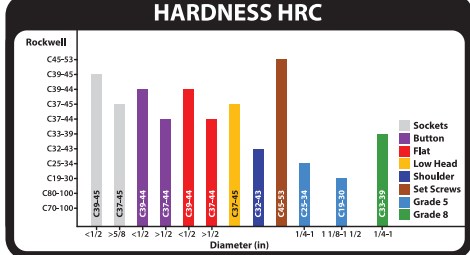
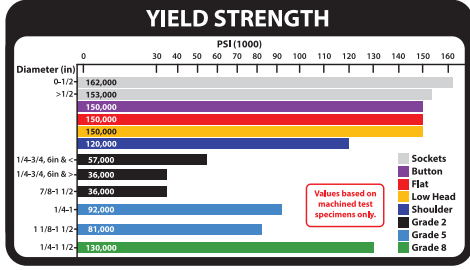
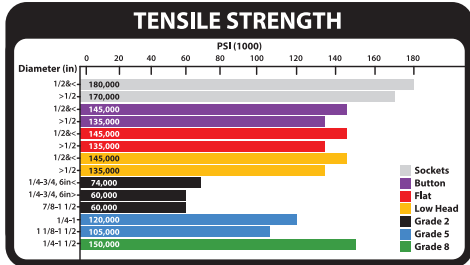
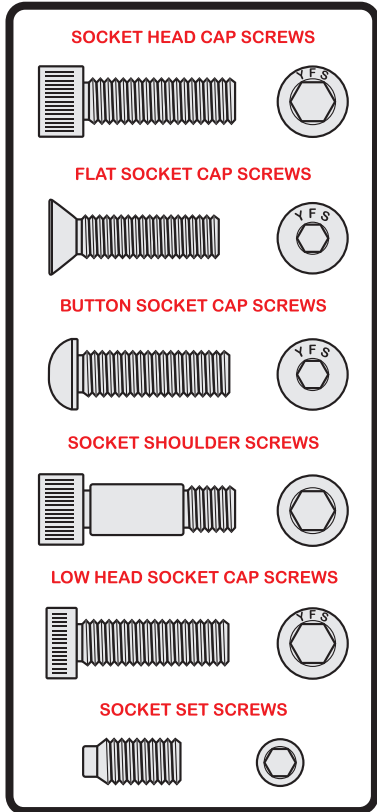




TECHNICAL GUIDE



BBI's partnership with YFS ensures that all socket products purchased from BBI are meticulously manufactured utilizing industry "best practices" and, have been rigidly tested to insure product reliability and superior performance.

ANNEALING

BEFORE SPHEROIDIZE | AFTER SPHEROIDIZE

FORMING

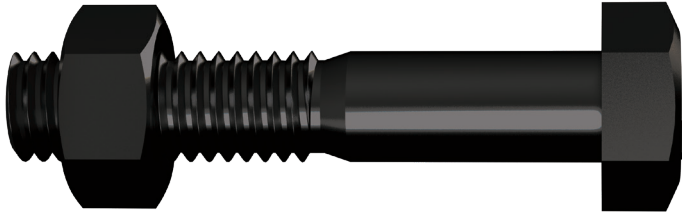
SOCKET HEAD CAP SCREW GRAIN FLOW-NOT UNIFORM (BAD) | SOCKET HEAD CAP SCREW GRAIN FLOW-UNIFORM (GOOD)

THREAD FORMING

Sharp angle | Sharp angle | THREAD ROLLING (BAD) | Round angle | Round angle | THREAD ROLLING (GOOD)

APPLICATIONS	
Description	Use / Application
Socket Screws	
Socket Head Cap Screws	Used in fastening or clamping components together, die castings, and machine assemblies among other use.
Flat Socket Cap Screws	Used in applications where counter sinking is desired. Used when a flush finish is required for either safety or appearance requirements.
Button Socket Cap Screws	Used when appearance is a factor and clamping material is too thin for counter sink. Examples are end panels, display shelving, and carts.
Socket Shoulder Screws	Used in many tool and die applications as well as stationary guides, pulley shafts, moving shafts, or pivots.
Low Head Socket Cap Screws	Used in applications where not enough clearance is available for a standard socket head cap screw.
Dowel Pins	Formed ends, controlled heat treat; close tolerances; standard for die work; also used as bearings, gages, precision parts, etc.
Pipe Plugs	3/4" taper (dry seal to help prevent leaks). 7/8 taper (flush seal to seat plug level with standard tapped hole).
Set Screws (Multiple Point Types)	
Cup Point Set Screws	Used against hardened shafts or where frequent adjustments are needed and no locking point is required.
Knurl Cup Set Screws	Similar to cup point but where vibration might be a problem. Knurls lock onto seating material and prevent screw from loosening.
Cone Point Set Screws	Used for permanent location of machine parts to shafts. Also used for pivots and fine adjustments.
Oval Point Set Screws	The oval point is used where frequent adjustments may be required. It may be used in applications where the point contacts the mating part at an angle.
Half Dog Set Screws	Used for permanent location of one part to another. Point is often set into a drilled hole. May sometimes take the place of a dowel pin.
Full Dog Set Screws	Used for permanent location of one part to another. Point is often set into a drilled hole. May sometimes take the place of a dowel pin.
Flat Point Set Screws	Used when parts must frequently be reset. Causes very minor damage to part it seats against.

HIGH TENSILE BOLTS & NUTS



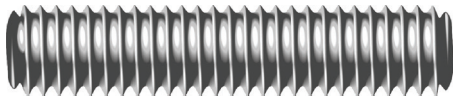
Bremick High Tensile fasteners are used where high strength connections are paramount. Our range includes, UNC Grade 5, UNC Grade 8, UNF Grade 5, UNF Grade 8 and Metric Class 8.8 Nuts & Bolts, Set Screws and Threaded Rod. Plain, zinc plated and galvanised finishes are all readily available.

Also available in zinc plated finish.

METRIC SAMPSONROD® 1M & 3M AS88GCM



- Hot Dip Galvanised
- DIN 975
- Class 8.8



HEX COUPLER AXHC08G



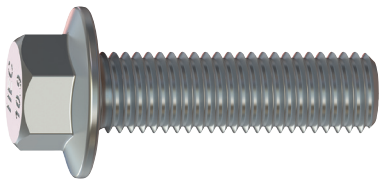
- Hot Dip Galvanised
- HEC
- Class 8



FLANGED HEX BOLT BF10PCM



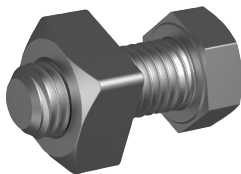
- Plain
- DIN 6921
- Class 10.9



TRAILER ADJ BOLT ASSEMBLY KBS88GQM



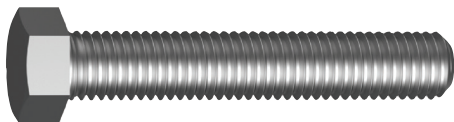
- Hot Dip Galvanised
- HEC
- Class 8.8



METRIC HEX SET SCREW BS88ZCM



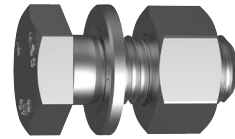
- Zinc Plated
- AS 1110.2
- Class 8.8



K2 10.9 STRUCTURAL ASSEMBLY KBHK9GCM



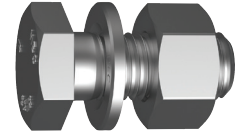
- HDG
- EN 14399-3: 2015 / Class 10.9
- M16 - M36



K2 STRUCTURAL ASSEMBLY KBHK2GCM



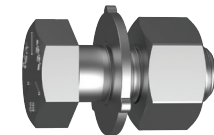
- Mechanical Galvanised
- EN 14399-3: 2015
- Class 8.8



K0 STRUCTURAL ASSEMBLY KBHK0GCM



- HDG
- AS1252:2016 / Class 8.8
- M12 - M36



IMPERIAL HIGH TENSILE BOLTS & NUTS



Macsim Stocks the Eclipse range of imperial hi tensile bolt & nut range. They are manufactured to Australian Standard AS2465-1999.

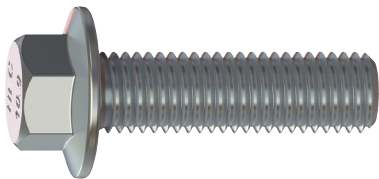
HEAD	GRADE	THREAD	FINISH	DIAM.
Hex	5	UNC	Black	1/4"-1-1/2"
			Zinc	1/4"-1"
	8	UNC	Black/ Zinc	1/4"-1"
			Zinc	1/4"-1"
		UNF	Black	1/4"-2"
			Zinc	1/4"-1"
		UNF	Black	1/4"-1-1/4"
			Zinc	1/4"-1"



FLANGED HEX BOLT BF10PCM



- Plain
- DIN 6921
- Class 10.9



METRIC HIGH TENSILE BOLTS & NUTS



Macsim Stocks the Eclipse range of metric hi tensile bolt & nut range. They are manufactured to Australian Standard AS1110-2000 (Bolts) AS1112-2000(Nuts)

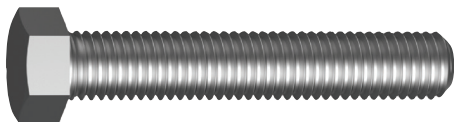
HEAD	THREAD	CLASS	FINISH	DIAM.
Hex	METRIC COARSE	8.8	Black	5-36mm
			Zinc	5-24mm
			Gal	12mm



METRIC HEX SET SCREW BS88ZCM



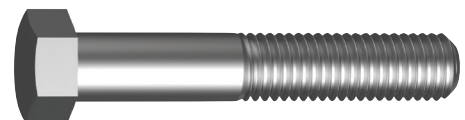
- Zinc Plated
- AS 1110.2
- Class 8.8

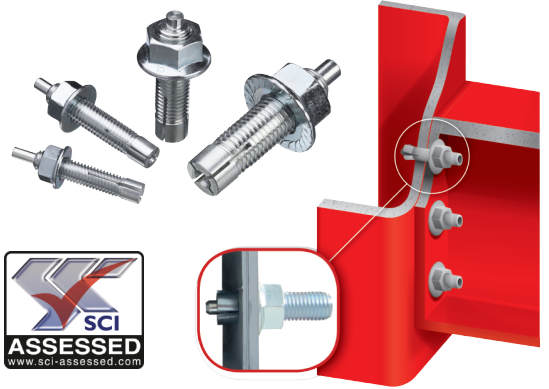


METRIC HEX BOLT BH88GCM

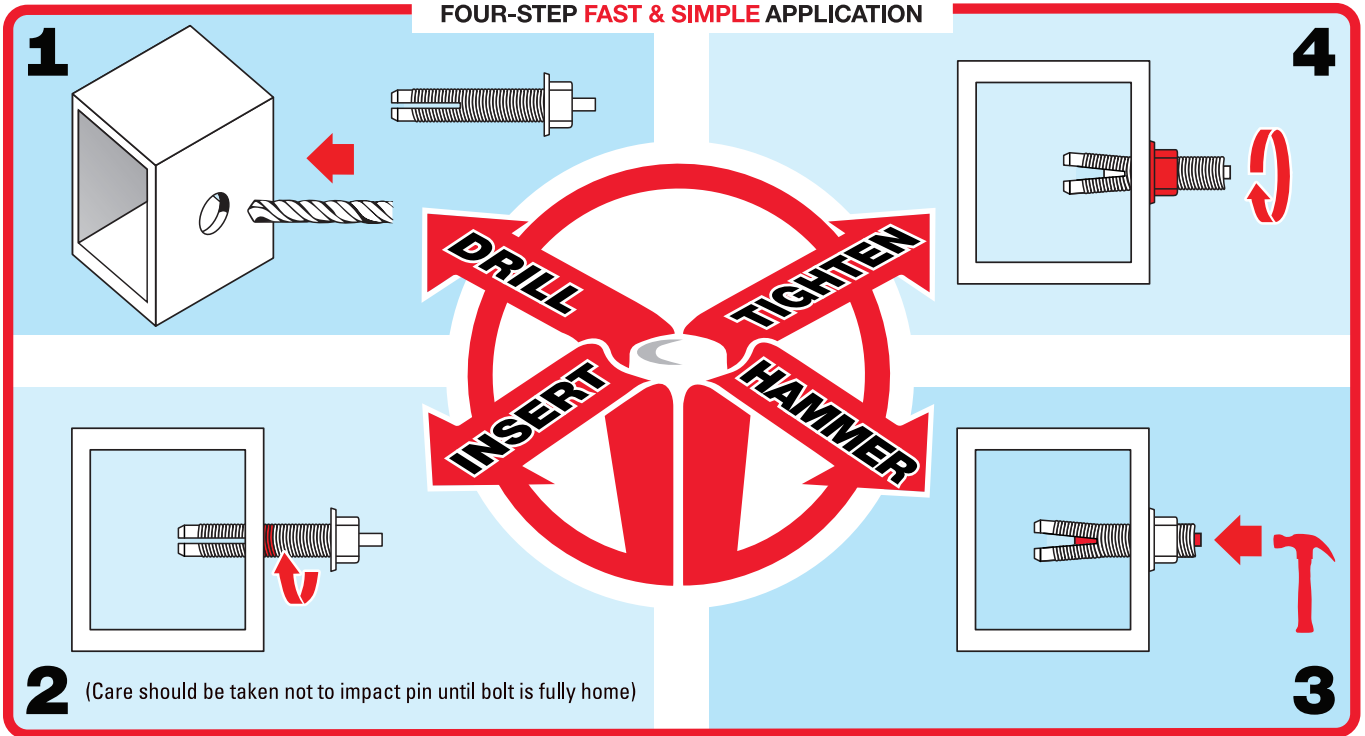


- Hot Dip Galvanised
- AS 1110.1
- Class 8.8





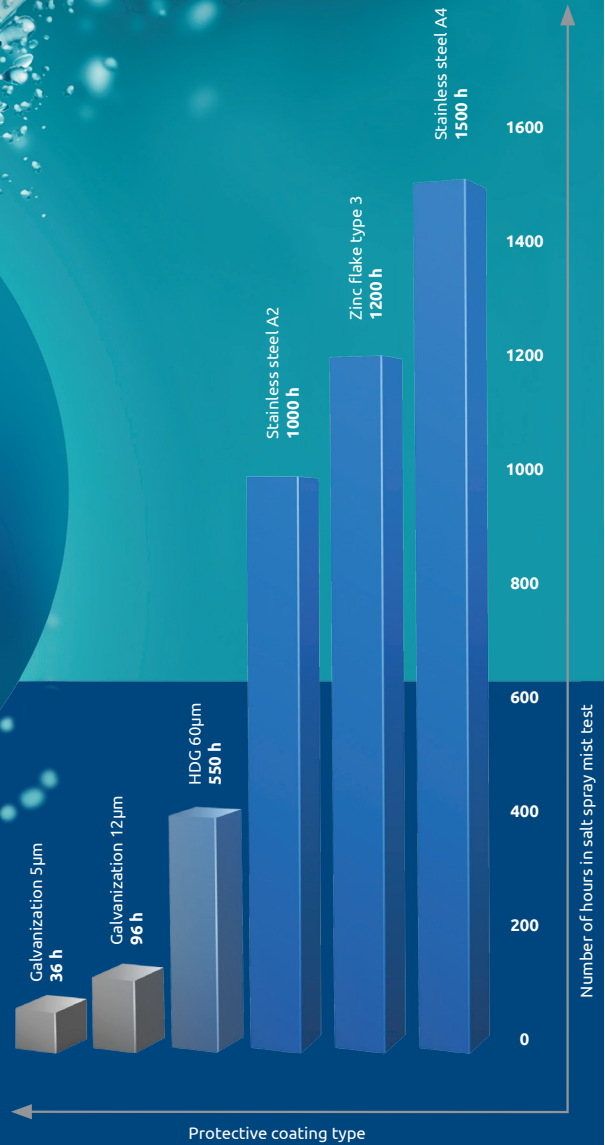
FOUR-STEP FAST & SIMPLE APPLICATION



Dimensions	Zinc Grade 8.8 Part Number	Stainless 316 Part Number	H. D. G. Part Number	Clamping Range	Pre-load Torque Settings
08mm X 50mm	PA0850	On Request	PAG0850	5mm – 34mm	20NM
10mm X 40mm	On Request	On Request	On Request	5mm – 34mm	35NM
10mm X 50mm	PA1050	PA1050SS	PAG81050	5mm – 30mm	35NM
10mm X 60mm	On Request	On Request	On Request		35NM
12mm X 30mm	On Request	On Request	On Request		50NM
12mm X 40mm	On Request	On Request	On Request		50NM
12mm X 50 mm	On Request	On Request	On Request		50NM
12mm X 60mm	PA1260	PA1260SS	PAG1260	7mm - 36mm	50NM
12mm X 75mm	On Request	On Request	On Request		50NM
14mm X 60mm	On Request	On Request	On Request		75NM
16mm X 60mm	PA1660	On Request	PAG1660	7mm – 32mm	100NM
20mm X 75mm	PA2075	On Request	PAG2075	7mm – 35mm	125NM
22mm X 24mm	On Request	On Request	On Request		150NM
24mm X 75mm	On Request	On Request	On Request		175NM



Revolutionary Zinc Flake coatings



Innovation in corrosion resistance

Atmospheric corrosion classification Corrosion categories	Typical environments		Recommended material			
	External	Internal	Zinc plating	Zinc Flake	A2	A4
C3 Moderate	Residential and industrial atmosphere with moderate pollution of SO ₂ . Coastal areas; low salinity atmosphere	Light industry with humidity and air pollution (Food production, laundry facilities, etc.)	40 µm	■	□	■
C4 High	Industrial and coastal areas; medium salinity atmosphere	Chemical factories, offshore ships, etc.	40 µm	■	-	■
C5-I/M Very high (marine)	Coastal and offshore areas with highly-aggressive atmospheric conditions of high salinity and humidity	Buildings and areas with condensation of water and high pollution	40 µm	□	-	■

□ Suitable for use ■ Consultation with technical advisor recommended - Not suitable for use



BRIGHTON-BEST INTERNATIONAL
FOUNDED 1925™

Trust & Innovation
RAWLPLUG®

BUMAX®

- Bumax® 88 tensile strength equivalent to Class 8.8. Class 10.9 available on request.
- Unmatched corrosion resistance.
- Lower install cost solution. Smaller Bolt with greater strength.

BUMAX® HEX NUT NHB8PCM



- Bumax®88
- ISO 4032

BUMAX® ALLTHREAD ROD ALB8PCM



- Bumax®88
- DIN 976

BUMAX® HEX BOLT BHB8PCM



- Bumax®88
- ISO 4014



BUMAX® FLANGE HEX LOCK NUT NLB8FCM



- Bumax®88
- BUMAX

BUMAX® FLAT SOCKET SCREW SCB8PCM



- Bumax®88
- ISO 10642

BUMAX® SOCKET HEAD CAP SCREW SHB8PCM



- Bumax®88
- ISO 4762

UNC PLOW BOLT CBPG9PC

- Plain
- HEC
- Grade 9



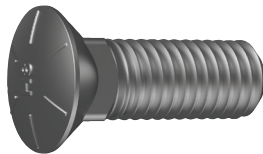
METRIC CAP SCREW SOCKET SHSOZCM

- Zinc Plated
- DIN 912
- Class 12.9



UNC PLOW BOLT CBPG8PC

- Plain
- HEC
- Grade 8



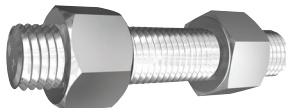
METRIC LOW HEAD SOCKET SLSOPCM

- Plain
- DIN 7984
- Alloy Steel



STUD BOLT & NUT KIT KSPB7

- Plain or Hot Dip Galvanised
- ASTM A193 / A194
- Grade B7 / 2H



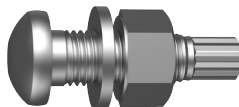
METRIC COUNTERSUNK SOCKET SCSOZCM

- Zinc Plated
- DIN 7991
- Class 12.9*



K0 10.9 TENSION CONTROL BOLT KBCT9GCM

- HDG
- EN 14399-10: 2018 / Class 10.9
- M12 - M36



METRIC BUTTON HEAD SOCKET SBSOZCM

- Zinc Plated
- ISO 7380
- Class 12.9*



UNC KNURL CUP PT SOCKET SSSKP

- Plain
- ANSI B18.3
- ASTM F912



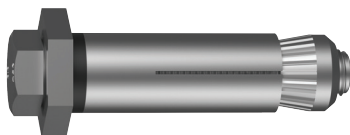
UNF CAP SCREW SOCKET SHSOPF

- Plain
- ANSI B18.3
- ASTM A574



HBS BOLT KBB88GHM

- HDG
- M8-M20
- Class 8.8



BSW BUTTON HEAD SOCKET SBSOPW

- Plain
- BS 2470
- Class 12.9*



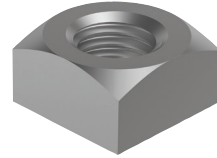
BOLTS & NUTS ASSORTMENT KIT FEFK015

- Includes: M6 / M8 / M10 / M12
- Zinc Plated
- Metric
- Class 8.8
- 7.07kg
- 513 pieces



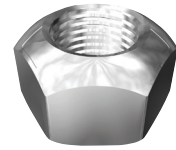
METRIC SQUARE NUT NQ08GCM

- Hot Dip Galvanised
- DIN 557
- Class 8



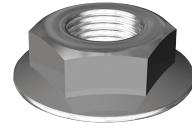
METRIC CONE LOCK HCL NUT NC10ZCM

- Zinc Plated
- DIN 980
- Class 10



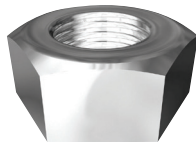
METRIC SERRATED HEX FLANGE NUT NF08YCM

- Zinc Yellow Passivated
- ISO 4161
- Class 8



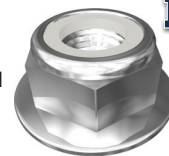
UNC HEX PLOW NUT CNPG8PC

- Plain
- HEC
- Grade 8



METRIC NYLOC® FLANGE NUT NF10YNM

- Zinc Yellow Passivated
- HEC
- Class 10

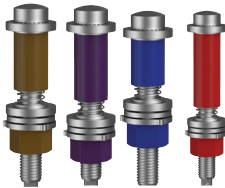


NYLOC®



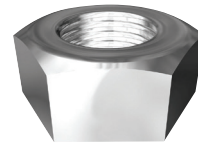
ONE SIDE BOLT KBO88GM20

- HDG
- M20, various grip ranges
- Class 8.8



METRIC HEX NUT NH08ZCM

- Zinc Plated
- AS 1112.1
- Class 8



FASTENERS

Richmond's new range of fasteners, includes nuts, bolts, set screws, washers, split pins, and more are available in a range of sizes & materials. With sizes from M8 to M20, our comprehensive range is sure to have what you're looking for.



Black Book

suttontools

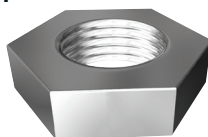


L200V1EN

L203V1EN

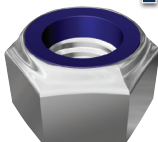
METRIC THIN HEX LOCK NUT NL08GCM

- Hot Dip Galvanised
- AS 1112.4
- Use with Class 8



METRIC NYLOC® NUT NN08GCM

- Mechanical Galvanised
- DIN 985
- Class 8



NYLOC



Fastener Black Book - 248 Pages of:

- Screw thread fundamentals
- Standards
- Heat treatment
- Thread classes
- Grades
- Materials & coatings
- Failures & corrosion
- Thread terminology
- Tolerances
- Fastener strengths & markings
- Hydrogen embrittlement
- Screw thread profiles
- Dimensional Specifications DIN / ISO / ANSI
- Galling
- Material selection
- Torque control
- Platings
- Elevated temperature effects

Thread Pitch Gauge Small edition with bonus tabs - L200V1EN

Thread Pitch Gauge Large edition with bonus tabs - L203V1EN