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Agrément Certificate

10/4801

Product Sheet 1

SCHÖCK ISOKORB RANGE OF THERMAL INSULATION COMPONENTS

SCHÖCK ISOKORB CONNECTORS — T TYPE S MODULES

This Certificate⁽¹⁾ relates to Schöck Isokorb Connectors — T Type S Modules, for connecting steel to steel or concrete structures where it is necessary to reduce heat transfer and – depending on the module arrangement – transfer moments, shear forces and normal forces.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Strength and stability — the modules have been designed to transfer the loads from steel beams to the steel or concrete structure (see section 6).

Hygrothermal performance — the modules can contribute to limiting surface condensation risk and excessive additional heat loss (see section 8).

Durability — the modules are made from stainless steel, giving adequate protection against corrosion for a service life of at least 60 years (see section 10).

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Second issue: 16 December 2021

Originally certificated on 9 December 2010

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body – Number 113.

*The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk
Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.*

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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Regulations

In the opinion of the BBA, Schöck Isokorb Connectors – T Type S Modules, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement: Comment:	A1	Loading The products have sufficient strength and stiffness to sustain and transmit the design loads in accordance with section 6 of this Certificate.
Requirement: Comment:	C2(c)	Resistance to moisture The products can contribute to minimising the risk of condensation. See sections 8.1 and 8.3 this Certificate.
Requirement: Comment:	L1(a)(i)	Conservation of fuel and power The products can contribute to satisfying this Requirement. See section 8.1 of this Certificate.
Regulation: Comment:	7(1)	Materials and workmanship The products are acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation: Comment:	7(2)	Materials and workmanship The EPS component is exempt from, and the products are unrestricted by this Regulation. See section 7.3 of this Certificate.
Regulation:	26	CO₂ emission rates for new buildings
Regulation:	26A	Fabric energy efficiency rate for new buildings (applicable to England only)
Regulation:	26A	Primary energy consumption rates for new buildings (applicable to Wales only)
Regulation:	26B	Fabric performance values for new dwellings (applicable to Wales only)
Comment:		The products can contribute to satisfying these Regulations. See section 8.1 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation: Comment:	8(1)	Durability, workmanship and fitness of materials The products can contribute to a construction satisfying this Regulation. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation: Standard: Comment:	9 1.1(a)	Building standards applicable to construction Structure A structure incorporating the products has sufficient strength and stiffness to sustain and transmit the design loads in accordance with section 6 of this Certificate, with reference to clauses 1.1.1 ⁽¹⁾⁽²⁾ to 1.1.3 ⁽¹⁾⁽²⁾ and 1.1.15 ⁽¹⁾⁽²⁾ of this Standard. See section 6 of this Certificate.
Standard: Comment:	3.15	Condensation The products can contribute to minimising the risk of condensation, with reference to clauses 3.15.1 ⁽¹⁾⁽²⁾ , 3.15.4 ⁽¹⁾⁽²⁾ and 3.15.5 ⁽¹⁾⁽²⁾ of this Standard. See sections 8.1 and 8.3 of this Certificate.
Standard: Comment:	6.1(b)	Carbon dioxide emissions The products can contribute to satisfying this Standard, with reference to clauses 6.1.1 ⁽¹⁾⁽²⁾ , 6.1.2 ⁽¹⁾⁽²⁾ and 6.1.6 ⁽¹⁾⁽²⁾ . See section 8.1 of this Certificate.

Standard: Comment:	6.2	Building insulation envelope The products can contribute to satisfying this Standard, with reference to clauses 6.2.1 ⁽¹⁾⁽²⁾ and 6.2.3 ⁽¹⁾⁽²⁾ . See sections 8.1 and 8.3 of this Certificate.
Standard: Comment:	7.1(a)(b)	Statement of sustainability The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation: Comment:	12	Building standards applicable to conversions Comments in relation to the systems under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation: Comment:	23	Fitness of materials and workmanship The products are acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation: Comment:	30	Stability The products have sufficient strength and stiffness to sustain and transmit the design loads in accordance with section 6 of this Certificate.
Regulation: Comment:	39 (a)(i)	Conservation measures The products can contribute to satisfying this Regulation. See sections 8.1 and 8.3 of this Certificate.
Regulation: Comment:	40(2)	Target carbon dioxide emission rate The products can contribute to satisfying this Regulation. See sections 8.1 and 8.3 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See section: **3 Delivery and site handling** of this Certificate.

Additional Information

NHBC Standards 2021

In the opinion of the BBA, the Schöck Isokorb Connectors – T Type S Modules, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards, 7.1 Flat roofs, terraces and balconies*.

Technical Specification

1 Description

1.1 The Schöck Isokorb Connectors – T Type S Modules, for connecting steel-to-steel or steel to concrete structures, are as detailed below:

- S-N modules including Schöck Isokorb T type S-N-D16 and Schöck type S-N-D22 (see Figure 1 of this Certificate)

- S-V modules including Schöck Isokorb T type S-V-D16 and Schöck type S-V-D22 (see Figure 2 of this Certificate)

S-N modules

The S-N modules transfer normal (axial) force, primarily tensile normal forces. Each module consists of an insulating element placed between two 2 mm thick stainless spacer steel plates and two stainless steel bolts (\varnothing 16 or \varnothing 22 mm) with the associated nuts. The dimension of the high-density polystyrene insulation element used with the modules is 150/60/80 mm (Wmin/H/D) with a declared thermal conductivity (λ_D) of $0.031 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ in accordance with BS EN 13163 : 2012.

S-V modules

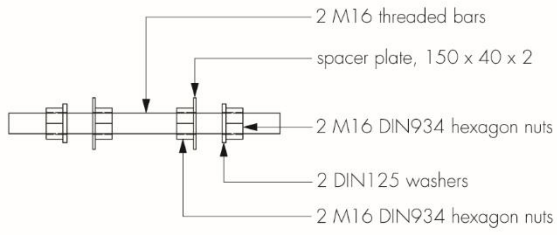
The S-V modules transfer the normal (axial) and shear forces. The axial forces can be tensile or compressive. Each module consists of two stainless steel pressure plates (10 or 12 mm thick), an insulating element, two stainless steel threaded bolts (\varnothing 16 or \varnothing 22 mm) with the nuts, and a welded-in stainless steel square hollow section (SHS 50 x 50 x 3 mm). The rectangular hollow section transmits the shear forces. The exterior sides of the steel plates (10 or 12 mm thick) for the modules are laminated with self-adhesive PTFE film on the outsides, to reduce restraint forces under thermal stress. The dimension of the high-density polystyrene insulation element used with the modules is 150/80/80 mm (Wmin/H/D) with a declared thermal conductivity (λ_D) of $0.031 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ in accordance with BS EN 13163 : 2012.

1.2 Insulating adaptors, 20 and 30 mm thick, comprise high-density polystyrene with a declared thermal conductivity (λ_D) of $0.031 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ and are used as a spacer between the S-N and S-V modules to allow continuation of the insulation. Their dimensions are 180 /20 /80 mm and 180 /30 /80 mm (W/H/D) respectively.

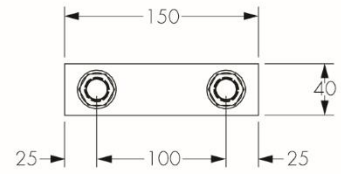
Figure 1 Schöck Isokorb T type S-N-D16 and type S-N-D22

Schöck Isokorb T type S-N-D16

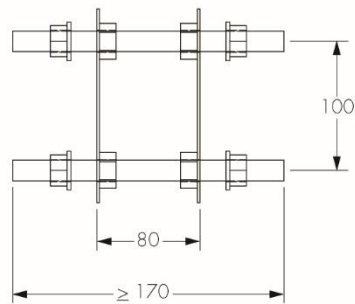
Section view



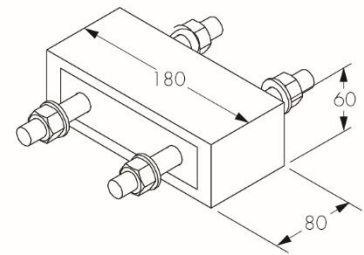
Side view



Plan view

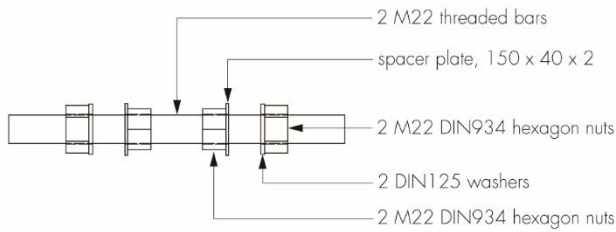


Isometric view

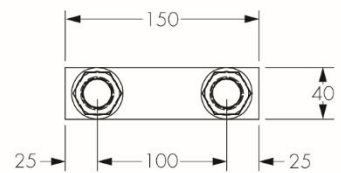


Schöck Isokorb T type S-N-D22

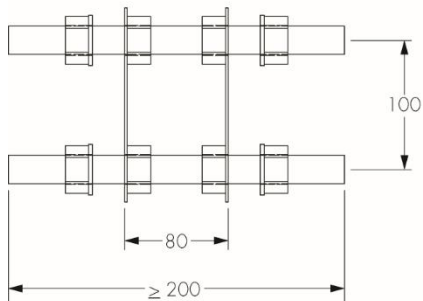
Section view



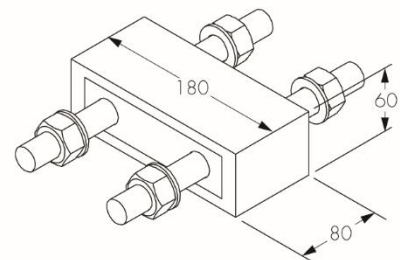
Side view



Plan view



Isometric view

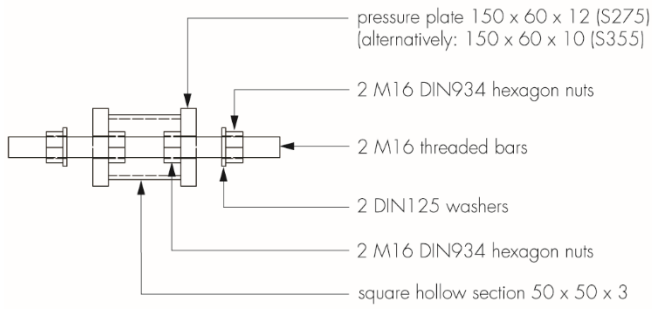


all dimensions are in mm

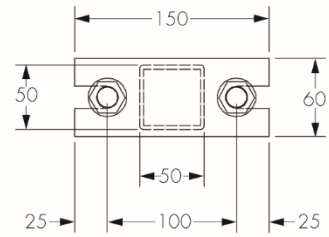
Figure 2 Schöck Isokorb T type S-V-D16 and type S-V-D22

Schöck Isokorb T type S-V-D16

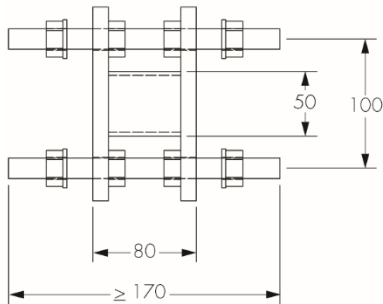
Section view



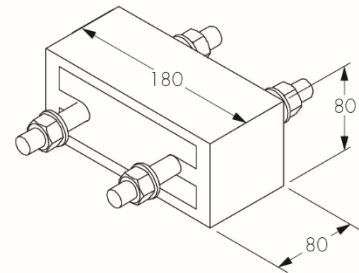
Side view



Plan view

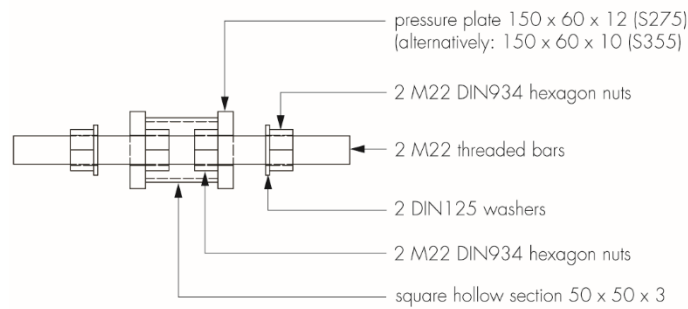


Isometric view

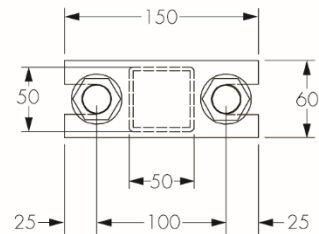


Schöck Isokorb T type S-V-D22

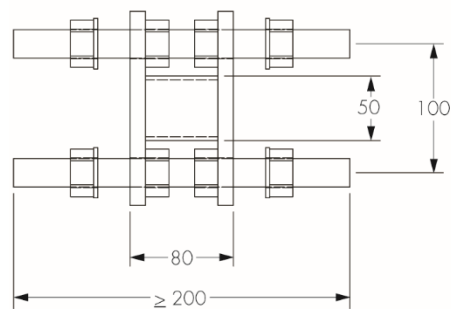
Section view



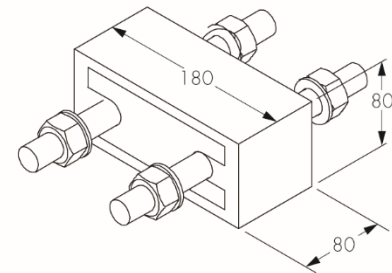
Side view



Plan view



Isometric view



all dimensions are in mm

1.3 All steel components for the S-N and S-V modules are made of stainless steel to BS EN 10088-1 : 2014, BS EN 10088-2 : 2014, BS EN 10088-3 : 2014 and BS EN 10088-4 : 2009. Table 1, below, demonstrates the steel strength class and material number (group) of the components.

Table 1 Properties of the stainless steel components for the Schöck Isokorb Connectors – T Type S Modules

Description	Strength class	Property class to EN ISO 3506-1 : 2020	Material no. (group)
M16 threaded bolts	–	70 ⁽¹⁾	1.4404 (A4L) 1.4571 (A5) 1.4362 (-)
M16 threaded bolts	–		1.4404 (A4L) 1.4362 (-)
M16 or M22 hexagon nuts	–		1.4401 (A4) 1.4404 (A4L) 1.4571 (A5) 1.4362 (-)
Φ17 or Φ23 washers		50	1.4401 (A4) 1.4404 (A4L)
Hollow section SHS 50 x 50 x 3	S355	–	1.4404 1.4571 1.4362 1.4401 All are grade CP350
Pressure plate	t = 12 mm S275	–	1.4404 1.4571 1.4362
	t = 10 mm S355	–	
Spacer plate t = 2 mm	S235	–	

(1) Refer to Table 2.3 of BS EN 1993-1-4 : 2006.

1.4 Ancillary items outside the scope of this Certificate include:

- Schöck-protection for environments with a high chlorine content (e.g. in indoor swimming pools)
- galvanized or painted steel beam front plates
- steel beams
- steel structure or reinforced concrete slab for balconies.

2 Manufacture

2.1 The modules are produced at the manufacturing plant.

2.2 The components are bought-in to an agreed specification, and completed for final assembly.

2.3 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.4 The management system of Schöck Bauteile GmbH has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by DEKRA Certification GmbH (Certificate 31112676/3).

3 Delivery and site handling

3.1 The modules are supplied in packages containing installation instructions. During handling, care must be taken to avoid damage.

3.2 To help with identification, the modules are protected by colour-coded packaging:

- S-N modules – white packaging
- S-V modules – blue packaging.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Schöck Isokorb Connectors — T Type S Modules.

Design Considerations

4 Use

4.1 Schöck Isokorb Connectors — T Type S Modules are used for connecting steel to steel or concrete structures, where it is necessary to reduce heat transfer and – depending on the module arrangement – transfer moments, shear forces and normal forces.

4.2 The connectors are made by selecting the appropriate modules according to the forces involved:

- S-N modules – absorb tensile forces
- S-V modules – absorb compressive forces and shear forces via the box section.

4.3 The product should be positioned to align with the insulation in the main building elements.

4.4 When used in environments with a high chlorine content (e.g. in indoor swimming pools) an appropriate Schöck protection⁽¹⁾ must be used.

(1) Outside the scope of this Certificate but details are available from the Certificate holder

5 Practicability of installation

5.1 The modules must be installed by operatives familiar with the erection and bolting of structural steel sections. The operatives will need to be competent and appropriately trained and take account of the instructions provided with each module.

5.2 It is important for designers, planners, contractors and/or installers to ensure the installation is in accordance with the Certificate holder's instructions and the information given in this Certificate.

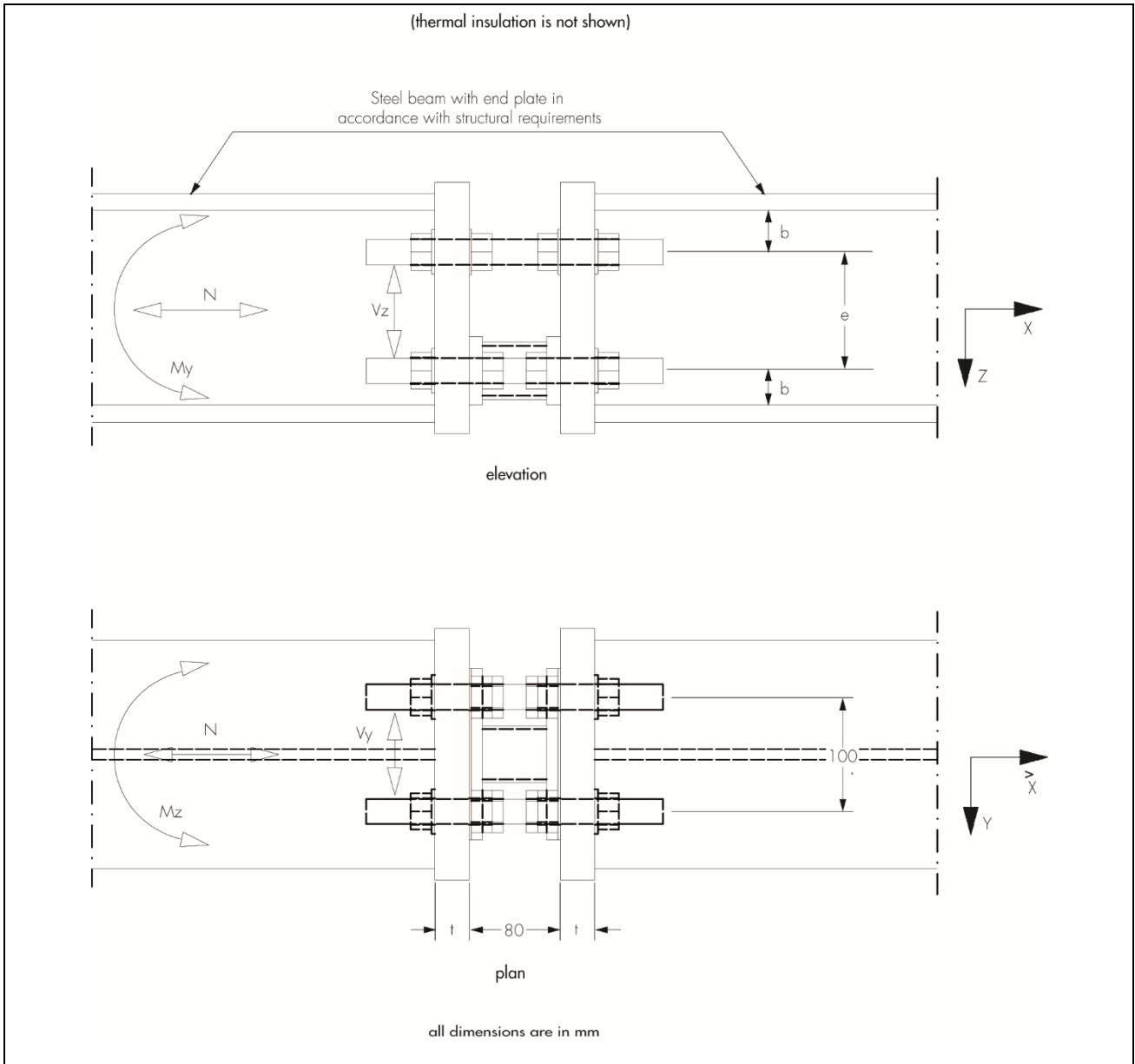
6 Strength and stability



An appropriately qualified engineer must undertake the structural design of the modules to the relevant codes of practice, taking into account the following:

- the maximum permanent and the maximum variable actions (imposed, snow, wind and thermal to BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003, BS EN 1991-1-4 : 2005 and BS EN 1991-1-5 : 2003 and their UK National Annexes) must be evaluated
- the maximum bending moments and the maximum axial forces applied on the threaded bolts (S-N and S-V modules) in accordance with appropriate combination of actions defined in BS EN 1990 : 2002 and its UK National Annex must be evaluated
- the appropriate geometric configuration of S-N and S-V modules (see Figure 3 for an example of T type S-N-D16 and T type S-V-D16 or T type S-N-D22 and T type S-V-D22 connected to a steel I-beam section) for each installation site based on applied axial forces on the threaded bolts must be selected
- the design punching shear resistance ($B_{p,Rd}$) of the threaded bolts and end plates in accordance with BS EN 1993-1-8 : 2005 (Table 3.4) and its UK National Annex, must be greater than the applied punching shear on the threaded bolts
- the design buckling resistance ($N_{b,Rd}$) of the threaded bolts in accordance with BS EN 1993-1-8 : 2005 (Table 3.4), BS EN 1993-1-1 : 2005 and BS EN 1993-1-4 : 2006 and their UK National Annexes, must be greater than buckling loads applied on the threaded bolts
- the design shear resistance per shear plane ($F_{v,Rd}$) of the threaded bolts in accordance with of BS EN 1993-1-8 : 2005 (Table 3.4), BS EN 1993-1-1 : 2005 and BS EN 1993-1-4 : 2006 and their UK National Annexes, must be greater than applied shear loads applied on the threaded bolts
- the design bearing resistance ($F_{b,Rd}$) of the threaded bolts in accordance with BS EN 1993-1-8 : 2005 (Table 3.4), BS EN 1993-1-1 : 2005 and BS EN 1993-1-4 : 2006 and their UK National Annexes, must be greater than bearing loads applied on the threaded bolts
- the design tension resistance ($F_{t,Rd}$) of the threaded bolts in accordance with BS EN 1993-1-8 : 2005 (Table 3.4) and BS EN 1993-1-4 : 2006 and their UK National Annexes must be greater than applied shear loads on the threaded bolts
- the design plastic shear resistance of the stainless steel SHS ($V_{Pl,Rd}$) in accordance with BS EN 1993-1-1 : 2005 (Expression 6.18) and BS EN 1993-1-4 : 2006 and their UK National Annexes must be greater than the shear load applied on the SHS
- the adequacy of the welding resistance of the stainless steel SHS to the plate in accordance with BS EN 1993-1-8 : 2005 and its UK National Annex against the applied load
- the adequacy of the shear and bending resistance of the end plate
- the vertical separation between the bolts (tension and compression bolts) must not be less than 50 mm
- the adequacy of the connection of the modules to the connected steel works
- the adequacy of the deflection of the balcony as a result of the combined actions
- appropriate joint spacing to resist the fatigue stress from normal forces and bending moment resulting from deformation due to different temperatures must be provided
- the reduction of the bolts and plate design resistances against fire in accordance with BS EN 1993-1-2 : 2005 and its UK National Annex
- the partial safety for load and material in accordance with BS EN 1990 : 2002, BS EN 1993-1-1 : 2005 and BS EN 1993-1-8 : 2005 and their UK National Annexes to be applied
- all limitations mentioned in the BS EN 1993-1-1 : 2005 and BS EN 1993-1-8 : 2005 and their UK National Annexes (e.g. maximum/minimum spacing, end and edge distance of bolts, minimum thickness of the end plates, etc.) to be considered in the calculation
- an assessment of the robustness of the design, such that if any of the connectors cannot be fully utilised due to foreseen or unforeseen events (incorrect installation, impact, fire or survival after an accidental event), the remaining resistance of the structural element is adequate to prevent collapse of the balcony
- to avoid the risk of corrosion of the stainless-steel components, for each site, the steel Corrosion Resistance Factor (CRF) must be checked to ensure that it is between the range of -15 and -7 ($-15 < CRF \leq -7$). Refer to Table A.2 of BS EN 1993-1-4 : 2006 and sections 10.2 and 10.3 of this Certificate.

Figure 3 Example of T type S-N-D16 and T type S-V-D16 or T type S-N-D22 and T type S-V-D22 connected to a steel I-beam section



7 Behaviour in relation to fire

7.1 Fire safety measures for modules should be equivalent to those required for the steel structure. Fire resistance can be achieved by using board linings or similar linings with an appropriate fire resistance rating. Such fire resistance measures are outside the scope of this Certificate and must be determined on a project-specific basis by an appropriately qualified individual in consultation with the Certificate holder's design department.

7.2 The bolts and plate design resistances against fire must be reduced in accordance with BS EN 1993-1-2 : 2005 and its UK National Annex.



7.3 The stainless steel bolts and stainless steel plates are classified as A1 reaction to fire and are not subject to any restriction on building height or proximity to boundaries. The Certificate holder has not declared reaction to fire classification to BS EN 13501-1 : 2018 for the EPS component.

8 Hygrothermal performance



8.1 Indicative computer modelling of a single module Type S-V beam connection with its insulation layer coinciding with an 80 mm thick layer of wall insulation (λ_D 0.035 W·m⁻¹·K⁻¹), and not including other construction details, indicates that temperature factors in excess of 0.75 can be achieved.

8.2 The junction heat loss rate (psi value) and minimum surface temperature factor (fRsi) of external envelope junctions incorporating the products will depend on the number and type of modules in the junction and the overall construction, and should be modelled in accordance with BRE Report BR 497 : 2016.



8.3 Junctions that achieve the appropriate critical surface temperature factors given in BRE Information Paper IP1/06, Table 3, will adequately limit excessive additional heat loss and risk of surface condensation.

8.4 It is essential that the insulation component of the modules coincides with the plane of the wall insulation layer, without gaps or bridging.

9 Maintenance

Once installed correctly, maintenance is not required.

10 Durability



10.1 Connections will have a service life at least 60 years.

10.2 The steel is stainless steel to avoid corrosion. The stainless steel materials are Class III, of Corrosion Resistance Class (CRC) in accordance with Tables A.2 and A.3 of BS EN 1993-1-4 : 2006.

10.3 The stainless steel components of the T Type S Modules as specified in Table 1 of this Certificate are Corrosion Resistance Class III (CRC) and have a typical corrosion resistance for the environment as defined in Table A.1 of BS EN 1993-1-4 : 2006 provided that the Corrosion Resistance Factor ($F1^{(1)} + F2^{(2)} + F3^{(3)}$) falls between the range of -15 and -7 ($-15 < CRF \leq -7$). See also the last bullet point of section 6 of this Certificate.

(1) F1 is the risk of exposure to chlorides from salt water or de-icing salts

(2) F2 is the risk of exposure to sulfur dioxide

(3) F3 is cleaning regime or exposure to washing by rain.

10.4 With the galvanized or painted steel beam front plates, the area of galvanized steel is greater than that of the stainless steel; therefore, there is minimal risk of bimetallic corrosion.

10.5 The insulation component should be protected from the weather by the building envelope.

11 Reuse and recyclability

The products contain high-density polystyrene and stainless steel, which can be recycled.

Installation

12 General

Installation instructions are supplied with each module. The operatives will need to be competent and appropriately trained and take account of the instructions provided.

13 Procedure

13.1 The correct type of module and orientation is selected in accordance with the design, and the top and bottom parts fixed to one steel member.

13.2 The module is seated in position on the other steel member, and the top and bottom bolt alignment checked after placing the polystyrene spacer adaptor in position between the end plates.

13.3 A final position check is made prior to the designed torque being applied to the top and bottom nuts.

13.4 The hole tolerance in the end plate must be provided in accordance with the requirements of BS EN 1993-1-8 : 2005 and taken into account for the fatigue.

13.5 The nuts of the threaded bolts must be tightened during installation with the following torque moments:

- | | |
|--|------------------------|
| • Schöck Isokorb T type S-N-D16 and T type S-V-D16 | Torque moments = 50 Nm |
| • Schöck Isokorb T type S-N-D22 and T type S-V-D22 | Torque moments = 80 Nm |

Technical Investigations

14 Investigations

14.1 An assessment was made of the design calculation in accordance with BS EN 1993-1-1 : 2005, BS EN 1993-1-4 : 2006 and BS EN 1993-1-8 : 2005 and their UK National Annexes relating to:

- material properties
- punching shear resistance of the bolts
- buckling resistance of the stainless steel threaded bolts
- shear resistance per shear plane of the bolts
- bearing resistance of the bolts
- design plastic shear resistance of stainless steel SHS.

14.2 The manufacturing process was examined, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

14.3 An assessment of DIBt Zulassung Z-14.4-518 (issued 15 November 2019, valid to 15 November 2024)

14.4 An assessment of thermal performance was carried out by the *Oxford Institute for Sustainable Development* and results are given in their report: 060814SCH.

Bibliography

BRE Information Paper IP1/06 *Assessing the effects of thermal bridging at junctions and around openings*

BRE Report BR 497 : 2016 *Conventions for calculating linear thermal transmittance and temperature factors*

BS EN 1990 : 2002 + A1 : 2005 *Eurocode : Basis of structural design*

NA to BS EN 1990 : 2002 + A1 : 2005 UK National Annex to *Eurocode : Basis of structural design*

BS EN 1991-1-1 : 2002 *Eurocode 1: Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*

NA to BS EN 1991-1-1 : 2002 UK National Annex to *Eurocode 1: Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*

BS EN 1991-1-3 : 2003 + A1 : 2015 *Eurocode 1: Actions on structures — General actions — Snow loads*

NA + A2 : 2018 to BS EN 1991-1-3 : 2003 + A1 : 2015 UK National Annex to *Eurocode 1: Actions on structures — General actions — Snow loads*

BS EN 1991-1-4 : 2005 + A1 : 2010 *Eurocode 1: Actions on structures — General actions — Wind actions*

NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to *Eurocode 1: Actions on structures — General actions — Wind actions*

BS EN 1991-1-5 : 2003 *Eurocode 1 — Actions on structures — Part 1-5: General actions — Thermal actions*

NA to BS EN 1991-1-5 : 2003 UK National Annex to *Eurocode 1 — Actions on structures — General actions — Thermal actions*

BS EN 1993-1-1 : 2005 *Eurocode 3: Design of steel structures — Part 1-1: General rules and rules for buildings*

NA to BS EN 1993-1-1 : 2005 *Eurocode 3: Design of steel structures — Part 1-1: General rules and rules for buildings*

BS EN 1993-1-2 : 2005 *Eurocode 3 — Design of steel structures — General rules — Structural fire design*

BS EN 1993-1-4 : 2006 *Eurocode 3 — Design of steel structures — Part 1-4: General rules — Supplementary rules for stainless steels*

NA to BS EN 1993-1-4 : 2006 *Eurocode 3 — Design of steel structures — Part 1-4: General rules — Supplementary rules for stainless steels*

BS EN 1993-1-8 : 2005 *Eurocode 3 — Design of steel structures — Design of joints*

BS EN 10088-1 : 2014 *Stainless steels Part 1: List of stainless steels*

BS EN 10088-2 : 2014 *Stainless steels: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

BS EN 10088-3 : 2014 *Stainless steels Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes*

BS EN 10088-4 : 2009 *Stainless steels: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes*

BS EN 13163 : 2012 + A2 : 2016 *Thermal insulation products for buildings — Factory made expanded polystyrene (EPS) products — Specification*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

EN ISO 3506-1 : 2020 *Fasteners — Mechanical properties of corrosion-resistant stainless-steel fasteners — Part 1: Bolts, screws and studs with specified grades and property classes*

15 Conditions

15.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

15.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

15.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

15.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

15.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

15.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.