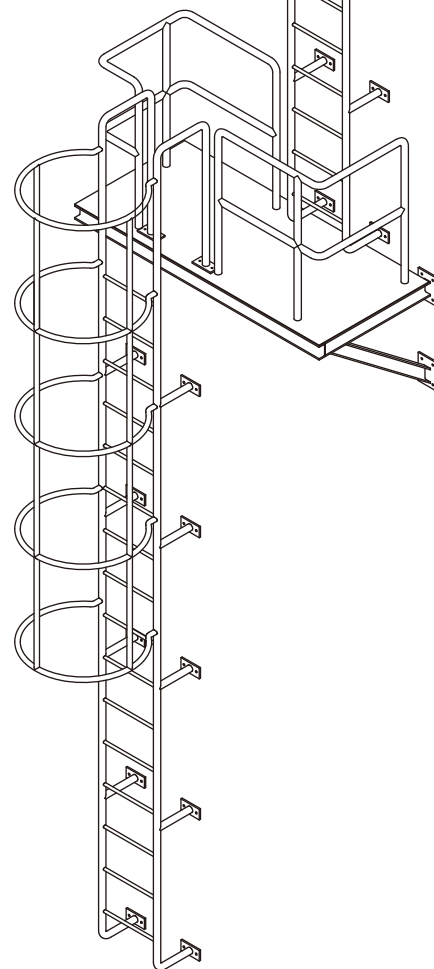
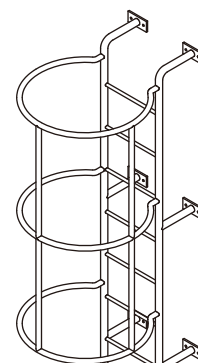
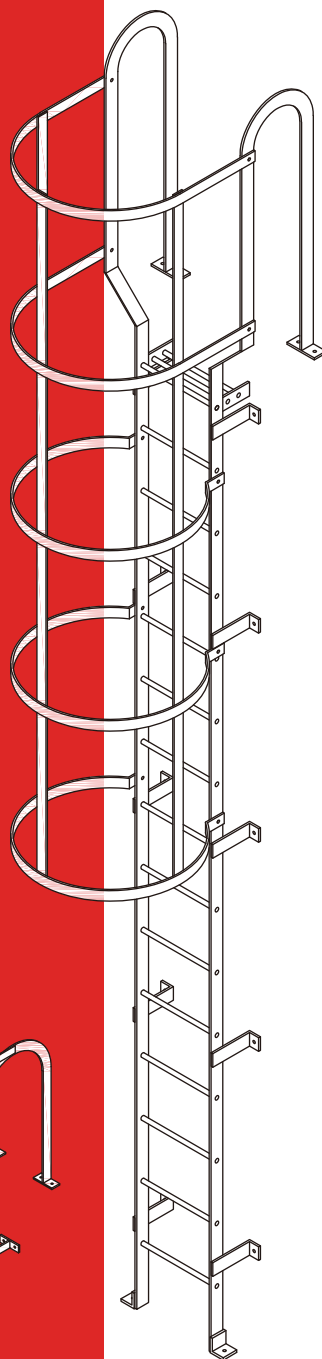
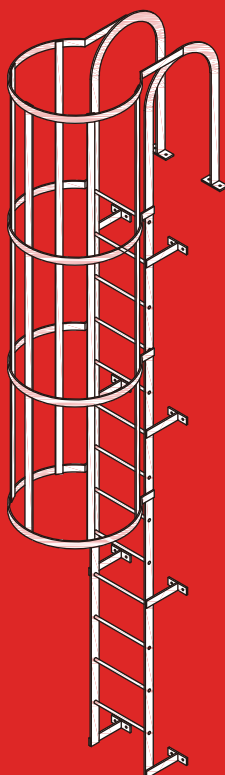




HK HuangShangYou Steel Industrial Limited
香港煌商佑鋼鐵實業有限公司

貓梯畫冊

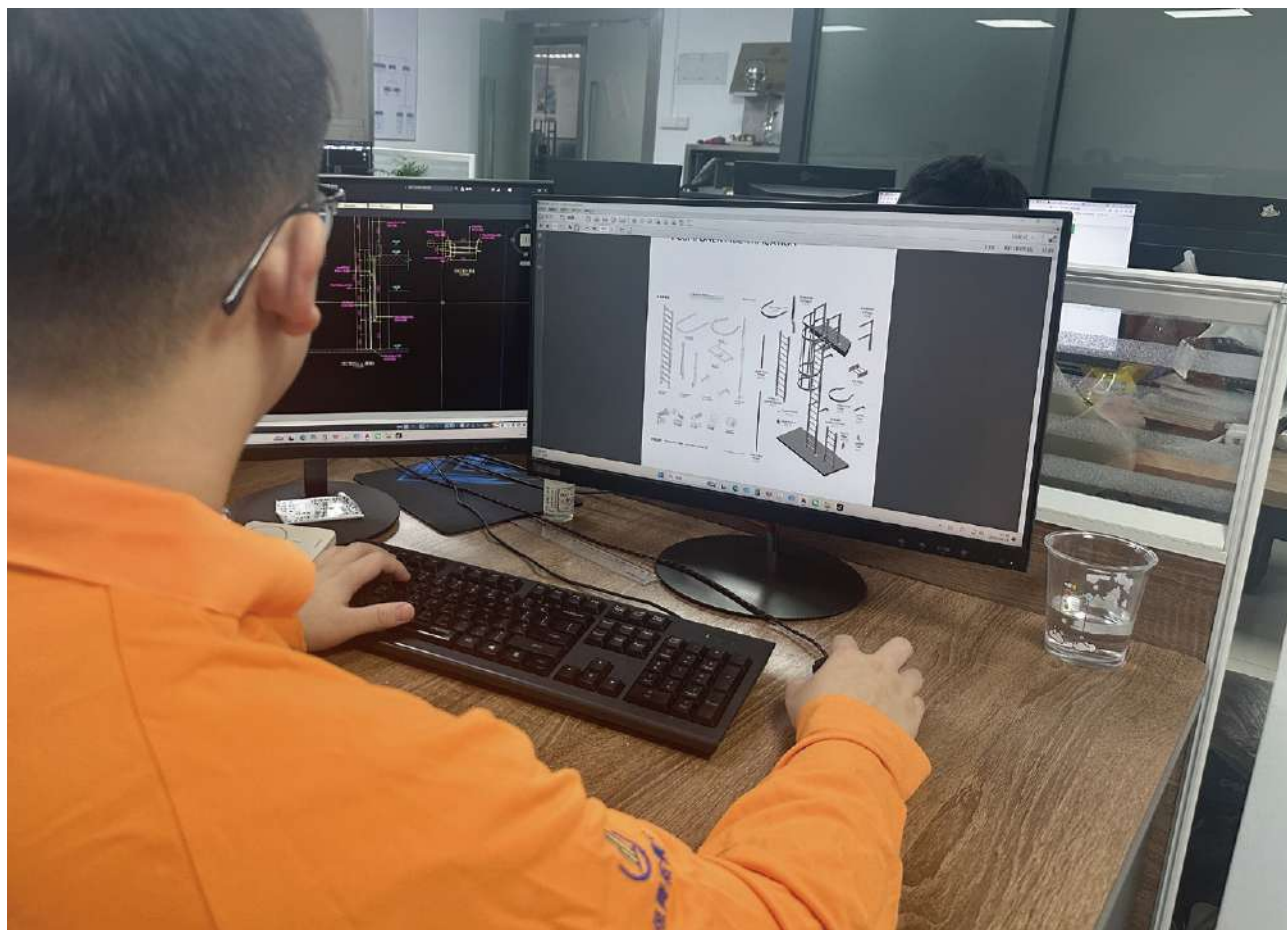
CAT LADDER PICTURE BOOK



目錄

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公司介紹 Company Introduction

煌商佑鋼鐵設計及生產各類型貓梯，可定製其長度，寬度和配件。可設計伸縮貓梯。貓梯通常用于進入屋頂、變電站、水箱、密閉區域等。根據客戶需求，貓梯可以采用鍍鋅低碳鋼或不鏽鋼制成。

貓梯多用於高處作業的安全設施。這種梯子通常固定安裝在建築物或腳手架上，有不同的類型，如直梯、船用梯、斜梯、伸縮梯和帶安全籠的梯子等，以滿足不同的工作需求。

Huangshang You Steel designs and produces various types of cat ladders, whose length, width, and accessories can be customized. Retractable cat ladders can be designed. Cat ladders are typically used to access rooftops, substations, water tanks, enclosed areas, etc. According to customer requirements, cat ladders can be made of galvanized low-carbon steel or stainless steel. Cat ladders are mostly safety facilities used for high-altitude operations. These ladders are typically fixed and installed on buildings or scaffolding, and come in various types such as straight ladders, marine ladders, inclined ladders, telescopic ladders, and ladders with safety cages, etc., to meet different work requirements.

lists.



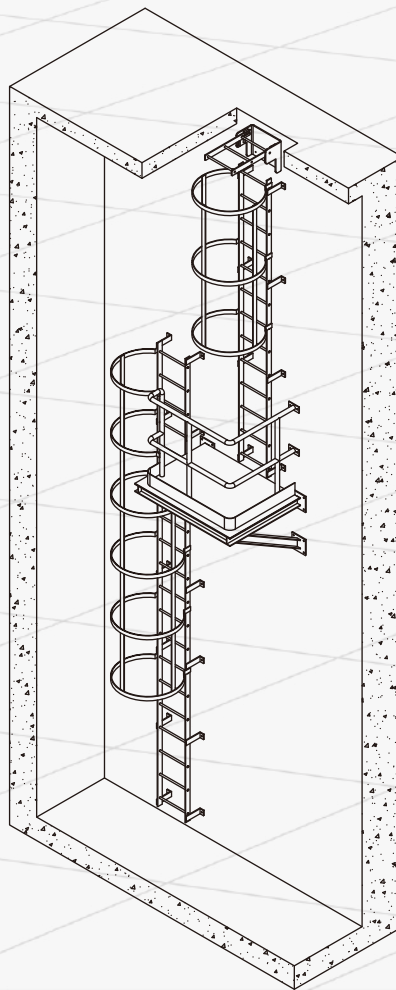
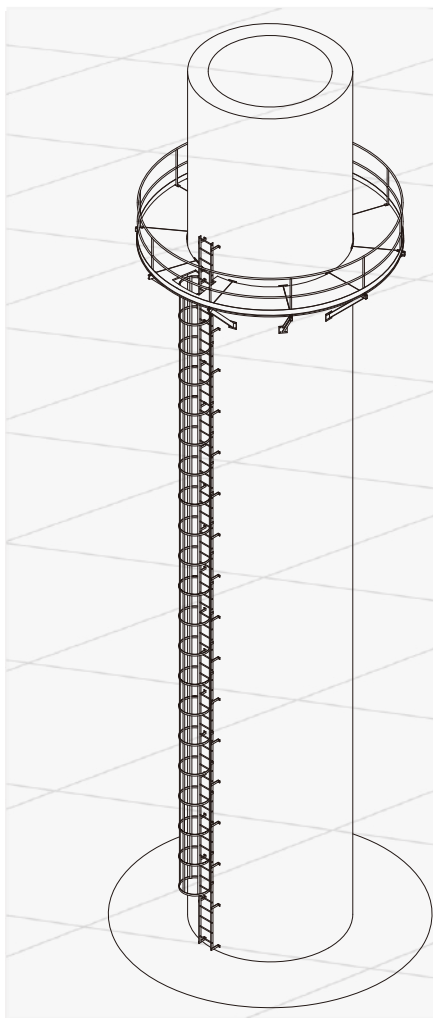
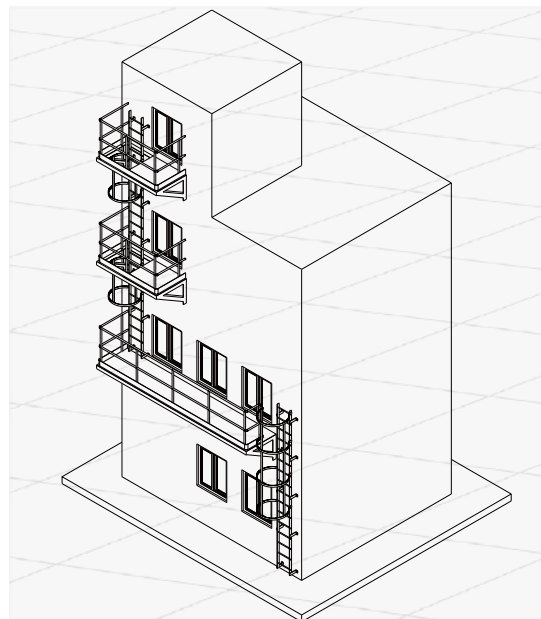
產品設計 PRODUCT DESIGN

爬梯系統設計:

煌商佑的永久爬梯系統採用安全、簡單的模組化設計，提供獨立零件，這些零件可用螺栓組裝成完整的爬梯套件。部件通常備有庫存以便快速交付，或在確定地板到地板尺寸後，即可提供整套爬梯。

Ladder System Design:

Huang Shangyou permanent ladder systems utilize a safe, simple, modular design, offering individual components that bolt together to create complete ladder kits. Components are often kept in stock for quick delivery, or complete ladder kits can be provided once floor-to-floor dimensions are determined.



安裝、操作與維護手冊

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

》安全指南

安裝时的基本安全措施

- 梯子只能由經過訓練的、有能力的人安裝。
- 所有安裝應按照詳細的、特定地點的方法聲明和風險評估進行。
- 梯子的安裝應使用適合且安全的專用設備，具體取決於梯子安裝的環境以及進行安裝的人員。
- 在安裝梯子時，應始終考慮所需的手動搬運。
- 梯子應按照BS4211:2005+A1:2008的建議進行安裝。

使用時的基本安全

- 梯子只能由經過訓練、有能力的人使用。
- 梯子不應用於運輸設備或貨物。
- 固定垂直梯子僅應用於偶爾的訪問。

職責、責任和保證

因以下一種或多種原因導致的人員和財產損失，不承擔任何責任：

- 意外使用登高梯系統。
- 不正確的安裝通道梯子系統。
- 使用安全設備有缺陷或安裝不正確時的通道系統。

产品数据

描述

煌商佑通道梯是一種預製模組化系統，透過螺栓連接形成完全符合規定的垂直通道梯。

測試

本手冊中涵蓋的訪問解決方案是根據以下法規設計和測試的：

- BS EN 4211-2005 +AS 1-2008 永久固定梯子。
- BS EN 131-2-2010+A2-2017 梯子-要求、測試和標記。
- HSG 33

屋頂作業中的健康與安全。

固定結構

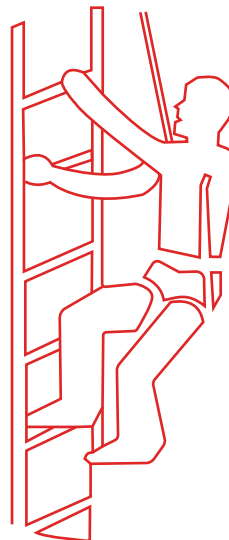
我們建議使用直徑至少12毫米的固定件，但應由合格人員決定選用何種固定件，且可依固定結構進行調整。

梯子固定的結構應適合承受梯子和未來使用者施加的荷0

BS4211:

它們應能承受每排3kN的垂直載重以及6kN的拔出載重。

Pay attention when climbing



攀爬直梯時必須佩戴安全帶及扣上防墜設備

When climbing a vertical ladder, safety belts must be worn and anti-fall devices must be fastened.

» Safety Guide

Basic safety precautions during installation

- Ladders should only be installed by trained, competent persons.
- All installations should be carried out in accordance with a detailed, site-specific method statement and risk assessment.
- Ladders should be installed using suitable and safe dedicated equipment, depending on the environment in which the ladder is to be installed and the person carrying out the installation.
- When installing ladders, the required manual handling should always be considered.
- Ladders should be installed in accordance with the recommendations of BS4211:2005+A1:2008.

Basic safety during use

- Ladders should only be used by trained, competent persons.
- Ladders should not be used to transport equipment or goods.
- Fixed vertical ladders should only be used for occasional access.

Responsibilities, liabilities and warranties

- No liability is accepted for damage to persons and property resulting from one or more of the following:
- Unintentional use of the access ladder system.
- Improper installation of the access ladder system.
- Access systems using defective or incorrectly installed safety equipment.

Product data

Description

Huang Shang You Access Ladder is a prefabricated modular system that is bolted together to form a fully compliant vertical access ladder.

Testing

The access solutions covered in this brochure are designed and tested in accordance with the following regulations:

- BS EN 4211-2005 +AS 1-2008 Permanently fixed ladders.
- BS EN 131-2-2010 + A2-2017 Ladders – Requirements, testing and marking.
- HSG 33

Health and safety in rooftop operations.

Fixings

We recommend using fixings with a minimum diameter of 12mm, but the choice of fixing should be determined by a qualified person and can be adjusted to the fixing structure.

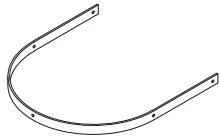
The structures to which the ladder is fixed should be suitable for the loads imposed by the ladder and future users.

BS4211:

They should be able to withstand a vertical load of 3kN per row and a pull-out load of 6kN.

組件標識

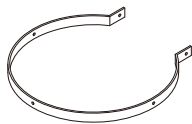
COMPONENT IDENTIFICATION



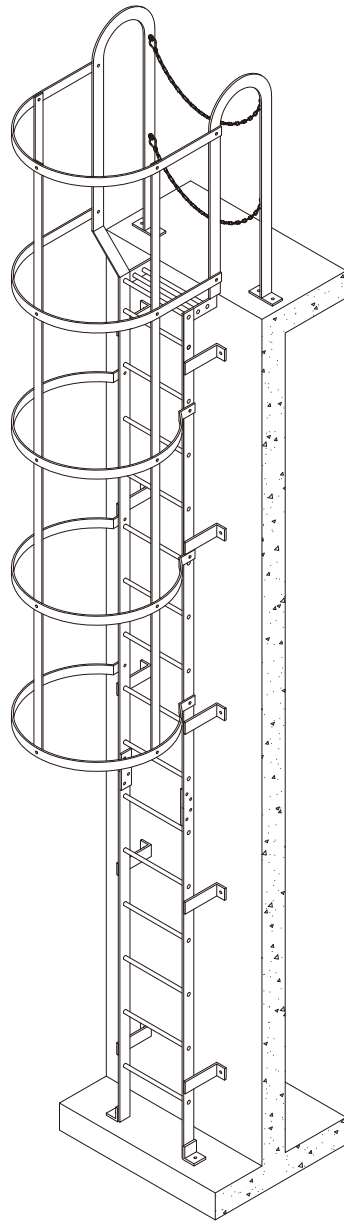
頂部安全量規環
TOP SAFETY GAGE HOOP



安全帶
SAFETY GAGE STRAPS



下部安全量規箍
LOWER SAFETY GAGE HOOP



頂部延伸
TOP EXTENSION



頂部台階
TOP STEP



接駁板
SPLICE PLATE



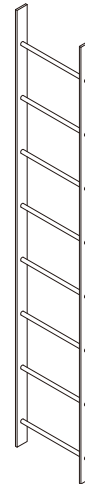
固定板
FIXING PLATE



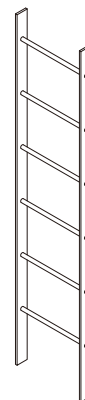
底部支架
BOTTOM BRACKET



安全陳
Ø6 SAFETY CHAIN



上長
UPPER LONG
梯子部分
LADDER SECTION



降低空頭
LOWER SHORT
梯子部分
LADDER SECTION

》推薦的安裝工具

在開始安裝之前，請確保您已備齊所有必要的工具和輔助組件，列如固定支架和支撐腳，以便完成安裝。

》Recommended Installation Tools

Before beginning the installation ensure that you have all the required tools and ancillary components such as fixing brackets or support feet to complete the installation.



(注：梯子套件中不包含組裝工具)
Note: Assembly tools are not included in the ladder kit

》支撐支架 Support bracket

上部支撐

為定位防撞支架預先鑽孔，但如果需要移動以避免碰撞，則這些孔距梯子立柱頂部不得超過500mm。

Upper supports Pre-drill holes for positioning the crash brackets, but if they need to be moved to avoid a collision, these holes should be no more than 500mm from the top of the ladder uprights

對峙中心 Standoff center

隔離支架必須固定在不超過1.5m的中心位置。

The isolation bracket must be fixed at a center position no more than 1.5 m.

較低的支持距離 Lower support distance

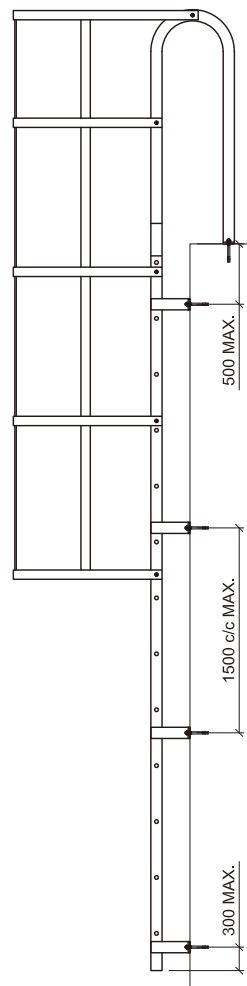
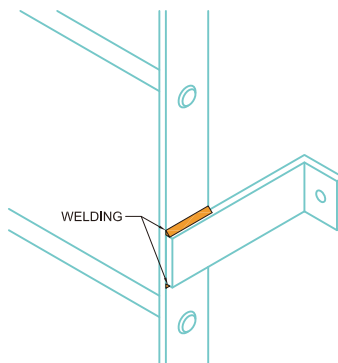
下部的支撐支架應固定在梯子底部300mm以內，必要時可固定在地板上。

The lower support bracket should be fixed within 300mm of the bottom of the ladder and can be fixed to the floor if necessary.

支撐固定件 Support fixings

焊接固定

Welding fixation



執行標準及材質

IMPLEMENTATION STANDARDS AND MATERIALS



選擇合適的貓梯取決于具體要求：

- HSY-A無籠固定垂直梯。
- HSY-A-WH 固定式垂直梯的安全籠。通常用於透過屋頂艙口進入屋頂區域)
- HSY-A-WG固定式垂直梯，配有安全籠和防護欄。(通常用於進入需要外部通道的屋頂區域或中層樓面。)

安裝人員有責任確保遵守所有當地、區域和國家的法規。

安裝人員有責任確保安裝和操作指南可供安裝和使用梯子系統的人員查閱，並確保所有提供的信息，如說明、警告和安全要求，都能被--遵循。

所有組件和安裝應由合格的安裝人員進行，並在任何工作開始前進行風險評估。

我們不對因不安全或錯誤的組裝或安裝而產生的任何問題承擔責任。

改進和變更

煌商佑不斷改進其產品，以滿足並超越客戶的需求，因此，本公司保留在實際可行時進行改進和變更的權利，同時不承擔對已售設備進行任何改動和補充的義務。

制造商

本畫冊中涵蓋的通道解決方案由煌商佑提供生產。

Choosing the right cat ladder depends on the specific requirements:

- HSY-A Cageless Fixed Vertical Ladder.
- HSY-A-WH Fixed Vertical Ladder with Safety Cage. Typically used to access roof areas through roof hatches)
- HSY-A-WG Fixed Vertical Ladder with Safety Cage and Guard Rails. (Typically used to access roof areas or mid-level floors where external access is required.)

It is the installer's responsibility to ensure that all local, regional and national regulations are followed.

It is the installer's responsibility to ensure that the installation and operating guides are available for review by those installing and using the ladder system and that all information provided, such as instructions, warnings and safety requirements, is followed.

All assembly and installation should be carried out by a qualified installer and a risk assessment carried out before any work is started.

We cannot be held responsible for any problems arising from unsafe or incorrect assembly or installation.

Improvements and Changes

Huang Shangyou is constantly improving its products to meet and exceed customer needs. Therefore, the company reserves the right to make improvements and changes when practical, and does not assume any obligation to make any changes and additions to the equipment sold.

Manufacturer

The channel solutions covered in this brochure are provided and produced by Huang Shangyou.

》材料選擇影響耐用性

材料	耐久性	维护成本	优点
鋼	高	高	堅固耐用
雙相不銹鋼	高	中等	耐腐蝕，美觀
不銹鋼	高	中等	耐腐蝕，美觀
鋁	中等	高	輕便，耐腐蝕
玻璃纖維增強塑料	高	低	耐腐蝕、輕巧、可自訂、多種顏色

固定梯子的垂直通道功能提供了一種安全且有效率地到達更高層的途徑，同時穩定的側欄可以防止使用者從梯子結構上跌落。側欄之間的開口寬度應確保通行便利，同時不影響使用者的安全。

》Material choice impacts durability

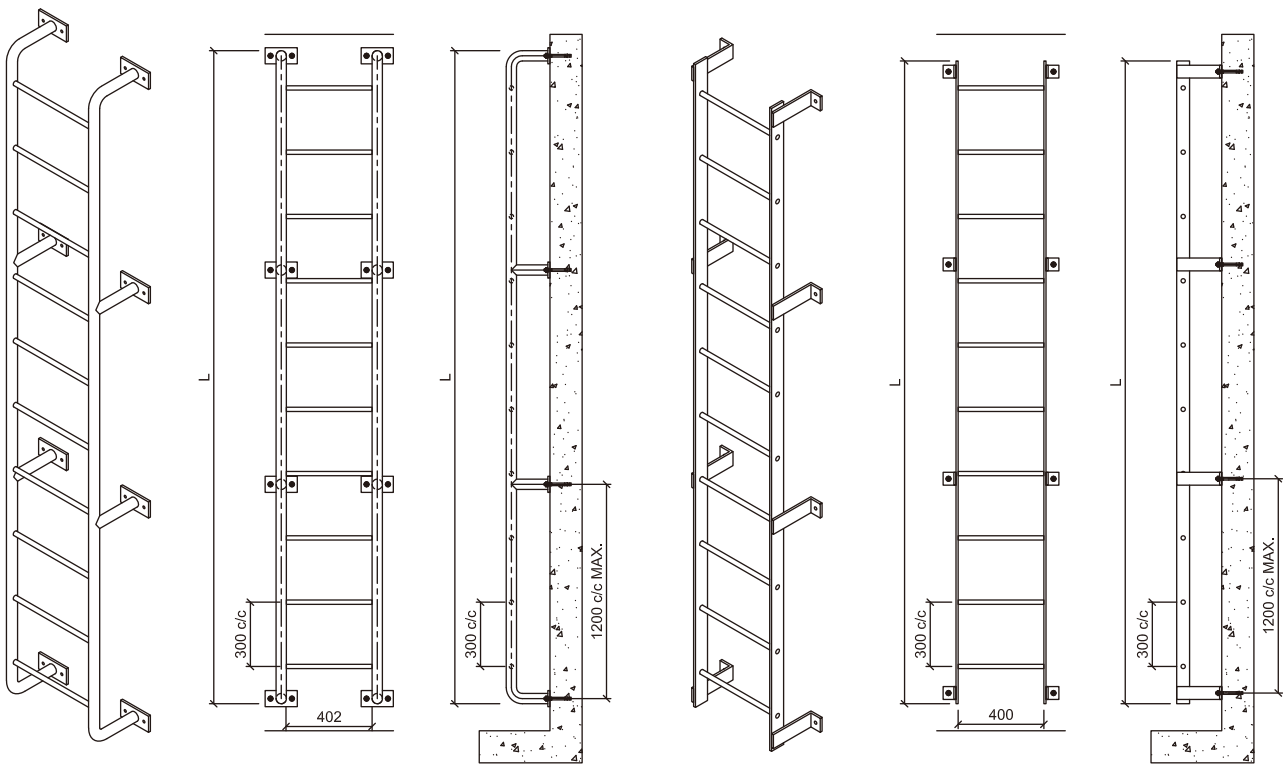
Material	Durability	Maintenance Cost	Advantages
Steel	High	High	Strong, durable
Duplex stainless steel	High	Medium	Corrosion-resistant, aesthetically pleasing
Stainless Steel	High	Medium	Corrosion-resistant, aesthetically pleasing
Aluminum	Medium	High	Lightweight, corrosion-resistant
Fiberglass Reinforced Plastic	High	LoW	Corrosion-resistant, lightweight, customizable, various color

Vertical access features in fixed ladders provide a safe way to reach higher levels efficiently with stable side rails preventing falls off the sides of the ladder structure. The opening width between side rails should allow easy passage without compromising user safety.

產品製造 PRODUCT MANUFACTURING



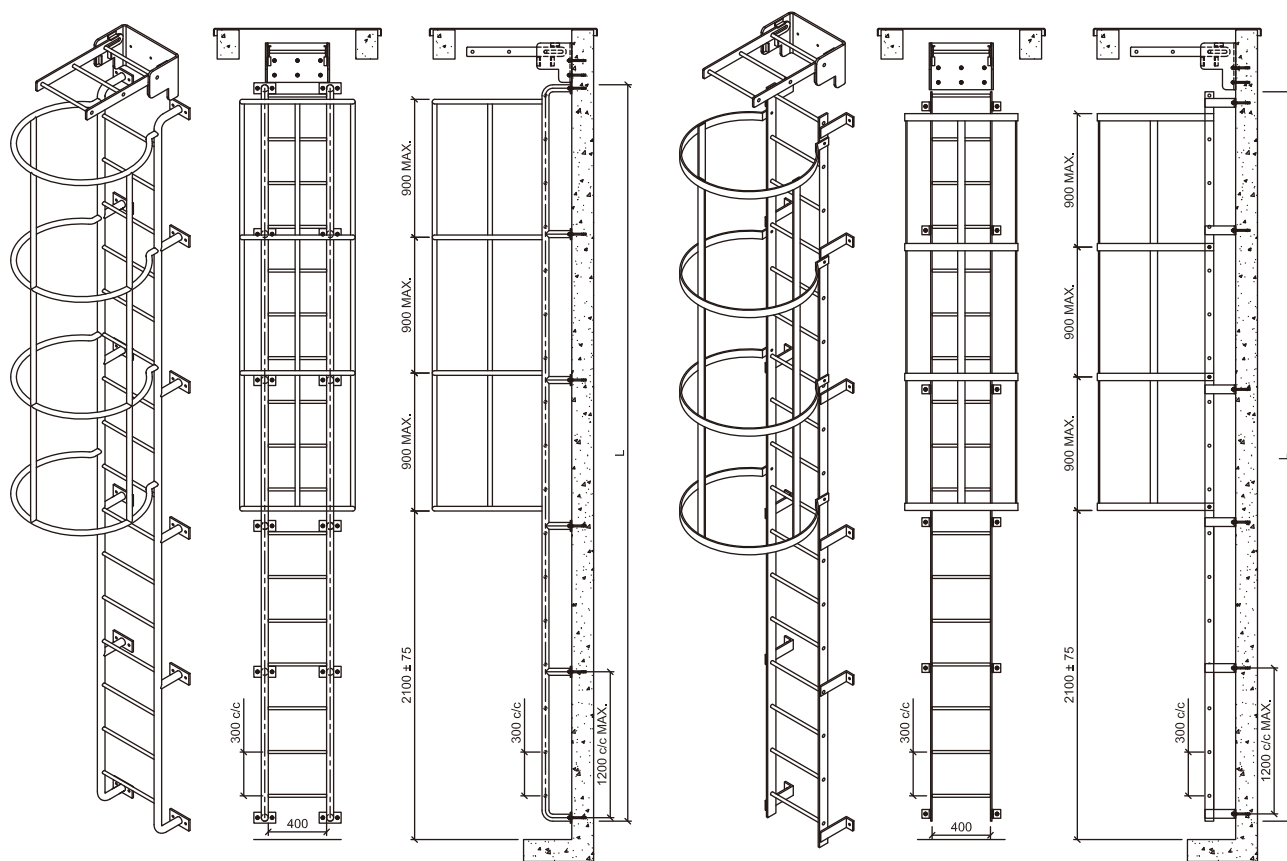
產品
PRODUCT



煌商佑工业固定垂直梯子有标准尺寸可供选择，地板到天花板的高度为3米。可根据要求提供特殊尺寸。这些梯子的制造符合 BS4211: 2005 + A1: 2008 的要求，有铝材质，是永久安全进入屋顶检修舱口的理想选择。采用耐腐蚀材料制成，可提供多年无故障、可靠的服务。

Huang Shangyou Industrial Fixed Vertical Ladders are available in standard sizes with a floor to ceiling height of 3 metres. Special sizes are available on request. Manufactured to BS4211:2005 + A1:2008, these ladders are available in aluminium and are ideal for permanent and safe access to roof access hatches. Made from corrosion resistant materials, they will provide years of trouble-free, reliable service.

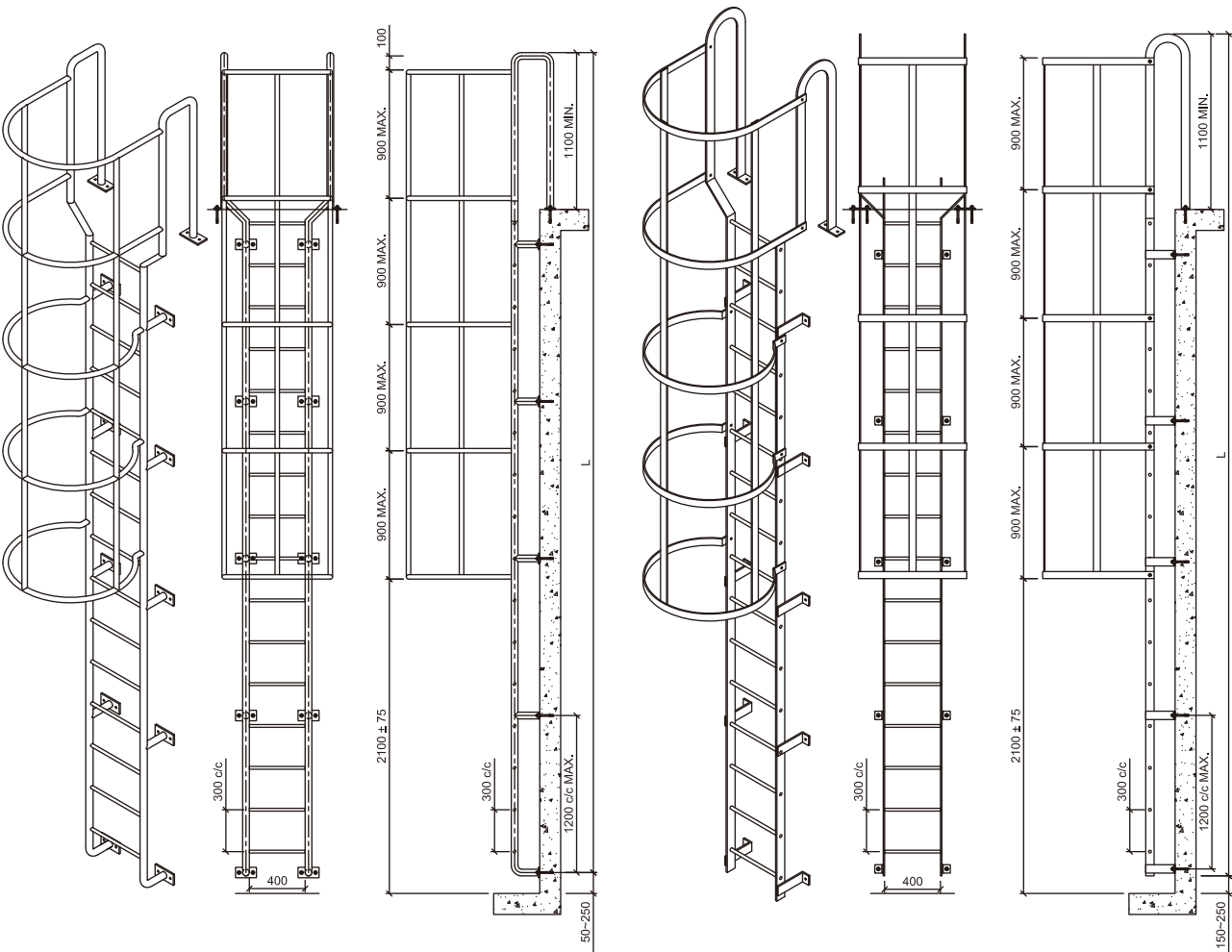
編號 Code No.	高度 high	闊度 width	立柱 Column	踏步 Column	重量 Weight (kg)
HSY-100	1.5m	400	60*10 48.3*3	20	25
HSY-200	2.5m	400	60*10 48.3*3	20	40.5
HSY-300	3.5m	400	60*10 48.3*3	20	56.1
HSY-400	4.5m	400	60*10 48.3*3	20	71.5



煌商佑工业级伸缩梯子具有重型平衡弹簧，可实现安全和受控的作用。压铸铝合金伸缩梯子，符合 EN 14975 标准，设计用于 CS-50TB 屋顶检修舱口。固定垂直梯子带安全笼，有标准尺寸可供选择，地板到天花板的高度为 2 - 6m。固定式安全笼设计为位于 2.2 - 3m 以上的屋顶检修舱口下方。可根据要求为特殊应用提供定制尺寸。采用耐腐蚀材料制成，可提供多年无故障、可靠的服务。提供标准或定制尺寸，以满足任何访问要求或安装。从一系列标准尺寸的铝选项中进行选择。完全符合 BS4211: 2005 + A1: 2008 我们的 TYPE BL 带安全笼固定垂直梯子采用铝制造，符合 BS4211: 2005 + A1: 2008 的要求。

Huang Shangyou Industrial Grade Telescopic Ladder features heavy duty counterbalanced springs for safe and controlled action. Die cast aluminium alloy telescopic ladder to EN 14975 standard, designed for use with CS-50TB roof access hatch. Fixed vertical ladder with safety cage, available in standard sizes with floor to ceiling heights of 2 - 6m. Fixed safety cage is designed to be located below roof access hatches above 2.2 - 3m. Custom sizes available for special applications on request. Made from corrosion resistant materials to provide years of trouble free, reliable service. Available in standard or custom sizes to suit any access requirement or installation. Choose from a range of aluminium options in standard sizes. Fully compliant with BS4211:2005 + A1:2008 Our TYPE BL Fixed Vertical Ladder with Safety Cage is manufactured in aluminium and complies with the requirements of BS4211:2005 + A1:2008.

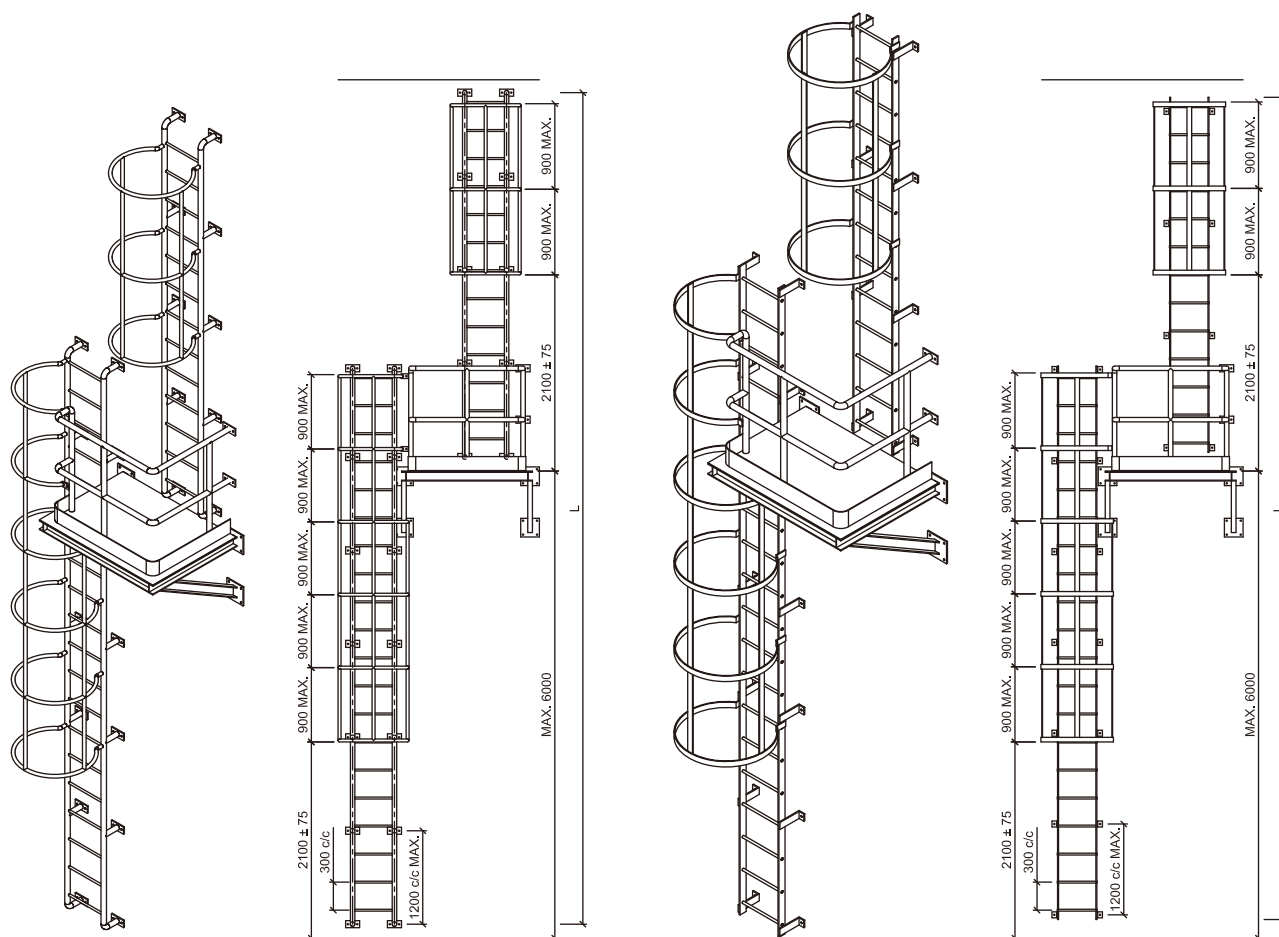
編號 Code No.	高度 high	闊度 width	貓籠 Cat Cage	立柱 Column	踏步 Column	重量 Weight (kg)
HSY-110	3.5m	400	768	60*10 48.3*3	20	88.8
HSY-120	4.5m	400	768	60*10 48.3*3	20	120.2
HSY-130	5.5m	400	768	60*10 48.3*3	20	151.2
HSY-140	6.5m	400	768	60*10 48.3*3	20	182.9



煌商佑工业固定垂直梯子，带安全笼和护栏、平台，有标准尺寸可供选择，地板到天花板的高度为 2 - 6m。它专为外部梯子通道或人员使用梯子从一个级别移动到另一个级别而无需使用检修舱口的情况而设计。可根据要求提供特殊尺寸。采用铝制造，符合 BS4211: 2005 + A1: 2008 的要求。采用耐腐蚀材料制成，可提供多年无故障、可靠的服务。

Huang Shangyou Industrial Fixed Vertical Ladder with Safety Cage and Guardrail, Platform, available in standard sizes with floor to ceiling heights of 2 - 6m. It is designed for external ladder access or where personnel use a ladder to move from one level to another without the use of an access hatch. Special sizes available on request. Manufactured from aluminium to comply with the requirements of BS4211:2005 + A1:2008. Made from corrosion resistant materials to provide years of trouble-free, reliable service.

編號 Code No.	高度 high	闊度 width	貓籠 Cat Cage	立柱 Column	踏步 Column	重量 Weight (kg)
HSY-110	3.5m	400	768	60*10 48.3*3	20	95.9
HSY-120	4.5m	400	768	60*10 48.3*3	20	127.4
HSY-130	5.5m	400	768	60*10 48.3*3	20	158.6
HSY-140	6.5m	400	768	60*10 48.3*3	20	190.1



煌商佑工业固定垂直梯子，带安全笼和护栏、平台，有标准尺寸可供选择，地板到天花板的高度为 2 - 6m。它专为外部梯子通道或人员使用梯子从一个级别移动到另一个级别而无需使用检修舱口的情况而设计。可根据要求提供特殊尺寸。采用铝制造，符合 BS4211: 2005 + A1: 2008 的要求。采用耐腐蚀材料制成，可提供多年无故障、可靠的服务。

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編號 Code No.	高度 high	闊度 width	貓籠 Cat Cage	立柱 Column	踏步 Column	重量 Weight (kg)
HSY-110	6m+3.5m	400	768	60*10 48.3*3	20	444.2
HSY-120	6m+4.5m	400	768	60*10 48.3*3	20	475.6
HSY-130	6m+5.5m	400	768	60*10 48.3*3	20	506.9
HSY-140	6m+6.5m	400	768	60*10 48.3*3	20	538.3

產品應用 APPLICATION



工程業績

ENGINEERING PERFORMANCE

Name of Projects 工程名稱	Time / amount 施工時間/工程量	Major Content 主要工程內容	Client name 客戶名稱	Grade of Quality 質量等級
合約號: 3303第三跑道及 相關工程UU渠及隧道 3303. Third Runway and Associated. Works.UU Canal and Tunnel	2021-2022 450條	不鏽鋼貓梯及 平台 腳踏 Stainless steel cat ladder and platform /Step Iron	香港機場管理局 Airport Authority SAPR JV	優 Excellent
合約號: 13/WSD/16 將軍 澳水管敷設工程 Contract no.. 13/WSD/16 Mainlaying in Tseung Kwan O	2022-2023 35條	不鏽鋼貓梯及平台 Stainless steel cat ladder and platform	水務署 WSD (Water Supplies Department) Penta-Ocean - Concentric Joint Venture	優 Excellent
HY/2014/08 中九龍幹線興建在 油麻地的隧道、重建一段加士 居道天橋及重置油麻地區 受影響的公共設施 Contract No. HY/2014/08 Construction of tunnel at Yau Ma Tei, reconstruction of a section of the Gascoigne Road Flyover and reprovisioning of affected public facilities at Yau Ma Tei	2022 4條	不鏽鋼貓梯 Stainless steel cat ladder	路政署 Highways Department Build King - SK ecoplant Joint Venture	優 Excellent
合約號: DC/2018/02 汀角路污水 泵房及污水收集系統改善工程 DC/2018/02 Upgrading of Sewage Pumping Stations and Sewerage along Ting Kok Road	2023-2024 85條	不鏽鋼貓梯 Stainless steel cat ladder	渠務署 Drainage Services Department Shanghai Construction Overseas Engineering Ltd.	優 Excellent

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合約編號: 3310. 北跑道改建工程. 3310 Hong Kong International Airport Three Runway System Project North Runway Modification Works	2024-2025 33條	不鏽鋼貓梯 Stainless steel cat ladder	香港機場管理局 Airport Authority Hong Kong. China State Construction Engineering (Hong Kong) Limited	優 In-process
合約編號EP/SP/66/12綜合廢物管理設施第1期 EP/SP/66/12 Integrated Waste Management Facilities Phase 1	2024-2025 15條	不鏽鋼貓梯及平台 Stainless steel cat ladder and platform	環保署 Environmental Protection Department Keppel Seghers – Zhen Hua Joint Venture	優 Excellent
CV/2021/05 元朗朗邊公營房屋發展之基礎設施工程 - 青山公路（屏山段）及朗天路 Contract no. CV/2021/05 Site formation and infrastructure works for public housing developments at Long Bin, Yuen Long	2025 25條	不鏽鋼貓梯 Stainless steel cat ladder	土木工程拓展署 Civil Engineering and Development Department Contractor: CNCEC – CRCC15 Joint Venture	優 Excellent
Contract No. 7/WSD/21 興建小蠔灣濾水廠擴建部分及小蠔灣原水增壓抽水站 Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping Station	2025 40條	不鏽鋼貓梯 Stainless steel cat ladder	水務署 WSD (Water Supplies Department) China Road And Bridge Corporation	優 Excellent



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