科技工藝 持續精進



上鎧鋼鐵
SHANG KAI STEEL

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SHANG KAI STEEL

# 機械科技打造精湛工藝

"Building Craftsmanship Through Mechanical Technology."

自 1988 年，上鎧鋼鐵致力於提供卓越的金屬擴張網。我們符合國際標準化組織 ISO 9001：2015 品質管理系統標準，因為每一個環節都達到自我的嚴格標準。

如今，上鎧鋼鐵加倍重視服務與數據，為了提高整體競爭力，從 2017 年全面更新工廠自動化機器設備與工廠電腦化管理，自工業 2.0 邁向工業 4.0，與歐美技術並駕齊驅。透過跨國／跨界思維，積極開發高附加價值與高端差異性產品，不斷嘗試創新與研發，致力於帶給客戶絕佳體驗。

在每次密切的合作關係裡，我們的技術總能不斷突破，與之創新。現在，您可以發現上鎧鋼鐵的產品為全球信任，「信任」一直是上鎧鋼鐵的最重要的品牌價值。我們擁有豐富的經驗及完善的生產設備，致力於提供客戶高品質、高價值之產品，以高標準滿足客戶之需求！

Since 1988, Shang Kai Steel has been dedicated to providing superior Expanded Metal meshes. We conform to the ISO 9001:2015 Quality Management System standards set by the International Organization for Standardization because every stage of our production meets our own strict standards.

Nowadays, Shang Kai Steel places a greater emphasis on service and data in order to improve overall competitiveness. In 2017, we fully updated our factory's automation equipment and computerized management, moving from Industry 2.0 to Industry 4.0. Through cross-national and cross-industry thinking, we actively develop high-value-added and high-end differentiated products, constantly trying to innovate and research, committed to providing customers with an excellent experience.

In every cooperation relationship, our technology always continues to break through and innovate. Now, you can find Shang Kai Steel's products to be globally trusted. "Trust" has always been the most important brand value for us. At Shang Kai Steel, we use state-of-the-art machinery and technology to create products of exceptional craftsmanship. Our advanced equipment and skilled technicians allow us to consistently deliver high-quality products that meet the high standard of our customers!




# 公司簡介
## Company Profile

上鎧鋼鐵股份有限公司是由**董事長林宗志先生**創立，專門從事金屬擴張網製造。公司經營理念是「誠信、品質」。我們擁有多種設備和技術，可製造板厚範圍從 0.05mm-8.0mm，不限於任何金屬材質。我們可生產各國標準擴張網，並持有 ISO 9001 品質管理系統，並有特訂品質保證制度。在台灣高端產品市場中占有率超過八成，並銷售至世界各地。

Shang Kai Steel Co., Ltd. was founded by Chairman Chung-Chih Lin and specializes in the manufacturing of expanded metal mesh. The company's business philosophy is "integrity and quality". We have a variety of equipment and technology, and can produce sheets with thicknesses ranging from 0.05mm-8.0mm, not limited to any metal material. We can produce various national standard expanded metal meshes and have an ISO 9001 quality management system and a special quality assurance system. We have a market share of more than 80% in Taiwan's high-end product market and sell our expanded metal mesh products to customers worldwide.

上鎧鋼鐵在 1998 年開始轉型，從 OEM 和 ODM 代工轉為 OBM，以滿足客戶日益變化的需求。近年來，公司重視服務和數據分析，積極推動工廠自動化和電腦化管理，從工業 2.0 轉型為工業 4.0，開發出具有高附加價值和高端差異性的產品。我們致力為客戶提供優質的產品與服務，幫助客戶在國際市場上取得佳績。

In 1998, Shang Kai Steel began its transformation journey, shifting from OEM and ODM contract manufacturing to OBM, to better meet the changing needs of its customers. In recent years, the company has placed a strong emphasis on service and data analysis, actively promoting factory automation and computerized management, and transitioning from Industry 2.0 to Industry 4.0. The company has developed products with high added value and high-end differentiation. We are dedicated to providing our customers with high-quality products and services, helping them achieve success in the international market.

經過三十多年的發展，上鎧鋼鐵的目標是「站穩台灣，深耕亞洲，放眼全球！成為高端客戶唯一指定的金屬擴張網供應商」。作為台灣產業用金屬擴張網的領導廠商，上鎧展現出卓越的技術水準，在金屬網產業鏈中扮演著重要的角色。我們將繼續追求「共好、共創、永續」，朝向更高水準的企業發展目標邁進。

After more than 30 years, Shang Kai Steel has established itself as a leading supplier of metal mesh in Taiwan, Asia and the world. The company aims to be the "Top choice for high-end customers as a supplier of Expanded metal mesh". As a leader in Taiwan's metal mesh industry, Shang Kai Steel has demonstrated its expertise and commitment to excellence. The company will continue to pursue its goal of "mutual benefit, co-creation and sustainability" and strive for even greater success in the future.

LRQA

Current issue date: 29 November 2022
Expiry date: 28 November 2025
Certificate identity number: 10484790

Original approval(s):
ISO 9001 - 29 November 2022

# Certificate of Approval

This is to certify that the Management System of:

## SHANG KAI STEEL CO., LTD.

No. 16 Juguang 2nd St. Daliao Dist., Kaohsiung City 831136, Taiwan

has been approved by LRQA to the following standards:

**ISO 9001:2015**

Approval number(s): ISO 9001 – 00038541

**The scope of this approval is applicable to:**

Manufacturing and sale of expanded metal and metal lath.

Luis Cunha

Area Operations Manager - North Asia & SAMEA

Issued by: LRQA Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.
Issued by: LRQA Limited, 1 Trinity Park, Bickenhill Lane, Birmingham B37 7ES, United Kingdom



# Certificate

| | |
|---|---|
| Standard | **ISO 14064-1:2018** |
| Certificate Registr. No. | **CF 50543434 0001** |
| Report No. | **38540393 001** |
| Certificate Holder: | **Shang Kai Co., Ltd.**<br>No.16, Chu-Kuang 2nd Street, Ta-Fa Industrial District, Ta-Liau Dist., Kaohsiung City, Taiwan (R.O.C.) |
| Site: | **Shang Kai Co., Ltd. Headquarters**<br>No.16, Chu-Kuang 2nd Street, Ta-Fa Industrial District, Ta-Liau Dist., Kaohsiung City, Taiwan (R.O.C.) |
| Scope: | Verification and Validation Body: TÜV Rheinland Taiwan Ltd.<br>- Process: Document review, interview, site visit and recalculation<br>Based on the information we have received and evaluated that:<br>- Programme: Voluntary<br>- Review Criteria: ISO 14064-3:2006<br>- Organizational Boundary: Operational Control<br>- Level of Assurance: Reasonable<br>- Materiality: 5%<br>- Global warming potential (GWP): IPCC 2013<br>- Base year: 2021 (2021.01.01~2021.12.31)<br>- Inventory year: 2021 (2021.01.01~2021.12.31)<br>- The total carbon emission is 447.309 tons of carbon dioxide equivalent ($tCO_2e$)<br>- Direct emission is 65.3248 $tCO_2e$<br>- Indirect emission is 381.9873 $tCO_2e$<br>- 2021 electricity emissions factor not publish, the inventory use 2020 electricity emissions factor for GHGs calculation |
| Validity: | This certificate only reviewed the emissions data of inventory year, this certificate is not for the management systems certification.<br>2022-05-24 |

TÜV Rheinland Taiwan Ltd.
11F., No. 758, Sec. 4, Bade Rd., Taipei 105, Taiwan

This verification and validation is based on the information made available to TÜV Rheinland and the engagement conditions detailed above. Therefore, TÜV Rheinland cannot guarantee the accuracy or correctness of the information. TÜV Rheinland cannot be held liable by any party relying in acting upon this verification and validation.

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Precisely Right.

LCBA Low Carbon Construction

# LCBA低碳工法標章證書

**Low Carbon Footprint Building Construction Certificate of Accreditation**

認證編號Certificate No: LCBA-LCC-015

| | |
|---|---|
| 申請廠商 | 上鎧鋼鐵股份有限公司 |
| 工法名稱 | 金屬擴張網外遮陽系統系列 |
| 申請人 | 林宗志 |
| 認證型號之減碳效益 | SKA 20-33 金屬擴張網：5.4%<br>SKA 30-59 金屬擴張網：6.0%<br>SKA 20-28 金屬擴張網：5.2%<br>SKA 20-55 金屬擴張網：8.8%<br>SKA 20-143金屬擴張網：6.1%<br>SKA 20-59 金屬擴張網：6.9%<br>SKA 15-06 金屬擴張網：5.3% |

**The following construction(s) was/were submitted and identified on behalf of the client as:**

**Shang Kai Steel Co., Ltd**

| | | |
|---|---|---|
| Construction Name | Expanded metal SK-Architecture Type | |
| Carbon Reduction | SKA 20-33 : 5.4% | SKA 20-143 : 6.1% |
| | SKA 30-59 : 6.0% | SKA 20-59 : 6.9% |
| | SKA 20-28 : 5.2% | SKA 15-06 : 5.3% |
| | SKA 20-55 : 8.8% | |

LCBA

低碳建築聯盟
Low Carbon Building Alliance
蔡耀賢
Yao-Hsien Tsai
發證日期 Certified on 2022.05.27

# 台灣精品獎
# Taiwan Excellence Award 2023

特頒予
Presented to

**上鎧鋼鐵股份有限公司**
**SHANG KAI STEEL CO., LTD.**

**具高耐風性能之建築用遮陽節能金屬擴張網**
**Sunshade Energy-Saving Expanded Metal Mesh for Building with High Wind Resistance**
SKA Series

王美花

經濟部 部長
Minister, Ministry of Economic Affairs, R.O.C.
中華民國111年11月23日
23rd of November 2022

經濟部

# 潛力中堅企業
## 證 書

上鎧鋼鐵股份有限公司
持續專注本業，在特定領域表現傑出，具有發展為卓越中堅企業之潛力，經評選後，榮獲第5屆潛力中堅企業，特頒此證，以茲證明。

部長 沈榮津

中華民國 108 年 10 月

*Certificate of Potential Taiwan Mittelstand Award*

This certificate of the 5th Potential Taiwan Mittelstand Award is presented to SHANG KAI STEEL Co., Ltd. in recognition of its outstanding performance in a specific field and for its strong potential to become a Taiwan Mittelstand Award winner.

Jong-Chin Shen
Minister of Economic Affairs, R.O.C.
October 2019

NATIONAL AWARD OF OUTSTANDING SMALL AND MEDIUM ENTERPRISES

# 國家磐石獎證書

上鎧鋼鐵股份有限公司

參加第26屆國家磐石獎一卓越中小企業選拔，經評審委員會評審結果，榮獲國家磐石獎，特頒此證。

經濟部部長 沈榮津
中華民國全國中小企業總會理事長 林繁雄

**THIS IS TO CERTIFY THAT**

SHANG KAI STEEL CO., LTD.

IS THE WINNER OF THE
26th NATIONAL AWARD OF OUTSTANDING
SMALL AND MEDIUM ENTERPRISES

Jong-Chin Shen
MINISTER
MINISTRY OF
ECONOMIC AFFAIRS, R.O.C.

Hwei-yen Lin
CHAIRMAN
NATIONAL ASSOCIATION
OF SMALL & MEDIUM
ENTERPRISES, R.O.C.

中華民國 106 年 10 月 31 日



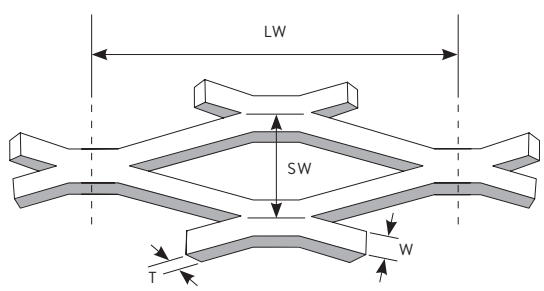


# 金屬擴張網

# Expanded Metal

金屬擴張網是將金屬板材經由橫切和拉伸擴展，所形成規則相同的菱形網狀結構，使其具有較高的抗拉強度。由於可生產不同的金屬材質及材料耐候性高、表面處理多樣化、成品網面平整、孔徑均勻等特點，上鎧鋼鐵的擴張網能夠在各個產業中更被廣泛地使用。而現在我們對擴張網有了全新的定義，即『穩固安全』、『過濾通透』、『綠化節能』和『變化彈性』。和以往所不同的是，我們對於原料、製作環節和細節上的執著與追求，上鎧鋼鐵所生產的擴張網具有豐富的立體視覺效果，可以塑造出穿透性的美感，提升各產業產品的質感和價值，使金屬擴張網成為越來越多產業的選擇。

Expanded metal is a type of metal mesh that is made by cutting and stretching metal plates to form a regular pattern of holes. Its diamond-shaped structure gives it high tensile strength. Because of the weather resistance of different metal materials, the surface treatment is diverse, the net surface is smooth, the aperture is uniform and other characteristics, the Shang Kai Steel expanded metal can be more widely used in various industries. Nowadays, we have a new understanding of expanded metal, that is "stable and safe," "filter and transparent," "green and energy-saving," and "changeable and elastic." Different from the past, We are persistent in the material, production process, and details, and the Shang Kai Steel expanded metal has a rich three-dimensional visual effect, can shape the permeable beauty, enhance the quality of various industrial products, and make the expanded metal a more and more popular choice in various industries.




本公司另可製造上述標準以外之產品，請聯絡我們。
We can also manufacture products other than the above specifications, please contact us for details.







## 擴張網介紹

- SW: 菱形短邊尺寸中心之間的距離。
- LW: 菱形長邊尺寸中心之間的距離。
- LWM: 寬度 ( 對應菱形長邊方向 )。
- SWM: 長度 ( 對應菱形短邊方向 )。
- 厚度 : 原料厚度。
- 總高度 : 網格總高度通常是材料厚度測量值的 1-2.5 倍。
- 網條 : 是菱形邊長之寬度。
- 所有厚度、網條重量均存在 +/-10% 的公差。
- 標準尺寸 : 915 x 1830 (LWM x SWM)、
  1220 x 2440(LWM x SWM)、
  1525 x 3050 (LWMXSWM)。

## 材料

鋼鐵、不銹鋼、鋁、鍍鋅鋼板、電氣鍍鋅鋼板、銅、鈦、鎳、銀、金。

## 表面處理

熱浸鍍鋅、粉體塗裝、陽極處理、氟碳烤漆。

## Expanded Metal Technical Specifications

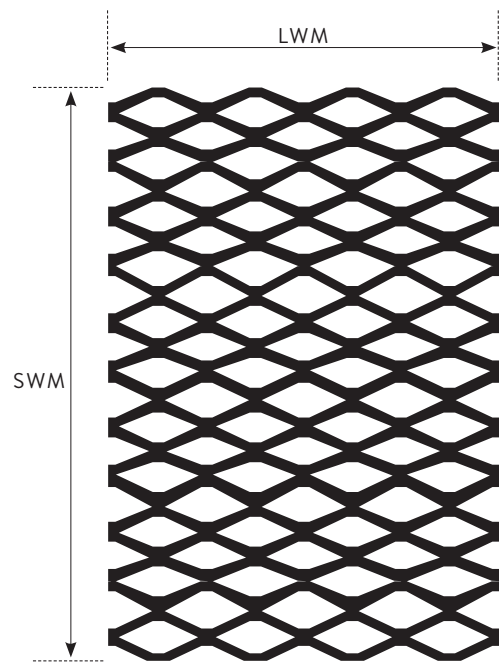
- SW: Short way Dimension of mesh.
  (Distance between centers in direction of short mesh)
- LW: Long way Dimension of mesh.
  (Distance between centers in direction of long mesh)
- LWM: Length (Long Way direction of the diamond)
- SWM: Width (Short direction of the diamond)
- Thickness: Material Thickness.
- Overall Thickness: The Overall Thickness can be as much as 1-2.5x the measurement of material thickens.
- Strand/Width: The width of diamond shape on each slice.
- All thickness, strand width and weight are subject to +/-10% tolerance.
- Standard sheet is 915 x 1830 (LWM x SWM)、
  1220 x 2440 (LWM x SWM)、
  1525 x 3050 (LWMXSWM).

## Material

Mild steel、Stainless steel、Aluminium、Pre-galvanized steel、Electrical Galvanized Steel、Copper、Titanium、Nickel、Silver、Gold

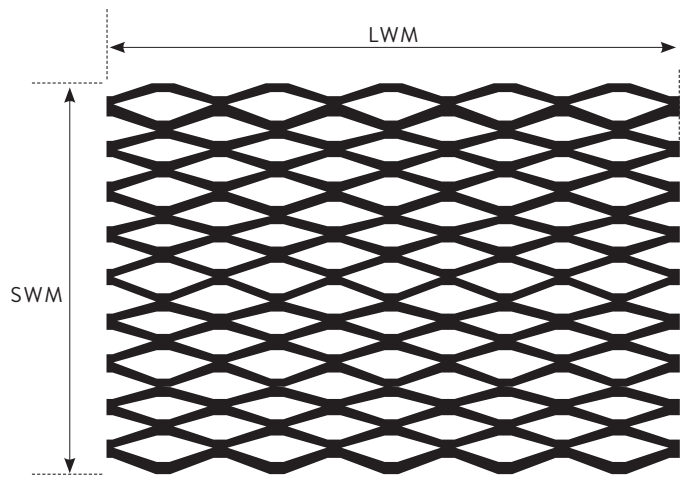
## Surface treatment

Hot-dip Galvanizing、Powder coating、Anodizing treatment、Fluorocarbon coating




X 型式 /X Type

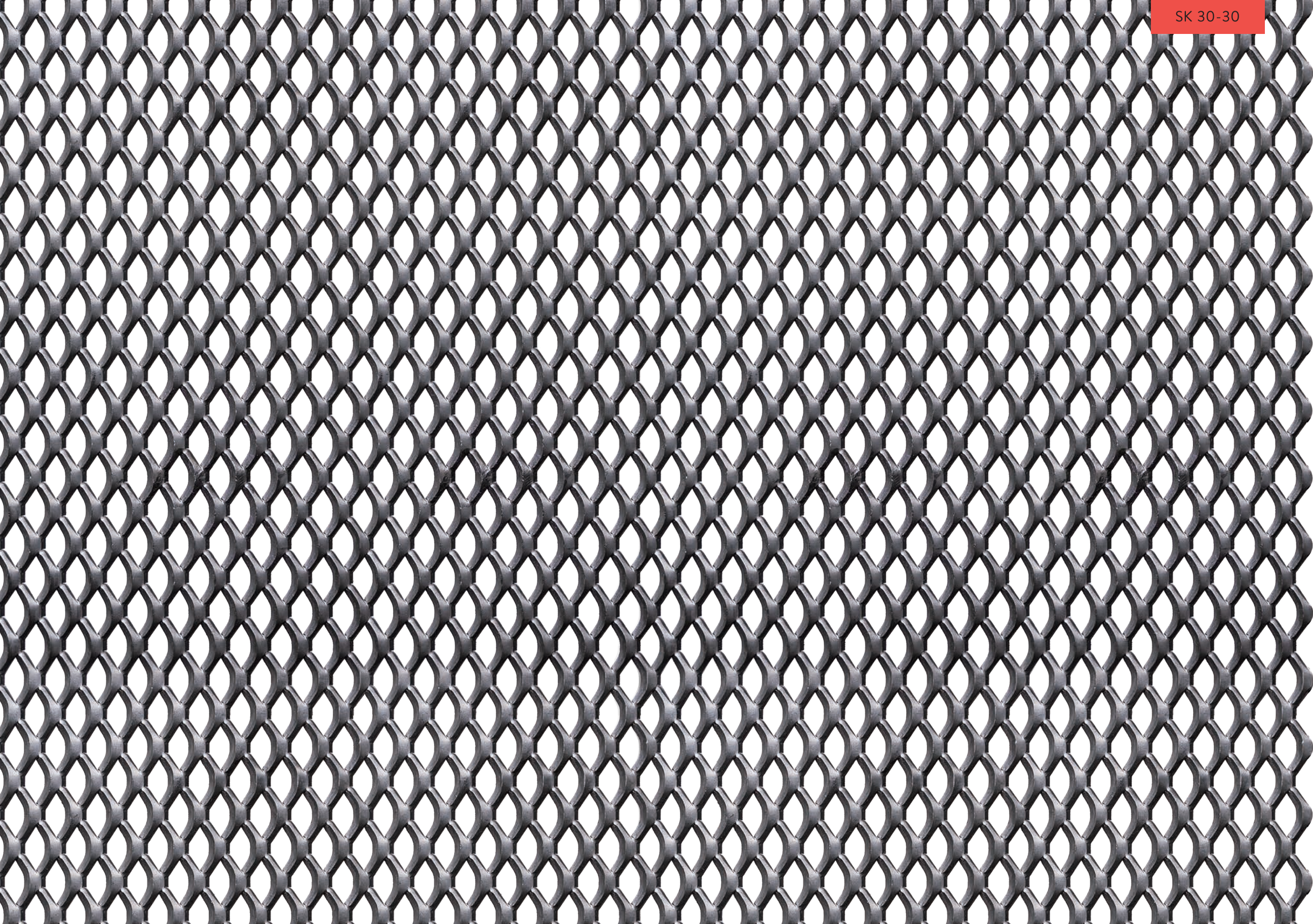
標準尺寸 Standard sheet
915 x 1830 (LWM x SWM)
1220 x 2440 (LWM x SWM)
1525 x 3050 (LWMXSWM)




Y 型式 /Y Type

標準尺寸 Standard sheet
2440 x 1220 (LWM x SWM)
3050 x 1525 (LWM x SWM)

SK 30-30

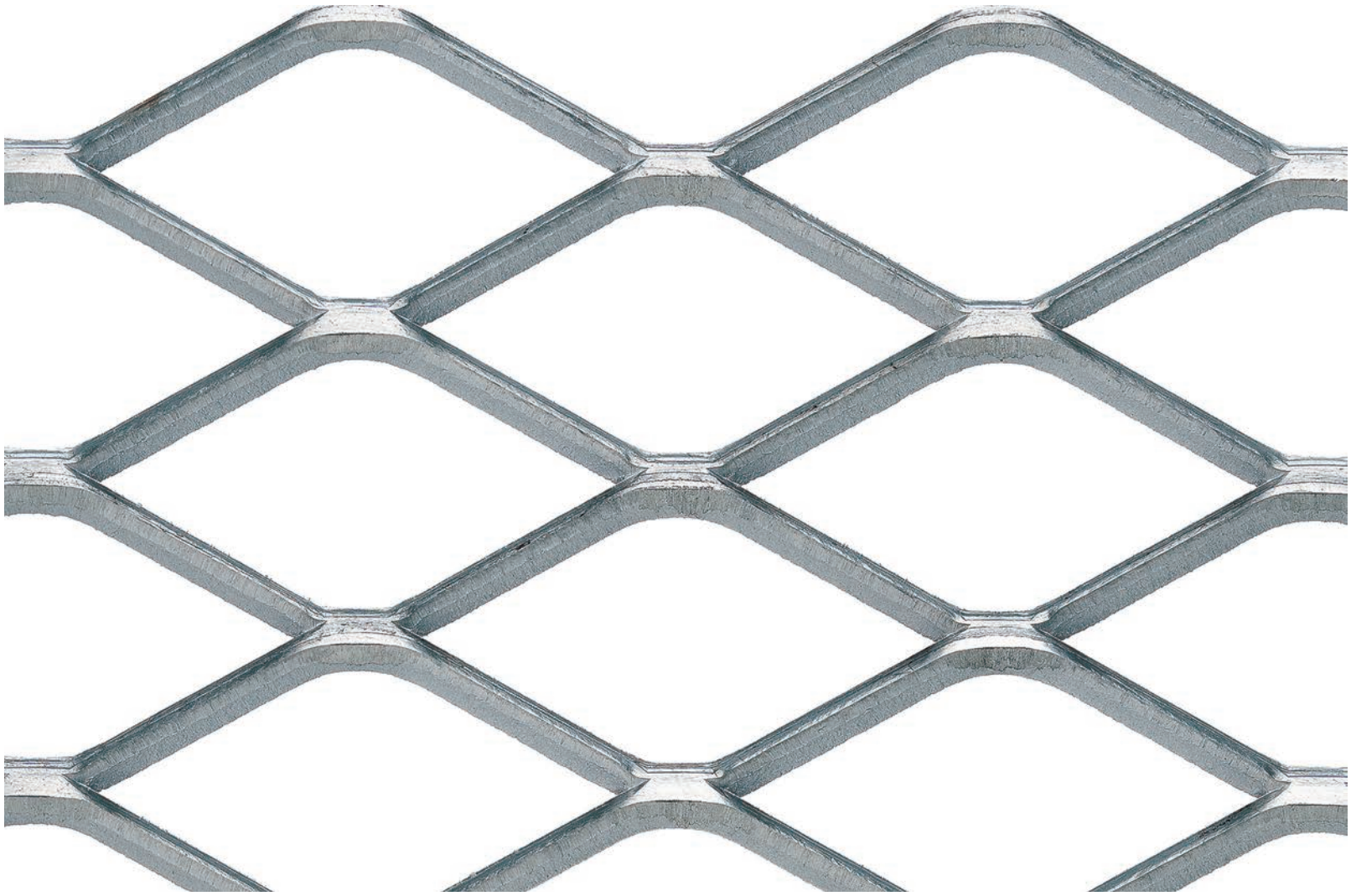


# SK 型號

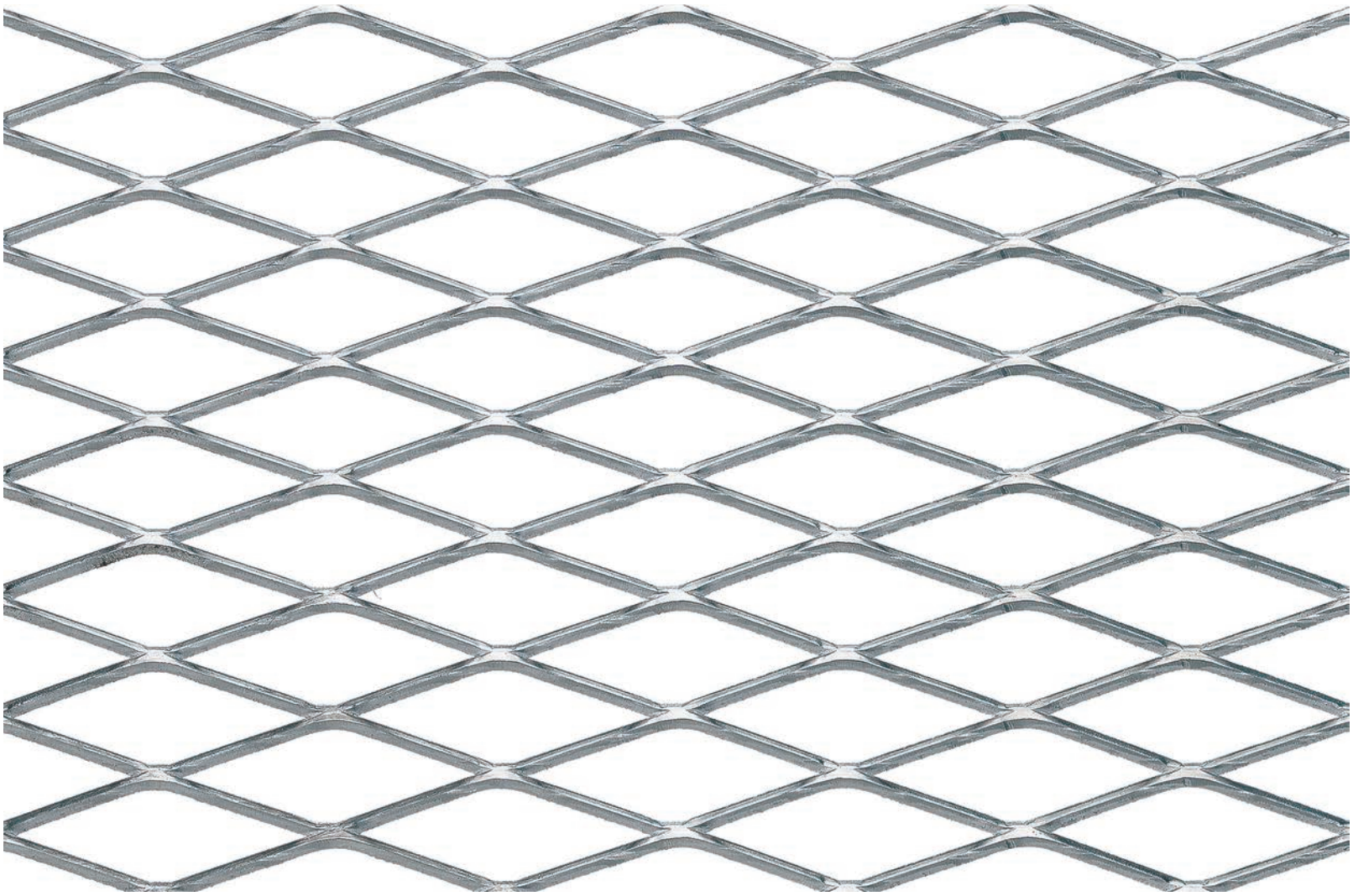
SK Type

上鎧鋼鐵的 SK 系列擴張網是為客戶量身打造的，它與標準的國際規範不同，具有可客製化的尺寸、材質、表面處理、網目大小、深淺和紋路面。SK 系列涵蓋了各種樣式，從立體的網目到大小網眼的排列組合，都為擴張網帶來更多應用可能。上鎧鋼鐵以其卓越的技術和精準的製造口碑，為擴張網的創新應用打下了新的基礎，突破了固有的刻板印象。

The SK Type expanded metal from Shang Kai Steel is custom-made for clients and stands apart from international standards. It offers customizable features such as size, material, surface finish, mesh size, depth and pattern. The SK range offers a variety of styles, from 3D mesh to various combinations of large and small mesh, providing more opportunities for its application. With exceptional technology and a reputation for precise manufacturing, Shang Kai Steel has set a new benchmark for innovative expanded metal solutions and defied conventional norms.



SK 08-01



SK 10-29

# SK Type

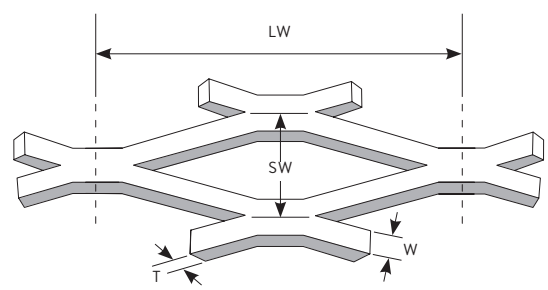
## 製品規格表 Product Specifications

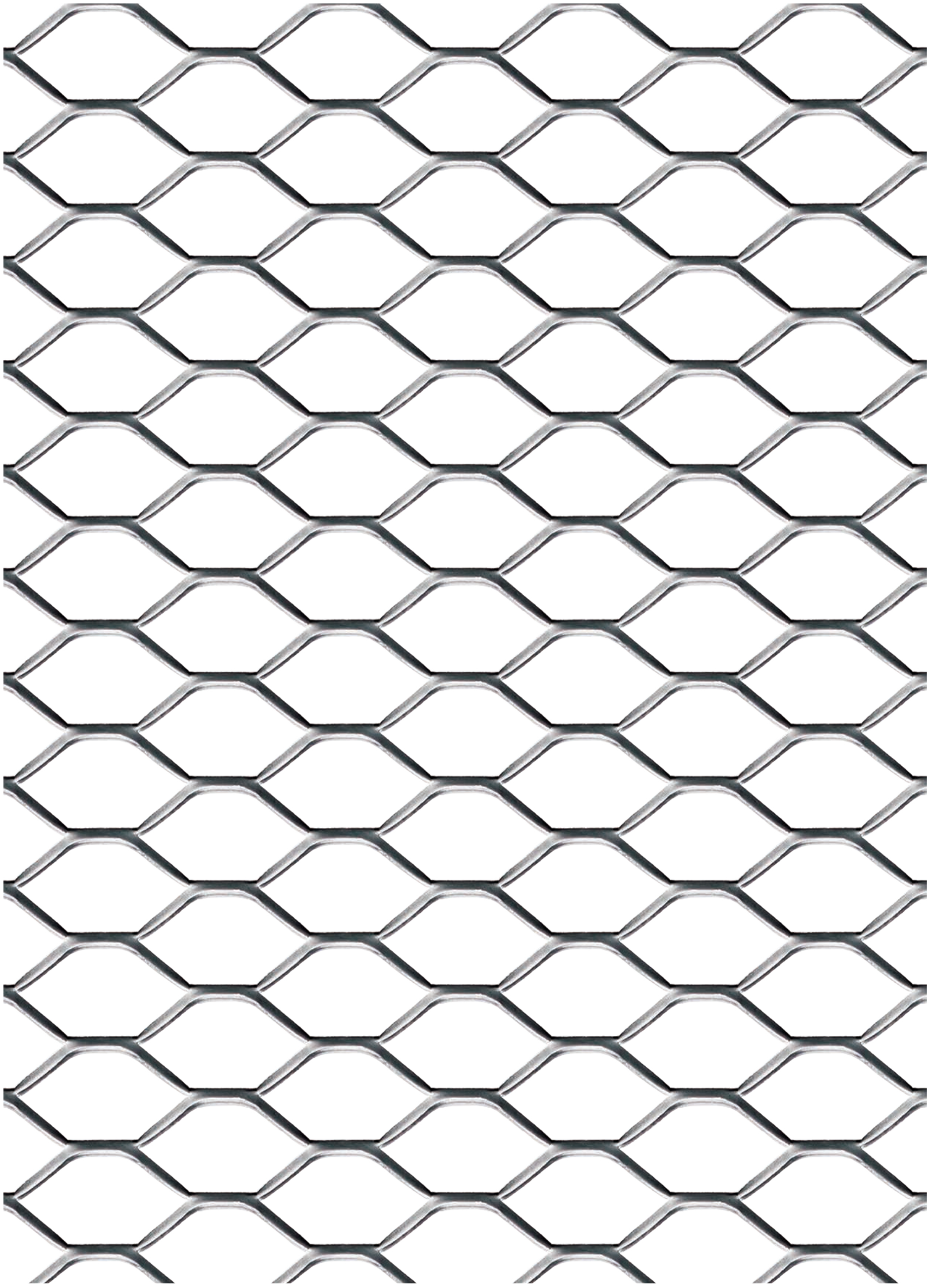
| 厚度<br>Thickness | 網目尺寸<br>Mesh Size | |
|---|---|---|
| T | SW | LW |
| 0.3~1.0 | 4.0 | 6.0 |
| 0.3T~1.2T | 5.0 | 10.0 |
| 0.3T~1.6T | 6.0 | 12.0 |
| 0.5T~1.6T | 7.0 | 14.0 |
| 0.5T~1.6T | 8.0 | 16.0 |
| 0.5T~1.6T | 10.0 | 20.0 |
| 0.5T~3.0T | 12.0 | 24.0 |
| 1.0T~3.2T | 14.0 | 30.5 |
| 1.0T~3.2T | 19.0 | 38.0 |
| 1.5T~3.2T | 25.0 | 50.0 |
| 1.5T~4.5T | 28.0 | 61.0 |
| 1.5T~6.0T | 30.0 | 75.0 |

尺寸單位 – 公釐 Units in mm

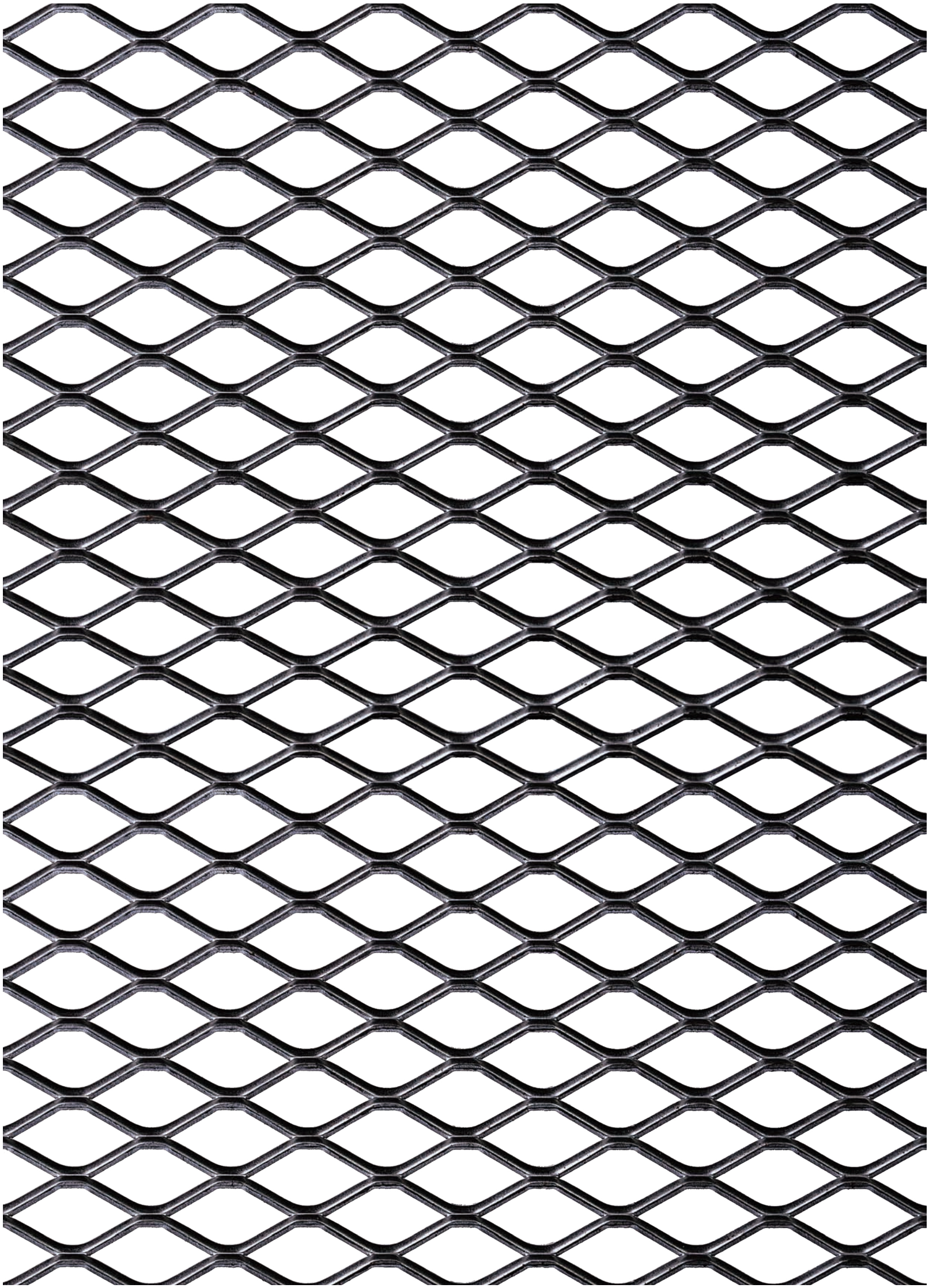
本公司另可製造上述標準以外之產品，請聯絡我們。
We can also manufacture products other than the above specifications, please contact us for details.

我們可製造符合CNS, JIS, BS,ASTM, AS/NZS 之國際擴張網標準規範尺寸。
We can also manufacture products from CNS, JIS, BS,ASTM, AS Expanded Metal specifications, please contact us for details.

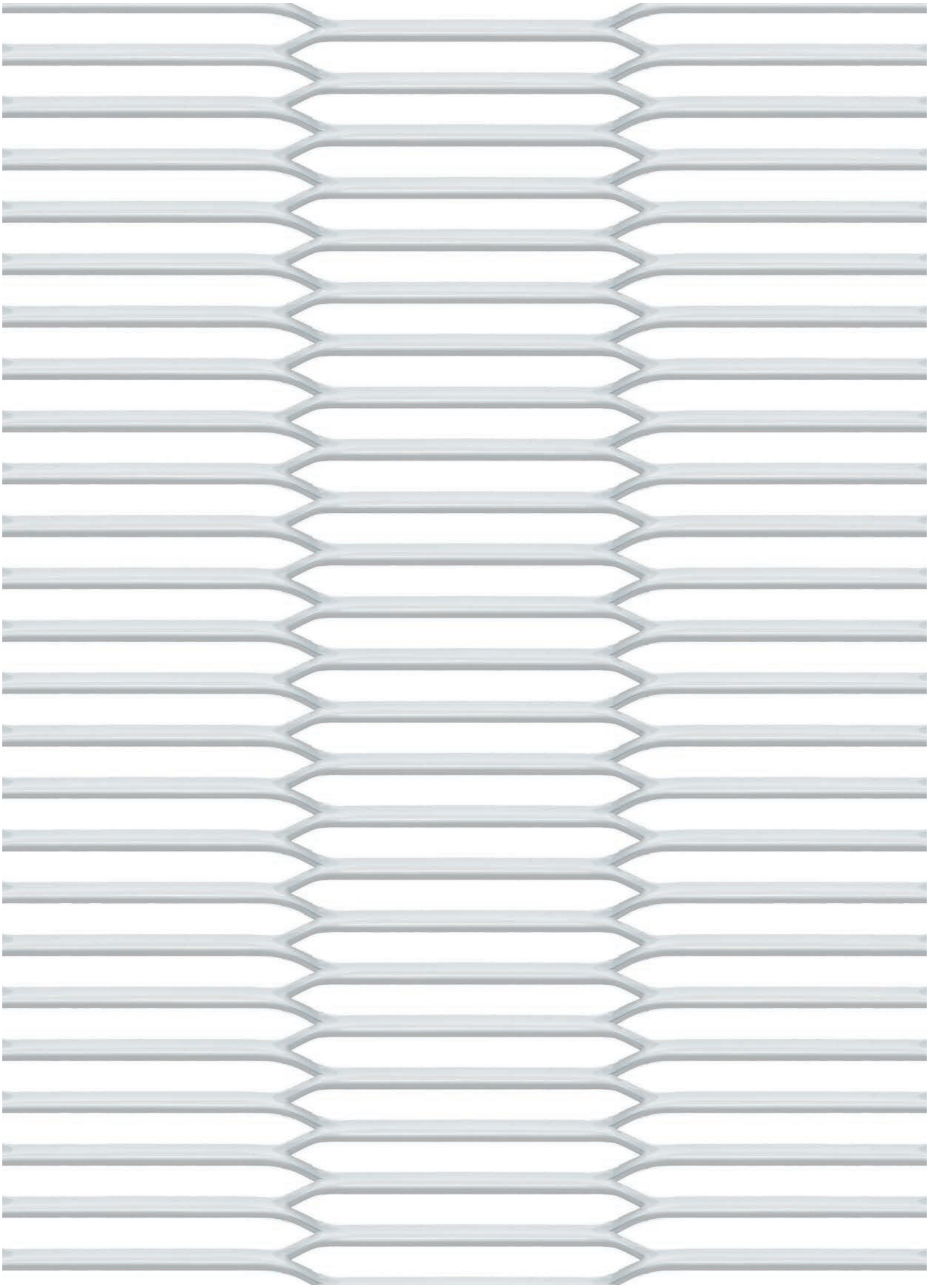




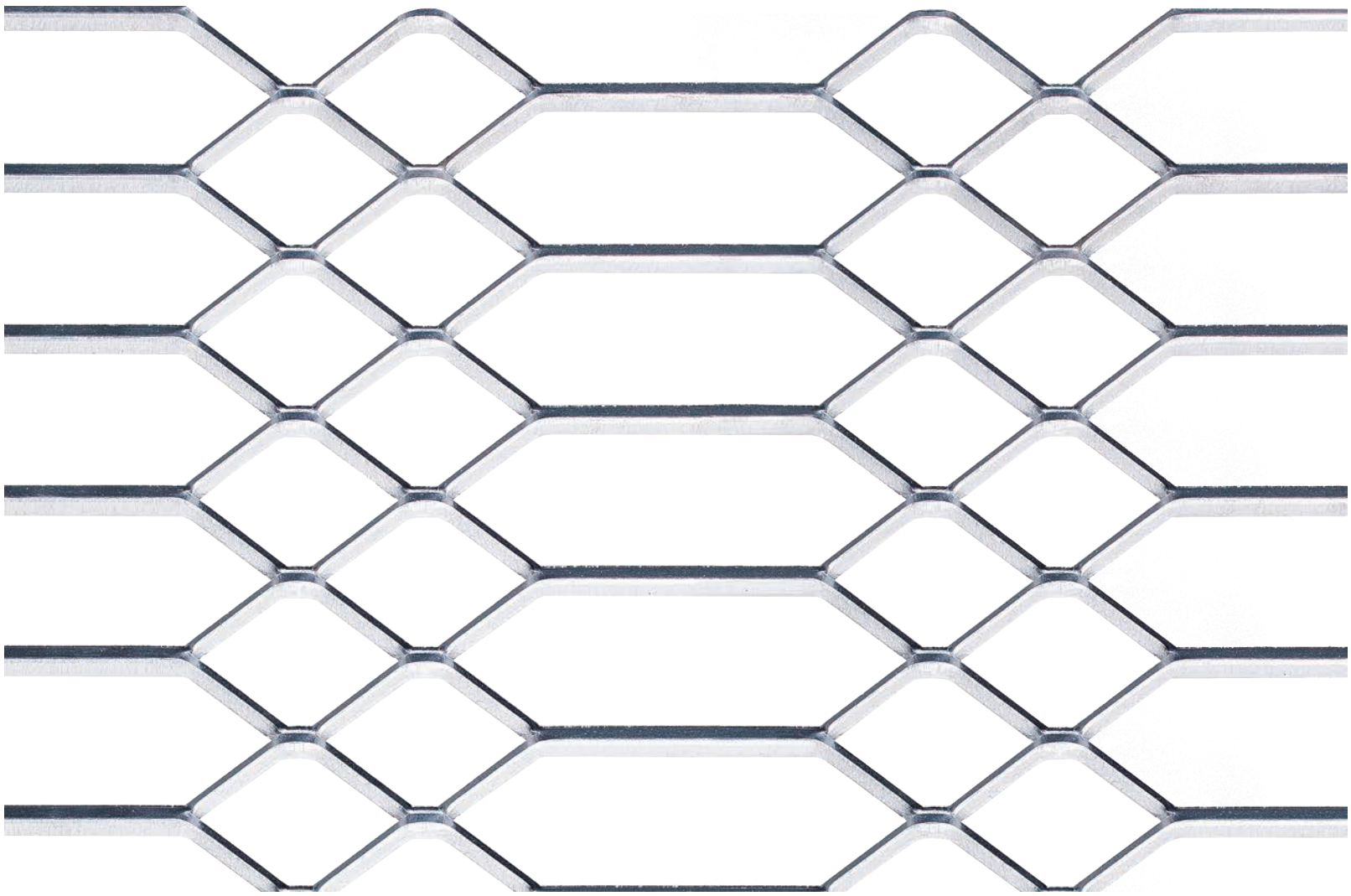
SK 20-01



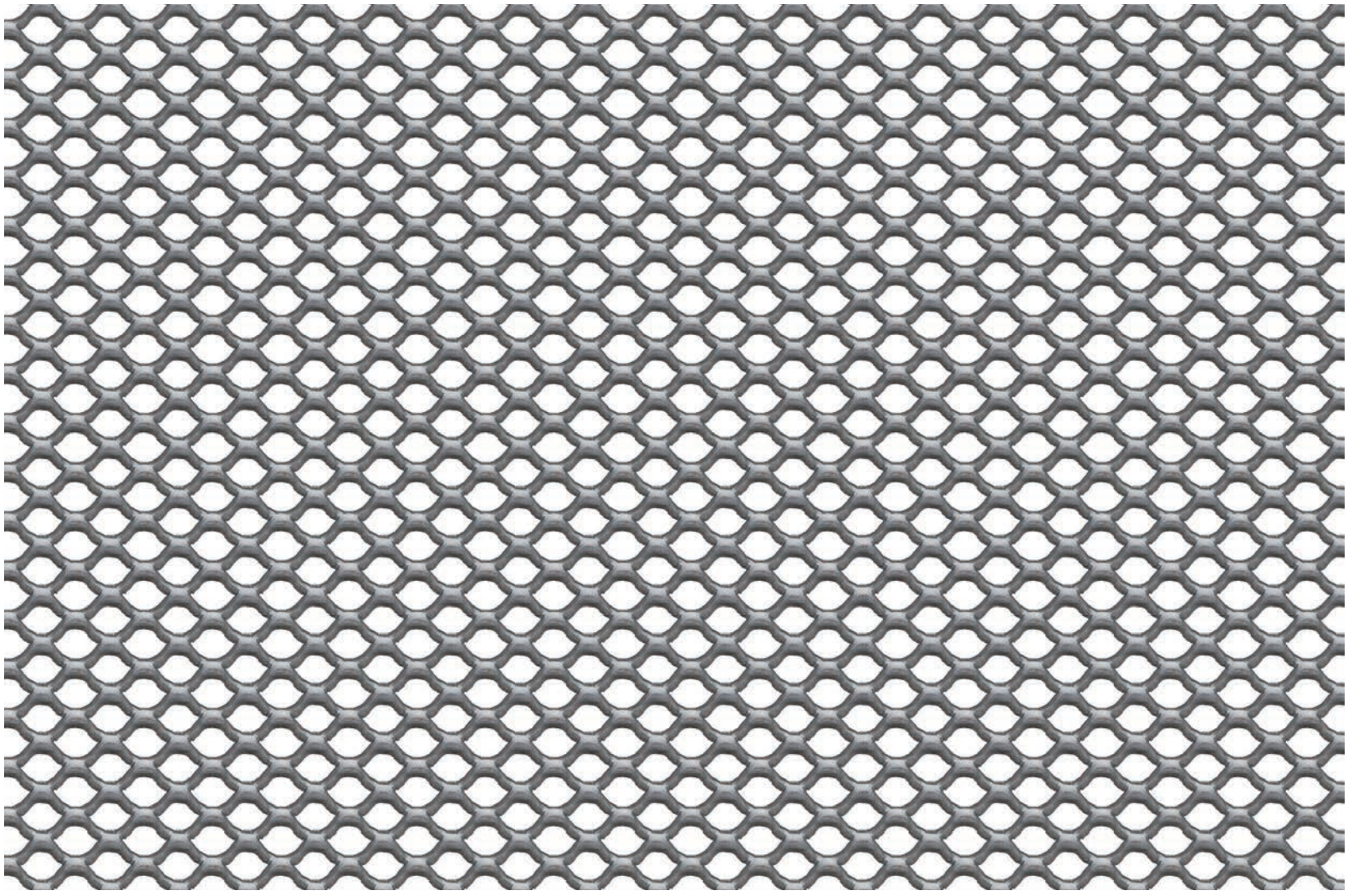
SK 20-25



SK 20-130



SK 30-32



SK 06-10

# 忠泰 M

JUT M

型號 : SK 20-7

建築師 : Oyler Wu Collaborative、廖國誠建築師事務所

步出捷運站後，一棟現代感設計十足的大樓，林立於平房之間。玻璃和金屬交替，不同材料擦撞出奇妙的火花，大樓外牆上的簾幕用直線勾勒出一道道曲線，幾何色塊散佈，簡約利落的視覺效果非常引人注目。上鎧鋼鐵 SK 20-7 型號擴張網廣泛用於外牆金屬幕牆，利用角度和孔徑大小調控光線，降低建築物的熱量，其設計的多樣性不容忽視。立體面和平面的造型多變，通過建築師之手創造出令人驚訝的作品，擴張網設計元素發展無限。

Model: SK 20-7

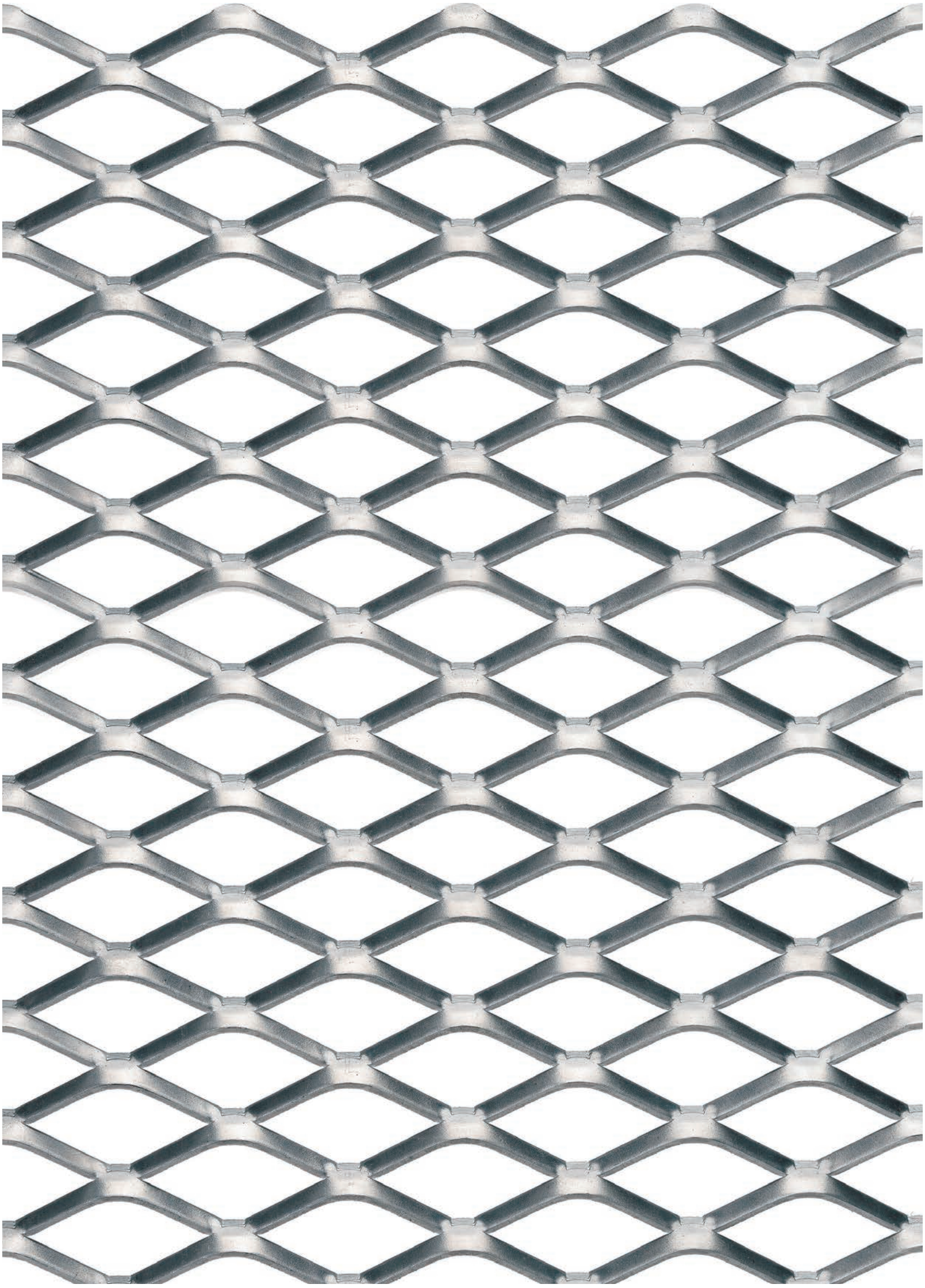
Architect: Oyler Wu Collaborative、LIAO Architect & Associates

The building stands out with its modern design as you step out of the MRT station, towering amidst the row of houses. Glass and Expanded metal materials alternate in a seamless blend, creating a unique look. Geometric blocks are spread along straight lines of the curtain walls on the building's exterior, giving a simple and eye-catching visual appeal. The SK 20-7 of the expanded metal aluminum curtain wall from Shang Kai Steel is widely used in metal curtains for exterior walls, controlling light and reducing building heat through the use of angles and aperture sizes. The design of the building is versatile and not to be underestimated, with both three-dimensional and flat surface designs that are varied. It is hoped that architects will be able to create stunning works with the unlimited potential for expanded metal curtain wall design.

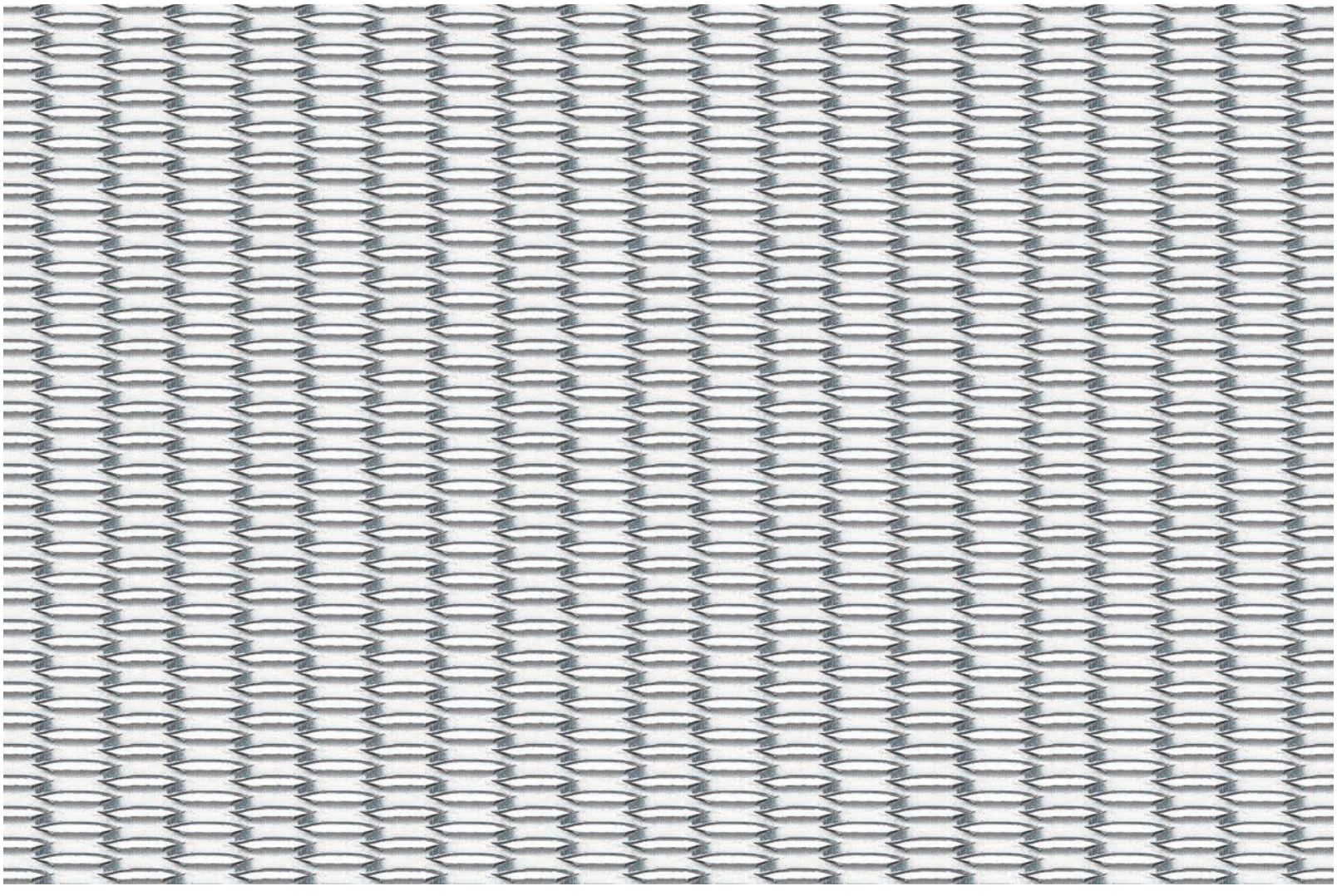




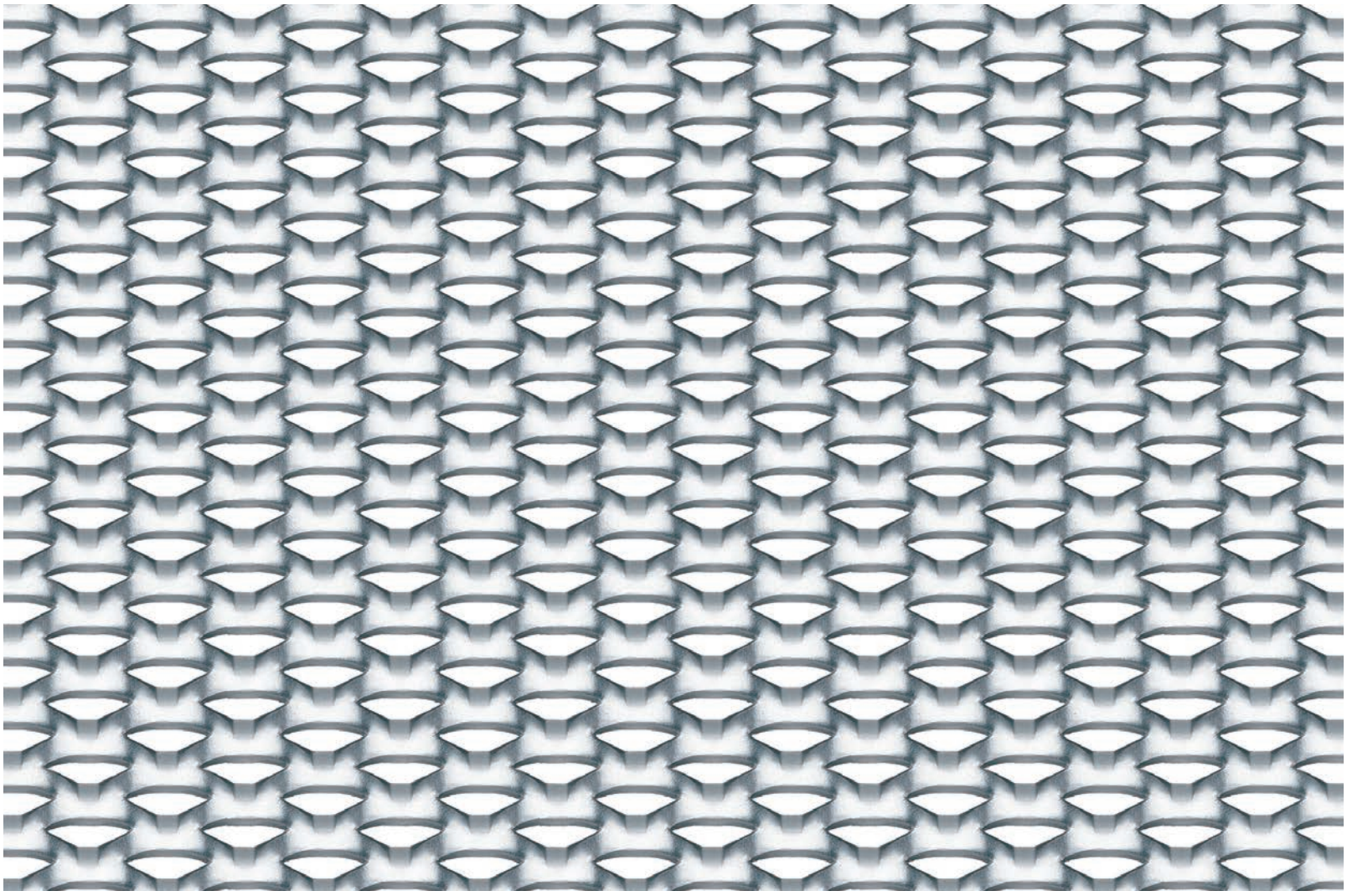




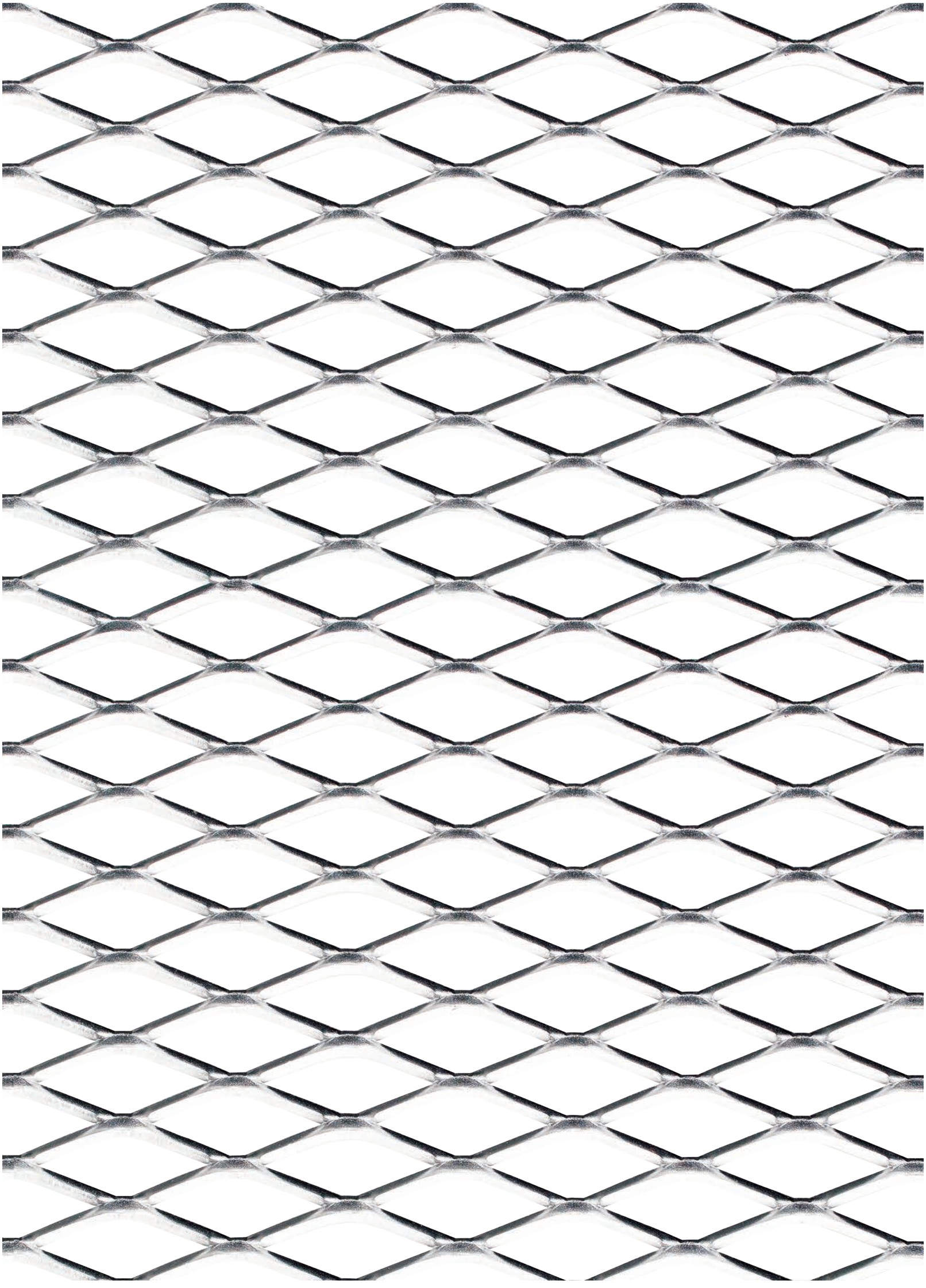
SK 20-66



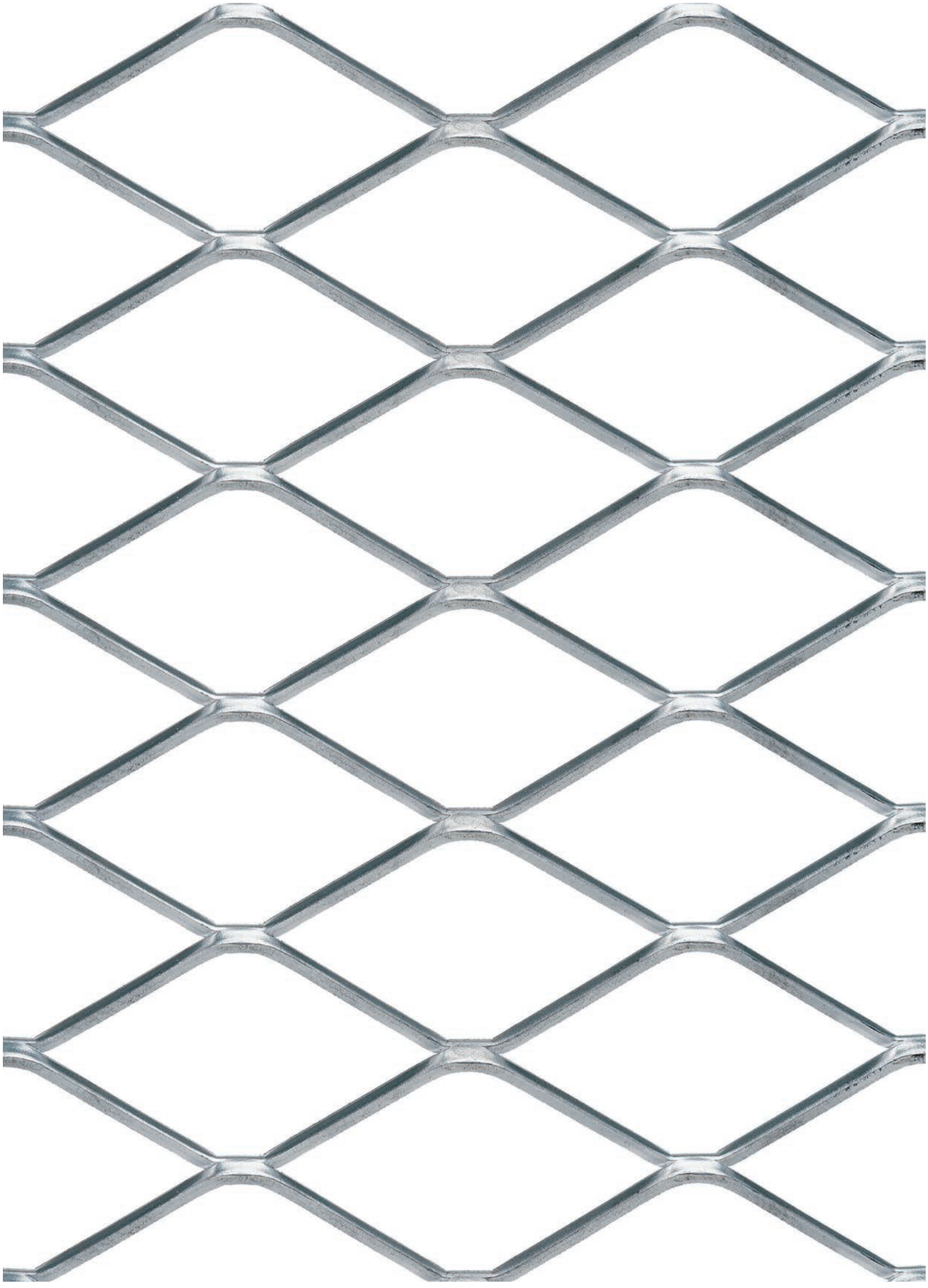
SK 45-20



SK 10-24



SK 30-42



SK 30-44





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