

# 商業樓宇的 氣體安全 Gas Safety of Commercial Premises



To ensure safety, customers should arrange for the gas installations and appliances to be maintained annually. Such inspection and maintenance work must be carried out by registered gas installers (Class 7).

After completion of maintenance or safety inspection works, the registered gas contractor would provide the customer with a work record specifying the details of the work done and the registered gas installer's name and registration number for future reference. The customer should keep this work record as reference to arrange the next gas safety inspection.

## 查詢 Enquiry

如需要氣體裝置的進一步資料，請聯絡相關註冊氣體工程承辦商、致電政府熱線1823或瀏覽機電工程署網頁：<http://www.emsd.gov.hk>。

For further information on gas installations, please contact the relevant registered gas contractors, call 1823 Citizen's Easy Link or visit the EMSD's homepage at <http://www.emsd.gov.hk>.

氣體安全監督  
Gas Authority



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2014年1月修訂版  
Updated Jan 2014

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准的分銷商會聘用註冊氣體裝置技工向顧客提供服務，令使用時更為安全。該等分銷商的店舖內會展示出所屬註冊氣體供應公司發出的證書，而發票上亦會顯示註冊氣體工程承辦商號碼，以供市民識別。用戶也可從機電工程署網頁瀏覽獲批准的分銷商名冊。

LPG cylinders should be purchased from approved LPG distributors. All LPG distributors are subject to the monitoring of registered gas supply companies. Approved LPG distributors would employ registered gas installers to provide services for customers to ensure the safety in using LPG cylinders. An approved LPG distributor would display the certificate issued by the respective registered gas supply company in the shop and would also show the registered gas contractor number on the invoice for identification. Customers may browse the list of approved distributors on the EMSD's homepage.



## 定期的氣體安全檢查 Regular Gas Safety Inspections

為確保安全，用戶應每年為氣體裝置及爐具安排維修保養。這類工作必須由具備第7類資格的註冊氣體裝置技工進行維修檢查。

進行維修或安全檢查之後，註冊氣體工程承辦商會向用戶提供工作紀錄單，當中列有工程的詳情、註冊氣體裝置技工的姓名及註冊號碼，以供日後查閱之用。用戶應該保留有關的工作紀錄，以便安排下次的氣體安全檢查。

Besides, LPG cylinders should be stored upright in a well-ventilated and readily accessible location and kept away from heat and flames, especially when exchanging cylinders. As LPG is heavier than air, to avoid accumulation of gas, do not use or keep LPG cylinders below ground level, adjacent to drains or in basements. Therefore, LPG should not be used in basement kitchens or seating areas below ground level.

Moreover, for public safety, do not put LPG cylinders in public places.

## 更換石油氣瓶的正確步驟 Steps to Exchange LPG Cylinders

1. 熄滅附近所有火種，不可吸煙。  
Extinguish all nearby flames, and do not smoke.
2. 關掉氣體用具。  
Switch off gas appliances.
3. 關掉並拆除調壓器，然後更換用罄的石油氣瓶。  
Switch off and disconnect the pressure regulator, then replace the used LPG cylinder.
4. 小心地將調壓器穩固接駁，然後檢查氣瓶接駁位確保沒有洩漏石油氣的氣味/聲音。  
Re-connect the pressure regulator carefully and firmly and check that there is no smell/sound of gas leaking from the cylinder connection.
5. 開啟調壓器，然後檢查氣體爐具是否操作正常。  
Switch on the pressure regulator, and check your gas appliances for proper operation.

## 使用獲批准的石油氣分銷商的服務 Make Use of the Services Provided by Approved LPG Distributors

應向獲批准的石油氣分銷商購買石油氣瓶。所有石油氣分銷商都受註冊氣體供應公司監察。獲批

LPG cylinders should not be installed in commercial premises to supply gas to gas appliances for combustion purposes unless town gas or a central LPG supply system is not available. If it is necessary to install LPG cylinders for use by gas appliances, customers should employ registered gas contractors to construct LPG cylinder storage chambers. Please refer to "GU 06: LPG Installations for Catering Purposes in Commercial Premises" for technical requirements of the LPG cylinder storage chambers.

According to the Gas Safety Ordinance, unless specifically approved by the Gas Authority, storing LPG cylinders (including empty cylinders) with a total nominal water capacity of over 130 litres (about 50 kg) is prohibited. The weight of LPG cylinders commonly used ranges from 12 kg to 22 kg. For general reference, the following table shows the maximum number of cylinders permitted for some common sizes of LPG cylinders.

石油氣重量(公斤) LPG Weight (kg)	許可瓶數 Permitted Number of Cylinders
2	27
12-13.5	4
15-16	3
22	2

此外，石油氣瓶須直立放置在通風良好和容易到達的地方，並遠離熱源及火源。當更換氣瓶時，這點尤為重要。由於石油氣比空氣重，為避免氣體積累，不可在地平面下的地方、排水溝附近或地庫內使用或存放石油氣瓶。因此，設於地庫的廚房或地平面以下的座位區是不得使用石油氣。

並且，石油氣瓶不可放置在公眾地方，以免影響公眾安全。

Water heaters should preferably be equipped with independent flues which can discharge combustion products to outside. If it is impossible to install independent flues, the flues of water heaters may be connected to the exhaust ducts (leading to the outside air) of the mechanical exhaust systems of kitchens, provided that the exhaust systems and the gas supply systems should be equipped with interlocks mentioned above.

If you are still using other types of gas water heaters, we recommend that you replace them immediately with room-sealed ones to protect yourself and your staff.

## 石油氣瓶的儲存 Storage of LPG Cylinders

除非該商業樓宇內沒有煤氣或中央石油氣供應，否則不可裝設石油氣瓶，以供氣給氣體用具作燃氣用途。若必須使用石油氣瓶供氣給氣體用具，則用戶須聘請註冊氣體工程承辦商建造一個石油氣瓶儲存室。有關石油氣瓶儲存室的技術要求，請參閱《氣體應用守則之六：商業樓宇內作供應飲食用途之石油氣裝置規定》。



根據氣體安全條例，除非取得氣體安全監督的批准，否則不得儲存總容水量超過130升(約50公斤)的石油氣瓶(包括空瓶)。一般常用的石油氣瓶由12公斤到22公斤不等，下表列出一些普通型號石油氣瓶的最多許可儲存數目，以供參考。

## 商業樓宇的氣體燃料 Gaseous Fuels for Commercial Premises

一般商業樓宇使用的氣體燃料是煤氣或石油氣。煤氣的主要成份是氫氣和甲烷，比空氣輕，並經煤氣管道輸送至各用戶；而石油氣則主要是丁烷和丙烷的混合氣體，比空氣重，多是經壓縮後以液態儲存於氣瓶內以供使用，但亦有由中央石油氣供應系統輸送石油氣至各用戶。

煤氣與石油氣均是安全可靠的氣體燃料。但若果使用不當，一樣可引致嚴重的氣體意外。本小冊子的目的，是把商業樓宇氣體安全的要點加以說明，而這些要點都是使用石油氣的商業用戶應該要知道的。

The most common gaseous fuels for commercial premises are town gas and liquefied petroleum gas (LPG). Town gas, the main constituents of which are hydrogen and methane, is lighter than air and is transmitted to customers via pipes. LPG, a mixture of mainly propane and butane, is heavier than air and is usually pressurized and stored in liquid form in cylinders for use. There are also central LPG supply systems whereby LPG is delivered to customers via pipes.

Both town gas and LPG are safe and reliable gaseous fuels. However, inappropriate use of them may lead to serious gas accidents. This leaflet covers the important aspects of gas safety of commercial premises which commercial customers should know when using LPG.

## 氣體洩漏的緊急處理 Emergency Handling of Gas Leaks

為了便於察覺氣體洩漏，石油氣混入了濃烈的特殊氣味。用戶一旦察覺氣體洩漏，應弄熄所有明火並盡量打開所有門窗，讓氣體消散。切

勿使用電話或開關任何電掣，更不要觸碰任何氣體爐具的開關掣。若情況許可，應立即關掉氣錶上游的緊急控制閥(氣錶總掣)，截斷氣體供應；而石油氣瓶的用戶則可關上供氣閥(如有的話)及拔掉連接石油氣瓶的調壓器，以截斷氣體供應。若漏氣情況嚴重，應立即離開有關單位並通知鄰居疏散，但不要按動任何門鈴。利用樓梯離開建築物，並撥999通知消防處，通知緊急服務人員到來處理。



Odorants are added to LPG, so that gas leaks can be detected easily. When customers detect gas leaks, please extinguish all naked flames and open all windows and doors wide to disperse the gas. Do not use the telephone or operate any electrical switches. Do not touch the switches of any gas appliances. The customers

should, if possible, stop the gas flow immediately by turning off the emergency control valves upstream of the gas meters (the main gas meter valves). For LPG cylinders, the customers can close the gas supply valves, if any, and disconnect the regulators of the LPG cylinders to cut gas supply. If the gas leak is serious, leave the premises at once and notify your neighbours to evacuate, but do not press any doorbells. Leave the building by stairs. Dial 999 and notify the Fire Services Department, which will send emergency personnel to the scene.

## 氣體爐具的安全使用 Safe Use of Gas Appliances

### 一般的安全守則 General Safety Guidelines

根據氣體安全條例(第51章)的規定，所有氣體用具的安裝、測試、更換和維修，均必須由註



冊氣體工程承辦商僱用的註冊氣體裝置技工進行。用戶不可自行進行任何的氣體裝置工程，不然會觸犯法例。氣體用具的安裝必須按照氣體安全(裝置及使用)規例的規定，以便進行維修，而且所在位置不得構成火警危險或阻礙逃生通道。另外，用戶應按照爐具生產商的指示使用氣體用具，以確保安全及其最佳效能。

商戶應該訂立緊急安全措施，為突發的氣體事故作應變準備。例如食肆的員工須熟知緊急控制閥及滅火器的位置，以便在發生事故時即時應變。店舖負責人應為員工安排相關的訓練，而員工亦應了解緊急安全措施的各個應變步驟及自己所負責的項目等等。有關的緊急安全措施須張貼於當眼處，使各員工熟習。

有關食肆的石油氣氣體裝置的技術要求，可參閱《氣體應用指南之六:商業樓宇內作供應飲食用途之石油氣裝置規定》。

According to the Gas Safety Ordinance (Cap. 51), the installation, testing, replacement and maintenance of gas appliances must be carried out by registered gas installers employed by registered gas contractors. It is against the law for customers to carry out any gas installation work themselves. Gas appliances should be installed so as to facilitate servicing in accordance with the Gas Safety (Installation and Use) Regulations and should not be located so as to cause fire hazard nor impede means of escape. For safety reasons and also effective performance of the gas appliances, customers should follow the manufacturer's instructions when using the appliances.

Customers should develop emergency safety measures to prepare for unexpected gas incidents. For example, restaurant staff shall be well aware of the positions of emergency control valves and fire extinguishers so that they can respond quickly when incidents occur. The responsible persons of restaurants should arrange appropriate training for their staff, who should understand the steps to be taken in emergencies and their responsibilities etc. The emergency safety measures should be posted in prominent positions for staff's reference.

Please refer to "GU 06: LPG Installations for Catering Purposes in Commercial Premises" for technical requirements of gas installations in restaurants.

### 氣體煮食爐具的安全使用 Safe Use of Gas Appliances

使用氣體爐具時須打開窗戶或開動機動通風，保持空氣流通，以供應燃燒時所需的空氣。爐具在燃點時必須有人看管，不可任由爐具在無人看管的情況下燃點。爐具旁不可放置易燃物品，以免引起火警。若廚房內自然通風不足夠或沒有新鮮空氣流通，則須使用機動排氣系統。通風系統與供氣系統必須裝設連鎖裝置，確保氣體供應時，機動通風系統一定是開動著。有關連鎖裝置的技術要求，可參閱本署指引《氣體應用指南之十二：氣體用具機動排氣系統的裝置規定(熱負荷在70千瓦以內者)》。



用戶該選用配備熄火保險裝置及自動點火的氣體爐具。熄火保險裝置可確保爐具火焰在意外熄滅時，會自動停止氣體供應。



如爐具接駁氣體軟喉，則接駁軟喉的長度須盡量裁短及不可超逾2米，並須在使用期限前更換。根據氣體安全條例的規定，所有在香港供應及售賣的低壓氣體接駁軟喉(供氣壓力不逾7.5千帕斯卡)，必須得到機電工程署的批准。用戶應該選用獲批准的氣體接駁軟喉，該等軟喉喉面上印有「機電工程署批准EMSD APPROVAL GTXXXX」(XXXX代表批准號碼)的字樣，並印上使用期限。

When gas appliances are used, windows must be opened or mechanical exhaust systems must be switched on all the time to maintain good ventilation and to supply adequate air for combustion. Gas appliances must be under supervision when in use. Do not leave them unattended when they operate. Flammable materials must not be placed beside gas appliances. If the natural ventilation of kitchens is insufficient or fresh air is inadequate, mechanical exhaust systems should be used. The exhaust systems and the gas supply systems should be equipped with interlocks to ensure that the exhaust systems are switched on when gas is delivered. For technical requirements of the interlocks, please refer to "GU 12: Installation of Mechanical Exhaust System for Gas Appliances (Rated Heat Input up to 70 kW)".

Customers should use gas appliances with flame failure devices and automatic ignition function. Flame failure devices can ensure that when flame is extinguished accidentally, the gas flow will be stopped automatically.



The length of flexible gas tubing connected to the gas appliance must be as short as possible and must not exceed 2 metres. The flexible gas tubing must be replaced before the expiry date of its service life. According to the Gas Safety Ordinance, all flexible gas tubing for low pressure applications (gas pressure of not more than 7.5 kPa) supplied to and sold in Hong Kong must be approved by the EMSD. Customers

should use approved flexible gas tubing imprinted with the wording "EMSD APPROVAL GTXXXX" (XXXX means the approval number) and the expiry date of service life.

### 氣體熱水爐的安全使用 Safe Use of Gas Water Heaters

氣體熱水爐有多種不同的種類。其中密封式熱水爐是新安裝及更換熱水爐時的最佳選擇。它們備有多種型號，包括機動排煙、自然排煙等，以供選擇。這種熱水爐的空氣和廢氣煙道口均露出外牆，燃燒間的新鮮空氣會從戶外直接抽取，而燃燒後的廢氣亦會直接排出戶外，因此不會消耗或污染室內的空氣。

熱水爐最好設有獨立煙道排氣至戶外。如果不能安裝獨立煙道，可將熱水爐的煙道接駁至廚房的機動通風系統的排氣槽向戶外排氣，惟通風系統與供氣系統必須裝設有上文提及的連鎖裝置。

若果你還在使用其他種類的氣體熱水爐，我們建議你盡快安排更換密封式熱水爐，以保障你和員工的安全。



There are several types of gas water heater. Room-sealed gas water heaters, available in different models such as fanned draught and natural draught ones, are the first choice for new and replacement installations. The air intake and flue terminal of this type of heater are outside the external wall, so fresh air for combustion is taken from and combustion products are discharged to outside air, and the heater does not consume or contaminate the air in the room.