

工廠及工業經營

（槍彈推動打釘工具）規例簡介

A Guide to the Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations



《工廠及工業經營(槍彈推動打釘工具)規例簡介(2006 年版)》更正對照表

(2024 年 4 月 19 日)

項目	節	現行版本	修訂
1	18 18.1	違例及罰款 地盤承建商或工業經營東主如違反規例第 4、5、6、7、8、9、10、11、12、13、14 或 16 條，一經定罪，可被處罰款五萬元；	違例及罰款 凡建築地盤的承建商或工業經營的東主違反— (a) 規例第 4、5、6、7、9、10、11、12、14 或 16 條，即屬犯罪，一經定罪，可處第 6 級罰款(現為 100,000 元); (b) 規例第 8 條，即屬犯罪，一經定罪，可處第 4 級罰款(現為 25,000 元)；或 (c) 規例第 13 條，即屬犯罪，一經定罪，可處罰款 400,000 元。
2	18.2	操作員如違反規例第 6、7、9(2)或(3)、11、13、14(2)或 15 條，一經定罪，可被處罰款一萬元。	任何操作員違反— (a) 規例第 6、7、9(2)或(3)、11、14(2)或 15 條，即屬犯罪，一經定罪，可處第 5 級罰款(現為 50,000 元);或 (b) 規例第 13 條，即屬犯罪，一經定罪，可處罰款 150,000 元。
3	18.3	任何人士如違反規例第 17 條，一經定罪，可被處罰款五萬元。	任何人違反規例第 17 條的任何條文，即屬犯罪，一經定罪，可處第 5 級罰款(現為 50,000 元)。

— 完 —

Corrigendum to A Guide to the Factories and Industrial Undertakings
(Cartridge-Operated Fixing Tools) Regulations (Year 2006 edition)
(19 April 2024)

Item	Section	Current Version	Amendment
1	18 18.1	Offences and Penalties The contractor of a construction site or the proprietor of any other industrial undertaking who contravenes any of the provisions of regulation 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 or 16 commits an offence and is liable to a fine of \$50,000.	Offences and Penalties A contractor of a construction site or a proprietor of any other industrial undertaking who contravenes — (a) regulation 4, 5, 6, 7, 9, 10, 11, 12, 14 or 16 commits an offence and is liable on conviction to a fine at level 6 (currently \$100,000); (b) regulation 8 commits an offence and is liable on conviction to a fine at level 4 (currently \$25,000); or (c) regulation 13 commits an offence and is liable on conviction to a fine of \$400,000.
2	18.2	An operator who contravenes any of the provisions of regulation 6, 7, 9(2) or (3), 11, 13, 14(2) or 15 commits an offence and is liable to a fine of \$10,000.	An operator who contravenes — (a) regulation 6, 7, 9(2) or (3), 11, 14(2) or 15 commits an offence and is liable on conviction to a fine at level 5 (currently 50,000); or (b) regulation 13 commits an offence and is liable on conviction to a fine of \$150,000;
3	18.3	Any person who contravenes any of the provisions of regulation 17 commits an offence and is liable to a fine of \$50,000.	Any person who contravenes any of the provisions of regulation 17 commits an offence and is liable to a fine at level 5 (currently \$50,000).

- End -

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本簡介可以在勞工處職業安全及健康部各辦事處免費索取，亦可於勞工處網站http://www.labour.gov.hk/public/content2_8a.htm直接下載。有關各辦事處的地址及查詢電話，可參考勞工處網站<http://www.labour.gov.hk/tele/osh.htm>或致電2559 2297。

歡迎複印本簡介，但作廣告、批核或商業用途者除外。如需複印，請註明錄自勞工處刊物《工廠及工業經營（槍彈推動打釘工具）規例簡介》。

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工廠及工業經營（槍彈推動打釘工具）規例簡介

A Guide to the Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations

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第一部 — 序言

1. 引言

- 1.1 槍彈推動打釘工具在香港通常用於建築及土木工程業，和其他行業如室內裝飾，機器安裝及電氣裝置工程等。該等工具主要因生產力高，效能良好及能作多方面用途而日趨普遍。
- 1.2 該等工具雖擁有多項優點，但亦有若干項為使用人士必須留意的限制。該等工具在使用時如並無採取適當安全措施，則可能對操作員、其他工人及在現場附近的人士造成不必要的危險，此點實須注意。在過去，因使用槍彈推動打釘工具而發生的意外，曾引致操作員及旁人受重傷甚至死亡。釘除可能反彈飛射而造成危險外，倘物料太薄或脆弱，則更可能穿過物料而在另一面射出。由於釘是由有爆炸性裝料之槍彈推動，因此操作員應曾接受適當訓練及充份明瞭因使用該等工具所能引起的危險。
- 1.3 工廠及工業經營（槍彈推動打釘工具）規例列出承建商、東主及工具的操作員應負的法定責任，以確保該等工具在使用時有充份安全措施。
- 1.4 各項規定中有兩項最為重要，即祇有獲得勞工處處長認可的工具才能使用，及祇有持有勞工處處長認可的合資格證明書的人士才得使用該等工具。

Part I - Preliminary

1. Introduction

- 1.1 In Hong Kong, cartridge-operated fixing tools are commonly used in the building and civil engineering industry, and in other areas such as interior decoration, machinery installation, electrical installation work, etc. The increasing popularity in the use of these tools is largely due to the high productivity and efficiency as well as versatility which these tools can offer in a wide range of applications.
- 1.2 In spite of the numerous advantages that these tools can offer, there are certain limitations which users must recognize. It is important to note that the use of these tools may sometimes cause unnecessary danger not only to the operator but also to other workers and passers-by if proper safety precautions are not taken. In the past, accidents involving cartridge-operated fixing tools had resulted in serious and sometimes fatal injuries both to operators as well as bystanders. Besides the risk of a ricochet, there is also the danger that the pin may penetrate the material and emerge in free flight on the other side if the material is too thin or if its resistance is too low. Because the pin is driven by a cartridge which contains an explosive charge, operators should be properly trained and should possess adequate knowledge of the dangers connected with the use of these tools.
- 1.3 To ensure that adequate safety precautions are taken in the use of these tools, the Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations lay down the legal obligations on contractors, proprietors and operators of the tools.
- 1.4 The two main requirements are that only tools approved by the Commissioner for Labour may be used and that a tool may only be used by a person holding a certificate of competency in a form approved by the Commissioner for Labour.

1.5 本簡介旨在以簡易文字解釋法律，及在有需要時，以註釋形式開列於每一條規例之後。本簡介亦應與工廠及工業經營條例（第6A及6B條）有關的刊物同時閱讀。該條例規定東主及受僱人士須在維持工業經營內工作健康及安全方面負起一般責任。

1.6 本處編製本簡介時，已力求審慎詳盡，惟對於所解釋的各項法律條文，仍以工廠及工業經營（槍彈推動打釘工具）規例為唯一法律依據。

2. 定義

規例第二條

「認可工具」指勞工處處長根據規例第19條認可的任何工具，包括該工具的任何部份。

「槍彈」指設計供工具用的能產生推進氣體的槍彈。

「槍彈推動打釘工具」指設計及用於將釘打入結構性物料的器具，而打釘的推動力是來自槍彈的。

「合資格證明書」指：

- (a) 由一名提供工具操作訓練課程的人所發給的證明書，而該訓練課程是勞工處處長所批准者；或
- (b) 獲勞工處處長批准為相等於(a)段之證明書相若者。

「建築地盤」指進行建築工程的地方，以及緊接在附近用作儲存物料或工業裝置的地方，而此種物料及工業裝置是供或擬供建築工程用者。

「直接推動工具」指推動力由槍彈直接傳達至釘上的工具。

1.5 This guide lists out the provisions of the law and where necessary gives an explanatory note immediately following each regulation. This guide should be read in conjunction with the publications relating to the Factories and Industrial Undertakings Ordinance (sections 6A & 6B) which imposes general duties on proprietors and persons employed with regard to the health and safety at work in industrial undertakings.

1.6 While every care has been exercised to include important details in this guide, the Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations remain the sole legal authority.

2 Interpretation

Reg.2

'approved tool' means a tool, including any part thereof, approved by the Commissioner for Labour under regulation 19;

'cartridge' means a propellant gas producing cartridge designed for use in a tool;

'cartridge-operated fixing tool' means an instrument designed and used for driving pins into structural material, the driving force being derived from a cartridge;

'certificate of competency' means —

- (a) a certificate issued by a person who provides courses of training, approved by the Commissioner for Labour, in the operation of a tool; or
- (b) such other certificate approved by the Commissioner for Labour as being equivalent to a certificate referred to in paragraph (a);

'construction site' means a place where construction work is undertaken and also any area in the immediate vicinity of any such place which is used for the storage of materials or plant used or intended to be used for the purpose of construction work;

'direct-acting tool' means a tool in which the driving force is transmitted to the pin directly from a cartridge;

「聽覺保護器」包括護耳罩、耳塞及耳閂。

「間接推動工具」指推動力通過有限度軸向運行的居間活塞（位於彈藥及釘中間）始傳達至釘上的工具。

「製造商」如與工具有關者，指工具的製造商。

「操作員」指使用或受僱使用工具的人。

「釘」包括釘子、螺桿、線環、空心釘、扣釘以及其他類似物體，而以工具打入結構性物料內者。

「防護設備」指安全眼罩、安全頭盔及聽覺保護器。

「工具」指槍彈推動打釘工具。

3. 適用範圍

規例第三條

3.1 於工業經營內使用任何槍彈推動打釘工具則受此等規例管制。

'ear protector' includes ear-muffs, ear plugs and ear valves;

'indirect-acting tool' means a tool in which the driving force is transmitted to the pin by means of an intervening piston with limited axial movement;

'manufacturer' in relation to a tool, means the manufacturer of the tool;

'operator' means a person using or employed in using a tool;

'pin' includes a nail, stud, eyelet, eyepin, fastener or other similar object which is driven into structural material by means of a tool;

'protective equipment' means safety goggles, safety helmets and ear protectors;

'tool' means a cartridge-operated fixing tool.

3 Application

Reg.3

3.1 These regulations apply in relation to the use of any cartridge-operated fixing tool in an industrial undertaking.

第二部 — 承建商、東主及操作員應負的責任

4. 祇准使用認可的工具

規例第四條

4.1 在工業經營內祇准使用認可的工具。

5. 工具的操作狀況

規例第五條

5.1 工具應在下列情況下始能操作 -

- (i) 發射管末端裝有碎片防護罩，而該罩並與管軸成一直角。如屬直接推動工具，碎片防護罩的外邊緣至發射管軸心的距離最少應為五十毫米。

射向堅硬平面的釘可能向操作員回射，或是向另一角度飛射。例：倘釘撞向一塊在混凝土內特別堅硬的石頭，則本身會連續反彈而轉向一百八十度，同時可能造成施工面破碎或剝落。為阻止釘及碎片和碎塊射出，工具上應裝有堅固的碎片防護罩以防反射。該罩應由發射管的軸線起伸展至五十毫米的距離，以便能遮蓋釘反彈時的預見路線及可能有碎片剝落的地帶。防護罩可設計為工具的一部分，或是經特別設計，使它在移離工具時，會使控制發射的彈簧，不能被壓縮。

- (ii) 碎片防護罩及發射管須完全壓着施工面，並與施工面緊密接觸。
碎片防護罩的邊緣必須完全與施工面接觸才能發揮其保護作用。

Part II - Duties of Contractors, Proprietors and Operators

4. Only approved tools to be used

Reg.4

4.1 Only an approved tool shall be used in an industrial undertaking.

5. Operational condition of tools

Reg.5

5.1 Every tool must be maintained in such condition that it can be operated only —

- (i) when a splinter guard is fitted at the end of the barrel and is at right angles to the axis of the barrel. For direct-acting tool, the distance from the outer edge of the splinter guard to the axis of the barrel shall be maintained to be of not less than 50mm.

A pin fired into a hard surface may turn back towards the operator or deflect at an angle. For example, if it strikes a particular hard piece of aggregate in concrete, it may be turned through an angle of 180 degrees by successive internal ricochets. This may be accompanied by splintering or spalling of the working surface. To contain the flying pin and prevent splinters and fragments from shooting out, a robust splinter guard should be provided to guard against penetration by a ricochet. It should extend over a distance of 50mm from the axis of the barrel to cover the foreseeable path of a turn-back pin and a possible spalling area. The guard can be made as an integral part of the tool or be so designed that, removal of the guard from the tool will render the spring which activates the firing mechanism unable to be compressed.

- (ii) when the splinter guard and barrel are fully pressed home and is in firm contact with the surface of the material to be pierced;

A splinter-guard can fulfil its protective function only when its rim is in contact with the working surface over its entire perimeter.

(iii)發射管與碎片防護罩受超過五公斤的壓力向施工面壓下。

應在工具上裝置連鎖設備，使它如非受超過五公斤的壓力壓於施工面時，便無法發射。此舉可避免工具因意外碰撞及跌落而走火。

(iv)如是直接推動工具，其發射管的軸線與施工面的垂直線間的角度小過七度。

倘工具不是與施工面成直角時，則釘可能反彈而不會打入施工面。為避免該等事件發生，持工具時需使釘與施工面成直角而直擊之。設計上，可使直接推動工具的撞針不能撞擊到彈藥，除非工具與施工面垂直線間的角度小過七度。

5.2 工具應在下列情況下不能操作 -

(i) 當將彈藥放入工具時；

(ii) 當工具由不超過300厘米的高度跌落於堅硬平面時。

工具可因疏忽地扣開機板或意外碰撞如跌下等，而引致發射。為避免因工具跌下而引致意外走火，其內部彈簧的設計，必須有足夠的強度以確保當工具由某一規定高度跌下時，工具內活動部分的動力不足以牽動發射機件或引發槍彈。法例規定的高度為300厘米（即三米）。

(iii)當工具未被正確地接嵌時，或因上彈藥時而拆開或移動的部份未能穩固地裝合時。

(iii)when a pressure exceeding 5kg is applied to the barrel and splinter guard against the surface to be pierced;

An interlock should be provided in the tool which makes it impossible to fire unless it is pressed fully home against the working surface with a force of exceeding 5kg. They will prevent the possibility of a misfire by accidental bumping and dropping of the tool.

(iv)in the case of direct-acting tool, when the axis of the barrel is at an angle of less than 7 degrees from a line perpendicular to the work surface.

If the tool is not held at right angles to the working surface, the pin may ricochet instead of penetrating the surface. To prevent such occurrence, the tool must be held so that the pin is at right angles to the surface and strikes it squarely. It is practicable to so design the muzzle of a direct-acting tool that unless the tool is within 7-degrees tolerance of perpendicularity to the working surface, the barrel cannot retract sufficiently far into the body for the firing pin to reach the cartridge.

5.2 Every tool must be maintained in such condition that it cannot be operated —

(i) when the tool is being loaded;

(ii) when the tool is dropped from a height of not more than 300 cm onto a hard surface; and

The tool may be fired either by inadvertent pressing of the trigger or by an accidental blow, such as when the tool is dropped. Prevention of accidental firing when the tool is dropped is provided by designing the internal spring with sufficient strength to ensure that if the tool is dropped from a specified height, the inertia of the moving parts in the tool will not be sufficient to cock the firing mechanism or fire the cartridge. The specified height in this case is 300 cm (i.e. 3 metres).

(iii)when the tool has been assembled incorrectly or the separate parts required to be dismantled or manipulated for loading have not been firmly locked together.

5.3 工具均須保養良好及無內在毛病。

工具中所有活動部份及發射機件應遵照製造商的指示適當保養。所有發射機件及發射部份須加以清理，以避免侵蝕。發射管必須保持平滑和沒有銹斑。所有活動部份應加以清潔及塗上少許潤滑油。

6. 釘

規例第六條

6.1 在操作某一種類及牌子的工具時，祇准配用符合製造商所指定適用於該工具的釘。

6.2 釘的大小，包括罩套或套環，必須符合工具發射管的口徑。

因釘是用於打入堅硬表面，如軟鋼和混凝土等，故與木匠用的普通鐵釘有不同的品質和特性。每位製造商都有專為配合自己出品工具發射性能用的各種型式的釘。由於每種釘的特點乃是從廣泛研究下的冶金技術形成，故每一製造商的出品皆有其獨特之處。工具使用者絕不應當嘗試將某一牌子或類型的釘用於其它不同牌子及類型的工具上。使用不適合的釘，可能引致震裂及碎片橫飛。所以，應依照製造商的指示來選擇正確的釘。

5.3 Every tool must be maintained properly and free from patent defects.

All moving parts and firing mechanism of the tool should be properly maintained in accordance with the manufacturer's instruction. All parts which may come into contact with the propellant gas should have the fouling cleaned off to avoid corrosion. The barrel should be smooth and free from pitting. All moving parts should be cleaned and lightly oiled.

6. Pins

Reg.6

6.1 In the operation of a particular type and make of tool, only pins which correspond to the manufacturer's specifications for that tool shall be used.

6.2 The size of pins, including their caps or rings shall be in conformity with the bore of the barrel of the tool.

As pins are intended to penetrate hard surfaces such as mild steel and concrete, they have physical properties different from ordinary carpenter's nails. Each manufacturer produces a wide range of pins, which are intended for use with the tools produced by that firm and are matched to the ballistic characteristics of the tools. The metallurgical control giving the pins their specific properties often involves extensive research and is therefore unique to each maker. Users should never try to interchange pins between different makes and models of tool. Use of a wrong pin may result in its shattering, and producing flying fragments. The manufacturer's guide should be followed when selecting the correct pins.

7. 槍彈

規例第七條

- 7.1 在操作某一種類型及牌子的工具時，祇准配用符合製造商所指定適用於該工具的槍彈。

用在槍彈推動打釘工具的槍彈屬於邊緣遭撞擊才能發射且無彈頭的槍彈，其火藥料及性能特別與所配用的工具的發射性能配合。各不同牌子或類型的工具所配用的槍彈，外型雖然相似，但絕不能調換使用。工具使用者應依從說明書或槍彈包裝招貼上所標明的製造商規格。過往常有因將設計為間接推動工具的槍彈用於直接推動工具而引致發生意外。間接推動工具的槍彈，其火藥料比直接推動工具用的槍彈火藥料為強烈，結果產生較猛烈的爆炸因而導致釘穿透施工面而殃及旁人。

8. 工具的標記

規例第八條

- 8.1 每件工具須在工具本身或緊緊於工具的金屬片上以中文或英文清楚及永久地標記下列各項目：
- (i) 製造商的姓名、名稱或商標；
 - (ii) 該工具的類型或型號；及
 - (iii) 工具編號。

7. Cartridges

Reg.7

- 7.1 In the operation of a particular type and make of tool, only cartridges which correspond to the manufacturer's specifications for that tool shall be used.

The cartridge used in cartridge-operated fixing tool is a rim-fire blank cartridge having a charge and characteristics which are specifically related to the ballistic properties of the tool to be used. Although cartridges for different makes or models of tool may appear the same, they are not inter-changeable. One should adhere to the specification given by the manufacturer in the manual or on the label of the package containing the cartridges. Accidents have been known to occur by using cartridges designed for indirect-acting tools in direct-acting tools. The charge in the 'indirect' cartridge is greater than that of the one appropriate to a direct-acting tool and as a result, the more powerful explosion can cause the pin to penetrate the working surface and injure a passer-by.

8. Tool markings

Reg.8

- 8.1 Every tool shall be clearly and permanently marked, in English or in Chinese, either on the tool or on a plate fixed to it, with —
- (i) the manufacturer's name or trade mark;
 - (ii) the type or model of the tool; and
 - (iii) its serial number.

9. 工具及其配件的貯存方法

規例第九條

- 9.1 每件工具、其槍彈、釘、及配件均應貯存於可以上鎖的堅固工具箱或其他類似的容器內。

工具、其槍彈、釘、及配件在不用時應存放在工具箱內，並將箱上鎖。如要使用時，應將整個工具箱攜至使用的地方，此舉可防止非經授權或未經訓練的人士擾動該工具。

- 9.2 裝上槍彈的工具不得貯存於第9.1段所規定的工具箱或其他容器內。

基於明顯理由，工具倘已裝上槍彈，絕不該無人看管或貯存在工具箱內，工具祇應在發射前才裝上槍彈。

- 9.3 工具在不用時，應貯存於第9.1段所規定的工具箱或其他容器內。更應將該箱或容器上鎖及存放在安全地方。

9. Storage of tool and ancillary equipment **Reg.9**

- 9.1 Every tool, its cartridges, pins and ancillary equipment shall be stored in a tool box or other similar containers, which is of strong construction and fitting with suitable means for locking.

It is important that a tool, its cartridges, pins, and ancillary equipment should always be kept and locked in a box whenever it is not in use and the whole box should be taken to a place of use when needed. This prevents meddling by unauthorized or untrained persons.

- 9.2 A loaded tool shall not be stored in the tool box or other container provided under paragraph 9.1.

For obvious reasons, a tool, when loaded, should never be left unattended or stored in a tool box. It should only be loaded immediately prior to firing.

- 9.3 A tool when not required for use shall be kept in the tool box, or other container, provided under paragraph 9.1, which shall be locked and stored in a secure place.

10. 工具箱內須存放如何保養及操作該工具的指示 **規例第十條**

10.1 每一工具箱或其他類似的容器均應存放一份由製造商訂定並適用於該工具的中英文指示書，而該指示書須詳載下列資料 —

(i) 該工具裝槍彈時，發射時及拆開時應遵從的程序；

指示書的內容應包括工具的使用，如裝槍彈及發射的程序，及可以由操作員拆除的機件及其方法。

(ii) 處置延誤發射時應遵守的程序；

處置延誤發射的程序須嚴格遵守。更重要的是在拆除失靈槍彈時，不應在槍彈邊緣施加壓力。用螺絲批或刀將工具內的槍彈挖出是極端危險之舉，因可能觸發槍彈內的火藥料而導致嚴重損傷。失靈的槍彈不應再度使用，應交回予以毀滅。

(iii) 按期清潔、抹油、檢驗的指示、及拆開與重裝該工具可拆除部份的正確方法；

製造商的指示應包括如何按期清潔、抹油和檢驗該工具所有活動部份及發射機件的有關資料。指示中應有拆除程序，使操作員能正確地拆除足夠的部份以便清潔工具。操作員不得嘗試進行超越指示所載的工作，因為某些工具的原裝安全設備十分複雜，故需有特別工具與科技知識才能勝任。徹底拆除工作應交由製造商或其服務代理進行。

10. Tool box to contain instructions on care **Reg.10** and operation of tool

10.1 Every tool box or other similar container shall contain a copy of the manufacturer's instruction manual of the tool in English and Chinese giving the following information —

(i) the procedure for loading, firing and dismantling the tool;

The instructions should cover the tool usage connected with loading and firing and the method of such stripping as may be done by the operator.

(ii) the procedure for dealing with delayed ignition;

The procedure for dealing with delayed ignition should be strictly followed. It is particularly important that when removing a misfired cartridge, no pressure should be applied to the rim of the cartridge. Using a screw driver or knife to prise a cartridge out of a tool is extremely dangerous, for this may trigger off the charge in the cartridge and cause serious injury. A mis-fire cartridge should not be used again. It should be returned for destruction.

(iii) instructions on regular cleaning, oiling and inspection and the correct method of dismantling and reassembling the removable parts of the tool; and

The manufacturer's instruction should always include appropriate information on regular cleaning, oiling and inspection of all moving parts and firing mechanism of the tool. They should lay down the procedure for sufficient dismantling to enable the operator to clean the tool properly. It is important that users should not attempt to do more than is detailed in the instructions because the built-in safety devices of some tools are complex and it requires special tools and technical knowledge to do the job properly. It is always advisable to leave full stripping down to the manufacturer or its service agent.

(iv)選擇適合該工具的釘及槍彈的指示、和辨別槍彈力度強弱的指南。

用於某一打釘工作的釘，其長度乃決定於工作物料的厚薄，釘須突出部份的長短及打入施工面的深度。但有些操作員頗傾向用較長的釘，而釘過長的部份則賴威力較強的槍彈，使其能插入較深。結果造成物料破裂損毀，並冒碎片四射及打釘工作不妥之險。為某工作選擇槍彈時、應依從製造商的指南。倘需試行打釘工作以找出正確的插入程度及槍彈強度時，應由力度最弱的槍彈開始，然後逐步增加槍彈力度，直至找出正確的插入程度為止。使用過強的槍彈會造成釘過度深入、反彈及施工面碎裂。槍彈包裝須示明槍彈的強度而每粒槍彈須以其代表顏色表示其強度。須緊記各製造商所採用的顏色並不劃一。

(iv)instructions on the selection of pins and cartridges for the tool and a guide for distinguishing the strength of the charge in the cartridges.

The length of pin required for a particular fixing job depends on the thickness of material to be worked, the outstand required, and the depth of penetration into a working surface. There is however a tendency for some operators to use a longer pin and to take up the excess length of pin by using a stronger cartridge to reach a deeper penetration. This may result in spalling and shattering of material, with danger from flying particles and the risk of an ineffective fixing. When selecting the cartridge for a particular job, maker's guidance should be followed. If trial fixings are necessary to determine the correct pin penetration and cartridge strength, use the weakest cartridge first, increasing the cartridge strength one step at a time until the correct penetration is obtained. The use of an unnecessarily powerful cartridge may result in overpenetration, ricochet and shattering of working surface. The cartridge package should show the strength of the cartridge, and each cartridge should be marked with a distinctive colour to indicate its strength. It should be borne in mind that those colours are not standardised among different manufacturers.

11. 操作員須持有合資格證明書

規例第十一條

11.1 祇有持有合資格證明書的人士才可以使用工具。

使用槍彈推動打釘工具的任何人士實際上是使用著一枝槍械，故應曾經接受如何安全使用此種工具的訓練。工具製造商提供訓練課程予使用其產品的人士，並在受訓完畢後發給合資格證明書予合格的受訓者，該證明書並列明其接受訓練使用的工具是屬於何種牌子及類型。

11.2 合資格證明書的格式須經勞工處處長批准。

此舉為確保使用者有足夠的訓練。

12. 照明設備及安全工作場地

規例第十二條

12.1 使用工具的地方必須：

(i) 有適當及足夠光線以保障操作員的安全；及

(ii) 盡可能保持安全以便操作員能有穩固立足點。

操作員祇可在穩定及堅固的位置時才可使用工具。與棚架或工作平台比較，梯子並不適宜在這類工作中使用，因為扳動工具所需的氣力及因抵消反撞時所產生的本能反應，都可能引致在梯子上工作的工人失去平衡。

13. 安全環境

規例第十三條

13.1 不得在含有易燃蒸氣、易燃氣體或爆炸性塵埃的空氣中使用工具。

引發槍彈時會使其火藥料爆炸，所產生的火花及熱能足以使易燃氣體燃燒或引致含爆炸性氣體或塵埃的空氣爆炸。

11. Operators to hold certificates of competency

Reg.11

11.1 A tool shall only be used by a person holding a certificate of competency.

Any person using a cartridge-operated fixing tool is in effect using a firearm and should therefore have been trained in its safe use. Manufacturers of tools provide training to users of their products and provide each trainee with a certificate of competency specifying the make and model of the tool on which he has been successfully trained.

11.2 A certificate of competency shall be in a form approved by the Commissioner for Labour.

This is to ensure that training is adequate.

12. Lighting and safe place of work

Reg.12

12.1 The place in which a tool is used shall —

(i) be suitably lit to secure the operator's safety; and

(ii) so far as is reasonably practicable, be made and kept safe so that the operator shall have a firm foothold.

The operator should use the tool only from a firm and stable position. Comparing with a scaffold or a working platform, the use of a ladder is unsuitable for the job because the strength required to cock the tool, and the instinctive reaction to the recoil, may cause a workman on a ladder to over-balance.

13. Safe atmosphere

Reg.13

13.1 No tool shall be used in an atmosphere containing flammable vapours, flammable gases or explosive dusts.

The firing of the cartridge sets off an explosion in the charge and the flash and energy released would be more than sufficient to ignite flammable vapours or to detonate an explosive atmosphere.

14. 防護設備

規例第十四條

- 14.1 工作場地應有保養良好的適當防護設備供應，給每位操作員使用。
- 14.2 工具操作員在使用工具時均須配戴所供給的防護設備。
在任何情況下，操作員均需戴上安全帽、高效能防擊護眼罩及聽覺保護器。

15. 發現毛病時應採取的行動

規例第十五條

- 15.1 操作員一旦發現工具，或任何釘，或槍彈有毛病或缺點時，應：
- (i) 停止使用該工具；及
 - (ii) 立即將毛病或缺點向承建商或東主報告。
此舉可使東主或承建商立即停止使用那件有缺點的工具、釘或槍彈，並將它送交供應商修理。

16. 未滿十八歲的人士不得使用工具

規例第十六條

- 16.1 未滿十八歲的人士不應獲准使用工具。
年青人多有不夠仔細的傾向。

17. 濫用工具等事宜

規例第十七條

- 17.1 任何人士均不得濫用或未有合理理由而干擾：
- (i) 任何工具、釘或槍彈；或
 - (ii) 規例第14（1）條所規定的任何防護設備。

14. Protective equipment

Reg.14

- 14.1 Suitable protective equipment shall be provided and maintained in good condition for the use of every operator.
- 14.2 Every operator shall wear the protective equipment provided when using a tool.
It is necessary that in all situations safety helmets, eye protectors of a high impact type and ear protectors should be worn.

15. Action when defect discovered

Reg.15

- 15.1 If an operator discovers a fault or defect in a tool, or in any pins or cartridges, he shall
- (i) stop operating the tool; and
 - (ii) report immediately the fault or defect to the contractor or proprietor.
In this way the proprietor or contractor can immediately take the defective tool, pins or cartridges out of service for repair by the supplier.

16. Person under 18 not to use tools

Reg.16

- 16.1 Person under 18 years of age shall not be permitted to use a tool.
Some young persons are prone to be careless.

17. Misuse of tools, etc.

Reg.17

- 17.1 No person shall misuse or, without reasonable excuse, interfere with-
- (i) any tool, pin or cartridge; or
 - (ii) any protective equipment provided under Regulation 14(1).

第三部 — 其他條款

18. 違例及罰款

規例第十八條

- 18.1 地盤承建商或工業經營東主如違反規例第4、5、6、7、8、9、10、11、12、13、14或16條，一經定罪，可被處罰款五萬元；
- 18.2 操作員如違反規例第6、7、9(2)或(3)、11、13、14(2)或15條，一經定罪，可被處罰款一萬元。
- 18.3 任何人士如違反規例第17條，一經定罪，可被處罰款五萬元。

19. 修訂規例附表的權力

規例第十九條

- 19.1 勞工處處長可經由憲報公佈認可某一槍彈推動打釘工具。

Part III - Miscellaneous

18. Offences and penalties

Reg.18

- 18.1 The contractor of a construction site or the proprietor of any other industrial undertaking who contravenes any of the provisions of regulation 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 or 16 commits an offence and is liable to a fine of \$50,000.
- 18.2 An operator who contravenes any of the provisions of regulation 6, 7, 9(2) or (3), 11, 13, 14(2) or 15 commits an offence and is liable to a fine of \$10,000.
- 18.3 Any person who contravenes any of the provisions of regulation 17 commits an offence and is liable to a fine of \$50,000.

19. Commissioner may approve tools

Reg.19

- 19.1 The Commissioner for Labour may approve a cartridge-operated fixing tool by notice in the Gazette.

資料查詢

如你對本簡介有任何疑問，或想查詢其他職業安全及健康事宜，你可與勞工處職業安全及健康部聯絡：

電話： 2559 2297（辦公時間外，將會自動錄音）

傳真： 2915 1410

電子郵件： enquiry@labour.gov.hk

你亦可透過互聯網絡，找到勞工處提供的各項服務，及主要勞工法例的資料。本處的網址是 <http://www.labour.gov.hk>。

你並可透過職安熱線 2739 9000，找到職業安全健康局提供各項服務的資料。

投訴

如有任何有關不安全工作地方及工序的投訴，請致電勞工處職安健投訴熱線 2542 2172。

Useful Information

If you wish to enquire about this guide or require advice on occupational safety and health, you can contact the Occupational Safety and Health Branch of the Labour Department through:

Telephone: 2559 2297 (auto-recording after office hours)

Fax: 2915 1410

E-mail: enquiry@labour.gov.hk

Information on the services offered by the Labour Department and on major labour legislation can also be found by visiting our Home Page on the Internet. Address of our Home Page is <http://www.labour.gov.hk>.

Information on the services offered by the Occupational Safety & Health Council can be obtained through hotline 2739 9000.

Complaints

If you have any complaints about unsafe workplaces and practices, please call the Labour Department's occupational safety and health complaint hotline at 2542 2172.