MONZATECH

ADVANCED TEMPERATURE MANAGEMENT

MONZATECH

AUTOMOTIVE and ATV

MonzaTech is a start-up founded in 2016.
An Italian company established thanks to the passion and experience of its founders in Motorsport.
Thanks to the years of experience acquired on the circuits, Monzatech can provide innovative solutions and products, satisfying professionals racing teams and amateurs from all over the world.


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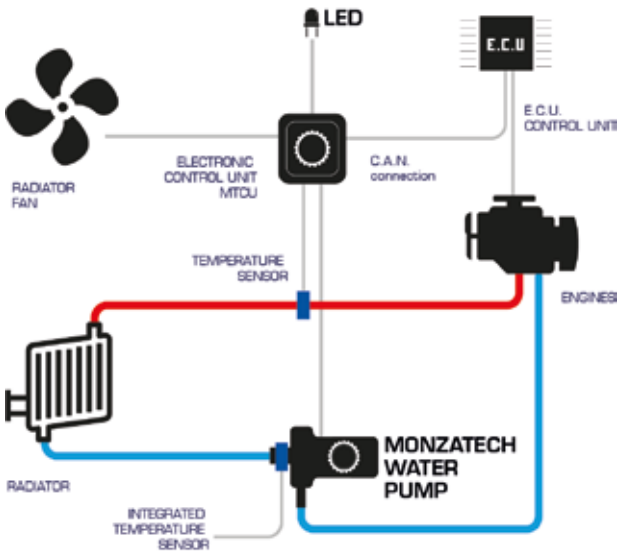


The MWP is a patented electromechanical system that **manage the temperature** of heat engines or electric motors. It can be used on every engine to manage the .

THE MWP SYSTEM

The MWP kits are based on two components: **the electronic control unit and the electric water pump.**

The control unit is installed on the vehicle and can be connected to the CAN or work independently, depending on the model. Its task is to acquire engine temperature data, through sensors or ECU, and **manage the operation of the electric pump and radiator fans**. The control unit determines the heat produced by the engine and the heat dissipated by the radiator, and manages the system operation through a specific algorithm.

The electric pump can be mounted in series with the standard mechanical pump to reduce its workload or can be installed exclusively, eliminating the mechanical pump. In this case, the power consuption of the mechanical parts is eliminated with a gain in horsepower at all revs.

OPERATION

Based on the target temperature (set by the user or pre-set in the factory depending on the models), **the control unit monzatech managing the flow rate of the electric pump and any operation of the radiator fanswith a specific algorithm.**
The cooling liquid flow is then managed by **the electric pump independently of the number of engine revolutions and based on the actual needs of the engine.** The speed of the cooling fans is also managed proportionally in a range of 0% -100% (therefore no longer on/off), without waiting for the engine to reach high temperature.

The electric pump fitted on modern engines guarantees a **completely new level of efficiency**, noticeably increasing the capacity of the original radiator to dissipate the engine heat.

BENEFITS

WARM-UP MANAGEMENT

Installation in series with the original pump

The MWP pump limits the flow of liquid in the circuit and this encourages heating. As the target temperature is approached, the water flow is gradually increased.

Stand-alone installation

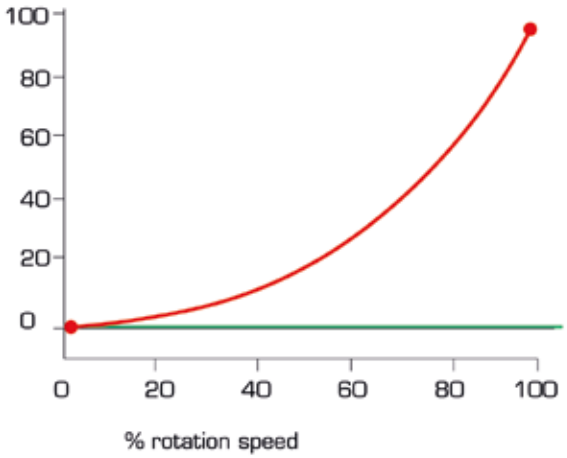
The MWP pump manages the flow of the coolant to heat the engine thermals faster. This way, the engine will work within the correct temperature range, ensuring its continuous operation.

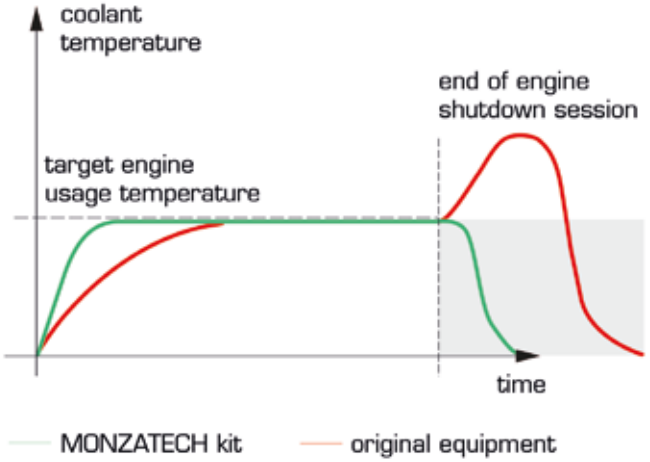
COOL-DOWN MANAGEMENT

The MWP pump ensures a continuous circulation of the coolant and also handles the fan operation to encourage the dispersion of heat, thus avoiding overheating which damages the engine.

PROPORTIONAL RADIATOR FAN USAGE

The electronic control unit combines the operating mode of the pump with the proportional management of the fans, so there is no longer on/off but 0 to 100%.





In This way, the fan can attend already at lower temperatures than those set by the manufacturer, avoiding a build-up of heat in the engine which is more difficult to disperse.

TRACK USE

Maintaining the engine temperature in the right temperature range is important not only to avoid thermal stress to the engine, but also, to obtain optimal and constant performance.
The MONZATECH kit ensures engine efficiency and stable performance. Increasing the performance of the cooling system increases the efficiency of the original radiator, so it may not be necessary to replace it with larger models.

ELIMINATION OF THE THERMOSTATIC VALVE

The system automatically adjusts the flow of liquids in the system, making the thermostatic valve and radiator choking superfluous.

INCREASED POWER

In case of a stand-alone installation, it is possible to remove the impeller of the mechanical pump, in this way the power absorbed by the impeller can be recovered over the entire distribution span.

Monzatech

AUTOMOTIVE COMPONENTS

FIELDS OF APPLICATIONS

TRACK-DAY

Track-day derive from heavily tuned road cars, the cooling system may not be adequate for engines designed to have lower performance. Our cooling circuit management system maximizes system performance by keeping the engine at optimum temperatures.

OFF_ROAD

The use of the car in off-road vehicles puts a strain on the engine for the great efforts it undergoes. This, together with low speeds and RPM, can generate engine overheating problems. The speed of the MWP pump is released from the engine speed and can therefore solve overheating problems.

CLASSIC

The cooling systems of historic cars lose efficiency over the years and the succession of thermal stresses during use can lead to engine breakages that are difficult to repair due to the scarcity of spare parts. The MWP system can work parallel to the original system and the modification is completely reversible.

RACING

The engines developed for competitions are optimized for maximum performance at a certain temperature and the thermal stresses can seriously damage them. The MWP pump works to maintain the set target temperature and help to achieve maximum performance. By removing the mechanical pump it is also possible to gain power.

ELECTRONIC CONTROL UNIT

MT- CU- C

The electronic control unit is the brain of the MWP system.
Thanks to algorithms developed by our engineers, it automatically manage the combined operation of the electric pump and the radiator fans.
The target temperature of the cooling system can be set by the user with the buttons, the integrated display instantly provides information on the operation of the pump.
The case is made of CNC machined aluminium and is fully waterproof.

ATTRIBUTES

Management water pump **MW70 e MWP180**
Material **CNC** | Dimension **100x122x43 mm**
Can interface **YES (2 Can) + Firmup**
Weight **250 g** | Power/Consumption **10-18 volt/0,05 Ah**

ELECTRONIC CONTROL UNIT

MT- CU- M

The electronic control unit is the brain of the MWP system. Thanks to algorithms developed by our engineers, it automatically manage the combined operation of the electric pump and the radiator fans.
The engine's target temperature is pre-set according to the veichle caracteristics.
The case is made of CNC machined aluminium and is fully waterproof.

ATTRIBUTES

Management water pump **MW70 e MWP180**
Material **CNC** | Dimension **101x14x80 mm**
Can interface **YES (2 Can) + Firmup**
Weight **250 g** | Power/Consumption **10-18 volt/0,05 Ah**

ELECTRONIC WATER PUMP

MT- WP180
MT- WP220

The MT-WP is an electronic pump for cooling system of thermal or electric engines.
The pump is available in 180 or 220 liters per minute, its DC engine ensures a maximum pressure of 0.8 or 1.1bar, enough to cool an engine of over 400hp in stand-alone mode.

Its structure is made of milled aluminium to save weight and resist to the highest stress. The electrical connector meets the strict military specifications.

The pump is available with 180° and 90° otlet

MT- WP180

ATTRIBUTES

Application **Engine max 400 cv** | Weight **1.950g**
Material **CNC Alu** | Dimension **168x99 mm**
Can Interface **YES if connected to MT-CU-M or MT-CU-C**
Power/Consuption **13,8 volt/13 Ah** | Flow Rate **180l/max @ 13,8 v**

MT- WP220

ATTRIBUTES

Application **Engine max 600 cv** | Weight **1.990 g**
Material **CNC Alu** | Dimension **168x99 mm**
Can Interface **YES if connected to MT-CU-M or MT-CU-C**
Power/Consuption **13,8 volt/19 Ah** | Flow Rate **220l/max @ 13,8 v**

ELECTRONIC WATER PUMP

MT- WP070

The WP070 is an electric pump for cooling system of thermal or electric engines.
Its DC engine ensures a maximum flow rate of 70 litres per minute with a pressure of 0.8 bar, enough to cool an engine of 100hp.

The small dimensions allow an easy installation, its structure is made of billet aluminium and carbon fibre to reduce weight and ensure a maximum level of strenght.

The pump is available with 180° and 90° otlet

ATTRIBUTES

Application **Engine up to 100 cv** | Weight **680 g**
Material **CNC+ Carbon** | Dimension **113x53 mm**
Can Interface **YES if connected to MT-CU-M**
Power/Consuption **13,8 volt/4,2 Ah** | Flow Rate **70 l/min @ 13,8 volt**

DIAGNOSTIC LED

MT- KLD / 140

The diagnostic LED provides constant feedback on the operating status of the connected pump; the LED warns if the pump is ok or not.
The LED is supplied with a screw support which can be easily installed on a dashboard panel.

ATTRIBUTES

- Dimension ø22 mm, THK 7 mm
- Pump Hall Sensor Input
- Management of multicolor leds

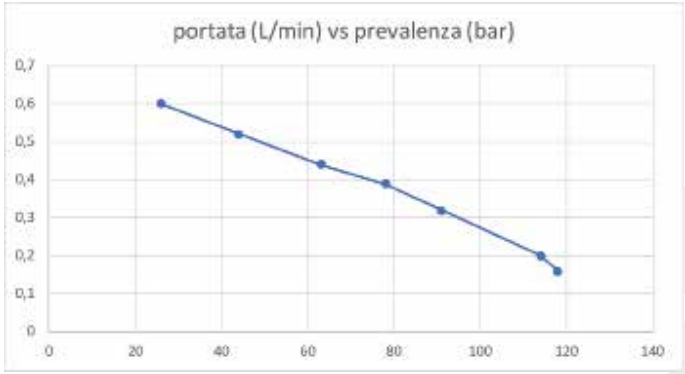
TCHNICAL SPECIFICATIONS

MT- WP070

Flow Rate 70 l/min @ 13,8 volt
Power/Consuption 13,8 volt/4,2 Ah

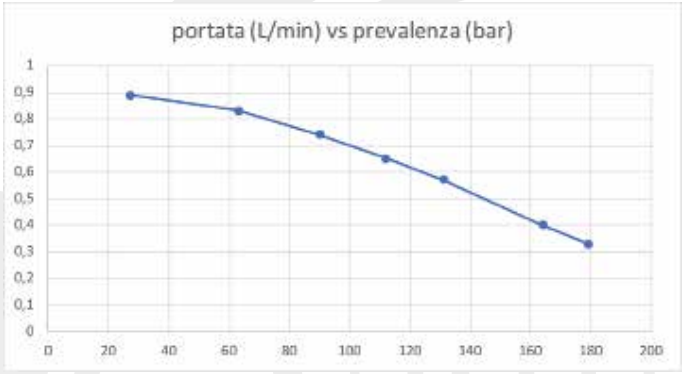
MT- WP180

Flow Rate 180l/max @ 13,8 v
Power/Consuption 13,8 volt/13 Ah



MT- WP220

Flow Rate 220l/max @ 13,8 v
Power/Consuption 13,8 volt/13 Ah



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