Air cooled Water chillers
Hava soğutmalı kondenserli
Soğuk su üretici gruplar

Multi scroll compressors • Microprocessor controlled
Çoklu scroll kompresörlü • Mikroişlemci kontollü

For air-conditioning systems,  Klima sistemleri,
Process cooling,  Proses soğutmaları,
Industrial plants and  Sanayi tesisleri ve
Various purpose  Muhtelif maksatlar için

OPTIONAL HIDRONIC KIT / HİDRONİK KİT OPSİYONLU
OPTIONAL ADIABATIC COOLING / ADYABATİK SOĞUTMA OPSİYONLU

Capacity range
Kapasite aralığı
89.5 kW - 978 kW
**Unit Description**  

**EBAY Water Chillers** are designed to outdoor installation and provide chilled water leaving temperatures which are given on capacity tables in our factory carrying out EN ISO 9001:2015 Quality Management System. The Units are supplied to ready for installation. All connections, oil and refrigerant charge and required tests are made in our factory. Our units are in conformity with health and safety requirements of following European Union directives and relevant harmonized standards.

- **Machinery Directive (MD)** : 2006/42/EC
- **Low Voltage Directive (LVD)** : 2014/35/EC
- **Electromagnetic Compatibility Directive (EMC)** : 2014/30/EC

The capacity of the Unit varying between 89.5 kW and 978 kW and it's composed of the following parts:

**Cooling Compressor** : According to capacity hermetic scroll compressors are used between 1 and 6 pieces and compressors are used as single, tandem or trio each independent refrigerant circuit. Tandem and trio compressors are mounted on solid frame rail so vibration effect is prevented. Equal oil distribution is provided on compressors by using oil equalizing system.

**Condenser** : Air cooled condensers are manufactured by collating special profile aluminum fins on copper tubes. Copper tubes are expanded special process in order to increase thermic conductivity between copper tubes and aluminium fins. By this means heat transfer reach to maximum level.

**Evaporator** : Direct expansion evaporator is manufactured in Shell & Tube form and special high efficient copper tubes are fixed to steel tubesheet holes with tube expander method. It's allowed to maintenance and clean up because of the removable tube bundle. Evaporators are in conformity with EN 14276-1 and EN 13445 standards and designed for chilling water and glycol brines. External surface of evaporators and compressor suction lines are insulated with insulation material with suitable thickness.

**Electrical Control Panel** : The panel is designed to IP54. To operate the Unit automatically and securely, the panel is composed of two different sections. The first section is power section and the other one is control section. The panel is equipped with enough number of controllers, thermics, fuses and on-off switches. The panel and wiring are in conformity with EN 60204-1 standard. Required power supply is 3 ph - 400 Volt - 50 Hz.

**Microprocessor Control System** : Microprocessor control system is used on the Unit. By means of this; entering and leaving water temperatures, refrigerant pressures on the suction and discharge lines, occurred super heat temperature of evaporator, operating times of compressors, all faults occurred on the system and all alarm history can be seen on the digital screen and also capacity control can be made easily. Besides condenser fans are controlled automatically depending on the ambient temperature and the operating times of each compressor is balanced so optimum efficient operation of the Unit is provided.

**Components of the Cooling Circuit** : To operate the Unit automatically and securely; electronic expansion valve, drier-filter, sight glass, relief valve, flow - switch, high - low pressure switch and shut - off valves are included.
### Technical Specifications

**Note:** Required power supply is 3 ph-400 Volt-50 Hz. Not central geothermal service 3 ph-400 Volt-50 Hz, 50 Hz.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>CİHAZ TIPI</th>
<th>EBHS-40.1</th>
<th>EBHS-35.3</th>
<th>EBHS-40.2</th>
<th>EBHS-40.3</th>
<th>EBHS-35.4</th>
<th>EBHS-30.6</th>
<th>EBHS-40.4</th>
<th>EBHS-40.6</th>
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</thead>
<tbody>
<tr>
<td><strong>Nominal Capacity (kW)</strong></td>
<td>R410A</td>
<td>(1) 123.4</td>
<td>153.4</td>
<td>201.4</td>
<td>216.0</td>
<td>246.8</td>
<td>284.0</td>
<td>370.2</td>
<td>422.0</td>
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<td></td>
<td></td>
<td>(2) 111.2</td>
<td>138.2</td>
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<td>194.6</td>
<td>222.4</td>
<td>291.9</td>
<td>333.6</td>
<td>389.2</td>
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<tr>
<td></td>
<td></td>
<td>(3) 124.0</td>
<td>155.2</td>
<td>199.6</td>
<td>216.0</td>
<td>252.0</td>
<td>324.0</td>
<td>408.0</td>
<td>480.0</td>
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<tr>
<td><strong>Nominal Power Input of the Comp. (kW)</strong></td>
<td>R410A</td>
<td>(1) 26.0</td>
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<td>43.2</td>
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<td>52.0</td>
<td>68.7</td>
<td>78.0</td>
<td>91.6</td>
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<tr>
<td></td>
<td></td>
<td>(2) 39.1</td>
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<td>64.2</td>
<td>62.4</td>
<td>82.8</td>
<td>93.6</td>
<td>104.0</td>
<td>124.8</td>
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<tr>
<td></td>
<td></td>
<td>(3) 42.0</td>
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<td>62.4</td>
<td>86.2</td>
<td>97.8</td>
<td>110.4</td>
<td>136.0</td>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
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<td><strong>Number of Indep. Refrigerant Circuit</strong></td>
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<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
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<tr>
<td><strong>Number of Fans x Power Input (kW)</strong></td>
<td>2 x 1.8</td>
<td>2 x 1.8</td>
<td>4 x 1.8</td>
<td>4 x 1.8</td>
<td>4 x 1.8</td>
<td>4 x 1.8</td>
<td>4 x 1.8</td>
<td>4 x 1.8</td>
<td>8 x 1.8</td>
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<tr>
<td><strong>Total Air Flowrate (m³/s)</strong></td>
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<td>12.5</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
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<tr>
<td><strong>Nominal Evaporator Water Flowrate (m³/h)</strong></td>
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<td>(1) 21.2</td>
<td>26.4</td>
<td>34.6</td>
<td>37.2</td>
<td>42.4</td>
<td>55.7</td>
<td>63.7</td>
<td>74.3</td>
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<tr>
<td></td>
<td></td>
<td>(2) 19.1</td>
<td>23.8</td>
<td>31.4</td>
<td>33.5</td>
<td>38.3</td>
<td>50.2</td>
<td>57.4</td>
<td>66.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3) 17.1</td>
<td>22.3</td>
<td>29.8</td>
<td>32.9</td>
<td>39.1</td>
<td>49.0</td>
<td>58.2</td>
<td>69.1</td>
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<tr>
<td><strong>Refrigerant Charge (kg)</strong></td>
<td></td>
<td>26</td>
<td>33</td>
<td>39</td>
<td>41</td>
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<td>67</td>
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<td>81</td>
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<td><strong>Oil Charge (lt)</strong></td>
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<td>5.3</td>
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<td>10.6</td>
<td>10.6</td>
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<td>10.6</td>
<td>10.6</td>
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<td><strong>Sound Pressure Level dB(A)</strong></td>
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<td>51</td>
<td>92</td>
<td>55</td>
<td>55</td>
<td>55</td>
<td>55</td>
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<td>55</td>
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<td><strong>Operating Weight (kg)</strong></td>
<td></td>
<td>1080</td>
<td>1310</td>
<td>1685</td>
<td>1705</td>
<td>1870</td>
<td>2175</td>
<td>2650</td>
<td>3130</td>
</tr>
</tbody>
</table>

(1) Values are based on evap. entering/leaving water temp. 12°C/7°C and ambient temperature 25°C
(2) Values are based on evap. entering/leaving water temp. 12°C/7°C and ambient temperature 33°C
(3) Values are based on freefield conditions in 10 meter distance.
## Capacity Table (kW)

### CHILLED WATER

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Q = Cooling capacity (kW)</th>
<th>N = Power input (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBHS - 10.1</td>
<td>6 °C</td>
<td>6 °C</td>
</tr>
<tr>
<td>EBHS - 20.2</td>
<td>7 °C</td>
<td>7 °C</td>
</tr>
<tr>
<td>EBHS - 30.3</td>
<td>8 °C</td>
<td>8 °C</td>
</tr>
</tbody>
</table>

### Type of Operation

- **CHILLED**
- **LEAVING**
- **WATER**

### Conditions

- **24 °C**
- **25 °C**
- **26 °C**
- **27 °C**
- **28 °C**
- **29 °C**
- **30 °C**
- **31 °C**
- **32 °C**
- **33 °C**
- **34 °C**
- **35 °C**

### Note

- Q: Cooling capacity (kW)
- N: Power input (kW)
### Capacity Table (kW)

<table>
<thead>
<tr>
<th>Condenser Entering Air Temp. / Kondensere Hava Girişi Sıcaklığı</th>
<th>Water Leaving (°C) / Su Çıkışı (°C)</th>
<th>EBHS - 35.2</th>
<th>EBHS - 40.2</th>
<th>EBHS - 35.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 °C</td>
<td>26 °C</td>
<td>28 °C</td>
<td>30 °C</td>
<td>32 °C</td>
</tr>
<tr>
<td>6°C</td>
<td>7°C</td>
<td>8°C</td>
<td>9°C</td>
<td>10°C</td>
</tr>
<tr>
<td>Q= Cooling capacity (kW) / Soğutma kapasitesi</td>
<td>Q= Power input (kW) / Kompresör mil gücü</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **EBHS - 35.2**
  - 6°C: Q= 316.0 kW
  - 7°C: Q= 317.0 kW
  - 8°C: Q= 318.0 kW
  - 9°C: Q= 319.0 kW
  - 10°C: Q= 320.0 kW
  - 11°C: Q= 321.0 kW

- **EBHS - 40.2**
  - 6°C: Q= 417.0 kW
  - 7°C: Q= 418.0 kW
  - 8°C: Q= 419.0 kW
  - 9°C: Q= 420.0 kW
  - 10°C: Q= 421.0 kW
  - 11°C: Q= 422.0 kW

- **EBHS - 35.3**
  - 6°C: Q= 518.0 kW
  - 7°C: Q= 519.0 kW
  - 8°C: Q= 520.0 kW
  - 9°C: Q= 521.0 kW
  - 10°C: Q= 522.0 kW
  - 11°C: Q= 523.0 kW

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**Notes:**
- Q= Cooling capacity (kW) / Soğutma kapasitesi
- **Condenser Entering Air Temp. / Kondensere Hava Girişi Sıcaklığı**
- **Water Leaving (°C) / Su Çıkışı (°C)**
- **EBHS - 35.2**
- **EBHS - 40.2**
- **EBHS - 35.3**
- **Power input (kW) / Kompresör mil gücü**

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**Additional Information:**
- The table provides the cooling capacity (kW) for different water outlet temperatures and condenser inlet temperatures.
- The table includes data for three different EBHS models: 35.2, 40.2, and 35.3.
- Each model has specific cooling capacities at different temperatures, which are listed in the table.

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**Data Source:**
- The data is from the technical specifications of the ERBAY R410A condenser units.
- The table is formatted to show the relationship between the condenser temperature, water temperature, and the corresponding cooling capacity.
### Capacity Table (kW) Kapasite Tablosu

<table>
<thead>
<tr>
<th>Type</th>
<th>Chilled Water Chiller</th>
<th>Kondensör Hava Girişi</th>
<th>Soğutma Kapasitesi</th>
<th>Kompresör Mil Gücü</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 °C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
</tr>
<tr>
<td>7°C</td>
<td>6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
</tr>
<tr>
<td>8°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
</tr>
<tr>
<td>9°C</td>
<td>8°C 7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
</tr>
<tr>
<td>10°C</td>
<td>9°C 8°C 7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
</tr>
<tr>
<td>11°C</td>
<td>10°C 9°C 8°C 7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
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<tr>
<td>12°C</td>
<td>11°C 10°C 9°C 8°C 7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
</tr>
<tr>
<td>13°C</td>
<td>12°C 11°C 10°C 9°C 8°C 7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
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</tr>
<tr>
<td>14°C</td>
<td>13°C 12°C 11°C 10°C 9°C 8°C 7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
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<td>7°C 6°C 11°C 17°C 23°C</td>
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<tr>
<td>15°C</td>
<td>14°C 13°C 12°C 11°C 10°C 9°C 8°C 7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
<td>7°C 6°C 11°C 17°C 23°C</td>
</tr>
</tbody>
</table>

Q = Cooling capacity (kW) Soğutma kapasitesi
Nₐ = Power input (kW) Kompresör mil gücü

**EBHS·30°.6**

**EBHS·40°.6**

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**Notes:**

- The table above is a capacity table for a chiller system, listing the cooling capacity (in kW) at various temperatures.
- Each row represents a temperature range and the corresponding capacity values.
- The data is organized to show the capacity at 6°C, 7°C, 8°C, 9°C, 10°C, 11°C, 12°C, 13°C, 14°C, and 15°C temperature settings.
- The columns provide the capacity values for different output temperatures and conditions, allowing for the selection of the appropriate equipment based on the desired performance at various conditions.

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**Technical Specifications:**

- Type of Chiller: Chilled Water Chiller
- Condenser Entering Air Temp: 40°C
- Type: Condenser: Hava Giriş Sıcaklığı

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**Additional Information:**

- E17-101/4.A: Model number
- 7: Page number
- R410A: Refrigerant used.
### Clearances  Cihaz Yerleşimi

<table>
<thead>
<tr>
<th>Type</th>
<th>EBHS-40.1</th>
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<th>EBHS-40.2</th>
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<th>EBHS-40.3</th>
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<td>DN 125</td>
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</table>

### CLEARANCES OF UNIT / CİHAZ YERLEŞİM ÖLÇÜSÜ

| S     | 1000      | 1100      | 1100      | 1200      | 1300      | 1300      | 1300      | 1500      |

Note: We reserve the right to make changes in dimensions and design at any time, without notice.

Not: Ölçü ve dizayn değiştirelimiz hakkımız maftuzdur.