

【無限高高樓垂降逃生】使用說明

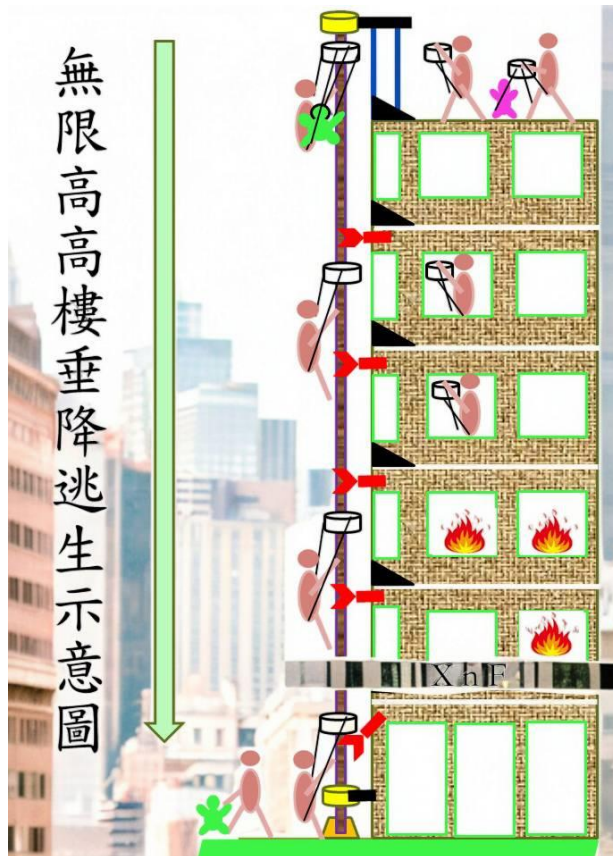
Instructions for use of infinite high-rise building rappel escape equipment

一.產品介紹 Product introduction

1. 無限高垂降用螺桿 Metal screw for infinite height vertical descent

金屬螺桿架設離牆面約 20cm，由上下基座及側向 U 型夾固定，底座包覆緩衝墊避免人員硬著陸，透過特殊拼接技術螺桿長度無限制

The metal screws are installed about 20cm away from the wall and are fixed by the upper and lower bases and lateral U-shaped clips. The base is covered with buffer pads to prevent people from landing hard. The length of the screws is unlimited through special splicing technology.



圖一



圖二

附註 Note：

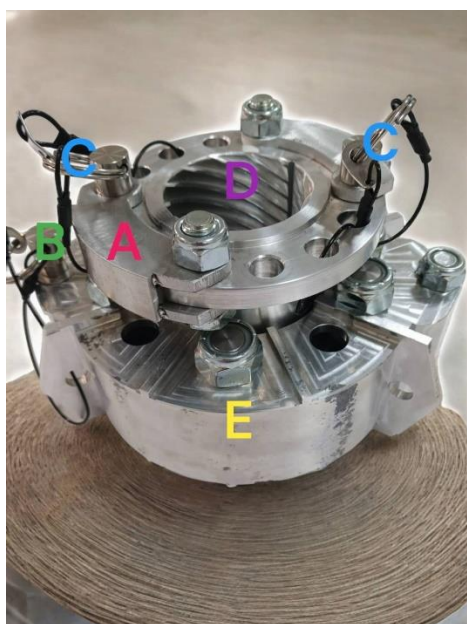
圖一 無限高高樓垂降逃生示意圖 Schematic diagram of rappelling escape from infinitely tall buildings

圖二 金屬螺桿 & 開闔式螺母產品圖 Screw & Open-closing Nut Product Picture

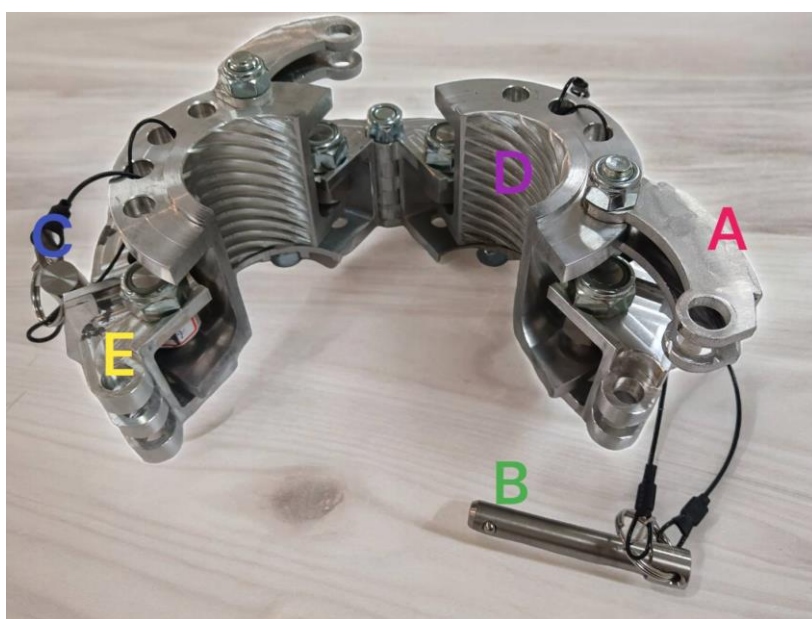
2. 開闔式螺母組 Open and close nut set

由中心轉子 D 與負重外殼 E 所組成，主要購件包括：兩支轉子緊固插銷 C、一支負重外殼緊固插銷 B、弧形夾具 A，透過開闔設計可從側邊夾合金屬螺桿，垂降衣與垂降繩可與負重外殼勾合完成垂降準備

It consists of a central rotor D and a load-bearing shell E. The main parts include: two rotor fastening pins C, a load-bearing shell fastening pin B and two arc clamp A. The nut set can clamp metal screw from the side through the opening and closing design. The rappel jacket and rappel rope can be combined with the load-bearing shell to complete the rappel preparation



圖三



圖四

附註 Note：

圖三 開闔式螺母閉合圖 Closed view of open and close nut

圖四 開闔式螺母張開圖 Opened view of open and close nut

3. 垂降衣與垂降繩 Rappelling clothes and rappelling ropes

可支援各式垂降衣垂降繩，圖中垂降衣款式可負重 220Kg，垂降繩可負重 2000Kg，金屬扣環每個可負重 220Kg，利用扣環勾合螺母負重外殼完成垂降準備

It can support most kinds of rappelling clothing and ropes. The rappelling garment style in the picture can bear a load of 220Kg, the rappelling rope can bear a load of 2000Kg, and each metal buckle can bear a load of 220Kg. Use the buckle to engage the nut load-bearing shell to complete the rappel preparation.



圖五



圖六



圖七

附註 Note：

圖五 垂降衣及垂降繩穿戴方式 The way to wear rappel clothing and rappel ropes

圖六 垂降繩兩端金屬扣環與負重外殼勾合固定 The metal buckles at both ends of the rappel rope are hooked and fixed with the load-bearing shell.

圖七 人員垂降示意圖 Demo of personnel rappelling

4. 緊急逃生箱 Emergency escape box

逃生箱內含一開闔式螺母組、1~2 件垂降衣、1~2 條垂降繩、工作手套 x2、手電筒 x1、Nosecomm 防煙鼻罩 x2，災害發生時可迅速取得逃生工具並由最近出口逃離現場 The escape box contains an opening and closing nut set, 1 to 2 rappel jackets, 1 to 2 rappel ropes, work gloves x2. Escape from the scene through the nearest exit



圖八



圖九



圖十

附註 Note：

圖五 緊急逃生箱 emergency escape box

圖六 開闔式螺母夾合金屬螺桿圖 Diagram of open-closing nut clamping metal screw

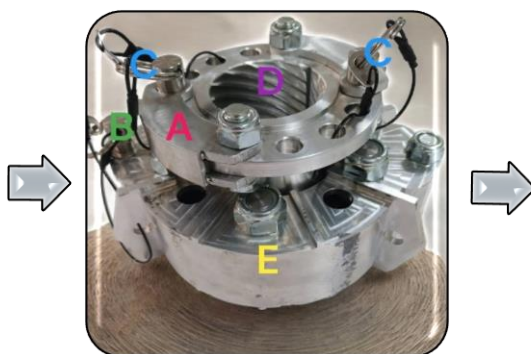
圖七 夾合完成圖(含兩條煞車繩及垂降繩) Completed picture of clamping (including two braking ropes and rappel rope)

二.使用步驟 Usage steps



緊急逃生箱
emergency escape box

- 至垂降入口
- 取出垂降衣及開闔式螺母組
- to rappel entrance
- Take out the rappel jacket and opening and closing nut set



開闔式螺母組 Open and close nut set

- 戴上工作手套
- 將B、C位置共3個活動插銷向上拔出
- 將中心轉子上兩個弧形夾具A向外推
- 對齊中心轉子及負重外殼的開闔線即可將螺母組張開一角度
- Put on work gloves
- Pull out the three movable pins at positions B and C upwards
- Push the two arc-shaped clamps A on the center rotor outwards
- Align the opening and closing lines of the center rotor and the load-bearing housing to open the nut



開闔式螺母組張開圖 Opening and closing nut set open view

- 雙手握住兩半圓中心轉子及負重外殼避免轉子滑出
- 將張開部分對準金屬螺桿準備夾合螺桿
- Hold the two semicircular center rotors and the load-bearing housing with both hands to prevent the rotors from sliding out.
- Align the open part with the metal screw and prepare to clamp the screw



夾合螺桿 Clamping screw

- 將張開的螺母組以垂直螺桿的方向夾合
- 夾合後將螺母組微微上下晃動即可緊密夾合
- 以相反順序將弧形夾具推回至閉合位置
- Clamp the open nut group in the direction perpendicular to the screw
- After clamping, shake the nut set up and down slightly to clamp it tightly.
- Push the arc clamp back to the closed position in reverse order

插入活動插銷緊固 Insert the movable latch to tighten

- 夾合完成後依相反順序插入3支活動插銷
- 調整移動螺母組高度使其方便與垂降繩勾合
- After the clamping is completed, insert the three movable pins in reverse order.
- Adjust the height of the moving nut group so that it can easily engage with the rappel rope

垂降繩勾合負重外殼 The rappel rope hooks into the load-bearing shell

- 將垂降繩結合垂降衣並將兩端的金屬扣環與負重外殼的結合孔勾合
- 勾合的結合孔相距180度角
- 開闔式螺母組最多可供兩人兩條垂降繩同時垂降
- Connect the rappel rope to the rappel jacket and connect the metal buckles at both ends with the combination holes of the load-bearing shell.
- The connecting holes are 180 degrees apart
- The opening and closing nut set can accommodate up to two people and two rappel ropes at the same time.



完成垂降準備 Complete preparations for rappelling

- 勾合完成後做垂降前檢查
- 垂降衣是否確實穿戴?
- 金屬扣環是否確實勾合?
- 3支活動插銷是否完全插入?
- After the coupling is completed, perform a pre-rappel inspection
- Is the rappel jacket actually worn?
- Does the metal buckle really hook up?
- Are the three movable pins fully inserted?

煞車繩使用方法與時機 How and when to use the brake rope

- 開闔式螺母組下方有兩條煞車繩可手動操控
- 向下拉緊可以減速甚至停止
- 垂降時先拉緊固定螺母，待身體離開樓面時再放鬆開始垂降
- There are two brake ropes under the opening and closing nut group that can be manually controlled
- Pull down to slow down or even stop
- When rappelling, tighten the fixing nut first, then relax it when your body leaves the floor and start rappelling.

順利垂降逃生 Successful rappelling escape

- 中心轉子旋轉下滑，負重外殼將負重透過止推滾輪轉移至轉子
- 垂降速度可以透過煞車繩自我控制
- 遇人多時，可暫時煞停待人員疏散後再繼續垂降
- 到達地面後迅速以相反順序脫離螺桿
- The center rotor rotates and slides down, and the load-bearing housing transfers the load to the rotor through the thrust roller.
- The rappel speed can be controlled by the brake rope
- When encountering traffic jam, you can temporarily stop and wait for the people to evacuate before continuing to rappel.
- After reaching the ground, quickly disengage the screw in reverse order.

三. 保養規定 Maintenance regulations

1. 螺桿主體>>>由業者實施年度保養並提供永久保固，細項包括：

Screw body>>>The operator will perform annual maintenance and provide a permanent warranty. Details include:

_____設備_____年度安全檢查表									
設備編號					日期	檢驗人員	簽名	完成率(%)	
設備地址					上次檢驗				
對應窗口			連絡電話		本次檢驗				
檢測公司			連絡電話		下次檢驗				
編號	項目	細項	判斷 (合格O/不合格X)	處置對策	處置結果		處置後 (合格O/不合格X)		
1	基座	固定機構是否鬆脫?							
2		固定機構是否鏽蝕嚴重?							
3		緩衝墊是否外觀功能正常?							
4	螺桿本體	螺桿是否鏽蝕嚴重?							
5		螺桿是否滑順可供螺母順利通過?							
6		螺桿結合插銷是否鬆脫?							
7		螺桿是否筆直無傾斜?							
8	側向卡固機構	U型夾是否作動正常?							
9		U型夾是否鬆脫?							
10		U型夾是否鏽蝕嚴重?							
11		側向支撐環架是否鬆脫?							
12		側向支撐環架是否鏽蝕嚴重?							
13	頂座	固定機構是否鬆脫?							
14		固定機構是否鏽蝕嚴重?							
15		定滑輪傳輸機構是否運作正常?							
待完成項目									
項目編號	未完成原因		預計完成日期	項目負責人簽名		完成日期確認結果		審核人員	
安全檢查人員確認簽名				日期					
客戶確認簽名				日期					
安全檢查主管確認簽名				日期					
殘件負責人完成後簽名				日期					
殘件完成客戶確認簽名				日期					
殘件完成負責主管確認簽名				日期					

2. 逃生箱組合>>由業者實施年度保養並提供永久保固，細項包括：

Escape box combination >> The operator will perform annual maintenance and provide a permanent warranty.
Details include:

_____設備_____年度安全檢查表						
設備編號				日期	檢驗人員	簽名
設備地址				上次檢驗		
對應窗口		連絡電話		本次檢驗		
檢測公司		連絡電話		下次檢驗		
編號	項目	細項	判斷 (合格O/不合格X)	處置對策	處置結果	處置後 (合格O/不合格X)
1	逃生箱	外觀開啟功能是否正常?				
2	逃生衣	是否合於保固期內?				
3		外觀檢查是否正常無破損?				
4	垂降繩	是否合於保固期內?				
5		外觀檢查是否正常無破損?				
6	安全扣環	扣合功能是否正常?				
7		外觀檢查是否正常無破損?				
8	手電筒	外觀開啟功能是否正常?				
9		是否有充分蓄電?				
10	手套	外觀檢查是否正常無破損?				
11	開闔式螺母組合	外觀檢查是否正常無破損?				
12		部件是否鏽蝕嚴重?				
13		三支活動插銷是否外觀功能正常?				
14		止推滾輪是否外觀功能正常?				
15		開闔動作是否正常順暢?				
待完成項目						
項目編號	未完成原因		預計完成日期	項目負責人簽名	完成日期確認結果	審核人員
安全檢查人員確認簽名			日期			
客戶確認簽名			日期			
安全檢查主管確認簽名			日期			
殘件負責人完成後簽名			日期			
殘件完成客戶確認簽名			日期			
殘件完成負責主管確認簽名			日期			

3. 除年度保養外，如遇大型地震、火災等相關災害得視情況增加額外保養以確保設備使用安全無憂
In addition to annual maintenance, in the event of major earthquakes, fires and other related disasters, additional maintenance may be required depending on the situation to ensure safe and worry-free use of the equipment.

四. 注意事項 Precautions

1. 火災時如果逃生梯不受阻礙，請以逃生梯為第一逃生選擇，迅速脫離火場
2. 火災時因濃煙無法判斷情況，請迅速配戴 Nosecomm 防煙鼻罩並攜帶逃生箱至低濃煙環境的垂降入口準備垂降
3. 如火勢猛烈且無法向下逃生，請迅速攜帶逃生箱向上逃至高樓層或樓頂垂降入口準備垂降
4. 如垂降點在陽台旁，請將窗戶緊閉或將窗戶推向垂降邊，藉此阻擋火焰及濃煙直接衝擊
5. 設備請務必依規定定期保養並更新保養證明
6. 無自備逃生箱的民眾請至垂降口排隊等待循環備品
7. 逃生時請以老弱婦孺為優先
8. 垂降時請迅速下滑離開螺桿，切勿龜速或逗留
9. 請定期參加消防演練並熟悉垂降設備使用方式
10. 正確使用無限高高樓垂降設備可快速安全的逃離火場避免傷亡發生，切勿錯誤使用！

1. If the escape ladder is not blocked during a fire, please use the escape ladder as your first escape option and quickly escape from the fire scene.
2. If it is difficult to judge the situation due to thick smoke during a fire, please quickly wear the Nosecomm anti-smoke mask and carry the escape box to the rappel entrance in a low-dense smoke environment to prepare for rappelling.
3. If the fire is severe and it is impossible to escape downwards, please quickly carry the escape box and escape upwards to a high floor or roof rappel entrance to prepare for rappelling.
4. If the rappel point is next to the balcony, please close the window or push the window to the rappel side to prevent direct impact of flames and smoke.
5. The equipment must be maintained regularly according to regulations and the maintenance certificate must be updated.
6. People who do not have their own escape boxes are asked to queue up at the rappel entrance to wait for circulating supplies.
7. Please give priority to the elderly, weak, women and children when escaping.
8. When descending, please slide down quickly and leave the screw ASAP. Do not slow down on screw.
9. Please participate in fire drills regularly and be familiar with the use of rappelling equipment
10. Correct use of infinite-height high-rise building rappelling equipment can quickly and safely escape the fire scene to avoid casualties. Do not use it incorrectly!