



We are proud to introduce ourselves,
as one of the very reputed company
executing very prominent projects
in and around UAE.

Emerald
Steel Industries L.L.C

Catalogue

Strut Channel

Company Profile

Emerald Steel Industries LLC based in Ajman, UAE are the leading manufacturer and suppliers of cable management systems in the UAE, Africa and Middle East countries. We manufacture all types of cable management systems. Our products include cable trays, ladders, trunking, flush floor trunking, under floor trunking, service outlet box and strut- systems.

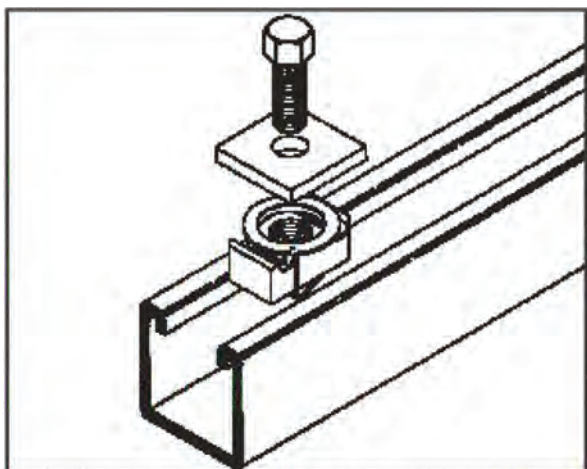
We have a proven track record of supplying to prestigious oil & gas projects in UAE and the middle east region including high-end clients. As an ISO 9001 certified company, Emerald Steel Industries LLC consider quality as our first priority in each stage of production. We have been exporting to various places like Middle East, Asian countries and also in African countries.

A cable tray system is an assembly of metallic cable tray sections and accessories, that forms a rigid structural system to support cables.

MANUFACTURED FROM MILD STEEL
COMPLYING WITH BS EN 10130 : 2006
HOT DIP GALVANIZED AFTER
MANUFACTURE TO BS EN ISO 1460 : 1991
COMPLIES WITH BS EN 61537 : 2000

Introduction

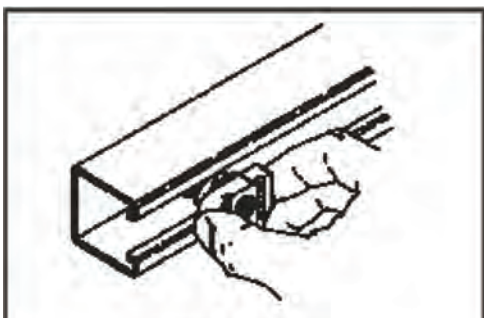
Our strut support system is designed with many time-saving features. They are fully adjustable and reusable, with a complete line of channels, fittings and accessories for multi-purpose applications.



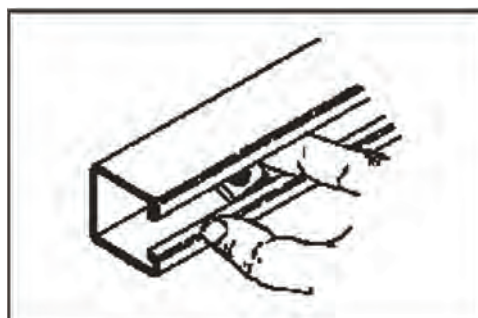
- No Welding
- No Drilling
- Use Your Imagination

The strut system installs quickly, with no need for special tools. All you need is a wrench and hacksaw. Channels and parts can be taken apart for reuse as quickly as they were assembled, yet help provide the strength of welded construction. Elimination of welding and drilling results in substantial savings in time and labor.

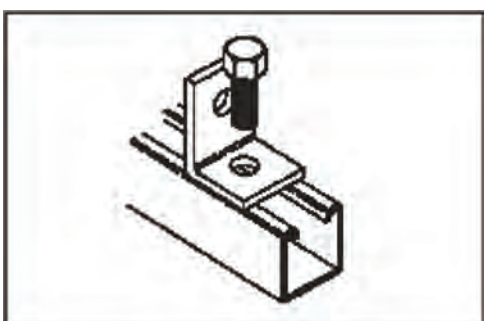
4 Steps is All it Takes



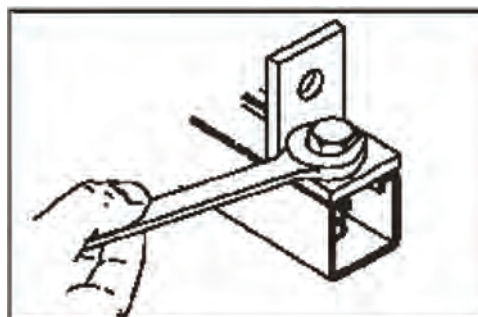
Step 1- Insert channel nut anywhere along the continuous slot, designed for easy insertion and self-alignment.



Step 2- A 90° turn aligns channel nut grooves with in-turned lips of the channel.



Step 3- Position fitting over channel nut and then insert a bolt to start any connection.



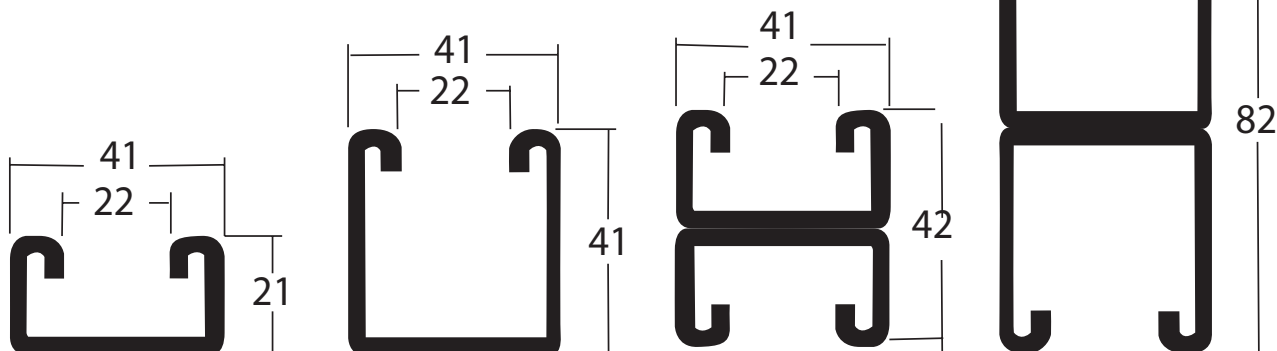
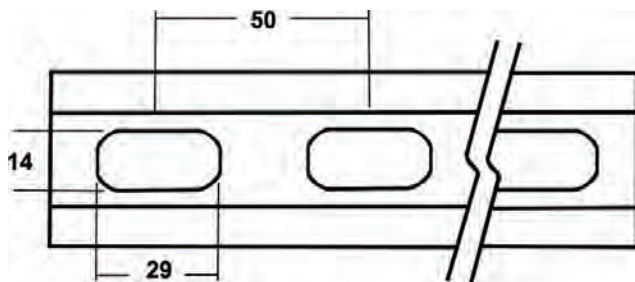
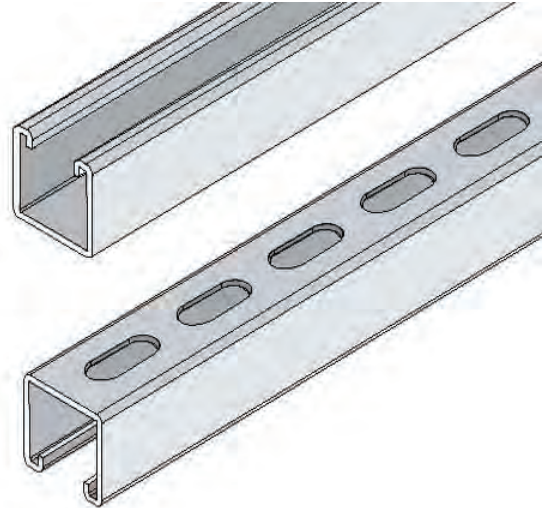
Step 4- With the twist of a wrench, channel nut locks its teeth firmly against in-turned lips of the channel.

STRUT CHANNELS

- U-profiled Emerald channel for horizontal and vertical installation.
- Fast and streamlined fastening of pipe tracks and load bearing constructions.
- Serration in the channel lips for secure hold of ESI(Spring Nut).
- Versatile options for wall, floor and ceiling installation.

APPLICATION

- Industrial plumbing.
- Heating and sanitary supply piping.
- Fire Fighting systems.
- Residential and commercial piping.
- Electrical installations like cable trays, data lines etc.
- Solar modules installations.
- Hvac - piping and ducting installations.
- Automation systems.
- Assembly lines and transfer lines.
- Conveyors.
- Structural framing.
- Building and construction.
- Storage.
- Fabrication.



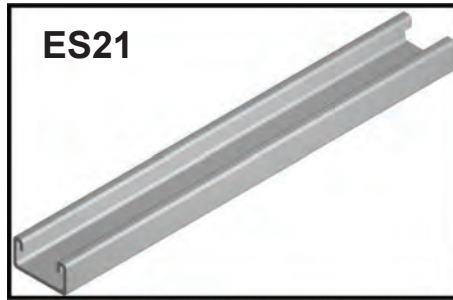
SLOT PATTERNS

Strut channels are produced with slots also with a standard length of 3 mtrs.

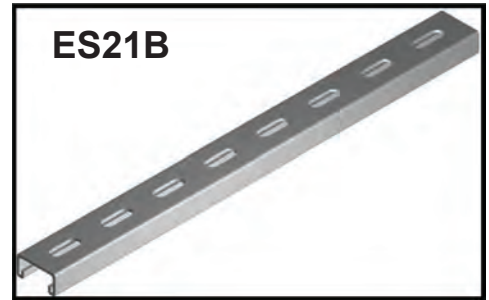
STRUT CHANNELS



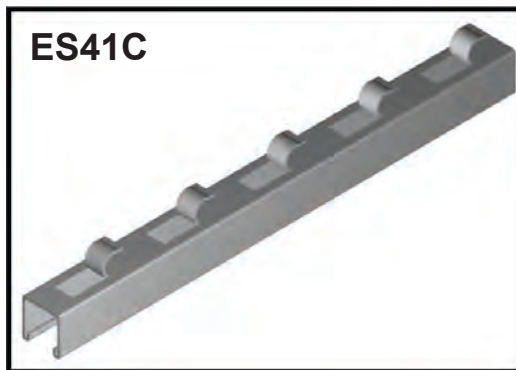
PLAIN CHANNEL 41X41



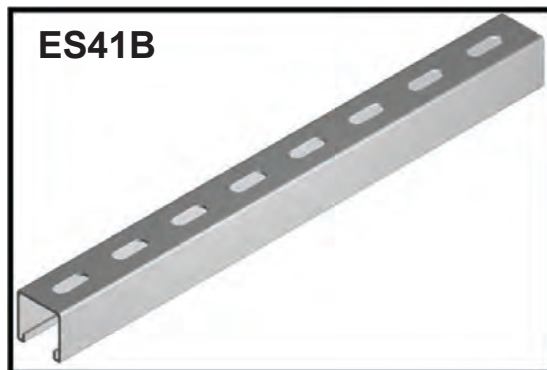
PLAIN CHANNEL 21X41



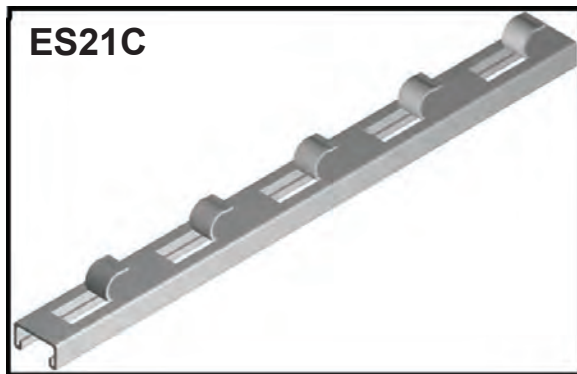
SLOTTED CHANNEL 41X21



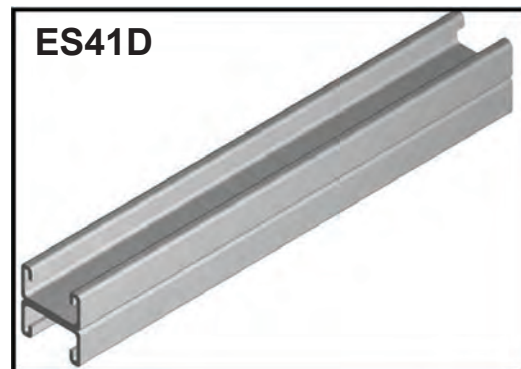
CONCRETE INSERTS 41X41



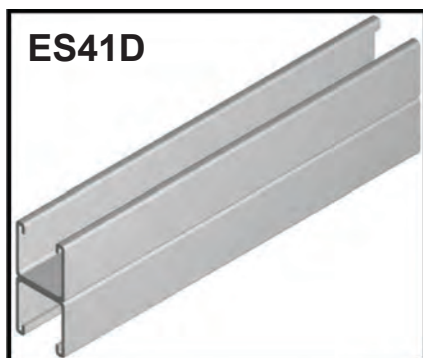
SLOTTED CHANNEL 41X41



CONCRETE INSERTS 41X21



BACK TO BACK CHANNEL 41X21



BACK TO BACK CHANNEL 41X41

END CAP 41X21



END CAP 41X41



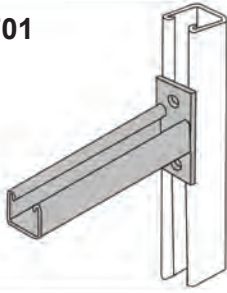
STANDARD FINISHES

HDG Hot dip Galvanized to BS EN ISO 1461:1999 (Formerly BS 729)

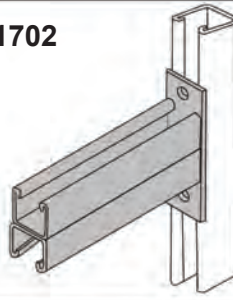
Pre-galvanized to BS EN 10142 & 10143

CANTILEVERS

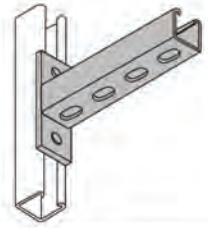
ES 1701



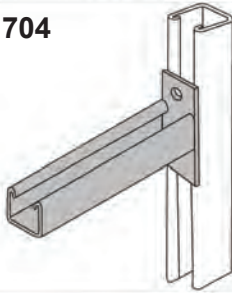
ES 1702



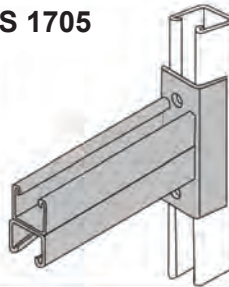
ES 1703



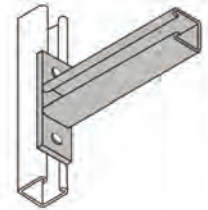
ES 1704



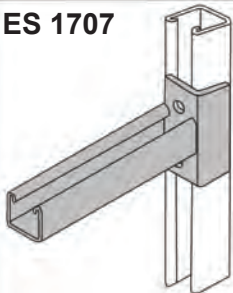
ES 1705



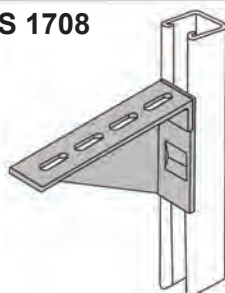
ES 1706



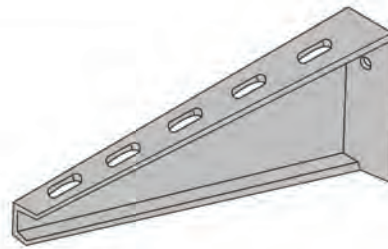
ES 1707



ES 1708



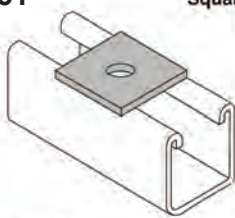
ES 1709



FLAT PLATE FITTING

ES 1851

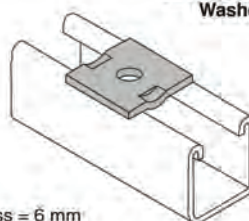
Square Washer



Thickness = 6 mm

ES 1852

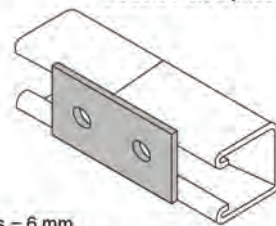
Locking Square Washer



Thickness = 6 mm

ES 1853

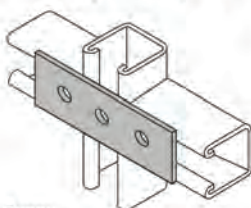
Double Hole Splice Plate



Thickness = 6 mm

ES 1854

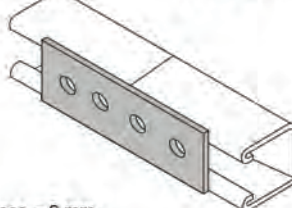
Triple Hole Splice Plate



Thickness = 6 mm

ES 1855

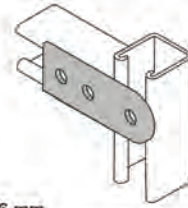
4 Hole Splice Plate



Thickness = 6 mm

ES 1856

3 Hole Swivel Plate

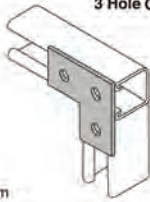


Thickness = 6 mm

FLAT PLATE FITTING

ES 1857

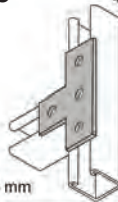
3 Hole Corner Plate



Thickness = 6 mm

ES 1858

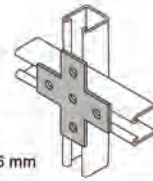
4 Hole Tee Plate



Thickness = 6 mm

ES 1859

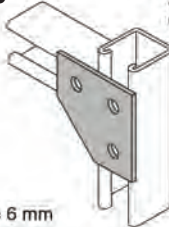
5 Hole Cross Plate



Thickness = 6 mm

ES 1860

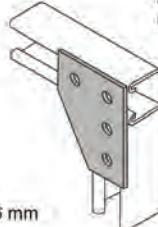
3 Hole Corner Gusset Plate



Thickness = 6 mm

ES 1861

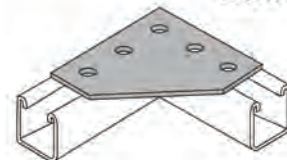
4 Hole Corner Gusset Plate



Thickness = 6 mm

ES 1862

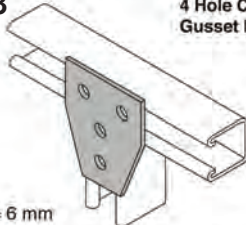
5 Hole Corner Gusset Plate



Thickness = 6 mm

ES 1863

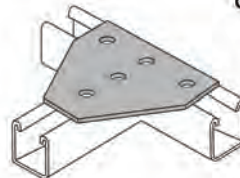
4 Hole Center Gusset Plate



Thickness = 6 mm

ES 1864

5 Hole Tee Gusset Plate

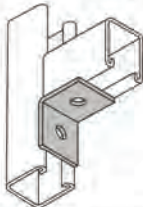


Thickness = 6 mm

ANGLE FITTING

ES 1901

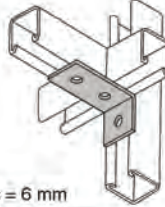
Corner Angle 2 Hole



Thickness = 6 mm

ES 1902

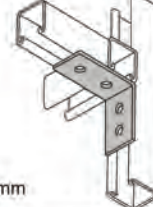
Corner Angle 3 Hole



Thickness = 6 mm

ES 1903

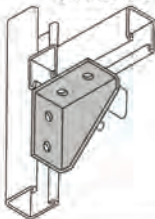
Corner Angle 4 Hole



Thickness = 6 mm

ES 1904

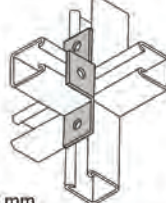
Universal Bracket



Thickness = 6 mm

ES 1905

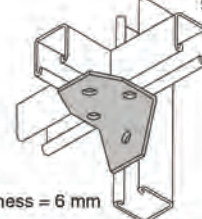
Tee Angle



Thickness = 6 mm

ES 1906

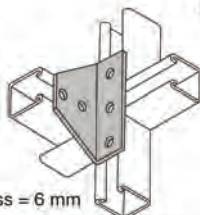
4 Hole Gusset Shelf angle



Thickness = 6 mm

ES 1907

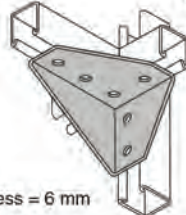
5 Hole Gusset Angle Bracket



Thickness = 6 mm

ES 1908

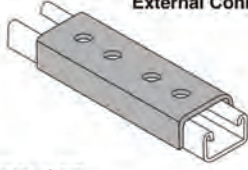
6 Hole Gusset Shelf angle



Thickness = 6 mm

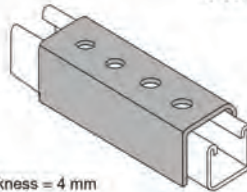
CHANNEL CONNECTOR

ES 2021 4 Hole External Connector



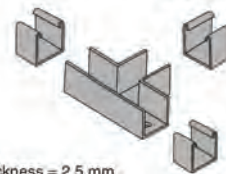
Thickness = 4 mm

ES 2022 U Connector



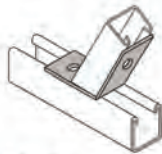
Thickness = 4 mm

ES 2023 Strut Connector Tee



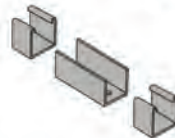
Thickness = 2.5 mm

ES 2024 Two Hole Open Angle



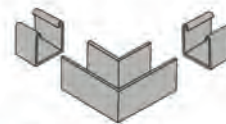
Thickness = 6 mm

ES 2025 Strut Connector



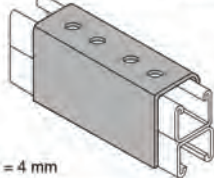
Thickness = 2.5 mm

ES 2026 Strut Connector 90°



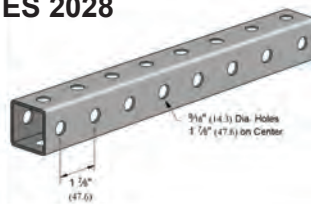
Thickness = 2.5 mm

ES 2027 U Connector

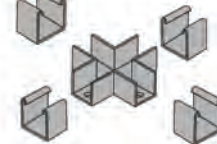


Thickness = 4 mm

ES 2028



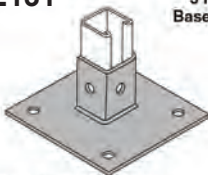
ES 2029 Strut Connector Cross



Thickness = 2.5 mm

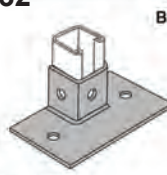
BASE POSTS

ES 2131 3 Hole Base Post



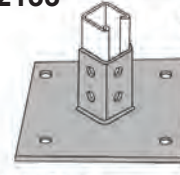
Thickness = 6 mm

ES 2132 3 Hole Base Post



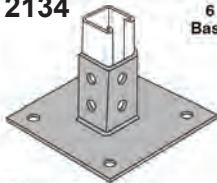
Thickness = 6 mm

ES 2133 6 Hole Base Post



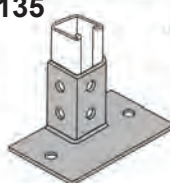
Thickness = 6 mm

ES 2134 6 Hole Base Post



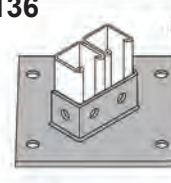
Thickness = 6 mm

ES 2135 6 Hole Base Post



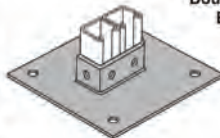
Thickness = 6 mm

ES 2136 4 Hole Base Post



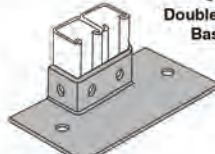
Thickness = 6 mm

ES 2137 6 Hole Double Channel Base Post



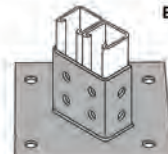
Thickness = 6 mm

ES 2138 6 Hole Double Channel Base Post



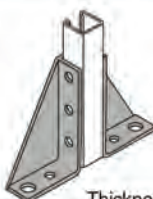
Thickness = 6 mm

ES 2139 BTB High Base Post



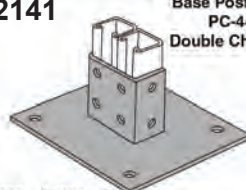
Thickness = 6 mm

ES 2140



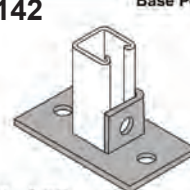
Thickness = 6 mm

ES 2141 Base Post High PC-44 Double Channel

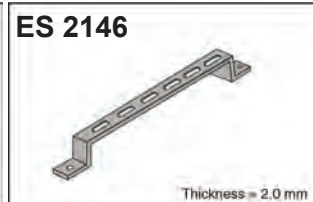
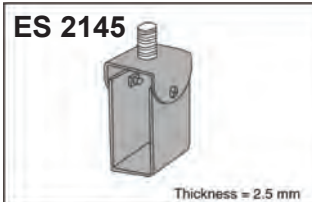
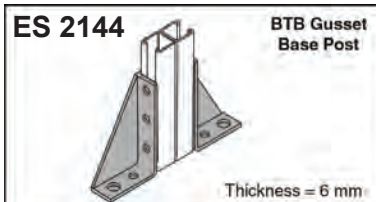
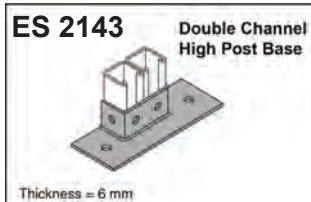


Thickness = 6 mm

ES 2142 Base Post PC-44



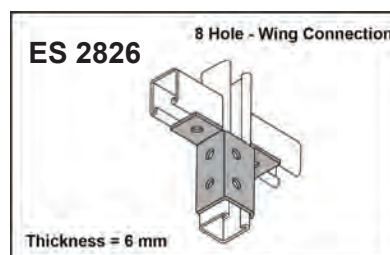
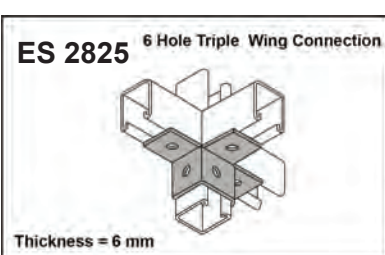
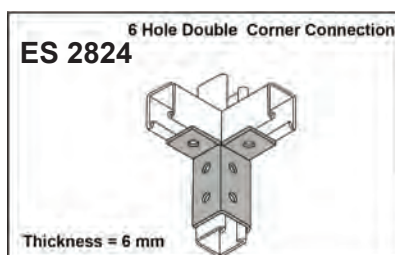
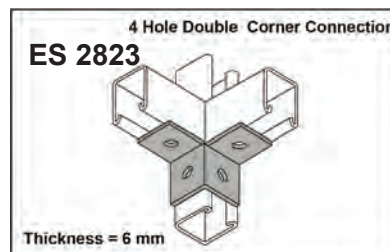
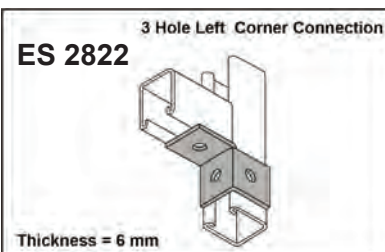
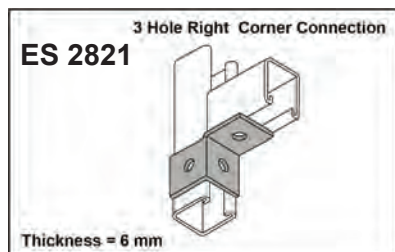
Thickness = 6 mm



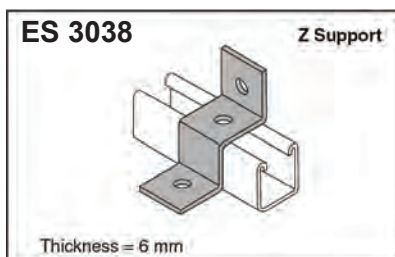
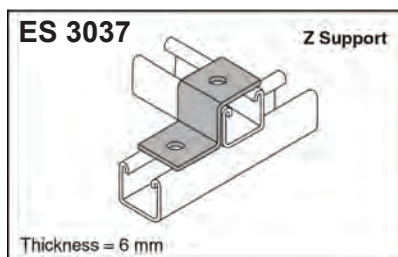
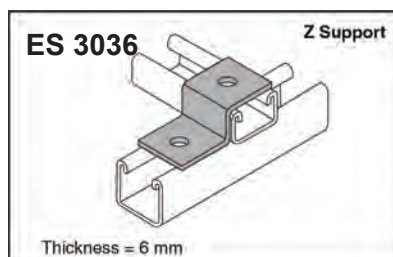
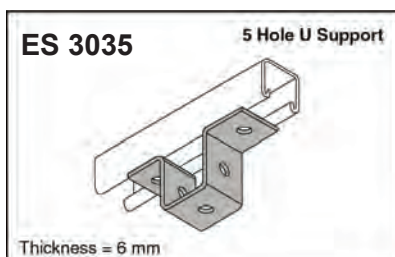
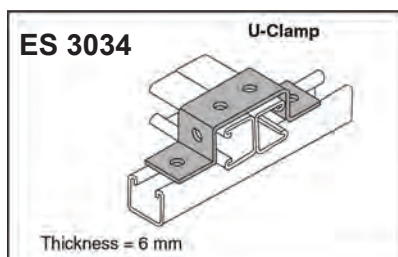
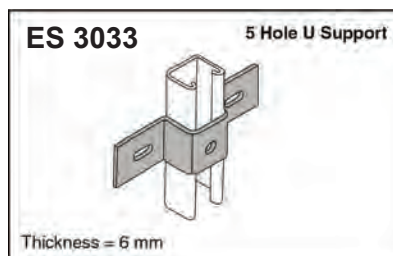
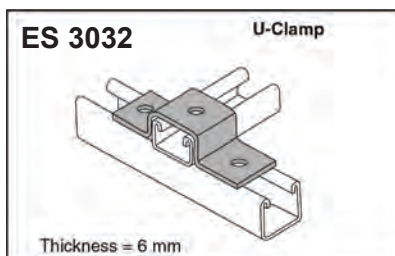
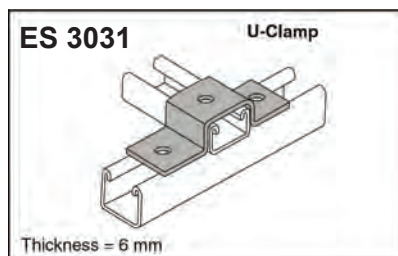
Channel Hangers

Floor Bracket

WINGS FITTING

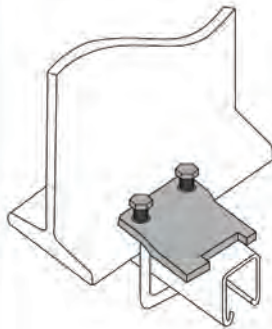


Z & U FITTINGS



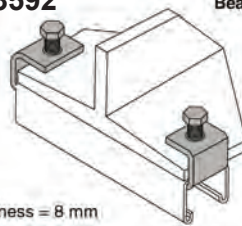
BEAM CLAMPS

ES 3591 Beam Clamp



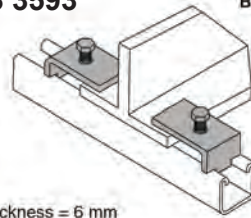
Thickness = 6 mm

ES 3592 Beam Clamp



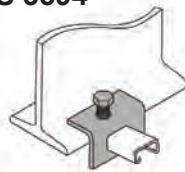
Thickness = 8 mm

ES 3593 Beam Clamp



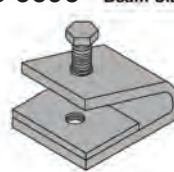
Thickness = 6 mm

ES 3594



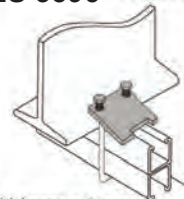
Thickness = 6 mm

ES 3595 Beam Clamp



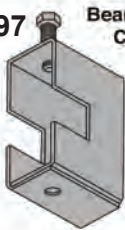
Thickness = 6 mm

ES 3596 Beam Clamp



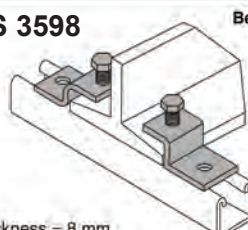
Thickness = 6 mm

ES 3597 Beam Clamp
C Type



Thickness = 2 mm

ES 3598 Beam Clamp
Z Type



Thickness = 8 mm

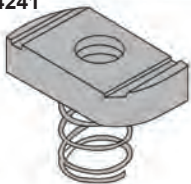
ES 3599 Window Beam Clamp



Thickness = 4 mm

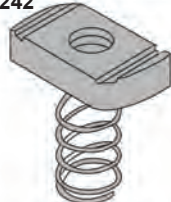
FASTNERS

ES 4241



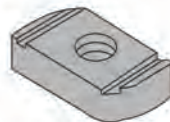
Channel Nut with short spring

ES 4242



Channel Nut with long spring

ES 4243



Channel Nut without spring

ES 4244



Machine Screw

ES 4245



Hexagonal Bolt

ES 4246



Roofing Bolt

ES 4247



Hexagonal Nut

ES 4248



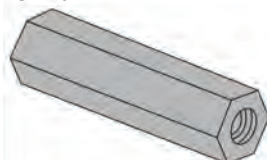
Flat Washer

ES 4249



Carriage Bolt

ES 4251



Channel Nut

ES 4252



Threaded Rod

ES 4253

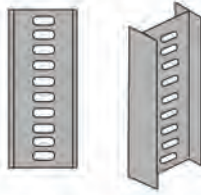


U - Bolt

I - BEAM SUPPORTS

ES 3861

I - Support



ES 3862

I-Support Connector



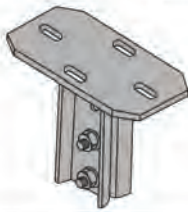
ES 3863

Top Head I-Support



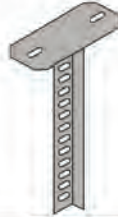
ES 3864

Base-Head Plate



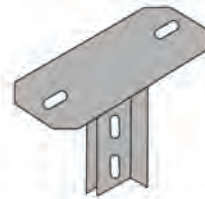
ES 3865

Top Head T-Support



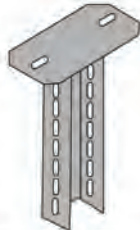
ES 3866

Base Head Plate



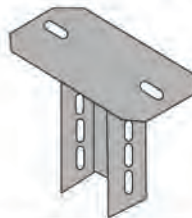
ES 3867

Top Head Plate



ES 3868

Base Head Plate



ES 3869

U Support



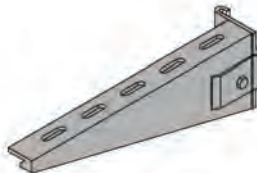
ES 3870

T - Support Bracket



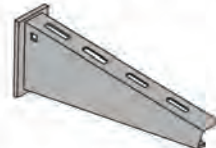
ES 3871

I - Support Bracket



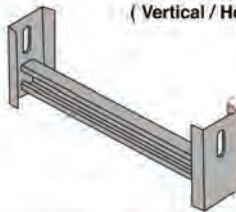
ES 3872

U - Support Bracket



ES 3873

Joint Bracket
(Vertical / Horizontal)



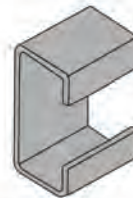
ES 3874

U Support Connector



ES 3875

Spacer



Properties Of Section Profiles

Loading tables

PC 44

Distance between supports L (mm)	Safe Working Load as total UDL across span (kN)	UDL at L/180 Deflection (kN)	UDL at L/360 Deflection (kN)	Maximum Axial Column Load (kN)
500	8.48	-	-	50.0
1000	4.24	-	3.36	33.5
1500	2.86	-	1.49	20.1
2000	2.12	1.68	0.84	12.7
2500	1.67	1.07	0.53	9.0
3000	1.41	0.75	0.37	7.0

PC42

500	2.5	-	2.32	29.4
1000	1.25	1.16	0.58	11.5
1500	0.83	0.51	0.26	5.2
2000	0.61	0.29	0.14	-
2500	0.50	0.18	0.09	-
3000	0.41	0.12	-	-

BTB 44

Distance between supports L (mm)	Safe Working Load as total UDL across span (kN)	UDL at L/180 Deflection (kN)	UDL at L/360 Deflection (kN)	Maximum Axial Column Load (kN)
500	23.28	-	-	105.0
1000	11.64	-	-	91.1
1500	7.76	-	7.5	63.3
2000	5.82	-	4.3	40.2
2500	4.65	-	2.7	26.8
3000	3.88	3.8	1.9	19.0

BTB 42

500	6.96	-	-	69.0
1000	3.48	-	2.6	44.1
1500	2.32	2.3	1.2	23.0
2000	1.74	1.3	0.6	13.3
2500	1.39	0.8	0.4	8.7
3000	1.16	0.6	0.3	-

		Axis XX		
	Moment of inertia I (mm ⁴)	Section modulus Z (mm ³)	Radius of gyration r (mm)	Maximum Bending Moment M (Nm)
PC 44	75000	3400	14.9	530
PC 42	13000	1000	7.5	156
BTB 44	380000	9300	23.8	1455
BTB 42	59000	2800	11.3	435

		Axis YY		
	Moment of inertia I (mm ⁴)	Section modulus Z (mm ³)	Radius of gyration r (mm)	Maximum Bending Moment M (Nm)
PC 44	93000	4600	16.6	720
PC 42	56000	2700	15.6	420
BTB 44	186000	9200	16.6	1440
BTB 42	112000	5400	15.6	845

Important notes on loading data supplied:

Loads have been treated as imposed loads in accordance with BS 5950 with a load factor of 1.6

Beam loads - assumptions

Beams are simply supported over span L

Load is applied perpendicular to the axis XX

There is lateral restraint to the beams

No restriction to loads which may exceed slip resistance of bracket fixings

Column loads - assumptions

Distance between supports is the "effective length" of column

Slenderness ratio is calculated with the lesser value of radius of gyration of the profile, and restricted to $L/r < 180$

In practical assembly conditions, using brackets, it will be necessary to calculate the bending moment and combine with axial column loading to establish a safe working load.

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