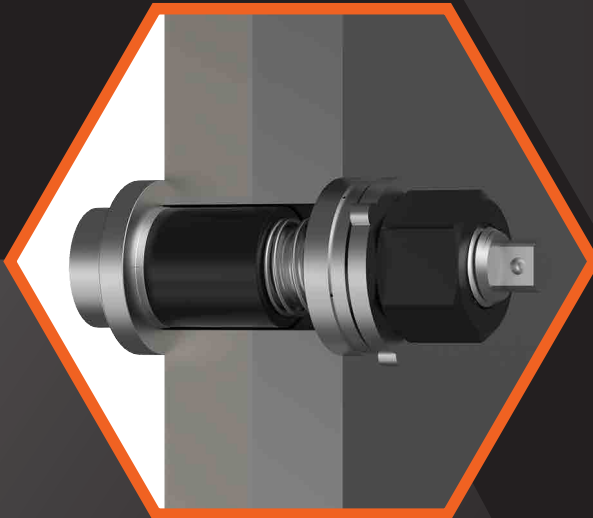
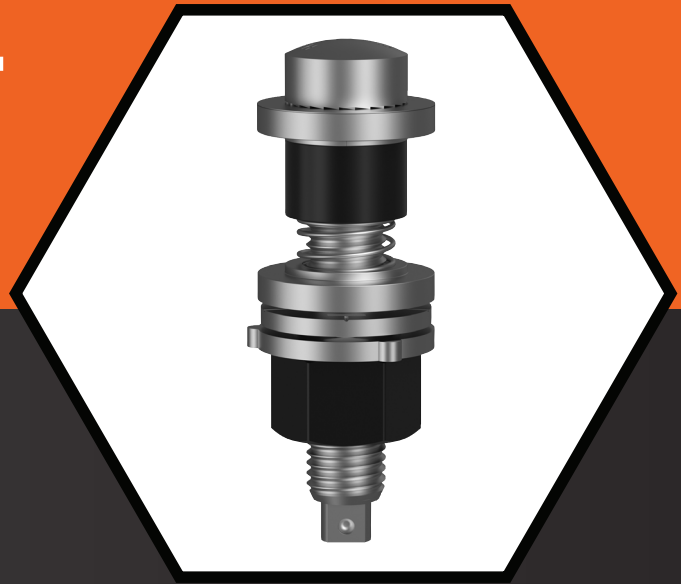


# ONESIDE™ BOLT



Proud Australian distributor of

**AJAX**  
FASTENERS  
**ONESIDE**™  
STRUCTURAL FASTENER

Structural Connections (TF/TB) | Class 8.8 HR | Blind Installation

# PRODUCT RELEASE





# PRODUCT DATA

## ONESIDE™ Bolt

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# Hobson ONESIDE™ Bolt

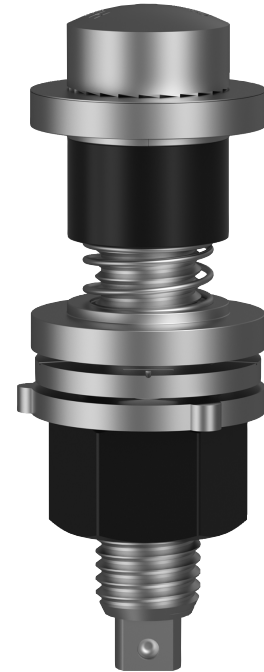
The ONESIDE™ bolt provides true structural strength for joints where access is limited to only one side of the joint. Unlike other blind fastening products available, the ONESIDE™ bolt provides superior clamping strength.

### Major features of ONESIDE™ Bolts:

- M30 shear capacity with an M20 bolt.
- Simple blind-installation method with a manual tool without requiring skilled labour.

The ONESIDE™ Bolts deliver:

- Reduced on-site labour requirements compared to welding.
- Restraint of vibration and mechanical movement.



### Applications

Applications include but are not limited to the following:

- For use with high performance hollow structural members.
- Retrofitting structural fixtures on hollow or one-sided access structures.
- Hollow communication towers and signage towers.
- Tanks and pressure vessels.
- Earthquake and cyclone tolerant structures.
- Mining and mineral processing equipment.
- Heavy cranes and lifting equipment.
- Road and rail gantries.

Material

8.8

ISO Property Class 8.8

Finish

HDG

Hot Dipped Galvanised

The ultimate high strength structural blind fastening system

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Bolt Tension | Anti-Vibration | Product Reliability | Traceability

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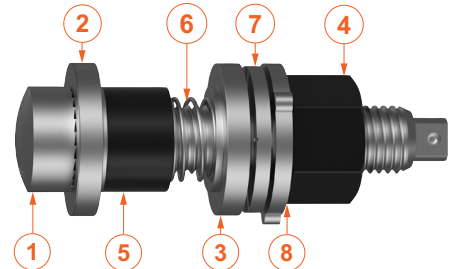
# PRODUCT DATA

## ONESIDE™ Bolt

### Components

- |                                 |   |
|---------------------------------|---|
| 1. High Strength Bolt Class 8.8 | 5. Hardened Sleeve                            |
| 2. Hardened Split Step-Washer   | 6. Spring                                     |
| 3. Hardened Solid Step-Washer   | 7. DuraSquirt® Direct Tension Indicator (DTI) |
| 4. Hardened Structural Nut      | 8. Structural Washer                          |

### Assembly



### ONESIDE™ Bolt

Part	OEM Part	Description	Sleeve Length	Grip Length	Pack Qty	Pack Wgt
			(mm)	(mm)		
KBO88GM20065006	697306	M20 x 65mm - Green	6	12-20	20	11.00
KBO88GM20095018	697318	M20 x 95mm - Black	18	23.5-36	20	12.50
KBO88GM20095030	697330	M20 x 95mm - Yellow	30	36-47	20	13.25
KBO88GM20135039	697339	M20 x 135mm - Blue	39	47-57	20	14.50
KBO88GM20135048	697348	M20 x 135mm - Brown	48	57-73	20	15.00
KBO88GM20135057	697357	M20 x 135mm - Purple	57	73-87	20	16.50
KBO88GM20165078	697378	M20 x 165mm - Red	76	87-120	15	14.00

### Insert Tool

Part	OEM Part	Description	Overall Length	Pack Qty	Pack Wgt
			(mm)		
XT-AJ-OS	452084	Insert Tool	480	1	0.70

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Bolt Tension | Anti-Vibration | Product Reliability | Traceability



# PRODUCT DATA

## ONESIDE™ Bolt

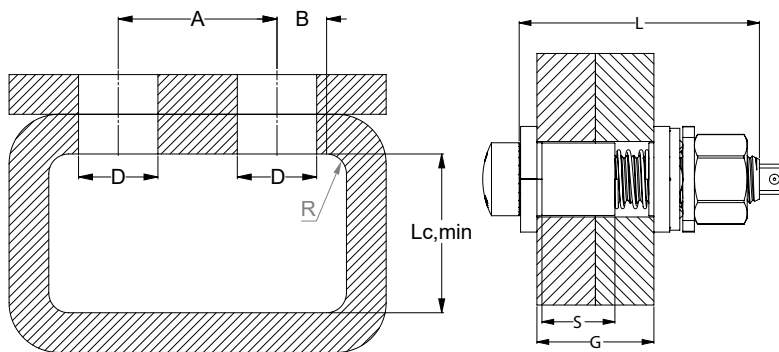
### Product Data: Mechanical Properties

Bolt Size	Ultimate Stress	Yield Stress	Proof Stress	Hardness Range	Shank Stress Area	Thread Stress Area	Core Shear Area	Sleeve Shear Area
Dia x Pitch	(MPa)	(MPa)	(MPa)	(HRC)	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )
M20x2.5	830	660	600	23-34	314	245	225	280

Bolt Size	Tensile Loads $N_{tr}$		Shear Across Shank $V_{shank}$		Shear Across Thread $V_{threads}$		Shear Across Sleeve $V_{sleeve}$	
	Ultimate	Proof	Ultimate	Proof	Ultimate	Proof	Ultimate	Proof
Dia x Pitch	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)
M20x2.5	203	147	162	117	116	84	144	104

### Product Data: Dimensions



Nominal Size	Minimum Pitch Length	Distance to Inner Edge	Hole Diameter
	A (mm)	B (mm)	D (mm)
M20x2.5	50	24	30-31

### Bolt Selection Guide

Nominal Size	Bolt Length	Sleeve Length	Grip Range	Minimum Cavity Length Required
	L (mm)	S (mm)	G (mm)	Lc,min (mm)
M20x2.5	65	6	12-20	190
	95	18	23.5-36	220
		30	36-47	
	135	39	47-57	260
		48	57-73	
	57	73-87		
165	76	87-120	290	

Required bolt length for specific applications can be selected based on the grip range of the connection. The sleeve length selected should ensure that the shear plane crosses the sleeve.

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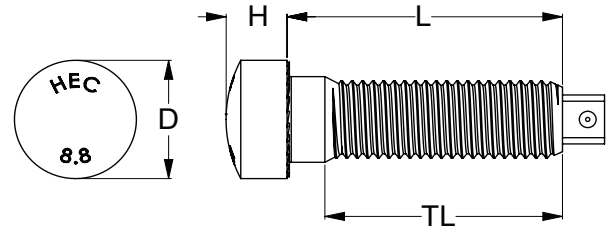


# PRODUCT DATA

## ONESIDE™ Bolt

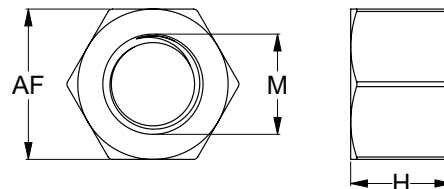
### Hobson ONESIDE™ Bolt

Nominal Size	Bolt Length	Thread Length	Head Thickness	Head Diameter
M	L (mm)	TL (mm)	H (mm)	D (mm)
M20x2.5	65	56.0	14	29
	95	86.5		
	135	107.0		
	165	107.0		



### AS1252 Structural Nut

Component	Nominal Size	AF	H
AS1252 Structural Nut	M	(mm)	(mm)
	M20 x 2.5	31-32	20.0-21.3

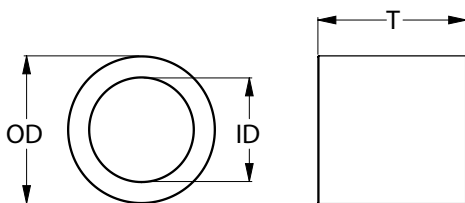


Component	Nominal Size	ID	OD	T
	M	(mm)	(mm)	(mm)
Hardened Sleeve	M20	21.0	29.0	REF <sup>1</sup>
Hardened Step Washer (Split & Solid)	M20	21.0	42.0	8.3
AS1252 Structural Washer	M20	21.0	37.4	4.1
DuraSquirt Direct Tension Indicator (DTI) <sup>2</sup>	M20	20.7	40.3	3.5

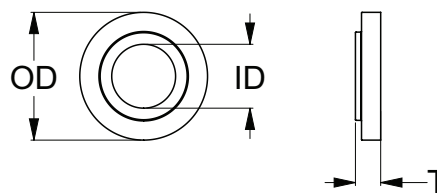
<sup>1</sup> Refer to Sleeve Length (S) in Bolt Selection Guide table.

<sup>2</sup> M20 DuraSquirt DTI has 5 bumps.

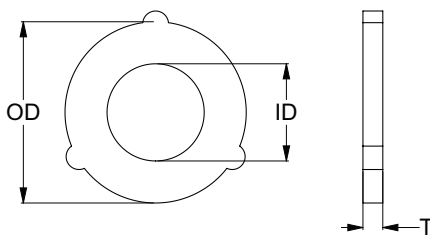
#### Hardened Sleeve



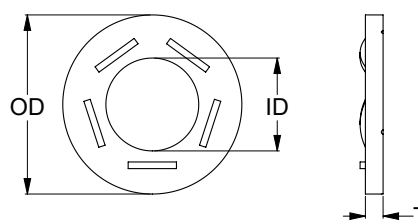
#### Hardened Step Washer (Split & Solid)



#### AS1252 Structural Washer



#### DuraSquirt® DTI



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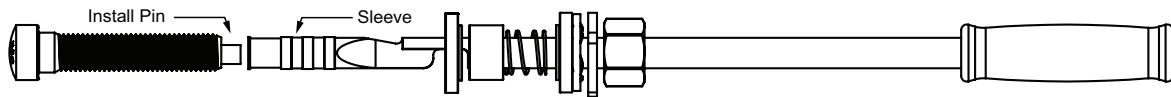
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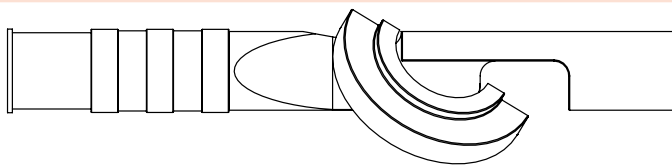
# PRODUCT DATA

## ONESIDE™ Bolt

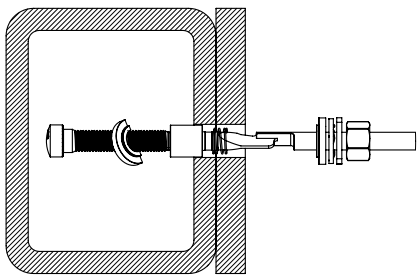
### Product Data: Installation Guide



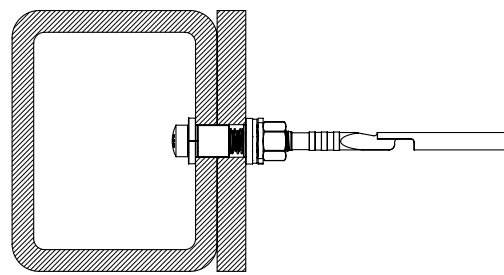
1. Place the tool onto the bolt over the install pin. Pull back the sleeve on the tool to engage the bolt in the front end of the tool. Then slide all the components on the assembly back over the tool. Push the sleeve forward to lock the bolt in place.



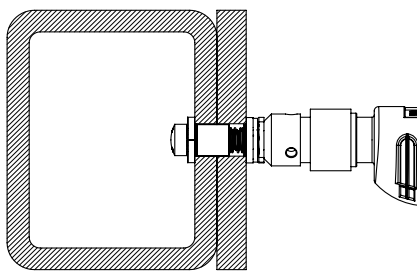
2. Fold the hardened split step-washer in the thin area of the installation tool as shown in figure. Guide the bolt and the washer through the hole of the assembled joint, pre-drilled to the requirements stated.



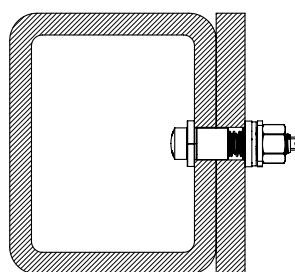
3. Rotate the installation tool 180° to unfold the washer. Pull the installation tool back to press the washer against the back of the joint.



4. Slide in the components on the bolt and snug-tighten the nut.



5. Remove the installation tool from the joint and use a torque wrench or other means to tighten the nut to the desired tension.



6. Remove the tightening tool and the installation of the Hobson ONESIDE™ bolt is now complete.

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