Reheat steam turbines are efficient, flexible and reliable machines based on a broad design platform, capable of satisfying a wide range of steam cycles, site conditions and operating modes for both 50 and 60 Hz applications. For higher ratings, the design concept is based on separate high pressure and intermediate pressure sections with one or more double flow low pressure section, suitable for combined cycles with advanced F and H class gas turbines as well as fossil power plants with the highest steam parameters for supercritical and ultrasupercritical conditions. For lower ratings, where a single flow exhaust is sufficient, the models are compact, with separate high pressure section and combined intermediate pressure sections, arranged in a counter flow configuration with the low pressure exhaust.

Advanced technology features

The design reflects the following distinctive advanced technology features:

• 3D stationary and rotating blades based on reaction robust design, manufactured from bar stock with an airfoil integral with the dovetail and shrouds.
• Shrink rings on the high pressure inner casing resulting in a compact and uniform shape for superior thermal flexibility and cycling capability.
• Single bearing per span design, with bearings directly sitting on the foundation, ensuring optimum rotor behavior and compact overall dimensions.
• Welded rotors for higher thermal flexibility and optimum material selection.
• Axial or downward exhaust for single flow configurations and side or downward exhaust for double flow configurations.
• Synchro-Self-Shifting Clutch for connection to the generator, in single-shaft application, providing better operating flexibility as a result of independent gas and steam turbines operation.
**Reheat Steam Turbines**

<table>
<thead>
<tr>
<th>Series</th>
<th>MT15</th>
<th>RT30</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application</strong></td>
<td>Medium ReHeat CC or Fossil-fired Steam Cycles, Cogeneration and Solar plants</td>
<td>Large ReHeat CC or Fossil-fired Steam Cycles, Cogeneration and Solar plants</td>
</tr>
<tr>
<td><strong>Steam parameters</strong></td>
<td>up to 170 bar</td>
<td>up to 170 bar</td>
</tr>
<tr>
<td></td>
<td>up to 600°C / 585°C</td>
<td>up to 600°C / 585°C</td>
</tr>
<tr>
<td><strong>Configuration</strong></td>
<td>Two cylinders with single flow exhaust</td>
<td>Three or more cylinders with double flow LP section(s)</td>
</tr>
</tbody>
</table>

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**Worldwide references**

Ansaldo Energia Steam Turbine references since 1980 are shown below. Ansaldo Energia has been producing Steam Turbines since 1910’s.

- **Reheat**: Chile; UK; Italy; Spain; France; Belgium; Denmark; Russia; Greece; Turkey; Israel; Egypt; Tunisia; Saudi Arabia; Iran; India; Australia.
- **Non Reheat**: Chile; UK; Italy; Greece; Egypt; UAE; Saudi Arabia; Lebanon; Oman; Pakistan; India.

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73 Reheat Units

20 Non Reheat Units

+ 450 units built before 1980’s