

Type HB - Hollo-Bolt®

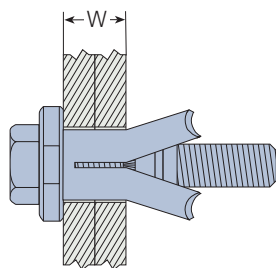
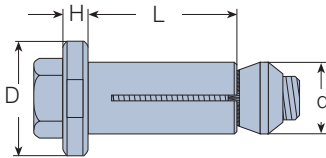
Steel, bright zinc plated plus JS 500
 Steel, hot dip galvanised
 Stainless Steel Grade 316



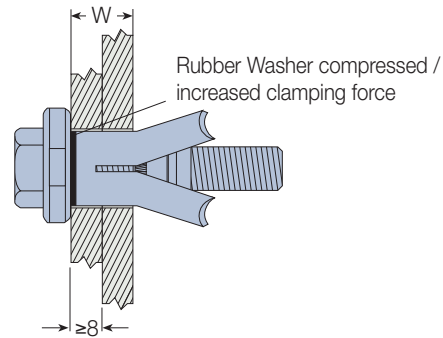
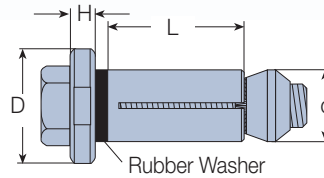
Suitable for hollow sections, tubes and where access is available from one side only. For high corrosion protection the Hollo-Bolt® comes with additional JS500 protection as standard or hot dip galvanised. Sizes M16 and M20 have a patented collapse mechanism for optimised clamping force. Speedy installation with standard tools and for the Type Hollo-Bolt® Flush Fit with installation nut. (One free per box)

Awarded the Design Council's Millennium Product status for innovation in the year 2000.

Hollo-Bolt®: M8, M10, M12



Hollo-Bolt®: M16, M20



Head Variations



Flush Fit

M8-M12



Countersunk (Head)

M8-M16



Hexagonal Head

M8-M20



Socket Head Cap Screw

Supplied to order



Button Head Security

Supplied to order

Type HB - Hollo-Bolt®

Product Code	Bolt	Clamping Thickness W mm	Outer Ply ¹⁾ min t mm	Sleeve		Collar		Torque Nm	SHS Section Material	SHS Section Dimensions mm	Safe Working Loads ²⁾ (5:1 Factor of Safety)		
				Length L mm	Outer Ø d mm	Height Ø H mm	A/F D mm				Tensile kN	Single Shear kN	
HB08-1	M8x50	3 - 22	-	30						140x140x5.0	4.0		
HB08-2	M8x70	22 - 41	-	49	13.75	5	22	19	23	S275	150x150x6.3	4.0	5.0
HB08-3	M8x90	41 - 60	-	68						200x200x10.0	4.0		
HB10-1	M10x55	3 - 22	-	30						100x100x6.3	7.0		
HB10-2	M10x75	22 - 41	-	48	17.75	6	29	24	45	S275	140x140x5.0	6.0	
HB10-3	M10x90	41 - 60	-	67						140x140x8.0	8.5	10.0	
										150x150x6.3	8.0		
										180x180x8.0	7.0		
										200x200x10.0	8.0		
HB12-1	M12x60	3 - 25	-	35						140x140x5.0	6.5		
HB12-2	M12x90	25 - 47	-	57	19.75	7	32	30	80	S275	140x140x8.0	10.5	
HB12-3	M12x110	47 - 69	-	79						150x150x6.3	10.0	15.0	
										180x180x8.0	10.0		
										200x200x10.0	10.5		
HB16-1	M16x75	12 - 29	8	41.5						100x100x6.3	13.5		
HB16-2	M16x100	29 - 50	8	63	25.75	8	38	36	190	S275	100x100x10.0	18.5	
HB16-3	M16x120	50 - 71	8	84						140x140x5.0	8.0		
										140x140x6.3	15.0		
										140x140x8.0	20.0	30.0	
										140x140x12.5	21.0		
										150x150x6.3	11.5		
										180x180x8.0	17.0		
										200x200x10.0	15.0		
HB20-1	M20x90	12 - 34	8	50						140x140x6.3	16.0		
HB20-2	M20x120	34 - 60	8	76	32.75	10	51	46	300	S275	140x140x8.0	23.0	
HB20-3	M20x150	60 - 86	8	102						140x140x10.0	25.0		
										140x140x12.5	35.0	40.0	
										150x150x6.3	12.5		
										180x180x8.0	18.0		
										200x200x10.0	19.0		

Type HBFF - Hollo-Bolt® Flush Fit

Product Code	Counter Sunk Bolt mm	Clamping Thickness W mm	Outer Ply min t mm	Sleeve		Collar		Installation Tool A/F mm	Torque Nm	SHS Section Material	SHS Section Dimensions mm	Safe Working Loads (5:1 Factor of Safety)		
				Length L mm	Outer Ø d mm	Height Ø H mm	A/F D mm					Tensile kN	Single Shear kN	
HBFF08-1	M8x50	5	10 - 27	8	30	13.75	5	24	19	23	S275	140x140x5.0	4.0	
												150x150x6.3	4.0	5.0
												180x180x8.0	4.0	
												200x200x10.0	4.0	
HBFF10-1	M10x60	6	12 - 27	10	30	17.75	6	30	24	45	S275	100x100x6.3	7.0	
												140x140x5.0	6.0	10.0
												140x140x8.0	8.5	
												150x150x6.3	8.0	
												180x180x8.0	7.0	
												200x200x10.0	8.0	
HBFF12-1	M12x60	8	12 - 30	10	35	19.75	7	33	30	80	S275	140x140x5.0	6.5	
												140x140x8.0	10.5	
												150x150x6.3	10.0	15.0
												180x180x8.0	10.0	
												200x200x10.0	10.5	

Order example: HB08-1 BZP plus JS 500
HBFF08-1 BZP plus JS 500 without / with ____ installation nut(s)

- 1) The thickness of the outer ply needs to be at least 8mm. If necessary spacer washers should be used beneath the collar to increase the thickness to 8mm.
- 2) The Hollo-Bolt® can be used on a wide variety of SHS sections; those shown above are only representative to give an indication of variations in Hollo-Bolt® capacity.
- The safe working loads, in both tension and shear, are applicable to the Hollo-Bolt® only, failure of the section, particularly on those with thin walls and a wide chord face, could occur at a lower figure and its strength should be checked using the 'Green Book' design guide.

■ Joints in Steel Construction - Simple Connections

The tables on the opposite page state the SWL with a 5:1 factor of safety and should be used for secondary applications, for primary design please consult the guide **Joints in Steel Construction - Simple Connections**.

The guide provides design guidance for the use of Hollo-Bolt® and gives essential information for structural steelwork connections for use in buildings designed by the 'Simple Method' i.e. braced frames where connections carry mainly shear and axial loads only.

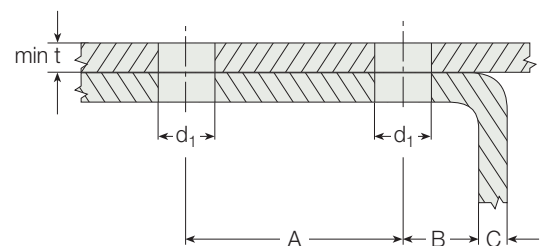
To obtain further details on the Simple Connections guide please contact:
 The Steel Construction Institute
 Tel: +44 (0) 1344 636 525
 Fax: +44 (0) 1344 636 570
 www.steel-sci.org



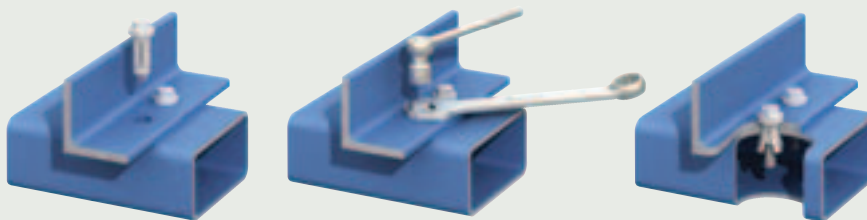
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■ Bolt Diameter, Hole and Edge Distances Type HB

Type	Clearance	Hole Distances		Edge Distances
	Hole Ø d_1 mm	min A mm	min B mm	B+C mm
HB08	14 (+1.0 / -0.2)	35	13	B + C > 17.5
HB10	18 (+1.0 / -0.2)	40	15	B + C > 22.5
HB12	20 (+1.0 / -0.2)	50	18	B + C > 25.0
HB16	26 (+2.0 / -0.2)	55	20	B + C > 32.5
HB20	33 (+2.0 / -0.2)	70	25	B + C > 33.0



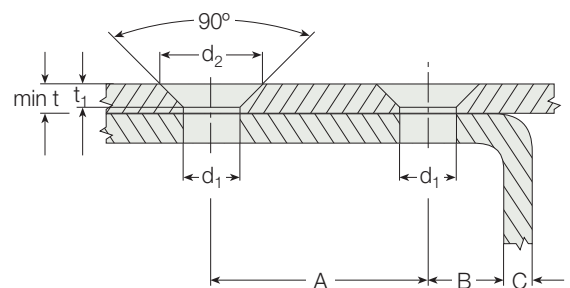
Installation Hollo-Bolt®



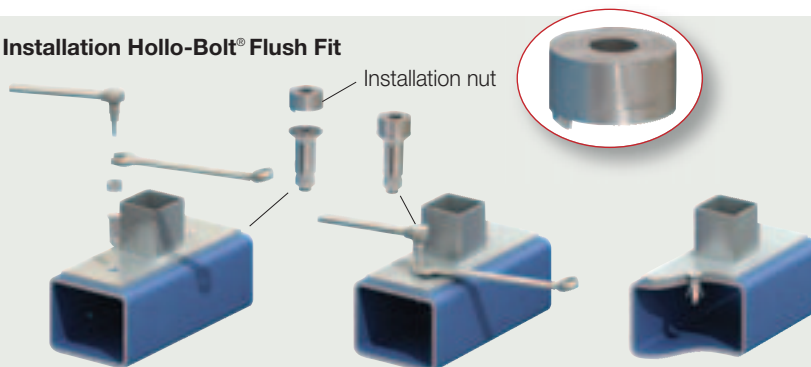
1. Align pre-drilled fixture and steelwork. Insert Hollo-Bolt® through fixture and steelwork.
2. Grip the Hollo-Bolt® collar with an open ended spanner.
3. Using a torque wrench, tighten the central bolt to the recommended torque.

■ Bolt Diameter, Hole and Edge Distances Type HBFF

Type	Clearance	Countersunk		Hole Distances		Edge Distances
	Hole Ø d_1 mm	Ø d_2 mm	Depth t_1 mm	min A mm	min B mm	B+C mm
HBFF08	14 (+1.0 / -0.2)	27	6.5	35	13	B + C > 17.5
HBFF10	18 (+1.0 / -0.2)	31	6.5	40	15	B + C > 22.5
HBFF12	20 (+1.0 / -0.2)	35	7.5	50	18	B + C > 25.0



Installation Hollo-Bolt® Flush Fit



1. Align pre-drilled fixture and steelwork. Insert Hollo-Bolt® through fixture and steelwork.
2. Apply installation nut and grip nut with an open ended spanner.
3. Using a torque wrench, tighten the central counter-sunk bolt to the recommended torque.