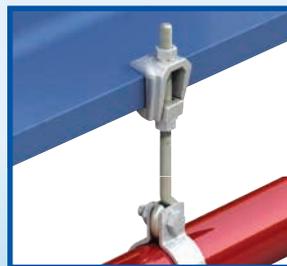


July 2025



lindapter®
Established 1934



Technical Innovation in Steelwork Connections

Hollo-Bolt™
Plug-In Tool
 available in
Tekla Warehouse

- ✓ Accurate detailing of Hollo-Bolt
- ✓ Efficient, time-saving tool
- ✓ Incorporate into BIM models

Download the plug-in from www.tekla.com/uk



The Hollo-Bolt HCF (High Clamping Force) is optimised for higher strength structural connections (see page 45).

Hollo-Bolt™

Lindapter's expansion bolts require access to only one side of the Structural Hollow Section (SHS), and offer a faster alternative to welding or through-bolting, enabling contractors to reduce construction time and labour costs.

The Hollo-Bolt is independently approved for primary structural connections (see pages 43-53). The LindiBolt is ideal for applications in standard clearance holes (page 54).

Hollo-Bolt™
 pages 43 - 53



LindiBolt™
 page 54

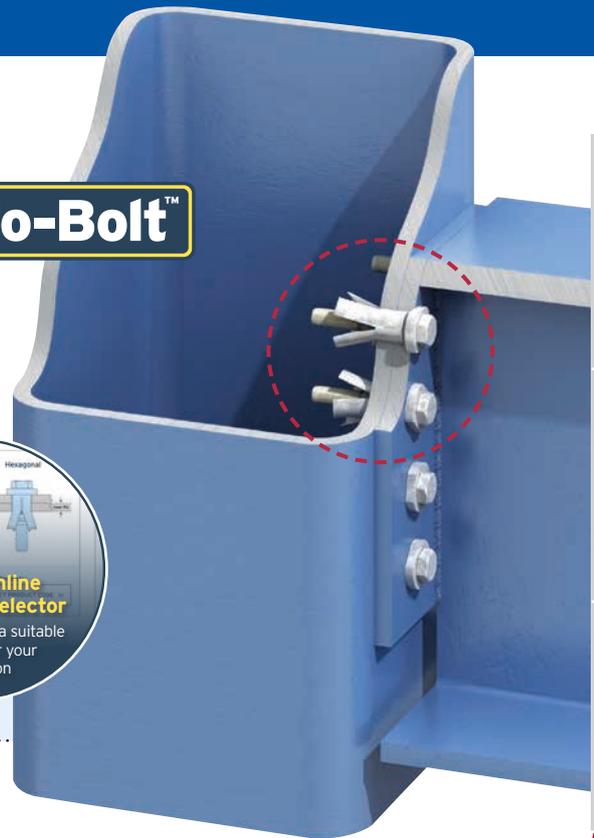


Hollo-Bolt™ by Lindapter

Installation is quickly carried out by inserting into pre-drilled steelwork and tightening with a torque wrench. Independent approvals include UKCA, CE Mark, TÜV, ICC-ES seismic accreditation and Fire Rated up to 120 minutes.



Hollo-Bolt HCF (High Clamping Force)
See page 45



GIRDER CLAMPS
RAIL FIXINGS
LIFTING POINTS
HOLLO-BOLT
FLOOR FIXINGS
SUPPORT FIXINGS
DECKING FIXINGS

- Fast, cost saving installation from one side.
- For square, rectangular and circular hollow sections.
- High resistance to shear and tension.
- Independently tested for dynamic loading.
- Independently fire tested.
- Unique High Clamping Force design.
- Low temperature tested to -45°C (carbon steel variants).
- Hollo-Bolt plug-in tool available in Tekla Warehouse.

	TENSION	SHEAR
M8	4 kN	5 kN
M10	8.5 kN	10 kN
M12	13.5 kN	15 kN
M16	21 kN	30 kN
M20	35 kN	40 kN

➤ Carbon steel, Hexagonal Head Hollo-Bolts in all sizes have been independently fire tested in both tension and shear in accordance with ISO 834 and are fire rated up to 120 minutes. For further details and load data please contact Lindapter.

Hollo-Bolt Options

Hollo-Bolts are available in a range of head types for a variety of architectural finishes...

KEY ✓ Standard Option ✓ Available on request

		Head Variants		
		HEXAGONAL Normal visible protrusion	COUNTERSUNK Minimal visible protrusion	FLUSH FIT Zero visible protrusion
Core Bolt Ø	Sizes Available			
	M8	✓ Fire Rated*	✓	✓
	M10	✓ Fire Rated*	✓	✓
	M12	✓ Fire Rated*	✓	✓
	M16 HCF (High Clamping Force)	✓ Fire Rated*	✓	-
M20 HCF (High Clamping Force)	✓ Fire Rated*	-	-	
Carbon Steel with finish	Corrosion Protection			
	Zinc Plated plus JS500	✓ Fire Rated*	✓	✓
	Hot Dip Galvanised	✓ Fire Rated*	-	-
	Sheraplex	✓ Fire Rated*	✓	✓
	Stainless Steel	✓	✓	✓

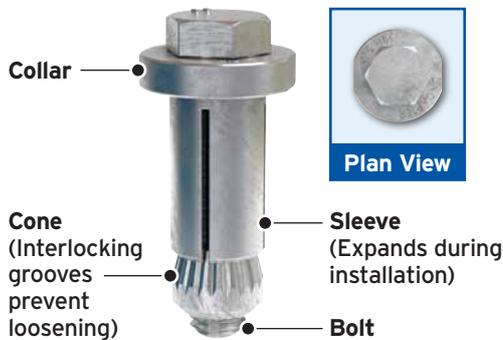
Sizes M16 and M20, known as the Hollo-Bolt HCF, feature a High Clamping Force mechanism to produce three times more clamping force than the same sized product without the mechanism. See page 45 for more information.



Hollo-Bolt Options

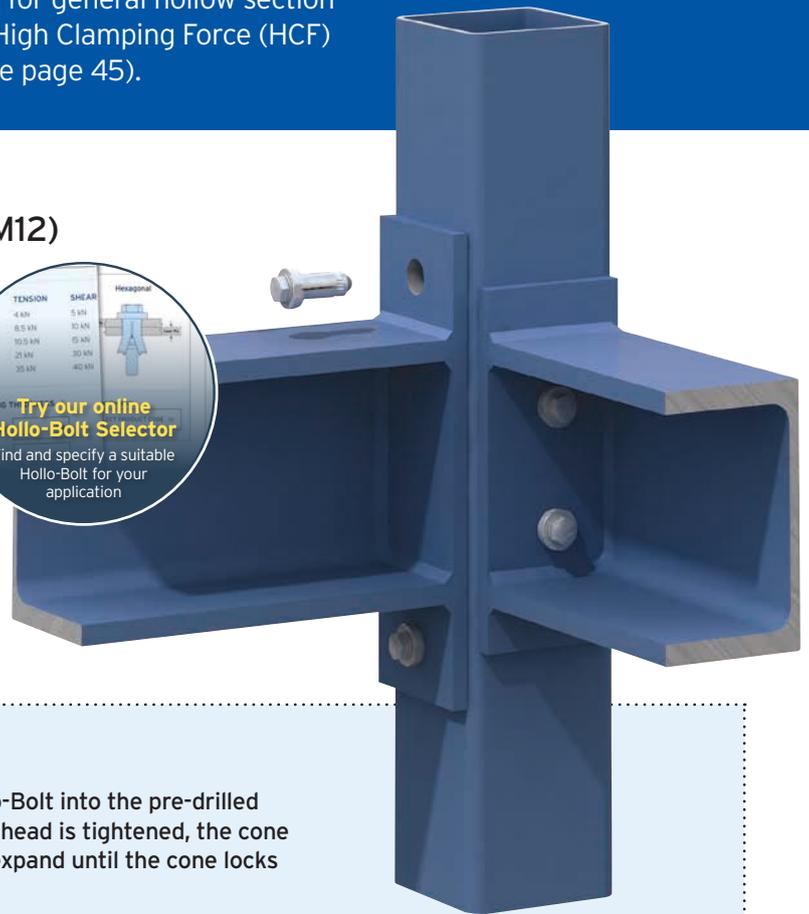
Two versions are available; the original design for general hollow section connections (see below) and the larger sized High Clamping Force (HCF) for higher strength structural connections (see page 45).

Hollo-Bolt™ (sizes M8, M10 and M12)



	TENSION	SHEAR
M8	4.8 kN	5.5 kN
M10	8.5 kN	10 kN
M12	15.5 kN	18 kN
M16	23.5 kN	30 kN
M20	35 kN	40 kN

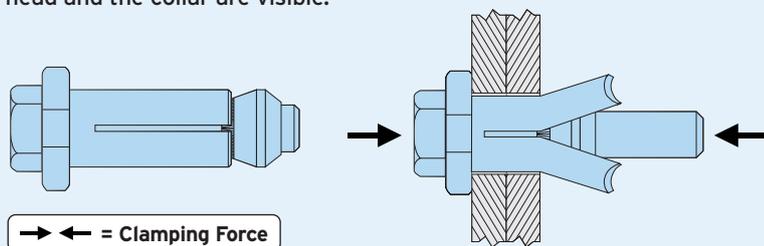
CLAMPING™ Try our online Hollo-Bolt Selector
Find and specify a suitable Hollo-Bolt for your application



The Connection Concept

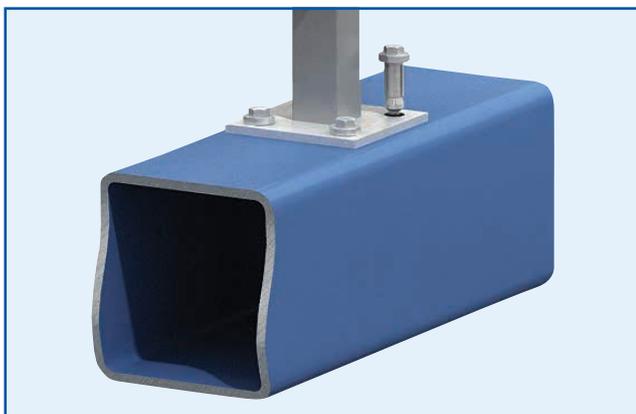
A typical connection is made by inserting the Hollo-Bolt into the pre-drilled holes of the fixture and hollow section. As the bolt head is tightened, the cone is pulled up the bolt thread, causing the sleeve to expand until the cone locks the sleeve against the hollow section's inner wall.

At full tightening torque, a clamping force is established between the fixture and the steel section to form a secure connection. Once installed, only the head and the collar are visible.



Watch the video at www.Lindapter.com to see how the Hollo-Bolt expands during installation.

Typical Applications



GIRDER CLAMPS
 RAIL FIXINGS
 LIFTING POINTS
 HOLLO-BOLT
 FLOOR FIXINGS
 SUPPORT FIXINGS
 DECKING FIXINGS

Hollo-Bolt HCF

The larger M16 and M20 Hollo-Bolts are optimised for high strength structural connections and feature a High Clamping Force mechanism for superior performance.

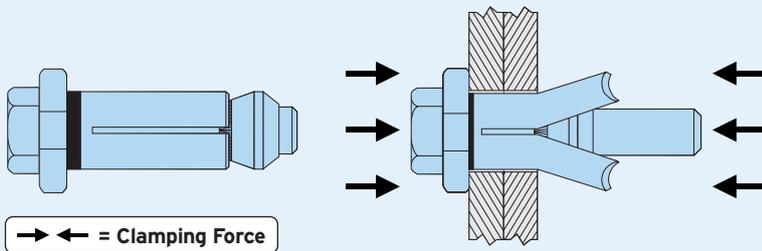
Hollo-Bolt™ HCF (sizes M16 and M20)



The Connection Concept

The HCF mechanism consists of a special rubber washer that compresses during installation to significantly increase the clamping force between the connecting steel, thereby reducing displacement to achieve a higher strength connection.

The typical clamping force of Hollo-Bolt HCF is over **three times higher** than the same sized product without the mechanism.



Watch the video at www.Lindapter.com to see how the High Clamping Force mechanism increases clamping force.

Typical Applications



GIRDER CLAMPS

RAIL FIXINGS

LIFTING POINTS

HOLLO-BOLT

FLOOR FIXINGS

SUPPORT FIXINGS

DECKING FIXINGS

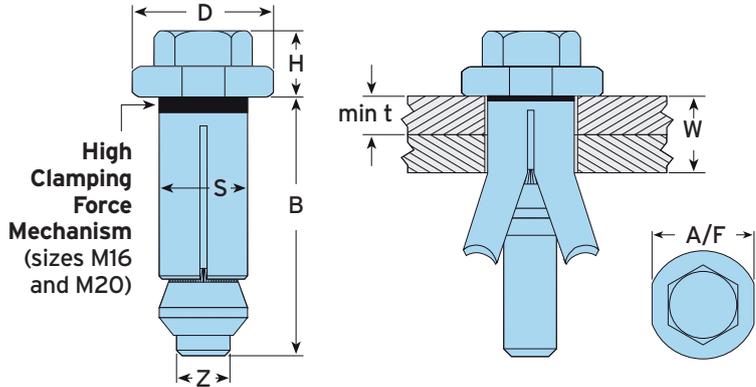
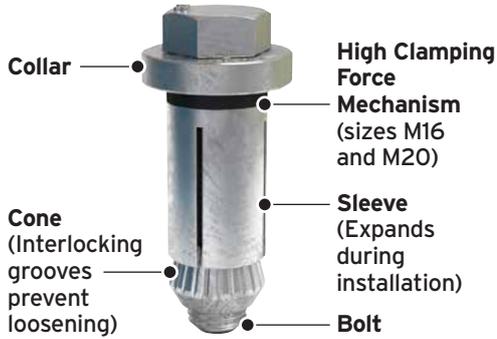
Hollo-Bolt™ Hexagonal Head Safe Working Loads

Try our online Hollo-Bolt Selector
Find and specify a suitable Hollo-Bolt for your application

CLAMPING THICKNESS (mm)	TENSION (kN)	SHEAR (kN)
M8	4.0	5.0
M10	8.5	10.0
M12	10.5	15.0
M16	21.0	30.0
M20	35.0	40.0



Hexagonal Head Data (Available in sizes M8, M10, M12, M16 & M20)

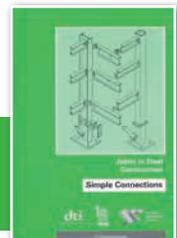


Material: Carbon steel or stainless steel (see page 43 for corrosion protection options).

HEXAGONAL HEAD DATA

Product Code	Bolt Ø Z	Height H mm	Length B (max) mm	Clamping Thickness W mm	Outer Ply min t mm	Sleeve Outer Ø S mm	Collar		Tightening Torque Nm	Safe Working Loads (Factor of Safety 5:1)		
							Ø D mm	A/F mm		Tensile kN	Single Shear kN	
HB08-1	M8	10.5	45	3 - 22	-	13.75	22	19	23	4.0	5.0	
HB08-2	M8	10.5	65	22 - 41	-	13.75	22	19	23	4.0	5.0	
HB08-3	M8	10.5	85	41 - 60	-	13.75	22	19	23	4.0	5.0	
HB10-1	M10	12.5	49	3 - 22	-	17.75	29	24	45	8.5	10.0	
HB10-2	M10	12.5	64	22 - 41	-	17.75	29	24	45	8.5	10.0	
HB10-3	M10	12.5	84	41 - 60	-	17.75	29	24	45	8.5	10.0	
HB12-1	M12	14.5	53	3 - 25	-	19.75	32	30	80	10.5	15.0	
HB12-2	M12	14.5	73	25 - 47	-	19.75	32	30	80	10.5	15.0	
HB12-3	M12	14.5	93	47 - 69	-	19.75	32	30	80	10.5	15.0	
Hollo-Bolt HCF	HB16-1	M16	18	67	12 - 29	8	25.75	38	36	190	21.0	30.0
	HB16-2	M16	18	92	29 - 50	8	25.75	38	36	190	21.0	30.0
	HB16-3	M16	18	112	50 - 71	8	25.75	38	36	190	21.0	30.0
	HB20-1	M20	22.5	80	12 - 34	8	32.75	51	46	300	35.0	40.0
	HB20-2	M20	22.5	110	34 - 60	8	32.75	51	46	300	35.0	40.0
	HB20-3	M20	22.5	140	60 - 86	8	32.75	51	46	300	35.0	40.0

- ▶ 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.
- ▶ Dynamic load testing has been performed for Hollo-Bolt Hexagonal in accordance with EN 1993-1-9. Please contact our Technical Support team for more information and design data.



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™ Hexagonal Head 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.

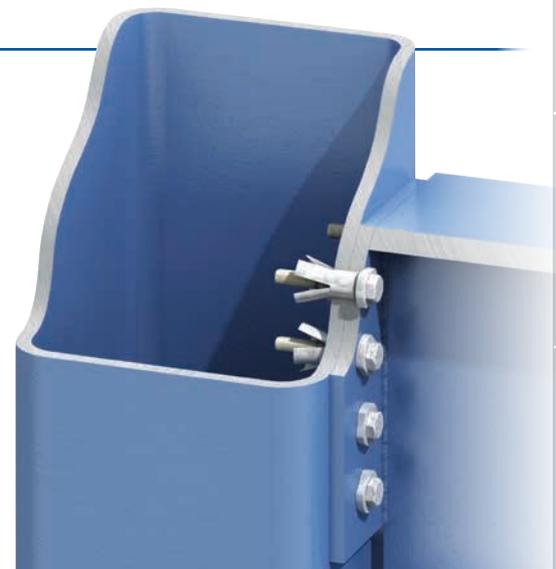
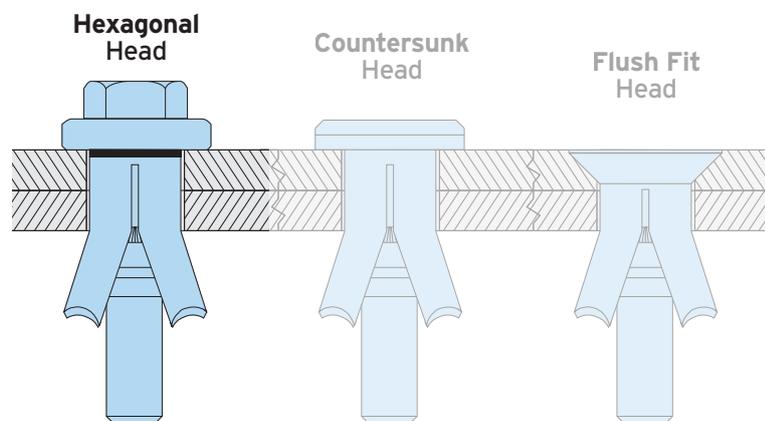


HEXAGONAL HEAD Data for Zinc + JS500, HDG and Sheraplex				
Product Code	Nominal Size	Tensile Ft,Rk kN	Shear Fv,Rk kN	Sleeve Material Strength N/mm ²
HB08	M8	23.1	32.9	430
HB10	M10	39.6	54.2	430
HB12	M12	45.8	71.0	430
HCF HB16	M16	84.3	139.0	430
HCF HB20	M20	124.0	211.0	390

HEXAGONAL HEAD Data for Stainless Steel				
Product Code	Nominal Size	Tensile Ft,Rk kN	Shear Fv,Rk kN	Sleeve Material Strength N/mm ²
HBST08	M8	26.8	30.7	500
HBST10	M10	46.0	51.0	500
HBST12	M12	53.3	65.0	500
HCF HBST16	M16	98.0	128.0	500
HCF HBST20	M20	154.0	205.0	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 γ_{M2} . The partial factor is a nationally determined parameter (eg: $\gamma_{M2} = 1.25$ in UK).
- ▶ For Hollo-Bolt Hexagonal Head safe working loads with a Factor of Safety of 5:1 please refer to the table on page 46 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



GIRDER CLAMPS

RAIL FIXINGS

LIFTING POINTS

HOLLO-BOLT

FLOOR FIXINGS

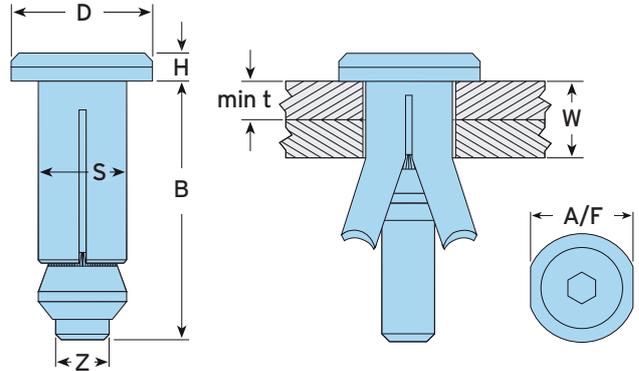
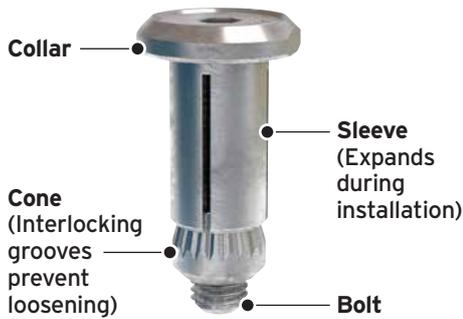
SUPPORT FIXINGS

DECKING FIXINGS

Hollo-Bolt™ Countersunk Head Safe Working Loads




Countersunk Head Data (Available in sizes M8, M10, M12 & M16)

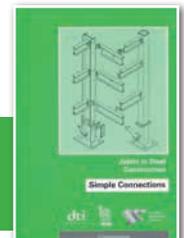


Material: Carbon steel or stainless steel (see page 43 for corrosion protection options).

COUNTERSUNK HEAD DATA												
Product Code	Bolt Ø Z	Height H mm	Length B (max) mm	Clamping Thickness W mm	Outer Ply min t mm	Sleeve Outer Ø S mm	Collar		Tightening Torque Nm	Safe Working Loads (Factor of Safety 5:1)		
							Ø D mm	A/F mm		Tensile kN	Single Shear kN	
HBCSK08-1	M8	5	45	3 - 22	-	13.75	22	19	23	4.0	5.0	
HBCSK08-2	M8	5	65	22 - 41	-	13.75	22	19	23	4.0	5.0	
HBCSK08-3	M8	5	85	41 - 60	-	13.75	22	19	23	4.0	5.0	
HBCSK10-1	M10	6	44	3 - 22	-	17.75	29	24	45	8.5	10.0	
HBCSK10-2	M10	6	64	22 - 41	-	17.75	29	24	45	8.5	10.0	
HBCSK10-3	M10	6	84	41 - 60	-	17.75	29	24	45	8.5	10.0	
HBCSK12-1	M12	7	48	3 - 25	-	19.75	32	30	80	10.5	15.0	
HBCSK12-2	M12	7	73	25 - 47	-	19.75	32	30	80	10.5	15.0	
HBCSK12-3	M12	7	93	47 - 69	-	19.75	32	30	80	10.5	15.0	
HCF	HBCSK16-1	M16	8	62	12 - 29	8	25.75	38	36	190	21.0	30.0
	HBCSK16-2	M16	8	92	29 - 50	8	25.75	38	36	190	21.0	30.0
	HBCSK16-3	M16	8	112	50 - 71	8	25.75	38	36	190	21.0	30.0

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™ Countersunk Head 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.

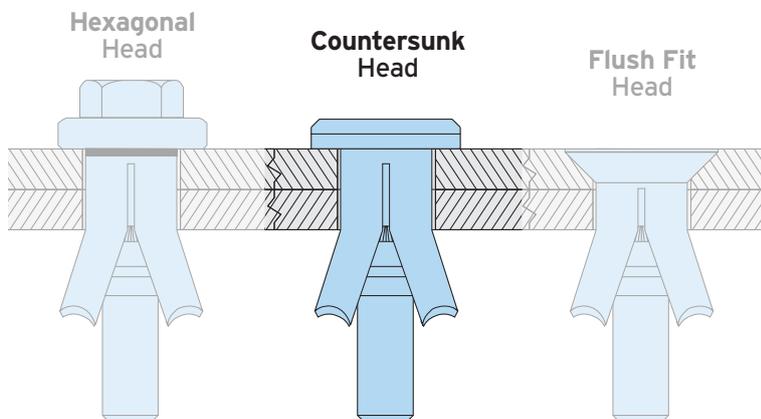


COUNTERSUNK HEAD Data for Zinc + JS500 and Sheraplex				
Product Code	Nominal Size	Tensile Ft,Rk kN	Shear Fv,Rk kN	Sleeve Material Strength N/mm ²
HBCSK08	M8	23.1	32.9	430
HBCSK10	M10	39.6	54.2	430
HBCSK12	M12	45.8	71.0	430
HCF HBCSK16	M16	84.3	139.0	430

COUNTERSUNK HEAD Data for Stainless Steel				
Product Code	Nominal Size	Tensile Ft,Rk kN	Shear Fv,Rk kN	Sleeve Material Strength N/mm ²
HBSTCSK08	M8	26.8	30.7	500
HBSTCSK10	M10	46.0	51.0	500
HBSTCSK12	M12	53.3	65.0	500
HCF HBSTCSK16	M16	98.0	128.0	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 γ_{M2} . The partial factor is a nationally determined parameter (eg: $\gamma_{M2} = 1.25$ in UK).
- ▶ For Hollo-Bolt Countersunk Head 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



GIRDER CLAMPS

RAIL FIXINGS

LIFTING POINTS

HOLLO-BOLT

FLOOR FIXINGS

SUPPORT FIXINGS

DECKING FIXINGS

Hollo-Bolt™ Flush Fit Head Safe Working Loads

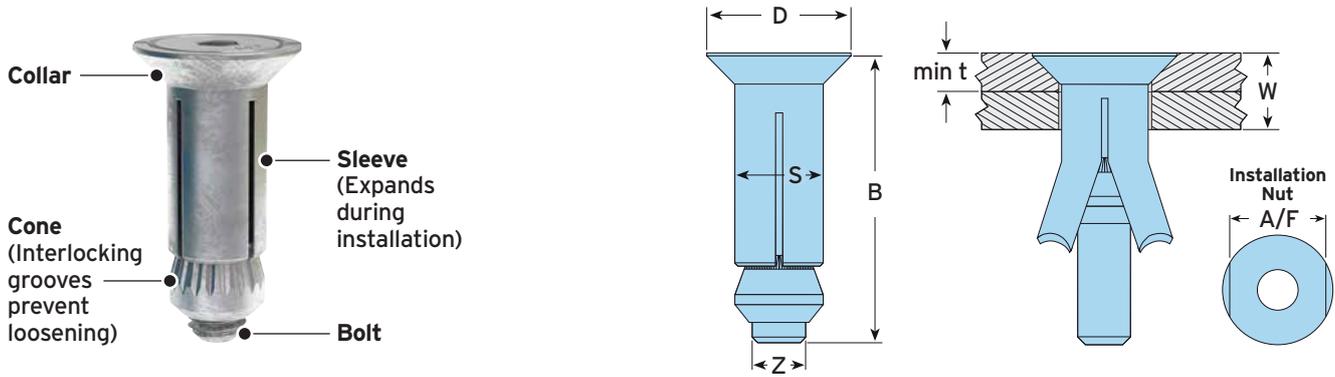
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Hollo-Bolt Selector
Find and specify a suitable
Hollo-Bolt for your
application

CLAMPING THICKNESS	TENSION	SHEAR
M8	4 kN	5 kN
M10	10.5 kN	13 kN
M10	10.5 kN	13 kN
M10	21 kN	26 kN
M12	21 kN	26 kN



Flush Fit Head Data

(Available in sizes M8, M10 & M12)



Material: Carbon steel or stainless steel (see page 43 for corrosion protection options).

FLUSH FIT HEAD 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		Tightening Torque Nm	Safe Working Loads (Factor of Safety 5:1)	
						Ø D mm	Installation Nut A/F mm		Tensile kN	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 Head 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.



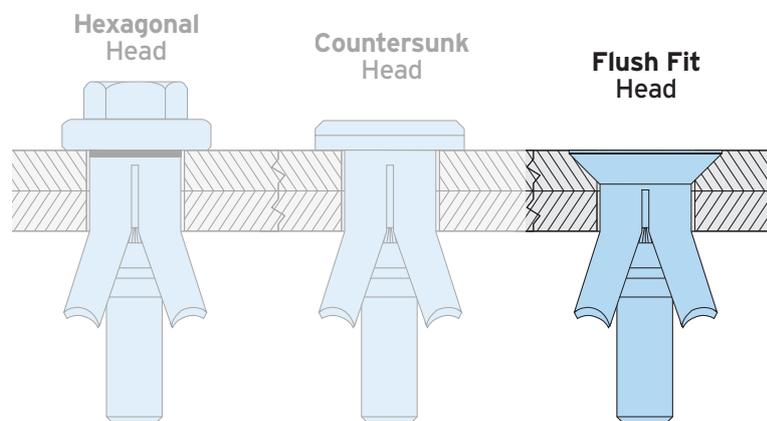
FLUSH FIT HEAD Data for Zinc + JS500 and Sheraplex				
Product Code	Nominal Size	Tensile Ft,Rk kN	Shear Fv,Rk kN	Sleeve Material Strength N/mm ²
HBFF08	M8	23.1	32.9	430
HBFF10	M10	39.6	54.2	430
HBFF12	M12	45.8	71.0	430

FLUSH FIT HEAD Data for Stainless Steel				
Product Code	Nominal Size	Tensile Ft,Rk kN	Shear Fv,Rk kN	Sleeve Material Strength N/mm ²
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 γ_{M2} . The partial factor is a nationally determined parameter (eg: $\gamma_{M2} = 1.25$ in UK).
- ▶ For Hollo-Bolt Flush Fit Head safe working loads with a Factor of Safety of 5:1 please refer to the table on page 50 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



GIRDER CLAMPS

RAIL FIXINGS

LIFTING POINTS

HOLLO-BOLT

FLOOR FIXINGS

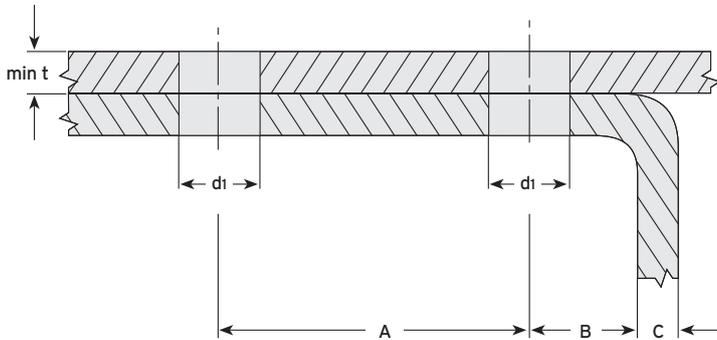
SUPPORT FIXINGS

DECKING FIXINGS

Holo-Bolt Hexagonal and Countersunk - 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 Holo-Bolt Hexagonal and Countersunk



Tool sizes for installing Holo-Bolt Hexagonal

Holo-Bolt Hexagonal			
Product Code	Spanner mm	Socket mm	Tightening Torque Nm
HB08	19	13	23
HB10	24	17	45
HB12	30	19	80
HB16	36	24	190
HB20	46	30	300

Type		Outer Ply min t mm	Clearance Hole ϕ^* d1 mm	Hole Distances**		Edge Distances** B + C mm
Hexagonal	Countersunk			min A mm	min B mm	
HB08	HBCSK08	-	14 (+1.0/-0.2)	35	13	≥ 17.5
HB10	HBCSK10	-	18 (+1.0/-0.2)	40	15	≥ 22.5
HB12	HBCSK12	-	20 (+1.0/-0.2)	50	18	≥ 25.0
HB16	HBCSK16	8	26 (+2.0/-0.2)	55	20	≥ 32.5
HB20	-	8	33 (+2.0/-0.2)	70	25	≥ 33.0

* For Holo-Bolts with Hot Dip Galvanised Finish, drilling the clearance hole to the top tolerance is recommended.
 ** Ensure holes do not cut through the outer radius.

➤ Sizes M16 and M20 require outer ply thickness (min t) to be at least 8mm.

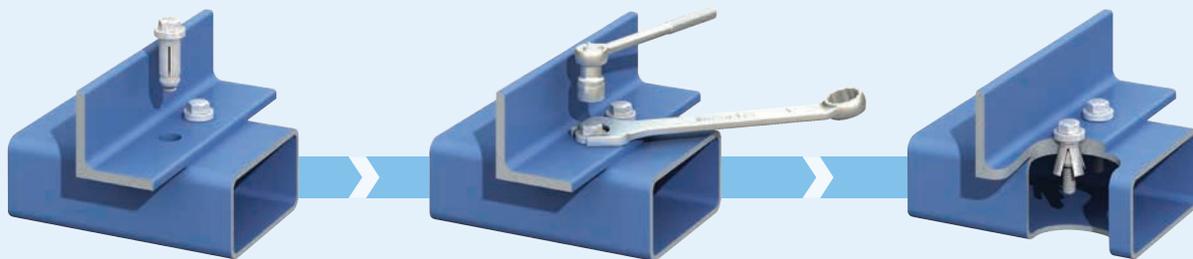
Tool sizes for installing Holo-Bolt Countersunk

Holo-Bolt Countersunk			
Product Code	Spanner mm	Hexagon Key mm	Tightening Torque Nm
HBCSK08	19	5	23
HBCSK10	24	6	45
HBCSK12	30	8	80
HBCSK16	36	10	190

How to install...

▶ Watch the Holo-Bolt installation video at www.Lindapter.com

- 1) Align pre-drilled fixture and section then insert the Holo-Bolt^{a)}.
- 2) Grip Holo-Bolt collar with an open ended spanner.
- 3) Using a calibrated torque wrench, tighten the central bolt to the recommended torque^{b)}.



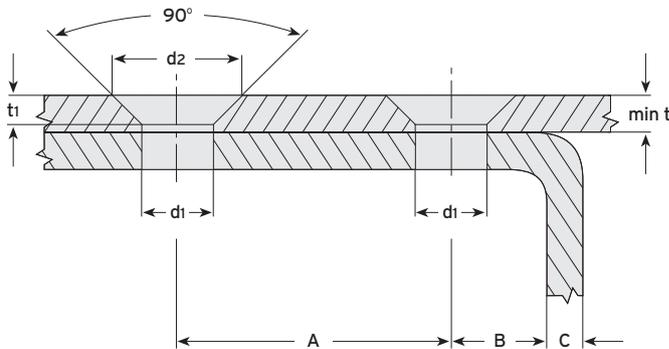
Notes:

- a) Before tightening, ensure that the materials that are to be connected together are touching.
- b) Rotate the torque wrench only. See table above for tightening torque.
- c) Power tools, such as an impact wrench, may be used to speed up the tightening of the Holo-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 Holo-Bolt.

Hollo-Bolt Flush Fit Head - 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 Head



Type	Outer Ply min t mm	Clearance Hole \varnothing d_1 mm	Countersunk		Hole Distances*		Edge Distances* B + C mm
			d_2 mm	t_1 mm	min A mm	min B 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 Head

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



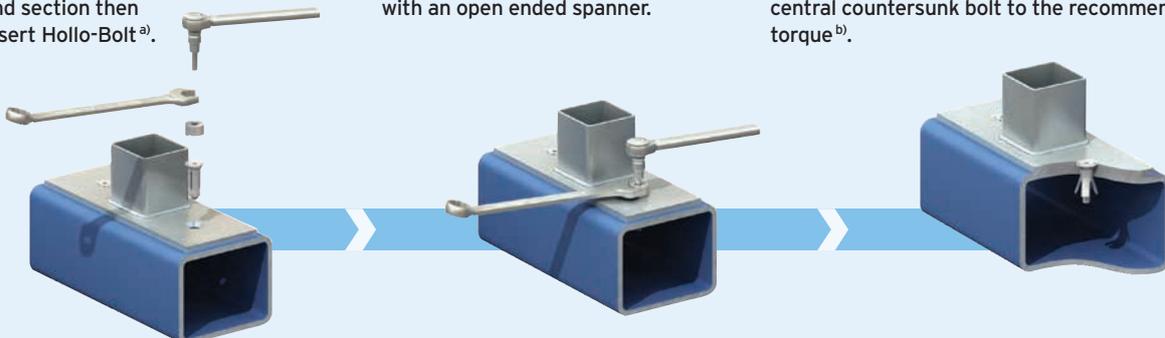
How to install...

▶ 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)}.

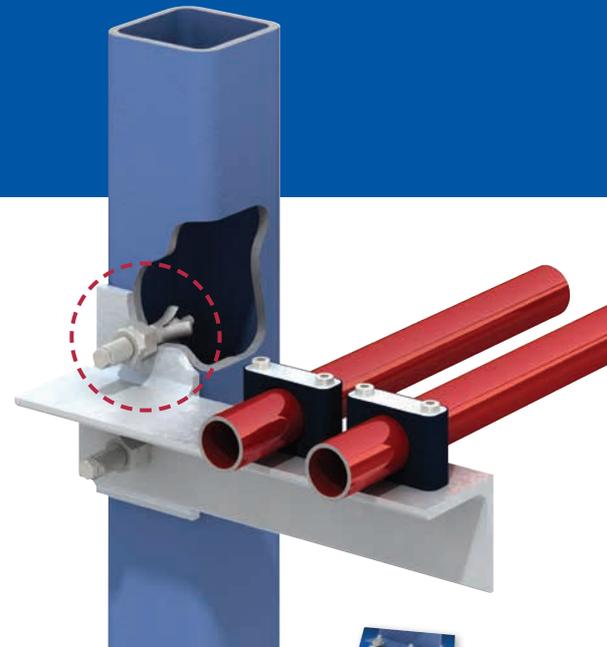
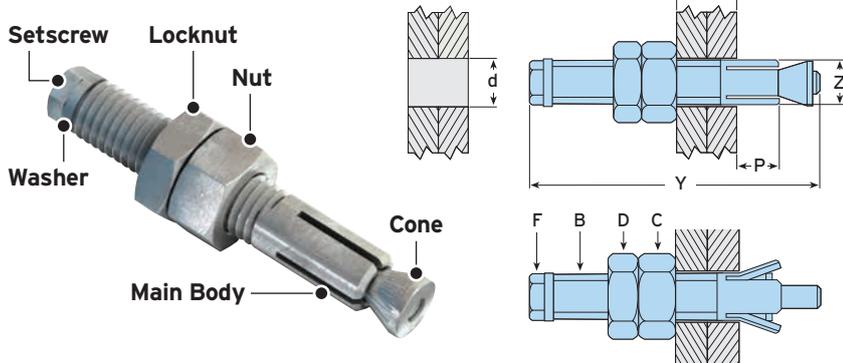


Notes:

- 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.

Type LB2 - LindiBolt™ 2

Self-heading bolt suitable for connecting steelwork to hollow sections where access is only available from one side. The LindiBolt uses a standard clearance hole.



For Characteristic Resistances when designing a connection to Eurocode 3, refer to DoP No.002 (CE) or DoC No.102 (UKCA) on Lindapter's website. Alternatively, request a DoP or DoC brochure.



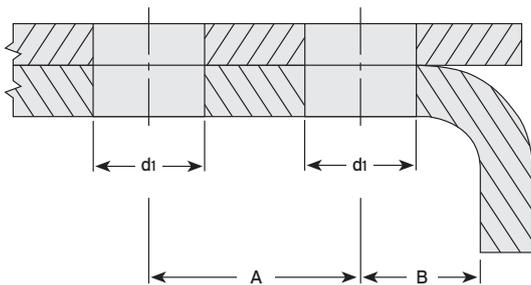
Material: Steel, zinc plated. Stainless steel grade 316.

Product Code	LindiBolt		Safe Working Loads (FOS 5:1)				Setscrew (F)			Main Body (B) and Nut (C and D)		
	Bolt Z	Length Y mm	Tensile kN	Single Shear kN	Clamping Length W mm	Projection P mm	Bolt F	Tightening Torque Nm	A/F mm	Thread Z	Tightening Torque Nm	A/F mm
LB10	M10	74	3.0	3.4	7 - 30	7.5 - 10	M5	6	8	M10	20	17
LB12	M12	85	5.0	5.0	10 - 36	9 - 12	M6	11	10	M12	31	19
LB16	M16	105	8.0	9.8	12 - 48	12 - 16	M8	23	13	M16	81	24
LB20	M20	128	14.0	15.2	14 - 60	15 - 20	M10	45	17	M20	129	30
LB24	M24	158	20.0	22.5	18 - 72	18 - 24	M12	80	19	M24	203	36

➤ The safe working loads, in both tension and shear shown, are applicable to the LindiBolt™ 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 by a qualified Structural Engineer.

LindiBolt - Drilling and Installation

Please ensure that the holes are drilled into both the fixture and the section according to the drilling guidance below.



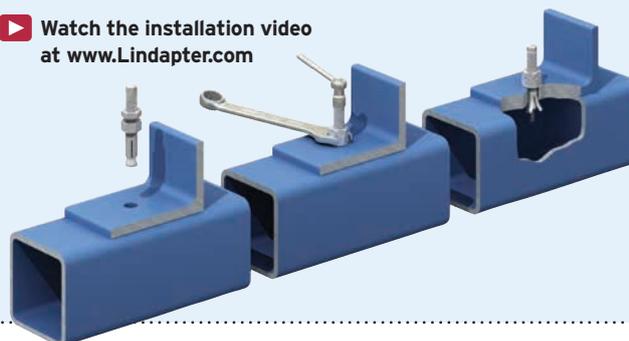
Product Code	Clearance Hole Ø d1 mm	Hole Distances	
		min A mm	min B mm
LB10	11 (+1.0)	25	15
LB12	13 (+1.0)	30	20
LB16	17 (+1.0)	40	25
LB20	21 (+1.0)	50	30
LB24	25 (+1.0)	60	35



How to install...

- 1) Set nut (C) at (W) plus projection (P) then tighten the locknut (D).
- 2) Align pre-drilled fixtures. Insert LindiBolt cone end first through both fixtures.
- 3) Hold nut (C) with a spanner and tighten the bolt (F). Loosen off the locknut (D) and tighten the nut (C). Secure by re-tightening the locknut (D).

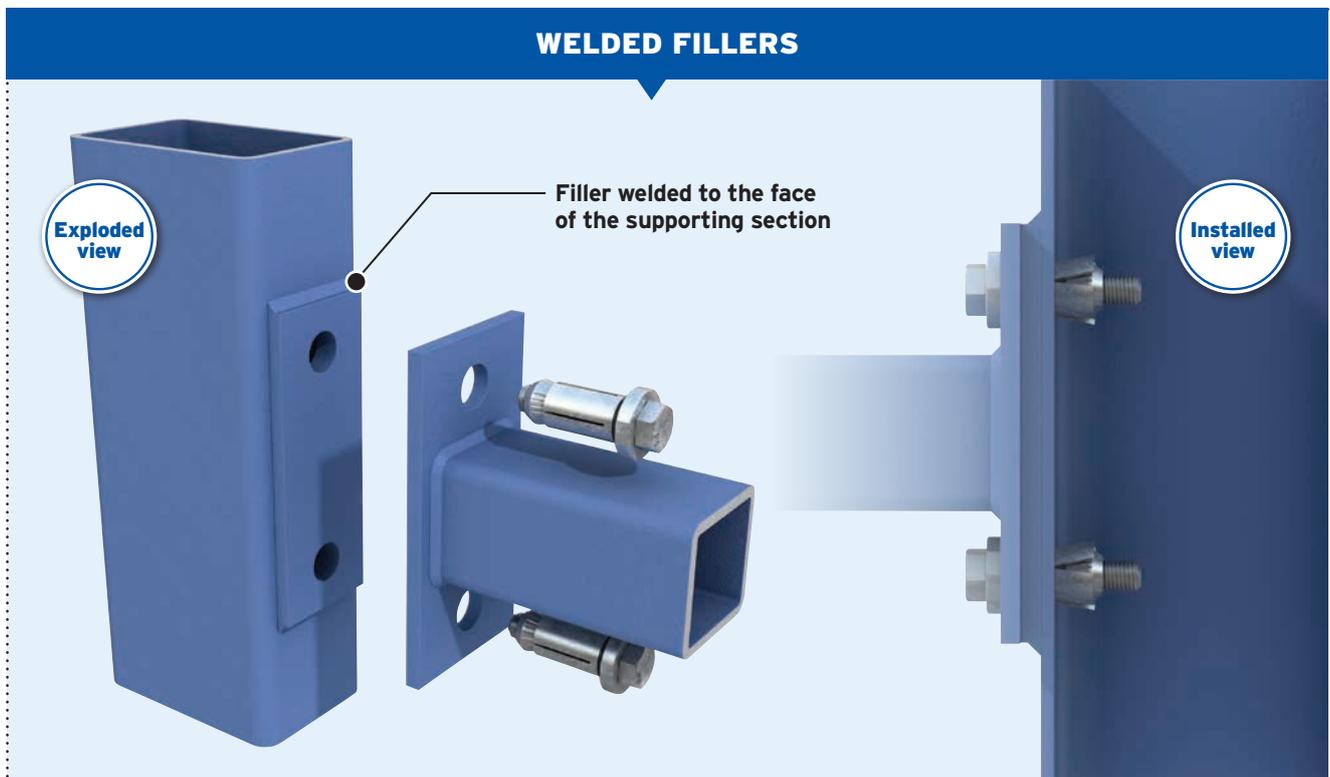
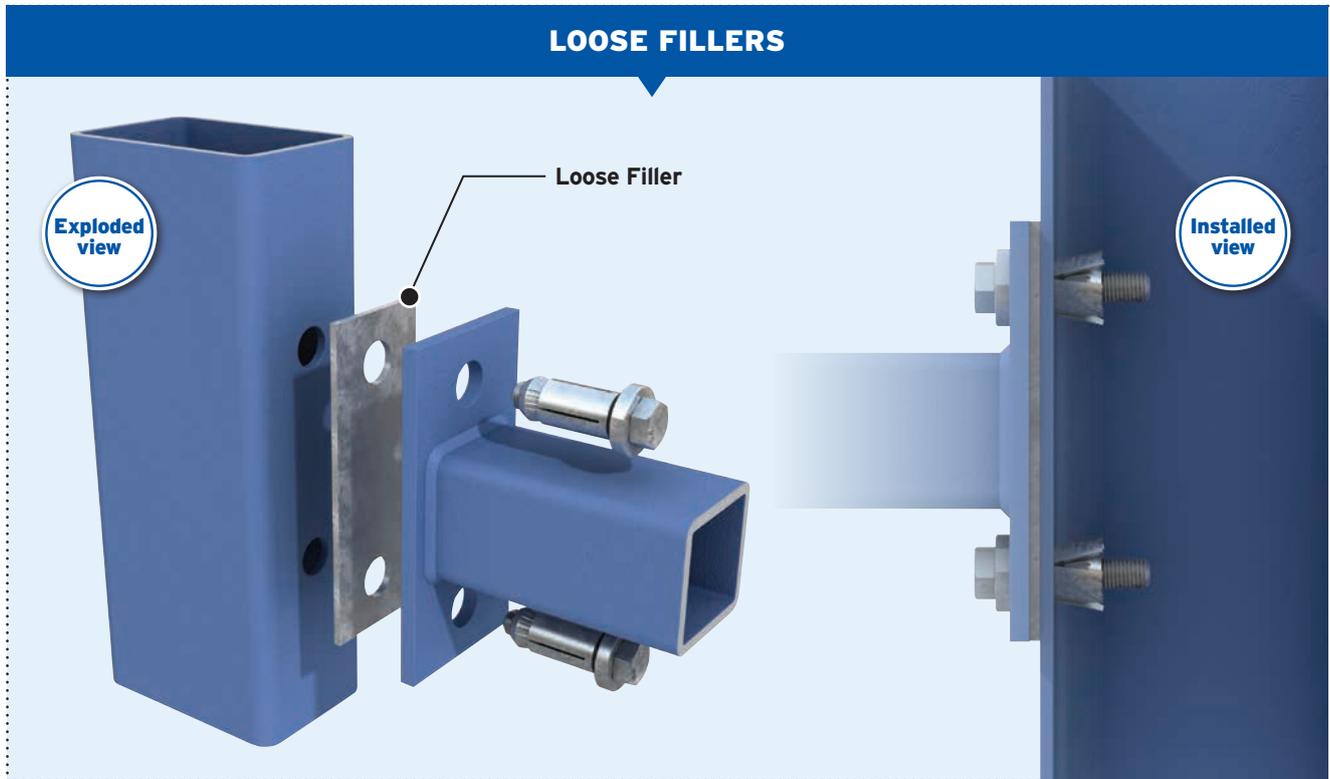
▶ Watch the installation video at www.Lindapter.com

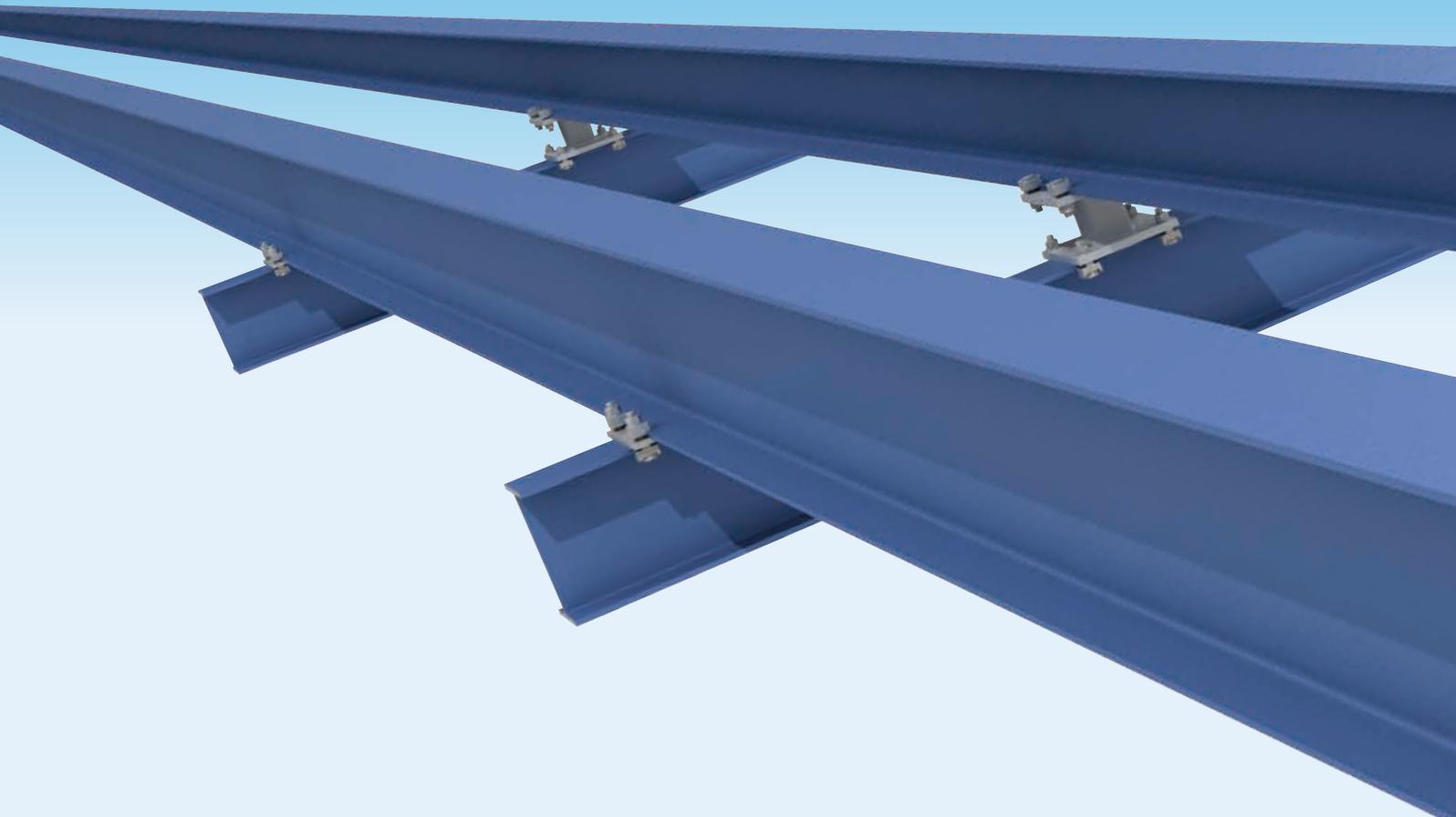


GIRDER CLAMPS
 RAIL FIXINGS
 LIFTING POINTS
 HOLLO-BOLT
 FLOOR FIXINGS
 SUPPORT FIXINGS
 DECKING FIXINGS

Fillers for Hollo-Bolt applications

Fillers or shims are steel strips or plates used in bolted connections to fill gaps in the connecting steelwork. For guidance regarding the use of fillers/shims in Bolted-Bearing Type connections please refer to EN 1090-2 - Execution of Steel Structures and Aluminium Structures Section 8.





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