

# 推行電子整流風扇先導計劃 冀為客戶節省能源

## Save Energy through Electronically Commutated Fan Pilot Programme

**政**府承諾在2020年之前把政府建築物的用電量減少5%。為此，機電署積極尋找能源管理機會，以便利用最新科技協助客戶達成省電目標。

在空調系統中使用電子整流風扇(EC風扇)是最新的節能技術。今年年初，我們率先在機電署總部大樓安裝EC風扇，並同時推出一項先導計劃，積極向客戶推廣這項技術，而香港警察學院便是首個安裝EC風扇的客戶場地。

EC風扇可以提升空調系統的能源效益。在傳統的空調系統中，風扇是由交流電電動機驅動，但EC風扇則是由高效能的直流電電動機驅動，而直流電電動機本身已較傳統的交流電電動機節能10%。此外，EC風扇採用直流電變速技術，無須利用變頻器便可根據控制目標(例如溫度)改變轉速，令風扇的控制更精準，因而更加節能。舉例來說，當房間的溫度達到預設的控制目標時，電動機會自動減慢，減少耗電。

在先導計劃試行期間，我們會收集多方面的數據，並在明年年中進行檢討，以研究廣泛應用的可行性。

我們樂於與客戶分享這項先進設備的最新資訊，有興趣的客戶請聯絡高級工程師楊秀權先生(電話：2808 3717)。

The Government commits to reducing the electricity consumption in government buildings by 5% by 2020. In this connection, EMSD is proactively identifying energy management opportunities. Our aim is to help our clients



香港警察學院是首個安裝EC風扇的客戶場地。  
The Hong Kong Police College is the first client venue that installs EC fans.

achieve their energy saving targets with the use of innovative technologies.

The use of electronically commutated (EC) fan in air-conditioning system is the latest energy saving technology. Early this year, we took the lead in installing EC fans at EMSD Headquarters Building. We also launched a pilot programme to proactively promote such technology to our clients, with the Hong Kong Police College as the first client venue installing EC fans.

An EC fan can improve the energy efficiency of an air-conditioning system. In a conventional air-conditioning system, alternating current (AC) motor is used to drive the fan. But for EC fan, high-performance direct current (DC) motor is used instead. By itself, a DC motor is 10% more efficient than a conventional AC motor. In addition, an EC fan employs DC speed control technology that can vary the speed in accordance with the control target (such as temperature) without the use of a frequency converter. This allows more precise control but less energy is consumed. For example, when the room temperature reaches the preset control target, the motor will automatically

slow down to reduce electricity consumption.

During the pilot stage, we will collect data on different aspects and review in the middle of next year to study the feasibility of a general rollout.

**We are happy to share the latest information about this innovative device with our clients. Interested parties are welcome to contact Mr. Sammy Yeung, Senior Engineer, at 2808 3717.**



EC風扇的直流電電動機不但耗電量低，而且體積細小。  
The DC motor in an EC fan consumes less power and is very compact in size.

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