

Connectors and Fasteners for Light Gauge Steel

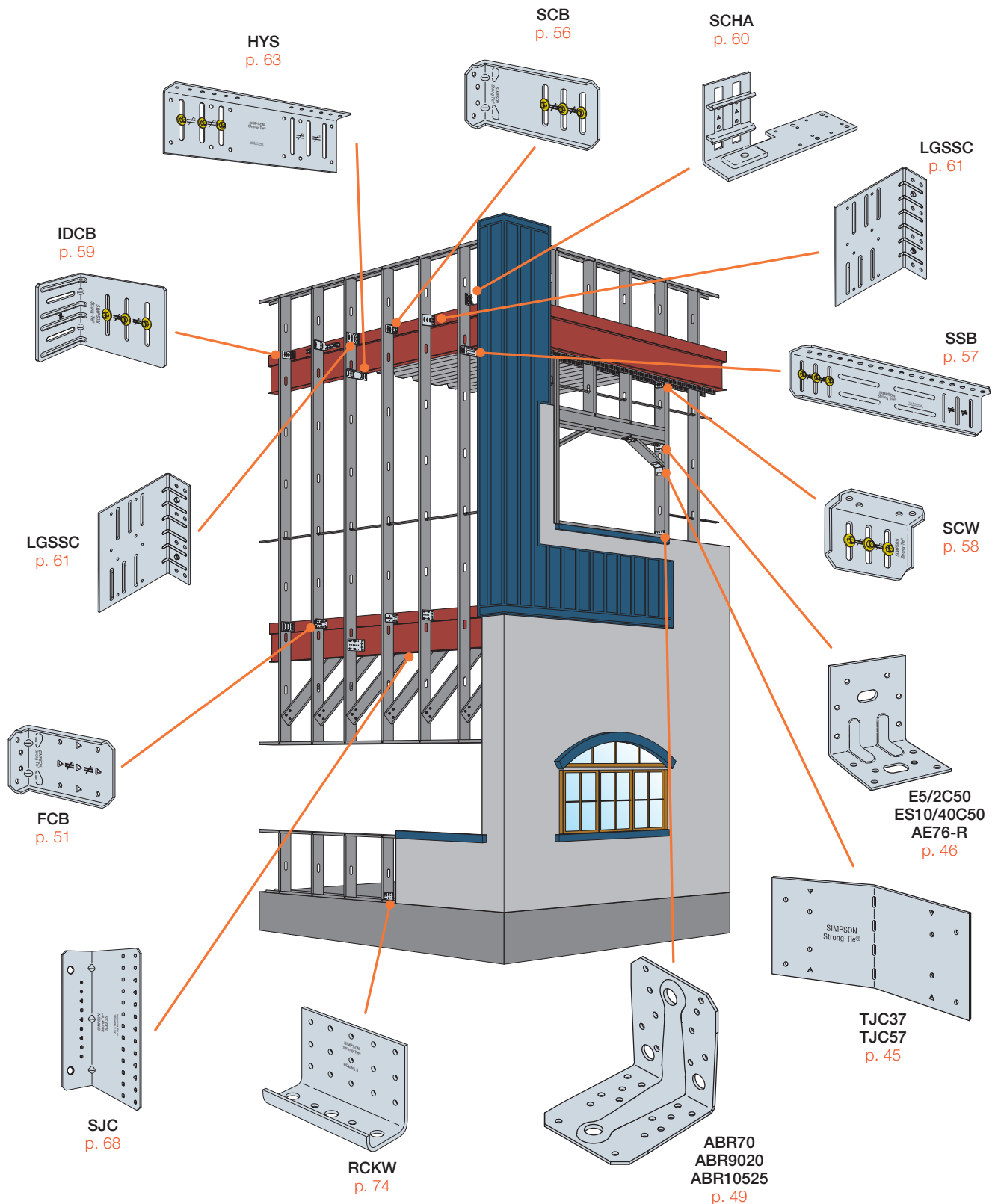
C-LGS-UK-2021 | +44 (0) 1827 255 600 | strongtie.co.uk

SIMPSON

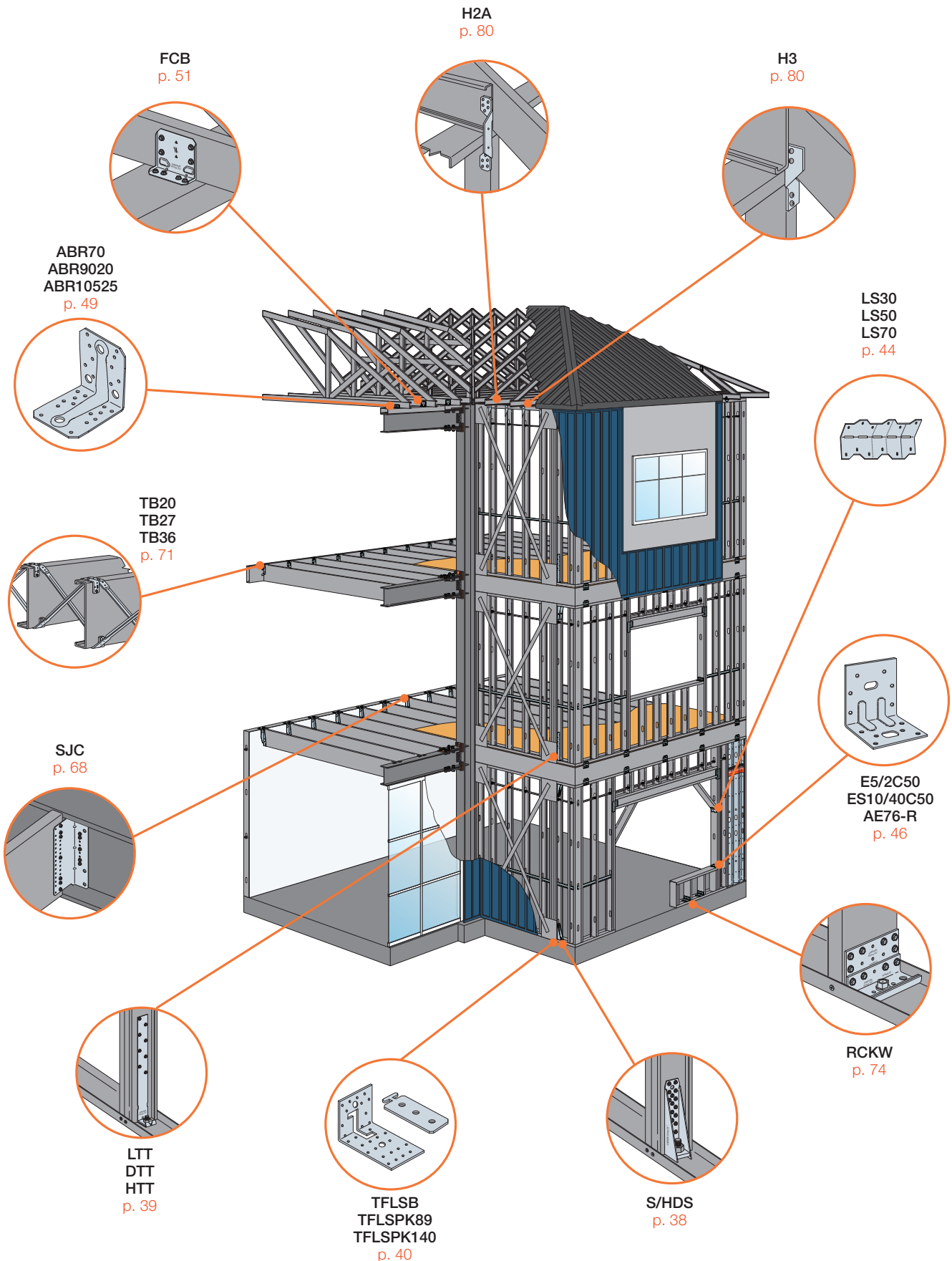
Strong-Tie



Facade and load bearing connector solutions



Facade and load bearing connector solutions



Strength Beyond Steel



Our products are engineered to stand the test of time.
So are our relationships.

For over 60 years, Simpson Strong-Tie® has focused on creating connectors that perform under the toughest of conditions, helping you build safer, stronger homes and structures. With more than 1,000 product solutions, we're proud to offer the widest connector range in Europe.

CE & Guarantees



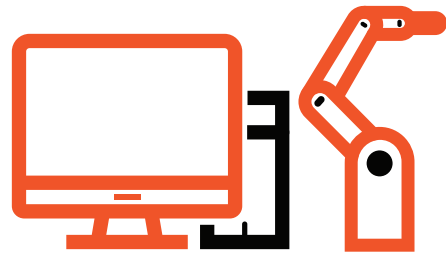
All of our products meet the Construction Products Regulations and those that are required to achieve CE Marking are tested to guarantee that they comply.

Technical Support



Our Technical Support team is on hand to answer your questions and provide some sound installation advice, from making sure you have the most suitable product, to the best ways to go about installing them.

Design & Manufacture



We regularly work with house builders and designers to develop our range of structural connector solutions, considering every aspect of their use to meet your ever-changing needs.

Ease of installation, performance characteristics and life-span are the fundamental principles that make up our design DNA.

Stock & Delivery



We maintain 200 different product families spanning over 5,000 product lines. We will continue supporting them for as long as you need them.

From our distribution centres in Tamworth and Dublin, we do everything we can to make sure you get your delivery in full - to your premises or direct to site.

Research & Development



We continuously invest in research and product development to ensure that our product solutions are efficient, easy to use and meet the needs of construction professionals.

Our Technical team design, develop and test new product solutions.

Plans & Drawings



We know that architects, designers, and contractors need very detailed technical information about our products, so we provide drawings and technical information free on our website.

These include CAD and BIM drawings, as well as DWG 2D and 3D, SAT files and performance data sheets.

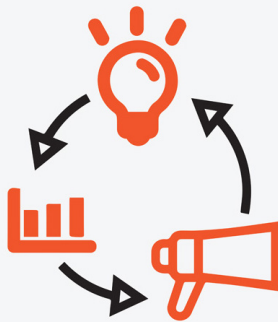
Software



We offer free software solutions to help you choose the right connector or fixing. Connector Selector enables you to quickly and easily identify the connectors or fastenings you will need, based on your dimensions, purpose and performance requirements.

Anchor Designer offers a quick calculation for anchor fixings into cracked and non cracked concrete.

Marketing Support



Our in-house marketing team is on hand to provide a wide range of product images and resources for you to use in-store or online, including catalogues, posters, displays and promotions, product data, product installation and feature videos.

Custom Manufacturing



Every construction project comes with its own set of challenges, sometimes unexpected and quite often unique.

Our engineering and production teams provide a design and manufacture service for 'one off' connectors, based on plans provided by you.

Your unique connector is produced using state-of-the-art equipment and is ready to send - often within one working day.

Quality Testing



We build quality and innovation into everything we make and everything we do.

Made using the best quality steels, all of our "No Equal" products and connectors undergo rigorous quality testing, to ensure that they meet safety regulations, and exceed our customers' needs and expectations.

Contact Us



This is our 'No Equal' commitment.
The difference between us and everybody else.



www.strongtie.co.uk



Project: Oadby Plastics Extension
Location: Leicester
Manufactured by EOS Framing Ltd.

**SIMPSON****Strong-Tie**

Simpson Strong-Tie® Connectors for Light Gauge Steel Construction

For more than 60 years, Simpson Strong-Tie has focused on creating structural products that help people build safer and stronger homes and buildings. A leader in structural systems research and technology, Simpson Strong-Tie is one of the largest suppliers of structural building products in the world. The Simpson Strong-Tie commitment to product development, engineering, testing and training is evident in the consistent quality and delivery of its products and services.

For more information, visit the company's website at www.strongtie.co.uk.

The 2021 Connectors for Light Gauge Steel Catalogue, brings together a selection of specifically designed and tested products for this sector.

Whether you are a manufacturer of Light Gauge Steel load-bearing structures or a manufacturer of Light Gauge Steel facades, Simpson Strong-Tie can provide a connection solution for your client's building. From the foundation up, we have a comprehensive range of products, which can ensure you make the right connection when you need it. Our range of ergonomically designed connectors can assist on-site installation to ensure projects are completed on time and to your specification. You also have the reassurance of knowing that you are specifying a tested product, whether it be a hold down anchored to the foundation, or an adjustable angle bracket connecting to the Light Gauge Steel, we can provide the connector and the fixings for the solution.

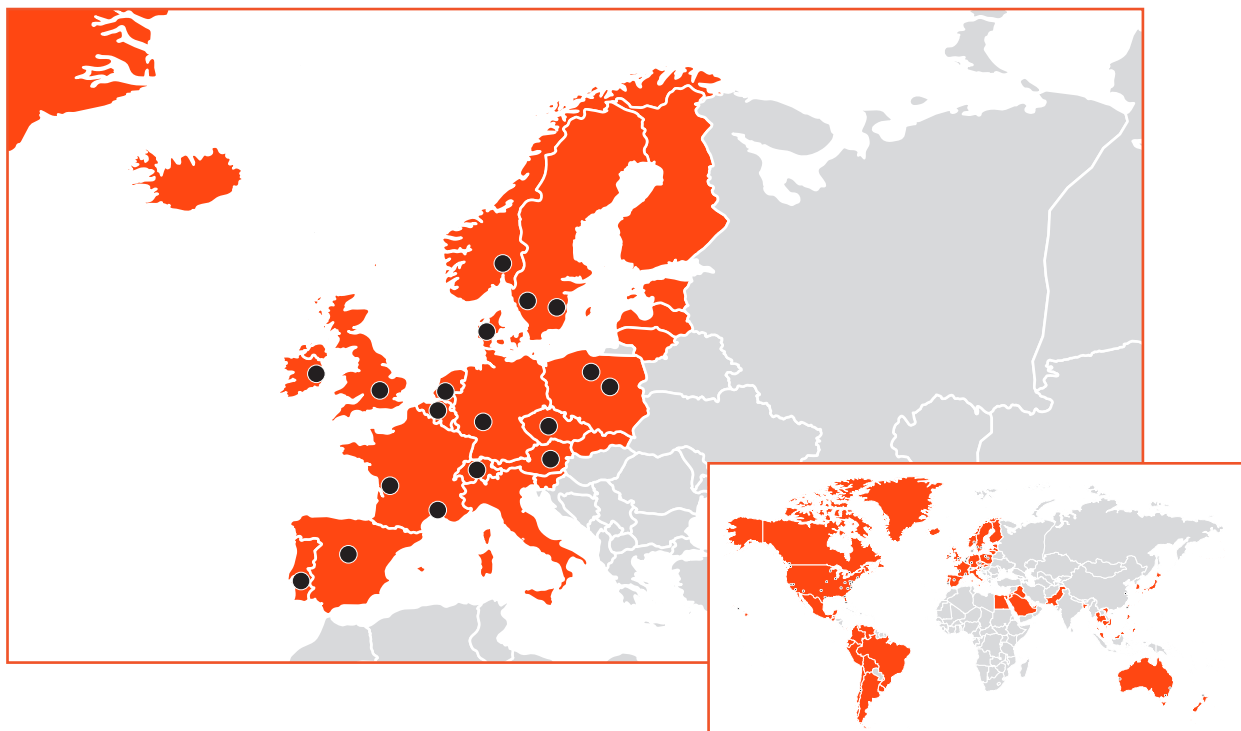


@strongtieUK

Company Information

For more than 60 years, Simpson Strong-Tie® has focused on creating structural products that help people build safer and stronger homes and buildings. A leader in structural systems research and technology, Simpson Strong-Tie® is one of the largest suppliers of structural building products in the world. Our commitment to product development and engineering, as well as testing and training, is evident in the consistent quality and delivery of our products and services.

For more information, visit the company's website at strongtie.co.uk



● Factories, offices, or warehouses in Australia, Austria, Belgium, Canada, Chile, China, Czech Republic, Denmark, France, Germany, Ireland, Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Taiwan, UK and USA

■ Distribution in Australia, Canada, Chile, Western Europe, part of Eastern Europe, Middle East, Egypt, Japan, Korea and other Asian countries, Mexico, New Zealand, UK, part of South America and USA

European Manufacturing

Beyond precision engineering and rigorous testing, our European based manufacturing facilities are what enable us to deliver products to the highest industry standard. We invest in - and invent - fabrication technology that can bring our designs to life, and ultimately provide your projects strength, speed and success.

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The Simpson Strong-Tie Company Inc.

“No Equal” Pledge Includes:

- Quality products value-engineered for the lowest installed cost at the highest-rated performance levels
- Most thoroughly tested and evaluated products in the industry
- Strategically located manufacturing and warehouse facilities
- National code agency listings
- Largest number of patented connectors in the industry
- European locations with an international sales team
- In-house R&D and tool and die professionals
- In-house product testing and quality control engineers

Quality Policy

We help people build safer structures economically. We do this by designing, engineering and manufacturing “No Equal” structural connectors and other related products that meet or exceed our customers’ needs and expectations.

Everyone is responsible for product quality and is committed to ensuring the effectiveness of the Quality Management System. Simpson Strong-Tie® is an ISO 9001 registered company. ISO 9001 is an internationally recognised quality management system standard, which lets our customers know that they can count on the consistent quality of Simpson Strong-Tie’s products and services.

Karen Colonias
President,
Chief Executive Officer

Testing Laboratory Accreditation



The Andris Peterson European Test Laboratory, located in the UK in Tamworth, Staffordshire, is the first manufacturer's facility to achieve third party accreditation to the international standard BS EN ISO/IEC 17025.

The world-class facility now conducts around 10,000 product tests annually and has recently benefited from a significant investment, which will enable a doubling in productivity. We extensively test our products, which gives you the reassurance that they will perform in the toughest conditions and we strive to ensure that our products are compliant with the latest European requirements for construction products.



FM 14704

ISO 9001:2015

Simpson Strong-Tie is an ISO 9001 registered company. ISO 9001 is an internationally recognised quality management system which lets our domestic and international customers know that they can count on the consistent quality of Simpson Strong-Tie® products and services.



EMS 517722

ISO 14001:2015

Our Swedish, French (St. Gemme la Pleine) and UK facilities are ISO 14001 certified. This standard states the requirements for an environmental management system, and applies to the environmental aspects over which our company has control and can be expected to have an influence.



OHS 57006

ISO 45001:2018

Our Tamworth, UK facility is ISO 45001 certified. This certification reflects an internationally applied standard for occupational health and safety management systems.

To learn more about these certifications and organizations, please visit ISO.org.

strongtie.co.uk



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Introduction to LGS

Light Gauge Steel

Light gauge steel systems offer a range of construction related benefits, with speed of construction, cost effectiveness and safety being the most notable. Light gauge steel is produced when thin gauge steel coils are uncoiled and cold roll-formed into light gauge steel sections, typically between 1.2mm and 3.2mm gauge. The most popular forms of light gauge steel construction are Facades (infill) and Load Bearing. Facade walls are connected between the primary structural frame of the building to provide support for cladding systems.

They do not support floor loads, but do resist wind loads applied to the facade on steel and concrete buildings. Load bearing walls are used in light gauge steel buildings, supporting floor loads, loads from walls above and resisting lateral wind loads. Both internal and external walls may be designed as load bearing. With increased interest in offsite construction methods, light gauge steel systems have become a popular choice for modern methods of construction.



Corrosion Information

The table below provides details of general materials that may be used together in certain instances.




It is sometimes hard to give general statements on certain materials (e.g. Aluminium) as the inclusion of certain ingredients in the alloy (e.g. Copper) has a major impact

on the corrosion resistance in the presence of certain electrolytes (e.g. de-icing salt). In addition, the post treatment (e.g. Eloxation) makes a big difference with the corrosion resistance.

Good to know: When low-alloy steels in high moisture atmospheres are in contact even with small carbon steel particles, bimetallic corrosion can cause a nucleus for stainless steel corrosion. This might happen for example when stainless fasteners are processed with non-stainless tools.

		Anode (Ratio < 10:1)									
		Cast Iron	Mild Steel	Stainless Steel	Copper	Phosphor Bronze	Aluminium Bronze	Magnesium Bronze	Aluminium	Zinc	
Cathode (Area Ratio > 10:1)	Cast Iron										
	Mild Steel										
	Stainless Steel										
	Copper										
	Phosphor Bronze										
	Aluminium Bronze										
	Magnesium Bronze										
	Aluminium										
	Zinc										
Key :			May be used in contact under all conditions								
			May be used in contact in dry conditions								
			MUST NOT be used in contact conditions								

Service classes according to Eurocode 5: Definition of the service classes environment are given within the EN1995-1-1

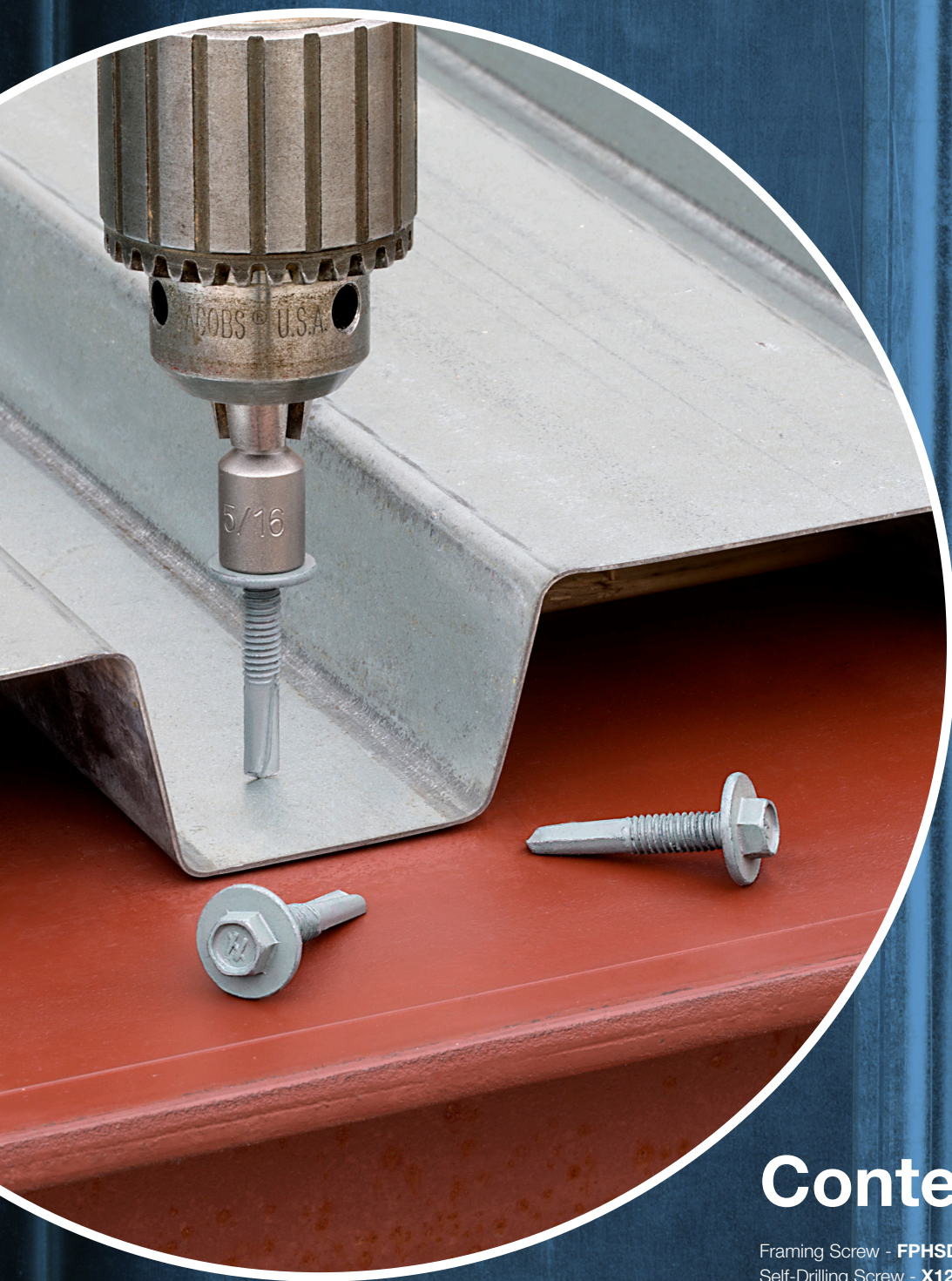
Service Class	Description	Examples
1 	Moisture content in the materials corresponding to a temperature of 20°C and the relative humidity of the surrounding air only exceeding 65% for a few weeks per year.	Warm roof, intermediate floors, timber frame walls - internal and party walls.
2 	Moisture content in the materials corresponding to a temperature of 20°C and the relative humidity of the surrounding air only exceeding 85% for a few weeks per year.	Cold roof, ground floors, timber frame walls - external walls where member is protected from direct wetting.
3 	Climatic conditions leading to higher moisture contents than in service class 2.	External uses - fully exposed.



**Find more
information
on our website**
www.strongtie.co.uk

Project: Stoner House
Location: Crawley
Frameclad

Loose Fasteners



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Framing Screw - FPHSD

Loose Fasteners

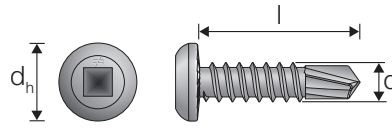
Framing screw for connecting LGS sections together. The FPHSD is a self-drilling screw with a #3 drill point and flat pan head. These screws are usually fixed through pre-formed holes in the steel frame, however they are capable of drilling through steel up to 5.5mm thick.

Material: Steel - Electro galvanised

Installation: Holes in the frame should be aligned before the framing screw is installed.

Key Features:

- 5.5mm x 19mm
- Flat pan head
- #3 square drive (not included)
- #3 drill point



FPHSD



Product Dimensions

Model No.	Fastener dimensions [mm]			TPI	Drill point	Drive Type	
	d _h	d	l				
FPHSD34S1214R	9	5.5	19	14	#3	#3 Square	100,000

Performance Values

Model No.	Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Loads [kN]	
		Shear	Tension	Shear	Tension
FPHSD34S1214R	1.2	2.2	1.1	3.5	1.7
	1.6	2.7	1.4	4.3	2.3

Self-Drilling Screw - X12

The X12 screws are self-drilling screws with a hex washer head and drill point. The X1214 screws have 14 TPI and a #3 drill point capable of drilling through steel up to 5mm thick. The X1224 screws have 24 TPI and a #5 drill point capable of drilling through steel up to 12.5mm thick. Driver bit not included.

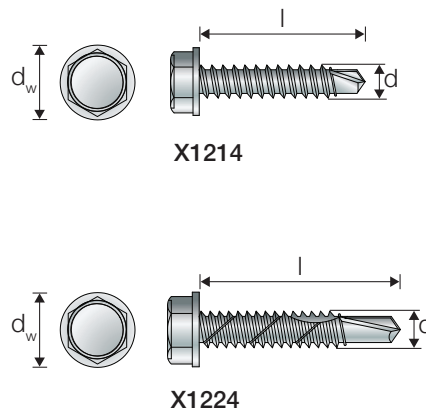
Material: Steel - Ruspert 500 coating

Installation: X1214 self-drilling screws connect steel section to steel section without the need for pre drilling.

X1224 self-drilling screws connect LGS sections to hot rolled steel without the need for pre drilling.

Key Features:

- 5/16" hex washer head
- Drill point
- X1214 suitable for 450 grade hardened steel
- X1224 suitable for hot rolled steel sections up to 12.5mm
- CE marked to EN14566



Product Dimensions

Model No.	Fastener dimensions [mm]				TPI	Drill Point	
	Head	d _w	d	l			
X1214D325	5/16" Hex	12.2	5.5	25	14	#3	250
X1214D350	5/16" Hex	12.2	5.5	50	14	#3	250
X1224D540	5/16" Hex	12.2	5.5	40	24	#5	250

Performance Values

Model No.	Fastener Performance					
	Safe Working Loads [kN]			Characteristic Loads [kN]		
	Tension	Shear	Torsional [Nm]	Tension	Shear	Torsional [Nm]
X1214D325	4.1	2.8	3.3	6.5	4.5	5.3
X1214D350						
X1224D540						

Model No.	Pull-Out Performance Values / Support Thickness [mm]													
	Safe Working Loads [kN]							Characteristic Loads [kN]						
	1.2	1.5	2	3	4	5	6	1.2	1.5	2	3	4	5	6
X1214D325	0.8	0.9	1.2	2.1	2.6	3.3	4.1	1.2	1.4	1.8	3.4	4.2	5.2	6.5
X1214D350	0.8	0.9	1.2	2.1	2.6	3.3	4.1	1.2	1.4	1.8	3.4	4.2	5.2	6.5
X1224D540	0.6	0.8	1.0	2.0	2.3	2.9	3.6	1.0	1.2	1.5	3.2	3.6	4.6	5.8

1) Steel thickness <4.0mm BS EN10025-S355, minimum yield strength 355N/mm²

2) Steel thickness ≥4.0mm BS EN10025-S275, minimum yield strength 275N/mm²

3) Pull out is limited by tensile strength of the fastener

Bracket Screw - **XLSH**Loose
Fasteners

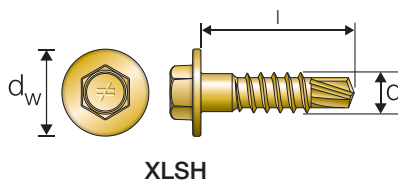
The XLSH screws are self-drilling screws with a hex washer head and shoulder. The screw is used for connecting movement clip and LGSSC brackets to LGS sections. Driver bit not included.

Material: Steel - Yellow zinc coating

Installation: The shoulder screw is positioned through the slots in the movement bracket and fixed to the LGS sections. For the LGSSC bracket the screw is positioned through the lower slots of the LGSSC bracket and fixed to the lower stud of the LGS sections. See page 61.

Key Features:

- Hex head shoulder screw
- Self-drilling point
- Suitable for 450 grade hardened steel



Product Dimensions

Model No.	Fastener Dimensions [mm]				TPI	Drill point	
	Head	d _w	d	l			
XLSH34B1414-83	5/16" Hex	15.6	6.2	19	14.0	#3	83
XLSH78B1414	5/16" Hex	15.6	6.2	22	14.0	#3	N/A

XLSH78B1414 screws supplied with specific brackets only. Not available for individual purchase.

Bracket Screw - X1B

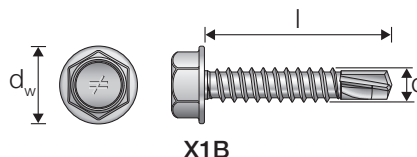
The X1B is a self-drilling screw with a #3 drill point and 5/16" hex washer head. The drill point allows the screw to penetrate the steel without the need for a pilot hole. Suitable for connecting LGS sections together between 0.9 mm and 2.6mm thickness. Ideally suited for use with LGSSC brackets. Driver bit not included.

Material: Steel - Bright zinc coating


Installation: The screw is positioned through the round holes in the LGSSC bracket and fixed to the upper stud of the LGS sections. See page 61.

Key Features:

- 5.5mm x 25mm
- 5/16" hex washer head
- #3 drill point
- Suitable for 450 grade hardened steel
- Also available collated as X1S screws for Quik Drive system



Product Dimensions

Model No.	Fastener Dimensions [mm]				TPI	Drill point	
	Head	dw	d	l			
X1B1214R100	5/16" Hex	10.1	5.5	25	14	#3	100

Performance Values

Model No.	Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Loads [kN]	
		Shear	Tension	Shear	Tension
X1B1214R100	1.2	2.2	0.8	3.5	1.2
	1.6	2.8	1.2	4.5	1.9

Bracket Screw - **XLQ**Loose
Fasteners

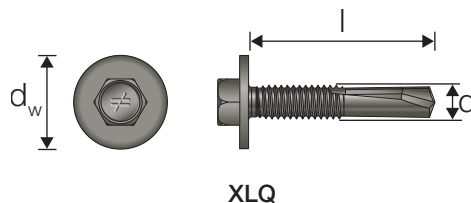
The XLQ is a self-drilling screw with a #5 drill point and hex washer head. It has an integral large washer. Commonly used for connecting movement brackets. Driver bit not included.

Material: Steel - Quik Guard coating


Installation: The XLQ screw fixes the IDCB, SCHA and LGSSC connectors back to the hot rolled steel section.

Key Features:

- 5.8mm x 32mm
- 5/16" hex washer head
- 15.5mm integral washer
- #5 drill point
- Suitable for hot rolled steel sections up to 12.5mm



Product Dimensions

Model No.	Fastener Dimensions [mm]				TPI	Suitable Material Thickness [mm]	Drill point	
	Head	d _w	d	l				
XLQ114B1224/1	5/16" Hex	15.5	5.8	32	24	3.5 - 12.5	#5	1
XLQ114B1224-250	5/16" Hex	15.5	5.8	32	24	3.5 - 12.5	#5	250

Performance Values

Model No.	Member Thickness [mm]	Safe Working Loads [kN]	Characteristic Loads [kN]
		Shear	
XLQ114B1224	1.2	4.5	7.2
	1.6	5.0	8.1

Model No.	Member Thickness [mm]	Safe Working Loads [kN]	Characteristic Loads [kN]
		Pull-Out	
XLQ114B1224	3.2	1.7	2.6
	4.8	2.6	3.8
	6.4	3.4	5.1
	9.5	5.1	7.7

Self-Drilling Screw - E1B

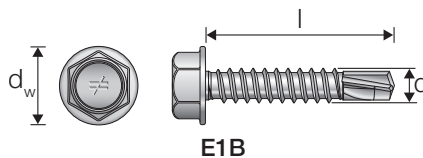
The E1B is a 6.1mm diameter self-drilling screw with a #3 drill point and hex washer head. The drill point allows the screw to penetrate the steel without the need for a pilot hole. Suitable for use with hold downs such as S/HDS. Driver bit not included.

Material: Steel - Clear zinc coating


Installation: Recommended for use with certain Simpson Strong-Tie connectors for fixing to steel up to 8mm thick.

Key Features:

- 6.1mm x 25mm
- 3/8" hex washer head
- 12.2mm integral washer
- #3 drill point



Product Dimensions

Model No.	Fastener dimensions [mm]				TPI	Drill Point	
	Head	d _w	d	l			
E1B1414B/1	3/8" Hex	12.2	6.1	25	14	#3	1
E1B1414B	3/8" Hex	12.2	6.1	25	14	#3	2500

Performance Values

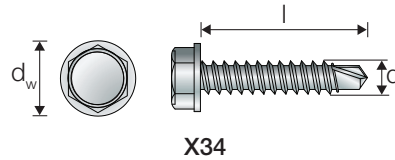
Model No.	Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Loads [kN]	
		Shear	Tension	Shear	Tension
E1B1414B	1.2	1.3	0.6	2.0	0.9
	1.6	2.7	1.1	4.0	1.7

The X34 is a 4.8mm diameter self-drilling screw with a #3 drill point and hex washer head. The drill point allows the screw to penetrate the steel without the need for a pilot hole. Driver bit not included


Material: Steel - Clear zinc coating

Installation: Recommended for use with Simpson Strong-Tie tension ties when fixing to light gauge steel.

- 4.8mm x 19mm
- 5/16" hex washer head
- #3 drill point



Product Dimensions

Model No.	Fastener Dimensions [mm]				TPI	Drill point	
	Head	d _w	d	l			
X34B1016R100	5/16" Hex	10.5	4.8	19	16	#3	100

Performance Values

Model No.	Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Loads [kN]	
		Shear	Tension	Shear	Tension
X34B1016R100	1.2	1.6	0.6	2.5	0.9
	1.6	2.4	0.9	3.6	1.4

Hex Head Masonry Screw - TTN

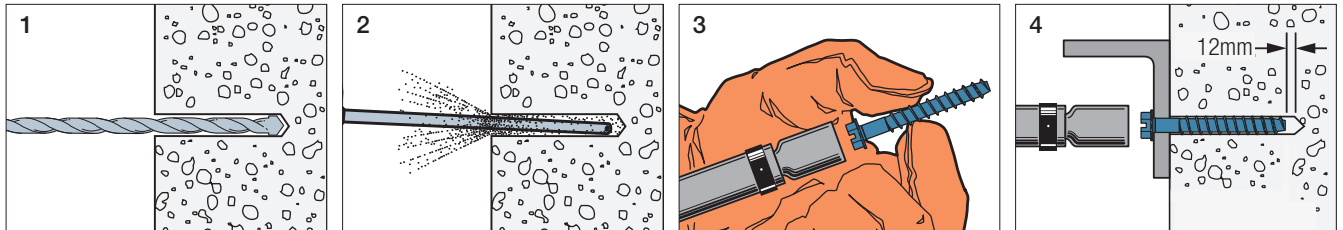
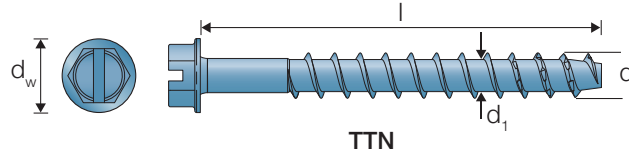
The Titen concrete and masonry screw is ideal for attaching all types of components to concrete and masonry. The improved thread design undercuts the base material more efficiently. This reduces installation torque making it easier to drive without binding, breaking or stripping, even during installation into hard base material. Driver bit not included.

Material: Steel - Zinc plated with baked-on ceramic coating


Installation: The Titen hex head screw connects over sail and LGSSC brackets to the concrete substrate. Pre drilling is required.

Key Features:

- Patented undercutting threads reduce installation torque
- Hex and flat screw head helps with installation
- 6.4mm diameter
- Blue colour for simple on site recognition
- For use in dry interior environments
- Drill bit included in each box



Product Dimensions

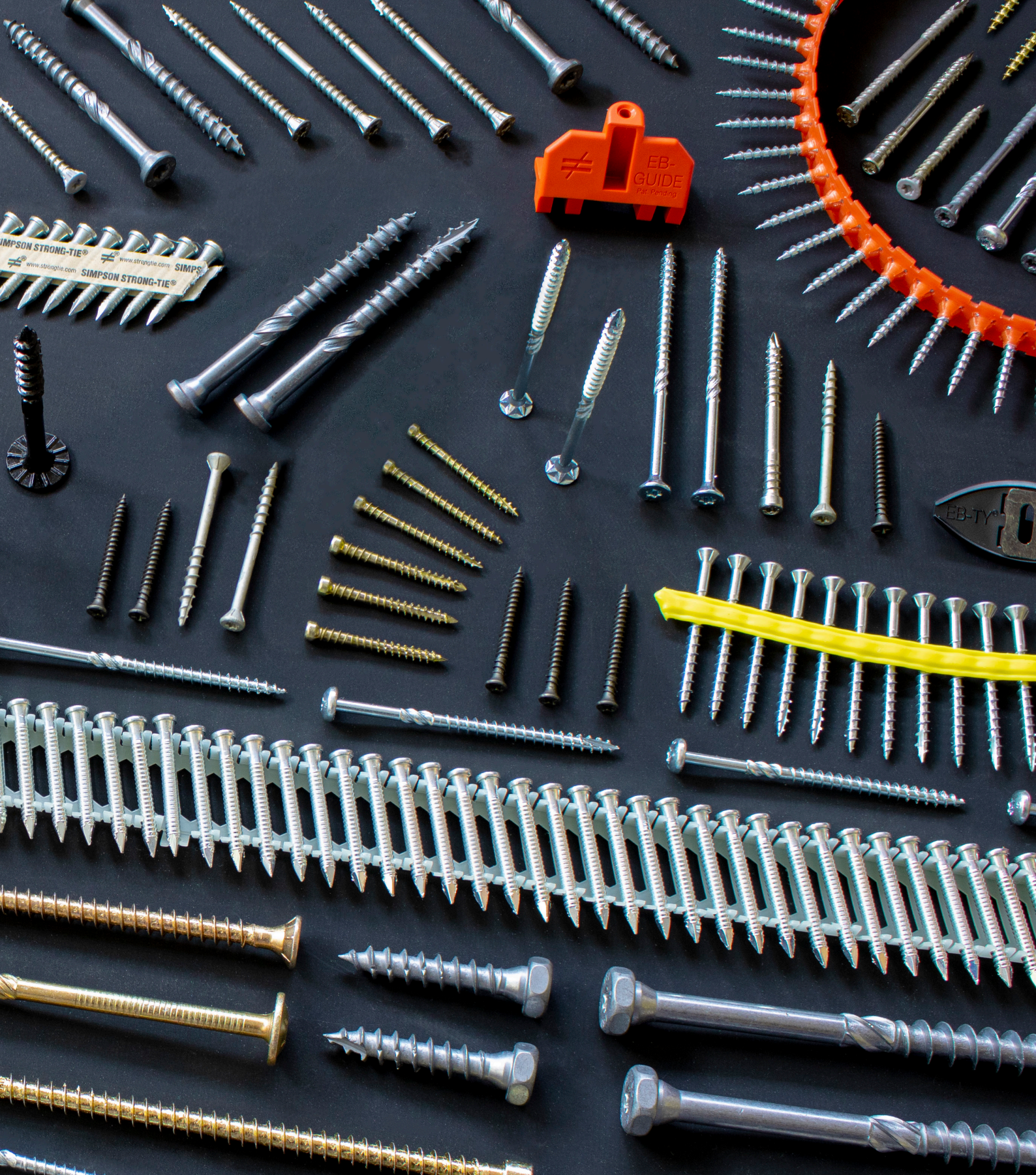
Model No.	Dimensions [mm]					Drill Diameter	
	Head	d _w	l	d	d ₁		
TTN25134H	5/16" Hex	10.0	45	6.4	4.8	4.8	100

Performance Values

Model No.	Recommended Loads [kN]		Design Resistance [kN]		Characteristic Resistance [kN]	
	Tension (N _{Rec})	Shear (V _{Rec})	Tension (N _{td})	Shear (V _{td})	Tension (N _{rk})	Shear (V _{rk})
TTN25134H	1.9	3.2	2.7	4.5	4.8	8.7

Installation Information

Characteristic	Symbol	Unit	TTN25134H
Drill Hole Depth	h _i	[mm]	45
Effective Embedment Depth	h _{ef}	[mm]	26
Characteristic Spacing	S _{cr,N}	[mm]	78
Minimum Spacing	S _{min}	[mm]	50
Characteristic Edge Distance	C _{cr,N}	[mm]	75
Minimum Edge Distance	C _{min}	[mm]	45
Minimum Concrete Thickness	h _{min}	[mm]	80
Installation Torque (C20/25)	T _{sd} ≤	[Nm]	105



NEW to the UK, Europe's Leading Range of Premium Fasteners!

Simpson Strong-Tie® now offers a complete range of nails and screws for almost every application, including stainless steel, structural and collated options. Also featuring the award winning Quik Drive auto-feed system. **Building Safer Stronger Structures.**

www.strongtie.co.uk

SIMPSON
Strong-Tie

Quik Drive Collated Fasteners



Contents

Fibre Cement Board to Steel Screw - CBSDQ	26
Quik Drive Collated Self-Drilling Screw - X1S	27

Fibre Cement Board to Steel Screw - **CBSDQ**Quik Drive
Collated Fasteners

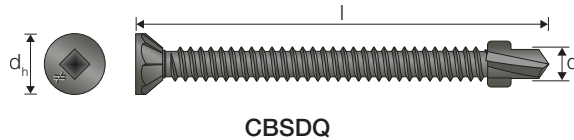
The CBSDQ screw is suitable for fixing fibre cement board to steel between 1mm and 3mm thick. Ideally suited for modular housing construction. It has a countersunk, ribbed flat head with a fine thread and a drill point with wings. The wings ream a larger hole in the cement board, and then break off when they connect with the steel. This allows the cement board to be pulled tight to the steel substrate.

Material: Steel - Quik Guard coating

Installation: The CBSDQ screws connect most types of cement board and fibre cement board to the LGS sections without the need for pre drilling. Only suitable for fixing to steel.

Key Features:

- CE Marked to EN14566
- Fibre cement board to steel frame 1mm to 3mm thickness
- Ribbed countersunk head with self tapping fine thread
- Drill point with wings to clear debris from hole
- #2 square undersized driver bit included (BIT2SUE)



Product Dimensions

Model No.	Fastener Dimensions [mm]			Drive Type	TPI	Drill Point	Qty per Strip	Recommended RPM	Quik Drive Attachment	
	d _h	d	l							
CBSDQ41E	8.4	4.2	41	#2 Undersize Square	18	#2	30	2500	QDPR051E / QDPR064E / QD76KE	1500
CBSDQ55E	8.4	4.8	57	#2 Undersize Square	16	#2	30	2500	QDPR064E / QD76KE	1000

Performance Values

Model No.	Member Thickness [mm]	Safe Working Loads [kN]			Characteristic Loads [kN]		
		Head Pull-Through	Shear	Tension	Head Pull-Through	Shear	Tension
CBSDQ41E	1.2	0.8	1.0	0.8	1.2	1.6	1.2
CBSDQ55E	1.6	0.8	1.1	1.2	1.2	1.7	1.9

Notes:

1) Head pull-through based upon 12mm Fibre Cement Board

Quik Drive Collated Self-Drilling Screw - X1S

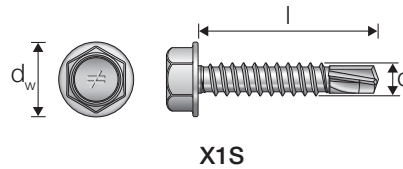
The X1S is a self-drilling screw with a #3 drill point and 8mm hex washer head. The drill point allows the screw to penetrate the steel without the need for a pilot hole. Suitable for connecting LGS sections together between 0.9mm and 2.6mm thickness.

Material: Steel - Electro galvanised


Installation: Self-drilling screws connect steel section to steel section without the need for pre drilling.

Key Features:

- #3 drill point
- 5/16" hex washer head
- LGS section to LGS section tek screw
- Compatible with QDPROHX516G2 Quik Drive attachment



Product Dimensions

Model No.	Fastener Dimensions [mm]				TPI	Drill Point	Qty per Strip	Recommended RPM	Quik Drive Attachment	
	Head	d _w	d	l						
X1S1214	5/16" Hex	10.1	5.5	25	14	#3	22	2500	QDPROHX516G2	1500

Performance Values

Model No.	Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Loads [kN]	
		Shear	Tension	Shear	Tension
X1S1214	1.2	2.2	0.8	3.5	1.2
	1.6	2.8	1.2	4.5	1.9

Quik Drive Attachments



Contents

Quik Drive Attachment 51mm - QDPRO51E	29
Quik Drive Attachment 64mm - QDPRO64E	30
Quik Drive Attachment 25mm - QDPROHX516G2	31

Quik Drive Attachment 51mm - QDPRO51E

The QDPRO51E Quik Drive attachment is suitable for screws ranging from 25mm to 51mm in length. Smooth nose piece prevents marking of the work surface. Teflon coated moving parts reduce friction and impart non-stick properties, meaning that no lubrication is required. Available with or without extension pole. Use code QDPRO51E for attachment only and QDPRO51KE for added extension pole. Suitable for use with CBSDQ41E screws.

Key Features:

- Suitable for screws 25mm to 51mm
- Self locking depth adjustment for accurate countersinking of screws
- Quick connection and release to screw gun or extension pole
- Teflon coated moving parts for durable performance
- Available as kit with or without extension pole



QDPRO51E



Smooth nose will not mark drywall surface.



Self-locking depth adjustment for consistent countersink.

Kit includes:		QDPRO51E	QDPRO51KE
Extension	QDEXTE		✓
Attachment	QDPRO51E	✓	✓
Pouch	QUIVER	✓	✓
Mandrel	MANDREL165E-RC	✓	✓
Carry Case	TOOLCASE-LGE		✓
Spare Bits	BIT2PE (x3)	✓	✓
	BIT2SE (x1)	✓	✓
	BIT3SUE	✓	✓

Compatible Screws	
BHSDZ	RDWF
DWC	RDPF
DWF	CHB
DWD	WSHL
DWFS	WSC
MTH	DWHL
CBSDQ	WSNTL (44 mm and 51 mm)
PPSD	

QDPRO51E



For more information on collated Quik Drive screws see our Premium Fasteners catalogue.



QDPRO51KE



Quik Drive Attachment 64mm - QDPRO64E

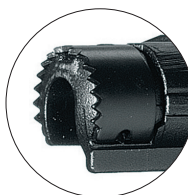
The QDPRO64E Quik Drive attachment is suitable for screws ranging from 38mm to 64mm in length. The serrated nose piece provides increased stability and prevents skidding on smooth or slippery surfaces. Teflon coated moving parts reduce friction and impart non-stick properties, meaning that no lubrication is required. Available with or without extension pole. Use code QDPRO64E for attachment only and QDPRO64KE for added extension pole. Suitable for use with CBSDQ41E and CBSDQ55E screws.

Key Features:

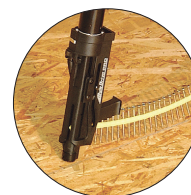
- Suitable for screws 38mm to 64mm
- Self locking depth adjustment for accurate countersinking of screws
- Quick connection and release to screw gun or extension handle
- Teflon coated moving parts for durable performance
- Available as kit with or without extension pole



QDPRO64E



Non-skid nose piece increases stability (not interchangeable).



Uniform toe-nailing and countersink on slick surfaces.

Kit includes:		QDPRO64E	QDPRO64KE
Extension	QDEXTE		✓
Attachment	QDPRO64E	✓	✓
Pouch	QUIVER	✓	✓
Mandrel	MANDREL191E-RC	✓	✓
Carry Case	TOOLCASE-LGE		✓
Spare Bits	BIT2SE (x2)	✓	✓
	BIT3SUE	✓	✓

Compatible Screws

CBSDQ
DTHQ
PPSD
SSDCL
SSWSCB

SSDTH
WSNTL
WSNTLG
CHB
DCSD

For more information on collated Quik Drive screws see our Premium Fasteners catalogue.

QDPRO64E



QDPRO64KE



Quik Drive Attachment 25mm - QDPROHX516G2

The QDPROHX516G2 is designed to be used in light gauge steel applications with Simpson Strong-Tie X1S1214 self drilling screws. Teflon coated moving parts reduce friction and impart non-stick properties, meaning that no lubrication is required. This kit comes with mandrel, hex driver bit, screw quiver and carry case. Extension poles can be ordered separately.

Key Features:

- Suitable for X1S1214 hex head screws
- Self locking depth adjustment to prevent damage to steel
- Quick connection and release to screw gun or extension pole
- Can be used with QDEXTG2-T2 extension handle
- Teflon coated moving parts for durable performance



QDPROHX516G2

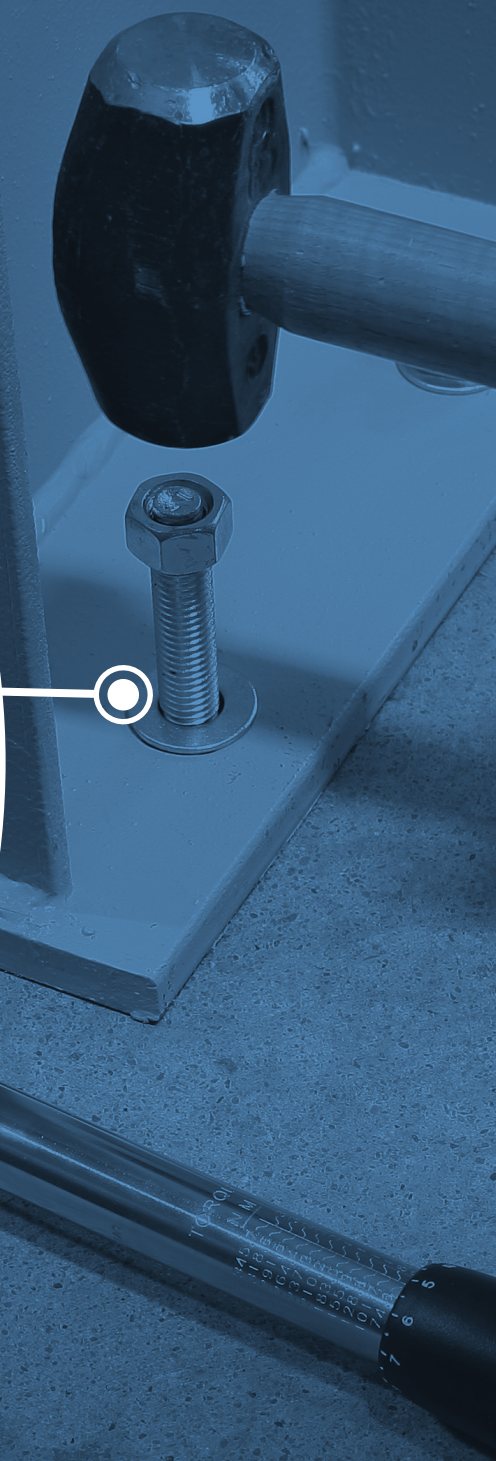
Quik Drive
Attachments

Kit includes:		QDPROHX516G2	Compatible Screws
Attachment	QDPROHX516G2	✓	X1S1214 X2SE1016
Mandrel	MANDRELBPHX516G2	✓	
Spare Bits	BITHEXLB516 (x1)	✓	
Pouch	QUIVER	✓	

For more information on collated Quik Drive screws see our Premium Fasteners catalogue.



Chemical Anchor Systems



Contents

Methacrylate Resin - **ATHP**33

Methacrylate Resin – ATHP

ATHP is a styrene free methacrylate resin suitable for securing threaded rod into concrete.

Easy to dispense and fast curing, specially designed for structural fixings that need connecting to concrete.

Unique feature: The resin changes colour to grey as it cures, helping the installer on site.

Installation: Ensure all drilled holes are cleaned (2 x blows - 4 x brushes - 2 x blows) before dispensing resin.

Key Features:

- ETA approved for threaded rod installations
- Changes colour as it cures
- Fast curing
- Low odour
- Non-flammable
- 2 mixing nozzles supplied
- 300 ml and 420 ml tubes



ATHP300BG-UK
ATHP420BG-UK

Product Dimensions

Model No.	Description
ATHP300BG-UK	300 ml
ATHP420BG-UK	420 ml

Product Values

Basic load data for single anchor with no influence of edge distances and spacings ^{4) 7)} / DESING METHOD EOTA TR 029																
					M8		M10		M12		M16		M20		M24	
					5.8	A4-70	5.8	A4-70	5.8	A4-70	5.8	A4-70	5.8	A4-70	5.8	A4-70
			h _{ef} = 8d [mm]		64		80		96		128		160		192	
Characteristic resistance ^{1) 8)}																
Cracked concrete (T1: 24°C/40°C)	C20/25	Tension	N _{Rk}	[kN]	-	-	-	-	12.7	12.7	22.5	22.5	-	-	-	-
	C30/37				-	-	-	-	13.2	13.2	23.4	23.4	-	-	-	-
	C40/50				-	-	-	-	13.5	13.5	24.1	24.1	-	-	-	-
	C50/60				-	-	-	-	13.8	13.8	24.5	24.5	-	-	-	-
	C20/25	Shear ⁵⁾	V _{Rk}	[kN]	-	-	-	-	21.0	25.3	39.0	45.0	-	-	-	-
	C30/37				-	-	-	-	21.0	26.3	39.0	46.8	-	-	-	-
	C40/50				-	-	-	-	21.0	27.1	39.0	48.2	-	-	-	-
	C50/60				-	-	-	-	21.0	27.6	39.0	49.1	-	-	-	-
Non-cracked concrete 6) (T1: 24°C/40°C)	C20/25	Tension	N _{Rk}	[kN]	16.1	16.1	23.9	23.9	32.6	32.6	51.4	51.4	75.4	75.4	101.3	101.3
	C30/37				18.0	18.0	26.7	26.7	36.5	36.5	57.6	57.6	84.4	84.4	113.4	113.4
	C40/50				18.0	19.8	29.0	29.4	40.0	40.0	63.3	63.3	92.7	92.7	124.6	124.6
	C50/60				18.0	20.9	29.0	31.0	42.0	42.3	66.9	66.9	98.0	98.0	131.7	131.7
	C20/25	Shear ⁵⁾	V _{Rk}	[kN]	9.0	13.0	15.0	20.0	21.0	30.0	39.0	55.0	61.0	86.0	88.0	124.0
	C30/37				9.0	13.0	15.0	20.0	21.0	30.0	39.0	55.0	61.0	86.0	88.0	124.0
	C40/50				9.0	13.0	15.0	20.0	21.0	30.0	39.0	55.0	61.0	86.0	88.0	124.0
	C50/60				9.0	13.0	15.0	20.0	21.0	30.0	39.0	55.0	61.0	86.0	88.0	124.0
Bending Moment			M ⁰ _{Rk,s}	[Nm]	19.0	26.0	37.0	53.0	66.0	92.0	167.0	233.0	326.0	454.0	784.0	

1. Steel failure decisive
2. The design resistances have been calculated using the partial safety factors for resistances stated in the ETA-assessment(s).
3. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-assessment(s) and with a partial safety factor for actions of $\gamma_F=1.4$.
4. The load figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \geq 15$ cm (any diameter) or with a rebar spacing $s \geq 10$ cm, if the rebar diameter is 10 mm or smaller.
5. The figures for shear loads are based on a single anchor without influence of concrete edges.
6. Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3$ N/mm² can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchor loads included).
7. For combined tension and shear loads or anchor groups and/or in case of edge influence, a calculation per TR 029, design method A shall be performed. For details see ETA - assessment(s)
8. Values for temperature range T1: 24°C/40°C: -40°C to +40°C (max. long term temperature: +24°C; max. short term temperature: +40°C)

Methacrylate Resin – **ATHP**

Design resistance ^{1) 2) 8)}																
Cracked concrete (T1: 24°C/40°C)	C20/25	Tension	N _{Rd}	[kN]	-	-	-	-	8.4	8.4	15.0	15.0	-	-	-	-
	C30/37				-	-	-	-	8.8	8.8	15.6	15.6	-	-	-	-
	C40/50				-	-	-	-	9.0	9.0	16.1	16.1	-	-	-	-
	C50/60				-	-	-	-	9.2	9.2	16.4	16.4	-	-	-	-
	C20/25	Shear ⁵⁾	V _{Rd}	[kN]	-	-	-	-	16.8	16.9	30.0	30.0	-	-	-	-
	C30/37				-	-	-	-	16.8	17.6	31.2	31.2	-	-	-	-
	C40/50				-	-	-	-	16.8	18.1	31.2	32.1	-	-	-	-
	C50/60				-	-	-	-	16.8	18.4	31.2	32.7	-	-	-	-
Non-cracked concrete 6) (T1: 24°C/40°C)	C20/25	Tension	N _{Rd}	[kN]	10.7	10.7	15.9	15.9	21.7	21.7	34.3	34.3	50.2	50.2	67.5	67.5
	C30/37				12.0	12.0	17.8	17.8	24.3	24.3	38.4	38.4	56.3	56.3	75.6	75.6
	C40/50				12.0	13.2	19.3	19.6	26.7	26.7	42.2	42.2	61.8	61.8	83.1	83.1
	C50/60				12.0	13.9	19.3	20.7	28.0	28.2	44.6	44.6	65.3	65.3	87.8	87.8
	C20/25	Shear ⁵⁾	V _{Rd}	[kN]	7.2	8.3	12.0	12.8	16.8	19.2	31.2	35.3	48.8	55.1	70.4	79.5
	C30/37				7.2	8.3	12.0	12.8	16.8	19.2	31.2	35.3	48.8	55.1	70.4	79.5
	C40/50				7.2	8.3	12.0	12.8	16.8	19.2	31.2	35.3	48.8	55.1	70.4	79.5
	C50/60				7.2	8.3	12.0	12.8	16.8	19.2	31.2	35.3	48.8	55.1	70.4	79.5
Bending Moment			M _{Rd}	[Nm]	15.2	16.7	29.6	34.0	52.8	59.0	133.6	149.4	260.8	291.0	448.8	502.6

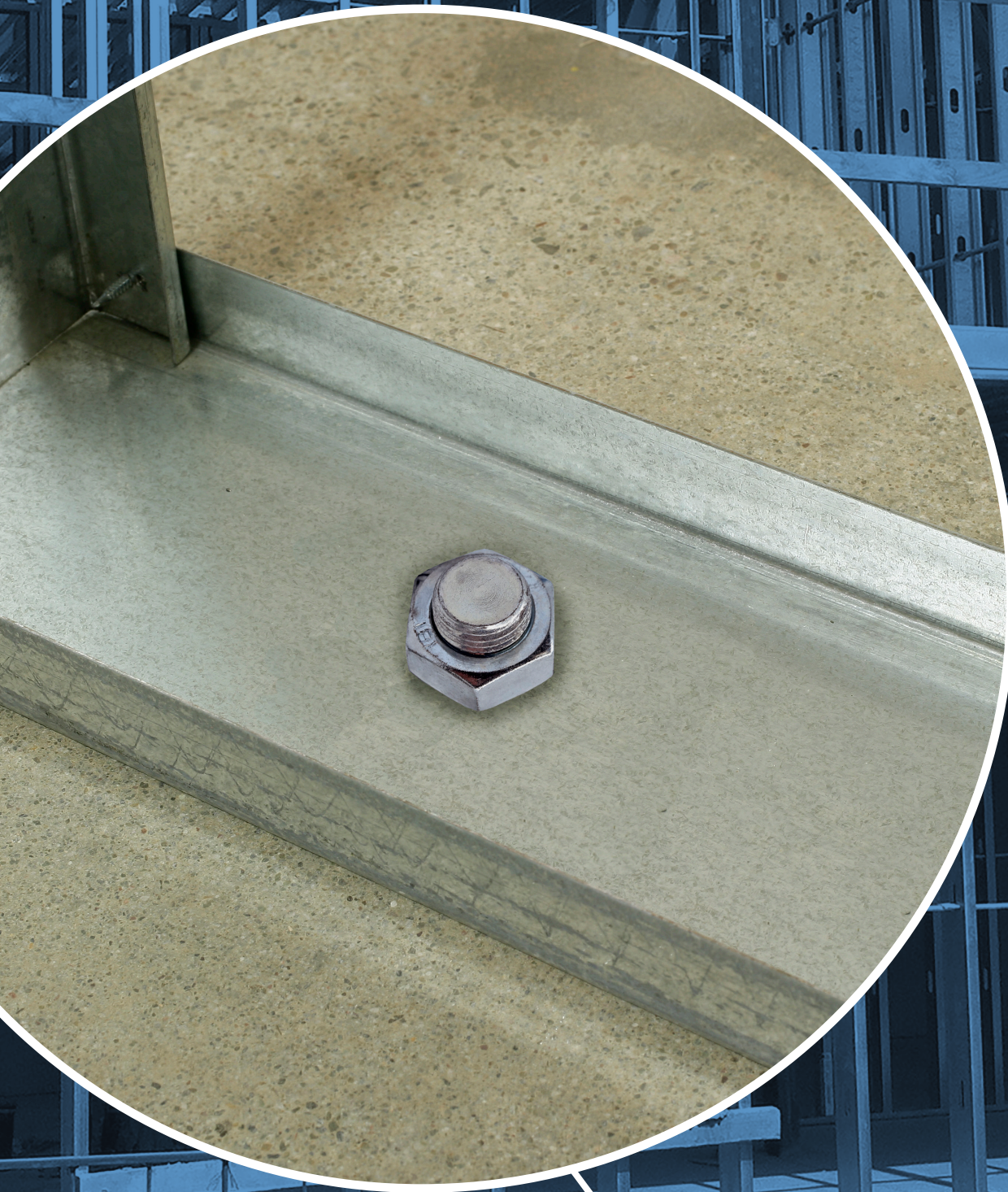
Recommended Loads ^{1) 3) 8)}																
Cracked concrete (T1: 24°C/40°C)	C20/25	Tension	N _{Rec}	[kN]	-	-	-	-	6.0	6.0	10.7	10.7	-	-	-	-
	C30/37				-	-	-	-	6.3	6.3	11.1	11.1	-	-	-	-
	C40/50				-	-	-	-	6.5	6.5	11.5	11.5	-	-	-	-
	C50/60				-	-	-	-	6.6	6.6	11.7	11.7	-	-	-	-
	C20/25	Shear ⁵⁾	V _{Rec}	[kN]	-	-	-	-	12.0	12.1	21.4	21.4	-	-	-	-
	C30/37				-	-	-	-	12.0	12.5	22.3	22.3	-	-	-	-
	C40/50				-	-	-	-	12.0	12.9	22.3	22.9	-	-	-	-
	C50/60				-	-	-	-	12.0	13.1	22.3	23.4	-	-	-	-
Non-cracked concrete 6) (T1: 24°C/40°C)	C20/25	Tension	N _{Rec}	[kN]	7.7	7.7	11.4	11.4	15.5	15.5	24.5	24.5	35.9	35.9	48.2	48.2
	C30/37				8.6	8.6	12.7	12.7	17.4	17.4	27.4	27.4	40.2	40.2	54.0	54.0
	C40/50				8.6	9.4	13.8	14.0	19.1	19.1	30.1	30.1	44.1	44.1	59.3	59.3
	C50/60				8.6	9.9	13.8	14.8	20.0	20.2	31.8	31.8	46.7	46.7	62.7	62.7
	C20/25	Shear ⁵⁾	V _{Rec}	[kN]	5.1	6.0	8.6	9.2	12.0	13.7	22.3	25.2	34.9	39.4	50.3	56.8
	C30/37				5.1	6.0	8.6	9.2	12.0	13.7	22.3	25.2	34.9	39.4	50.3	56.8
	C40/50				5.1	6.0	8.6	9.2	12.0	13.7	22.3	25.2	34.9	39.4	50.3	56.8
	C50/60				5.1	6.0	8.6	9.2	12.0	13.7	22.3	25.2	34.9	39.4	50.3	56.8
Bending Moment			M _{Rec}	[Nm]	10.9	11.9	21.1	24.3	37.7	42.1	95.4	106.7	186.3	207.9	320.6	359.0

Installation Data														
<ul style="list-style-type: none">Dry or wet concrete (Use category 1)Overhead installation is not permitted			M8		M10		M12		M16		M20		M24	
			Steel	A4	Steel	A4	Steel	A4	Steel	A4	Steel	A4	Steel	A4
Nominal drill hole diameter	d ₀	[mm]	10		12		14		18		24		28	
Cylindrical drill hole depth	h ₀ ≥	[mm]	64		80		96		128		160		192	
Diameter of clearance hole of the fixture	d _f	[mm]	9		12		14		18		22		26	
Width across flats DIN 934 (ISO 4032)	SW	[mm]	13		17(16)		19(18)		24		30		36	
Installation torque (max.)	T _{inst. max}	[mm]	10		20		30		60		90		140	

Spacing, edge distance and member thickness																
					M8		M10		M12		M16		M20		M24	
					Steel	A4	Steel	A4	Steel	A4	Steel	A4	Steel	A4	Steel	A4
Effective embedment depth		$h_{ef, min}$	[mm]		60		60		70		80		90		100	
		$h_{ef, max}$	[mm]		160		200		240		320		400		480	
Effective embedment depth (8d)		$h_{ef, 8d}$	[mm]		64		80		96		128		160		192	
Characteristic spacing		$s_{cr, N}$	[mm]		192		240		288		384		480		576	
Minimum spacing		s_{min}	[mm]		40		50		60		80		100		120	
Characteristic edge distance		$c_{cr, N}$	[mm]		96		120		144		192		240		288	
Minimum edge distance		c_{min}	[mm]		40		50		60		80		100		120	
Minimum member thickness		h_{min}	[mm]		100		110		126		164		208		248	

Working and curing times / Drill hole cleaning procedure					
Temperature of the anchorage base $T_{\text{base material}}$		Working time (Gel time)	Curing time (In dry concrete)	Curing time (In wet concrete)	Manual Air Cleaning (MAC) for all drill hole diameters $d_0 \leq 24$ mm and drill hole depth $h_0 \leq 10d$ 4x blowing (Hand pump) 4x brushing
		t_{gel}	$t_{\text{cure,dry}}$	$t_{\text{cure,wet}}$	
$0^{\circ}\text{C} \leq T_{\text{base material}} < +5^{\circ}\text{C}$		25 min	90 min	3:00 h	
$+5^{\circ}\text{C} \leq T_{\text{base material}} < +10^{\circ}\text{C}$		17 min	70 min	2:20 h	
$+10^{\circ}\text{C} \leq T_{\text{base material}} < +20^{\circ}\text{C}$		12 min	65 min	2:10 h	
$+20^{\circ}\text{C} \leq T_{\text{base material}} < +30^{\circ}\text{C}$		6 min	60 min	2:00 h	
$+30^{\circ}\text{C} \leq T_{\text{base material}} \leq +40^{\circ}\text{C}$		3 min	45 min	1:30 h	
Cartridge temperature (Bond material): $\geq +20^{\circ}\text{C}$!					

Fixings For Chemical Anchor Systems



Contents

Threaded Rods - LMAS	36
Resin Dispensing Tool - DT300	36

Threaded Rod – LMAS

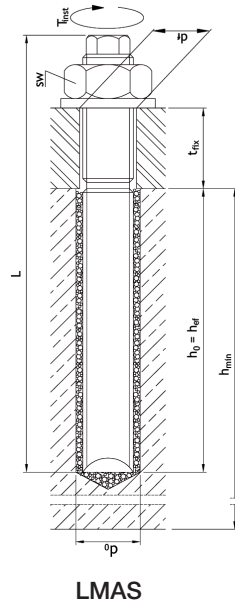
LMAS threaded rods are intended to be used in conjunction with ATHP300BG-UK and ATHP420BG-UK resin.

Features:

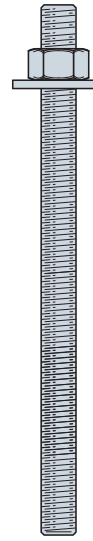
- Zinc plated LMAS threaded rods are supplied with nuts & washers
- Available in M10 to M16

Material:

- Zinc Plated Steel: Grade 5.8



LMAS



Product Dimensions

Model No.	Code	Bolt Dimensions [mm]		Fixture & Hole Dimensions [mm]			
				Max Fixture Thickness	Max hole diameter within Fixture	Embedment Depth	Drilled Hole Size
		Diameter	l	t _{fix}	d _f	h _{ef}	d _o x h _o
M10x130	LMAS1012090025	M10	130	25	12	90	12 x 90
M10x150	LMAS1016085050	M10	150	50	12	85	12 x 85
M12x150	LMAS1214100035	M12	150	35	14	100	14 x 100
M12x185	LMAS1214100070	M12	185	70	14	100	14 x 100
M16x170	LMAS1618130020	M16	170	20	18	130	18 x 130
M16x200	LMAS1618130050	M16	200	50	18	130	18 x 130

Resin Dispensing Tool – DT300, DT380

Dispensing tool allows effortless installation of ATHP300BG-UK and ATHP420BG-UK resin.

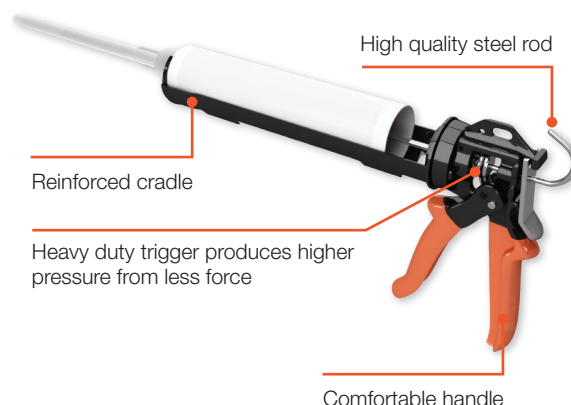
Installation: The DT300 dispensing tool is suitable for the 300ml cartridges and the DT380 dispensing tool is suitable for the 420ml cartridges.

Key Features:

- Dispensing tool for 300 ml and 420 ml cartridge
- Unlike ordinary cartridge guns, the DT300 and DT380 are machined to cope with the heavier duty demands of concrete resins, dispensing smoothly with less effort
- Ergonomically designed for easier dispensing of the resin and better handling

Product Dimensions

Model No.	Description
DT300	300 ml Cartridge
DT380	420 ml Cartridge



Hold Downs and Tension Ties



Contents

Hold Downs - S/HD8S / S/HD10S	38
Tension Ties - DTT / HTT / LTT	39

Hold Downs – S/HD8S / S/HD10S

The S/HD series of holdowns are designed to connect the building structure to the foundation. Connection to the stud is with screws. When connecting with a back to back detail, fasteners must be specified by the designer. In a back to back installation, the binding members enable the two sections to act as one.

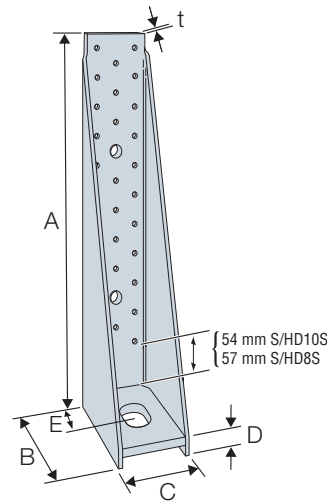
Material: Galvanised Mild Steel: 275g/m²,

Installation: Use the specified number of fasteners to attach the strap portion of the tie to the light gauge steel stud.

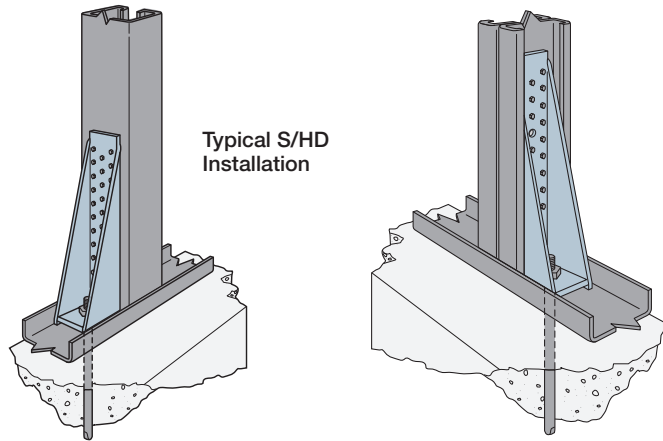
Connect the base to the wall or foundation with a suitable anchor; see performance table for fastener type and required bolt diameter.

Key Features:

- The S/HD8S uses a maximum of 17 fasteners and the S/HD10S uses a maximum of 22 fasteners
- Designed to utilize fewer fasteners for reduced installation times



S/HD10S



Typical S/HD Installation

Product Dimensions

Model No.	Hanger Dimensions [mm]						Holes		
							Flange A		Flange B
	A	B	C	D	E	t	Ø6.4	Ø14.3	Ø24x28
S/HD8S	279	86	52	22	38	3.4	19	2	1
S/HD10S	343	86	52	22	38	3.4	24	2	1

Performance Values

Model No.	Fasteners				Installation	Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Capacities [kN]	
	Flange A		Flange B				R _{2,SWL,ST}	Deflection at Load [mm]	R _{2,k}	Deflection at Load [mm]
	Stud (E1B1414B)	Steel Section (X1224D540)	Anchor Bolt							
	Qty	Qty	Qty	Ø [mm]						
S/HD8S	17	-	1	22	Back to Back Studs	1.2	38.9	2.2	62.2	3.7
	17	-	1	22	Back to Back Studs	1.6	39.4	2.7	62.9	4.1
	-	17	1	22	Steel Section	-	48.2	1.3	77.1	1.8
S/HD10S	22	-	1	22	Back to Back Studs	1.2	49.5	2.8	79.0	3.1
	22	-	1	22	Back to Back Studs	1.6	54.4	2.4	86.8	3.7
	-	22	1	22	Steel Section	-	55.0	1.1	88.2	1.5

- The engineer or designer shall be responsible for specifying suitable anchor type, embedment and configuration
- Deflection at Load includes fastener slip, holdown deformation and anchor rod elongation for holdowns installed up to 100mm above top of concrete. Holdowns may be installed raised, up to 450mm above top of concrete, with no load reduction provided that additional elongation of the anchor rod is accounted for.
- For instances where the S/HDS holdowns are installed onto steel sections with material thickness greater than 8mm, use S1224D540 screws (suitable for use on RSJ or steel sections upto 12.5mm thick)
- Not all fastener holes for S/HDS holdowns need to be filled, as additional fastener holes provided. Install fasteners symmetrically.

Tension Ties – DTT / HTT / LTT

The DTT, HTT and LTT tension ties are ideal for retrofit or new construction projects. They provide high strength, post pour, light gauge steel to concrete connections.

Material: Galvanised Mild Steel:

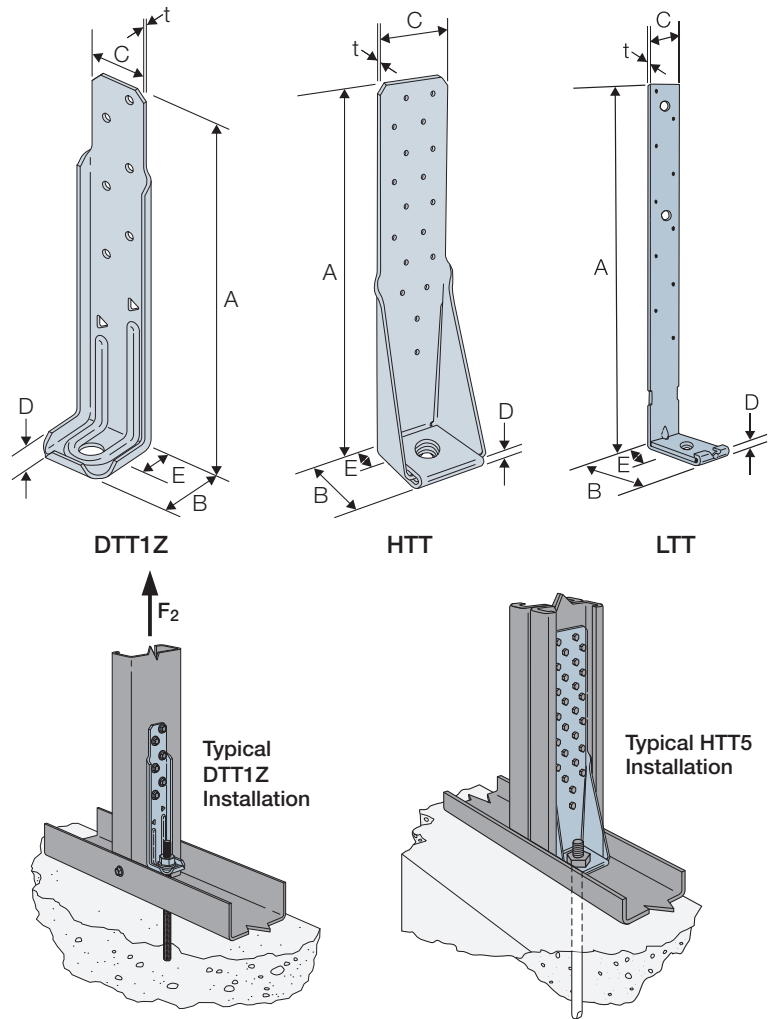
HTT & LTT – 275g/m², DTT – 565 g/m²

Installation: Use the specified number of fasteners to attach the strap portion of the tie to the light gauge steel stud.

Connect the base to the wall or foundation with a suitable anchor; see performance table for fastener type and required bolt diameter.

Key Features:

- The DTT and HTT are single piece formed tension ties with the HTT having a 4-ply formed seat that eliminates the need for any washers
- LTT incorporates a load transfer plate which means no additional washers are required



Product Dimensions

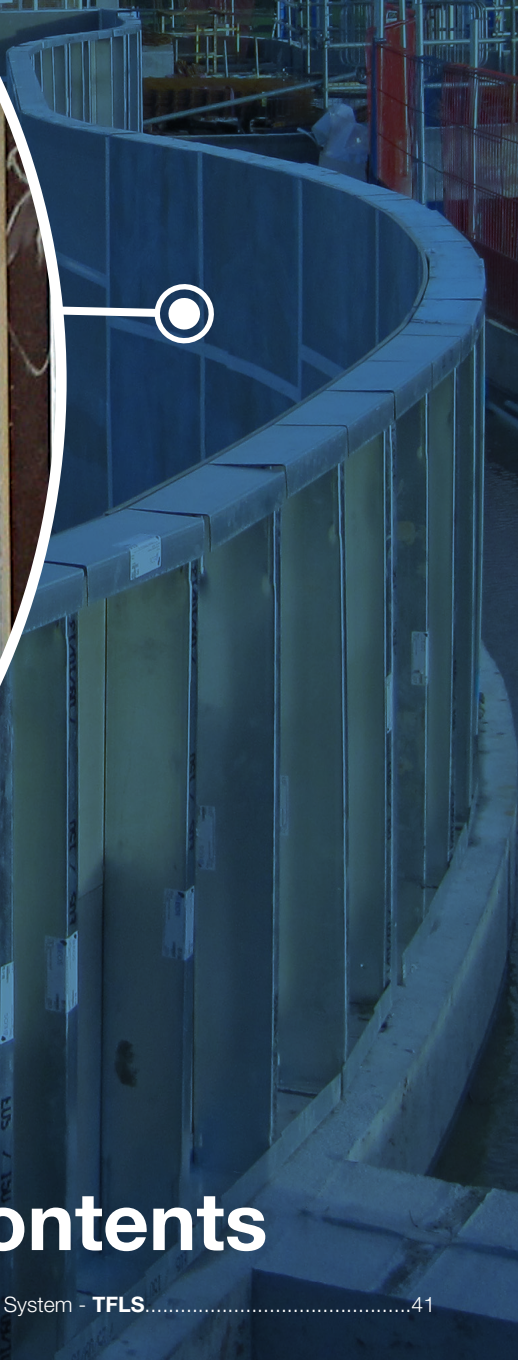
Model No.	Hanger Dimensions [mm]						Holes							
							Flange A					Flange B		
	A	B	C	D	E	t	Ø4.3	Ø4.7	Ø5.0	Ø14.0	Tri	Ø11	Ø17.5	Ø21.0
DTT1Z	180	37	38	7	19	2.0	6	-	-	-	2	1	-	-
HTT4	314	60	64	11	35	2.8	-	18	-	-	-	-	1	-
HTT5	406	56	64	11	35	2.8	-	26	-	-	-	-	1	-
LTT20B	508	74	51	7	35	2.5	-	-	10	2	-	-	-	1

Performance Values

Model No.	Fasteners			Installation	Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Capacities [kN]	
	Flange A		Flange B			$R_{2,SWL,ST}$	Deflection at Load [mm]	$R_{2,K}$	Deflection at Load [mm]
	Stud (X34B1016)		Anchor Bolt						
	Qty	Qty	Ø [mm]						
DTT1Z	6	1	10	Single Stud	1.2	4.0	4.0	5.6	6.4
HTT4	18	1	16	Single Stud	1.2	14.1	2.6	21.2	4.7
	18	1		Back to Back Stud	1.2	19.5	3.2	29.7	6.4
HTT5	26	1	16	Single Stud	1.2	18.9	3.2	28.9	6.4
				Back to Back Stud	1.2	20.8	3.2	31.0	6.4
				Single Stud	1.6	18.5	3.2	28.6	6.4
LTT20B	8	1	20	Single Stud	1.2	5.3	3.2	8.4	6.4

- Performance values are based upon tests completed by Simpson Strong-Tie U.S. in accordance to ICC-ES AC261 – Acceptance criteria for connectors used with Cold-Formed Steel Structural Members
- Deflection at Load is the deflection of the holdown measured between the anchor bolt and the strap portion of the holdown when loaded to the stated tension load
- The engineer or designer shall be responsible for specifying suitable anchor type, embedment and configuration

Levelling Systems



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Levelling System – TFLS

The TFLS provides the combined function of levelling and fixing an LGS frame system sole plate to a foundation or sub-structure. It comprises a universal bracket and packing pieces which can be added or removed as required. The system transfers vertical and lateral loads from the wall to the foundation.

Material: Galvanised Mild Steel: 275 g/m²

Features:

- Adaptable - accommodates structural packing up to 30mm deep
- Universal - suitable for walls widths from 89mm to 140mm
- Flexible - packing pieces can easily be added or removed from the base plate to achieve the required depth
- Structural - satisfies requirements for permanent structural packing of the sole plate when installed at load points
- Multiple nail holes in bracket offer a variety of nailing points

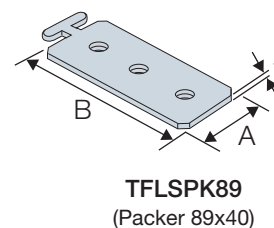
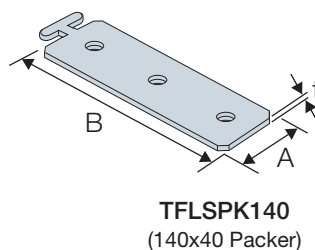
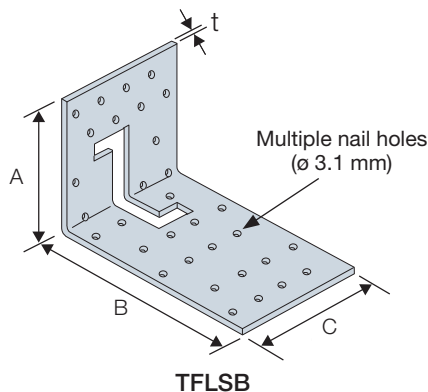
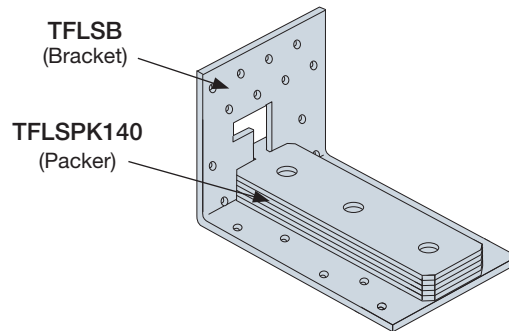
Standard Installation: Starting at the highest point of the foundation slab, position and install the TFLS bracket, including one packer underneath the base track.

Position and install a second TFLS bracket at one end of the base track and level to the first by adding packers to the second TFLS bracket. If necessary, install a third TFLS at the other end of the base track and level to the first.

Infill between TFLS brackets with additional brackets. Level by adding packers as necessary to each bracket. Ideally position infill brackets under load points (stud positions) at centres specified by the engineer/building designer.

Repeat the process around the rest of the building. Once the ground floor walls are in situ, install packers under the load points not supported by a TFLS bracket.

Alternative Installation: Can also be installed to ensure mortar bedding is level between 2 or more brackets - using the packers provided.



Product Dimensions - Bracket

Model No.	Hanger Dimensions [mm]				Holes			
					Flange A		Flange B	
	A	B	C	t	Ø3	Ø8	Ø3	Ø8
TFLSB	89	140	80	1	11	1	19	1

Product Dimensions - Packers

Model No.	Hanger Dimensions [mm]			Holes
	A	B	t	Ø8
TFLSPK89	39	89	2	3
TFLSPK140	39	140	2	4

Angle Brackets

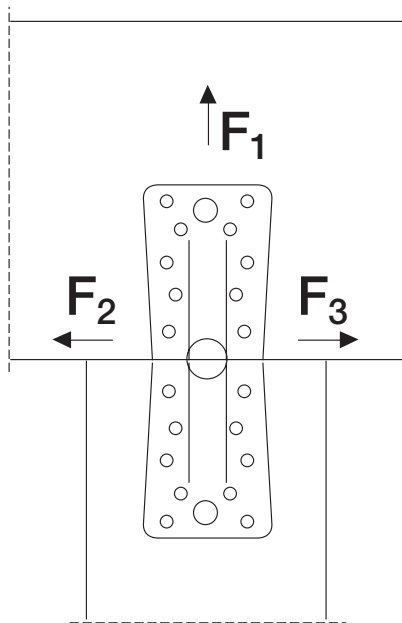


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Introduction

Definition of Force Directions



F₁ = Uplift, applied in line with the angle bracket.

F₂ / F₃ = Lateral load, applied perpendicular to the connection.

Basis of Design

The capacities stated in this document are un-modified characteristic capacities R_k . The design capacities are obtained according to the following formula:

$$R_{\text{design}} = \frac{R_k}{\gamma_m}$$

If combined forces are applied to the angle brackets, the following checks must be satisfied:

F_1 combined with F_2 or F_3 :

$$\left(\frac{F_{1,d}}{R_{1,d}} \right) + \left(\frac{F_{2\text{or}3,d}}{R_{2\text{or}3,d}} \right) \leq 1$$

Bending Capacities

The angle brackets are typically produced from steel grade S 250 GD except for ABR10525, which are made from S350 in accordance with standard EN 10346 with the characteristic lower yielding strength of 250 MPa or 350 MPa and a lower ultimate tensile strength of 330 MPa or 420MPa respectively.

Some of the angle brackets have embossed ribs which considerably increase the bending capacity of the brackets. In such cases bending tests have been performed in accordance with ETAG 015:2012, clause 2.4.1.1.2.3.4.

The characteristic bending capacities of angle brackets without ribs can be determined by calculation as prescribed in the Eurocodes.

Skewable Angles – LS

LS skewable angles are a cost effective method for connecting roof sections to hip sections, and because they are on-site adjustable, they can be used for connecting angled LGS sections too.

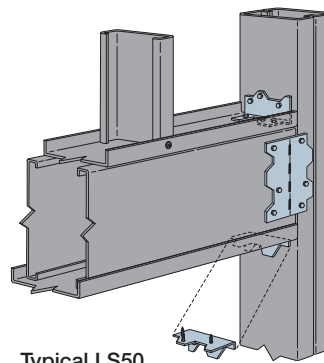
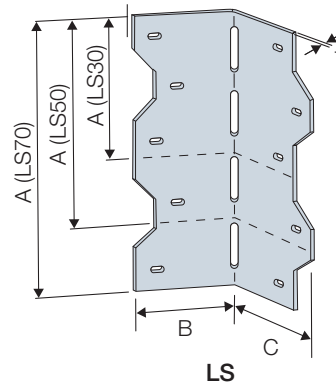
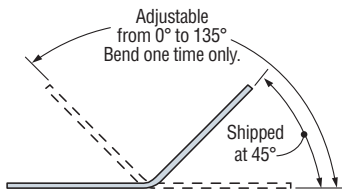
Material: Galvanised Mild Steel: 275 g/m²

Installation: Use the specified number of fasteners (see performance table for fastener type).

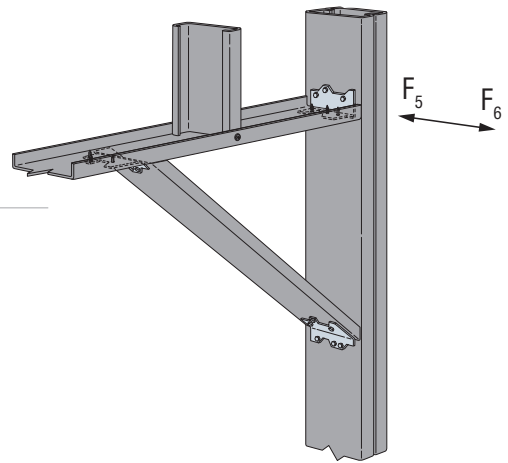
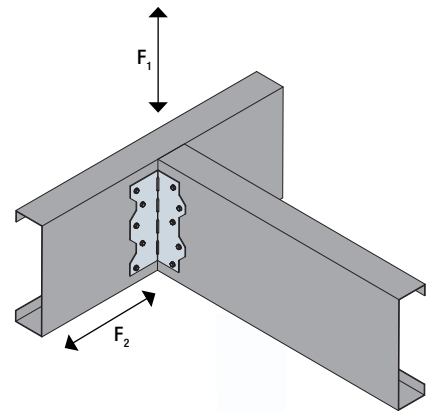
On-site skewable; bend one time only.

Key Features:

- Multiple screw hole locations to allow for easy installation
- Site adjustable from 0° - 135°



Typical LS50 Installation



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes	
					Flange B	Flange C
	A	B	C	t	Ø4x7 Obround	Ø4x7 Obround
LS30	85	55	55	1.3	3	3
LS50	124	55	55	1.3	4	4
LS70	162	55	55	1.3	5	5

Performance Values

Model No.	Fasteners		Safe Working Loads [kN]						Characteristic Capacities [kN]					
			Member Thickness [mm]						Member Thickness [mm]					
	Flange B	Flange C	1.2			1.4			1.2			1.4		
	Qty (X1214D325)	Qty (X1214D325)	R _{1,SWL}	R _{2,SWL}	R _{4,SWL}	R _{1,SWL}	R _{2,SWL}	R _{4,SWL}	R _{1,k}	R _{2,k}	R _{4,k}	R _{1,k}	R _{2,k}	R _{4,k}
LS30	3	3	1.4	0.4	1.6	2.7	-	2.2	2.2	0.6	2.6	4.3	-	3.6
LS50	4	4	3.0	0.4	1.6	3.3	0.5	2.2	4.8	0.6	2.6	5.3	0.8	3.6
LS70	5	5	3.4	0.5	2.6	4.9	0.5	3.2	5.4	0.8	4.1	7.8	0.8	5.1

1) Loads are for one party only.

Jack Truss and Rafter Connector – TJC

On-site adjustable angle brackets for connecting angled LGS sections, the TJC bracket can be adjusted from 0 to 67.5 degrees. Multiple hole locations assist with on-site installation.

Material: Galvanised Mild Steel: 275 g/m²

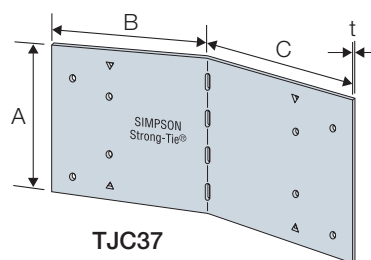
Installation: Use the specified number of fasteners (see performance table for fastener type).

With the TJC installed on the header, position the skewed member on the bend line of the TJC.

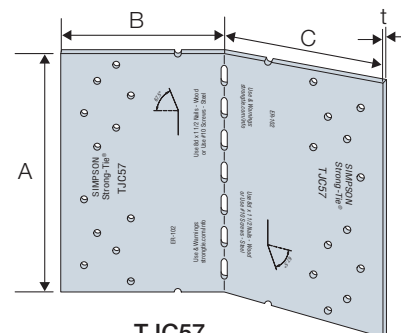
Bend the TJC to the desired position (bend one time only). Fix in place.

Key Features:

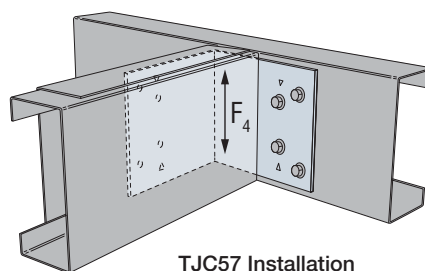
- Multiple screw hole locations allow for easy installation
- Site adjustable from 0° - 67.5°



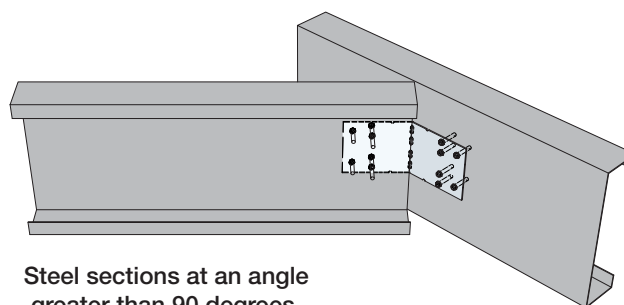
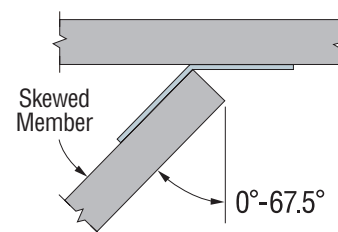
TJC37



TJC57



TJC57 Installation and screw pattern



Steel sections at an angle greater than 90 degrees.



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes Flange B	Holes Flange C
	A	B	C	t	Ø3.75	Ø3.75
TJC37	79	89	89	1.6	6	6
TJC57	130	89	89	1.6	12	12

Performance Values

Model No.	Fasteners		Header Thickness [mm]	Safe Working Loads [kN]			Characteristic Capacities [kN]		
	Flange B	Flange C		R _{4,k}			R _{4,k}		
	Qty (X1214D325)	Qty (X1214D325)		Skew 0°	Skew 1° - 60°	Skew 61° - 67.5°	Skew 0°	Skew 1° - 60°	Skew 61° - 67.5°
TJC37	4	4	1.2	2.9	2.5	2.1	4.7	4.0	3.4
	6	6	1.2	3.0	2.8	2.4	4.8	4.5	3.8
TJC57	8	8	1.2	5.8	5.4	5.5	9.2	8.6	8.8
	8	8	1.6	8.0	8.0	8.0	12.7	12.7	12.7

Angle Brackets – E5 / ES

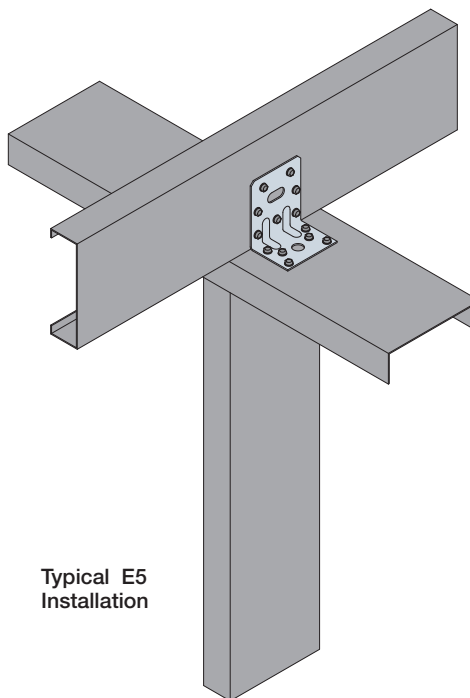
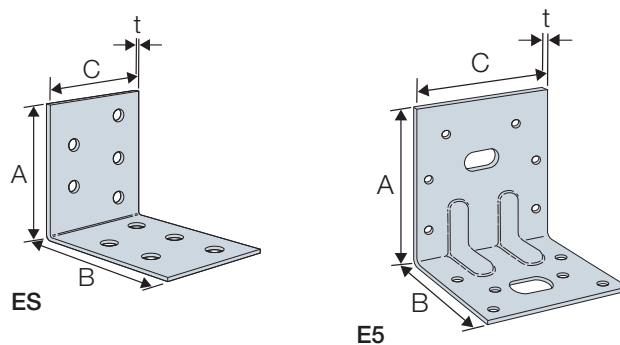
Angle brackets make an effective ergonomic connection from an LGS channel section to an LGS stud section, with features like the embossed ribs considerably increasing the bracket's bending capacity.

Material: Galvanised Mild Steel: 275 g/m²

Installation: Position angle bracket in place. Fix with appropriate number of fasteners.

Key Features:

- Reinforcing ribs provide enhanced performance
- Multiple screw hole locations allow for easy installation



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes			
					Flange A		Flange B	
	A	B	C	t	Ø5	Ø11x22	Ø5	Ø11x22
E5/2C50	77	50	65	2	7	1	6	1

Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes Flange A	Holes Flange B
	A	B	C	t	Ø5	Ø5
ES10/40C50	60	60	40	2.5	5	5

Bending Capacities

Model No.	Characteristic Bending Capacities	
	Lever Arm 'x' [mm]	M _{R,k} [kNmm]
	0 ≤ x ≤ 27.3	56 - 3.47x
E5/2C50	27.3 ≤ x	8.3

- 1) 1 Bracket per connection
2) No Rotation allowed

Bending Capacities

Model No.	Characteristic Bending Capacities	
	Lever Arm 'x' [mm]	M _{R,k} [kNmm]
	0 ≤ x ≤ 6	13.7
ES10/40C50		

- 1) 1 Bracket per connection
2) No Rotation

Angle Brackets – EFIXR

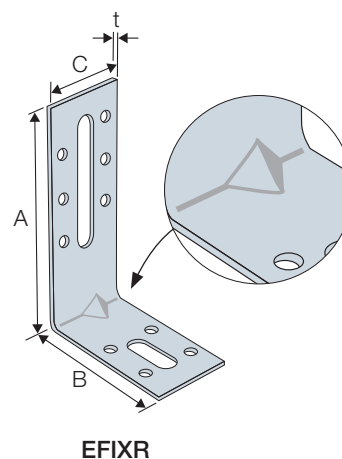
Angle brackets make an effective ergonomic connection from an LGS channel section to an LGS stud sections, with features like the embossed ribs considerably increasing the bracket's bending capacity.

Material: Galvanised Mild Steel: 275 g/m²

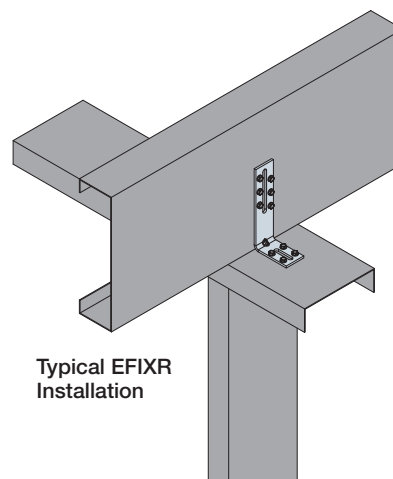
Installation: Position angle bracket in place. Fix with appropriate number of fasteners.

Key Features:

- Reinforcing ribs provide enhanced performance
- Multiple screw hole locations allow for easy installation
- Slots allow for a temporary fix and adjustment of the position of the bracket before final installation



EFIXR



Typical EFIXR Installation

Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes			
					Flange A		Flange B	
	A	B	C	t	Ø5	Ø6.5x65	Ø5	Ø8.5x30
EFIXR1053C50	98	52	30	2.5	6	1	4	1
EFIXR1253C50	117	52	30	3	6	1	4	1

Bending Capacities

Model No.	Characteristic Bending Capacity Flange B	
	Lever Arm 'x' [mm]	M _{R,k} [kNm]
EFIXR1053C50	0 ≤ x ≤ 52	4.5
EFIXR1253C50	0 ≤ x ≤ 52	6.5

Angle Brackets – AE

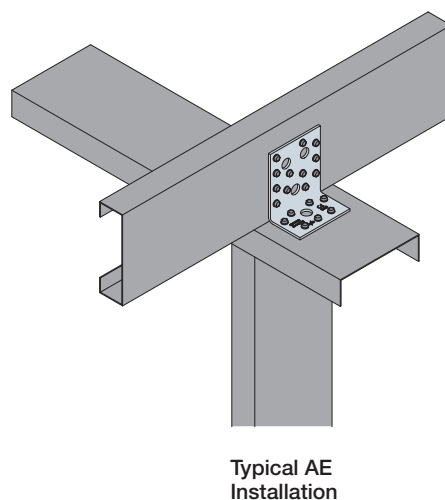
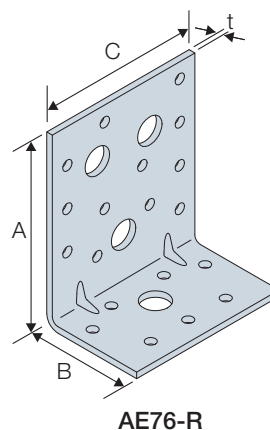
Angle brackets make an effective ergonomic connection from an LGS channel section to an LGS stud sections, with features like the embossed ribs considerably increasing the bracket's bending capacity.

Material: Galvanised Mild Steel: 275 g/m²

Installation: Position angle bracket in place. Fix with appropriate number of fasteners.

Key Features:

- Reinforcing ribs provide enhanced performance
- Multiple screw hole locations allow for easy installation



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes			
					Flange A		Flange B	
	A	B	C	t	Ø5	Ø13	Ø5	Ø13
AE76-R	90	48	76	3	12	3	7	1

Bending Capacities

Model No.	Bending Capacities	
	Lever Arm 'x' [mm]	Characteristic Bending Capacity [kNm]
AE76-R	$0 \leq x \leq 10.9$	$90 - 5.64 x$
	$10.9 \leq x$	28.7

1) 1 Bracket per connection

2) No Rotation allowed

Angle Brackets – ABR

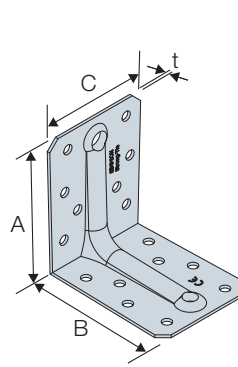
Angle brackets make an effective ergonomic connection from an LGS channel section to an LGS stud section, with features like the embossed ribs considerably increasing the bracket's bending capacity.

Material: Galvanised Mild Steel: 275 g/m²

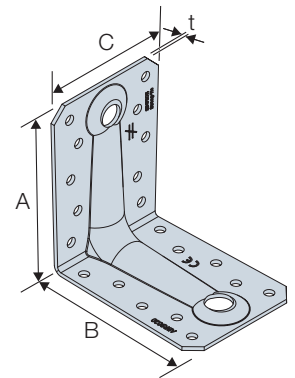
Installation: Position angle bracket in place.
Fix with appropriate number of fasteners.

Key Features:

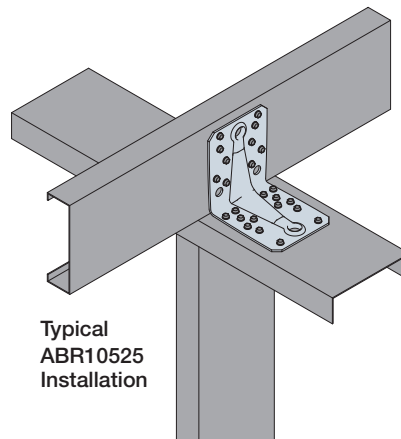
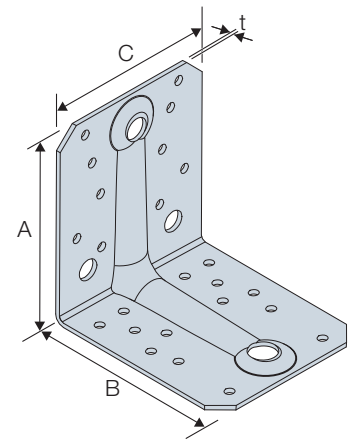
- Reinforcing ribs provide enhanced performance
- Multiple screw hole locations allow for easy installation



ABR70



ABR9020

Typical
ABR10525
Installation

ABR10525



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes					
					Flange A			Flange B		
	A	B	C	t	Ø5	Ø8.5	Ø11	Ø5	Ø8.5	Ø14
ABR70	70	70	55	2	6	1	-	6	1	-
ABR9020	88	88	65	2	10	-	1	10	-	1
ABR10525	105	105	90	2.5	10	-	1	14	-	1

Performance Values

Model No.	Fasteners		Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Loads [kN]		Slip Modulus F ₁ [kNmm]	Slip Modulus F ₂ = F ₃ [kNmm]
	Flange A	Flange B		R _{1,SWL}	R _{2,SWL} = R _{3,SWL}	R _{1,k}	R _{2,k} = R _{3,k}		
	Qty (FPHSD34S1214)	Qty (FPHSD34S1214)							
ABR10525	10	14	1.2	4.3	7.0	6.8	11.2	0.6	2.8
	10	14	1.6	5.1	8.6	8.2	13.8	0.7	3.8

Bending Capacities

Characteristic Bending Capacity Flange B		
Model No.	Lever Arm 'x' [mm]	$M_{R,k}$ [kNmm]
ABR10525	$10 \leq x \leq 27.5$	$613-14.26x$
	$27.5 \leq x \leq 57.4$	$343-4.43x$
	$57.4 \leq x$	88.8

Bending Capacities

Characteristic Bending Capacity Flange B		
Model No.	Lever Arm 'x' [mm]	$M_{R,k}$ [kNmm]
ABR9020	$0 \leq x \leq 28$	$150-3.13x$
	$28 \leq x \leq 42$	$108-1.61x$
	$42 \leq x$	41.0

Bending Capacities

Characteristic Bending Capacity Flange B		
Model No.	Lever Arm 'x' [mm]	$M_{R,k}$ [kNmm]
ABR70	$0 \leq x \leq 28.8$	$139-3.97x$
	$28.8 \leq x \leq 44$	$41-0.56x$
	$44 \leq x \leq 62.5$	$29-0.29x$
	$62.5 \leq x$	10.6

Angle Brackets – E9 / E9S

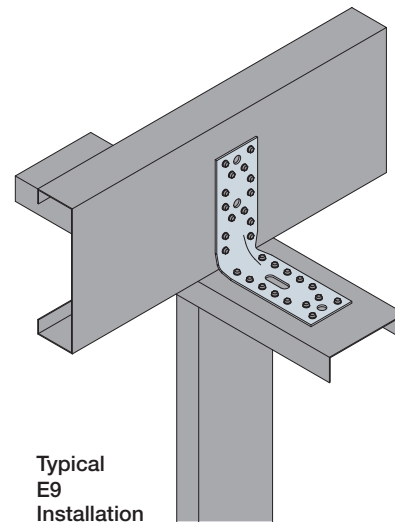
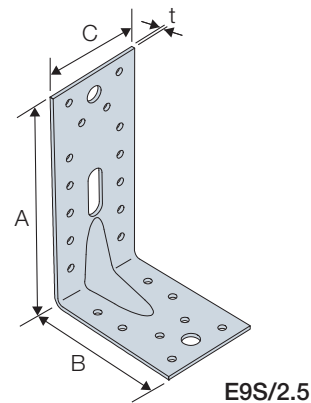
Angle brackets make an effective ergonomic connection from an LGS channel section to an LGS stud sections, with features like the embossed ribs considerably increasing the bracket's bending capacity.

Material: Galvanised Mild Steel: 275 g/m²

Installation: Position angle bracket in place.
Fix with appropriate number of fasteners.

Key Features:

- Reinforcing ribs provide enhanced performance
- Multiple screw hole locations allow for easy installation



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes				
					Flange A		Flange B		
	A	B	C	t	Ø5	Ø11	Ø5	Ø11	Ø11x22.5
E9/2,5	154	153	65	2.5	14	2	14	1	1
E9S/2,5	94	153	65	2.5	8	1	14	1	1

Performance Values

Model No.	Fasteners		Member Thickness [mm]	Safe Working Loads [kN]		Characteristic Loads [kN]		Slip Modulus	
	Flange A	Flange B		$R_{1,SWL}$	$R_{2,SWL} = R_{3,SWL}$	$R_{1,k}$	$R_{2,k} = R_{3,k}$	F_1 [kNmm]	$F_2 = F_3$ [kNmm]
	Qty (FPHSD34S1214)	Qty (FPHSD34S1214)							
E9/2,5	14	14	1.2	2.6	4.2	4.1	6.7	0.3	1.9
	14	14	1.6	3.4	5.2	5.4	8.3	0.6	2.1
E9S/2,5	8	14	1.2	3.3	5.9	5.3	9.5	0.4	3.0
	8	14	1.6	3.8	5.6	6.0	9.0	0.5	2.7

Bending Capacities

Characteristic Bending Capacity Flange B	
Lever Arm 'x' [mm]	$M_{R,k}$ [kNmm]
$0 \leq x \leq 36.6$	$236 - 5.5x$
$36.6 \leq x$	21.5
$0 \leq x \leq 36.6$	$236 - 5.5x$
$36.6 \leq x$	21.5

Bypass Frame Fixed Clip Connector – FCB

The FCB clip is an ergonomic, high-performing, fixed-clip connector that can be used for a variety of framing applications. It is rated for tension, compression and shear loads and offers the designer the flexibility of specifying different screw & anchorage patterns that conform to desired load levels.

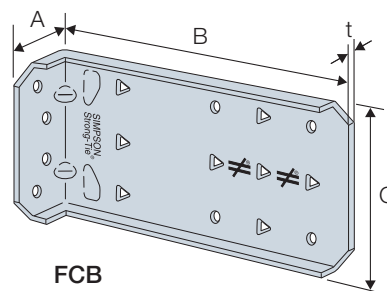
Material: Galvanised Mild Steel: 275 g/m²

Installation:

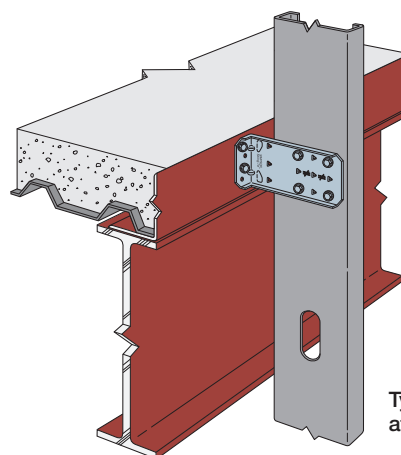
- Use the specified type and number of fasteners (see performance table for fastener type)
- Use the specified number of self-drilling screws when connecting to LGS framing

Key Features:

- Rated for tension, compression and shear loads
- Allows design flexibility with varying screw and anchorage patterns to achieve different load requirements
- Strategically spaced stiffeners, embossments & anchor holes maximise connector performance



FCB



Typical FCB Installation at Bypass Framing

Product Dimensions

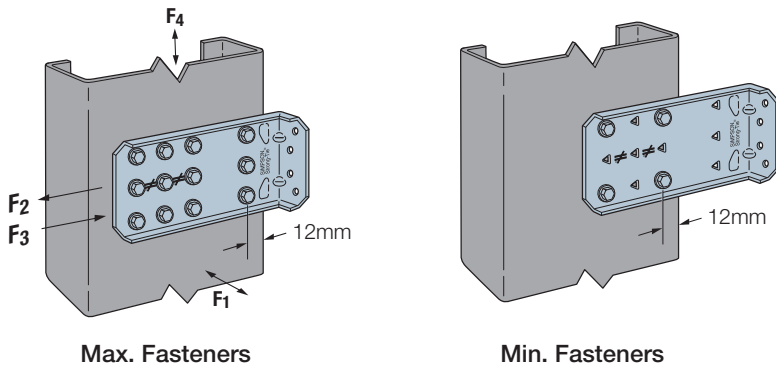
Model No.	Hanger Dimensions [mm]				Holes		
					Flange A	Flange B	
	A	B	C	t	Ø5.5	Ø4.8	Tri
FCB43.5-R25	38	89	100	1.6	4	4	2
FCB45.5-R25	38	140	100	1.6	4	4	5
FCB47.5-R25	38	191	100	1.6	4	4	8
FCB49.5-R25	38	241	100	1.6	4	4	8
FCB411.5-R25	38	292	100	1.6	4	4	8

Bypass Frame Fixed Clip Connector – FCB

Performance Values - FCB to Stud

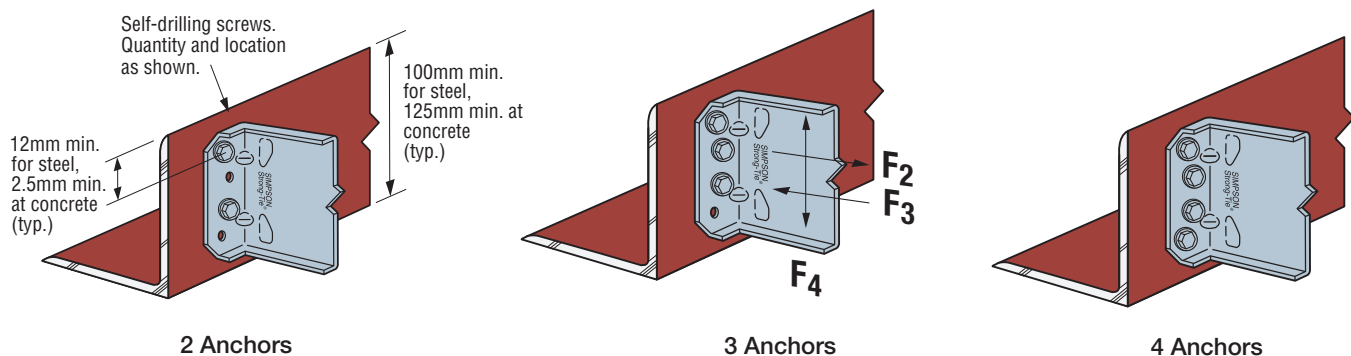
Model No.	Fasteners		Safe Working Loads [kN]								Characteristic Capacities [kN]							
	Min/Max	Flange B Self Drilling Screw (X1B1214)	Member Thickness [mm]								Member Thickness [mm]							
			1.2				1.6				1.2				1.6			
			R ₁	R ₂	R ₃	R ₄	R ₁	R ₂	R ₃	R ₄	R ₁	R ₂	R ₃	R ₄	R ₁	R ₂	R ₃	R ₄
FCB43.5-R25	Min	4	0.9	4.9	4.3	5.0	1.5	5.6	4.3	6.6	1.5	7.9	6.9	8.0	2.5	8.9	6.9	10.6
	Max	6	1.2	4.9	5.6	6.5	1.5	5.6	7.7	8.5	1.9	7.9	9.0	10.4	2.5	8.9	12.3	13.6
FCB45.5-R25	Min	4	0.8	4.9	4.3	4.2	1.5	4.9	4.3	5.9	1.3	7.9	6.9	6.7	2.5	7.9	6.9	9.4
	Max	9	0.9	4.9	5.6	6.6	1.5	4.9	7.7	8.6	1.5	7.9	9.0	10.6	2.5	7.9	12.3	13.7
FCB47.5-R25	Min	4	0.6	4.9	4.2	1.5	1.2	4.9	4.2	1.6	1.0	7.9	6.7	2.3	1.9	7.9	6.7	2.6
	Max	12	1.2	4.9	5.6	4.7	1.5	4.9	7.7	6.4	1.9	7.9	9.0	7.5	2.5	7.9	12.3	10.3
FCB49.5-R25	Min	4	0.5	4.9	4.2	1.1	0.5	4.9	4.2	1.6	0.8	7.9	6.7	1.8	0.8	7.9	6.7	2.6
	Max	12	1.2	4.9	5.6	5.0	1.5	4.9	7.7	5.3	1.9	7.9	9.0	7.9	2.5	7.9	12.3	8.5
FCB411.5-R25	Min	4	0.4	4.9	4.1	0.9	0.4	4.9	4.1	1.6	0.6	7.9	6.5	1.5	0.6	7.9	6.5	2.6
	Max	12	1.2	4.9	5.6	3.8	1.5	4.9	7.7	3.8	1.9	7.9	9.0	6.1	2.5	7.9	12.3	6.1

- 1) Min. fastener quantity and load values — fill all round holes; max. fastener quantity and load values — fill all round and triangular holes.
 2) Loads are based on clip capacity only and do not consider anchorage. The capacity of the system will be the minimum of the tabulated value and the FCB Anchorage Loads.



Anchorage Values - FCB to Structure

Model No.	Anchor Fixing Qty	Safe Working Anchorage Loads (kN)										Characteristic Anchorage Loads (kN)											
		R _{2,SWL} = R _{3,SWL3}	R _{4,SWL}										R _{2,k} = R _{3,k}	R _{4,k}									
			FCB43.5		FCB45.5		FCB47.5		FCB49.5		FCB411.5			FCB43.5		FCB45.5		FCB47.5		FCB49.5		FCB411.5	
			Min/Max	Min/Max	Min	Max	Min	Max	Min	Max	Min	Max		Min/Max	Min/Max	Min	Max	Min	Max	Min	Max	Min	Max
Min 5.0mm thick Steel Self Drilling Screw (XLQ114B1224)	2	5.0	2.8	1.8	1.1	2.0	0.8	1.2	0.5	0.8	7.9	4.4	2.9	1.8	3.2	1.3	1.9	0.9	1.4				
	3	7.3	3.1	2.0	1.2	2.2	0.9	1.3	0.6	0.9	11.7	4.9	3.2	2.0	3.5	1.4	2.1	1.0	1.5				
	4	9.9	5.6	3.6	1.6	4.0	1.6	2.4	1.2	1.7	15.9	8.9	5.8	2.6	6.3	2.5	3.8	2.0	2.7				
C20 Concrete Titen Screws (TTN25134H)	2	1.7	1.8	1.4	0.9	1.4	0.6	0.9	0.6	0.7	2.7	3.0	2.2	1.4	2.2	1.0	1.5	1.0	1.1				
	3	2.3	2.1	2.1	1.3	2.1	0.9	1.4	0.9	1.0	3.7	3.3	3.3	2.1	3.3	1.5	2.2	1.5	1.6				
	4	3.0	2.9	2.8	1.7	2.8	1.2	1.8	1.2	1.3	4.8	4.6	4.5	2.8	4.5	2.0	2.9	2.0	2.1				



Slotted Truss / Joist Clips – STC / DTC

STC & DTC truss clips are used to provide alignment control between an LGS roof truss or joist and a non-bearing wall. The 38 mm slot permits vertical truss or joist chord movement when loads are applied.

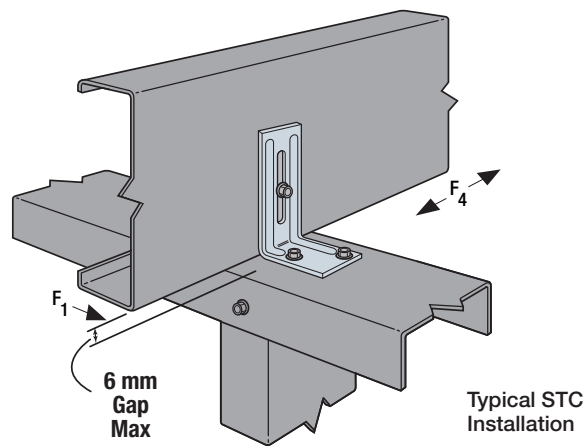
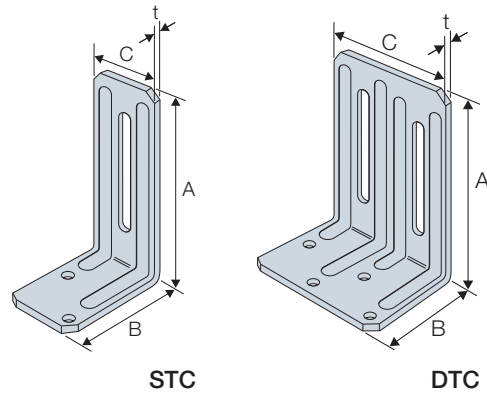
Material: Galvanised Mild Steel: 275 g/m²

Installation:

- Use the specified number of fasteners (see performance table for fastener type)
- Use a maximum of one screw per slot

Key Features:

- Reinforcing ribs provide enhanced performance



To allow for vertical truss movement, screws into the truss or rafter should not be driven completely flush against the connector.



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes	
					Flange A	Flange B
	A	B	C	t	Ø4.3x43 Slot	Ø4.3
STC	70	48	32	1.3	1	2
DTC	70	48	64	1.3	2	4

Performance Values - STC / DTC to Stud

Model No.	Fasteners		Safe Working Loads [kN]						Characteristic Capacities [kN]					
	Flange A (X1214D325)	Flange B (X1214D325)	Without Gap		6mm Maximum Gap		12mm Maximum		Without Gap		6mm Maximum		12mm Maximum	
			R _{1,SWL}	R _{4,SWL}	R _{1,SWL}	R _{4,SWL}	R _{1,SWL}	R _{4,SWL}	R _{1,K}	R _{4,K}	R _{1,K}	R _{4,K}	R _{1,K}	R _{4,K}
STC	1	2	0.82	0.16	0.60	0.16	0.33	0.16	1.32	0.25	0.96	0.25	0.53	0.25
DTC	2	4	0.89	0.71	0.89	0.71	0.64	0.71	1.42	1.14	1.42	1.14	1.03	1.14

1) Truss or rafter must be bearing on top plate to achieve loads under "Without Gap"

2) Clips are required on both sides of the truss to achieve R₄ loads (stagger parts to avoid screw interferences)

3) To allow for vertical truss movement, screws into the truss or rafter should not be driven completely flush against the connector

Over-Sail Movement Connectors



Contents

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Clip Connectors

Movement Clip Connectors for Over-Sail Projects

As part of a commitment to expand our range of products for light gauge steel applications, we have developed a new line of connectors for use with buildings having “over-sail” structures.

Over-sail projects require a variety of connectors which provide a load path from the over-sail structure to the primary structure for:

- Wind loads
- Seismic loads
- Dead loads

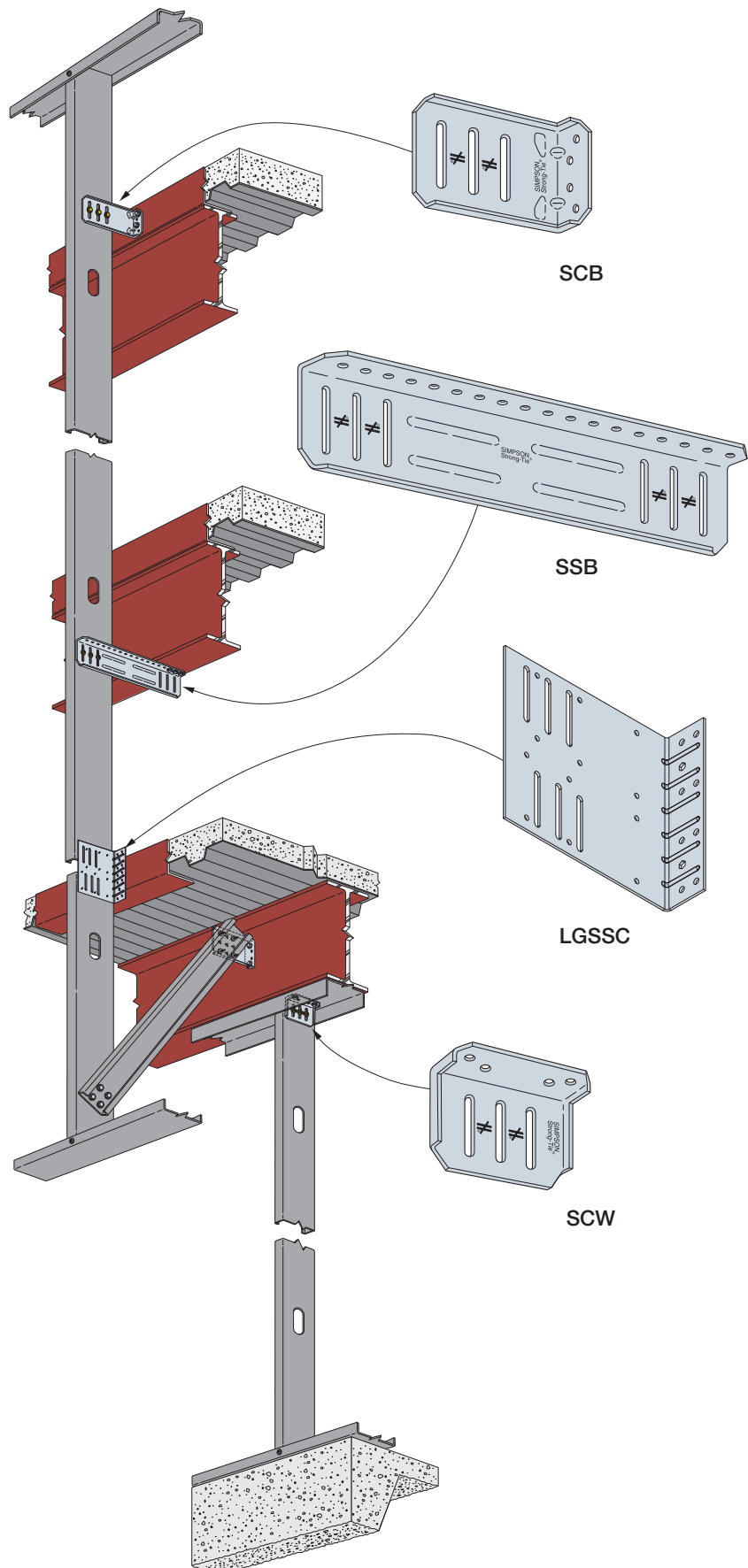
Movement clip connectors enable the structural building frame to deflect independently of the over-sail configuration.

Fixed clip connectors support the dead load of an over-sail structure from the structural frame. These have the added benefit of providing a connector solution for load bearing walls and roof systems.

Our connectors for over-sail construction methods accommodate many different framing applications in a variety of locations.

We also offer connectors for head-of-wall and strut applications.

The movement clip connectors are designed to be fixed to the building structure and the over-sail steel section. The slots in the connectors allow deflection of the over-sail to occur independently of the building structure, accommodating movement when encountered in the building design.



Movement Clip Connector – SCB

The SCB movement clip connector is a high performance connector for over-sail framing applications. Designed to reduce design time and overall installed cost. Various anchorage methods have been tested, and the resulting allowable anchorage loads eliminates the need to manually design connector anchorage. The SCB as a single connector can accommodate applications that would typically require two connectors, reducing material and labour costs. The SCB connectors are manufactured in a number of different sizes to accommodate a variety of stand off conditions and steel stud sizes.

Material: Galvanised Mild Steel: 275 g/m²

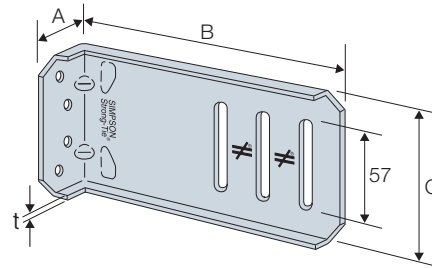
Installation: Use the specified number of fasteners (see performance table for fastener type).

Use the specified number of shouldered screws (XLSH34B1414 – provided). Install shouldered screws in the slots adjacent to the No-Equal stamp.

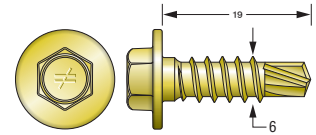
Use a maximum of one screw per slot

Key Features:

- Provides a full 25 mm of both upward and downward movement
- Supplied with Ø6 shouldered screws (XLSH34B1414-83)



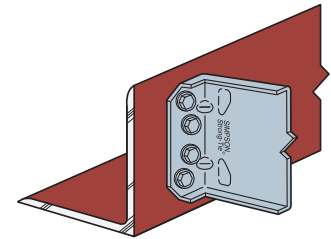
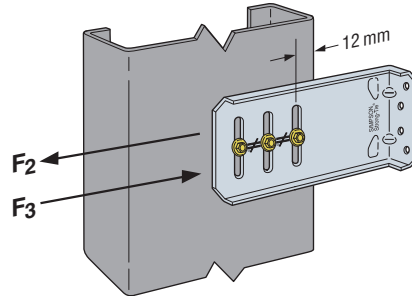
SCB



XLSH34B1414-83

Ø6 mm

Shouldered Screw



Four Anchors

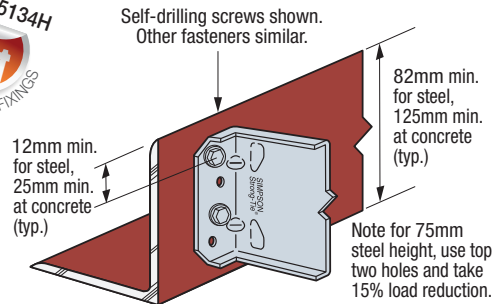


Product Dimensions

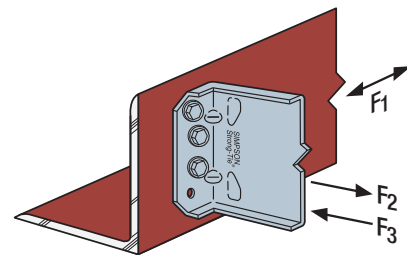
Model No.	Hanger Dimensions [mm]				Holes	
	A	B	C	t	Flange A Ø5.5	Flange B Ø6.4 x 57 Slot
SCB43.5-KT	38	89	100	1.6	4	2
SCB45.5-KT	38	140	100	1.6	4	3
SCB47.5-KT	38	191	100	1.6	4	3
SCB49.5-KT	38	241	100	1.6	4	3
SCB411.5-KT	38	292	100	1.6	4	3

Performance Values - SCB to Stud

Model No.	Fasteners	Safe Working Loads [kN]				Characteristic Capacities [kN]			
		Member Thickness [mm]				Member Thickness [mm]			
	Flange B	1.2		1.6		1.2		1.6	
	Qty (XLSH34B1414)	R _{2,SWL}	R _{3,SWL}	R _{2,SWL}	R _{3,SWL}	R _{2,K}	R _{3,K}	R _{2,K}	R _{3,K}
SCB43.5-KT	2	2.7	3.1	3.4	4.3	4.3	4.9	5.4	6.9
SCB45.5-KT	2	2.7	3.1	3.4	4.3	4.3	4.9	5.4	6.9
	3	4.0	4.4	4.4	5.6	6.4	7.1	7.0	9.0
SCB47.5-KT	2	2.7	3.1	3.4	4.2	4.3	4.9	5.4	6.7
	3	4.0	4.4	4.4	5.6	6.4	7.1	7.0	9.0
SCB49.5-KT	2	3.1	3.1	3.4	4.2	4.9	4.9	5.4	6.7
	3	4.0	4.4	4.4	5.6	6.4	7.1	7.0	9.0
SCB411.5-KT	2	3.1	3.1	4.4	4.1	4.9	4.9	7.0	6.5
	3	3.8	4.4	4.4	5.6	6.1	7.1	7.0	9.0



Two Anchors



Three Anchors

Anchorage Values

Anchorage Type Flange A	Anchorage Fasteners	Safe Working Loads [kN]	Characteristic Loads [kN]
	Qty	R _{2,SWL}	R _{2,K}
Min 5.0mm thick Steel Self Drilling Screw (XLQ114B1224)	2	5.0	7.6
	3	7.3	11.4
	4	9.9	15.2
C20 Concrete Titen Screws (TTN25134H)	2	1.7	2.7
	3	2.3	3.2
	4	3.0	3.6

- When the SCB connector is used with two shouldered screws, the screws may be installed in any two slots.
- Stated loads are based on clips installed with screws in the anchor leg. For other anchorage installations, the capacity of the connection system will be the minimum of the tabulated value and the loads, from the SCB Anchorage Loads table

Bypass Framing Movement Clip Strut Connector – SSB

The SSB framing movement clip is a versatile strut connector commonly used at the bottom of a steel beam to accommodate large over-sail structures.

Material: Galvanised Mild Steel: 275 g/m²

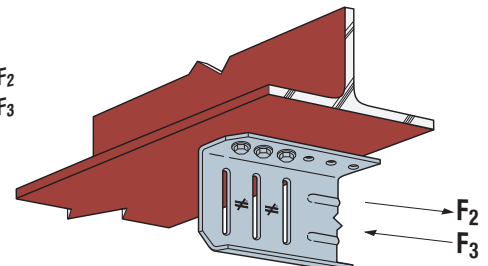
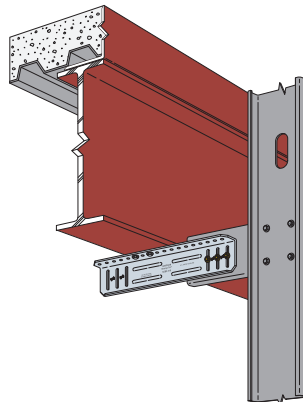
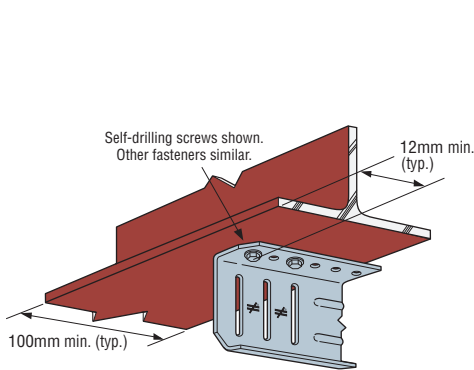
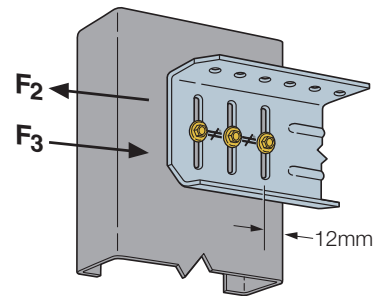
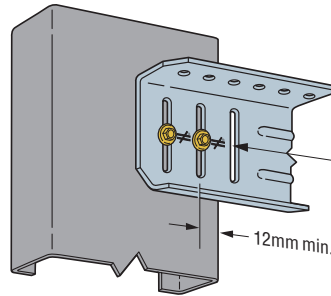
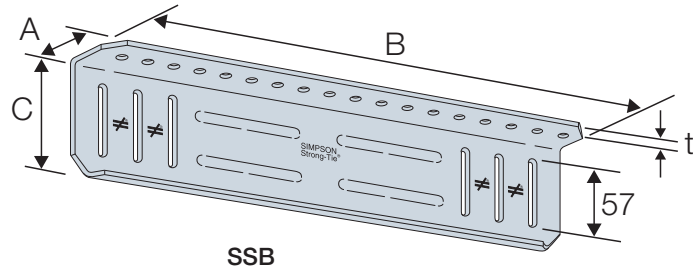
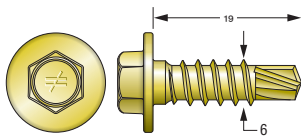
Installation: Use the specified number of fasteners (see performance table for fastener type).

Use the specified number of shoulder screws (XLSH34B1414 – provided). Install shouldered screws in the slots adjacent to the No-Equal stamp.

If the SSB intrudes on interior space, it can be trimmed. The trimmed part shall allow an edge distance from the centre of the nearest anchor to the end of the trimmed part of a minimum of 14mm.

Key Features:

- Provides a full 25mm of both upward and downward movement
- Supplied with Ø6 shouldered screws (XLSH34B1414-83)



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes	
					Flange A	Flange B
	A	B	C	t	Ø5.5	Ø6.4x57 Slot
SSB3.518-KT	41	89	457	1.6	18	6

Performance Values - SSB to Stud

Model No.	Number of LGS Fasteners in Flange B	Safe Working Loads [kN]				Characteristic Capacities [kN]			
		Member Thickness [mm]				Member Thickness [mm]			
		1.2		1.6		1.2		1.6	
	Qty (XLSH34B1414-83)	R _{2,SWL}	R _{3,SWL}	R _{2,SWL}	R _{3,SWL}	R _{2,K}	R _{3,K}	R _{2,K}	R _{3,K}
SSB3.518-KT	2	3.1	3.1	4.8	4.4	4.9	4.9	7.7	7.0
	3	4.6	4.8	5.9	5.4	7.3	7.7	9.5	8.7

Performance Values - SSB to Steel

Anchorage Type Flange A	Anchorage Fasteners (XLQ114B1224)	Safe Working Loads [kN]	Characteristic Loads [kN]
	Qty	R ₂ = R _{3,SWL}	R ₂ = R _{3,K}
Min 5.0mm thick Steel	2	5.6	8.9
	3	8.3	9.5

- When the SSB connector is used with two shouldered screws, the screws may be installed in any two slots.
- The capacity of the connection will be the minimum of the performance values for SSB to stud or SSB to steel
- The maximum standoff for SSB with (2) screws and (3) screws is 310mm and 280mm respectively.

Head of Wall Movement Clip Connector – SCW

SCW movement clip connectors are primarily used in deflection head applications that require vertical movement relative to the structure. The connector can also be used to strengthen window and door jambs for projects that utilise slip-track.

Material: Galvanised Mild Steel: 275 g/m²

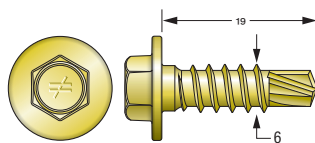
Installation: Use the specified number of fasteners (see performance table for fastener type).

Use the specified number of shoulder screws (XLSH34B1414 – provided). Install shouldered screws in the slots adjacent to the No-Equal stamp.

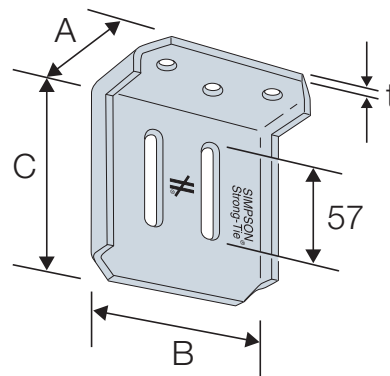
Use a maximum of one screw per slot.

Key Features:

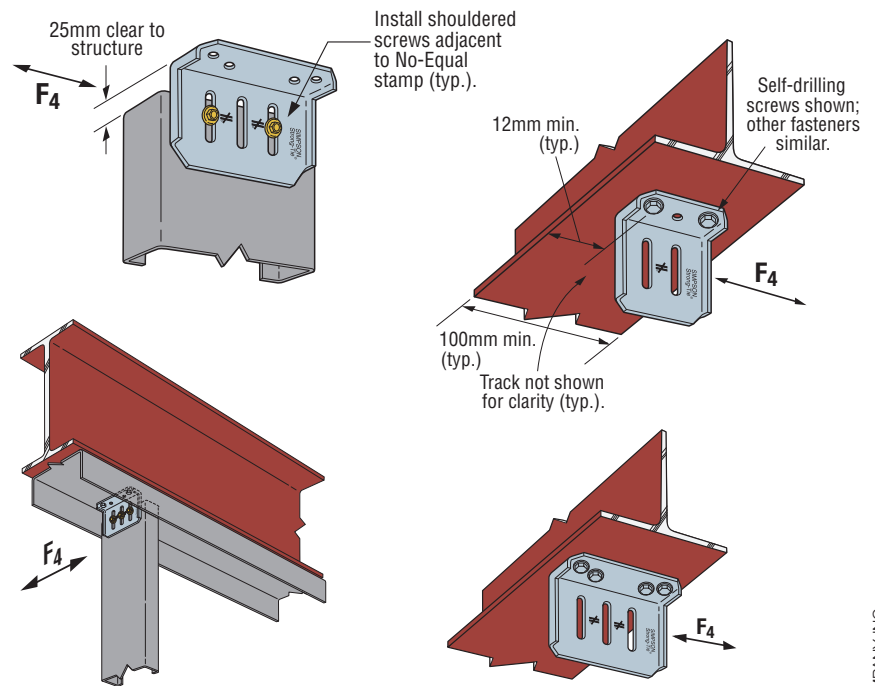
- Provides a full 25mm of both upward and downward movement
- Supplied with Ø6mm shouldered screws (XLSH34B1414-83)



XLSH34B1414-83
Ø6 mm
Shouldered Screw



SCW



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes	
	A	B	C	t	Flange A	Flange B
SCW3.25-KT	38	83	100	1.6	Ø5.5	Ø5 x 57 Slot
SCW5.5-KT	38	140	100	1.6	4	3

Performance Values - SCW to Stud

Model No.	Number of LGS Fasteners in Flange B	Safe Working Loads [kN]		Characteristic Capacities [kN]	
		Member Thickness [mm]		Member Thickness [mm]	
		1.2	1.6	1.2	1.6
Qty (XLSH34B1414-83)	Qty (XLSH34B1414-83)	R _{4, SWL}	R _{4, SWL}	R _{4, k}	R _{4, k}
		R _{4, SWL}	R _{4, SWL}	R _{4, k}	R _{4, k}
SCW3.25-KT	2	2.8	3.4	4.5	5.4
SCW5.5-KT	2	2.8	4.4	4.5	7.0
	3	2.8	5.4	4.5	8.7

Performance Values - SCW to Steel Section

Model No.	Anchorage Fasteners	Minimum Base Material	Anchorage Loads	
			Safe Working Loads [kN]	
			R _{4, SWL}	R _{4, k}
Qty (XLQ114B1224)	Qty (XLQ114B1224)	Minimum 5.0mm thick Steel	R _{4, SWL}	R _{4, k}
			R _{4, SWL}	R _{4, k}
SCW3.25-KT	2	Minimum 5.0mm thick Steel	3.2	5.1
	3		4.8	7.7
SCW5.5-KT	2	Minimum 5.0mm thick Steel	3.4	5.5
	4		6.9	11.0

1. When the SCW5.5 connector is used with two shouldered screws, install screws in the outermost slots.

2. The capacity of the system will be the minimum of the tabulated value for the SCW to Stud or the SCW to Steel Section.

Drift Clip Bypass Framing Connector – IDCB

The IDCB drift clip connector is used to secure bypass stud framing to the edge of a slab. The connector will accommodate 25mm of lateral drift in each direction and 25mm of upward or downward vertical deflection. Tested load values are provided for anchorage to a steel-edge angle using Strong-Drive XL Screws (XLQ114B1224) – sold separately.

Material: Galvanised Mild Steel: 275 g/m²

Installation: Use the specified number of fasteners and anchors (see performance table for fastener type).

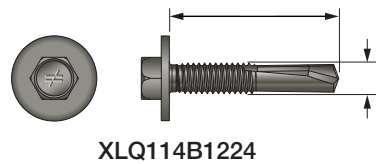
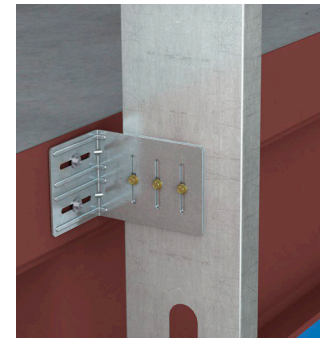
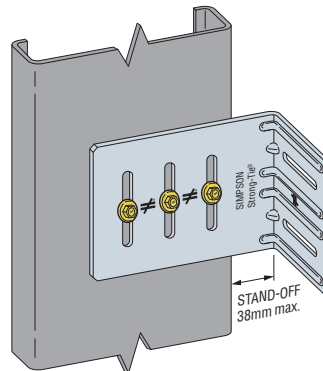
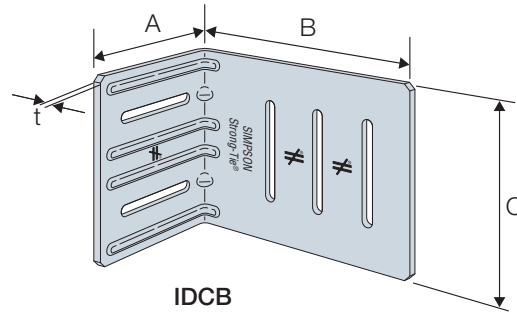
In the vertical slots, use the specified number of shouldered screws (XLSH78B1414 included) for attachment to the stud. Install screws to align with the No-Equal stamp.

For attachment to a steel edge angle (Min. 4.5 mm – Max. 12.75mm) use Strong-Drive XL Large Head Metal screws (XLQ114B1224 – sold separately). Use one screw centred in each horizontal slot. Install screws to align with the No-Equal stamp on the connector, and un-screw half a turn.

For fastener installation into steel backed by concrete, pre-drilling into both the steel and the concrete will be required. For pre-drilling use a 4.75mm dia. bit.

Key Features:

- Horizontal embossments and corner gussets optimise performance in the F_2 load direction
- Precision Manufactured shouldered screws (XLSH78B1414) provided with the IDCB connector, prevent over-driving and ensure that the clip functions properly
- Simpson Strong Tie® No-Equal stamps mark the centre of the slots to help ensure accurate shoulder screw and anchor placement



XLQ114B1224



Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes	
	A	B	C	t	Flange A	Flange B
					Ø6.4 x 57 Slot	Ø6.4 x 57 Slot
IDCB45.5-KT25	89	140	101	2.7	2	3

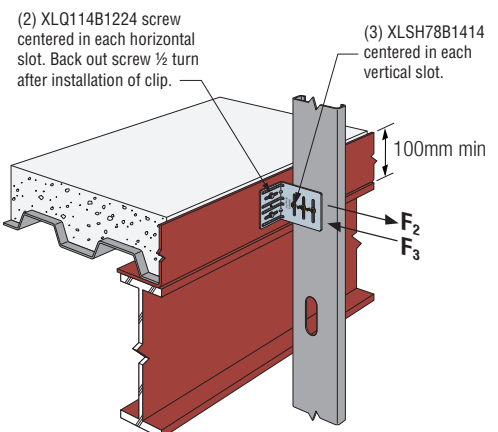
Performance Values

Model No.	Fasteners		Safe Working Loads [kN]		Characteristic Capacities [kN]	
	Flange A	Flange B	Member Thickness [mm]		Member Thickness [mm]	
			1.2	1.6	1.2	1.6
	Qty (XLQ114B1224)	Qty (XLSH78B1414)	$R_{2,SWL} = R_{3,SWL}$	$R_{2,SWL} = R_{3,SWL}$	$R_{2,K} = R_{3,K}$	$R_{2,K} = R_{3,K}$
IDCB45.5-KT25	2	3	3.0	3.4	4.7	5.4

1. XLSH78B1414 supplied with the connector

Serviceability Values

Deflection Limits [mm]	Serviceability Loads [kN]	
	Member Thickness [mm]	
	1.2	1.6
	$F_2 = F_3$	$F_2 = F_3$
3.2	2.0	2.2
4.8	2.9	3.3



Side Clip Connector – SCHA

SCHA connectors are an ideal solution for facade or load bearing construction, where the LGS requires framing anchors to be fixed to the top of a concrete floor slab, or the bottom of a steel beam. The connector features a wide support leg to decrease eccentricity on anchors and provide a variety of anchorage options. The SCVS vertical slider (included) provides superior rotational support to the vertical leg of the SCHA connector, helping improve the buckling performance of the anchored leg.

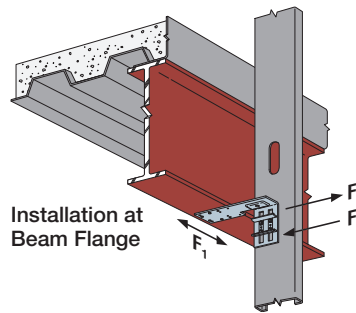
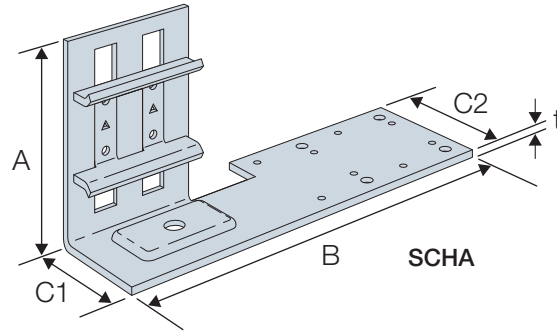
Material: Galvanised Mild Steel: 275 g/m²

Installation: Use all specified fasteners.

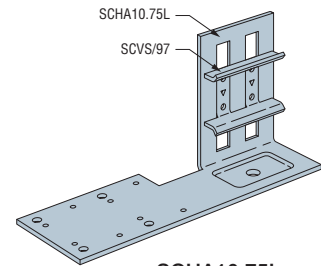
Ensure the SCVS vertical slider is centred in the SCHA vertical slots by aligning the 'tick' marks adjacent to the triangular holes in the slider with the No-Equal stamp on the SCHA clip. Shoulder screws (XLSH78B1414) inside brackets should be specified by designer.

Key Features:

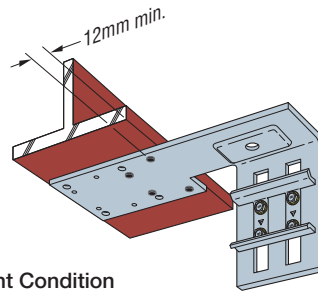
- Provides a full 25mm of both upwards or downwards movement
- Tabulated design values for anchorage help mitigate risk and provide ease of specification
- Either face of the anchorage leg can be used against the support
- Accommodates stand-off distances up to 120mm
- Can be used with 89mm, 100mm, 150mm and 200mm studs
- Pre-punched anchor holes also eliminate the need for pre-drilling and help ensure accurate anchor placement



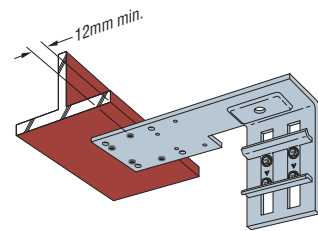
Installation at Beam Flange



SCHA10.75L with SCVS/9)



Front Condition Installation



End Condition Installation



Product Dimensions

Model No.	Hanger Dimensions [mm]					Holes			
						Flange A		Flange B	
	A	B	C ₁	C ₂	t	Ø5.4	Triangle	Ø4.8	Ø8
SCHA10.75-KT15	125	273	70	93	3.5	4	2	6	4
SCHA10.75L-KT15	125	273	70	93	3.5	4	2	6	4

Performance Values

Model No.	Primary Structure Base Material	Fasteners			Member Thickness [mm]	Maximum Stand-Off Distance [mm]	Safe Working Loads [kN]			Characteristic Loads [kN]		
		Flange A	Flange B				R _{1, SWL}	R _{2, SWL}	R _{3, SWL}	R _{1, k}	R _{2, k}	R _{3, k}
			Qty (X1B1214)	Condition								
SCHA10.75-KT15 SCHA10.75L-KT15	Structural Steel 5.0mm Minimum Thickness	4	Front	4	1.2	50	0.9	3.9	2.7	1.4	6.3	4.3
		4	Front	4	1.6	50	1.0	4.4	3.9	1.7	7.0	6.3
		6	Front	4	1.6	50	1.6	5.8	4.6	2.5	9.3	7.4
		4	End	4	1.2	120	0.5	3.7	2.5	0.8	5.9	4.1
		4	End	4	1.6	120	0.7	3.7	3.2	1.2	5.9	5.1
		6	End	4	1.6	120	1.6	4.7	3.4	2.5	7.5	5.5

1. Flange A: Min (4 fixings) - Fill all round holes - Max (6 fixings) - Fill all round and triangular holes.

2. The stand-off is the distance from the interior flange of the stud to the face of the supporting structure. Interior flange of the stud is assumed to align with the inside vertical edge of the connector see images.

3. Loads are based on 90mm studs. Web crippling checks for deeper members are the responsibility of the Designer/Engineer.

4. Loads are based on in plane loads applied to the fasteners nearest to support with complete rotational resistance at the studs.

Light Gauge Steel Splicing Clip – LGSSC

The LGSSC is a universal splicing clip designed to connect the over – sail LGS studs to the primary structure in continuous walling installations.

The LGSSC provides a secure connection to the floor slab whilst allowing for up to 50mm of vertical movement between butt jointed light gauge steel studs. It is non-handed, enabling an easier ordering process for site.

Material: Galvanised Mild Steel: 275 g/m²

Installation:

1) Connect to Primary Structure

Secure connector to primary structure with specified fasteners (2 No. TTN25134H through hexagonal holes for concrete support [B] or 8 No XLQ114B1224 through round holes for steel support [C]). When connecting to a concrete support a minimum fastener edge distance of 50mm is required [A].

2) Install Lower Stud

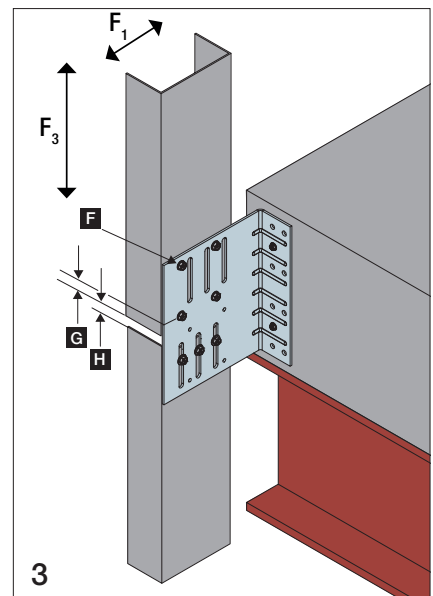
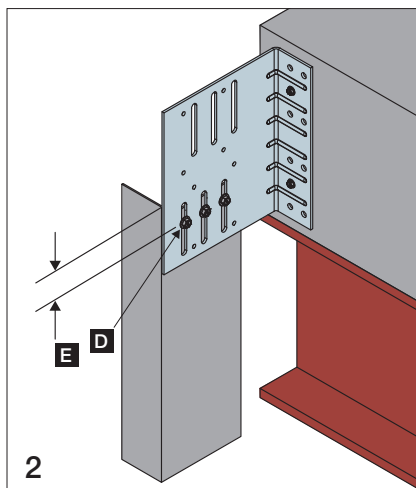
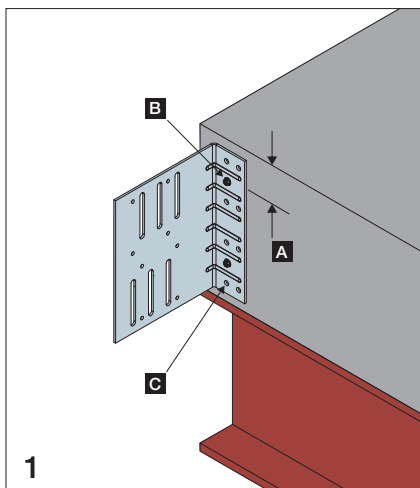
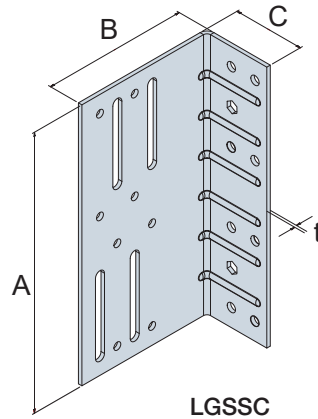
Secure lower stud with specified number of XLSH34B1414 screws into the movement slots [D]. Screws are to be fixed centrally within the movement slots, allowing vertical movement of the lower stud. A minimum end distance of 12.5mm is required [E].

3) Install Upper Stud

Secure upper stud with specified number of X1B1214R100 screws through the round holes [F], ensuring that the lower screws are a minimum of 12.5mm from the bottom end of steel stud [G]. Minimum gap between upper and lower studs is 12.5mm [H].

Key Features:

- Suitable for use on concrete or steel primary structures
- Accommodates up to 50mm of movement between butt jointed light gauge steel studs
- Suitable for light gauge steel stud thickness of 1.2mm to 1.6mm and widths of 100mm to 150mm
- Performance values for F₁ and F₃ load directions, when connected to concrete or hot rolled steel
- Maximum hot rolled steel material thickness 12.5mm
- 50mm fastener edge distance required when fixed to a concrete substrate



Light Gauge Steel Splicing Clip – **LGSSC**

Product Dimensions

Model No.	Hanger Dimensions [mm]				Holes			
					Flange B		Flange C	
	A	B	C	t	Ø4.1	Ø6.5 x 50 Slot	Ø6	Hexagonal
LGSSC90	175	90	43	2.5	8	4	8	2
LGSSC140	175	140	43	2.5	8	6	8	2
LGSSC190	175	190	43	2.5	12	6	8	2
LGSSC240	175	240	43	2.5	12	6	8	2
LGSSC290	175	290	43	2.5	12	6	8	2

Performance Values

Model No.	Fasteners				Member Thickness [mm]	Safe Working Loads [kN]				Characteristic Capacities [kN]			
	Flange B (Upper Stud)	Flange B (Lower Stud)	Flange C			Steel Section ⁽¹⁾		Concrete ⁽²⁾		Steel Section ⁽¹⁾		Concrete ⁽²⁾	
			Steel Suppourt	Concrete Support									
	Qty (X1B1214)	Qty (XLSH34B1414)	Qty (XLQ114B1224)	Qty (TTN25134H)		R _{1,SWL}	R _{3,SWL}	R _{1,SWL}	R _{3,SWL}	R _{1,k}	R _{3,k}	R _{1,k}	R _{3,k}
LGSSC90	4	2	8	2	1.2	19.0	14.8	6.0	10.9	30.4	23.6	9.6	17.4
					1.6	19.0	21.8	6.0	10.9	30.4	34.8	9.6	17.4
LGSSC140	4	3	8	2	1.2	19.0	14.8	6.0	10.9	30.4	23.6	9.6	17.4
					1.6	19.0	21.8	6.0	10.9	30.4	34.8	9.6	17.4
LGSSC190	6	3	8	2	1.2	19.0	22.1	6.0	10.9	30.4	35.4	9.6	17.4
					1.6	19.0	32.6	6.0	10.9	30.4	52.2	9.6	17.4
LGSSC240	6	3	8	2	1.2	19.0	22.1	6.0	10.9	30.4	35.4	9.6	17.4
					1.6	19.0	32.6	6.0	10.9	30.4	52.2	9.6	17.4
LGSSC290	6	3	8	2	1.2	19.0	22.1	6.0	10.9	30.4	35.4	9.6	17.4
					1.6	19.0	32.6	6.0	10.9	30.4	52.2	9.6	17.4

1. Minimum thickness of steel support 5.0mm

2. C20 Concrete

Hybrid Strut – HYS

The Hybrid Strut can be used as either a slide or rigid clip. Commonly used at the bottom of a hot rolled steel girder to accommodate excessive stand off conditions associated with some over-sail connection details.

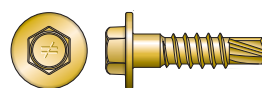
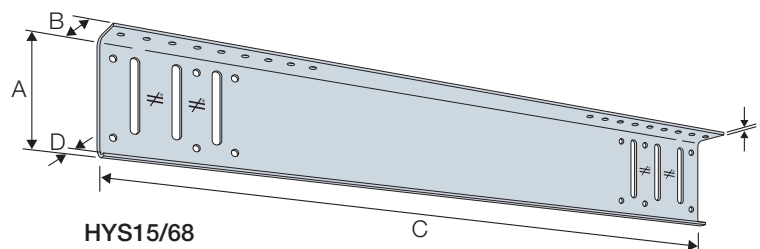
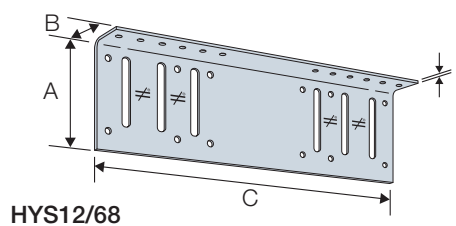
Material: Galvanised Mild Steel: 275 g/m²

Installation: Fix the bracket to the hot rolled steel section using X1224D540 screws (number varies depending on hot rolled steel size).

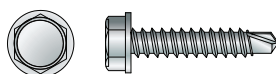
Connect strut to LGS over-sail section with 3 number XLSH78B1414 shoulder screws. Simpson Strong-Tie No-Equal stamps mark the centre of the slots to help ensure the correct placement of the shoulder screws.

Key Features:

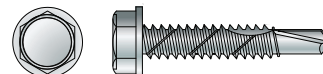
- Available in 305mm and 381mm lengths
- Ergonomically positioned slots minimizes eccentric loads and maximizes capacity
- Over-sail application allows 25mm of vertical movement in each direction when shoulder screws are used through the centre of the slot
- Simpson Strong-Tie No-Equal stamps mark the centre of the slots to help ensure the correct placement of the shoulder screws



XLSH78B1414



X1214D325



X1224D540



Product Dimensions

Model No.	Hanger Dimensions [mm]					Holes		Holes Flange B
	A	B	C	D	t	Flange A		
HYS12/68-KT25	89	38	305	-	2.0	Ø4.8	Ø6.35x57	Ø4.8
HYS15/68-KT25	89	38	381	13	2.0	12	6	12

Maximum Standoff Distance

Model No.	Slip-Clip		Fixed-Clip	
	S2	S3	F4	F6
HYS12/68-KT25	175	143	127	127
HYS15/68-KT25	251	219	203	203

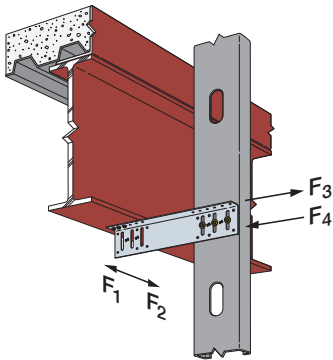
¹⁾ Maximum standoff distance's are for two or three fasteners to primary structure

Hybrid Strut – HYS

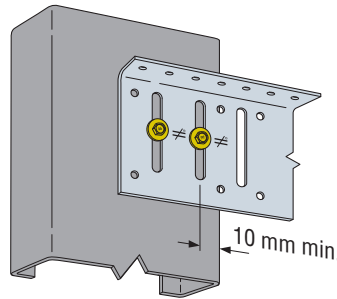
Performance Values - Slide Clip - HYS to Stud

Model No.	Fasteners	Member Thickness [mm]	Screw Installation Pattern ⁽²⁾	Safe Working Loads [kN]			Characteristic Capacities [kN]		
	Stud			R _{1,SWL} = R _{2,SWL}	R _{3,SWL}	R _{4,SWL}	R _{1,K} = R _{2,K}	R _{3,K}	R _{4,K}
	Qty (XLSH78B1414)								
HYS12/68-KT25	2	1.2	S2	0.7	3.8	2.8	1.1	6.0	4.4
	3		S3	0.7	5.7	5.6	1.1	9.1	9.0
	2	1.6	S2	1.1	4.6	4.4	1.7	7.4	7.1
	3		S3	1.1	7.1	6.9	1.7	11.3	11.0
HYS15/68-KT25	2	1.2	S2	0.7	3.8	2.8	1.1	6.0	4.4
	3		S3	0.7	5.7	5.6	1.1	9.1	9.0
	2	1.6	S2	1.1	4.6	4.4	1.7	7.4	7.1
	3		S3	1.1	7.1	6.9	1.7	11.3	11.0

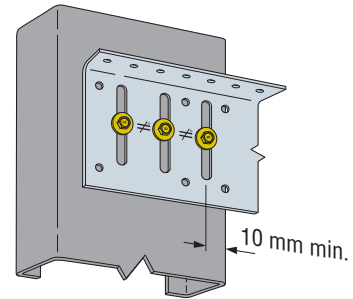
2. See illustrations below for fastener placement to stud framing.



Slide Clip Installation



Slide Clip Screw Pattern S2 HYS fixed to Stud with 2 No Shouldered Screws



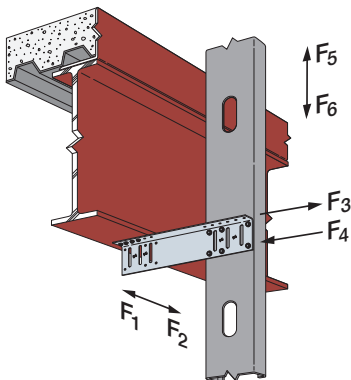
Slide Clip Screw Pattern S3 HYS fixed to Stud with 3 No Shouldered Screws

(No screws required in small round holes in slide application)

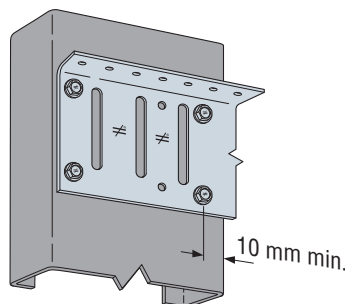
Performance Values - Fixed Clip - HYS to Stud

Model No.	Fasteners	Member Thickness [mm]	Screw Installation Pattern ⁽²⁾	Safe Working Loads [kN]				Characteristic Capacities [kN]				
	Stud			Qty (X1214D325)	R _{1,SWL} = R _{2,SWL}	R _{3,SWL}	R _{4,SWL}	R _{5,SWL} = R _{6,SWL}	R _{1,K} = R _{2,K}	R _{3,K}	R _{4,K}	R _{5,K} = R _{6,K}
HYS12/68-KT25	4	1.2	F4	0.6	4.6	4.7	2.3	0.9	7.4	7.5	3.7	
	6		F6	0.7	6.8	7.0	2.3	1.1	10.8	11.2	3.7	
	4	1.6	F4	0.6	9.4	8.0	2.5	1.0	15.0	12.8	4.0	
	6		F6	1.3	13.7	8.0	3.2	2.0	22.0	12.8	5.1	
HYS15/68-KT25	4	1.2	F4	0.6	4.6	4.7	2.0	0.9	7.4	7.5	3.2	
	6		F6	0.7	6.8	7.0	2.0	1.1	10.8	11.2	3.2	
	4	1.6	F4	0.6	9.4	10.3	2.5	1.0	15.0	16.5	4.0	
	6		F6	1.3	13.7	11.7	2.5	2.0	22.0	18.7	4.0	

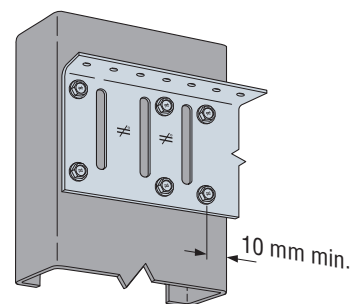
2. See illustrations below for fastener placement to stud framing.



Fixed Clip Installation



Fixed Clip Screw Pattern F4 HYS fixed to Stud with 4 No Screws



Fixed Clip Screw Pattern F6 HYS fixed to Stud with 4 No Screws

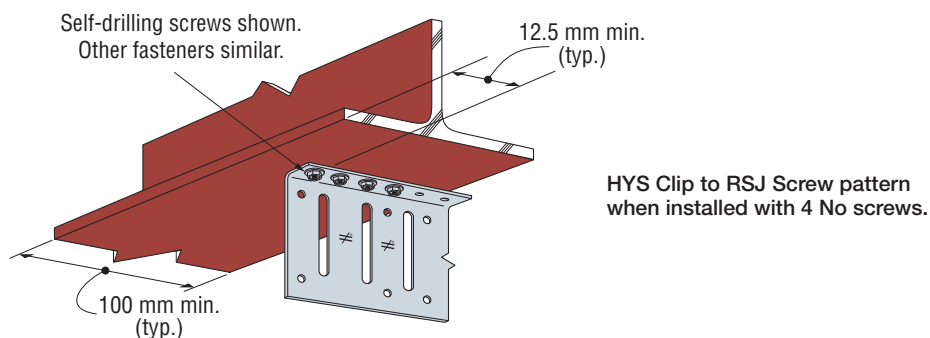
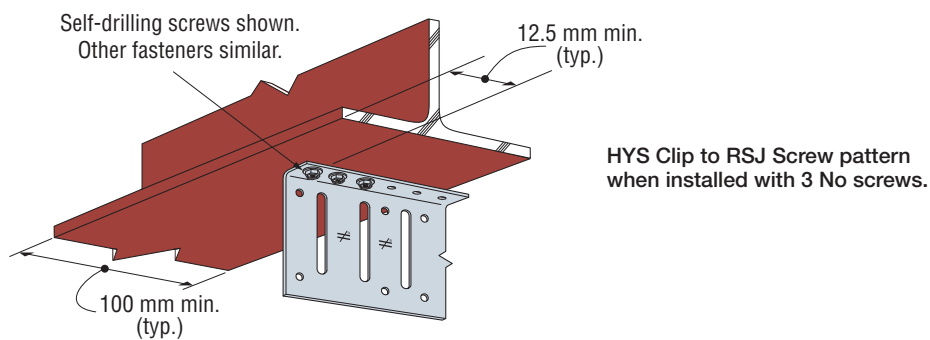
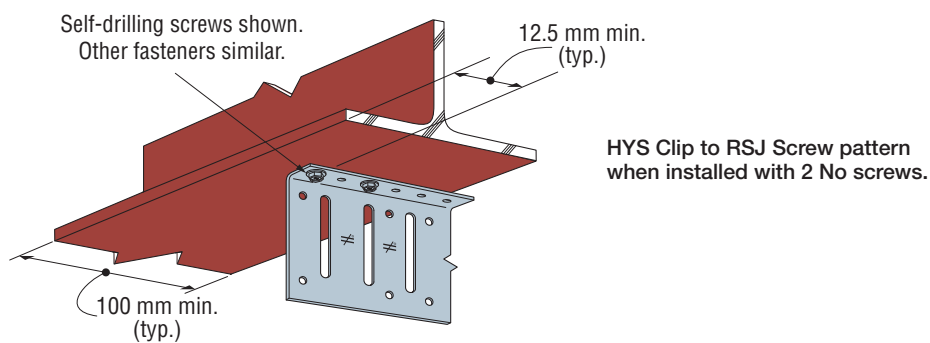
(No screws required in slots in fixed applications)

Hybrid Strut – HYS

Performance Values - HYS to Steel Sections

Fasteners	Safe Working Loads [kN]		Characteristic Capacities [kN]	
	$R_{3,SWL} = R_{4,SWL}$	$R_{5,SWL} = R_{5,SWL}$	$R_{3,K} = R_{4,K}$	$R_{5,K} = R_{6,K}$
Qty (X1224D540)				
2	7.1	2.5	11.4	4.0
3	10.7	3.8	17.0	6.0
4	14.2	5.0	22.7	8.0

1. HYS Connector Loads are also limited by the RSJ Connection Loads. Use the minimum tabulated values from the connector and RSJ tables as applicable.
2. See illustrations below for fastener placement to stud framing.
3. Tabulated R1 and R2 loads are based on assembly tests with the load through the centerline of the stud.
4. Minimum stud width for fixed application is 150mm.
5. XLSH78B1414 shouldered screw is supplied with the connectors.





Product: SCHA
Slide Clip Connector

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information
on our website
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Our Complete Range of Performance Tested Connectors & Fasteners

Introducing the latest range of connectors and fasteners for light gauge steel construction from Simpson Strong-Tie®. The UK's first complete range of structural solutions designed and tested specifically for steel frame construction. Every structural connector needed for the assembly of steel framing and fixing to concrete, as well as screws for fastening drywall and other sub structures to the steel framework, are right here.

SIMPSON
Strong-Tie

Steel Joist Connectors



Contents

Steel Joist Connector - **SJC**68

Steel Joist Connector – SJC

Steel Joist Connectors have been specifically designed for various LGS joist rafter applications. The unique clip dimensions enable easy installation on the open side of the joists and rafters with flanges and return lips.

Material: Galvanised Mild Steel: 275 g/m²

Key Features:

- Pre-punched holes reduce installation cost by eliminating the need for pre-drilling
- Fastener hole positions ensure accurate connector installation to accommodate a wide range of design and application requirements, as well as providing installation flexibility
- Angle lengths accommodate attachments for joists with return lips of up to 20mm
- Leg length enables connections with joists with flanges up to 89mm

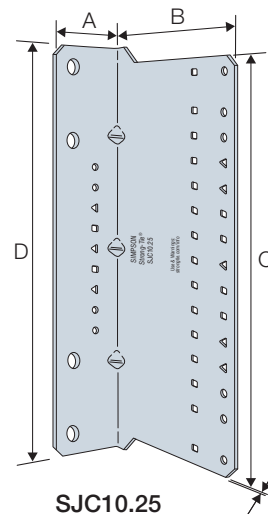
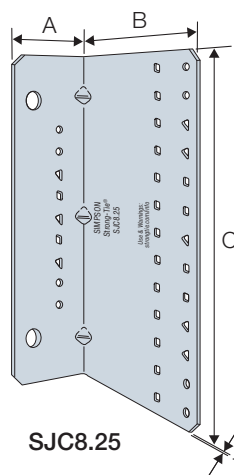
Installation: Use the specified number and type of fasteners (see performance table for fastener type, quantities and installation pattern).

Minimum & Maximum Fastener Patterns

1. For minimum fastener installation: Fill all round holes in outer row only
2. For maximum fastener installation: Fill all round and triangular holes in outer row only

Inner Fastener Pattern

1. Fill holes in the positions indicated in the illustrations below



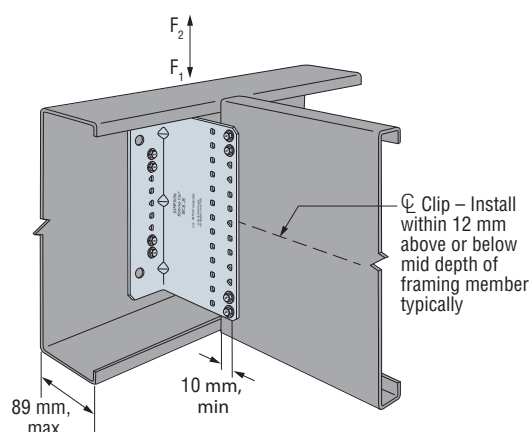
Product Dimensions

Model No.	Hanger Dimensions [mm]					Holes						
						Flange A				Flange B		
						Ø4.8	Ø11.1	4.3 Tri	4.3 SQ	Ø4.8	4.3 Tri	4.3 SQ
SJC8.25	56	114	210	-	2.0	4	2	3	2	4	5	17
SJC10.25	56	114	260	283	2.0	4	4	3	2	6	5	19

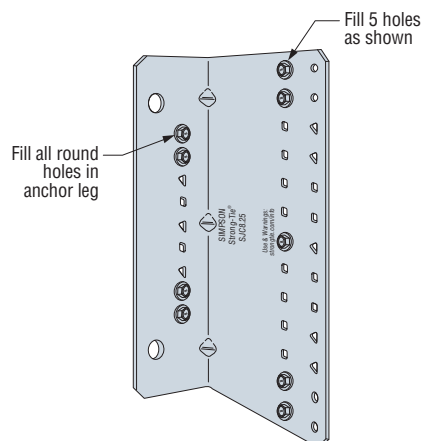
Performance Values

Model No.	Fasteners				Safe Working Loads [kN]		Characteristic Capacities [kN]	
	Pattern	Flange A		Flange B	Member Thickness [mm]		Member Thickness [mm]	
		LGS Stud or Joist	Min 5.0mm Steel Section	Stud	1.6	2.0	1.6	2.0
		Qty (X1214D325)	Qty (X1224D540)	Qty (X1214D325)	$R_{1,SWL} = R_{2,SWL}$		$R_1 = R_{2,k}$	
SJC8.25	Min	4	4	4	4.4	4.4	7.0	7.0
	Max	7	7	9	4.5	6.6	7.2	10.6
	Inner	4	4	5	6.0	8.9	9.6	14.3
SJC10.25	Min	4	4	6	5.2	7.2	8.3	11.6
	Max	7	7	11	5.6	9.1	9.0	14.6
	Inner	5	5	7	7.7	11.7	12.3	18.8

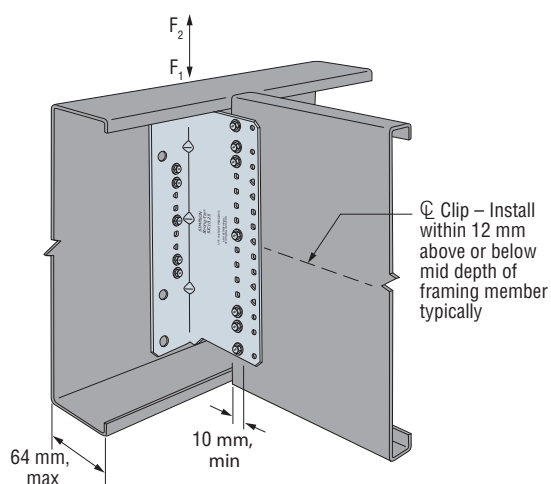
1. Performance values are based upon tests completed by Simpson Strong-Tie U.S. in accordance to ICC-ES AC261 - Acceptance criteria for connectors used with Cold-Formed Steel Structural Members
2. Min. fastener quantity and load values — fill all round holes; Max. fastener quantity and load values — fill all round and triangular holes; Inner fastener quantity and load values — see illustrations for fastener placement.
3. Loads are based on bracing of the members located within 12" of the connection.

Steel Joist Connector – **SJC****SJC8.25**

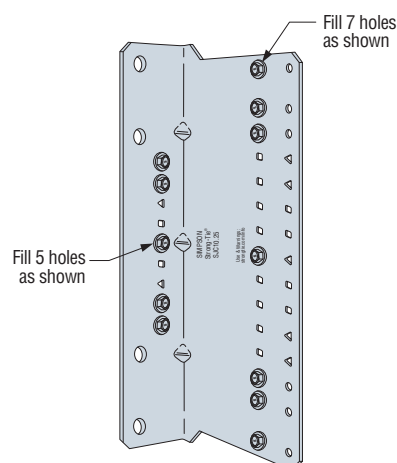
Installation with Min. Screw Pattern
(screw in round holes) For max. screw pattern,
fill all round and triangle holes. Min./Max. patterns
have screws only in outer row.

**SJC8.25**

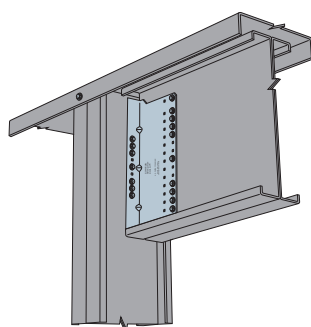
Inner Fastener Pattern

**SJC10.25**

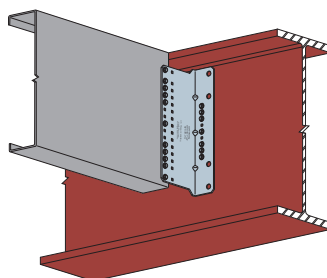
Installation with Carried Member
Fasteners in Inner Row

**SJC10.25**

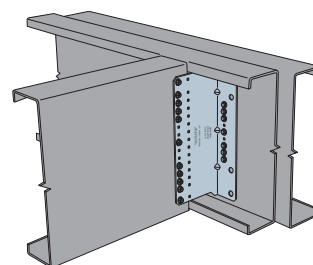
Inner Fastener Pattern



SJC -
Header to Jam
Installation



SJC -
Joist to RSJ
Installation



SJC -
Joist to Girder
Installation

Bridging Connectors and Ties



Contents

Bridging Connectors - HSA / LTB / TB	71
Party Wall Tie - PWT	72

Bridging Connector - HSA / LTB / TB

The Bridging Connector provides bracing between floor joists, and offers a more cost effective method when compared to on site blocking and clip angles.

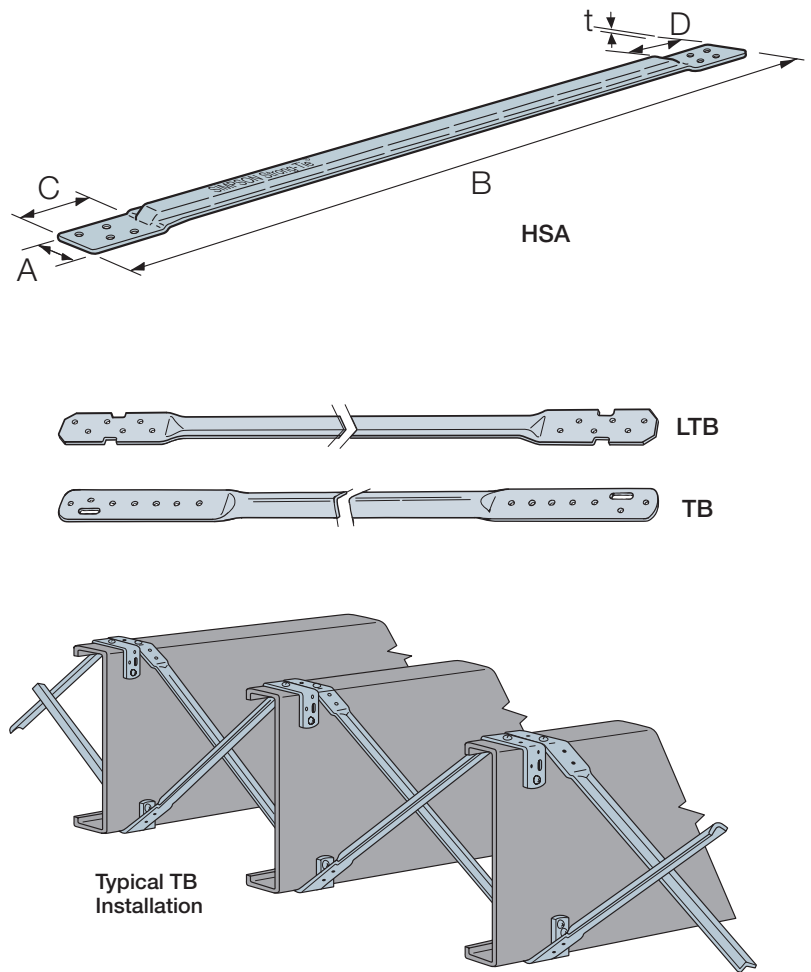
Material: Galvanised Mild Steel: 275 g/m²

Installation: Use the specified number of fasteners (see performance table for fastener type).

Secure to the floor joist with 2 no fasteners as each end of the connector.

Key Features:

- Quick on-site installation with lower requirement for fixings compared to clip angles



Product Dimensions

Model No.	Connector Dimensions [mm]					Holes					
						End C			End D		
	A	B	C	D	t	Ø3.6	Ø4.0	Ø4.1	Ø3.6	Ø4.0	Ø4.1
LTB20	19	495	65	65	0.7	6	-	-	6	-	-
TB20	25	508	137	137	0.9	-	7	-	-	7	-
TB27	25	686	137	137	0.9	-	7	-	-	7	-
TB27	25	686	137	137	0.9	-	7	-	-	7	-
TB36	25	914	137	137	0.9	-	7	-	-	7	-
HSA400	27	480	53	53	1.0	-	-	4	-	-	4
HSA450	27	530	53	53	1.0	-	-	4	-	-	4
HSA600	27	660	53	53	1.0	-	-	4	-	-	4

Selection Guide

Joist Height [mm]	Model No.				Fasteners
	Joist Centres [mm]				Qty
	300	400	450	600	(X1214D325)
152 - 203	LTB20	-	-	-	4
152 - 254	TB20	-	-	-	4
152 - 304	TB27	TB27	-	-	4
254 - 304	-	-	-	TB36	4
175 - 225	-	HSA400	HSA450	HSA600	4

Party Wall Tie - PWT

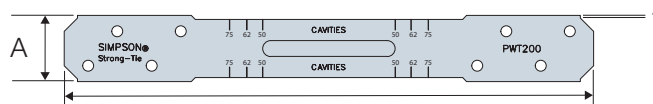
The Party Wall Tie connects party walls whilst resisting the passage of sound to meet the requirements of Part E of the building regulations.

Material: Galvanised Mild Steel: 275 g/m²

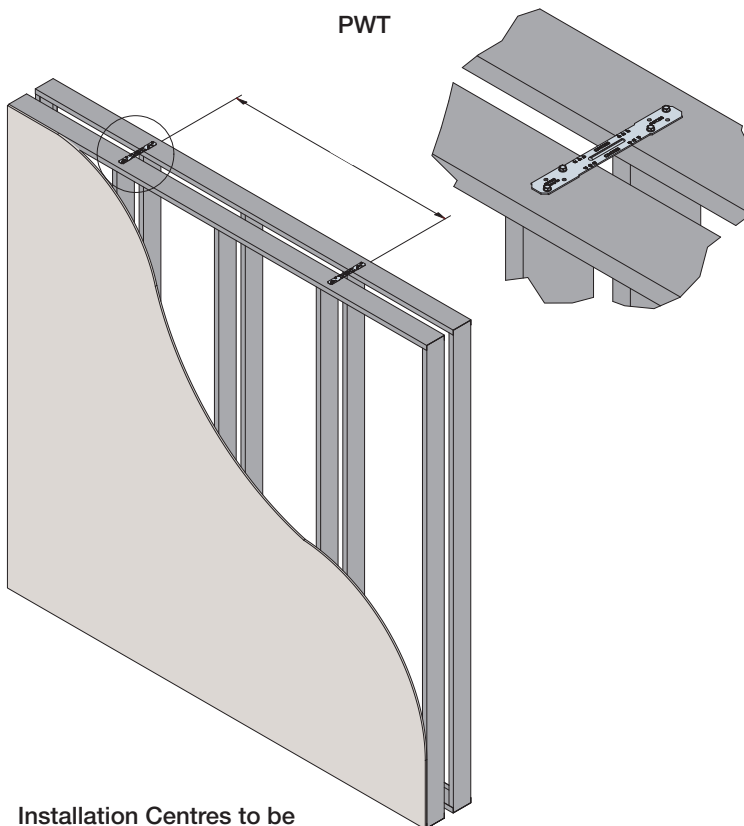
Installation: Use the specified number of fasteners (see performance table for fastener type, 25 mm tek screws).

Key Features:

- Meets the requirements of Part E of the Building Regulations (Resistance to the Passage of Sound)
- Suits frames with cavity from 50mm to 75mm
- Can be used on closed panel construction - where 50mm stiffening rib helps to check the minimum 50mm cavity width has been achieved
- Minimum material cross-section for optimum sound performance



PWT



Installation Centres to be specified by structural engineer.



Product Dimensions

Model No.	Dimensions [mm]			Holes
	A	B	t	Ø4.1
PWT200	25	200	1.5	8

Performance Values

Model No.	Fasteners	Safe Working Loads [kN]		Characteristic Capacities [kN]	
		Member Thickness [mm]		Member Thickness [mm]	
		1.6	2.0	1.6	2.0
	Qty (X1214D325)	$R_{1,SWL} = R_{2,SWL}$		$R_{1,K} = R_{2,K}$	
PWT200	2 + 2	1.1	1.1	1.8	1.8

1. An even number of fasteners are to be installed into either end of the PWT.

Parapet Wall Brackets



Contents

Parapet Wall Bracket - RCKW.....	74
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Parapet Wall Bracket - RCKW

The RCKW is a 1 or 2 part connector designed to resist an over-turning moment at the base of exterior knee-walls and parapets as well as interior partial height walls. These connectors offer a unique large and small anchorage hole pattern that permits anchorage into both hot rolled steel and concrete.

If more rigidity is required, a stiffener (the RCKWS) can be added to nest into the RCKW clip; the screw and anchor holes line up making installation simple, with no need for pre drilling. The RCKW and the RCKWS are sold separately.

Material: Galvanised Mild Steel: 275 g/m²

Installation: Use the specified number of fasteners (see performance table for fastener type).

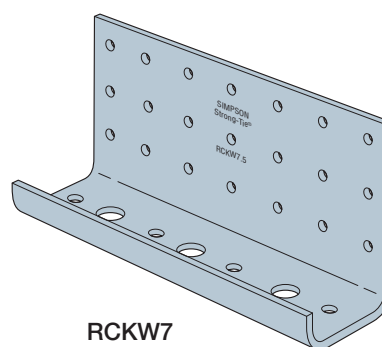
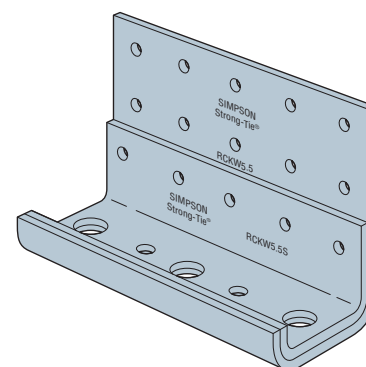
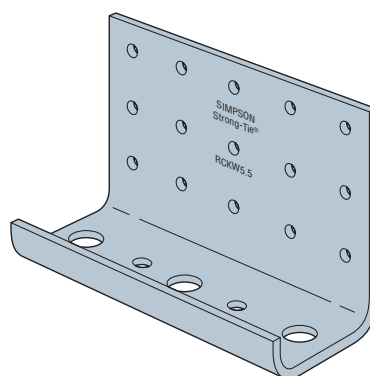
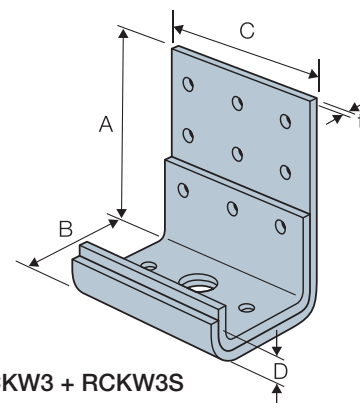
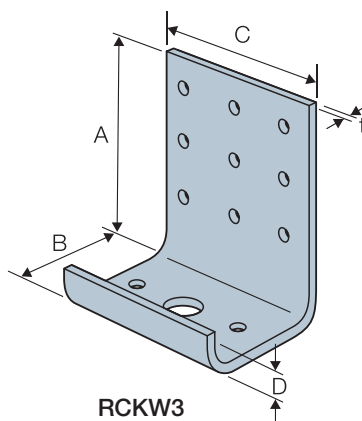
When using the RCKWS, secure the stiffener to the clip with the specified screw fasteners.

Use all specified anchors to achieve tabulated performance values, the installation torque must be as published in the performance table, or the torque requirements of the anchor, whichever is greater.

When using the larger diameter anchor holes, the bottom track must be pre drilled or punched with an M20 hole.

Key Features:

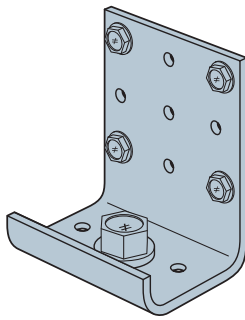
- Anchorage legs incorporate stiffened flanges, improving over-turning moment resistance
- Large diameter anchor holes accommodate 12 mm diameter fixings e.g (LMAS stud with ATHP resin)
- The 3 additional large holes (RCKW5.5 and RCKW7.5 only) are for added versatility. The central hole is for a one-anchor solution. The 2 outer holes are for a two anchor solution that requires a higher capacity at the centre of the slab.
- Additional smaller diameter anchor holes allow for the attachment to hot rolled steel with X1224D540 self-drilling screws.



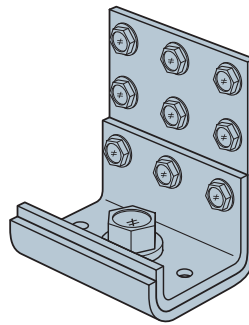
Product Dimensions

Model No.	Hanger Dimensions [mm]							Holes					
								Flange A		Flange B			
	A	A ₁	B	C	D	D ₁	t	Ø4.8	Ø5.5	Ø6.7	Ø7.5	Ø14.3	Ø15.9
RCKW3	90	-	66	75	22	-	4.7	9	-	2	-	1	-
RCKW5.5	90	-	66	140	22	-	4.7	15	-	4	-	3	-
RCKW7.5	90	-	66	190	22	-	4.7	21	-	6	-	3	-
RCKW3S	-	38	56	75	-	19	4.7	-	3	-	2	-	1
RCKW5.5S	-	38	56	140	-	19	4.7	-	5	-	4	-	3

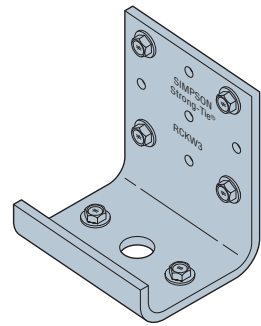
Parapet Wall Bracket - **RCKW**



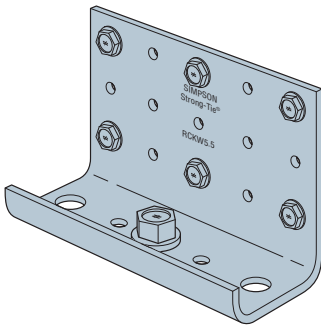
RCKW3 Fastener Pattern 1
- Concrete Application



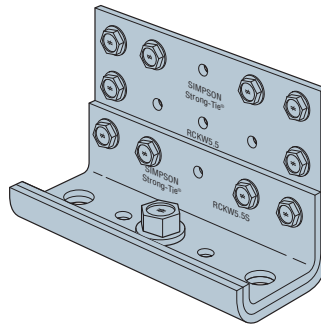
RCKW3 with RCKW
Fastener Pattern 2
- Concrete Application



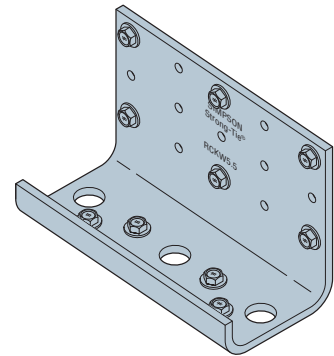
RCKW3 Fastener Pattern 7
- Structural Steel
Application



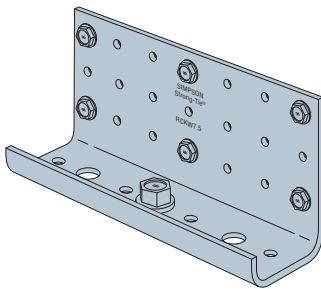
RCKW5.5 Fastener Pattern 3
- Concrete Application



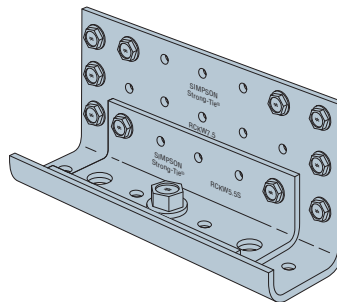
RCKW5.5 with RCKW5.5S
Fastener Pattern 4
- Concrete Application



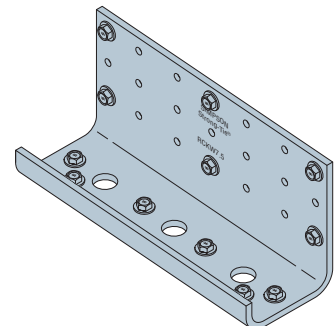
RCKWS Fastener Pattern 8
- Structural Steel
Application



RCKW7.5 Fastener Pattern 5
- Concrete Application



RCKW7.5 with RCKW5.5S
Fastener Pattern 6
- Concrete Application



RCKW7 Fastener Pattern 9
- Structural Steel
Application

Parapet Wall Bracket - **RCKW**

Performance Values

Model No.	Fasteners			Member Thickness [mm]	Minimum Framing Member Depth [mm]	Screw Installation Pattern	Assembly Rotational Stiffness β [Nm/Rad]	Connector Rotational Stiffness β_c [Nm/Rad]
	Flange A Stud	Flange B Concrete	Flange B Structural Steel					
	Qty (X1214D325)	Qty (M12 LMAS)	Qty (X1224D540)					
Performance Values: Concrete Applications								
RCKW3	4	1	-	1.2	90	1	12767	12993
RCKW3				1.6			14462	15479
RCKW3+RCKW3S	9	1	-	1.2	90	2	18530	19772
RCKW3+RCKW3S				1.6			18530	19772
RCKW5.5	6	1	-	1.2	150	3	36155	38189
RCKW5.5				1.6			36155	38189
RCKW5.5+RCKW5.5S	10	1	-	1.2	150	4	50843	55363
RCKW5.5+RCKW5.5S				1.6			52764	56718
RCKW7.5	6	1	-	1.2	200	5	57622	60560
RCKW7.5				1.6			62594	64514
RCKW7.5+RCKW5.5S	10	1	-	1.2	200	6	66774	70390
RCKW7.5+RCKW5.5S				1.6			77847	81349
Performance Values: Structural Steel Applications								
RCKW3	4	-	2	1.2	90	7	8281	8666
RCKW3				1.6			9859	10304
RCKW5.5	6	-	4	1.2	150	8	30798	32436
RCKW5.5				1.6			28911	30064
RCKW7.5	6	-	6	1.2	200	9	64579	68194
RCKW7.5				1.6			78362	82656

1. Tabulated values are based on framing members with track and stud of the same thickness and (1) Ø5.5mm Framing Screw into each stud flange unless otherwise noted.
2. Tabulated moment values correspond to connector strength without consideration of serviceability. designer must check out-of-plane deflections using tabulated Rotational Stiffness.
3. Tabulated Assembly Rotational Stiffness is applicable for walls at 950mm tall with corresponding framing member depth and thickness.
4. Tabulated Connector Rotational Stiffness may be used for any wall heights; the designer must consider member deflection due to bending in the stud member.
5. Anchor tension, T, is the force in the anchor, at tabulated moment, M, or tension, F₂, values.
6. The designer is responsible for anchor design / specification
7. The designer is responsible for structural steel design.
8. Anchor tension values may be interpolated
9. See illustrations for fastener pattern placement



Assembly test with member failure

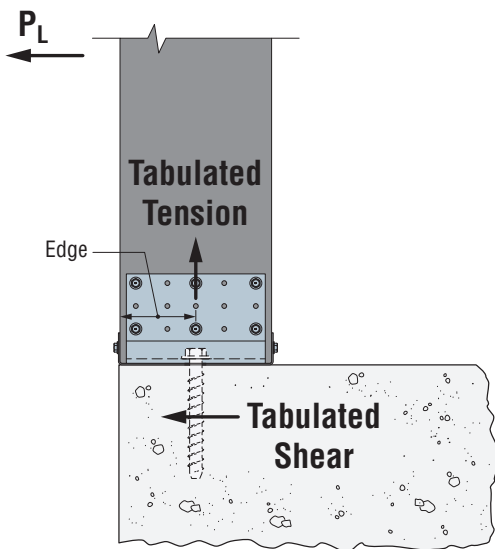


Typical RCKW Installation

Parapet Wall Bracket - **RCKW**

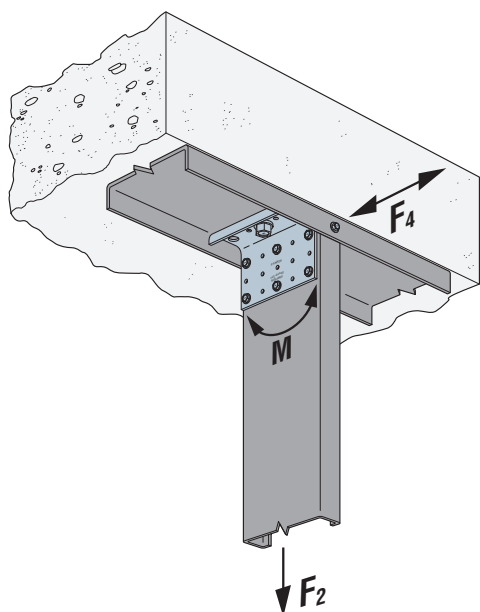
Performance Values

Model No.	Safe Working Loads [kN]							Characteristic Capacities [kN]						
	Moment $M_{R,SWL}$ [Nm]	Anchor Tension at M_R Capacity		Tension $R_{2,SWL}$	Anchor Tension at R_2 Capacity		Shear $R_{4,SWL}$	Moment $M_{R,K}$ [Nm]	Anchor Tension at M_R Capacity		Tension $R_{2,K}$	Anchor Tension at R2 Capacity		Shear $R_{4,K}$
		Concrete C20/25	Concrete C30/35		Concrete C20/25	Concrete C30/35			Concrete C20/25	Concrete C30/35		Concrete C20/25	Concrete C30/35	
Performance Values: Concrete Applications														
RCKW3	348	11.2	10.5	5.6	7.3	7.1	3.4	473	14.5	13.9	7.6	9.7	9.4	4.6
RCKW3	489	18.3	16.0	8.2	11.8	11.0	5.0	720	25.4	22.8	12.1	16.9	15.9	7.3
RCKW3+RCKW3S	476	17.5	15.4	11.5	19.6	16.7	3.5	648	21.8	20.0	15.7	23.9	21.7	4.8
RCKW3+RCKW3S	583	29.8	20.4	15.3	27.3	25.9	5.0	908	39.6	31.2	22.5	40.2	35.5	7.3
RCKW5.5	706	11.2	10.9	4.7	5.8	5.7	4.6	960	15.0	14.6	6.5	7.8	7.7	6.3
RCKW5.5	929	15.4	14.8	10.9	14.5	13.9	6.2	1369	22.3	21.5	16.1	21.0	20.2	9.1
RCKW5.5+RCKW5.5S	954	15.9	15.2	11.4	15.3	14.6	4.6	1299	21.0	20.3	15.5	20.2	19.5	6.3
RCKW5.5+RCKW5.5S	1308	23.8	21.9	16.9	25.2	23.1	6.2	1917	33.7	31.5	24.9	35.8	33.4	9.1
RCKW7.5	926	10.4	10.2	5.7	6.9	6.8	5.3	1261	14.0	13.8	7.3	8.7	8.6	7.3
RCKW7.5	1288	15.0	14.6	9.6	12.1	11.8	7.5	1896	21.8	21.3	13.3	16.4	16.1	11.1
RCKW7.5+RCKW5.5S	1233	14.3	13.9	10.0	12.6	12.3	5.3	1678	19.1	18.7	14.8	18.5	18.1	7.3
RCKW7.5+RCKW5.5S	1587	19.0	18.3	11.7	14.9	14.5	7.5	2336	27.6	26.7	25.3	33.8	32.4	11.1
Performance Values: Structural Steel Applications														
RCKW3	290	-	-	5.4	-	-	3.3	395	-	-	7.4	-	-	4.5
RCKW3	304	-	-	6.2	-	-	5.0	447	-	-	9.1	-	-	7.3
RCKW5.5	720	-	-	8.5	-	-	4.7	979	-	-	11.5	-	-	6.4
RCKW5.5	726	-	-	8.9	-	-	5.8	1070	-	-	13.1	-	-	8.5
RCKW7.5	1084	-	-	8.7	-	-	5.0	1476	-	-	11.8	-	-	6.9
RCKW7.5	1279	-	-	9.7	-	-	7.6	1883	-	-	14.3	-	-	11.2

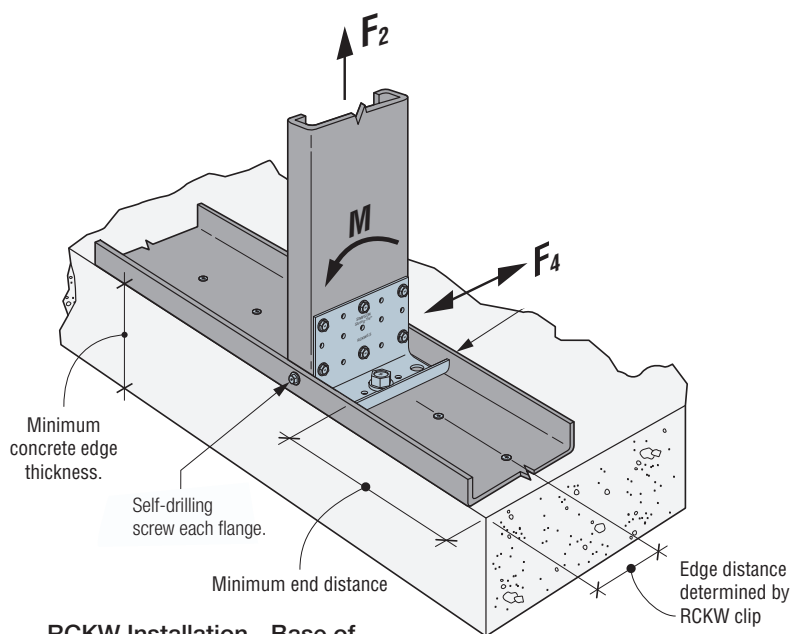


Single Anchor - Shear and Tension
(Tension from moment created from P_L)

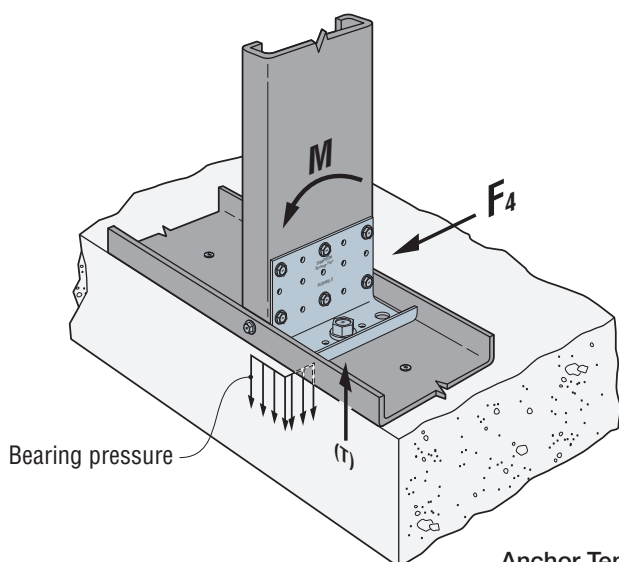
Parapet Wall Bracket - RCKW



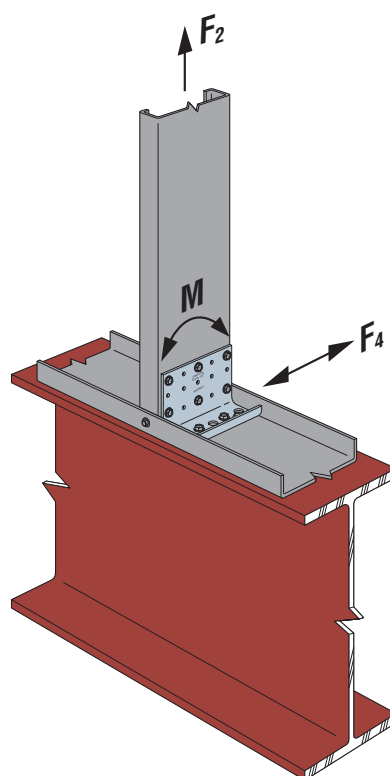
RCKW Installation - Top of Stud onto Concrete



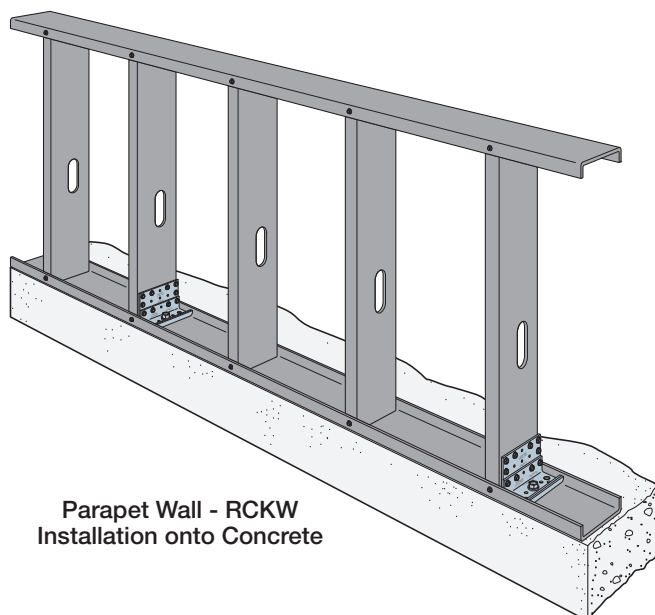
RCKW Installation - Base of Stud onto Concrete



Anchor Tension, T,
Created from Movement
(one anchor)



RCKW Installation onto Structural Steel



Parapet Wall - RCKW
Installation onto Concrete

High Wind Ties



Contents

High Wind Tie - **H2A/H3**80

High Wind Tie - H2A/H3

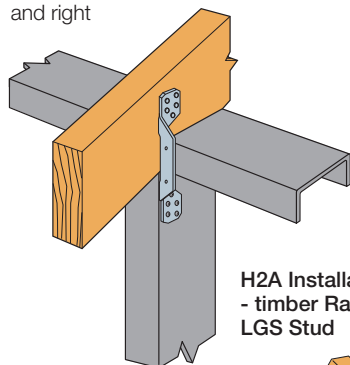
High Wind Ties for connecting LGS and wood trusses to LGS structures to provide uplift resistance.

Material: Galvanised Mild Steel: 275 g/m²

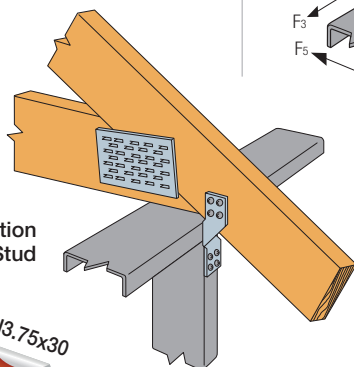
Installation: Use the specified number of fasteners (see performance table for fastener type).

Key Features:

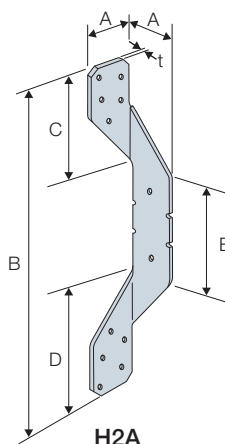
- Ideal for connections where one LGS section crosses another
- Suitable for connecting LGS or timber trusses to LGS structures
- H3 ties are only shipped in equal quantities of left and right



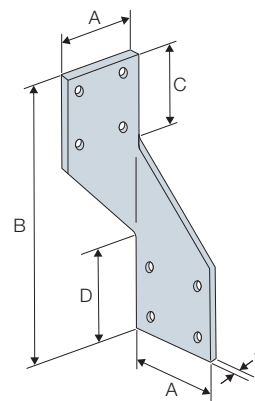
H2A Installation
- timber Rafter to
LGS Stud



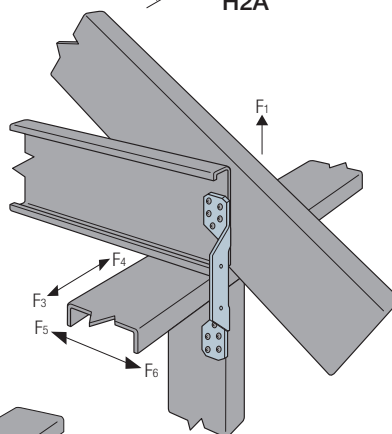
H3 Installation
- Timber Truss to LGS Stud



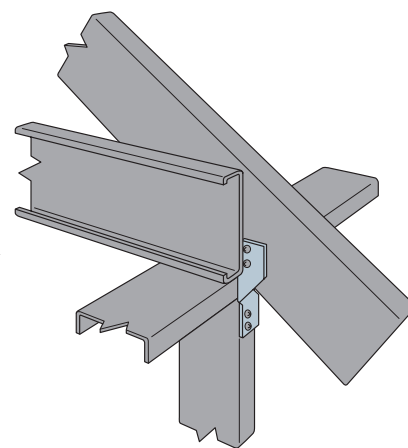
H2A



H3



Typical H2A Installation
- LGS Joist and Rafter
to Stud



Typical H3 Installation
- LGS Rafter to Stud

Product Dimensions

Model No.	Connector Dimensions [mm]						Holes				
							Flange C		Flange D		Flange E
	A	B	C	D	E	t	Ø3.9	Ø4.3	Ø3.9	Ø4.3	Ø3.9
H2A	38	265	89	89	87	1.1	5	-	5	-	2
H3	40	117	38	38	-	1.1	-	4	-	4	-

Performance Values

Model No.	Fasteners				Safe Working Loads [kN]			Characteristic Capacities [kN]		
	Steel Rafter	Timber Rafter	To Top Track	To stud	$R_3 = R_{4,SWL,LT}$	$R_5 = R_{6,SWL,LT}$	$R_{2,SWL,ST}$	$R_3 = R_{4,k}$	$R_5 = R_{6,k}$	$R_{2,k}$
	Qty (FPHSD34S1214)	Qty (N3.75x30)	Qty (FPHSD34S1214)	Qty (FPHSD34S1214)						
LGS Rafter/Joist to LGS Connection										
H2A	5	-	1	5	0.4	0.4	2.00	0.64	0.71	3.20
H3	2	-	2	-	0.4	0.6	1.67	0.64	0.89	2.67
Timber Rafter/Joist to LGS Connection										
H2A	-	5	1	5	-	-	2.45	-	-	3.91
H3	-	4	4	-	-	-	1.62	-	-	2.60

1. Performance values based upon attachment of Light Gauge Steel members having a minimum thickness 1.0 mm

2. Performance values are based upon tests completed by Simpson Strong-Tie U.S. in accordance to ICC-ES AC261 - Acceptance criteria for connectors used with Cold-Formed Steel Structural Members



Curves Are now Smoother Than Ever



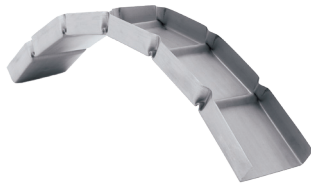
Ready Products Hand-Bendable Framing



Ready Products hand-bendable framing members, along with the Ready Bender™ portable bending tools, enable an installer to create curved light-gauge steel wall and ceiling framing right on the jobsite. Easy to work with and endlessly versatile, the Ready-Hat®, Ready-Track®, Ready-Arch® and Ready-Angle® flexible framing sections create a LGS framing system that can help you realize even the most challenging curved drywall designs. Ready Products provide superior results in less time than traditional methods.

- **Complete any curved framing job quickly and efficiently the first time.**
- **Easy for all skill levels to hand-form into uniform, smooth curves.**
- **One-piece steel construction, designed to hold shape with fewer fasteners.**

Ready Products Hand-Bendable Framing



Ready Track Bender™ Custom Framing Tool

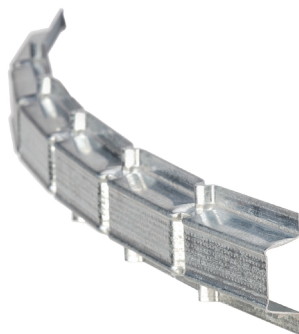
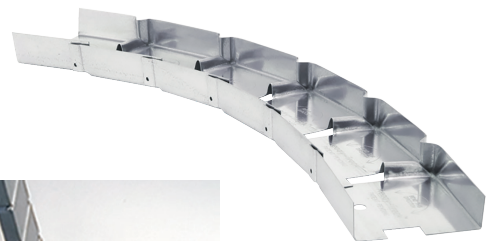
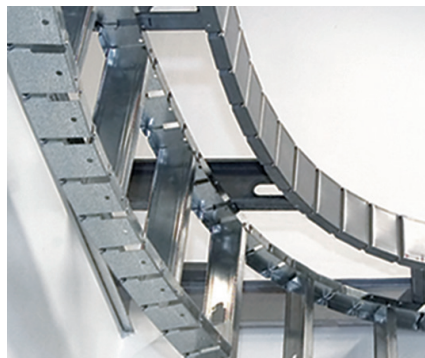
Creating arched openings and designs is simpler than ever with Ready-Arch framing members. Round, elliptical or s-shapes are all easy to form on the jobsite without any cutting or additional reinforcement. Ready-Arch members are also ideal for more challenging applications where material needs to curve along the web.

- Ideal for soffits, arches, light coves and elliptical or eyebrow curves for windows and doorways
- 0.8mm steel holds its shape without any fasteners
- Installs to cold-formed steel or wood framing

Ready-Arch® Framing

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Ready-Hat® Framing

Whether the plans call for framing over a CMU wall or concrete column or just a curved transition from wall to ceiling, the Ready-Hat furring and framing channel is right for the job. This versatile product is easy to form by hand into the exact shape needed and is secured to concrete or CMU walls with power-driven fasteners or concrete screws.

- Ideal for furring on curved walls or to create coves, barrel vaults, groin vaults, soffits and serpentine ceilings
- Great for wrapping columns or as cross-framing to eliminate drywall butt joints
- 0.9mm steel holds its shape once formed and positioned for easy fastening

COMING SOON

Ready Bender™ Tools for Jobsite Framing

Ready Track Bender™ Custom Framing Tool



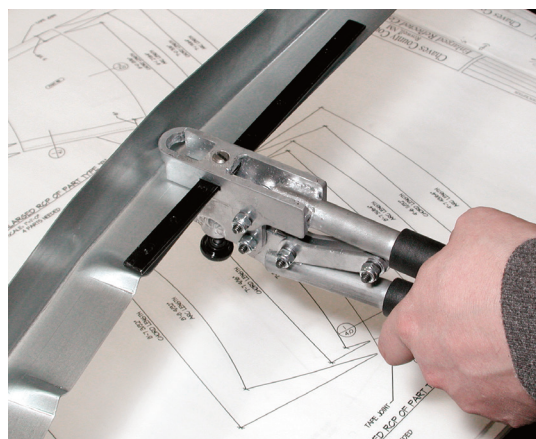
The Ready Track Bender is a portable, on-the-jobsite tool that curves studs and track easily, accurately and conveniently by creating compound indentations at consistent intervals along the length of the material.

- Spaces indentations as close as 50mm apart for a tight radius, and up to 305mm or more apart for a larger radius
- Forms all standard stud and track profiles up to 0.9mm thick and 152mm wide
- No flange or web cutting to form radius and no plywood or strap repair needed for strength
- Reliable and precise — turn the dial to the desired radius and create uniform bends in piece after piece, all day long
- Tough heavy-gauge steel construction throughout for smooth, trouble-free operation job after job
- Rugged plastic case for easy transportation

Ready Trim Bender™ Custom Framing Tool

The Ready Trim Bender allows the user to curve angles quickly, accurately and conveniently right on the jobsite by creating compound indentations at consistent intervals along the length of the angle. It eliminates the need for old-fashioned tin snips and the trial-and-error method of approximating the right radius.

- Consistently forms the exact radius you need
- Tough heavy-gauge steel construction assures a smooth, trouble-free operation job after job
- Great for 0.5mm - 0.9mm angles with 38mm x 38mm, 50mm x 50mm or 76mm x 76mm legs
- Minimum radius is 762mm – 1117mm



Ready-Angle® Framing

Ready-Angle framing angle adapts to almost any shape, and curves in multiple directions, so it's easy to form challenging compound curves and s-bends. Use two pieces to replicate curved track for steel and wood studs, to form arches of any depth quickly, or to produce finished corners that are ready for drywall.

- Ideal for s-shapes, spirals, sweeps or virtually any free-form shape
- 0.8mm steel holds its shape without any fasteners
- A versatile product for problem-solving on the jobsite



COMING SOON

Engineered Versatility

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Strong-Tie

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