

Featuring



by **lindapter**

The Original Expansion
Bolt for Structural Steel

 MAURIN FIXATION

Lindapter SHS Connections for

ARCHITECTURE

KEY BENEFITS

- ✓ Fast, cost effective installation
- ✓ No weld steelwork connections
- ✓ Suitable for permanent and temporary connections
- ✓ Adjustable on-site for precise alignment
- ✓ Product options designed for an aesthetic finish

TYPICAL APPLICATIONS

- Hollow section connections for glass frames
- Securing cladding and façades to supporting steelwork
- Steel framed roof connections
- Securing installations

See inside for project experience...



Contact Lindapter for more information. See overleaf for details.

lindapter[®]

EUREKA TOWER

Location: Melbourne, Australia
Product: Hollo-Bolt Hexagonal
Application: Attaching decorative giant 'bee hive' to the world's tallest residential tower



KIMMEL CENTER

Location: Philadelphia, USA
Product: Hollo-Bolt Hexagonal
Application: Connecting the hollow section trusses of the barrel-vault roof



Image: Jeff Goldberg/Photo courtesy of Kimmel Center

WESTFIELD CENTREPOINT

Location: Sydney, Australia
Product: Hollo-Bolt
Countersunk M12 and M16 (HCF)
Application: Hollow section roof frame connections



Image: © Peter Bernatis

HAFEN CITY

Location: Hamburg, Germany
Product: Hollo-Bolt Flush Fit
Application: Connecting the glazing support frame and roof



Image: Quantum Immobilien AG

MILITARY MUSEUM

Location: Dresden, Germany
Product: Hollo-Bolt Hexagonal -
Stainless Steel
Application: Connecting perforated steel cladding to structural hollow section

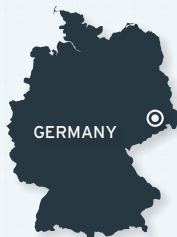
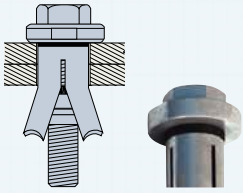
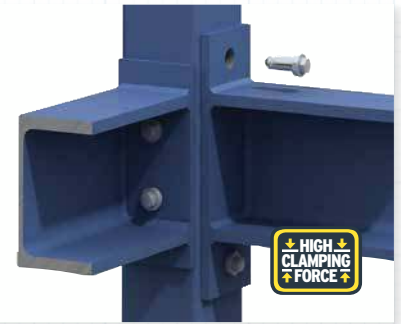


Image: © Hudson & Crow

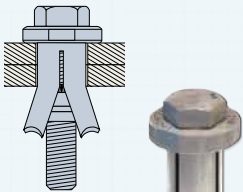
Hollo-Bolt (HCF)



Lindapter's Hollo-Bolt (HCF) was used to attach the decorative bee hive to Eureka Tower's structural steelwork, where space behind the façade was restricted. The Hollo-Bolt allowed installation to be carried out from the exterior by simply inserting Hollo-Bolts through pre-drilled holes whilst the façade was stripped back, to attach mounting points for the hive and bees.



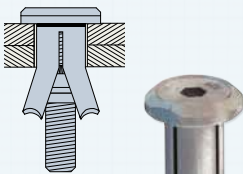
Hexagonal



Over 35,000 M10 Hollo-Bolts were used to construct the arched trusses that support the glass barrel vaulted of the Kimmel Center. Hollo-Bolts were rapidly installed in thousands of splice joints of adjoining SHS. Requiring no specialist equipment or labour, the Hollo-Bolt provided a fast, cost-effective connection solution that minimised time spent working at height.



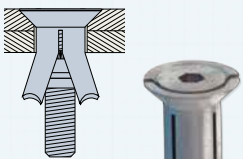
Countersunk



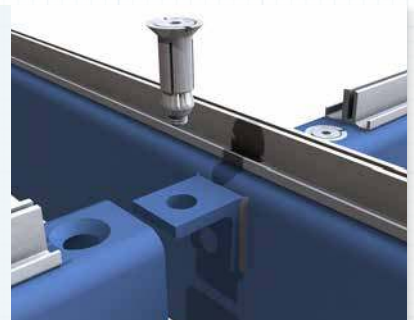
Approximately 4,000 Countersunk (Bolt Head) Hollo-Bolts were used in the recent development of Pitt Street Mall in the structural connections of the rectangular SHS roof frame. The Architect on the development specified that the Countersunk head variant of the Hollo-Bolt should be used for its aesthetic finish. The discreet bolt heads remain exposed throughout areas of the shopping centre.



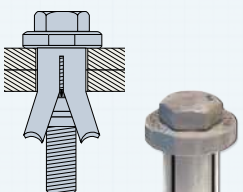
Flush Fit



The Hollo-Bolt Flush Fit was specified as a structural steelwork connection in the Germanischer Lloyd Headquarters, allowing the glass roof and frontage of the building to be constructed without the fixings being visible. The revolutionary Flush Fit head creates immense opportunity for architectural design as it is entirely concealed within the steelwork once installed, with no protruding bolt head or nut.



Hexagonal

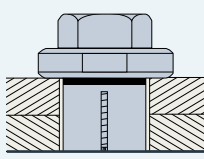


Lindapter's M8 Stainless Steel Hollo-Bolts were used to secure perforated steel cladding to the supporting SHS across Daniel Libeskind's impressive five story façade; the arrow shape he designed to intersect the original Neo-Classical building. The discreet Hollo-Bolt provided an easy to install connection barely visible once construction was complete.



The Hollo-Bolt is the original expansion bolt for structural steel, specifically designed with Architects in mind. It eliminates the need for conventional but unsightly through-bolting or welding of SHS or any steel structure where access is only available from one side.

THE HOLLO-BOLT RANGE



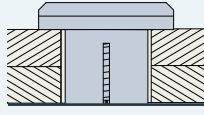
Hexagonal

Protrusion: Standard

Description: The Hollo-Bolt collar and head of the Grade 8.8 bolt are evident above the surface of the steel section.



Project: Salt River Fields, Arizona, USA



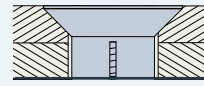
Countersunk (Bolt Head)

Protrusion: Minimal

Description: This Hollo-Bolt features a Grade 10.9 countersunk bolt with a special collar to accommodate the entire head.



Project: Westfield Centrepoint, Sydney, Australia



Flush Fit

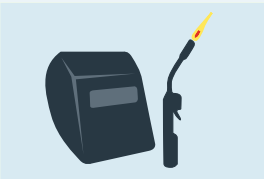
Protrusion: Zero

Description: This Hollo-Bolt is entirely concealed within the countersunk hole once installed; a perfect solution for architects!



Project: Hafen City, Hamburg, Germany

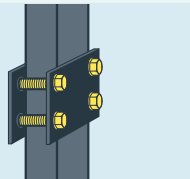
HOLLO-BOLT vs UNSIGHTLY CONNECTION METHODS



Welding

- ✗ Filing & repainting required
- ✗ Hot work permit required
- ✗ Skilled labour needed

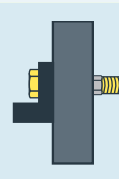
✓ *The Hollo-Bolt is a safe, permanent fixing, quick to install for an instantly neat connection.*



Brackets & Strapping

- ✗ Unsightly finish
- ✗ Time consuming to install
- ✗ Low capacity in friction

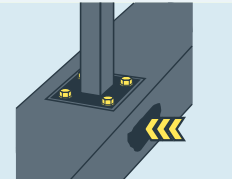
✓ *Architectural options include the Hollo-Bolt Flush Fit for a very discreet connection.*



Through-Bolting

- ✗ Visible nuts and bolts
- ✗ Strength of connection not guaranteed
- ✗ Risk of SHS deformation

✓ *The Hollo-Bolt is a reliable high strength fixing, that provides an aesthetic finish.*



Cutting Access Holes

- ✗ Defeats any architectural benefit of SHS
- ✗ Costly & time consuming
- ✗ Unsuitable for structural connections

✓ *The Hollo-Bolt is a neat, labour saving SHS connection.*

CORROSION RESISTANCE

The Hollo-Bolt is available in a series of protective coatings and materials to provide a customisable yet off-the-shelf connection solution. See the table below for availability:

	M8	M10	M12	M16 (HCF)*	M20 (HCF)*	JS500	Stainless Steel	Sherplex	Hot Dip Galv.
Hex Head	✓	✓	✓	✓	✓	✓	✓	✓	✓
Countersunk	✓	✓	✓	✓		✓	✓	✓	
Flush Fit	✓	✓	✓			✓	✓	✓	

*HCF = High Clamping Force. Download the Hollo-Bolt Brochure from the Lindapter website for more information.



Steelwork Fixings



Cavity Fixings



Decking Fixings



Support Fixings



Floor Fixings

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MAURIN FIXATION

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