The RTM322 is a 100% Turbomeca engine powering medium-heavy helicopters. It is designed and certified to equip both civil and military platforms. The RTM322 currently powers the three-engine AgustaWestland EH101 Merlin military helicopter, as well as two twin-engine military helicopters: the NH 90 and the UK Apache. The RTM322 engine has contributed to aviation history in achieving a speed record of 255 knots during level flight, on the Eurocopter twin-engine X3 hybrid helicopter. The engine offers a competitive retrofit solution for same-class aircraft thanks to its simple and compact architecture. Its state-of-the-art technologies give to the RTM322 the ability to operate in the harshest environments, and have made it a leader on the European rotorcraft defence market.

Generating Power and Performance

The RTM322 experience
• State-of-the-art technology designed to meet requirements of very demanding environments, with full marinisation.
• In all applications the RTM322 gives more power than competitors.
• The RTM322 01/9A version offers up to 15% power increase in ISA +35°C, sea level.

Missions
• Military maritime operations, medical evacuation, CSAR, mine sweeping, attack, tactical troop transport, and more.

Simple modular design
• 6 separate modules built to tolerances which allow them to be wholly replaceable.
• First and second line maintenance performed in field, only one special tool.
• Top mounted LRUs for easy access and ballistic tolerance.
• Full boroscope access on installed engine.

Dual Channel FADEC
• Automatic pre-start built-in-test and fast automatically controlled engine start.
• Automatic matching of engine torques, together with rotor governing at constant speed.
• Automatic fault management and diagnostics.
• Power response to match fastest power demands.
• Engine and torque limits applied by FADEC, so pilots can use power aggressively when needed.
• Fail-safe turbine overspeed protection.

The RTM322 family
• Entered in service in 1995.
• Maturity: 1,000,000 operating hours.
• 1,000 engines delivered.
> **Helicopters:**

**EH 101 Merlin MK1/MK3**
- Powered by three RTM322 01/8-02/8

**NH90**
- Powered by two RTM322 01-9/01-9A

**WAH 64 - Apache**
- Powered by two RTM322 01/12

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**Power output shaft**
- 20,900 rpm.

**Accessory gear box**
- Reduced number of external piping for ballistic impact tolerance.

**Reverse flow combustion chamber**
- Simple and robust, for a more compact engine.

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**Turbomeca** is dedicated to the design, production, sale and support of gas turbines for helicopters. Turbomeca offers the world’s most comprehensive range of engines, along with strong industrial cooperation associated to close-by customer services structures. Dedicated to 2,500 customers in 155 countries, Turbomeca provides a proximity service thanks to its 16 sites (and one subsidiary), 30 Maintenance Centers, 18 Repair & Overhaul Centers and 90 Field representatives and Field technicians.

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**W322**

<table>
<thead>
<tr>
<th>WAH-64 Apache (UK Apache)</th>
<th>EH101</th>
<th>NH90</th>
<th>NH90</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTM322 kW/Shp</td>
<td>MK 120 (or 01/12)</td>
<td>01/8 &amp; 02/8</td>
<td>01/9</td>
</tr>
<tr>
<td>OEI 30 seconds</td>
<td>/</td>
<td>/</td>
<td>2,206/2,958</td>
</tr>
<tr>
<td>OEI 2 minutes</td>
<td>1,673/2,242</td>
<td>1,791/2,400</td>
<td>1,962/2,631</td>
</tr>
<tr>
<td>OEI continuous</td>
<td>/</td>
<td>/</td>
<td>1,811/2,429</td>
</tr>
<tr>
<td>OEI 30 minutes</td>
<td>/</td>
<td>/</td>
<td>2,019/2,708</td>
</tr>
<tr>
<td>Take-off 60 minutes</td>
<td>1,568/2,101</td>
<td>1,694/2,270</td>
<td>1,799/2,412</td>
</tr>
<tr>
<td>Max. continuous</td>
<td>1,375/1,842</td>
<td>1,604/2,150</td>
<td>1,799/2,412</td>
</tr>
</tbody>
</table>

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