimensions h x w x d mm</td>
<td>800x450x480</td>
<td>800x450x480</td>
<td>800x450x480</td>
<td>800x450x480</td>
</tr>
<tr>
<td>Net weight/filled weight kg</td>
<td>42 / 58</td>
<td>42 / 58</td>
<td>42 / 58</td>
<td>42 / 58</td>
</tr>
<tr>
<td>Power supply</td>
<td>230 V / 50 Hz</td>
<td>230 V / 50 Hz</td>
<td>400 V / 50 Hz</td>
<td>400 V / 50 Hz</td>
</tr>
</tbody>
</table>

---

**OUTDOOR UNIT**

<table>
<thead>
<tr>
<th>ALFÉA EXCELLIA 11</th>
<th>ALFÉA EXCELLIA 14</th>
<th>ALFÉA EXCELLIA TRI 11</th>
<th>ALFÉA EXCELLIA TRI 14</th>
<th>ALFÉA EXCELLIA TRI 16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Noise level</strong></td>
<td>dB(A)</td>
<td>47</td>
<td>48</td>
<td>46</td>
</tr>
<tr>
<td>Dimensions h x w x d mm</td>
<td>1290x970x400</td>
<td>1290x970x400</td>
<td>1290x900x400</td>
<td>1290x900x400</td>
</tr>
<tr>
<td>Operating weight kg</td>
<td>92</td>
<td>92</td>
<td>99</td>
<td>99</td>
</tr>
</tbody>
</table>

---

**REFRIGERANT CHARACTERISTICS**

<table>
<thead>
<tr>
<th>ALFÉA EXCELLIA 11</th>
<th>ALFÉA EXCELLIA 14</th>
<th>ALFÉA EXCELLIA TRI 11</th>
<th>ALFÉA EXCELLIA TRI 14</th>
<th>ALFÉA EXCELLIA TRI 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min./max. length m</td>
<td>5 / 20</td>
<td>5 / 20</td>
<td>5 / 20</td>
<td>5 / 20</td>
</tr>
<tr>
<td>Max. diff. in height m</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

---

*Acoustic pressure at 1m from HP; 1.5 m height, open field, directivity 2.* **Acoustic pressure at 5m from HP; 1.5 m height, open field, directivity 2.* The cable sections and circuit breaker protection ratings are given for information only and do not relieve the installer from verifying that these sections correspond to the needs and meet the standards.

---

**DIMENSIONS (MM)**

Outdoor Inverter unit Alfea Excellia 11 and 14 single-phase

Outdoor Inverter unit Alfea Excellia 11, 14 and 16 three-phase

Indoor hydraulic module
**ALFEA EXCELLIA**

*Installation schematics*

**ALFEA EXCELLIA: 1 HEATING ZONE**

1. Outdoor unit and ground support*
2. Refrigerant connections*
3. Hydraulic module
4. Backup heater*
5. Room control unit*
6. Outdoor sensor

**ALFEA EXCELLIA: 2 HEATING ZONES AND DHW PRODUCTION**

1. Outdoor unit and ground support*
2. Refrigerant connections*
3. Hydraulic module
4. Backup heater*
5. Room control unit*
6. 2nd zone kit*
7. DHV kit*
8. DHV tank*
9. Outdoor sensor

**ALFEA EXCELLIA CONNECTED TO BOILER: 2 HEATING ZONES + DHW PRODUCTION**

1. Outdoor unit and ground support*
2. Refrigerant connections*
3. Hydraulic module
4. Boiler connection kit*
5. Room radio control unit*
6. 2nd zone kit*
7. DHV kit*
8. DHV tank*
9. Boiler
10. Outdoor sensor

*Option*