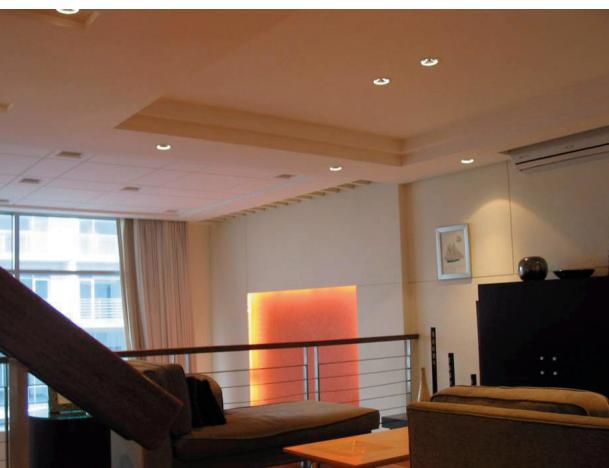


ELEPHANT
Gypsum Board

Elephant ProLine

Concealed Ceiling Metal Profile



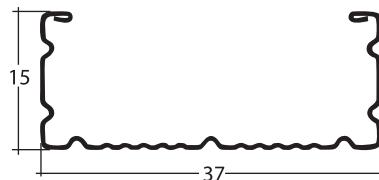


ProLine Concealed Ceiling Metal Profiles, new metal frame innovation by Elephant Brand, solves various problems including.

- Uneven finished ceiling levels (sagging).
- Weak metal frames, risking collapsed ceilings.
- Poor aesthetics of sophisticated designs, such as step-ceilings (bulkheads)
- Problematic installation of accessories (lighting fixture, access panel, etc.) such as accessories become loose, fall or cause the ceiling to sag.
- Uncertainty of proper installation, affecting strength, durability, safety and aesthetic.
- It is suitable to use with regular tapered-edge and 4 tapered edges (SYNIA) by Elephant Gypsum board.

Applications

- High quality metal profile for installation of gypsum boards for interior concealed-grid ceiling.
- For usage with wall lining brackets to install gypsum boards for interior wall lining system.



Gauge	0.52 mm
Dimension	15 x 37 mm
Length	4 m/piece
Weight	1.17-1.26 kg/piece



Strong & Safe

Manufactured from high quality, certified cold-rolled galvanized steel of **0.52 mm** gauge. Specially designed profile increases system strength. All component parts (accessories) were specially designed and tested for safety. Elephant Fix Spring is manufactured from high quality stainless steel with high loading capacity and is rust-proof.

Easy & Fast Installation

Easier and faster installation than traditional systems. Easy to verify correct installation after completion. Printed distance-marking on C-Line ensures component parts are attached at correct location. Modern manufacturing technique ensure high manufacturing precision. No special equipments needed for installation.



Durable

Hot-dipped galvanized steel of JIS G3302 standard galvanized with **220 g/m² of zinc** is suitable for humid climates, decrease rust problem.



Flexible Installation

Multiple component parts to allow for easy installation of various ceiling designs.



Lightweight

Lighter than wood frames and does not twist.



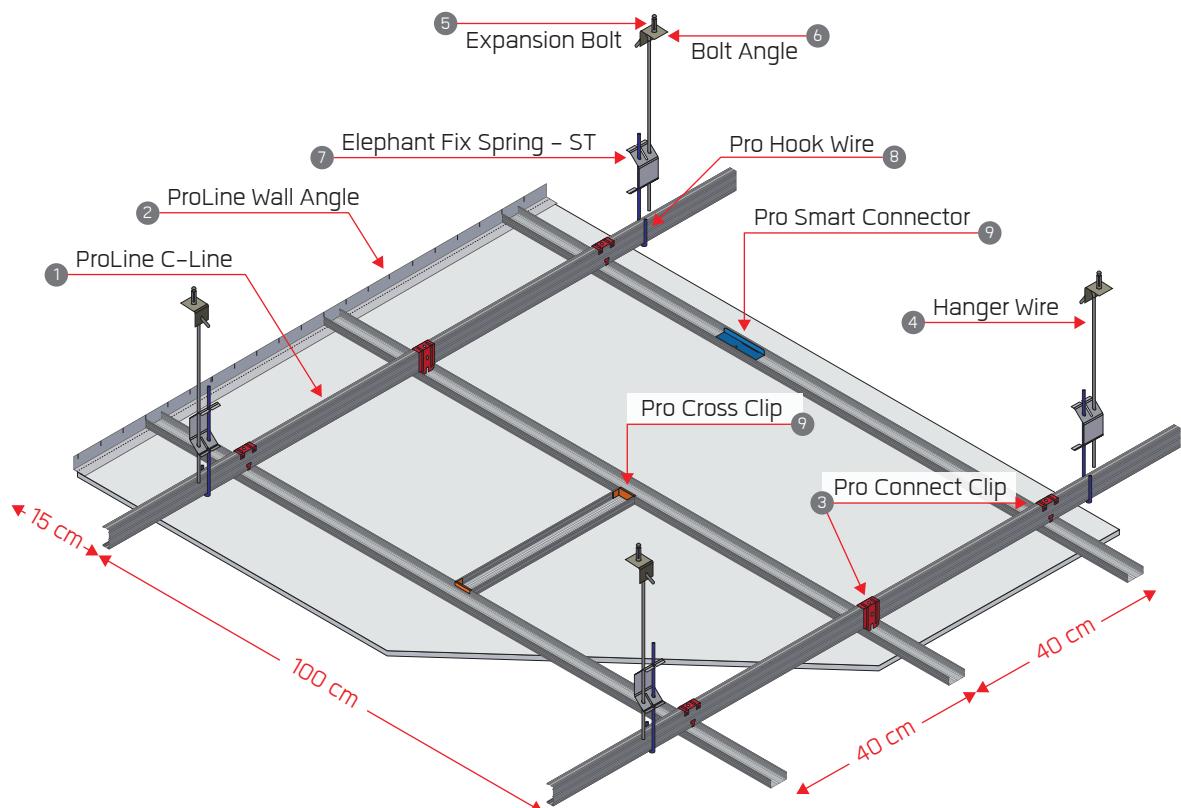
Insect-Free

Free from termites and other insects.



Certified

Thai Industrial Standard **863-2532** certified.



Component Parts :



ProLine C-Line
15x37x0.52 mm Length 4 m



ProLine Wall Angle
25x24x0.52 mm Length 2.4 m



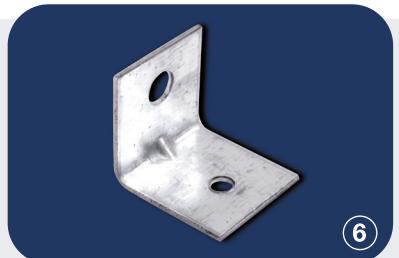
Pro Connect Clip
Gauge 0.8 mm



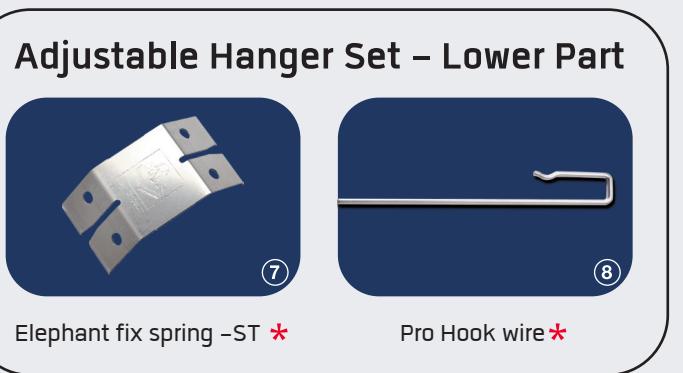
Hanger wire Ø4 mm
Length 0.6 m, 1.1 m, 2.1 m



Expansion Bolt

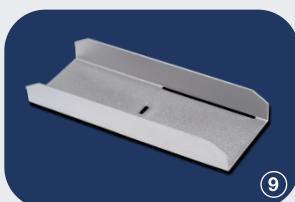


Bolt Angle



Elephant fix spring - ST *

Pro Hook wire *



Pro Smart Connector
Gauge 0.50 mm



Pro Cross Clip
Gauge 0.50 mm

*PATENT PENDING

Installation Guide



1 Mark ceiling level around perimeter and screw in wall angles.



2 Assemble hanging set and adjust length of Hanger Wire and Pro Hook Wire to the distance of the upper floor and the main runner.

(Warning: For safety reason, use only Elephant brand 4 mm diameter Hanger Wires and Hook Wires).



3 Securely attach Bolt Angles to upper floor in a 1.00 x 1.20 meter or 1.20 x 1.20 meter grid. Hang the assembled hanging set to the Bolt Angles.



4 Attach ProLine C-Line vertically into adjustable hanging set. Make sure that each hanging set (Pro Hook Wire) is attached on switching side. Connect main runners by using either Pro Smart Connector or

Pro H Connector. Ensure that connection points are not all parallel across the ceiling.

Re-adjust height of the hanging set again if necessary.



5 Click in Pro Connect Clip to ProLine C-Line main runners at every 40 cm intervals (on every 4th arrow printed on C-Lines). Wrap tail of Pro Connect Clip around ProLine C-Line main runners. Lock ProLine C-Line cross-runners into Pro Connect Clips. Verify that assembled metal frame is on level. Make sure that each Pro Connect Clip is attached on switching side.

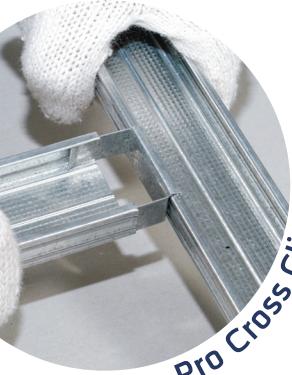
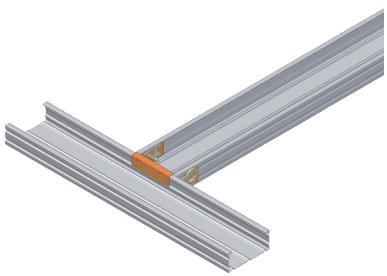
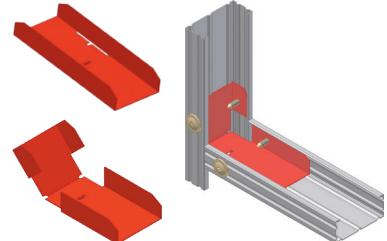


6 Screw onto Elephant Gypsum Board tapered edges with 25 mm Black Screws at every 30 cm interval and 20 cm interval at the edge of the board.

7 Coat the gypsum board joint with Elephant EasyJoint 120 following the compound instruction.

Multiple Applications

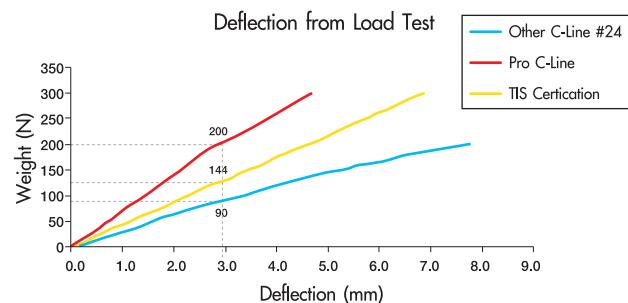
ProLine C-Line component parts have been designed by experts for practical application at job sites. Features include safer loading capacity, easy installation of Elephant brand access panels (ZERVEboard), lighting panels, lighting fixtures, step ceiling (bulkheads), and direct fixing to wooden frames. ProLine C-Lines can also be used in Elephant brand wall lining systems.

Component Parts	Application
 Pro Cross Clip	 For assembly of ProLine C-Line at one level to support installation and loading of lighting panels, lighting fixtures and ZERVEboard (access panels)
 Pro Smart Connector	 For connecting ProLine C-Lines at the same level. For connecting ProLine C-Lines at the horizontal and vertical levels (cut out sides of Pro Smart Connector at the pre-punched slots, bend the connector to a 90° angle, insert ProLine C-Lines and screw connector and C-Line together)
 Pro Connect Clip	 In addition to the traditional assembly of connecting main and cross runners, Pro Connect Clip can also be used to direct-fix C-Lines to wooden tresses for one-level assembly. Direct-fix Pro Connect Clip to wooden tress by screwing clip into tress through pre-punched hole. Adjust height of clip before fastening clip to tress with screw through second pre-punched hole.
 Pro Wall Angle	 Pre-punched slots at every 5 cm. interval allows bending of the slot for tight lock of C-Lines. Also used for wall lining system application.

Safety Assurance

In addition to superior profile design, manufacturing process and TIS certification 863-2532, Pro C-Line increase confidence with:

- Advanced manufacturing process increases profile loading capacity with a **5 times minimum safety factor**.
- All component parts use superior raw material quality than other similar products in the market.
- Carefully designed component part to ensure installers safety from finished ceiling and reduce chance of incorrect installation.
- Easy to verify correct installation after completed
- Corrosion-resistant with minimum (zinc coat) galvanizing of 220 g/m² which is thicker than 80% of similar profiles affecting suspended ceiling safety. As metal profiles are not seen after completion of ceiling work, there is no warning of insecure ceiling.



Ceiling with superior Corrosion-resistant.

Comparison of Elephant ProLine C-Line and other C-Line#24.

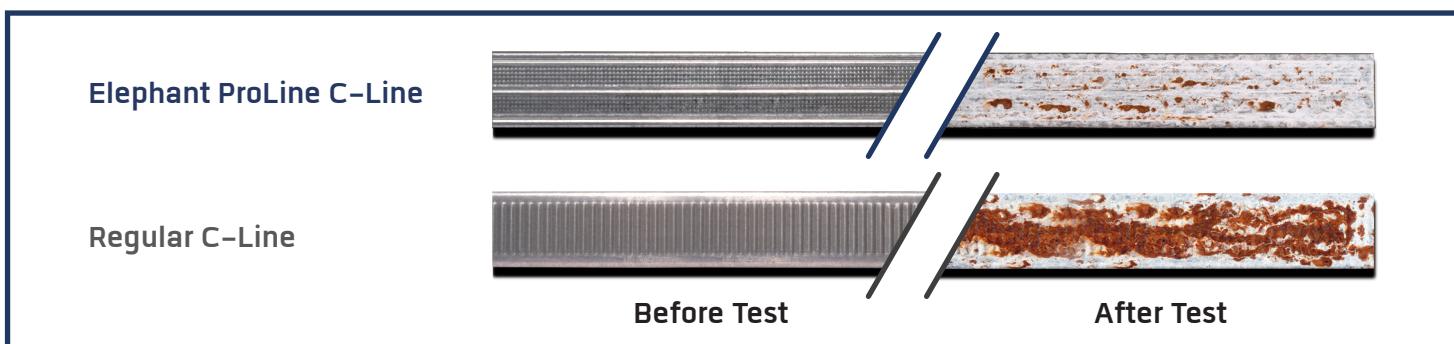


Figure shows the Salt Sprey Test (following ASTM B117-97) result after 300 continuous hours, comparing Elephant ProLine C-Line with regular C-Line.

Comparison of Elephant Fix Spring and regular spring.

- Elephant Fix Spring manufactured from High Quality Stainless Steel for spring, pass the **Salt Spray Test (following ASTM B117-97)** more than **300 continuous hours**, compared with regular spring.
- Elephant Fix Spring especially designed to hold tight the rod wire for high loading capacity. The assembled hanging sets **pass more than 120 kg** tension test. (safety factor = 4)
- Elephant Fix Spring **pass 1,000 times** of continuous passing test without deformation.



Elephant Fix Spring



Regular Spring

The testing result from "Technical Development Center" in France shows that regular Metal Profiles (C-Line), manufactured from second grade or lower quality galvanized steel, have less than 50% number of screw fastened between gypsum board and C-Line (only 4 out of 10 pieces of screw that are fastened while the others are loose) which can cause the ceiling to collapse.



Specification

Elephant – Concealed Ceiling System

Gypsum Boards : Use Elephant Brand (Standard for general use, HeatBloc for Heat-resistant ceiling under the roof, MoistBloc for Moisture-resistant ceiling in the bathroom/toilet or kitchen) certified by TIS 219-2524, ASTM C 1396, BS 1230, tapered edge, 9 mm thickness, size 1200x2400 mm.

Metal Frame : Use Elephant ProLine ; size 37x15 mm 0.52 mm thickness, 4 m length, certified by TIS 863-2532. Material made from Hot-dipped Galvanized Steel certified by JIS G 3302-1987. System hangs with stainless steel spring hanging set and all other components (clipping and connector sets) that have sufficient strength for all ceiling weight following standard of The Siam Gypsum Industry (Saraburi) Co., Ltd.

Q & A



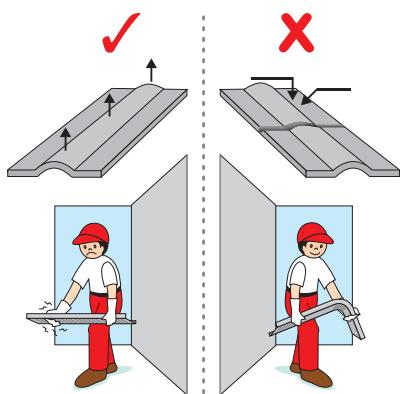
How does reduced thickness of C-Line affect the finished ceiling?



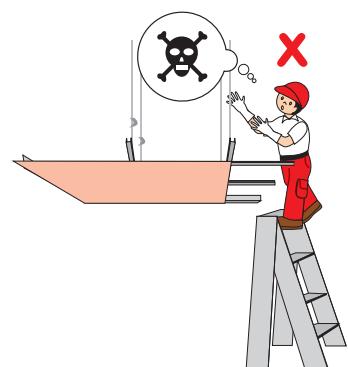
Thinner gauge C-Line is lighter and costs less. However, most C-Line profiles in Thailand have such reduced thicknesses that they do not conform to safety standards. In many cases, we find ceiling deformation, non-flatness, sagging and distorted edges. In addition to being unsightly, there is also the real threat of the ceiling collapsing. And as there are usually no visible warning signs, it is difficult to prevent a ceiling from collapsing. Therefore, it is important to select quality of C-Lines that meet safety standards.



The bump on C-Line can make it strong?



What is the required thickness of C-Lines that can support human weight?



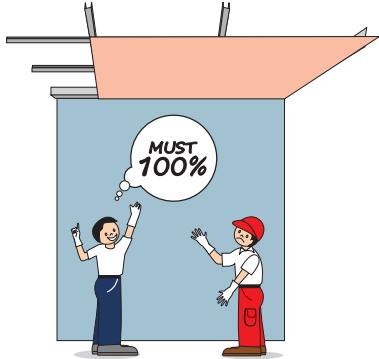
With the right process, the bump can enhance the resistance against bending. The bump must be along the C-Line length and in the right direction in order to be functional.



A system should have to be tailor-designed for the application. In any case, the loading capacity of a drywall ceiling system does not depend only on the C-Line gauge, but also on the other component parts and the type of installation

Q

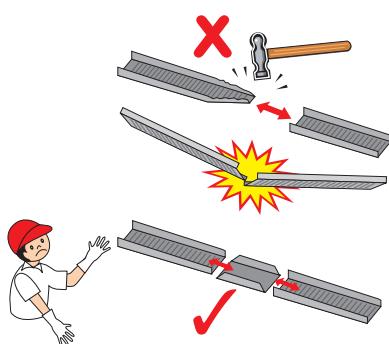
What factors affect the ceiling's loading capacity?

**A**

- Quality metal profiles and other component parts that meet standards and are certified by reliable institutions.
- Thickness of metal profile and other component parts.
- Thickness of zinc coating on galvanized steel of metal profile.
- Spacing of hanging sets, main runner and cross runner of metal profile following designing and testing standard of manufacturer.
- Spacing of each screw affixing gypsum board.
- Quantity of screws that can fasten gypsum board and metal profile together.
- Gross weight of ceiling system and other components.
- Affixing of additional components on ceiling system following standard of manufacturer.

Q

Is it correct to connect metal profiles (C-Lines) together by jamming them into each other and riveting?

**A**

It is an incorrect method since this will create the weakest point of the ceiling system. The correct method is to use a connecting clip designed to connect C-Lines together safely.

Q

Why should we be concerned about rust since it is an internal structure of the ceiling and not exposed?

**A**

Moisture above the ceiling can easily increase from higher temperature than the room temperature, from hot-water pipes, from smoke absorber and from water leakages. Moisture can cause rusting easier and faster if the metal profiles do not meet corrosion-resistance standards.

Elephant Concealed Ceiling System



Concealed Ceiling Metal Profile
Elephant **PlusLine**

- Strong, 3 times safer with 0.40 mm high quality metal.
- High rust resistant.
- Easy to install with range indicator on C-line at every 10 cm.

PlusLine



ProLine Max

Concealed Ceiling Metal Profile
Elephant **ProLine Max**

- Produced from high quality metal.
- Able to carry the weight up to 100 kg/installing point.
- Compatible with large service system with 3 meters long hanging wire.

Elephant Partition System



Partition Metal Profile
Elephant **Prowall**

Interior partition metal profile produced with 0.52 mm high quality metal, strong and durable with rust resistant. Certified TIS 863-2532

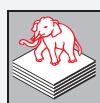
Prowall



Partition Metal Profile
Elephant **PlusWall**

Economic option for interior partition metal profile produced with 0.40 mm high quality metal, strong and durable with rust resistant

PlusWall



ELEPHANT
Gypsum Board

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A product of Knauf Group



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