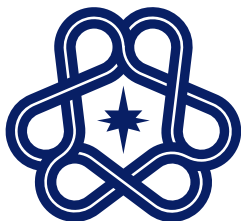




**THAI METAL
ALUMINIUM**

タイメタルアルミ

UNLEASH CREATIVITY WITH COMPREHENSIVE DESIGN POSSIBILITIES FROM “THAI METAL ALUMINIUM”



**THAI METAL
ALUMINIUM**

タイメタルアルミ

Thai Metal offers end-to-end design & manufacturing of high-quality profiles for doors and windows. We offer a wide range of products, including the Thai Standard system, high performance system, Japanese system and original equipment manufacturer (OEM) products. We manufacture products in accordance with the installer's overall architectural design to achieve a harmonious appearance. Our products can be modified to respond to the demands of the designs, deliver the convenience and safety and enhance the sanitation of the residents. With more than 40 years of experience and expertise, our product manufacturing is under strict quality control for the utmost efficiency.



Non Chrome
Technology



No Lead &
Mercury



Care and Coat
Protection



Zirconium
Plus



25 Years
Shield

FULLY INTEGRATED PRODUCTION SYSTEM

CASTING | EXTRUSION | SURFACE TREATMENT

Thai Metal is determined to relentlessly develop product quality and manufacture products with cutting-edge technology in all aspects. Every phase of our end-to-end manufacturing, starting from raw material selection and billet casting to aluminium rolling, anodizing and powder coating. Our stringent quality control allows us to meet the diverse demands of both domestic and foreign customers as our products are exported to leading global markets.

We gain trust from all industries, ranging from construction, automobile, transportation, aircraft, electronic parts, and electric equipment to furniture, devices, and so on. We are ready to deliver carcinogen-free and eco-friendly products safe for users, residents, and pets.

Thai Metal is committed to environmental responsibility. Our greenhouse gas emission is 20% lower than the standard, contributing to a more livable society. By choosing our products, you actively support the fight against global warming.

Our entire manufacturing process creates neither carcinogen nor other harmful chemicals preventing any residues which may be harmful to users and residents.



QUALITY OF LIVING WITH SAFE & SUSTAINABLE ALUMINIUM



Aluminium of Thai Metal

Thai Metal's technology generates no carcinogen



General Aluminium

Chromium residue in the color stain is a kind of carcinogens

Thai Metal's aluminium is 100% carcinogen-free, as we choose manufacturing technology with consideration on the safety of residents and everyone who will be exposed to the aluminium. According to International Agency for Research on Cancer (IARC), chromium is classified as a carcinogenic agent, highly harmful to the environment. Still, it is widely used in the aluminium industry due to the cheaper manufacturing cost for aluminium surface preparation before coating. Chromium could remain in aluminium pieces and enter the human body via skin contact or inhalation and eventually cause adverse effect against users.

With our care for the sanitation and safety of employees and customers, and in accordance with our organizational mission on social, communal, and environmental responsibility, Thai Metal chooses Zirconium Plus innovation which is carcinogen-free, safe and causes no harm against humans in replacement of the use of chromium. Hence, you can be rest assured of our products' quality and safety. They contain no harmful substance and are also eco-friendly.



Non Chrome Technology



No Lead & Mercury



Care and Coat Protection



Zirconium Plus



25 Years Shield

THAI METAL | LOW CARBON ORGANIZATION



Thai Metal

Drives our aluminium business to be the first “low-carbon” organization in Thailand.

We want to collaboratively advance sustainability in the construction and real estate industry.



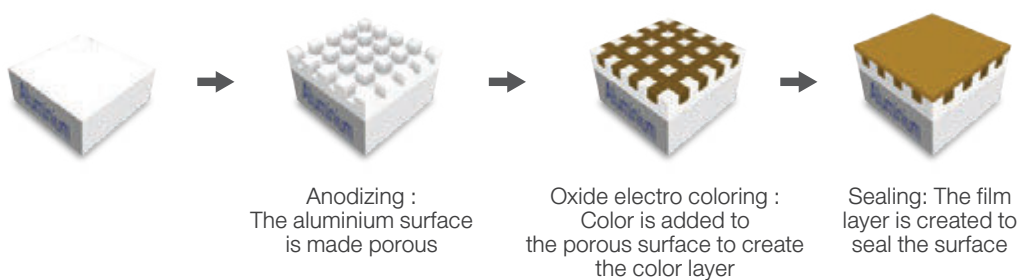
Based on our organizational mission of social and environmental care, **Thai Metal** is the first Thai aluminium extruder which to register Carbon Footprint for Organization (CFO) & Carbon Footprint of Product (CFP) with Thailand Greenhouse Gas Management Organization (TGO). **We can reduce pollutant gas emissions of “3,758” tons per year, equivalent to growing more than 150,000 trees**”. This contributes to the alleviation of the greenhouse problem which is affecting the global climate and ecosystem.

With the “**Thai Metal Green Billet**” technology whose Co_2 emission is 60% lower than the standard, aluminium of Thai Metal helps relieve the global warmth for the sustainable and better quality of life. Every phase of our manufacturing process is carefully invented to help protect the world without compromising the product quality. This is in line with the philosophy of many organizations, projects, private sector, public sector or household which have awareness and support the sustainable environmental management and conservation.



ANODIZING PROCESS

For beautiful colors and smooth surfaces, we use our distinctive anodizing technology to safeguard the surface and finely defining the aluminium's color. The available surface textures include a natural surface with the stripes caused by the rolling process (general grade) and a smooth surface without stripes. The latter is suitable for the projects requiring the door-window surface to be fine and smooth. We can manufacture with a film thickness of 5-25 microns and anodize the aluminium pieces with a maximum length of 7 meters. Therefore our products can seamlessly meet all design requirements.



Anodizing Process Examination

Test process	Test standards
Film thickness _____	ASTM D1400
Color tolerance and differences _____	ASTM D2244
Salt spray test* _____	ASTM B117, ASTM D1654

*Random test during the manufacturing process. The maximum test hour is 300 hours.

STANDARD COLOUR



Natural Anodize TM3

Thickness: 10 (+/-02) Micron
Texture: Anodizing
NA



Light Bronze TM3

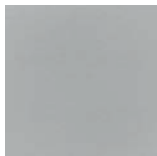
Thickness: 10 (+/-02) Micron
Texture: Anodizing
512



Infinite Black TM3

Thickness: 10 (+/-02) Micron
Texture: Anodizing
519

SPECIAL COLOUR



Natural Anodize TM2

Thickness: 10 (+/-02) Micron
Texture: Satin
NA



Dark Bronze TM3

Thickness: 10 (+/-02) Micron
Texture: Anodizing
514



Champagne Bronze TM2

Thickness: 10 (+/-02) Micron
Texture: Satin
510



Quartz Black TM3

Thickness: 10 (+/-02) Micron
Texture: Anodizing
517



Light Bronze TM2

Thickness: 10 (+/-02) Micron
Texture: Satin
512

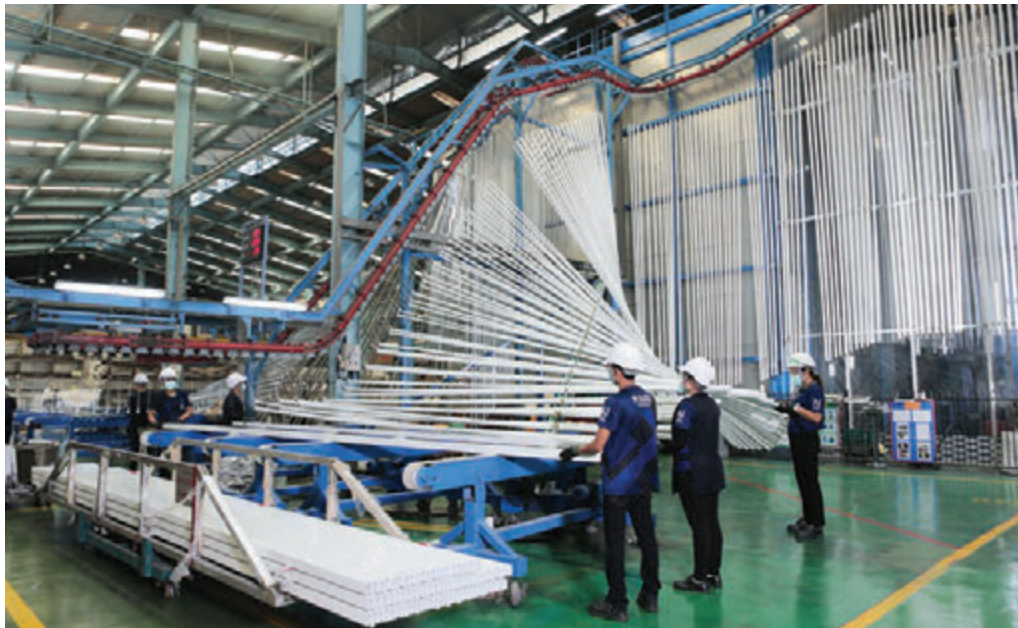


Infinite Black TM2

Thickness: 10 (+/-02) Micron
Texture: Satin
519

Note : Special colors require an additional manufacturing period of 45-60 days.

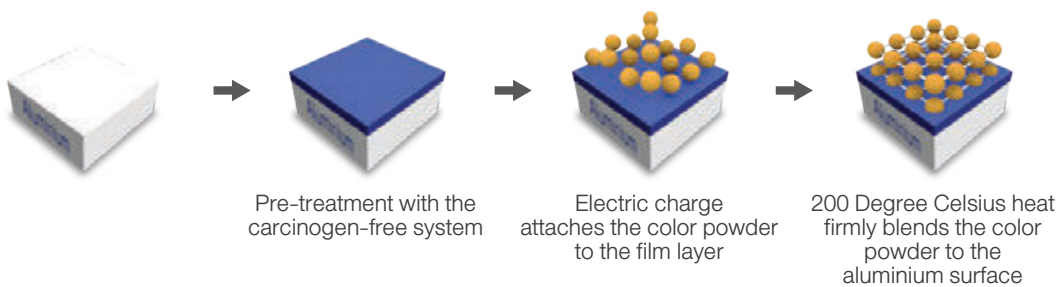
*The displayed color could be slightly different from the actual color due to the printing process.



POWDER COATING PROCESS

With PowderTech™ innovation, - the first and best vertical powder coating process in Thailand, we realize the inspiration and different designs with lively and durable colors. This technology can coat workpieces of a maximum 7.2 m. length and a thickness of 60-80 microns. This process is done under a temperature of 200 degrees Celsius to seamlessly blend the powder molecules to the aluminium surface, preventing the color from peeling or flaking off. The surface color is smooth, consistent and durable under all weather conditions including sunlight, UV, ocean vapor and moisture. The workpieces do not rust throughout their life cycle. You can be certain of high quality in every workpiece with a warranty from 10 to 25 years. We choose eco-friendly innovation free from carcinogens to enhance users' safety and give added value to your project.

The designers determine the shades of color in accordance with global standards, such as RAL or Pantone, together with other specifications such as film layer width, warranty period, etc.

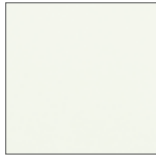


Powder Coating Process Examination

Test process	Test standards
Adhesion test _____	ASTM D3359 or DIN 53151 or ISO 2409
Film hardness _____	ASTM D3363
Bend test _____	ASTM D522
Impact test _____	ASTM D2794
Film thickness _____	ASTM D1400
Specular gloss _____	ASTM D523
Color tolerance and differences _____	ASTM D2244
Humidity resistance* _____	ASTM D2247, ASTM D4585

*Random test during the manufacturing process. The maximum test hour is 4,000 hours.

STANDARD COLOUR



Carera White

Thickness: 60-80 Micron
Gloss: 80% (+/-05%)
Texture: Smooth



Sky White

Thickness: 60-80 Micron
Gloss: 80% (+/-05%)
Texture: Smooth



Autumn Brown

Thickness: 60-80 Micron
Gloss: 35% (+/-05%)
Texture: Smooth



Galaxy Grey

Thickness: 60-80 Micron
Gloss: 08% (+/-05%)
Texture: Sahara



Space Black

Thickness: 60-80 Micron
Gloss: 30% (+/-05%)
Texture: Smooth

SPECIAL COLOUR



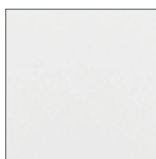
Teak Brown

Thickness: 60-80 Micron
Gloss: 08% (+/-05%)
Texture: Sahara



Dark Oak

Thickness: 60-80 Micron
Gloss: 08% (+/-05%)
Texture: Sahara



Mineral White

Thickness: 60-80 Micron
Gloss: 12% (+/-05%)
Texture: Sahara



Quart Grey

Thickness: 60-80 Micron
Gloss: 12% (+/-05%)
Texture: Sahara



Shine Grey

Thickness: 60-80 Micron
Gloss: 30% (+/-05%)
Texture: Smooth



Champagne Grey

Thickness: 60-80 Micron
Gloss: 12% (+/-05%)
Texture: Sahara



Cobalt Black

Thickness: 60-80 Micron
Gloss: 12% (+/-05%)
Texture: Sahara

Note : Special colors require an additional manufacturing period of 45-60 days.
*The displayed color could be slightly different from the real color due to the printing process.





We take into account the project's functionality, beauty and suitability.

Thai Metal's door-window products are categorized into the following series based on their intended functions :

EXTERIOR

For exterior areas exposed to wind, rain and dust, the doors and windows should be resistant to water and wind. They should prevent the passage of noise, air and insects. The multi-point lock system prevents burglary. The products are available in both Thai standard and high-performance (X-Series) systems include :

- Sliding doors and window
- Casement & awning window
- Casement door
- Folding door
- Fixed light window
- Curtain wall

INTERIOR

Interior areas are not directly exposed to water, wind, dust and rain. The products are ideally used for dividing or partitioning zones within the house. They are designed with no-bottom track, or with a flat-bottom track. Rest assured that a baby or stroller will not meet any obstacles. They also give a tidy appearance. The interior doors and windows or INT-series include;

- Low threshold sliding door
- Top-track sliding door
- Swing door
- Pivot door





EXTERIOR

SLIDING SYSTEM

Sliding doors and windows can be categorized according to their functionality as follows:

X-Series System

X20 model is the sliding doors and windows suitable for large door & window sizes with a 1.2 mm. thickness which best prevent water, wind, air, dust and insects.

X10 model is the sliding doors and windows, developed from the Thai standard system to enhance its waterproofing properties. The thickness is 1.2 mm.

Both models are tested at Testing Center of Doors, Windows and Curtain Wall in Buildings (TDWCB), Kasetsart University, Kamphaeng Saen Campus.

The test was performed with the 2,200 mm.-high and 1,800 mm.-wide door of X20 model.

The test was performed with the 1,500 mm.-high and 1,800 mm.-wide window of X10 model.

TS (Thai Standard) System

Thai Metal's TS sliding doors and windows are designed to be adequately waterproof. The door and window cross sections are designed to enable installation on a multi-level floor. The 2 or 3 rolling tracks with 1.0-2.0 mm. thickness can be added. The Thai standard system is the prevailing system in Thailand. Hence, it is widely available.



DESIGN OPTIONS





SPECIFICATION

X20 SERIES

X10 SERIES

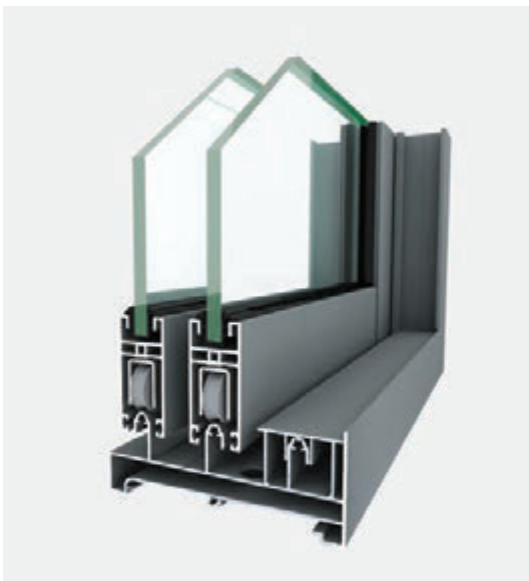
TS SYSTEM

MAXIMUM WIDTH	1500 mm	1200 mm	1200 mm
MAXIMUM HEIGHT	3200 mm	2200 mm	2200 mm
QUANTITY PER SET (MIN)	2 leaves	2 leaves	2 leaves
QUANTITY PER SET (MAX)	6 leaves	4 leaves	4 leaves
FRAME DEPTH	101.60 mm	101.60 mm	101 60 mm
SILL HEIGHT	44.45 mm	44.45 mm	20.00 44.45 mm
GLASS THICKNESS	5 6 8 10 mm	5 6 8 mm	5 6 8 mm
GLASS GROOVE	12.70 mm	9.50 mm	9.50 mm
ALUMINIUM THICKNESS	1.20 mm	1.20 mm	1.00-2.00 mm
INSECT SCREEN SYSTEM	Yes	Yes	Yes
LOCKING	Single / Multi Point	Single / Multi Point	Single
SEALANT GAP	5 mm / side	5 mm / side	5 mm / side



SLIDING SYSTEM : X20 model

The outstanding and elegant design raises the standard of door/window frames. The products are designed and developed to demonstrate optimum efficiency in the prevention of water, noise, air and dust, including all kinds of insects, lizards and other outside disturbances. The products are sturdy and can be manufactured in bigger sizes. They are durable even under hurricane-speed wind. The door/window frames can save energy by keeping cold air inside buildings. The frames are easily slide without resistance or rolling-out due to the roller running track. The products are compatible with both single-lock and multi-point lock systems.



PERFORMANCE

WIND RESISTANCE _____ 2000 Pa
 AIR CLASS _____ 300 Pa
 WATER TIGHTNESS _____ 180 Pa

SPECIFICATION

MAXIMUM WIDTH _____ 1500 mm
 MAXIMUM HEIGHT _____ 3200 mm
 QUANTITY PER SET (MIN) _____ 2 leaves
 QUANTITY PER SET (MAX) _____ 6 leaves
 FRAME DEPTH _____ 101.60 mm (4 inches)
 SILL HEIGHT _____ 44.45 mm (13/4 inches)
 GLASS THICKNESS _____ 5 | 6 | 8 | 10 mm
 GLASS GROOVE _____ 12.70 mm
 ALUMINIUM THICKNESS _____ 1.20 mm
 INSECT SCREEN SYSTEM _____ Yes
 LOCKING _____ Single / Multi Point
 SEALANT GAP _____ 5 mm / side



Water Proof



Wind Loads



Sound Proof



Secured Lock



SLIDING SYSTEM : X10 Model

The stunning and matching design adds modernity to all zones. The products are designed to be strong and can be manufactured in larger sizes. The waterproof bottom track prevent the passage of water, noise, wind, air, insects and other outside disturbances through the doors or windows. The products are compatible with both single-lock and multi-point lock systems.

PERFORMANCE

WIND RESISTANCE _____ 1200 Pa

WATER RESISTANCE _____ 120 Pa

SPECIFICATION

MAXIMUM WIDTH _____ 1200 mm

MAXIMUM HEIGHT _____ 2200 mm

QUANTITY PER SET (MIN) _____ 2 leaves

QUANTITY PER SET (MAX) _____ 4 leaves

FRAME DEPTH _____ 101.60 mm (4 inches)

SILL HEIGHT _____ 44.45 mm (13/4 inches)

GLASS THICKNESS _____ 5 | 6 | 8 mm

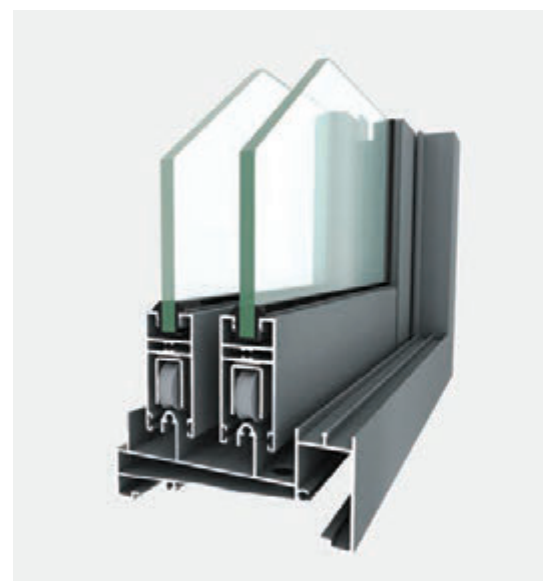
GLASS GROOVE _____ 9.50 mm

ALUMINIUM THICKNESS _____ 1.20 mm

INSECT SCREEN SYSTEM _____ Yes

LOCKING _____ Single / Multi point

SEALANT GAP _____ 5 mm / side



Water
Proof



Wind
Loads



Sound
Proof



Secured
Lock



SLIDING SYSTEM : TS (Thai Standard) Model

The products are designed under a simple concept to perfectly integrate the interior living space with the outdoor natural environment. They can tolerate high wind speed and prevent the passage of water at a satisfactory level, suitable for doors or windows of moderate size. The door and window cross sections are designed to enable installation on a multi-level floor. The 2 or 3 rolling tracks with 1.0-2.0 mm thickness can be added. The products are compatible with the single-lock system (with thicknesses of 1.0, 1.2, 1.5 and 2.0 mm.)

SPECIFICATION

MAXIMUM WIDTH	1200 mm
MAXIMUM HEIGHT	2200 mm
QUANTITY PER SET (MIN)	2 leaves
QUANTITY PER SET (MAX)	4 leaves
FRAME DEPTH	101.60 mm
SILL HEIGHT	20.00 44.45 mm
GLASS THICKNESS	5 6 8 mm
GLASS GROOVE	9.50 mm
ALUMINIUM THICKNESS	1.00-2.00 mm
INSECT SCREEN SYSTEM	Yes
LOCKING	Single
SEALANT GAP	5 mm / side







CASEMENT & AWNING SYSTEM

Casement & Awning windows can be categorized according to their functions as follows :

X-Series System

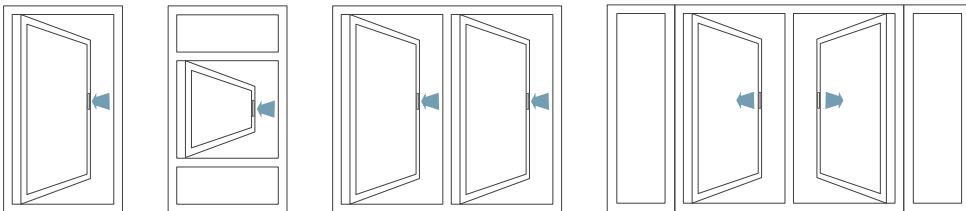
A40 model is compatible with doors and windows of very large sizes or doors and windows of high rise building which need to tolerate strong winds.

TS (Thai Standard) System

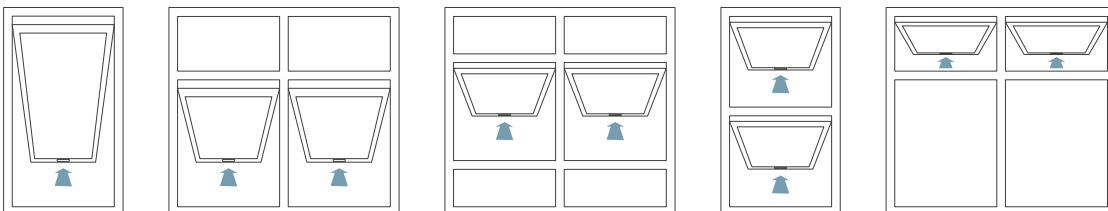
The products of TS (Thai standard) system are available in smaller frames. The slim appearance is perfect for doors and windows of smaller sizes. They can tolerate wind at ground level.



DESIGN OPTIONS



Example : Casement windows



Example : Awning windows





Friction Stay

The friction stay is wind-resistant to prevent folding. The window requires pulling forces to be closed. The friction stays are available in many sizes to bear different weights of small and large windows.

- Awning Window: Install the friction stay at the top, right and left of the window.
- Casement Window: Install the friction stay at the top and bottom of each window side.



Hinge

The butterfly-shaped hinge generates no friction. Very large windows may need more hinges to bear more weight. They can be used with the friction stay to keep the window open and not be closed by strong wind.

- Awning Window: Install the hinge at the top of the window.
- Casement Window: Install the hinge on each window side.

SPECIFICATION

A40 SERIES

TS SYSTEM

MAXIMUM WIDTH	600 mm	800 mm
MAXIMUM HEIGHT	2400 mm	1200 mm
QUANTITY PER SET (Min)	1 leave	1 leave
QUANTITY PER SET (Max)	2 leaves	2 leaves
FRAME DEPTH	101.60 mm	101.60 mm
SILL HEIGHT	25.40 44.45 50.80 mm	25.40 44.45 50.80 mm
GLASS THICKNESS	5 6 8 10 mm	5 6 8 mm
GLASS GROOVE	12.70 mm	8 mm
ALUMINIUM THICKNESS	1.50 mm	1.50-2.00 mm
LOCKING	Single / Multi Point	Single
SEALANT GAP	5 mm / side	5 mm / side



CASEMENT & AWNING SYSTEM : A40 Model

This model is especially designed to allow for good ventilation. It can effectively prevent the passage of water, noise and wind and is suitable for windows of very large sizes or high-rise building windows which are required to tolerate strong wind. They can be installed as single or double windows or installed with a fixed light window, based on your preferences. For more safety, both single-lock and multi-point lock, together with the handle can be installed.



PERFORMANCE

WIND RESISTANCE _____ 2000 Pa

AIR CLASS _____ 300 Pa

WATER TIGHTNESS _____ 300 Pa

SPECIFICATION

MAXIMUM WIDTH _____ 600 mm

MAXIMUM HEIGHT _____ 2400 mm

QUANTITY PER SET (MIN) _____ 1 leave

QUANTITY PER SET (MAX) _____ 2 leaves

FRAME DEPTH _____ 101.60 mm

SILL HEIGHT _____ 25.40 | 44.45 | 50.80 mm

GLASS THICKNESS _____ 5 | 6 | 8 | 10 mm

GLASS GROOVE _____ 12.70 mm

ALUMINIUM THICKNESS _____ 1.50 mm

LOCKING _____ Single / Multi point

SEALANT GAP _____ 5 mm / side

The test results were obtained by Testing Center of Doors, Windows, and Curtain Wall in Buildings (TDWCB), Kasetsart University. The test was performed with the 1,200 mm.-high and 1,500 mm.-wide window.



Water
Proof



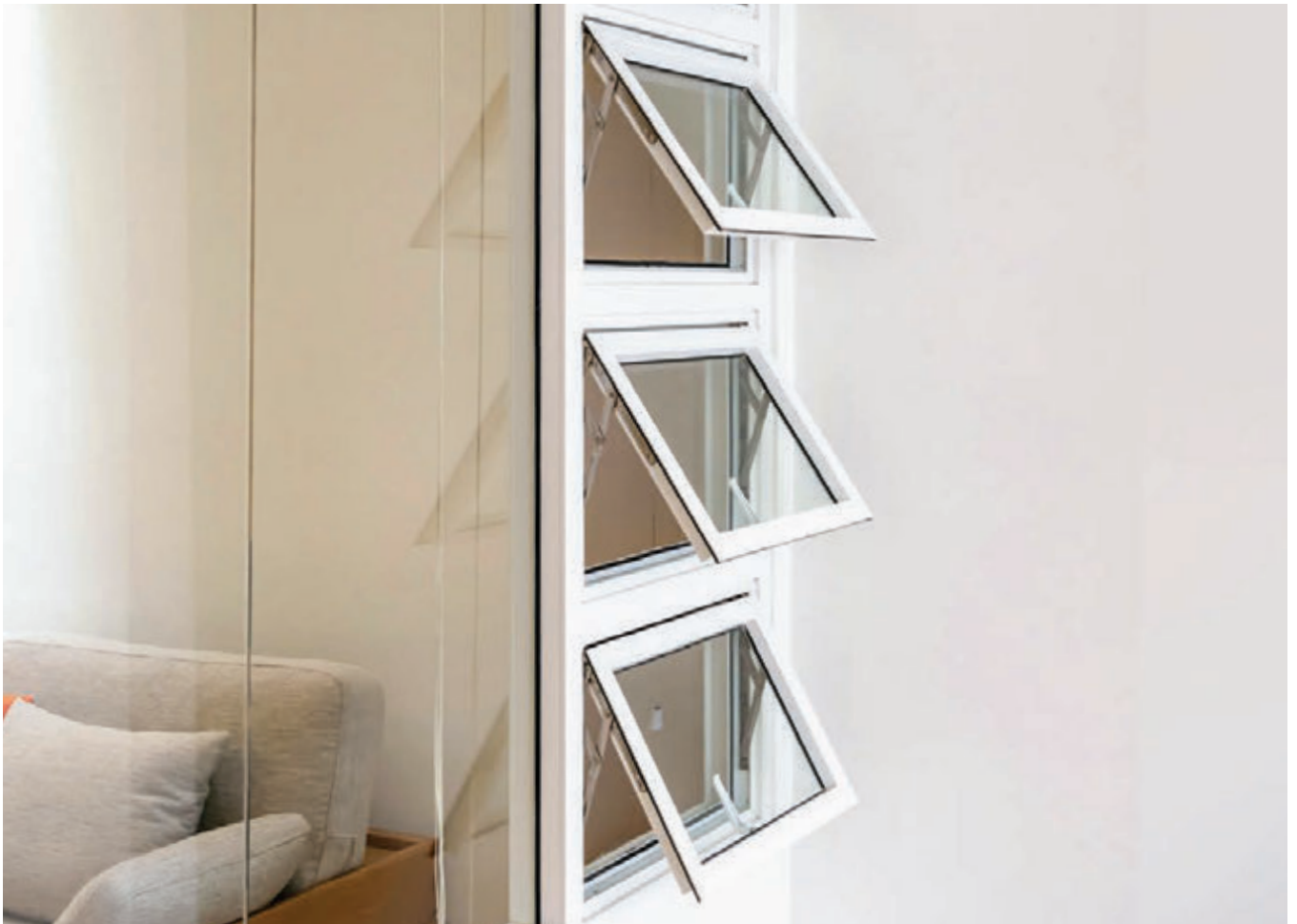
Wind
Loads



Sound
Proof



Secured
Lock



CASEMENT & AWNING SYSTEM : TS Model

The products are designed with the small and durable frame to give the slim appearance. They allow good air ventilation and finely increase the wall opening, suitable for the small windows which are intended to tolerate the wind at the ground level.

SPECIFICATION

MAXIMUM WIDTH	_____	800 mm
MAXIMUM HEIGHT	_____	1200 mm
QUANTITY PER SET (Min)	_____	1 leave
QUANTITY PER SET (Max)	_____	2 leaves
FRAME DEPHT	_____	101.60 mm
SILL HEIGHT	_____	25.40 44.45 50.80 mm
GLASS THICKNESS	_____	5 6 8 mm
GLASS GROOVE	_____	8 mm
ALUMINIUM THICKNESS	_____	1.50, 2.00 mm
LOCKING	_____	Single
SEALANT GAP	_____	5 mm / side





CASEMENT DOOR

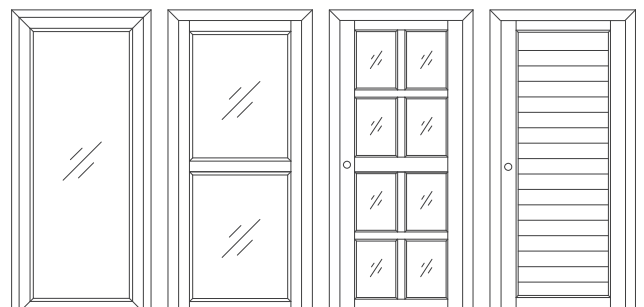
These doors meet all functional requirements. You can choose from a combination of materials, such as mirrored or corrugated aluminum bars or even install them with aluminium fixed light windows. They can function as house or office doors, for both the interior or exterior. The rabbit joints are attached around the door. The installation will determine whether the casement door will be used as either a pull or push door. They can be installed as either single or double doors.

- The interior installation does not need the bottom threshold.
- The bottom threshold could be added in case of exterior installation or exposure to water, wind, or dust.
- An electric lock, finger scanner or door closer can be added to enable the door to automatically close.
- The door frame fitting angle can be set at either 45 or 90 degrees.

SPECIFICATION

MAXIMUM WIDTH	_____	1200 mm
MAXIMUM HEIGHT	_____	3000 mm
QUANTITY PER SET (Min)	_____	1 leave
QUANTITY PER SET (Max)	_____	2 leaves
FRAME DEPTH	_____	101.60 mm
SILL HEIGHT	_____	44.45 mm
GLASS THICKNESS	_____	5 6 8 10 mm
GLASS GROOVE	_____	12.90 mm
ALUMINIUM THICKNESS	_____	1.30-2.00 mm
LOCKING	_____	Single
SEALANT GAP	_____	5 mm / side

DESIGN OPTIONS





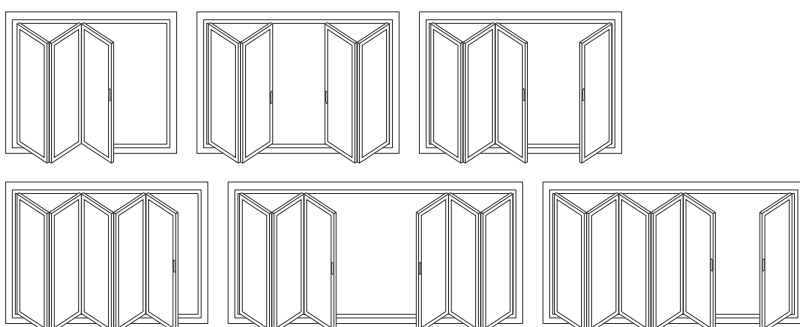
FOLDING SYSTEM : F40 model

The F40 model door is designed to allow complete folding to its edge, so that you can fully enjoy the view and natural light from outside. It gives an airy, spacious, and comfy feeling and effectively prevents the passage of water, noise, wind, air or outside disturbances. The design allows for easy sliding without friction. The single-lock and multi-point lock systems raise safety, being able to prevent burglary. They are highly sturdy, durable, and compatible with different usages. The door can be installed to separate interior zones with a track embedded in the floor to prevent any stumbling or installed outside with the waterproof bottom track.



The embedded track: The frame is flat and at the same level as the floor to prevent residents tripping over and allowing baby strollers or wheelchairs to easily pass.

DESIGN OPTIONS





SPECIFICATION

MAXIMUM WIDTH _____	800 mm
MAXIMUM HEIGHT _____	3000 mm
QUANTITY PER SET (Min) _____	2 leaves
QUANTITY PER SET (Max) _____	12 leaves
FRAME DEPHT _____	101.60 mm
SILL HEIGHT _____	46 mm
GLASS THICKNESS _____	5 6 8 10 mm
GLASS THICKNESS (Max) _____	16 mm
GLASS GROOVE _____	12.70 mm
ALUMINIUM THICKNESS _____	1.50 mm
LOCKING _____	Single / Multi Point
SEALANT GAP _____	5 mm / side





FIXED LIGHT WINDOW

Fixed light windows are designed to fully capture and embrace the surrounding scenery and natural light from outside. It gives an airy, spacious, and comfy feeling. You can freely combine the fixed light window with a door / window of other series, as you deem appropriate.

You can choose from three frame sizes; 1³/₄ x 4, 2" x 4" and 1" x 4". The smallest size gives a slim appearance, making it suitable for interior installation. Each frame size has a different aluminum thickness to accommodate various mirror thicknesses

SPECIFICATION

MAXIMUM WIDTH	_____	1200 mm
MAXIMUM HEIGHT	_____	3200 mm
FRAME DEPTH	_____	101.60 mm
SILL HEIGHT	_____	25.40 44.45 50.80 mm
GLASS THICKNESS	_____	5 6 8 10 mm
GLASS GROOVE	_____	12.70 mm
ALUMINIUM THICKNESS	_____	1.00-2.30 mm
SEALANT GAP	_____	5 mm / side





CURTAIN WALL SYSTEM (UNITIZED)

We can manufacture curtain walls of unitized model with in larger dimensions than typical fixed light windows to ensure wind resistance and strength, they can be installed in locations where these qualities are especially required. Curtain walls with different frame sizes are manufactured as finished products ready to be installed.

SPECIFICATION

MAXIMUM WIDTH _____	1500 mm
MAXIMUM HEIGHT _____	3500 mm
FRAME DEPHT _____	101.60 mm
SILL HEIGHT _____	50.80 mm
GLASS THICKNESS _____	6 8 10 mm
GLASS GROOVE _____	12.50 mm
SEALANT GAP _____	5 mm / side



CURTAIN WALL SYSTEM (STICK WALL)

We can manufacture stick wall model curtain walls in larger dimensions than typical fixed light windows. They are suitable for skyscrapers or rooms with a spacious and airy design. They can be modified to offer various functions. The curtain walls are assembled by arranging fixed light windows in a row. You can choose from various frame sizes.

Available frame sizes

1" ³/₄ x 3" | 2" x 2" | 2" x 4" | 2" x 5"
2.5" x 4" | 2.5" x 5" | 2.5" x 6" | 2.5" x 8.5"

SPECIFICATION

MAXIMUM WIDTH _____ 1500 mm
MAXIMUM HEIGHT _____ 3500 mm
FRAME DEPTH _____ 140 mm
SILL HEIGHT _____ 78.50 mm
GLASS THICKNESS _____ 6 | 8 | 10 | 12 mm
GLASS GROOVE _____ 21 mm
SEALANT GAP _____ 5 mm / side





INTERIOR



LOW THRESHOLD SLIDING DOOR

Low threshold sliding doors are designed for interior usage or locations not exposed to water, rain, wind, or dust. It helps divide the domestic space into zones or separate rooms to give privacy. Low threshold sliding doors comes with a low bottom track to prevent stumbling.

SPECIFICATION

MAXIMUM WIDTH _____	1200 mm
MAXIMUM HEIGHT _____	2200 mm
QUANTITY PER SET (Min) _____	2 leaves
QUANTITY PER SET (Max) _____	6 leaves
FRAME DEPHT _____	101.60 mm
SILL HEIGHT _____	12.70 mm
GLASS THICKNESS _____	5 6 8 mm
GLASS GROOVE _____	9.50 mm
ALUMINIUM THICKNESS _____	1.00-1.30 mm
LOCKING _____	Single
SEALANT GAP _____	5 mm / side



TOP TRACK SLIDING DOOR

Top track sliding doors are designed to be durable and give an elegant look. They are suitable as an interior installation to separate different zones. Alternatively, they may be installed in a crowded building with high foot-traffic throughout the day. Top track sliding doors are not designed to prevent the water leakage, dust, or air.

SPECIFICATION

MAXIMUM WIDTH	1200 mm
MAXIMUM HEIGHT	2500 mm
QUANTITY PER SET (Min)	2 leaves
QUANTITY PER SET (Max)	4 leaves
FRAME DEPTH	101.60 mm
SILL HEIGHT	44.45 mm
GLASS THICKNESS	5 6 8 10 mm
GLASS GROOVE	12.70 mm
ALUMINIUM THICKNESS	1.30-2.30 mm
LOCKING	Single
SEALANT GAP	5 mm / side



SWING DOOR

Swing doors are versatile and suitable for both home and office use, as they can be easily opened and closed, making them ideal for high-traffic entrances. They can be both pushed and pulled (180 degrees), and are suitable for interior installation. In case of exterior installation, they should be covered under the overhang, as they are not equipped with a waterproof system. They can be used as either single or double doors.

- Installation can be done without a threshold or with a non-waterproof threshold.
- They can be installed with a hydraulic door stopper or the so-called door closer embedded in a door frame and the floor, serving as a hinge.

SPECIFICATION

MAXIMUM WIDTH	_____	1500 mm
MAXIMUM HEIGHT	_____	2500 mm
QUANTITY PER SET (MIN)	_____	1 leave
QUANTITY PER SET (MAX)	_____	2 leaves
FRAME DEPTH	_____	101.60 mm
SILL HEIGHT	_____	44.45 mm
GLASS THICKNESS	_____	5 6 8 10 mm
GLASS THICKNESS (MAX)	_____	16 mm
GLASS GROOVE	_____	12.70 mm
ALUMINIUM THICKNESS	_____	1.30-2.30 mm
LOCKING	_____	Single
SEALANT GAP	_____	5 mm / side



PIVOT DOOR

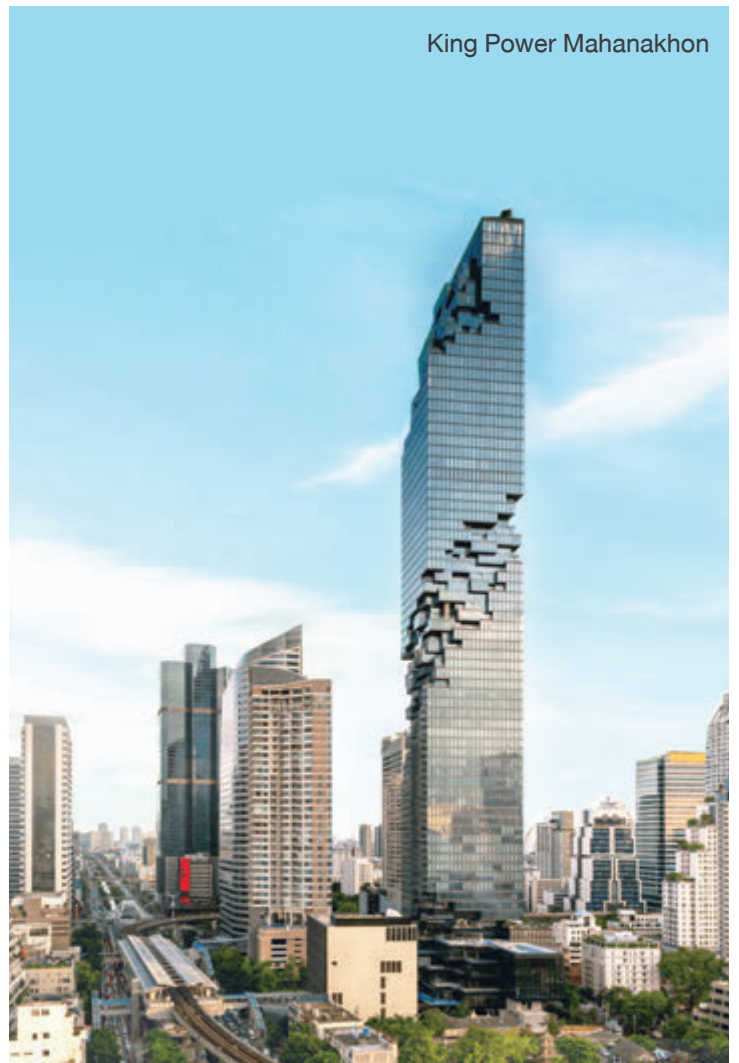
Pivot doors can rotate 360 degrees, adding style to any house.

- It can be installed either inside or outside the house to divide spaces. The door is equipped with a track embedded in the floor.
- If multiple pivot doors are installed in a row, it will expand the entrance and exit space.

SPECIFICATION

MAXIMUM WIDTH	_____	1500 mm
MAXIMUM HEIGHT	_____	2500 mm
QUANTITY PER SET (Min)	_____	1 leave
QUANTITY PER SET (Max)	_____	4 leaves
FRAME DEPTH	_____	101.60 mm
SILL HEIGHT	_____	44.45 mm
GLASS THICKNESS	_____	5 6 8 10 mm
GLASS THICKNESS (Max)	_____	16 mm
GLASS GROOVE	_____	12.70 mm
ALUMINIUM THICKNESS	_____	1.30-2.30 mm
LOCKING	_____	Single
SEALANT GAP	_____	5 mm / side

PROJECT REFERENCE



Origin Plug & Play Nonthaburi Station



The River, Bangkok



Muniq Langsuan



The Saint Residences



La Citta, Thonglor



The Ninth Tower



PROJECT REFERENCE

Setthasiri Thawiwattana



VIVE Ekkamai – Ramintra



Welton Rama3



Supalai Urbana Chaengwatthana-Pakkret



The Prime Embrace Chatuchot-Ramintra





PROJECT REFERENCE



The EmQuartier, Bangkok



Police College



Siriraj Hospital, Bangkok





Mega Bangna, Samutprakarn



Airport Rail Link, Bangkok



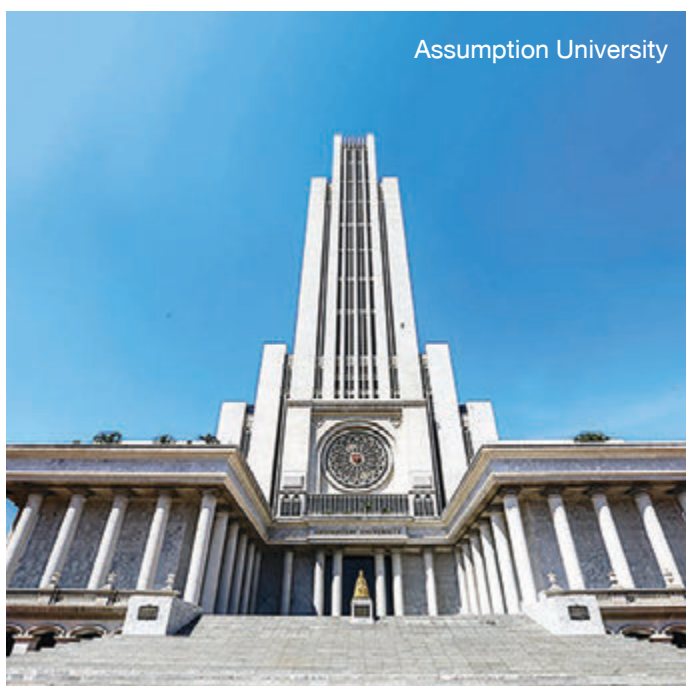
Chamchuri Square, Bangkok



Kasikorn Bank



Mahidol University Faculty of Dentistry, Bangkok



Assumption University



The United Nations, Bangkok

TRUST IN QUALITY AND WORLD-CLASS STANDARD

Thai Metal's products are under strict quality assurance and quality control standards. We control the aluminium profile manufacturing with the international standards, such as Japanese Industrial Standards Committee (JIS), American Society for Testing Materials (ASTM), Deutsches Institut für Normung (or German institute for standardization – DIN) and Thai Industrial Standards Institute (TISI). We also obtain Thailand Trust Mark to build your trust that our product quality and service meet the global standards.

Aside from the product quality, we also consider the effects on the environment. Therefore, we are committed to a stringent greenhouse gas emission policy. Thai Metal is the first Thai Aluminium manufacturer to register Carbon Footprint for Organization (CFO) & Carbon Footprint of Product (CFP) with Thailand Greenhouse Gas Management Organization (TGO).

- 1 License to Display Standard Mark on the Industrial Product, Mor. Aor. Kor. 284-2560
- 2 License to Display Standard Mark on the Industrial Product, Mor. Aor. Kor. 218-2520
- 3 Made in Thailand (MiT) (Thai product certification by the Federation of Thai Industries)
- 4 Thailand Trust Mark (T Mark)
- 5 Carbon Footprint registration certificate
- 6 ISO 9001:2015 for quality management system
- 7 ISO 14001:2015 for environmental management system
- 8 IATF 16949:2016 for automotive quality management system
- 9 ISO 50001:2018 for energy management system (EnMS)
- 10 ISO 45001:2018 for occupational health and safety (OH&S) management system

 แบบ ๒๒๖
คำศัพท์ ๕

ใบอนุญาตที่ ๕163-50/294

ใบอนุญาต
และหนังสืออนุญาตการฐานสินค้าในเขตอุตสาหกรรม
สำหรับโรงงานในมาตรา ๒๖ แห่งพระราชบัญญัติโรงงานและในเขตอุตสาหกรรม พ.ศ. ๒๕๓๘
ภายใต้การกำกับดูแลการฐานสินค้าในเขตอุตสาหกรรม
ของใบอนุญาตฉบับนี้
บริษัท ไทเมทัลอล อลูมิเนียม จำกัด
เลขประจำตัวผู้เสียภาษี ๐113557019021

และหนังสืออนุญาตการฐานสินค้าในเขตอุตสาหกรรม เลขผู้ขึ้นทะเบียน

ที่ท่าขนถ่ายฐานสินค้าในเขตอุตสาหกรรม เลขผู้ขึ้นทะเบียน

มาตรฐานเลขที่ ๒๐๔-2560
คำศัพท์ตามคำ ๖71๓1 ไทเมทัลอล อลูมิเนียม จำกัด
เขตอุตสาหกรรม -
ตั้งอยู่ที่ 205 หมู่ที่ 2 อ.ชะอำ จ.ประจวบคีรีขันธ์
ถนน ๒๒๒๓๓ ตำบลชะอำ อำเภอชะอำ จังหวัดประจวบคีรีขันธ์ เมืองสมุทรปราการ
จังหวัด สมุทรปราการ ทะเบียนโรงงานเลขที่ 10110400225210
รายละเอียดของสินค้าในเขตอุตสาหกรรมและในโรงงาน และในโรงงานคำศัพท์ ๖
บันทึกการยื่นขอและในโรงงานคำศัพท์ ๖

ทั้งนี้ ผู้รับใบอนุญาตต้องปฏิบัติตามเงื่อนไขในการอนุญาตภายใต้การกำกับดูแล
ฉบับที่ ๘ วันที่ 20 กรกฎาคม 2565


(นายสมพร โสภณการ)
ผู้อำนวยการกองควบคุมโรงงาน
ปฏิบัติราชการแทน
ภายใต้การกำกับดูแลการฐานสินค้าในเขตอุตสาหกรรม

 #บัตรอนุญาตสินค้าในเขตอุตสาหกรรม
 เลขที่ใบ #บัตรอนุญาตสินค้าในเขตอุตสาหกรรม: ๕163-50/294
Date: 2023/07/20

1

 แบบ ๒๒๖
คำศัพท์ ๕

ใบอนุญาตที่ 7169-4/218

ใบอนุญาต
และหนังสืออนุญาตการฐานสินค้าในเขตอุตสาหกรรม
สำหรับโรงงานในมาตรา ๒๖ แห่งพระราชบัญญัติโรงงานและในเขตอุตสาหกรรม พ.ศ. ๒๕๓๘
ภายใต้การกำกับดูแลการฐานสินค้าในเขตอุตสาหกรรม
ของใบอนุญาตฉบับนี้
บริษัท ไทเมทัลอล อลูมิเนียม จำกัด
เลขประจำตัวผู้เสียภาษี ๐113557019021

และหนังสืออนุญาตการฐานสินค้าในเขตอุตสาหกรรม เลขผู้ขึ้นทะเบียน

ที่ท่าขนถ่ายฐานสินค้าในเขตอุตสาหกรรม เลขผู้ขึ้นทะเบียน

มาตรฐานเลขที่ ๒๐๔-2520
คำศัพท์ตามคำ ๖71๓1 ไทเมทัลอล อลูมิเนียม จำกัด
เขตอุตสาหกรรม -
ตั้งอยู่ที่ 205 หมู่ที่ 2 อ.ชะอำ จ.ประจวบคีรีขันธ์
ถนน ๒๒๒๓๓ ตำบลชะอำ อำเภอชะอำ จังหวัดประจวบคีรีขันธ์ เมืองสมุทรปราการ
จังหวัด สมุทรปราการ ทะเบียนโรงงานเลขที่ 10110400225210
รายละเอียดของสินค้าในเขตอุตสาหกรรมและในโรงงาน และในโรงงานคำศัพท์ ๖
บันทึกการยื่นขอและในโรงงานคำศัพท์ ๖

ทั้งนี้ ผู้รับใบอนุญาตต้องปฏิบัติตามเงื่อนไขในการอนุญาตภายใต้การกำกับดูแล
ฉบับที่ ๘ วันที่ 11 ตุลาคม 2560


(นายสมพร โสภณการ)
ผู้อำนวยการกองควบคุมโรงงาน
ปฏิบัติราชการแทน
ภายใต้การกำกับดูแลการฐานสินค้าในเขตอุตสาหกรรม

 #บัตรอนุญาตสินค้าในเขตอุตสาหกรรม
 เลขที่ใบ #บัตรอนุญาตสินค้าในเขตอุตสาหกรรม: 7169-4/218
Date: 2023/07/20

2

ใบรับรอง MIT


Made in Thailand

ใบรับรองนี้มอบให้
สมาคมอุตสาหกรรมเหล็กไทย (FTI) ของสมาชิก
เพื่อใช้เพื่อ อลูมิเนียมจากโรงงานในเขตอุตสาหกรรม
ภายใต้ชื่อ บริษัท ไทเมทัลอล อลูมิเนียม จำกัด
เลขประจำตัวผู้เสียภาษี 0113557019021
เป็นผลิตภัณฑ์ที่ผลิตในประเทศไทย 100% ของมูลค่า


(นายสมพร โสภณการ)
ผู้อำนวยการกองควบคุมโรงงาน
ภายใต้การกำกับดูแลการฐานสินค้าในเขตอุตสาหกรรม



ฉบับที่ ๒๒๖/๒๐๒๓
ฉบับที่ ๒๒๖/๒๐๒๓



3



This is to certify that
THAI METAL ALUMINIUM CO., LTD.
Has been selected and approved to use
THAILAND TRUST MARK
Given on 10th September 2020
By
Department of International Trade Promotion,
Ministry of Commerce


Mr. Somdet Susombhoon
Director General
Department of International Trade Promotion

4

Certificate Number
TGO-CFO-FV23-119


**THAILAND GREENHOUSE GAS
MANAGEMENT ORGANIZATION**
(Public Organization) TGO

CERTIFICATE
Awarded to
THAI METAL ALUMINIUM CO., LTD
(Company address: 205/002 2 Phetchaburi Rd., Tambon Thung Sai, Thungkhro-Khet, Bangkok 10110)

Thailand Greenhouse Gas Management Organization certifies that
the quantity of Greenhouse Gas of the above organization has been verified
by TGO (Thailand), Limited
and found to be in accordance with the requirements of the standard detailed below.

Standard
TGO-Qualiance of the Carbon Footprint for Organization

Verification Period: 01/01/2021 - 31/12/2021
Total Greenhouse Gas Emission (Scope 1&2): **24,907** tonCO₂equivalent

Direct GHG emissions	12,700 tonCO ₂ equivalent
Energy Indirect (GHG) emissions	12,207 tonCO ₂ equivalent
Other Indirect GHG emissions	177,974 tonCO ₂ equivalent

The agreed level of assurance is: Limited, at materiality of 5%
Registration Date: 23 August 2022


Ms. Kanchana Muevong
Executive Director
Public Organization for the Management of Greenhouse Gas Emissions

5



6



9



7



10



8

CERTIFICATES OF APPROVED APPLICATOR

Thai Metal Aluminium is certified by global paint manufacturers who rigorously assess the manufacturing process and quality of our powder-coated aluminium. We obtained the certificate as a standard powder coater from the manufacturers.

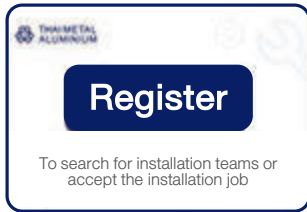
Under the quality test system of American standards
(AAMA: American Architectural Manufacturers Association)



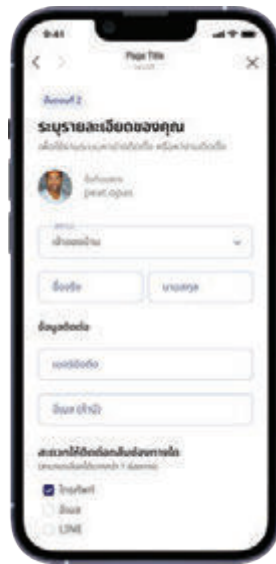
How to search for Installation Teams or Distributors of Thai Metal Aluminium via Thai Metal Aluminium LINE

Aluminium Installation Team Searching System

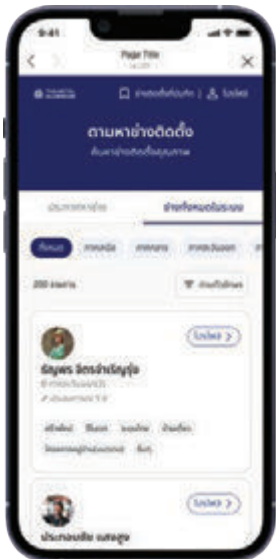
For any **architect / designer / residence owner** who has no installation team, you can easily search for a team by registering in **Thai Metal Aluminium LINE**.



① Choose the **“Register”** menu
Choose **“Residence / project owner”**



② **Create your profile** by entering your information.



③ After registration, you can **search for aluminium installation teams** in the system.



④ In addition, you can **post a message to search for installation teams**. Then, simply wait for their reply.

*Please compare the prices and team capacity, and specify window & door detail for which you would like to receive a quotation



To conveniently and quickly search for installation teams and aluminium distributors, please use the nationwide installation team and aluminium distributor searching system via **LINE**. Please scan the **QR Code** or search via **Line:@thaimetalalu**



Distributor Searching System

For any **architect / designer** who already has an installation team and wants to buy only aluminium profiles from Thai Metal Aluminium, you can search for distributors by the following method :



① Choose “Distributors of Thai Metal Aluminium” menu



② Choose the province where you reside (or nearby province). The system will show the shop list with contact information.

The system can search for product information and design inspiration.

You can search for product information in the “Catalog” menu and design inspiration in the “Door and Window Design” menu.



Download the product **catalog** for information to support your decision.



Techniques and ideas on door and window design and project references of Thai Metal Aluminium products.

*Please contact the platform administrator or your trusted distributor, if you cannot find the information you are looking for.



**THAI METAL
ALUMINIUM**
タイメタルアルミ

Tel : +662-136-8866

Website : www.tm-aluwindow.com

Youtube : Thaimetal Aluminium

FB : tmada

IG : tmada.th

Line : @thaimetalalu