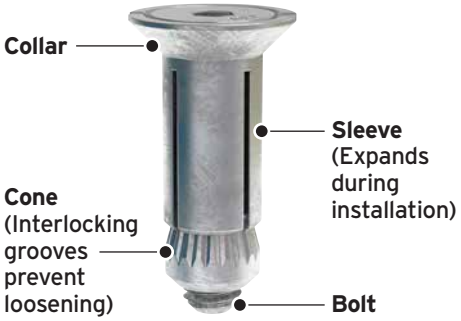
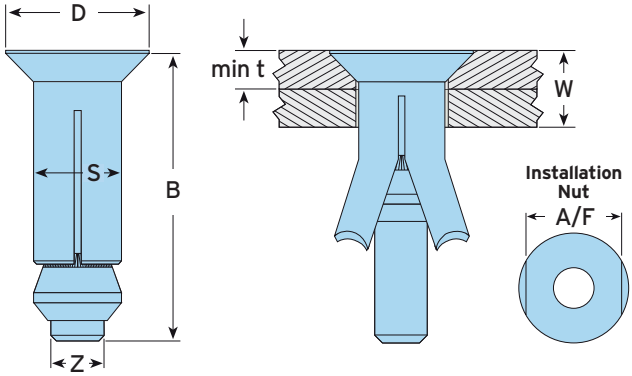
Hollo-Bolt™ Flush Fit Safe Working Loads

Flush Fit Data

(Available in sizes M8, M10 & M12)





Material: Carbon steel or stainless steel (see page 41 for corrosion protection options).

FLUSH FIT DATA

Product Code	Countersunk Bolt Ø Z	Length B mm	Clamping Thickness W mm	Outer Ply min t mm	Sleeve Outer Ø S mm	Collar Ø D mm	Collar Installation Nut A/F mm	Tightening Torque Nm	Safe Working Loads (Factor of Safety 5:1) Tensile kN	Safe Working Loads (Factor of Safety 5:1) Single Shear kN
HBFF08-1	M8	50	10 - 27	8	13.75	24	19	23	4.0	5.0
HBFF08-2	M8	70	27 - 45	8	13.75	24	19	23	4.0	5.0
HBFF08-3	M8	90	45 - 64	8	13.75	24	19	23	4.0	5.0
HBFF10-1	M10	50	12 - 27	10	17.75	30	24	45	8.5	10.0
HBFF10-2	M10	70	27 - 45	10	17.75	30	24	45	8.5	10.0
HBFF10-3	M10	90	45 - 64	10	17.75	30	24	45	8.5	10.0
HBFF12-1	M12	55	12 - 30	10	19.75	33	30	80	10.5	15.0
HBFF12-2	M12	80	30 - 52	10	19.75	33	30	80	10.5	15.0
HBFF12-3	M12	100	52 - 74	10	19.75	33	30	80	10.5	15.0

Hollo-Bolts can be used on a wide variety of steel hollow shape sections. Safe working loads shown are applicable to the Hollo-Bolt only in both tension and shear. Failure of the section could occur at a lower figure and its strength should be checked by a qualified Structural Engineer.

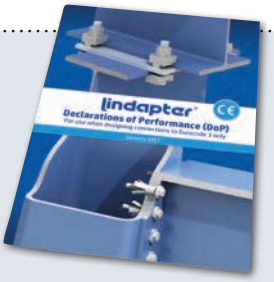
Published by the SCI/BCSA Connections Group, 'Joints in Steel Construction - Simple Connections' provides design guidance for using Hollo-Bolt and structural steelwork connections in buildings designed using the 'Simple Method' i.e. braced frames where connections carry mainly shear and axial loads only. For more information please contact The Steel Construction Institute on **+44 (0) 1344 636525** or visit **www.steel-sci.com**

Hollo-Bolt™ Flush Fit Characteristic Resistances

Characteristic Resistances

The values listed in the tables below are to be used when designing bolted connection to Eurocode 3 only, they are not standard safe working loads.

Please refer to CE Declaration of Performance No.001 or UKCA Declaration of Conformity No.101 on Lindapter's website. Alternatively, request a DoP or DoC brochure.

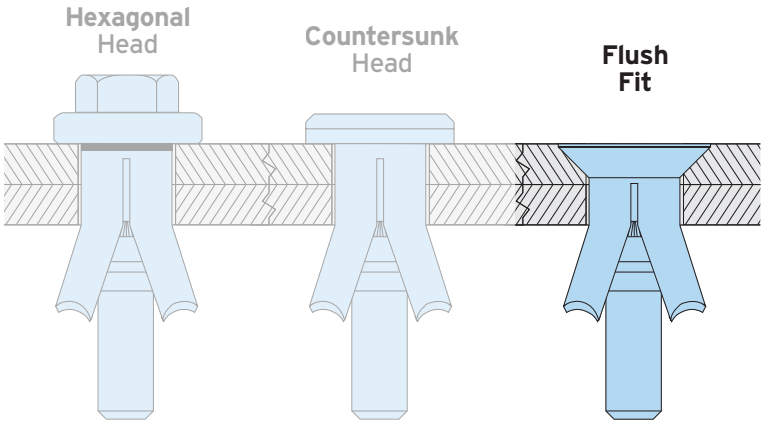


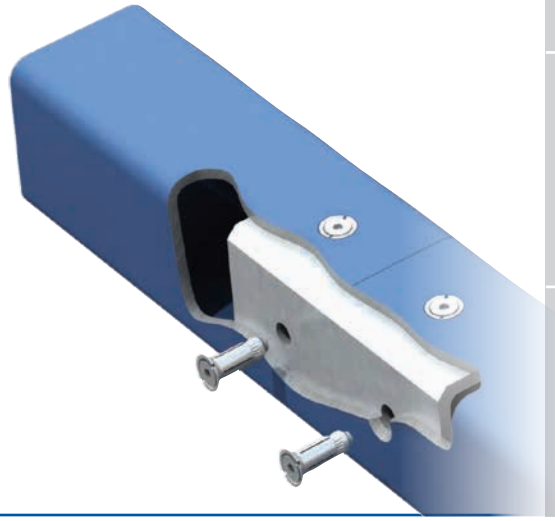
FLUSH FIT Data for Zinc + JS500 and Sheraplex				
Product Code	Nominal Size	Tensile $F_{t,Rk}$ kN	Shear $F_{v,Rk}$ kN	Sleeve Material Strength N/mm²
HBFF08	M8	23.1	32.9	430
HBFF10	M10	39.6	54.2	430
HBFF12	M12	45.8	71.0	430

FLUSH FIT Data for Stainless Steel				
Product Code	Nominal Size	Tensile $F_{t,Rk}$ kN	Shear $F_{v,Rk}$ kN	Sleeve Material Strength N/mm²
HBSTFF08	M8	26.8	30.7	500
HBSTFF10	M10	46.0	51.0	500
HBSTFF12	M12	53.3	65.0	500

- **Hollo-Bolt lengths 1, 2 and 3 are covered by ETA 10/0416. The characteristic values are used to determine the design resistance of the Hollo-Bolt. The design resistance is calculated by dividing the characteristic value by a partial factor γM2. The partial factor is a nationally determined parameter (eg: γM2 = 1.25 in UK).**
- **For Hollo-Bolt Flush Fit safe working loads with a Factor of Safety of 5:1 please refer to the table on page 48 of this catalogue. The characteristic values are valid for the assembly itself, in any connection detail the design resistance of the connection may be limited to a lesser value. For example, when the thickness of the connected component is small, pull out failure may occur before failure of the Hollo-Bolt. Design checks should be carried out to determine the static design resistance.**

The SCI Greenbook publication 'Joints in Steel Construction: Simple Joints to Eurocode 3' contains a number of checks on the section. The characteristic values are only valid when the Hollo-Bolts are installed as per Lindapter's installation instructions. For more information please contact The Steel Construction Institute on **+44 (0) 1344 636525** or visit **www.steel-sci.com**

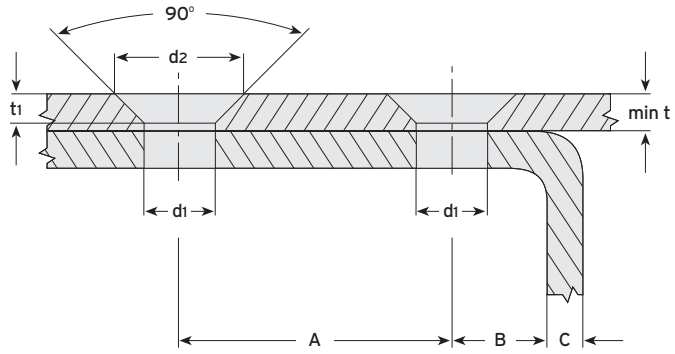




Hollo-Bolt Flush Fit - Drilling and Installation

Please ensure that the holes are drilled into both the fixture and the section according to the drilling guidance below. Please note that the holes are slightly larger than standard bolt clearance holes to accommodate the sleeve and cone.

Preparation for installing Hollo-Bolt Flush Fit

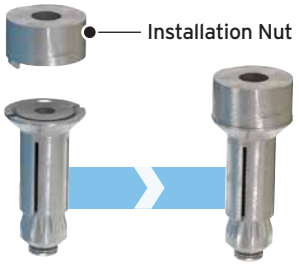


Type	Outer Ply	Clearance Hole Ø	Countersunk		Hole Distances*		Edge Distances*
	min t mm	d1 mm	d2 mm	t1 mm	min A mm	min B mm	B + C mm
HBFF08	8	14 (+1.0/-0.2)	27	6.5	35	13	≥ 17.5
HBFF10	10	18 (+1.0/-0.2)	31	6.5	40	15	≥ 22.5
HBFF12	10	20 (+1.0/-0.2)	35	7.5	50	18	≥ 25.0

** Ensure holes do not cut through the outer radius.*

Tool sizes for installing Hollo-Bolt Flush Fit

Hollo-Bolt Flush Fit			
Product Code	Spanner mm	Hexagon Key mm	Tightening Torque Nm
HBFF08	19	5	23
HBFF10	24	6	45
HBFF12	30	8	80



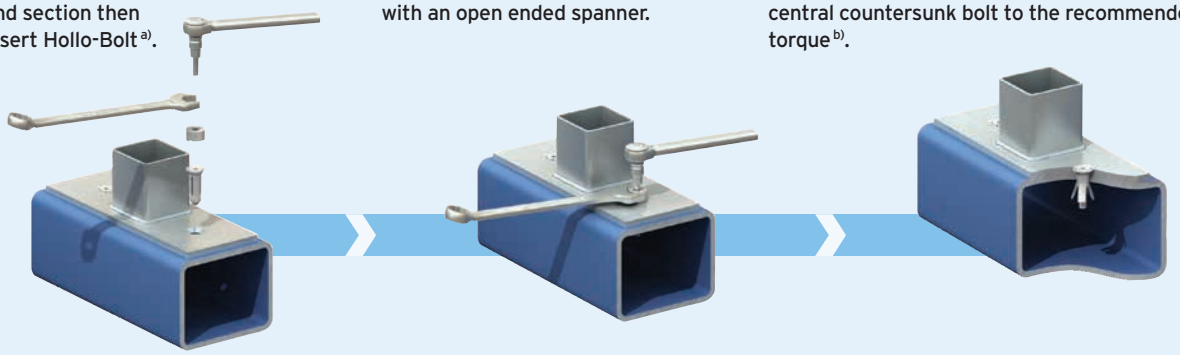
How to install...

Watch the Hollo-Bolt installation video at www.Lindapter.com

1) Align pre-drilled fixture and section then insert Hollo-Bolt [a].

2) Apply the installation nut and grip with an open ended spanner.

3) Using a calibrated torque wrench, tighten the central countersunk bolt to the recommended torque [b].



Notes:

a) Before tightening, ensure that the materials that are to be connected together are touching.
b) Rotate the torque wrench only (the installation nut is for restraining only). See table above for tightening torque.
c) Power tools, such as an impact wrench, may be used to speed up the tightening of the Hollo-Bolt. However, when using power tools, always complete the tightening process with a calibrated torque wrench to ensure the correct torque is applied to the Hollo-Bolt.