



Radyatör ve Kalorifer peteđi Temizleme Cihazı

Radiator and Panel Radiator Cleaning Machine



Kullanma Kılavuzu

Operating Manual

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Technical Specifications

Model.....	SMART RTC-1
Water pump	35 Liters/Minute
Services hoses.....	2,5 Meter
Power supply	220 V \pm 10% / 50Hz
Display	4x20 characters LCD
Tank capacity	15 liters
Heating power	2000W
Pressure gauge	0-5bar
Measurements.....	60 cm x 105 cm x 48 cm
Weight	40 kg

Other Specifications

- ❖ Fast tank heating.
 - ❖ Digital time and heat warning.
 - ❖ Electronic Tank Full – Empty Warning.
 - ❖ Change the direction of the flow without removing the hoses from the radiator input (Thus the system can be cleaned from both sides effectively).
 - ❖ Warning for service time.
 - ❖ Energy saver.
 - ❖ Works automatically.
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Safety

- Read this manual carefully and understand all the procedures outlines in this manual before operating the unit. Failure to follow these procedures could result in personal injury or property damage.
- Allow only qualified personnel to operate this unit.
- Always wear safety goggles and appropriate protective clothing.
- Do not operate the unit with a damaged cord or plug.
- Disconnect unit from power supply before removing any protective cover.
- Do not expose the unit to wet environment.
- Use only in well ventilated areas.
- The unit must be transported in a vertical position.

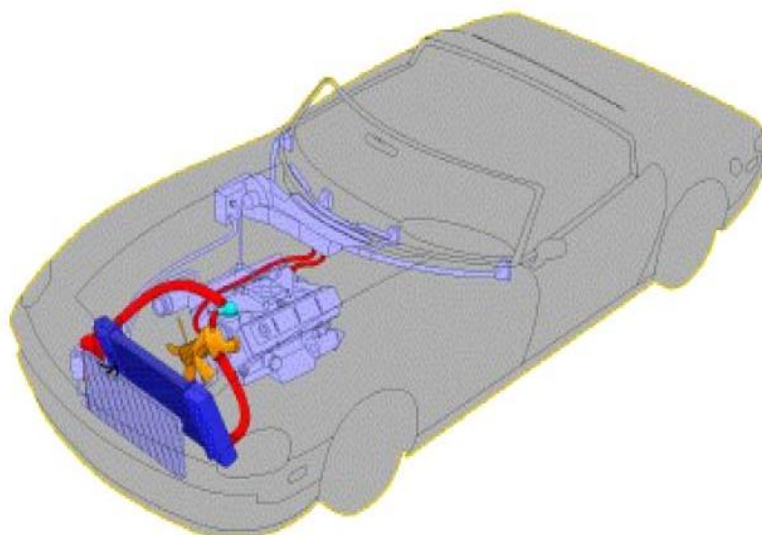
Radiator System

How Does a Cooling System Work?

Actually, there are two types of cooling systems found on motor vehicles: Liquid cooled and Air cooled. Air cooled engines are found on a few older cars, like the original Volkswagen Beetle, the Chevrolet Corvair and a few others. Many modern motorcycles still use air cooling, but for the most part, automobiles and trucks use liquid cooled systems and that is what this article will concentrate on.

The cooling system is made up of the passages inside the engine block and heads, a water pump to circulate the coolant, a thermostat to control the temperature of the coolant, a radiator to cool the coolant, a radiator cap to control the pressure in the system, and some plumbing consisting of interconnecting hoses to transfer the coolant from the engine to radiator and also to the car's heater system where hot coolant is used to warm up the vehicle's interior on a cold day.

A cooling system works by sending a liquid coolant through passages in the engine block and heads. As the coolant flows through these passages, it picks up heat from the engine. The heated fluid then makes its way through a rubber hose to the radiator in the front of the car. As it flows through the thin tubes in the radiator, the hot liquid is cooled by the air stream entering the engine compartment from the grill in front of the car. Once the fluid is cooled, it returns to the engine to absorb more heat. The water pump has the job of keeping the fluid moving through this system of plumbing and hidden passages.

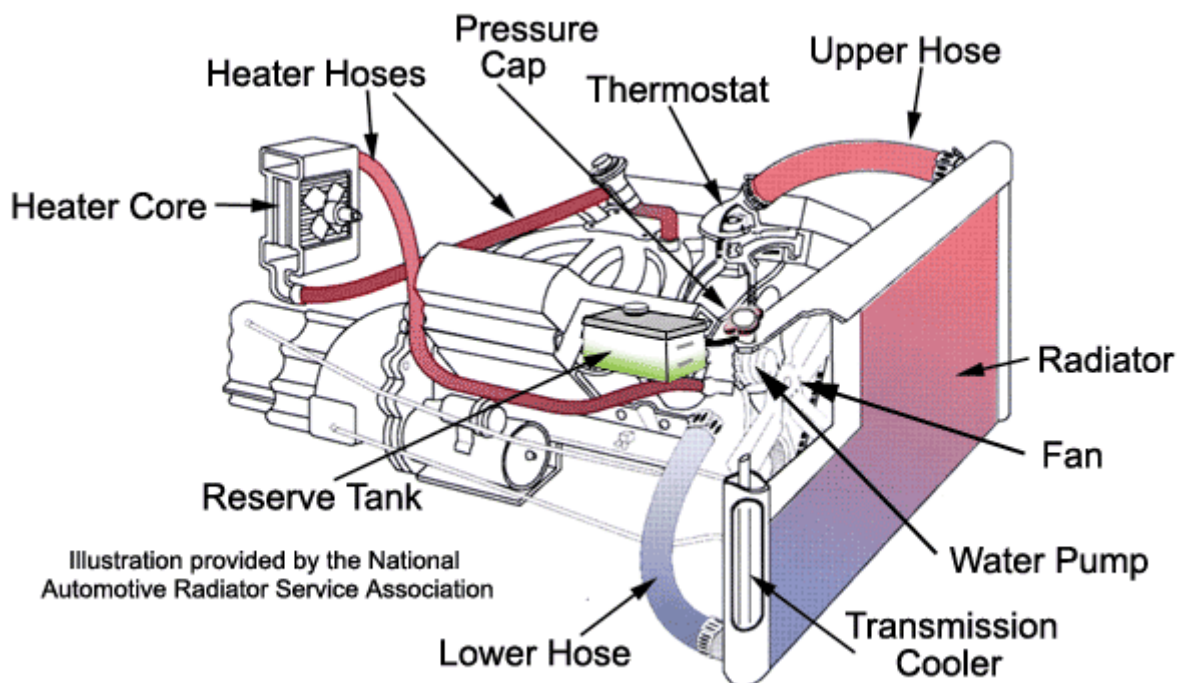


A thermostat is placed between the engine and the radiator to make sure that the coolant stays above a certain preset temperature. If the coolant temperature falls below this temperature, the thermostat blocks the coolant flow to the radiator, forcing the fluid instead through a bypass directly back to the engine. The coolant will continue to circulate like this until it reaches the design temperature, at which point, the thermostat will open a valve and allow the coolant back through the radiator.

In order to prevent the coolant from boiling, the cooling system is designed to be pressurized. Under pressure, the boiling point of the coolant is raised considerably. However, too much pressure will cause hoses and other parts to burst, so a system is needed to relieve pressure if it exceeds a certain point. The job of maintaining the pressure in the cooling system belongs to the radiator cap. The cap is designed to release pressure if it reaches the specified upper limit that the system was designed to handle. Prior to the '70s, the cap would release this extra pressure to the pavement. Since then, a system was added to capture any released fluid and store it temporarily in a reserve tank. This fluid would then return to the cooling system after the engine cooled down. This is what is called a closed cooling system.

Circulation

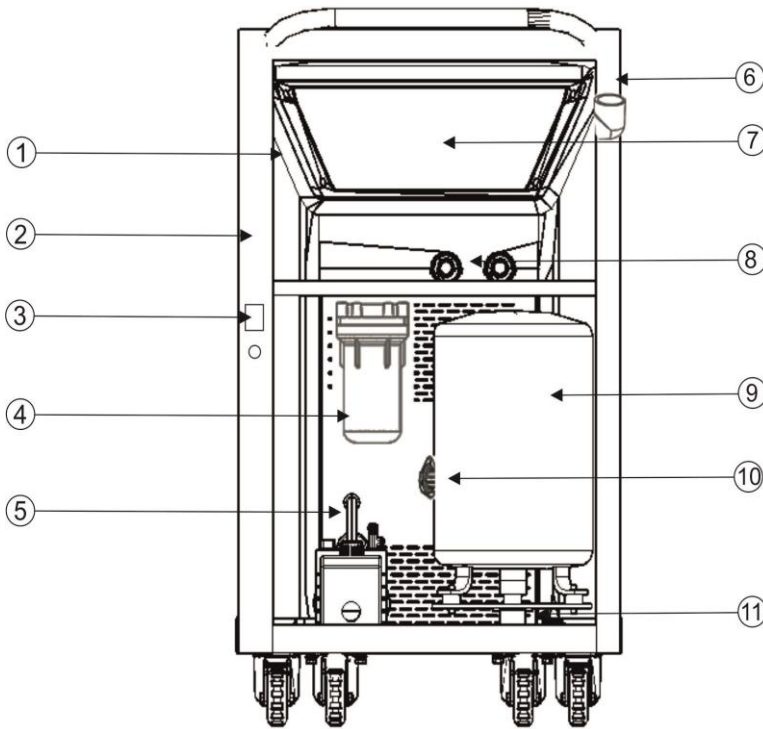
The coolant follows a path that takes it from the water pump, through passages inside the engine block where it collects the heat produced by the cylinders. It then flows up to the cylinder head (or heads in a V type engine) where it collects more heat from the combustion chambers. It then flows out past the thermostat (if the thermostat is opened to allow the fluid to pass), through the upper radiator hose and into the radiator. The coolant flows through the thin flattened tubes that make up the core of the radiator and is cooled by the air flow through the radiator. From there, it flows out of the radiator, through the lower radiator hose and back to the water



pump. By this time, the coolant is cooled off and ready to collect more heat from the engine.

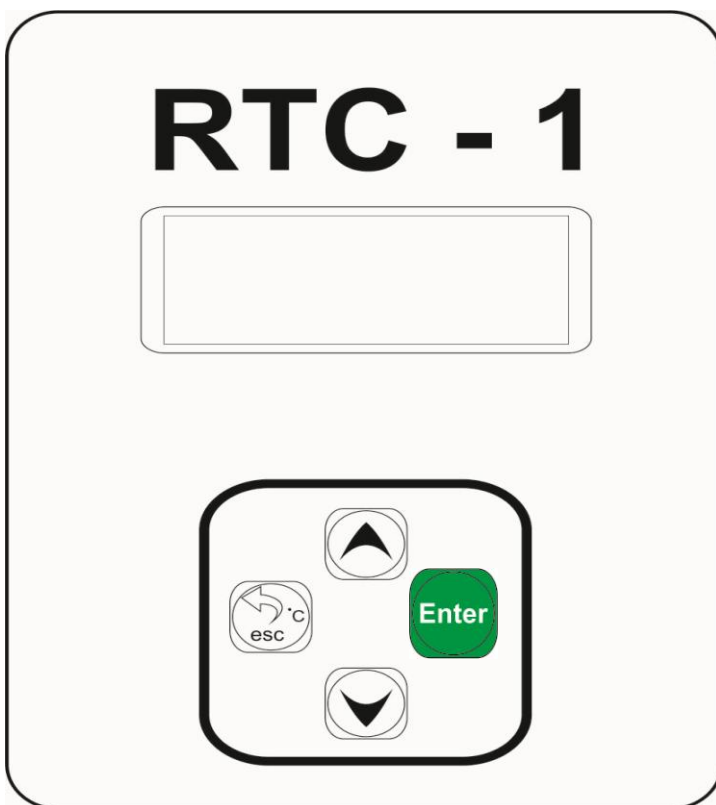
The capacity of the system is engineered for the type and size of the engine and the work load that it is expected to undergo. Obviously, the cooling system for a larger, more powerful V8 engine in a heavy vehicle will need considerably more capacity than a compact car with a small 4 cylinder engine. On a large vehicle, the radiator is larger with many more tubes for the coolant to flow through. The radiator is also wider and taller to capture more air flow entering the vehicle from the grill in front.

Components



No:	PARTS
1	PLASTIC CASE
2	METAL CASE
3	POWER SWITCH
4	FILTER
5	WATER PUMP
6	WATER FILL PLACE
7	CONTROL PANEL
8	SERVICE HOSES
9	WATER TANK
10	HEATER
11	WEIGHT SENSOR

Control Panel



ENTER
next operation OR
confirm

ESC
previous operation OR
interrupt operation

UP
next selection OR
increase value

DOWN
previous selection OR
decrease value

Setup

Unpack the unit and accessories. The package contains:

- RTC-1 unit.
- Plastic hose connector.
- Metal hose clipper.
- Power cable.
- Operating manual and warranty.

Please follow these procedures before the first use of the unit.

1. Place the unit on a level surface.
2. Connect quick-action coupler valves to the service hoses. **DO NOT OVERTIGHTEN THE ADAPTERS.**
3. Plug the power cable into a grounded power outlet.
4. Turn on the power switch.

WARNING: Scale is calibrated at the factory, re-calibration is not necessary.

Operations

1. Connect service hoses to the radiator panel.
2. Turn on the power switch.
3. After start the display below will appear.

Start Process
Settings
Filling Tank

4. Use UP & DOWN buttons to select desired process then press ENTER.
5. Setting of time and Heating depends on the operator decision (Heat Degree 50 is recommended).
6. After setting time and heating degree fill the Tank by opening the (FLUSH CLEAN) cover which is located on the upper front side of the machine.
7. Fill in the tank half liter of FLUSH CLEAN liquid.
8. Press Enter to start and machine will stop automatically after finishing.

Maintenance

Filter Change

Drier filter keeps recovered refrigerant clean and moisture free. Filter must be replaced periodically in order to ensure the unit is working properly. Using expired filters voids warranty.

1. Order a new filter
2. Replace the filter
3. Turn on the unit

Scale Calibration

Scale calibration must not be performed unless it is absolutely necessary. If scale is no longer measuring accurately, please call technical service.