TECHNICAL DATA SHEET

HDUE — Heavy Duty Holdown

Material:

HDUE9-SDS3.5 Carbon Steel 2.5mm thick

HDUE13-SDS3.5 Carbon Steel 2.5mm thick

HDUE17-SDS4.5 Carbon Steel 3.5mm thick

Finish:

Z275 Galvanised

Corrosion Resistance Level

LOW

Dimensions:

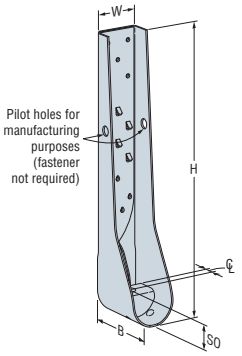
See illustration on the right and table below.

Features & Benefits

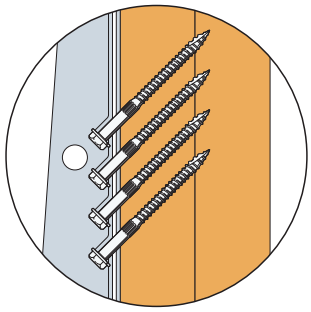
- Pre-deflected seat and tension screws greatly improves stiffness and reduce deflection under load.
- Angled fastening engages the screws in tension for higher load capacity, reducing the number of screws required.
- Angled fastening tabs help drive fastener at a 45° angle, and offset holes on the second back plate block the fastener from being driven straight.
- Overlapping back plate increases fastener strength and shear values, helping prevent studs splitting.
- Optimized screw patterns reduce splitting at the stud ends and maximize individual fastener capacity.
- Installs with Strong-Drive SDS Heavy-Duty Connector screws.

Construction Details

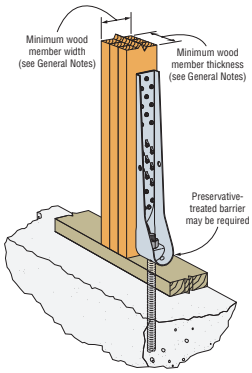
See adjacent illustrations, or for detailed installation steps refer to the HDUE Product Flyer.



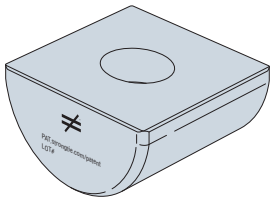
Dimensions



Angled fastening



Typical Application



Aluminium Washer (Used with HDUE17 for increased loads)

Technical Data

Model No.	Dimensions (mm)						Fasteners		Wall Framing Stud(s) (mm)[7]	Country	Design Tension Capacity (kN)	Stiffness (N/mm)
	Strap Thickness	W	H	B	CL	SO	Anchor Hole Dia. (mm)	Post (Nails: No. - Length x Dia., Screws: No. - Dia. x Length, mm)				
HDUE9-SDS3.5	2.5	76	442	109	37	38	22	(16) 6.4 x 90mm	(70mm or 2/35mm) x 90	AU	k_1 = 1.14 **34.54**	12,000
									(90mm or 2/45mm) x 90	NZ	k_1 = 1.0 **30.3**	12,000
									(135mm or 3/45mm) x 90	AU	k_1 = 1.14 **42.28**	12,000
									(135mm or 3/45mm) x 90	NZ	k_1 = 1.0 **37.08**	12,000
HDUE13-SDS3.5	2.5	76	586	109	37	38	26	(23) 6.4 x 90mm	(135mm or 3/45mm) x 90	AU	k_1 = 1.14 **53.4**	12,500
									(135mm or 3/45mm) x 90	NZ	k_1 = 1.0 **46.84**	12,500
									(180 or 4/45mm) x 90	AU	k_1 = 1.14 **59.8**	15,500
									(180 or 4/45mm) x 90	NZ	k_1 = 1.0 **52.46**	15,500
HDUE17-SDS4.5	3.5	76	708	132	49	38	26	(28) 6.4 x 114mm	(135mm or 3/45mm) x 90	AU	k_1 = 1.14 **73.54**	28,500
									(135mm or 3/45mm) x 90	NZ	k_1 = 1.0 **64.51**	28,500
									(135mm or 3/45mm) x 140[8]	AU	k_1 = 1.14 **83.94**	28,500
									(135mm or 3/45mm) x 140[8]	NZ	k_1 = 1.0 **76.63**	28,500

1. Design Capacity is the Characteristic Capacity multiplied by the Australian Capacity or NZ Strength Reduction Factor (φ), and applicable k modification factors following AS 1720.1 and NZS 3603. Design Capacity is the minimum of test data and structural joint calculation.
2. For Australia the Capacity Factor (φ) is 0.8 for structural joints in Category 2 applications, and for New Zealand the Strength Reduction Factor (φ) is 0.8. Reduce tabulated values where other Capacity or Strength Reduction Factors govern.
3. Duration of Load Factor (k_1) is as shown. Reduce Duration of Load Factor where applicable. Capacities may not be increased.
4. Timber species for joint design is seasoned Radiata Pine, which is Australia Joint Group JD4 per AS 1720.1 Table H2.4 and New Zealand Joint Group J5 per NZS 3603 Table 4.1.
5. The Designer must specify anchor bolt type, length and embedment.
6. Anchor bolt nut should be finger tight plus ⅓ to ½ turn with a hand wrench. Care should be taken not to over-tighten the nut.
7. Number of total studs or post size to meet axial load demand, to be determined by the designer. Multiple studs connected independently of holdown fasteners.
8. Noted HDUE17 design capacity is based on a 140 mm wide post or stud (minimum), all other resistances assume a 90 mm wide post or stud (minimum).
9. Structural composite timber columns have sides that either show the wide face or the edges of the timber strands/veneers known as the narrow face – values in the table reflect installation into the wide face.
10. Holdowns and tension ties may be installed raised up to 460mm above the top of the concrete with no load reduction, provided that additional elongation of the anchor rod is taken into account.

Simpson Strong-Tie® Australia Pty Ltd
Call **1300 STRONGTIE** (1300 787 664)
www.strongtie.com.au

Simpson Strong-Tie® (New Zealand) Ltd
Call **09 477 4440**
www.strongtie.co.nz