



# PRODUCT DATA

## SS316 HBS BOLTS for Blind and Hollow Steel Connections

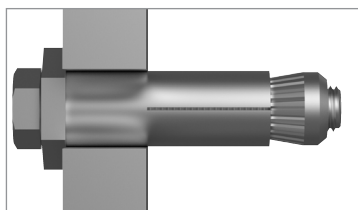
### Description

One-sided installation for fixing steel to hollow sections or where there is limited access. High shear capacity and large grip range make the HBS Bolt suitable for many steel connections.

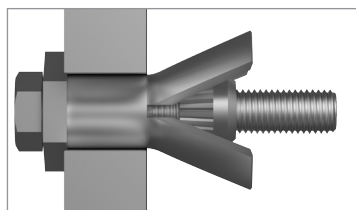
Applications	
•	For fixing steel to hollow steel sections
•	For use with square, rectangle, and circular hollow sections
•	High shear and tensile capacities
•	Large grip range
•	One sided installation
•	Steel framework, including: gantries, bridges, stadiums, and transmission towers

<b>Material</b>	 316	AISI 316/A4
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<b>Finish</b>	 316	316 Stainless
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Before



After



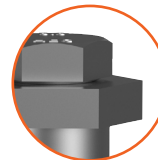
### 3-part assembly

- » M10
- » M12



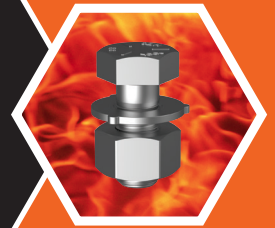
### 5-part assembly

- » M16
- » M20



Hexagon collar for use with open-ended or ring spanners.

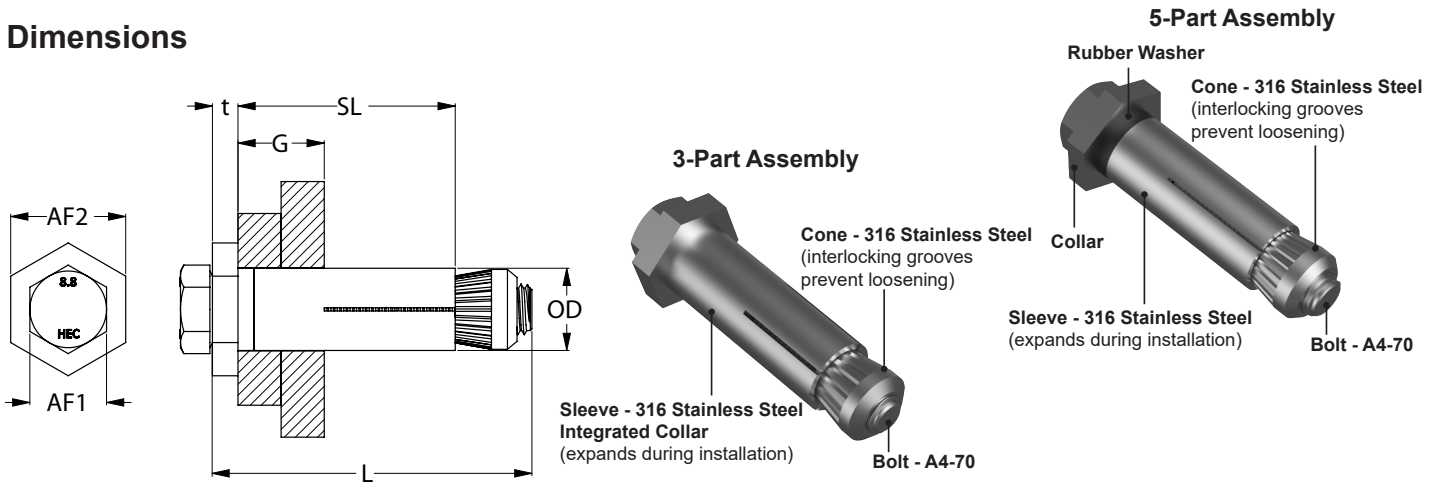
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### Dimensions



3-Part Assembly									
Part	QFind	Nominal Size	Bolt Length	Grip Range	Hex Size	Sleeve		Collar	
						Length	Outer Ø	Across Flats	Thickness
			L (mm)	G (mm)	AF1 (mm)	SL (mm)	OD (mm)	AF2 (mm)	t (mm)
KBB16PHM100055	HBA41055	M10	55	3 - 22	16	30	17.75	24	6
KBB16PHM120060	HBA41260	M12	60	3 - 25	18	35	19.75	30	7

5-Part Assembly									
Part	QFind	Nominal Size	Bolt Length	Grip Range	Hex Size	Sleeve		Collar	
						Length	Outer Ø	Across Flats	Thickness
			L (mm)	G (mm)	AF1 (mm)	SL (mm)	OD (mm)	AF2 (mm)	t (mm)
KBB16PHM160080	HBA41680	M16	80	12 - 29	24	42	25.75	36	8
KBB16PHM160100	HBA416100		100	29 - 50		63			
KBB16PHM200090	HBA42090	M20	90	12 - 34	30	50	32.75	46	10

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Bolt Tension | Anti-Vibration | Product Reliability | Traceability



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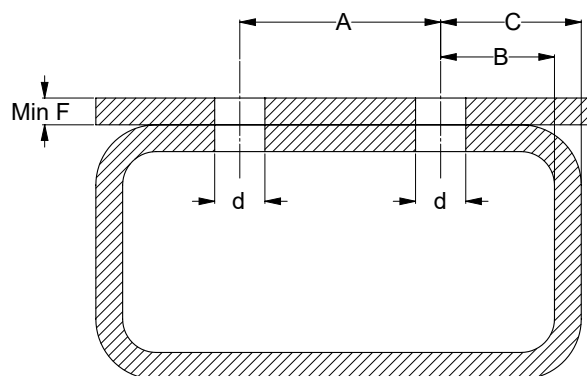
### Mechanical Properties

Part Prefix.	Nominal Size	Characteristic Load <sup>a</sup>		Working Load	
		Tensile	Shear	Tensile	Shear
		kN	kN	kN	kN
KBB16PHM100055	M10	44.8	45.6	10	12
KBB16PHM120060	M12	51.6	58.3	13	15
KBB16PHM160080	M16	89.1	105.3	23	28
KBB16PHM160100	M16	89.1	105.3	23	28
KBB16PHM200090	M20	128.9	161.4	34	43

<sup>a</sup> Characteristic loads are used to calculate design resistance and should not be used as working loads. The characteristic loads apply to the HBS Bolt assembly. The design resistance of the connection may be lower due to material properties of other parts of the connection.

### Hole Size and Spacing

Nominal Size	Hole in Steelwork	Hole Spacing		Edge Distance	Min. Fixture Thickness	Nominal Tightening Torque
		A (mm)	B (mm)			
	d (mm)	A (mm)	B (mm)	C (mm)	F (mm)	Nm
M10	18.00 – 19.00	40	15	C > 22.5	1	45
M12	20.00 – 21.00*	50	18	C > 25.0	1	80
M16	26.00 – 28.00	55	20	C > 32.5	8	190
M20	33.00 – 35.00	70	25	C > 33.0	8	300

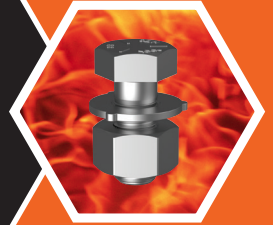


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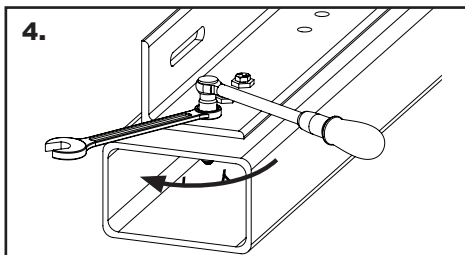
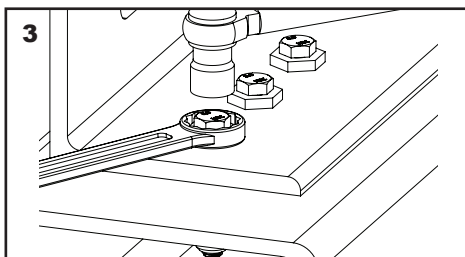
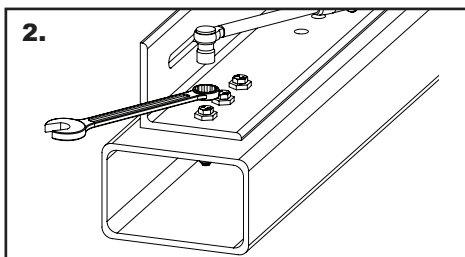
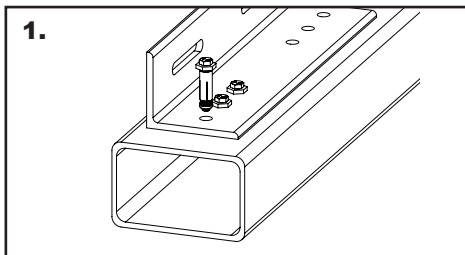


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### Installation



### Installation Guide

1. Bring steelwork together, align pre-drilled holes, and insert HBS Bolt.
2. Prepare suitably sized open-ended or ring spanner and torque wrench.
3. Place spanner over the larger hex collar and torque wrench over the bolt head.
4. Holding the spanner in place, tighten the bolt head to the specified tightening torque.

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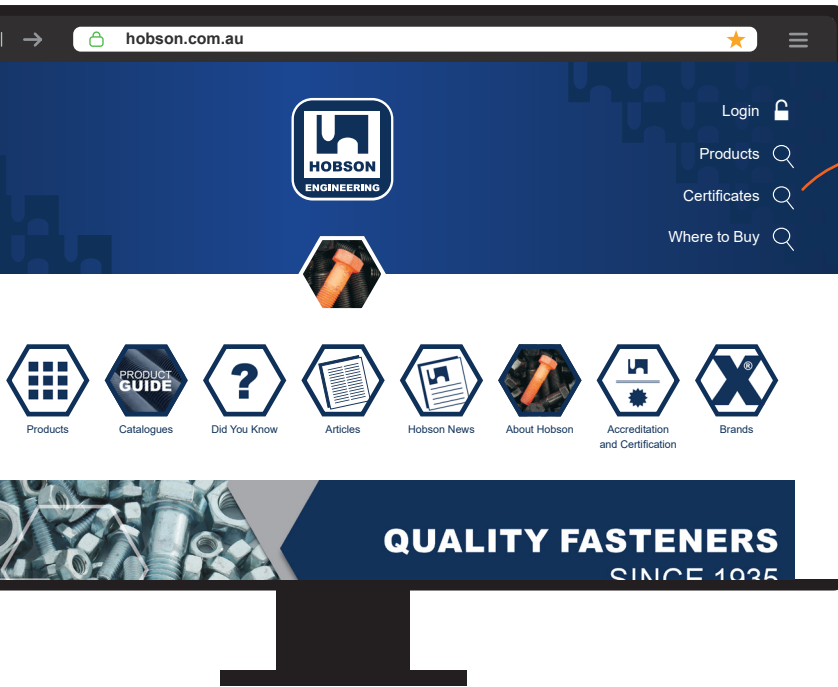
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# PRODUCT DATA

## SS316 HBS BOLTS for Blind and Hollow Steel Connections



You can download this Test Certificate and/or Report from our website: **hobson.com.au**

AL3

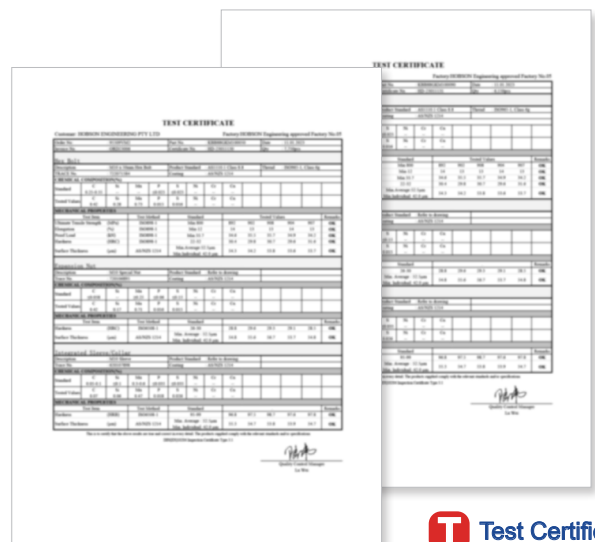
123456789

Type the unique **3-character Trace Code** on the bolt head, or the **Trace Number** on the label.

*Codes are examples only.*



**N** NATA Certificate



**T** Test Certificate

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