Technical data sheet

HYS
Hybrid Strut

The HYS hybrid strut is a versatile dual-application strut that has been specifically designed and tested for use as either a slide or rigid clip. Commonly used at the bottom of a steel beam to accommodate large standoff conditions, the HYS strut attaches LGS Studs to the main structure with screws.

Features

Description

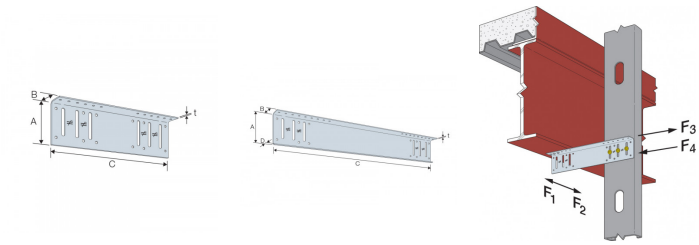
The HYS hybrid strut is a versatile dual-application strut that has been specifically designed and tested for use as either a slide or fixed clip.
Commonly used at the bottom of a steel beam to accommodate large standoff conditions, the HYS strut attaches LGS Studs to the main structure with screws.

Key Features

- Available in 305mm and 381mm lengths.
- Ergonomically positioned slots minimise eccentric load and maximise capacity.
- Slide application allows up to 25mm of vertical moment in each direction when shouldered screws are used through the center of the slot.
- Simpson Strong-Tie® No-Equal® stamps mark the center of the slots to help ensure correct placement of shouldered screws

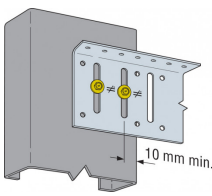
Material

Galvanised Mild Steel: 275g/m^2

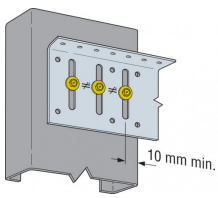


HYS12 Dimension Image

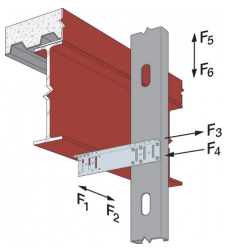
Slide Clip Installation



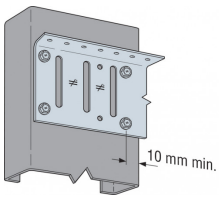
Slide Clip Screw Pattern S1 HYS fixed to Stud with 2 No Shouldered Screws (No screws required in small round holes in slide application)



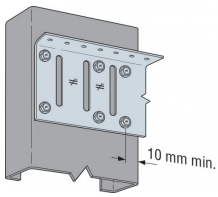
Slide Clip Screw Pattern S3 HYS fixed to Stud with 3 No Shouldered Screws (No screws required in small round holes in slide application)



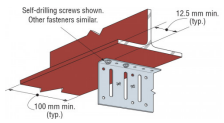
Fixed Clip Installation



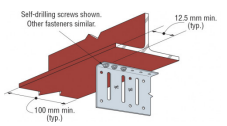
Fixed Clip Screw Pattern F4 HYS fixed to Stud with 4 No Shouldered Screws (No screws required in slots in fixed application)



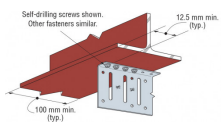
Fixed Clip Screw Pattern F6 HYS fixed to Stud with 6 No Shouldered Screws (No screws required in slots in fixed application)



HYS Clip to RSJ Screw pattern when installed with 2 No screws.



HYS Clip to RSJ Screw pattern when installed with 3 No screws.



HYS Clip to RSJ Screw pattern when installed with 4 No screws.

Technical data sheet

HYS
Hybrid Strut

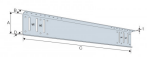
SIMPSON Strong-Tie

Technical Data

Performance Values: HYS to RSJ Sections

Fasteners		Safe Working Loads [kN]	
Type	Qty	$R_{3,SWL} = R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$
X1224D540	2	7.1	2.5
X1224D540	3	10.7	3.8
X1224D540	4	14.2	5.0

HYS - Product Dimensions

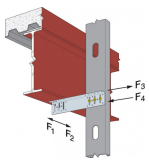


References	Hanger Dimensions [mm]					Holes Flange A		Holes Flange B	Maximum Standoff Distance [mm]			
									Slide-Clip		Fixed-Clip	
	A	B	C	D	t	Ø4.8	Ø6.35x57 Slots	Ø4.8	S_2	S_3	F_4	F_6
HYS15/68-KT25	89	38	381	13	2	12	6	12	251	219	203	203

Table Notes:

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

Slide-Clip - Performance Values - HYS to Stud (1.2mm Min. Stud Thickness)

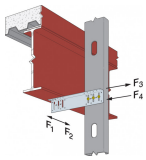


Slide Clip Installation

References	Fasteners (Slide-Clip)		Screw Pattern[2]													
	Stud	RSJ[1]	S_2 (2 Screws per stud)								S_3 (3 Screws per Stud)							
	Type	Type	Safe Working Loads [kN]				Characteristic Capacities [kN]				Safe Working Loads [kN]				Characteristic Capacities [kN]			
			$R_{1,SWL} = R_{2,SWL}$	$R_{3,SWL}$	$R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$	$R_{1,K} = R_{2,K}$	$R_{3,K}$	$R_{4,K}$	$R_{5,K} = R_{6,K}$	$R_{1,SWL} = R_{2,SWL}$	$R_{3,SWL}$	$R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$	$R_{1,K} = R_{2,K}$	$R_{3,K}$	$R_{4,K}$	$R_{5,K} = R_{6,K}$
HYS15/68-KT25	XLSH78B1414	X1224D540	0.7	3.8	2.8	-	1.1	6	6.4	-	0.7	5.7	5.6	-	1.1	9.1	9	-

Technical data sheet

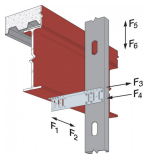
HYS
Hybrid Strut



Slide Clip Installation

Slide-Clip - Performance Values - HYS to Stud (1.6mm Min. stud Thickness)

References	Fasteners (Slide-Clip)		Screw Pattern[2]															
	Stud	RSJ[1]	S_2 (2 Screws per Stud)								S_3 (3 Screws per Stud)							
	Type	Type	Safe Working Loads [kN]				Characteristic Loads [kN]				Safe Working Loads [kN]				Characteristic Capacities [kN]			
			$R_{1,SWL} = R_{2,SWL}$	$R_{3,SWL}$	$R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$	$R_{1,K} = R_{2,K}$	$R_{3,K}$	$R_{4,K}$	$R_{5,K} = R_{6,K}$	$R_{1,SWL} = R_{2,SWL}$	$R_{3,SWL}$	$R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$	$R_{1,K} = R_{2,K}$	$R_{3,K}$	$R_{4,K}$	$R_{5,K} = R_{6,K}$
HYS15/68-KT25	XLSH78B1414	X1224D540	1.3	5.2	4.4	-	2.1	8.3	7.1	-	1.3	7.9	6.9	-	2.1	12.6	11	-



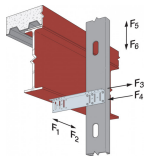
Fixed Clip Installation

Fixed-Clip - Performance Values - HYS to Stud (1.2mm Min. Stud Thickness)

References	Fasteners (Fixed-Clip)		Screw Pattern[2]															
	Stud	RSJ[1]	F_4 (4 Screws per Stud)								F_6 (6 Screws per Stud)							
	Type	Type	Safe Working Loads [kN]				Characteristic Capacities [kN]				Safe Working Loads [kN]				Characteristic Capacities [kN]			
			$R_{1,SWL} = R_{2,SWL}$	$R_{3,SWL}$	$R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$	$R_{1,K} = R_{2,K}$	$R_{3,K}$	$R_{4,K}$	$R_{5,K} = R_{6,K}$	$R_{1,SWL} = R_{2,SWL}$	$R_{3,SWL}$	$R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$	$R_{1,K} = R_{2,K}$	$R_{3,K}$	$R_{4,K}$	$R_{5,K} = R_{6,K}$
HYS15/68-KT25	XLSH78B1414	X1224D540	0.6	4.6	4.7	2	0.9	7.4	7.5	3.2	0.7	6.8	7	2	1.1	10.8	11.2	3.2

Technical data sheet

HYS
Hybrid Strut



Fixed Clip Installation

Fixed-Clip - Performance Values - HYS to Stud (1.6mm Min. Stud Thickness)

References	Fasteners (Fixed-Clip)		Screw Pattern[2]															
	Stud	RSJ[1]	F_4 (4 Screws per Stud)								F_6 (6 Screws per Stud)							
	Type	Type	Safe Working Loads [kN]				Characteristic Capacities [kN]				Safe Working Loads [kN]				Characteristic Capacities [kN]			
			$R_{1,SWL} = R_{2,SWL}$	$R_{3,SWL}$	$R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$	$R_{1,K} = R_{2,K}$	$R_{3,K}$	$R_{4,K}$	$R_{5,K} = R_{6,K}$	$R_{1,SWL} = R_{2,SWL}$	$R_{3,SWL}$	$R_{4,SWL}$	$R_{5,SWL} = R_{6,SWL}$	$R_{1,K} = R_{2,K}$	$R_{3,K}$	$R_{4,K}$	$R_{5,K} = R_{6,K}$
HYS15/68-KT25	XLSH78B1414	X1224D540	0.9	9.4	9.6	2.5	1.4	15	15.4	4	1.7	13.7	11.7	2.5	2.7	22	18.7	4

Table Notes:

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 installation illustrations for fastener placement to stud framing.*
3. *Tabulated R_1 and R_2 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*

Installation

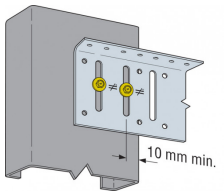
Installation

Slide Applications

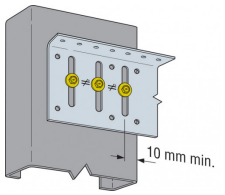
- For installation as a slide connection, attach the HYS using XLSH78B1414 shouldered screws through the slotted holes (screws are supplied with the HYS)
- The precision-manufactured shouldered screws supplied with the HYS are designed to prevent over-driving and to ensure that the clip functions properly in the slide application.
- Fix to RSJ sections with X1224D540 screws (not supplied)
- Install quantity of fasteners in accordance to the number and pattern stated in the performance tables

Fixed Applications

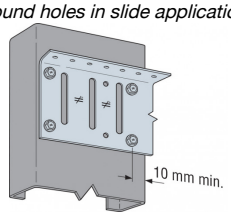
- For installation as a fixed connection, attach the HYS using XLSH78B1414 shouldered screws through the round holes (screws are supplied with the HYS)
- Fix to RSJ sections with X1224D540 screws (not supplied)
- Install quantity of fasteners in accordance to the number and pattern stated in the performance tables



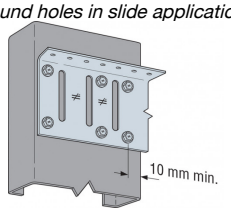
Slide Clip Screw Pattern S1 HYS fixed to Stud with 2 No Shouldered Screws (No screws required in small round holes in slide application)



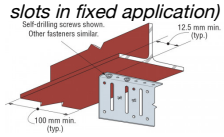
Slide Clip Screw Pattern S3 HYS fixed to Stud with 3 No Shouldered Screws (No screws required in small round holes in slide application)



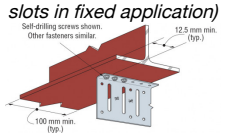
Fixed Clip Screw Pattern F4 HYS fixed to Stud with 4 No Shouldered Screws (No screws required in slots in fixed application)



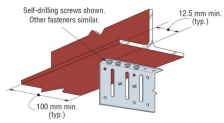
Fixed Clip Screw Pattern F6 HYS fixed to Stud with 6 No Shouldered Screws (No screws required in slots in fixed application)



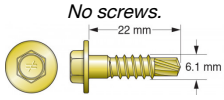
HYS Clip to RSJ Screw pattern when installed with 2 No screws.



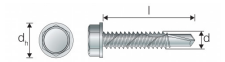
HYS Clip to RSJ Screw pattern when installed with 3 No screws.



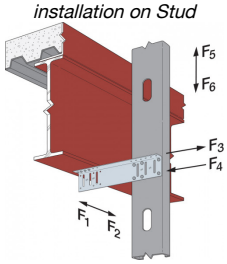
HYS Clip to RSJ Screw pattern when installed with 4 No screws.



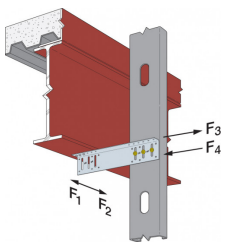
XLSH78B1414 Shouldered Screw - Used for installation on Stud



X1224D540 - Used for installation on RSJ



Fixed Clip Installation



Slide Clip Installation

Technical data sheet

HYS
Hybrid Strut

Winchester Road Cardinal Point Tamworth Staffordshire B78 3HG
tel: +44 1827 255600
fax: +44 1827 255616

HYS
Hybrid Strut

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www.strongtie.co.uk