



PRODUCT DATA

HBS BOLTS for Blind and Hollow Steel Connections

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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	
<ul style="list-style-type: none"> • 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. 	

Material	 Class 8.8
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Coating	 Hot Dipped Galvanised
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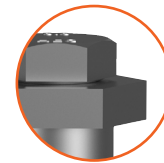
3-part assembly

- » M8
- » M10
- » M12



5-part assembly

- » M16
- » M20



Hexagon collar for use with open end or ring spanner.

Part Prefix.	Nominal Size	Mechanical Properties			
		Characteristic Load ^a		Working Load	
		Tensile	Shear	Tensile	Shear
		kN	kN	kN	kN
KBB88GHM08	M8	24.3	26.1	6	7
KBB88GHM10	M10	44.8	45.6	10	12
KBB88GHM12	M12	51.6	58.3	13	15
KBB88GHM16	M16	89.1	105.3	23	28
KBB88GHM20	M20	128.9	161.4	34	43

^a Characteristic loads are used to calculate design resistance and should not be used as working loads. The characteristic loads apply to the HBS Bolts assembly, the design resistance of the connection may be lower due to material properties of other parts of the connection.

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Bolt Tension | Anti-Vibration | Product Reliability | Traceability

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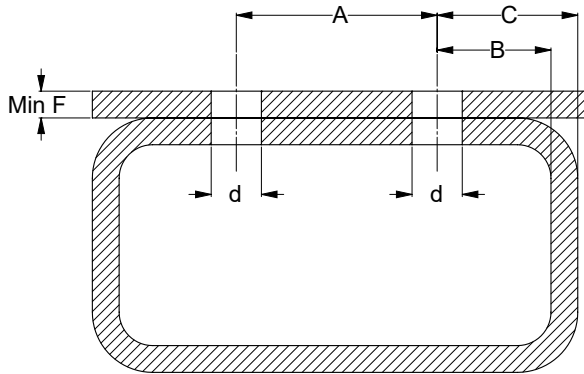


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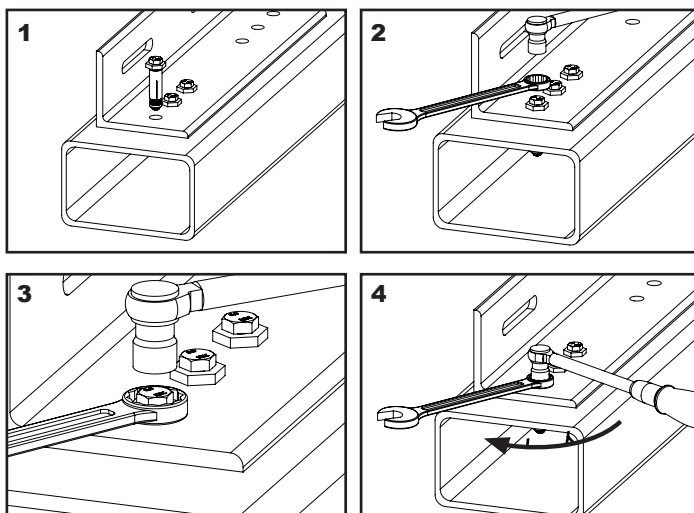
Hole Size and Spacing



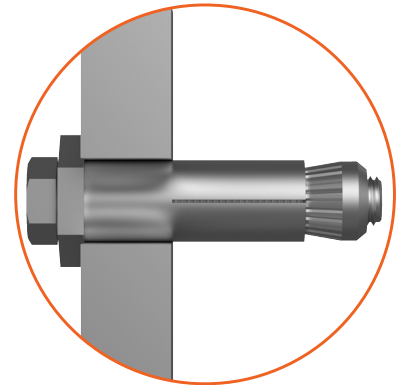
Nominal Size	Hole in Steel Work	Hole Spacing		Edge Distance	Min. Fixture Thickness	Nominal Tightening Torque
	d (mm)	A (mm)	B (mm)	C (mm)		
M8	14.00 – 15.00*	35	13	C > 17.5	1	25
M10	18.00 – 19.00*	40	15	C > 22.5	1	45
M12	20.00 – 21.00*	50	18	C > 25.0	1	80
M16	26.00 – 28.00	55	20	C > 32.5	8	190
M20	33.00 – 35.00	70	25	C > 33.0	8	300

*For maximum performance of the grip length up to the minimum +2.0mm, the recommended hole diameter is the minimum.

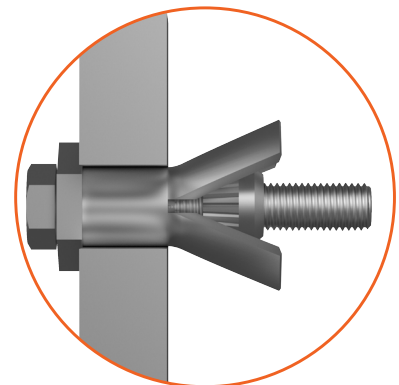
Installation



Before



After



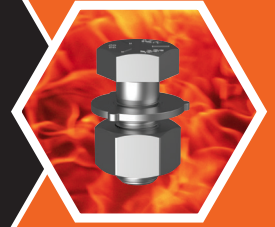
Installation Guide

1. Bring steel work 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 bolt head.
4. Holding the spanner in place tighten the bolt head to the specified tightening torque.

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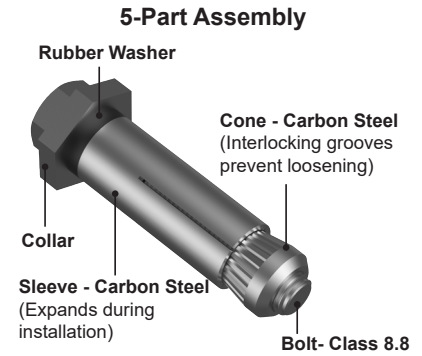
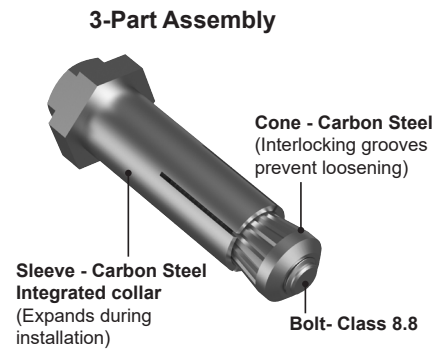
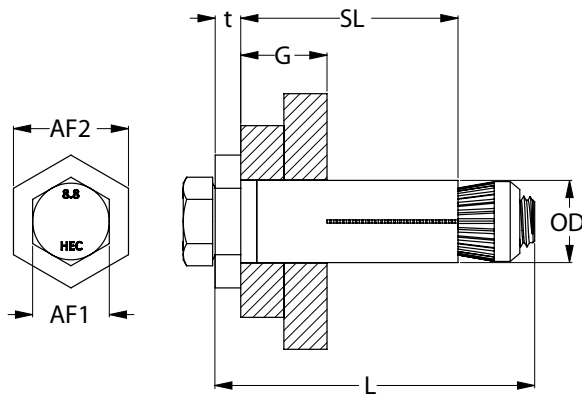
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HBS BOLTS for Blind and Hollow Steel Connections

Dimensions



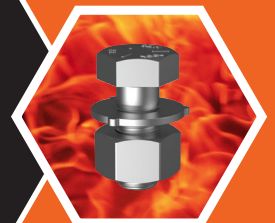
3-Part Assembly										
Part	QFind	Nominal Size	Bolt Length	Grip Range	Hex Size	Sleeve		Collar		Pack QTY
						Length	Outer Ø	Across Flats	Thickness	
			L (mm)	G (mm)	AF1 (mm)	SL (mm)	OD (mm)	AF2 (mm)	t (mm)	
KBB88GHM080050	HBG850	M8	50	3 - 22	13	30	13.75	20	5	50
KBB88GHM080070	HBG870		70	22 - 41		49				
KBB88GHM080090	HBG890		90	41 - 60		68				
KBB88GHM100055	HBG1055	M10	55	3 - 22	16	30	17.75	24	6	50
KBB88GHM100070	HBG1070		70	22 - 41		48				
KBB88GHM100090	HBG1090		90	41 - 60		67				
KBB88GHM120060	HBG1260	M12	60	3 - 25	18	35	19.75	30	7	25
KBB88GHM120080	HBG1280		80	25 - 47		57				
KBB88GHM120110	HBG12110		110	47 - 69		79				

5-Part Assembly										
Part	QFind	Nominal Size	Bolt Length	Grip Range	Hex Size	Sleeve		Collar		Pack QTY
						Length	Outer Ø	Across Flats	Thickness	
			L (mm)	G (mm)	AF1 (mm)	SL (mm)	OD (mm)	AF2 (mm)	t (mm)	
KBB88GHM160080	HBG1680	M16	80	12 - 29	24	42	25.75	36	8	10
KBB88GHM160100	HBG16100		100	29 - 50		63				
KBB88GHM160120	HBG16120		120	50 - 71		84				
KBB88GHM200090	HBG2090	M20	90	12 - 34	30	50	32.75	46	10	5
KBB88GHM200120	HBG20120		120	34 - 60		76				
KBB88GHM200140	HBG20140		140	60 - 86		102				

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PRODUCT DATA

HBS BOLTS for Blind and Hollow Steel Connections

Quality Assurance Documentation Online

719040374

FIND

Find Test Certificates by typing at least 3 characters of a Heat Number. Then press the FIND button to retrieve links to all matching certificates.

Heat Number	Description	Category	Part Number	Certificates
719040374	HDG 8.8 HBS BOLT HEX: M10 X 55	High-Tensile	KBB88GHM100055	

LABORATORY TEST REPORT

CLIENT: Hobson Engineering Co Pty Ltd
 ORDER No: #1566_HOBLAB_55
 PRODUCT SPECIFICATION: AS4291.1 2015 Class 8.8 Bolt / HEC-QA-156
 HOBSON SPECIFICATION: TP56

Sample ID	Product Code	Product Description	Heat No.	Lot No.	Overall Compliance
15191	KBB88GHM100055	HDG 8.8 HBS BOLT HEX M10 x 55	719040374	77218	Complies
15192	KBB88GHM100055	HDG 8.8 HBS BOLT HEX M10 x 55	719040374	77218	Complies
15193	KBB88GHM100055	HDG 8.8 HBS BOLT HEX M10 x 55	719040374	77218	Complies
15194	KBB88GHM100055	HDG 8.8 HBS BOLT HEX M10 x 55	719040374	77218	Complies
15195	KBB88GHM100055	HDG 8.8 HBS BOLT HEX M10 x 55	719040374	77218	Complies
15196	KBB88GHM100055	HDG 8.8 HBS BOLT HEX M10 x 55	719040374	77218	Complies

NATA Accredited for compliance with AS/NZS 1538
 Accreditation Number 18918 - Testing

TEST RESULTS

Test Date: 14-Sep-20
 Test Procedure: HEC-LAB-028

Heat No.	Part Lot (Lot No.)	Failure Location	Attribute	C / Comp
40	51.2	Free Thread	46.4	C

Test Date: 14-Sep-20
 Test Procedure: HEC-LAB-036

Heat No.	Part Lot (Lot No.)	Failure Location	Attribute	C / Comp
40	59.9	Expansion Sleeve		C
40	75.5	Expansion Sleeve		C
40	59.5	Expansion Sleeve		C
40	62.3	Expansion Sleeve		C
40	68.7	Expansion Sleeve		C

TEST CERTIFICATE

Customer: HOBSON ENGINEERING PTY LTD
 Factory: HOBSON Engineering approved Factory No.15

Item No.	Part No.	Quantity	Date
1	AS/NZS 1538 Class 8.8	100	14-Sep-20

MATERIAL COMPOSITION (%)

Element	Standard	Tested	Result
C	0.25-0.55	0.32	OK
Mn	0.30-0.60	0.45	OK
P	0.010	0.008	OK
S	0.010	0.005	OK
Si	0.10-0.35	0.20	OK
Cr	0.00-0.030	0.005	OK
Ni	0.00-0.010	0.002	OK
Al	0.00-0.010	0.001	OK
Fe	Balance	Balance	OK

MECHANICAL PROPERTIES

Property	Standard	Tested	Result
Yield Strength (MPa)	475-550	510	OK
Tensile Strength (MPa)	570-690	620	OK
Elongation (%)	12-18	15	OK
Reduction of Area (%)	35-45	40	OK
Surface Hardness (HV0.05)	200-230	210	OK
Surface Hardness (HRC)	19-21	20	OK

INTERPRETED STEEL COLLAR

Property	Standard	Tested	Result
Yield Strength (MPa)	355-450	380	OK
Tensile Strength (MPa)	450-550	480	OK
Elongation (%)	12-18	15	OK
Reduction of Area (%)	35-45	40	OK
Surface Hardness (HV0.05)	180-200	190	OK
Surface Hardness (HRC)	17-19	18	OK

Quality Control Manager: Lu Wu

TEST CERTIFICATE

Customer: Hobson Engineering approved Factory No.15

Item No.	Part No.	Quantity	Date
1	AS/NZS 1538 Class 8.8	100	14-Sep-20

MATERIAL COMPOSITION (%)

Element	Standard	Tested	Result
C	0.25-0.55	0.32	OK
Mn	0.30-0.60	0.45	OK
P	0.010	0.008	OK
S	0.010	0.005	OK
Si	0.10-0.35	0.20	OK
Cr	0.00-0.030	0.005	OK
Ni	0.00-0.010	0.002	OK
Al	0.00-0.010	0.001	OK
Fe	Balance	Balance	OK

MECHANICAL PROPERTIES

Property	Standard	Tested	Result
Yield Strength (MPa)	475-550	510	OK
Tensile Strength (MPa)	570-690	620	OK
Elongation (%)	12-18	15	OK
Reduction of Area (%)	35-45	40	OK
Surface Hardness (HV0.05)	200-230	210	OK
Surface Hardness (HRC)	19-21	20	OK

Quality Control Manager: Lu Wu

T Test Certificate

N NATA Certificate

Label Image Reference for online test certification

HOT DIP GALVANISED HBS BOLT HEX - FOR BLIND INSTALL HEC / CLASS 8.8

M10 x 55

QFind: **HGB1055**

100 pcs

HOBSON

KBB88GHM100055 Trace: 719040374
 LOT: HEC209-0004
 PO: 77218 NS2
 CTN WGT: 3.18kg

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