**SYSTEM INFORMATION**

**REC+ (Recovery Energy Cycle)** is an energy system designed to dramatically reduce the energy costs of medium and large energy consumers, which operate all year round and which simultaneously consume electric and heating energy or electric and cooling energy. It is a compact system that can be installed outdoors or indoors. It is based on the principles of cogeneration and trigeneration, or in other words, it delivers two or more kinds of energy simultaneously. Its core is an internal combustion engine which can be powered by different kinds of fuel – ideally natural gas, but other possibilities are diesel, LPG, biogas, biomethane, depending on the most cost-efficient fuel option available. In addition to lower energy costs, REC+ ensures drastic reduction of $\text{CO}_2$ emissions, as well as lower dependence on the grid.

**MAIN FIELDS OF APPLICATION ARE**

- **INDUSTRIAL FACILITIES** (food conservation, pharma, plastic, textile, chemical, ...);
- **HOSPITALS, HOTELS, SWIMMING POOLS AND SPAS, DATA CENTERS**;
- **AIRPORTS, GOVERNMENT FACILITIES, PRISONS, SCHOOLS AND UNIVERSITIES**;
- **SUPERMARKETS AND SHOPPING MALLS**;
- **DISTRICT HEATING/COOLING**.

Electrical power of REC+ models is ranging from **40 kWe to 530 kWe**. More powerful models are available on request.
### REC+ model list - 50 Hz - Natural Gas

<table>
<thead>
<tr>
<th>Name of model</th>
<th>Electric Power kW</th>
<th>Recovered Heat kW</th>
<th>Input Energy kW</th>
<th>Electrical Efficiency %</th>
<th>Global Efficiency %</th>
<th>Dimensions LxWxH,m</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>REC+40NAM</td>
<td>43</td>
<td>63</td>
<td>130</td>
<td>33,4</td>
<td>81,9</td>
<td>2,9x1,1x1,9</td>
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<tr>
<td>REC+50NAM</td>
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<td>79</td>
<td>148</td>
<td>33,8</td>
<td>87,2</td>
<td>2,9x1,1x1,9</td>
<td>3.050</td>
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<tr>
<td>REC+60TCM</td>
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<td>94</td>
<td>177</td>
<td>35,7</td>
<td>88,8</td>
<td>2,9x1,1x1,9</td>
<td>3.250</td>
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<tr>
<td>REC+70NAM</td>
<td>70</td>
<td>109</td>
<td>205</td>
<td>34,0</td>
<td>87,2</td>
<td>3,4x1,2x2,5</td>
<td>3.400</td>
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<td>REC+100TCM</td>
<td>104</td>
<td>137</td>
<td>278</td>
<td>35,0</td>
<td>86,8</td>
<td>3,4x1,2x2,5</td>
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<td>REC+120NAT</td>
<td>123</td>
<td>182</td>
<td>339</td>
<td>36,3</td>
<td>89,9</td>
<td>3,4x1,2x2,5</td>
<td>4.100</td>
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<td>REC+130NAM</td>
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<td>193</td>
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<td>4.100</td>
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<td>REC+160TCT</td>
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<td>210</td>
<td>428</td>
<td>37,6</td>
<td>86,6</td>
<td>3,4x1,2x2,5</td>
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<td>REC+180TCT</td>
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<td>219</td>
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<td>REC+205TCM</td>
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<td>248</td>
<td>529</td>
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<td>3,4x1,2x2,5</td>
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<td>REC+260NAM</td>
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<td>375</td>
<td>695</td>
<td>37,7</td>
<td>91,7</td>
<td>4,9x1,6x2,5</td>
<td>6.900</td>
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<td>REC+300TCM</td>
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<td>365</td>
<td>768</td>
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<td>REC+350TCM</td>
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<td>4,9x1,6x2,5</td>
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<td>581</td>
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<td>39,5</td>
<td>86,1</td>
<td>4,9x1,6x2,5</td>
<td>8.700</td>
</tr>
</tbody>
</table>

1. OUTDOOR versions available on request.
2. 60 Hz models are available on request.
3. For Italian market, models up to 1500 kW available on request.
4. Special systems (trigeneration, steam, hot air, ...) available on request.
5. Technical data and dimensions are indicative only and subject to change without notice.
7. All naturally aspirated engines (NAM and NAT) have the following emissions:
   - NOx 200 mg/Nm³ and CO 300 mg/Nm³ at 5% concentration of oxygen reference.
8. All turbocharged engines (TCM and TCT) from REC+40NAM to REC+350TCM including have the following emissions:
   - NOx 500 mg/Nm³ and CO 300 mg/Nm³ at 5% concentration of oxygen reference.
9. Models REC+430TCM-In and REC+530-ln (Low NOx emissions) have the following emissions:
   - NOx 250 mg/Nm³ and CO 300 mg/Nm³ at 5% concentration of oxygen reference.
10. Standard models REC+430TCM and REC+530TCM have the following emissions:
    - NOx 500 mg/Nm³ and CO 300 mg/Nm³ at 5% concentration of oxygen reference.
**BENEFITS**

- **REC+** is a COGENERATION (CHP) system that SIMULTANEOUSLY produces both ELECTRICITY and HOT WATER (90°C) and/or STEAM (FREE WASTE HEAT);
- It can be combined with absorption systems in order to produce also FREE CHILLED WATER (7°C);
- INCREASES ENERGY EFFICIENCY: it reduces fuel consumption for heat and power production by 30% to 50% when compared to centralized power plants;
- REDUCES GREENHOUSE GASES EMISSIONS (CO₂) thanks to its small environmental footprint;
- INCREASES QUALITY on power supply;
- PRODUCES FINANCIAL SAVINGS in utility bills;
- EASY TO INSTALL (Plug&Play) and ready for REMOTE MONITORING;
- FULL SERVICE MAINTENANCE with WARRANTY EXTENSION.

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