

## **Gates thermostats**

*A precise response to the cooling system's needs*



### **Watchdog of the car's cooling system**

A thermostat constantly monitors the temperature of the coolant and regulates coolant flow through the radiator. It operates many times each day during driving. A good thermostat speeds up engine warm-up and regulates the engine's operating temperature, which results in good fuel economy, lower emissions, better engine performance and longer engine life.

### **A broad range of OE-quality thermostats**

The Gates cooling programme includes several types of OE-design thermostats (housing, insert and regular), ensuring full coverage of the European car park. In addition, inventories can be kept down as Gates thermostats are supplied with the matching seals and gaskets, covering more than one application.

### **The right thermostat for your car**

More information on applications and sizes can be found in the multilingual Gates Cooling Systems catalogue E/70372 or online at [www.gatesautocat.com](http://www.gatesautocat.com).





## How does a Gates thermostat work?

The heart of the Gates thermostat is the temperature sensitive heat motor. A specifically formulated, thermally expansive wax is used and is calibrated to assure prompt and precise operation of the thermostat valve. The wax is contained in a heat conducting copper housing fitted with a stainless steel piston inside a rubber boot. The heat motor itself is placed in a stainless steel assembly.

The thermostat blocks the flow of coolant to the radiator until the engine has warmed up. As the engine and coolant temperature heat up, the wax begins to melt when the temperature reaches the waxes melting range. As the wax melts, it expands. This expansion presses in on the rubber boot which in turn squeezes the piston upward. This upward motion causes the thermostat to open, allowing the coolant to flow through the engine.

In other words, the Gates thermostat provides a securely sealed, heat responsive assembly that keeps engine temperatures within original equipment specifications.



## Construction features

1. Self-cleaning and self-aligning thermostat valve
2. Original equipment design provides exact fit and performance
3. Precise sealing edges reduce leakage and premature cooling
4. Temperature sensitive heat motor provides consistent valve response for smooth performance and precise engine cooling
5. Stainless steel assembly and springs are engineered for life



## Extensive thermostat range

Gates markets several types of thermostats in order to provide the same design as specified by car manufacturers:

- The **reverse poppet thermostat** opens against the flow of coolant from the water pump. The coolant, under water pump pressure, is used to help the reverse poppet thermostat stay closed when cool to reduce leakage. This type is engineered with a self-cleaning, self-aligning stainless steel valve
- The **offset thermostat with jiggle pin valves** is equipped with a special valve in the flange, which allows trapped air in the system to escape and permits the venting of air from the system when filling it with coolant
- Gates also provides **rubber seal thermostats, bypass thermostats, map-controlled thermostats etc.**, all in the same high quality
- Gates is switching to plastic rather than steel housings. Next to saving weight, they cost less and are easier to integrate with electronic switches



*map-controlled thermostat*

## Easy-to-use gaskets and seals

Several Gates thermostats are supplied complete with the matching gasket or seal.

Generally, gaskets are made of a composition fibre material and are die-cut to match the thermostat opening and mounting bolt configuration. Gates markets a complete line of adhesive-backed thermostat gaskets. They cut thermostat installation time by as much as 50%. The adhesive backing helps prevent water leakage, and gasket cement is not needed. With a Gates gasket holding the thermostat in place, the thermostat won't move or become misaligned.

Gates rubber seals are used to seal specific thermostats. Gates seals are made of high-quality rubber in order to prevent leakage.



## Your preferred one-stop-shop supplier for cooling system products

Being a world-leading manufacturer and supplier of automotive products, Gates provides a complete line of belt drive system, cooling system, fuel system and air system products for passenger cars, light-duty commercial vehicles, trucks, buses and tractors. The Gates cooling programme offers the most comprehensive coverage in the industry.

### Next to thermostats, Gates also supplies:

- Radiator and expansion tank caps
- Curved hoses
- Flexible hoses
- Straight hoses
- Heater hose connectors

### Rely on Gates for a thermostat that fits and performs like the original one

- Wide range covering a multitude of applications
- OE-quality guarantee
- Easy product search on **[www.gatesautocat.com](http://www.gatesautocat.com)**
- Efficient logistics: fast dispatch from stock

**Gates premium quality thermostats provide a precise fit and prevent leakage. Their temperature sensitive heat motor allows precise engine cooling in order to guarantee optimum engine performance. That is why an engine should never be operated without a reliable, high-quality Gates thermostat in place.**



**[www.gates.com/europe](http://www.gates.com/europe)**

Your distributor:

