

GCMS-QP2010 *Ultra* / SE

Provided with measures to reduce power consumption



Eco Friendly

Designed with Consideration to Reducing Laboratory Running Costs and Environmental Load

Approximately
26%
power
savings*

Annual power
consumption

The GCMS-QP2010 Ultra/SE is equipped with Ecology mode functionality to reduce unnecessary power and carrier gas consumption during analysis standby.

This enables the system to reduce both running costs and environmental load. In addition to the system's power consumption, Ecology mode can also reduce the power consumed by the air conditioning system.

*Assuming 260 days of operation per year, and 6 hours of use per day, under Shimadzu standard analysis operating conditions.

A Fresh Approach to GC-MS with Consideration of the Global Environment

Equipped with Ecology Mode to Reduce Power Consumption

Equipped with Ecology mode, the system offers a 36 % reduction (Ultra) in power consumption during analysis standby in comparison to conventional models. Ecology mode can be entered automatically after nighttime analysis, so unnecessary power consumption can be reduced.



Ecology mode software window

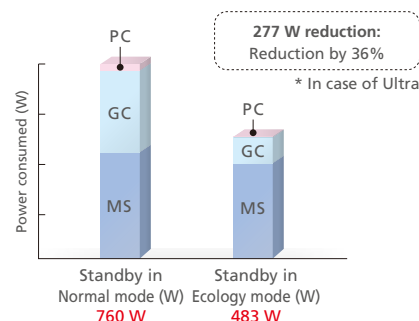
Reduced Running Costs

When Ecology mode is started up, unnecessary power consumption by the GC, MS, and PC is automatically eliminated. The consumption of carrier gas is also automatically reduced. In terms of annual operations, this can mean a 26 % reduction in power consumption, which is equivalent to a 1.1 ton reduction in CO₂ emissions (Ultra).

*Assuming 260 days of operation per year, and 6 hours of use per day, under Shimadzu standard analysis operating conditions.

Eco simulations are posted on the website! Get a sense of the reductions for yourself.

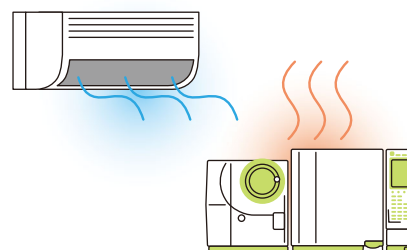
http://www.shimadzu.com/eco_sim/eco.htm



Effectively Reduces the Air Conditioning Load as Well

Starting up Ecology mode can reduce power consumption during analysis standby by 277 W. This means a 277 W reduction in system heat generation. Normally, ambient air conditioning requires approximately 55 W* to cool 277 W of waste heat, so this air conditioning power is also reduced. In other words, starting up Ecology mode can lead to a total power savings of 332 W per unit.

*Assuming an air conditioning COP value of 5.





Enhance Laboratory Productivity and Shorten System Operating Time

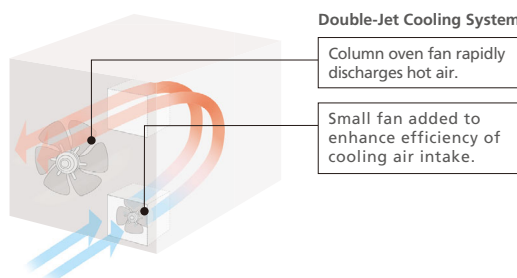
High-speed scan control technology shortens analysis times, reducing the energy expended during analysis.

More Efficient Analysis Shortens the Operating Time

The "double-jet cooling system" rapidly cools the GC oven, reducing the cooling time (from 350 °C to 50 °C) from 5.3 minutes to 2.7 minutes.

By combining this system with the GC-MS high-speed method, analysis cycle times for VOCs 25 components via HS can be lessened from 30 minutes to 10 minutes.

Shortening the analysis time makes it possible to design an analysis schedule that avoids peak power consumption times. Furthermore, even greater reductions in power consumption can be expected by entering Ecology mode during standby.



Greater System Efficiency with 2 System on 1 GC-MS

The GCMS-QP2010 Ultra can be equipped with the Twin Line MS system. With this system, 2 columns are connected directly to the MS. Since both lines are always on standby, the system can be switched (liquid injection to HS, P&T to liquid injection, etc.) easily from the software.

By utilizing 2 systems with a single GC-MS unit, reduced laboratory power consumption can be expected.

*Not always possible, depending on the combination of column and pretreatment system. Contact Shimadzu for details.



For more information on the environmental load reducing technology in the GCMS-QP2010 Ultra, refer to GC/MS Technical Report "Development of Green Technologies in GCMS-QP2010 Ultra (C146-E159)".



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Printed in Japan 3655-05220-30ANS