The HRS BDS Series is an efficient solution to cool and dehumidify biogas for combustion with two standard options. The system condenses up to 90% of the water contained in the gas, which is continuously separated before the lean biogas is ready for use. This is a necessary process for all bio-energy plants that use biogas as fuel in CHP engines.

A heat recovery step can be included as a standard option thus reducing energy costs up to 20%, Cold gas at 5°C is used to precool the incoming gas at 40°C, whilst raising the temperature of the dehumidified gas to approximately 36°C before use. A chiller is included to provide the energy required for the process.

The BDS comes complete with controls in a packaged ‘plug and play’ skid.

**APPLICATIONS**
- Biogas Dehumidification
- Biogas Cooling

**STANDARD MATERIALS OF CONSTRUCTION**
- Service Side: AISI 304 Stainless Steel
- Biogas Side: AISI 316L Stainless Steel
- Other material options available

**STANDARD CONNECTIONS**
- Service Side: Flange
- Product Side: Flange
- All flange types available

**SURFACE FINISH**
- External: Matt
- Internal: Matt

**STANDARD DESIGN CONDITIONS**
- Service Side: 6 bar/80°C
- Biogas Side: 2 bar/80°C

**FEATURES**
- Condenses >90% of the water present in biogas
- Up to 20% energy recovery available, reducing energy costs
- Skid-mounted for easy access and freedom of movement
- Automatic control panel
- ATEX-compliant version available
- Unit insulated with Armaflex

**RANGE**

<table>
<thead>
<tr>
<th>MODELS</th>
<th>GAS FLOW (kg/hr)</th>
<th>T GAS IN (°C)</th>
<th>T GAS MIN (°C)</th>
<th>T GAS OUT (°C)</th>
<th>T SERVICE IN (°C)</th>
<th>T SERVICE OUT (°C)</th>
<th>THERMAL DUTY CHILLER (kW)</th>
<th>ELECTRICITY CONE. (kW)</th>
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<tbody>
<tr>
<td>BDS 13</td>
<td>161 - 200</td>
<td>40</td>
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<td>BDS 21</td>
<td>200 - 350</td>
<td>40</td>
<td>7</td>
<td>32</td>
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<td>540 - 700</td>
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<td>30.4</td>
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**DESIGN CODE AND COMPLIANCE**
- PD 5500, PED 2014/68/EU, ASME
- TR CU 032, DOSH Compliant
BIOGAS DEHUMIDIFICATION SYSTEM

HRS BDS SERIES

STANDARD OPTION

Heat exchanger

Pump

Chiller

Condensed water

HEAT RECOVERY OPTION

Heat recovery heat exchanger

Final cooling heat exchanger

Reheated biogas

Hot biogas

Cold biogas

Condensed water

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