

Certificate of Conformity

Certificate number: CM30136 Rev0

THIS IS TO CERTIFY THAT

SENSE 600® - Column Fitments

Type and/or use of product:

SENSE 600® - Column Fitments are manufactured from steel reinforcing bar that conforms with AS/NZS 4671:2019 – Steel for the reinforcement of concrete, suitable for column fitments designed in accordance with AS 3600:2018 – Concrete structures (incorporating Amendment No. 1 & 2).

SENSE 600® - Column Fitments are suitable for use in all building classes.

Description of product:

SENSE 600® - Column Fitments are made of SENSE 600® steel reinforcing bar that are processed by bending into shapes in accordance with AS 3600:2018 – Concrete structures (incorporating Amendment No. 1 & 2), for fitments in reinforced concrete columns.

SENSE 600® steel reinforcing bar has minimum characteristic strength (f_{sy}) of 600 MPa and Ductility Class N ($A_{gt} > 5\%$) as defined in AS/NZS 4671:2019 – Steel for the reinforcement of concrete.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S)

BCA 2022

	Volume One		Volume Two including ABCB Housing Provisions	
Performance Requirement(s)				
Deemed-to-Satisfy Provision(s):	B1D4 (b)	Determination of structural resistance of materials and forms of construction - Concrete	2.2.4 (d)	Determination of structural resistance of materials and forms of construction - Concrete
State or territory variation(s):	NT B1D4 (b)	Determination of structural resistance of materials and forms of construction - Concrete	WA 2.2.4 (d)	Determination of structural resistance of materials and forms of construction - Concrete
	QLD B1D4 (b)	Determination of structural resistance of materials and forms of construction - Concrete		
	WA B1D4(b)	Determination of structural resistance of materials and forms of construction - Concrete		

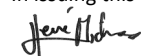
Scope of certification: The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the certificate holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

Disclaimer: The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.

The purpose of Global-Mark **construction site audits** is to confirm the practicability of installing the product; and to confirm the appropriateness and accuracy of installation instructions.

In placing **the CodeMark mark** on the product/system, the certificate holder makes a declaration of compliance with the certification standard(s) and confirms that the product is identical to the product certified herein.

In issuing this Certificate of Approval Global-Mark has relied on the **expertise of external bodies** (laboratories, and technical experts).



Herve Michoux
Global-Mark Managing Director



Peter Gardner
Unrestricted Building Certifier

Date of issue: 08/12/2023

Date of expiry: 08/12/2026



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SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B

Limitations and conditions:

1. General

Design and specification of SENSE 600® - Column Fitments shall be carried out in accordance with AS 3600:2018 – Concrete structures (incorporating Amendment No. 1 & 2), by a Professional Engineer as defined in Schedule 1 of the BCA.

500 MPa column fitments conforming to AS/NZS 4671:2019 Steel for the reinforcement of concrete, and designed in accordance with AS 3600:2018 – Concrete structures (incorporating Amendment No. 1 & 2) , may be substituted with SENSE 600® - Column Fitments in accordance with Table 1.

Table 1

SENSE 600® - Column Fitments		Equivalent 500 MPa
Designation	Diameter (mm)	Column Fitment Diameter (mm)
S11	11.0	12
S15	14.6	16
S18	18.3	20

Building classification/s:

1, 2, 3, 4, 5, 6, 7, 8, 9 & 10

2. General

The SENSE 600® Column Fitments shall be installed in the same manner as the 500 MPa column fitments i.e. conforming to AS 3600:2018 – Concrete structures (incorporating Amendment No.1 and Amendment No.2), and the professional engineer's plans

1, 2, 3, 4, 5, 6, 7, 8, 9 & 10

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

Refer to page 1.

A2 Description of product

Refer to page 1.

SENSE 600® - Column Fitments are available in the diameters shown in Table 1 which are equivalent in load capacity to standard diameter 500 MPa bars.

A3 Product specification

SENSE 600® - Column Fitments comply with AS/NZS 4671:2019 for grade 600 MPa and has normal ductility. The reinforcement designation is “S” and has equivalence to standard 500 MPa grade bar as shown in Table 1. The design capacity of the Column fitments is also provided in Table 2.

Table 2

Alternative SENSE 600®- Column Fitments Designation	Design Capacity $A_{b,fit} \times f_{sy,f}$ (kN)
S11	56.5
S15	100.5
S18	157.1

A4 Manufacturer and manufacturing plant(s)

The Australian Steel Co. (Operations) Pty Ltd

- 105-123 Dohertys Road, Laverton North, Victoria, 3026, and

InfraBuild (Newcastle) Pty Ltd

- Ingall Street, Mayfield, NSW, 2304

A5 Installation requirements

SENSE 600® - Column Fitments shall be installed in accordance with the requirements of AS 3600:2018 – Concrete structures (incorporating Amendment No. 1 & 2), and the professional engineer’s plans.

A6 Other relevant technical data

Any referenced documents within the technical literature identified in Appendices A3 and A5.

The technical justification of substitution of SENSE 600® - Column Fitments for N12, N16 and N20 respectively, is provided in;

- InfraBuild Compliance Report – SENSE 600® Column Fitments v1, dated 23 November 2023.

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APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

The following assessment methods have been used to determine compliance with BCA 2022:

Code Clause	Assessment Method(s)	Evidence of suitability	Evidence reference in B2
Volume One B1D4 (b)	BCA Volume One A2G3 (2)(a) & (b)	BCA Volume One A5G3 (1)(e) Certificate or report from a professional engineer or other appropriately qualified person	Items 1, 2, 3 & 4
Volume One NT B1D4 (b)	BCA Volume One A2G3 (2)(a) & (b)	BCA Volume One A5G3 (1)(e) Certificate or report from a professional engineer or other appropriately qualified person	Items 1, 2, 3 & 4
Volume One QLD B1D4 (b)	BCA Volume One A2G3 (2)(a) & (b)	BCA Volume One A5G3 (1)(e) Certificate or report from a professional engineer or other appropriately qualified person	Items 1, 2, 3 & 4
Volume One WA B1D4 (b)	BCA Volume One A2G3 (2)(a) & (b)	BCA Volume One A5G3 (1)(e) Certificate or report from a professional engineer or other appropriately qualified person	Items 1, 2, 3 & 4
Housing Provisions 2.2.4 (d)	BCA Volume Two A2G3 (2)(a) & (b)	BCA Volume Two A5G3 (1)(e) Certificate or report from a professional engineer or other appropriately qualified person	Items 1, 2, 3 & 4
Housing Provisions WA 2.2.4 (d)	BCA Volume Two A2G3 (2)(a) & (b)	BCA Volume Two A5G3 (1)(e) Certificate or report from a professional engineer or other appropriately qualified person	Items 1, 2, 3 & 4

B2 Reports

The following reports have been used as evidence to determine compliance with BCA 2022:

Ref	Author	Reference	Date	Description	NATA Registration
1	Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS)	Certificate Number: 311021	1 Nov 2003	CERTIFICATE OF APPROVAL - Product Conformity Certification Reinforcing Bar Manufactured in coil to AS/NZS 4671:2019	JAS-ANZ Accreditation Nos.: Z5221212AC
2	Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS)	Certificate Number: 31103	1 Nov 2003	CERTIFICATE OF APPROVAL - Product Conformity Certification Reinforcing Bar Manufactured in coil to AS/NZS 4671:2019	JAS-ANZ Accreditation Nos.: Z5221212AC
3	InfraBuild – Anthony Ng	Compliance Report – SENSE 600® Column Fitments v1.0	23 Nov 2023	Engineering Report for SENSE 600® Column Fitments	N/A
4*	UNSW – Professor Stephen Foster	N/A	24 Sept 2023	Expert Opinion on Performance Solution Report – SENSE 600® Column Fitments	N/A

* The Certificate Holder has chosen not to make the above identified evidence of compliance publicly available, due to the document(s) being considered commercial in confidence.