



PRODUCT GUIDE

HIGH-TENSILE



STRUCTURAL



SOKO



EARTHMOVING



PETROCHEMICAL



**STAINLESS
HARDWARE**



**STAINLESS
FASTENERS**



NEPTUNE



BUMAX



NORD-LOCK



SCHNORR



WASHERS



NYLON



COMMERCIAL



LOW-TENSILE



CYCLONE



TRADE PAX & KITS



MUNGO



CONXTRACT



DRILLX





Hobson Engineering Co. Pty. Ltd

A.B.N. 38 000 289 958

Quality Fasteners Since 1935

Sydney

Phone: (02) 8818 0222

Fax: (02) 9620 1850

Email: salesnsw@hobson.com.au

Townsville

Phone: (07) 3273 0733

Fax: (07) 3711 4551

Email: salesqld@hobson.com.au

Perth

Phone: (08) 9241 9888

Fax: (08) 9248 8806

Email: saleswa@hobson.com.au

Brisbane

Phone: (07) 3273 0777

Fax: (07) 3711 4551

Email: salesqld@hobson.com.au

Melbourne

Phone: (03) 9797 3333

Fax: (03) 9799 3081

Email: salesvic@hobson.com.au

Full range of quality fasteners online:

» **hobson.com.au**

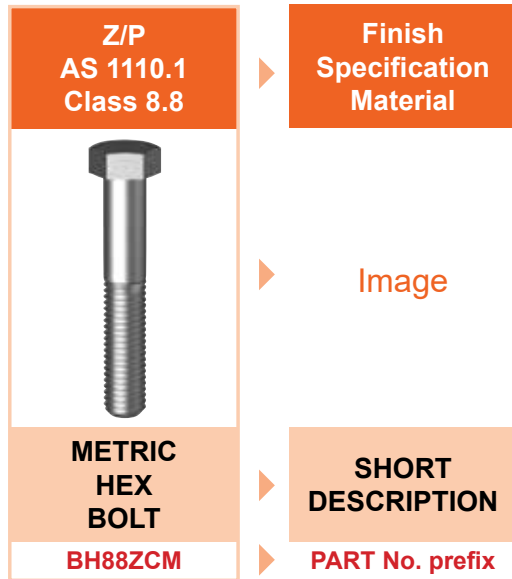
Published by Hobson Engineering Co. Pty. Ltd.
P.O. Box 320
Horsley Park N.S.W. 2175

All rights reserved. Hobson Engineering Co. Pty. Ltd. is the owner of the copyright subsisting in this publication. Other than permitted by the Copyright Act, no part of this publication can be reproduced, copied or transmitted, in any form or by any means (electric, mechanical, photocopying, recording, storage in a retrieval system or otherwise), without the prior written consent of Hobson Engineering Co. Pty. Ltd. Hobson Engineering Co. Pty. Ltd. will vigorously pursue any breach of its copyright.

This publication is distributed on the basis and understanding that the publisher is not responsible for the results of any actions taken on the basis of information in this publication, nor for any error in or omission from this publication. The publisher expressly disclaims all and any liability and responsibility to any person, whether a reader of this publication or not, in respect of anything, and the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partially, upon the whole or any part of the contents of this publication. Without limiting the generality of the foregoing the publisher accepts no liability for any loss or damage either direct or consequential arising out of or in relation to the use or application of the information or products referred to herein.



Using this Guide



BH88ZCM =

| Stock Code | Size | Length |
|---------------|------|--------|
| BH88ZCM060016 | M6 | 16 |
| BH88ZCM060020 | M6 | 20 |
| BH88ZCM060025 | M6 | 25 |
| BH88ZCM060030 | M6 | 30 |
| BH88ZCM060035 | M6 | 35 |
| BH88ZCM060040 | M6 | 40 |
| BH88ZCM060045 | M6 | 45 |
| BH88ZCM060050 | M6 | 50 |

Accreditation

AUSTRALIAN
TRUSTED
TRADER



Memberships



HIGH-TENSILE 6



STRUCTURAL 10



SOKO 18



EARTHMOVING 20



PETROCHEMICAL 21



**STAINLESS
HARDWARE** 22



**STAINLESS
FASTENERS** 28



NEPTUNE 33



BUMAX 34



NORD-LOCK 36



SCHNORR 38



WASHERS 40



NYLON 44



COMMERCIAL 46



LOW-TENSILE 48



CYCLONE 50



KITS 52



MUNGO 54



CONSTRUCT 68



DRILLX 72





NEW PRODUCTS

| | | | | | | |
|--|--|--|--|--|---|--|
| <div>Metal SS 304 BI-Metal</div> <div></div> <div></div> <div>PAN HEAD SQUARE DR</div> <div>T4XMPQ</div> | <div>Needle Point Coarse ZYP</div> <div></div> <div>LARGE WAFER PHILLIPS</div> <div>T9PCYAP</div> | <div>Needle Point Coarse Drywall ZYP</div> <div></div> <div>BUGLE BATTEN PHILLIPS</div> <div>T9PCYBP</div> | <div>HVAC Framing Z/P</div> <div></div> <div>HEX HEAD WASHER</div> <div>T9PFZWH</div> | <div>Type 17 ZYP</div> <div></div> <div>HEX HEAD FLANGE</div> <div>T9PWYFH</div> | <div>SS 304</div> <div></div> <div></div> <div>TRIM HEAD TORX DR</div> <div>T04VSTT</div> | <div>SS 410 ANSI B18.6.4</div> <div></div> <div>UNDERCUT CSK SELF TAPPING PHILLIPS</div> <div>T41SSDP</div> |
| <div>SS 410 ANSI B18.6.4</div> <div></div> <div>PAN HEAD SELF TAPPING SQUARE</div> <div>T41PSPQ</div> | <div>HEC</div> <div>EZ Drill Bit</div> <div></div> <div>KIT PRE-DRILL & COUNTERSINK</div> <div>TXDEZPK</div> | <div>HEC</div> <div>EZ Drill Bit</div> <div></div> <div>REPLACEMENT PRE-DRILL & COUNTERSINK</div> <div>TXDEZRK</div> | <div>Z/P HEC Carbon Steel</div> <div></div> <div>VERTICAL HANGER METAL</div> <div>MVMMSZIM</div> | <div>Z/P HEC Carbon Steel</div> <div></div> <div>VERTICAL SIDE HANGER METAL</div> <div>MVMMSZSM</div> | <div>Z/P HEC Carbon Steel</div> <div></div> <div>VERTICAL HANGER T17 TIMBER</div> <div>MVWMSZIM</div> | <div>Blue HEC For M6/M8/M10</div> <div></div> <div>VERTICAL HANGER SOCKET</div> <div>MXSVS-SI</div> |
| <div>304 SS Steel ZP</div> <div></div> <div>DOME HEAD OPEN RIVET</div> <div>R0473OLS</div> | <div>304 SS</div> <div></div> <div>DOME HEAD SEALED RIVET</div> <div>R0473TLL</div> | <div>5056 AL Steel ZP</div> <div></div> <div>DOME HEAD PEEL RIVET</div> <div>R9673P6S</div> | <div>Monel Steel ZP</div> <div></div> <div>COUNTERSUNK OPEN RIVET</div> <div>R9P72OMS</div> | <div>5056 AL Steel ZP</div> <div></div> <div>DOME HEAD OPEN RIVET</div> <div>R9P73O6S</div> | <div>S2 Alloy TitaN Bit 1/4</div> <div></div> <div>INSERT PHILLIPS</div> <div>TXDTIPH</div> | <div>S2 Alloy TitaN Bit 1/4</div> <div></div> <div>POWER HEX</div> <div>TXDTPHX</div> |
| <div>S2 Alloy Black impaX Bit 1/4</div> <div></div> <div>INSERT PHILLIPS</div> <div>TXDIIPH</div> | <div>S2 Alloy Black impaX Bit 1/4</div> <div></div> <div>INSERT BIT HOLDER MAG COLLAR</div> <div>TXDIIBM</div> | <div>S2 Alloy Black impaX Bit 1/4</div> <div></div> <div>MAGNETIC NUT SETTER</div> <div>TXDIPNS</div> | <div>S2 Alloy Black impaX Bit 1/4</div> <div></div> <div>POWER HEX</div> <div>TXDIPHX</div> | | | |

impaXTM

Drive Bits designed for high impact forces of modern power tools.

impaX™

Drive Bits designed for high impact forces of modern power tools.



NEW PRODUCTS

| | | | | | | | |
|---|---|---|---|--|--|--|---|
| <div>R1000 hrs HEC Carbon Steel</div> <div></div> <div>WALL KATT™ UNIVERSAL PAN SQUARE MWKXRPQ</div> | <div>Z/P HEC Carbon Steel</div> <div></div> <div>WALL KATT™ UNIVERSAL PAN PHILLIPS MWKXZPP</div> | <div>R1000 hrs HEC Carbon Steel</div> <div></div> <div>TX-CON™ ANCHOR CSK PHILLIPS MTXTRCP</div> | <div>R1000 hrs HEC Carbon Steel</div> <div></div> <div>TX-CON™ ANCHOR HEX SLOT MTXTRHL</div> | <div>Z/P HEC Carbon Steel</div> <div></div> <div>TX-CON™ FRAMING ANCHOR TORX MTXSZGO</div> | <div>Z/P HEC Carbon Steel</div> <div></div> <div>HOLLOW WALL ANCHOR STANDARD MWHDZPCM</div> | <div>Wall Anchor Tool HEC Carbon Steel</div> <div></div> <div>SETTING TOOL RATCHET STYLE MATWHR</div> | |
| <div>ZYP HEC Carbon Steel</div> <div></div> <div>TY9aBolt® CSK SLEEVE ANCHOR MTC88YM</div> | <div>MGAL HEC Carbon Steel</div> <div></div> <div>XBolt® BUTTON HEAD TORX DR MXDMSGM</div> | <div>MGAL HEC Carbon Steel</div> <div></div> <div>XBolt® CSK HEAD HEX DR MXKMSGM</div> | <div>ZYP HEC Carbon Steel</div> <div></div> <div>XBolt® CSK HEAD HEX DR MXKMSYM</div> | <div>Blue HEC For M10 XBolt®</div> <div></div> <div>VERTICAL HANGER SOCKET MXSVSM</div> | <div>ZYP HEC CARBON STEEL</div> <div></div> <div>500 x DROP-IN ANCHOR KNURLED BODY WITH LIP 2 x BITS / 1 x HANDLE IN BUCKET MDKMSSYM</div> | | |
| <div>PLASTIC HEC</div> <div></div> <div>PACKING SHIMS WINDOW MIX 1.5: WHITE / 3.2: BLUE / 5.0: RED 6.4: GREEN / 10.0: BLACK FTMPWPLX</div> | | | | <div>Vinylester MIT-TROPICAL</div> <div></div> <div>CARTRIDGE 350ML MUNGO MUCMTTRO</div> | <div>Vinylester urethane MIT-HYBRID</div> <div></div> <div>CARTRIDGE 400ML MUNGO MUCMTHYB1710094</div> | <div>MFB</div> <div></div> <div>DIAMOND DRILL BIT MUNGO MUDMFB00</div> | <div>SDS-PLUS JET-TRAC TRIPLO</div> <div></div> <div>DRILL BIT 3 CUTTER MUNGO MUDJTTPR</div> |
| <div>MPC Pro Cut</div> <div></div> <div>CUTTING DISC 1.0 - 1.9 MUNGO MUDMPCP1</div> | <div>MPG Pro Grind</div> <div></div> <div>GRINDING DISC 6.5 MUNGO MUDMPGPG</div> | <div>MDC Laser Beton</div> <div></div> <div>DIAMOND BLADE MUNGO MUDMDCLB</div> | <div>MDC Power M</div> <div></div> <div>DIAMOND BLADE MUNGO MUDMDCPM</div> | <div>SDS-PLUS MPM</div> <div></div> <div>FLAT CHISEL MUNGO MUDMPMFC</div> | <div>SDS-PLUS MPM</div> <div></div> <div>POINTED CHISEL MUNGO MUDMPMPC</div> | <div>SDS-MAX MXM</div> <div></div> <div>SPADE CHISEL MUNGO MUDMXMSC</div> | |



NEW PRODUCTS

| | | | | | | |
|--|---|---|--|--|---|--|
| <p>ZYP DIN 6921 Class 8.8</p> <p>FINE FLANGED HEX BOLT SERRATED</p> <p>BF88Y6FM</p> | <p>Z/P DIN 6921 Class 8.8</p> <p>FLANGED HEX BOLT SERRATED</p> <p>BF88ZCM</p> | <p>ZYP JIS B1189 Type 2 Class 8.8</p> <p>FLANGED HEX BOLT NO SERRATION</p> <p>BF88YCM</p> | <p>ZYP JIS B1189 Type 2 Class 8.8</p> <p>FINE FLANGED HEX BOLT NO SERRATION</p> <p>BF88YFM</p> | <p>SS 304 ISO 14579</p> <p>METRIC COUNTERSUNK TORX</p> <p>SC04POCM</p> | <p>SS 304 ISO 7380</p> <p>METRIC BUTTON HEAD TORX SCREW</p> <p>SB04POCM</p> | <p>PLN ASTM A193 Grade B7</p> <p>HEAVY HEX BOLT BLANK</p> <p>BPB7PB</p> |
| <p>Z/P HEC Class 10.9</p> <p>CSK SOCKET</p> <p>SC10ZCM</p> | <p>Z/P ANSI B18.3 ASTM F835</p> <p>UNC CSK SOCKET</p> <p>SCSOZC</p> | <p>Z/P ANSI B18.3 ASTM A574</p> <p>UNC CAP SCREW SOCKET</p> <p>SHSOZC</p> | <p>Z/P ANSI B18.3 ASTM A574</p> <p>FINE CAP SCREW SOCKET</p> <p>SHSOZFM</p> | <p>Z/P HEC Class 10.9</p> <p>METRIC BUTTON HEAD SOCKET SCREW</p> <p>SB10ZCM</p> | <p>Z/P ANSI B18.3 ASTM F835</p> <p>UNC BUTTON HEAD SOCKET SCREW</p> <p>SBSOZC</p> | <p>Bumax®129 ISO 4762 DUPLEX</p> <p>SOCKET HEAD CAP SCREW</p> <p>SHX9PCM</p> |
| <p>Z/P AS 1427: 1996 Mild Steel</p> <p>METAL THREAD PAN HEAD COMBI</p> <p>MSMSZPCM</p> | <p>Security SS 304 ISO 7380</p> <p>BARREL NUT BUTTON HEAD POST TORX</p> <p>INB04BTM</p> | <p>Z/P AS 1390 Class 10.9</p> <p>METRIC CUP HEAD BOLT & NUT</p> <p>KBC10ZCM</p> | <p>HDG AS 1390 Class 8.8</p> <p>METRIC CUP HEAD BOLT & NUT</p> <p>KBC88GCM</p> | <p>Z/P ASME B18.5 Grade 8</p> <p>UNC CUP HEAD BOLT & NUT</p> <p>KBCG8ZC</p> | <p>SS 316 DIN 975</p> <p>FINE ALLTHREAD 1m</p> <p>AL16PFM</p> | <p>ZYP DIN 6924 Class 8</p> <p>METRIC HEAVY NYLOC® NUT</p> <p>NN08Y6CM</p> |
| <p>Z/P ISO 10511</p> <p>NYLOC® NUT THIN</p> <p>NN05ZTCM</p> | <p>Z/P DIN 985 Class 6</p> <p>METRIC FINE NYLOC® NUT</p> <p>NN06ZFM</p> | <p>Z/P ASME B18.16.6 Type NTE / NTM</p> <p>UNC NYLOC® NUT THIN</p> <p>NNG2ZTC</p> | <p>Z/P ASME B18.16.6 Type NTE / NTM</p> <p>UNF NYLOC® NUT THIN</p> <p>NNG2ZTF</p> | <p>Z/P ISO 4161 Class 8</p> <p>METRIC SERRATED HEX FLANGE NUT</p> <p>NF08ZCM</p> | <p>1PX1 (MOLY) DIN 934 SS 316</p> <p>METRIC HEX NUT</p> <p>NH16LCM</p> | <p>SS 304 HEC</p> <p>UNF HEX DOME</p> <p>ND04PF</p> |



NEW PRODUCTS

| | | | | | | |
|--|---|--|---|--|---|---|
| <p>Delta Protekt® Hardened Steel EN 1.7182</p>   <p>STANDARD SC WASHER</p> <p>WNSCDD</p> | <p>Delta Protekt® Hardened Steel EN 1.7225</p>   <p>METRIC X SERIES LARGE OD WASHER</p> <p>WNXTLD</p> | <p>HDG AS1252 33-41HRC</p>  <p>TAPER WASHER 8° SQUARE</p> <p>WTK0GM</p> | <p>PLN AS1252 33-41HRC</p>  <p>TAPER WASHER 8° SQUARE</p> <p>WTK0PM</p> | <p>MGAL ASTM F959 Grade 5</p>   <p>SQUIRTOR® DTI WASHER</p> <p>WDSTG</p> | <p>HDG HEC 35-41HRC</p>  <p>METRIC SQUARE WASHER</p> <p>WSHTGM</p> | <p>Z/P HEC Mild Steel</p>  <p>METRIC SQUARE WASHER</p> <p>WSMSZM</p> |
| <p>Wall Mount HEC Imperial / Metric</p>  <p>THREAD CHECK DISPLAY</p> <p>XXTHREADCHECK</p> | <p>SS 304 HEC</p>  <p>SKID PLATE CUP WASHER</p> <p>WR04KM</p> | <p>Natural Nylon HEC</p>  <p>FLAT ADHESIVE WASHER</p> <p>WR66PDM</p> | <p>Nylon Black HEC UV Resistant</p>  <p>FINISHING WASHER RCC</p> <p>WR66UCM</p> | <p>HDG HEC Mild Steel</p>  <p>D ANCHOR BRACKET PLATE M6 / 4 HOLES</p> <p>GDAGP4M</p> | <p>HDG HEC Mild Steel</p>  <p>BSW U BOLT SQUARE KIT NYLOC & WASHER</p> <p>KUSMSGN</p> | |
| | <p>Z/P HEC</p>  <p>IMPERIAL THREAD CHECK DISPLAY CABLE</p> <p>XXTHREADCHKCAB-I</p> | <p>Nylon Natural HEC</p>  <p>UNC HEX SOCKET GRUB SCREW</p> <p>SG66PC</p> | <p>Z/P HEC Mild Steel</p>  <p>R CLIP HUMPBAC PIN</p> <p>QPRMSZM</p> | <p>Z/P HEC Mild Steel</p>  <p>METRIC SPLIT PIN</p> <p>QPSMSZM</p> | <p>Black HEC 25µm</p>  <p>SHRINK WRAP 500mm x 400m</p> <p>XSWB</p> | |
| | <p>PLN HEC</p>  <p>METRIC THREAD CHECK DISPLAY CABLE</p> <p>XXTHREADCHKCAB-M</p> | <p>Polyethylene HEC UV Resistant</p>  <p>PLUG HEAD COVER FOR HEX SCREW</p> <p>PHCPEUM</p> | <p>SS 304 HEC</p>  <p>FLUSH FITTING HINGE 6 HOLE FIXED PIN</p> <p>HHF04D-100</p> | <p>ALUM HEC</p>  <p>FLUSH FITTING HINGE 7 HOLE FIXED PIN</p> <p>HHFALD-100</p> | <p>SS 304 HEC</p>  <p>BUTT HINGE 8 HOLE FIXED PIN</p> <p>HHB04D-100</p> | |













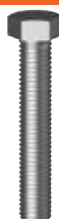




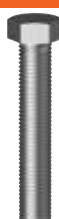




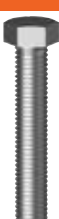







HIGH-TENSILE

| | | | | | | |
|--|--|---|--|---|--|---|
| <p>HDG DIN 975 Class 8.8</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>METRIC SAMPSONROD® 1m & 3m</p> <p>AS88GCM</p> | <p>HDG DIN 975 Class 8.8</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>METRIC FOUNDATION STUD</p> <p>AS88GCM</p> | <p>HDG DIN 975 Class 8.8</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>METRIC FINE SAMPSONROD®</p> <p>AS88GFM</p> | <p>PLN DIN 975 Class 8.8</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>METRIC SAMPSONROD® 1m & 3m</p> <p>AS88PCM</p> | <p>PLN DIN 975 Class 8.8</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>METRIC FINE SAMPSONROD®</p> <p>AS88PFM</p> | <p>ZYP DIN 975 Class 8.8</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>METRIC SAMPSONROD® 1m & 3m</p> <p>AS88YCM</p> | <p>HDG IFI 136C Grade 5</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>UNC SAMPSONROD® 3ft</p> <p>ASG5GC</p> |
| <p>PLN IFI 136C Grade 5</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>UNC SAMPSONROD® 3ft</p> <p>ASG5PC</p> | <p>PLN IFI 136C Grade 5</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>UNF SAMPSONROD® 3ft</p> <p>ASG5PF</p> | <p>PLN AS 3501 Grade 5</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>BSF SAMPSONROD® 3ft</p> <p>ASG5PS</p> | <p>PLN IFI 136C Grade 5</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>UN8 SAMPSONROD® 3ft</p> <p>ASG5PU</p> | <p>PLN AS 3501 Grade 5</p> <p>SAMPSONROD <small>High Tensile Steel Rod</small></p> <p>BSW SAMPSONROD® 3ft</p> <p>ASG5PW</p> | <p>PLN DIN 975 Class 10.9</p> <p>METRIC HOBROD™ 1m</p> <p>AS10PCM</p> | <p>PLN IFI 136C Grade 8</p> <p>UNC HOBROD™ 3ft</p> <p>ASG8PC</p> |
| <p>HDG HEC Class 8</p> <p>HEX COUPLER</p> <p>AXHC08GCM</p> | <p>PLN DIN 6921 Class 10.9</p> <p>FLANGED HEX BOLT</p> <p>BF10PCM</p> | <p>HDG HEC Class 8.8</p> <p>PURLIN HEX 2 WASHER BOLT & NUT</p> <p>KBHHTGCM</p> | <p>Z/P HEC Class 8.8</p> <p>PURLIN HEX 2 WASHER BOLT & NUT</p> <p>KBHHTZCM</p> | <p>HDG HEC Class 8.8</p> <p>PURLIN HEX FLANGE BOLT & NUT</p> <p>KBFHTGCM</p> | <p>Z/P HEC Class 8.8</p> <p>PURLIN HEX FLANGE BOLT & NUT</p> <p>KBFHTZCM</p> | <p>HDG HEC Class 8.8</p> <p>METRIC FASCIA BOLT KIT</p> <p>KBIHTGCM</p> |
| <p>HDG HEC Class 8.8</p> <p>TRAILER ADJ BOLT ASSEMBLY</p> <p>KBS88GQM</p> | <p>PLN AS 1110.1 Class 10.9</p> <p>HEX BOLT BLANK</p> <p>BH10PBM</p> | <p>HDG AS 1110.2 Class 8.8</p> <p>METRIC HEX SET SCREW</p> <p>BS88GCM</p> | <p>Z/P AS 1110.2 Class 8.8</p> <p>METRIC HEX SET SCREW</p> <p>BS88ZCM</p> | <p>PLN AS 1110.2 Class 8.8</p> <p>METRIC HEX SET SCREW</p> <p>BS88PCM</p> | <p>HDG AS 1110.1 Class 8.8</p> <p>METRIC HEX BOLT</p> <p>BH88GCM</p> | <p>PLN AS 1110.1 Class 8.8</p> <p>METRIC HEX BOLT</p> <p>BH88PCM</p> |






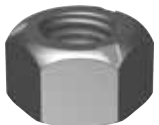




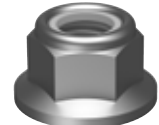



















HIGH-TENSILE

| | | | | | | |
|---|--|--|--|--|---|--|
| Z/P AS 1110.1 Class 8.8  METRIC HEX BOLT BH88ZCM | HDG AS 1110.1 Class 8.8  METRIC HEX BOLT & NUT KBH88GCM | Z/P AS 1110.1 Class 8.8  METRIC HEX BOLT & NUT KBH88ZCM | PLN AS 1110.1 Class 8.8  METRIC HEX BOLT & NUT KBH88PCM | Z/P AS 1110.2 Class 8.8  METRIC FINE HEX SET SCREW BS88ZFM | PLN AS 1110.2 Class 8.8  METRIC FINE HEX SET SCREW BS88PFM | Z/P AS 1110.1 Class 8.8  METRIC FINE HEX BOLT BH88ZFM |
| PLN AS 1110.1 Class 8.8  METRIC FINE HEX BOLT BH88PFM | Z/P AS 1110.1 Class 10.9  METRIC HEX BOLT BH10ZCM | PLN AS 1110.1 Class 10.9  METRIC HEX BOLT BH10PCM | Z/P AS 1110.1 Class 10.9  METRIC FINE HEX BOLT BH10ZFM | Z/P AS 2465 Grade 5  UNC HEX SET SCREW BSG5ZC | PLN AS 2465 Grade 5  UNC HEX SET SCREW BSG5PC | Z/P AS 2465 Grade 5  UNC HEX BOLT BHG5ZC |
| PLN AS 2465 Grade 5  UNC HEX BOLT BHG5PC | Z/P AS 2465 Grade 5  UNC HEX BOLT & NUT KBHG5ZC | PLN AS 2465 Grade 5  UNC HEX BOLT & NUT KBHG5PC | Z/P AS 2465 Grade 5  UNF HEX SET SCREW BSG5ZF | PLN AS 2465 Grade 5  UNF HEX SET SCREW BSG5PF | Z/P AS 2465 Grade 5  UNF HEX BOLT BHG5ZF | PLN AS 2465 Grade 5  UNF HEX BOLT BHG5PF |
| Z/P AS 2465 Grade 8  UNC HEX SET SCREW BSG8ZC | PLN AS 2465 Grade 8  UNC HEX SET SCREW BSG8PC | Z/P AS 2465 Grade 8  UNC HEX BOLT BHG8ZC | PLN AS 2465 Grade 8  UNC HEX BOLT BHG8PC | Z/P AS 2465 Grade 8  UNC HEX BOLT & NUT KBHG8ZC | PLN AS 2465 Grade 8  UNC HEX BOLT & NUT KBHG8PC | Z/P AS 2465 Grade 8  UNF HEX SET SCREW BSG8ZF |











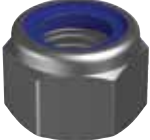
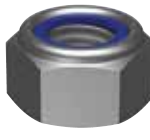
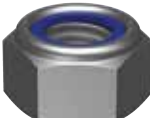
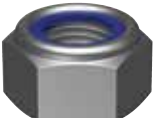
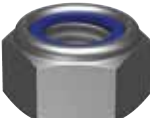
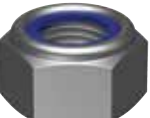
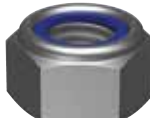
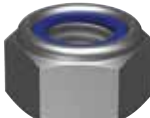
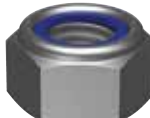

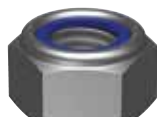
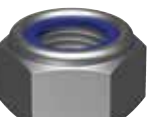






HIGH-TENSILE

| | | | | | | |
|--|---|--|---|---|--|--|
| <p>PLN AS 2465 Grade 8</p>  <p>UNF HEX SET SCREW</p> <p>BSG8PF</p> | <p>Z/P AS 2465 Grade 8</p>  <p>UNF HEX BOLT</p> <p>BHG8ZF</p> | <p>PLN AS 2465 Grade 8</p>  <p>UNF HEX BOLT</p> <p>BHG8PF</p> | <p>Z/P DIN 980 Class 10</p>  <p>METRIC CONE LOCK HCL NUT</p> <p>NC10ZCM</p> | <p>Z/P DIN 980 Class 10</p>  <p>METRIC FINE CONE LOCK HCL NUT</p> <p>NC10ZFM</p> | <p>Z/P IFI 100-107 Grade C</p>  <p>UNC CONE LOCK HCL NUT</p> <p>NCGCZ</p> | <p>Z/P IFI 100-107 Grade C</p>  <p>UNF CONE LOCK HCL NUT</p> <p>NCGCZF</p> |
| <p>HDG ISO 4161 Class 8</p>  <p>METRIC SERRATED HEX FLANGE NUT</p> <p>NF08GCM</p> | <p>ZYP ISO 4161 Class 8</p>  <p>METRIC SERRATED HEX FLANGE NUT</p> <p>NF08YCM</p> | <p>PLN ISO 4161 Class 10</p>  <p>METRIC SERRATED HEX FLANGE NUT</p> <p>NF10PCM</p> | <p>ZYP HEC Class 10</p> <p>NYLOC</p>  <p>METRIC NYLOC® FLANGE NUT</p> <p>NF10YNM</p> | <p>ZYP IFI 145 / B18 2.2 Grade 5</p>  <p>UNC SERRATED HEX FLANGE NUT</p> <p>NFG5YC</p> | <p>PLN IFI 145 / B18 2.2 Grade 8</p>  <p>UNF SERRATED HEX FLANGE NUT</p> <p>NFG8PF</p> | <p>Z/P IFI 145 / B18 2.2 Grade 8</p>  <p>UNC SERRATED HEX FLANGE NUT</p> <p>NFG8ZC</p> |
| <p>Z/P IFI 145 / B18 2.2 Grade 8</p>  <p>UNF SERRATED HEX FLANGE NUT</p> <p>NFG8ZF</p> | <p>ZYP ISO 4161 Class 8</p>  <p>METRIC FINE SERRATED HEX FLANGE NUT</p> <p>NF08YFM</p> | <p>PLN ISO 4161 Class 10</p>  <p>NO SERRATION HEX FLANGE NUT</p> <p>NF10PPM</p> | <p>HDG AS 1112.1 Class 8</p>  <p>METRIC HEX NUT</p> <p>NH08GCM</p> | <p>HDG AS 1112.1 Class 8</p>  <p>METRIC HEX NUT LEFT HAND</p> <p>NH08GDM</p> | <p>PLN AS 1112.1 Class 8</p>  <p>METRIC HEX NUT</p> <p>NH08PCM</p> | <p>PLN AS 1112.1 Class 8</p>  <p>METRIC FINE HEX NUT</p> <p>NH08PFM</p> |
| <p>Z/P AS 1112.1 Class 8</p>  <p>METRIC HEX NUT</p> <p>NH08ZCM</p> | <p>Z/P AS 1112.1 Class 8</p>  <p>METRIC FINE HEX NUT</p> <p>NH08ZFM</p> | <p>PLN AS1112.1 Class 10</p>  <p>METRIC HEX NUT</p> <p>NH10PCM</p> | <p>PLN AS1112.1 Class 10</p>  <p>METRIC FINE HEX NUT</p> <p>NH10PFM</p> | <p>Z/P AS1112.1 Class 10</p>  <p>METRIC HEX NUT</p> <p>NH10ZCM</p> | <p>Z/P AS 1112.1 Class 10</p>  <p>METRIC FINE HEX NUT</p> <p>NH10ZFM</p> | <p>PLN AS 2465 Grade 5</p>  <p>UNC HEX NUT</p> <p>NHG5PC</p> |



HIGH-TENSILE

| | | | | | | |
|---|---|--|---|---|---|--|
| <p>PLN AS 2465 Grade 5</p>  <p>UNF HEX NUT</p> <p>NHG5PF</p> | <p>Z/P AS 2465 Grade 5</p>  <p>UNC HEX NUT</p> <p>NHG5ZC</p> | <p>Z/P AS 2465 Grade 5</p>  <p>UNF HEX NUT</p> <p>NHG5ZF</p> | <p>PLN AS 2465 Grade 8</p>  <p>UNC HEX NUT</p> <p>NHG8PC</p> | <p>PLN AS 2465 Grade 8</p>  <p>UNF HEX NUT</p> <p>NHG8PF</p> | <p>Z/P AS 2465 Grade 8</p>  <p>UNC HEX NUT</p> <p>NHG8ZC</p> | <p>Z/P AS 2465 Grade 8</p>  <p>UNF HEX NUT</p> <p>NHG8ZF</p> |
| <p>HDG AS 1112.4 Use with Class 8</p>  <p>METRIC THIN HEX LOCK NUT</p> <p>NL08GCM</p> | <p>Z/P AS 1112.4 Use with Class 8</p>  <p>METRIC THIN HEX LOCK NUT</p> <p>NL08ZCM</p> | <p>NYLOC®</p> <p>Nylon insert locknuts</p> <p>Anti-vibration solution.</p> | | <p>Z/P DIN 982 Class 8</p>  <p>METRIC HEAVY NYLOC® NUT</p> <p>NN08ZHCM</p> | <p>Z/P DIN 982 Class 10</p>  <p>METRIC HEAVY NYLOC® NUT</p> <p>NN10ZHCM</p> | <p>MGAL DIN 985 Class 8</p>  <p>METRIC NYLOC® NUT</p> <p>NN08GCM</p> |
| <p>ZYP DIN 985 Class 8</p>  <p>METRIC NYLOC® NUT</p> <p>NN08YCM</p> | <p>ZYP DIN 985 Class 8</p>  <p>METRIC FINE NYLOC® NUT</p> <p>NN08YFM</p> | <p>Z/P DIN 985 Class 8</p>  <p>METRIC NYLOC® NUT</p> <p>NN08ZCM</p> | <p>Z/P DIN 985 Class 8</p>  <p>METRIC FINE NYLOC® NUT</p> <p>NN08ZFM</p> | <p>ZYP DIN 985 Class 10</p>  <p>METRIC NYLOC® NUT</p> <p>NN10YCM</p> | <p>Z/P DIN 985 Class 10</p>  <p>METRIC NYLOC® NUT</p> <p>NN10ZCM</p> | <p>Z/P IFI-100NE Grade 5</p>  <p>UNC NYLOC® NUT</p> <p>NNG5Z</p> |
| <p>Z/P IFI-100NE Grade 5</p>  <p>UNF NYLOC® NUT</p> <p>NNG5ZF</p> | <p>Z/P IFI-100NE Grade 8</p>  <p>UNC NYLOC® NUT</p> <p>NNG8ZC</p> | <p>Z/P IFI-100NE Grade 8</p>  <p>UNF NYLOC® NUT</p> <p>NNG8ZF</p> | <p>HDG DIN 557 Class 8</p>  <p>METRIC SQUARE NUT</p> <p>NQ08GCM</p> | <p>Z/P HEC Class 8.8</p>  <p>STARTER BAR L BOLT</p> <p>LB88ZCM</p> | <p>PLN AS 1085.4 Class 8.8</p>  <p>FISHBOLT & NUT</p> <p>DBD88PCM</p> | <p>PLN AS 1085.4/7 Class 8.8</p>  <p>FISHBOLT NUT & SPRING WASHER</p> <p>DBD88PSM</p> |



STRUCTURAL

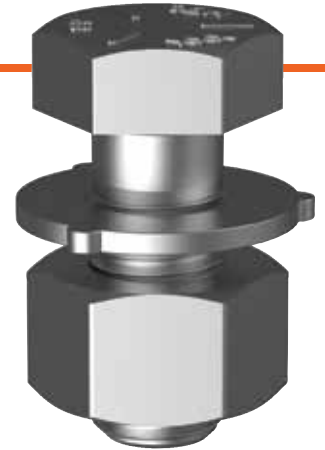
AS 1252: 2016 K0 8.8 HR Structural Assembly

» **AS 1252: 2016 K0 8.8 HR replaces
AS 1252: 1983 dimensional (1996 mechanical)**

- » Fully adhering to the new standard.
- » Unique Batch head marking. See photo below
- » Verification Testing Reports included in the Supplier Declaration of Conformance [SDoC].
- » Full Quality Assurance documentation online.



Assembly testing was made to be 'normative' in AS 1252: 2016. **This makes it compulsory to do assembly testing for K0 assemblies.**



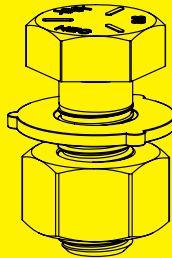
**HOT DIP GALVANISED
K0 STRUCTURAL ASSEMBLY
AS1252:2016 K0 / CLASS 8.8**

M20 x 50

50 pcs

Q:K02050

SDoC: This product complies to AS1252:2016 Part 1 and 2 (mandatory). ALL conforming documentation and quantity production units are available online at hobson.com.au/k0 or scan the below QR code.



KBHK0GCM200050

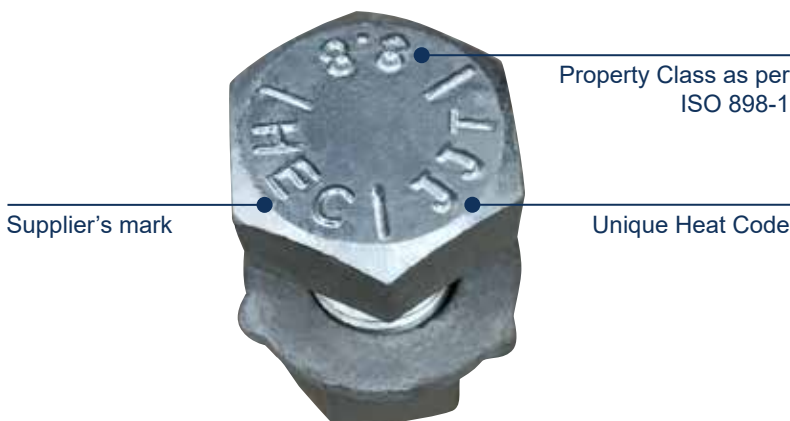
HEAT: JJT-E987654



LOT: A123456
PO: 99999 NS1
CTN WGT: 16.00kg

**K0 8.8 HR STRUCTURAL ASSEMBLY
HOT DIP GALVANISED / AS1252:2016 K0 / CLASS 8.8**

| Part | Size | Length (mm) |
|-------------|------|-------------|
| KBHK0GCM120 | M12 | 30-200 |
| KBHK0GCM160 | M16 | 40-700 |
| KBHK0GCM200 | M20 | 40-800 |
| KBHK0GCM220 | M22 | 55-200 |
| KBHK0GCM240 | M24 | 50-750 |
| KBHK0GCM270 | M27 | 80-200 |
| KBHK0GCM300 | M30 | 75-725 |
| KBHK0GCM330 | M33 | 130-230 |
| KBHK0GCM360 | M36 | 90-600 |



Supplier's mark

Property Class as per ISO 898-1

Unique Heat Code

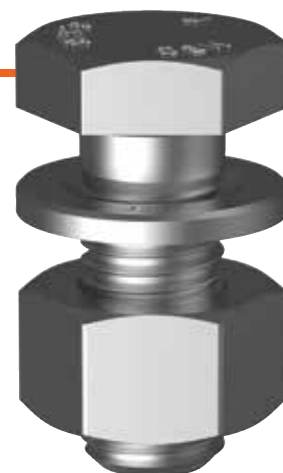
K0



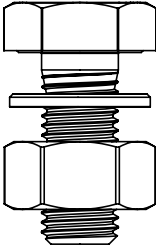

STRUCTURAL

EN 14399: 2005 K2 8.8 HR Structural Assembly

- » EN 14399: 2005 K2 8.8 HR [AS 1252: 2016 states that EN 14399 can be used as an 'alternative assembly type'].
- » Premium Range.
- » Unique batch head marking. See photo below.
- » Friction tightly controlled during manufacture. Refer details on the label for k factor and torque method.
- » Torque able to be used for tensioning.
- » Full Quality Assurance documentation online.



Carton Label

| | | |
|---|---|---|
| HR, HDG (EN14399-3 8.8 BOLT/ (1) EN14399-3 CL.8 NUT/ (1) EN14399-5 WASHER) | | |
| KBHK2GCM240080 | LOT# 2015351400 | Quantity: 30 PCS |
| PO# 58949 | Hobson Engineering 10 Clay Place Eastern Creek NSW 2766 AUSTRALIA | |
| Heat Code: 2MT | |  |
|  | | |
| 935062901642 | | |
| M24x3.0Px80 | | |
| Torque Method according to EN1090-2 ① 1st : 430 Nm ② 2nd : 630 Nm | | |
| k - class K2 ③ k_m : 0.120 ④ V_k : 0.06 | | |
| KEG NO: 1 PLT NO: 155 | | |

K2 8.8 HR STRUCTURAL ASSEMBLY HOT DIP GALVANISED / EN14399:2005 K2 / CLASS 8.8

| Part | Size | Length (mm) |
|-------------|------|----------------|
| KBHK2GCM160 | M16 | 40-100 |
| KBHK2GCM200 | M20 | 45-350 |
| KBHK2GCM220 | M22 | 65-130 |
| KBHK2GCM240 | M24 | 50-150 |
| KBHK2GCM300 | M30 | 75-500 |
| KBHK2GCM360 | M36 | 90-200 |



Manufacturer's mark

Unique Heat Code

Property Class as per
ISO 898-1 and HR

- ① The rated torque value required to bring the steel plies to firm contact (Snug or Bearing Joint).
- ② The rated torque value required to reach the correct tension in the assembly (Friction Joint).
- ③ The mean value of the k-factor obtained through testing.
- ④ V_k is the coefficient of variation of the k-factor values obtained in testing.



STRUCTURAL

Required Documentation

EN 14399: 2005 **K2** 8.8 HR
Assembly document structure.

» European Conformity (CE) Certificate.

The European Conformity (CE) mark is given to a manufacturer who has been assessed by a notified body and audited to the Harmonised European Standard (hEN) stating that they have the fabrication processes and quality management in place which is acceptable for the products manufactured. It is a requirement in the European Union to have the required CE marking on their products. A CE mark is only required in AS 1252: 2016 for the alternative and additional assembly types.

» Factory Production Control (FPC).

Inspection Certificate.

» Declaration of Performance (DoP).

AS 1252: 2016 **K0** 8.8 HR
Assembly document structure.

» Initial Type Testing Certificate (ITT) as demonstrated by the European Conformity (CE) Certificate.

» Factory Production Control (FPC).

Inspection Certificate.




» Verification Testing Report must be included in the Supplier Declaration of Conformance (SDoC).

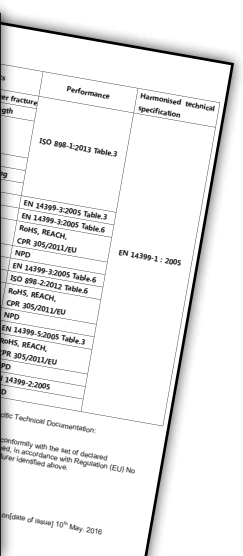
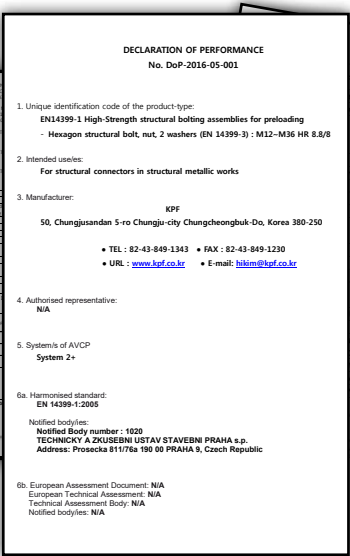
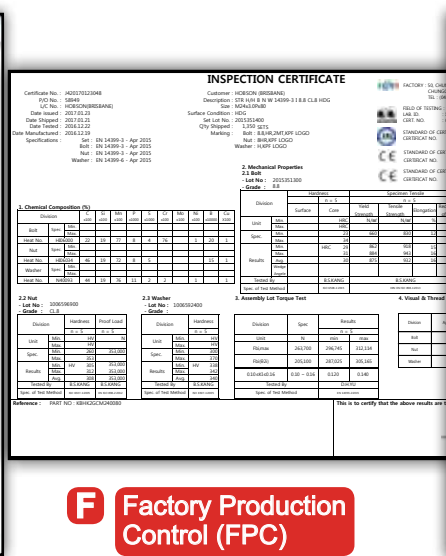

Verification Testing is an additional layer to the quality assurance of the **K0** assemblies arriving in Australia.


Verification Testing must be completed by an independent ILAC (NATA equivalent global body) accredited laboratory.


K2 Quality Assurance Documentation Online


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 |
|----------------|----------------------------|-------------------|----------------|---|
| 2015351400-2MT | EN 8.8 K2 HDG BNW:M24 X 80 | AS1252 Structural | KBHK2GCM240080 |    |



 The European Union's Certificate of conformity

 **Factory Production Control (FPC)**

 **Declaration of Performance (DoP)**

STRUCTURAL



K0 Quality Assurance Documentation Online

JJT

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 |
|-------------|---------------------------------|-------------------|----------------|--------------|
| JJT-E987654 | K0 AS1252:2016 HDG BNW:M20 X 50 | AS1252 Structural | KBHK0GCM200050 | ITT F S |



INSPECTION CERTIFICATE

Customer: Hobson
Product: K0 AS1252:2016 HDG BNW:M20 X 50
Size: M20 X 50
Marking: HEC 8.8 J88
Washer: H

Invoice No: INV0389
PO No: 23398
Part No: KBHK0GCM200050
Production Date: 27-Apr-17
Safety Condition: HDG
Assembly Trace No: 201552840
Qty Shipped: 10

FACTORY: Hobson Engineering approved Factory No.02
Certificate No: J42617012353
Date Shipped: 27-Apr-17

Specifications: Std: AS1252:2016 K0 Class-K0
Bolt: AS1252:2016
Nut: AS1252:2016
Washer: AS1252:2016

2 Mechanical Properties

2.1 Bolt

| Division | Surface | Core | Strength | Elongation | Reduction of Area | Proof Load | Weight Tolerance |
|----------|---------|------|-------------------|------------|-------------------|------------|------------------|
| Unit | mm | mm | N/mm ² | % | % | N | % |
| Spec | 20 | 20 | 510 | 16 | 35 | 215000 | 12.5 |
| Results | 20 | 20 | 510 | 16 | 35 | 215000 | 12.5 |
| Concl | Pass | Pass | Pass | Pass | Pass | Pass | Pass |

2.2 Washer

| Division | Hardness | Proof Load |
|----------|----------|------------|
| Unit | HRC | N |
| Spec | 20 | 215000 |
| Results | 20 | 215000 |
| Concl | Pass | Pass |

3 Assembly Test

| Division | Assembly | Thrust |
|----------|----------|--------|
| Unit | mm | N |
| Spec | 20 | 215000 |
| Results | 20 | 215000 |
| Concl | Pass | Pass |

4 Visual & Thread Inspection

| Division | Appearance | Thrust |
|----------|------------|--------|
| Unit | mm | N |
| Spec | 20 | 215000 |
| Results | 20 | 215000 |
| Concl | Pass | Pass |

This is to certify that the above results are true and correct to entry details.

Quality Control Manager: *How Kim*

F Factory Production Control (FPC)

ITT Initial Type Testing (ITT)

TEST REPORT

Report number: ZMTC/JC-2017-4-WG2-2(Z)
Sample name: Assembly (Bolt,Nut,Washer)
Customer: HOBSON ENGINEERING CO PTY. LTD.

Ningbo Zhongji Inspection of Machinery Parts Co.,Ltd

TEST REPORT

Test Results

| Test Results | Item Conclusion |
|--------------|-----------------|
| 19 232 100 | Pass |
| 20 233 700 | Pass |
| 30 234 000 | Pass |
| 10 +5 μm | Pass |
| 20 +4 μm | Pass |
| 30 +6 μm | Pass |
| 10 19 | Pass |
| 20 19 | Pass |
| 30 19 | Pass |
| 10 19 | Pass |
| 20 19 | Pass |
| 30 19 | Pass |

Ningbo Zhongji Inspection of Machinery Parts Co.,Ltd

TEST REPORT

Test Results

| Test Results | Item Conclusion |
|--------------|-----------------|
| 19 30.2 | Pass |
| 20 31.2 | Pass |
| 30 31.0 | Pass |
| 40 31.8 | Pass |
| 50 31.4 | Pass |
| 60 30.4 | Pass |
| 10 34.4 | Pass |
| 20 34.8 | Pass |
| 30 34.8 | Pass |
| 40 34.8 | Pass |
| 50 34.9 | Pass |
| 60 34.2 | Pass |
| 10 203 N | Pass |
| 20 212 N | Pass |
| 30 192 N | Pass |
| 40 245 N | Pass |

S DoC Compliance Statement

Hobson Engineering Co Pty Ltd (ABN 58 000 289 958) has reviewed the Initial Type Testing (ITT) reports of the factory that produced the product.

Hobson Engineering Co Pty Ltd (ABN 58 000 289 958) has reviewed the Factory Production Control (FPC) reports for the items on this verification report of the factory that produced the product.

Hobson Engineering Co Pty Ltd (ABN 58 000 289 958) and the factory that produced these products have systems satisfying ISO 9001 and procedures are in place to maintain product integrity, including testing procedures and nonconforming product.

Hobson Engineering Co Pty Ltd (ABN 58 000 289 958) has reviewed the ISO 9001 attached verification testing reports (VTR).

Hobson Engineering Co Pty Ltd (ABN 58 000 289 958) confirms compliance of this product to AS1252:2016 Part 1 and Part 2 (Headlines).

Signed on the authorized competent person at Hobson Engineering Co Pty Ltd

Peter Hobson & Eng (2004)
Quality Assurance Manager
CEO

Page 1 of 1

S Suppliers Declaration of Conformity (SDoC)



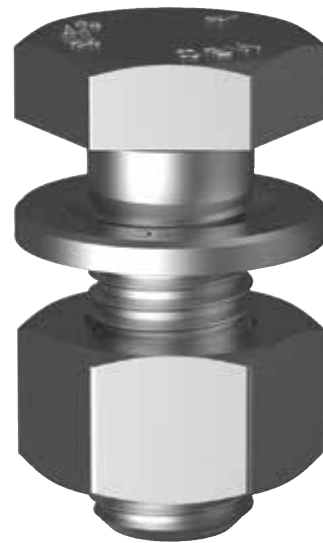
STRUCTURAL

K Classification of Bolt Systems

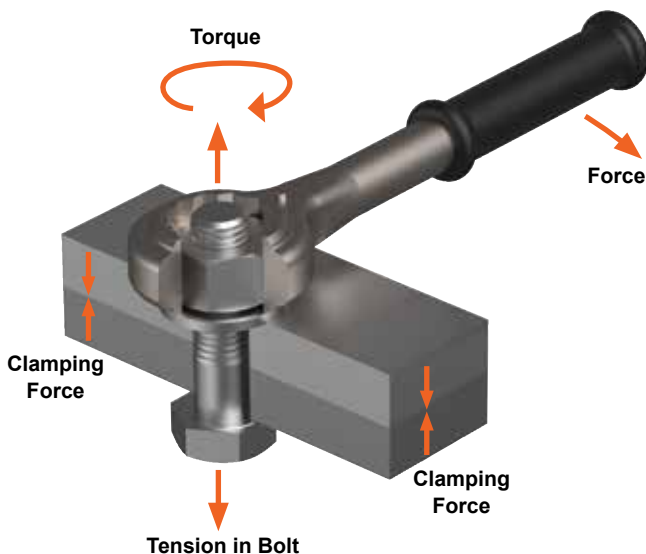
EN 14399 documentation provides performance values for designers along with tests to ensure that the assembly will perform as intended by the standard.

This European standard allows torque to be used when tightening structural bolts. This only applies for K1 and K2 assemblies where the torque-tension relationship is calibrated.

Structural Bolt assemblies that are manufactured to EN 14399 8.8 Type HR with K2 classification comply to the requirement of AS 1252: 2016 and can be used directly in the Australian market.



Torque and Tension?



Forces at play when a bolt is torqued.

Torque is the *rotational* force applied to a solid body.

Tension is the *axial* (along the shank) force applied to a solid body.

We can relate the torque applied to the nut to the tension achieved by the bolt. However, the effect of friction on surfaces that are in contact (threads and nut face) must be calibrated!

Friction

The formula below is applied to relate the tension achieved by the bolt from a specific torque on the nut.

$$M = F \cdot k \cdot d$$

M = torque required on the nut to achieve 'F'

F = required tension on the bolt

k = a factor applied to account for the torque loss primarily due to friction.

d = the thread diameter of the bolt

K Class

The K class of a bolt refers to the control of friction between the threads.

k-class and k-factor

| k-class | k-factor |
|---------|---|
| K0 | — |
| K1 | $0,10 \leq k_f \leq 0,16$ |
| K2 | $0,10 \leq k_m \leq 0,23 \quad V_k \leq 0,06$ |

From EN 14399: 2005-04.



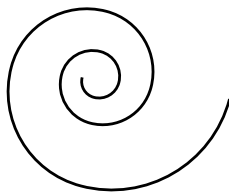
Structural Bolts Installation

AS 4100-1998

Working definitions:

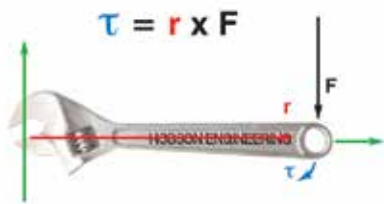
Torque

The energy taken to twist the nut up the thread of the bolt (Measured in Nm).



Torque is not used as a measure for the tensioning of structural bolting. Bolt torque values are not shown in AS 4100/NZS 3404.

Mathematically, torque can be defined as:



Tension

The force generated in the bolt to clamp the steel plies together (Measured in kN).



| Nominal Size | Pitch | Minimum Bolt Tension Kn |
|--------------|-------|-------------------------|
| M12 | 1.75 | 51 |
| M16 | 2.0 | 95 |
| M20 | 2.5 | 145 |
| M24 | 3.0 | 210 |
| M30 | 3.5 | 335 |
| M36 | 4.0 | 490 |

Note: the minimum bolt tension shown (AS 4100-1998) is approximately equivalent to the minimum proof loads shown in AS 1252.

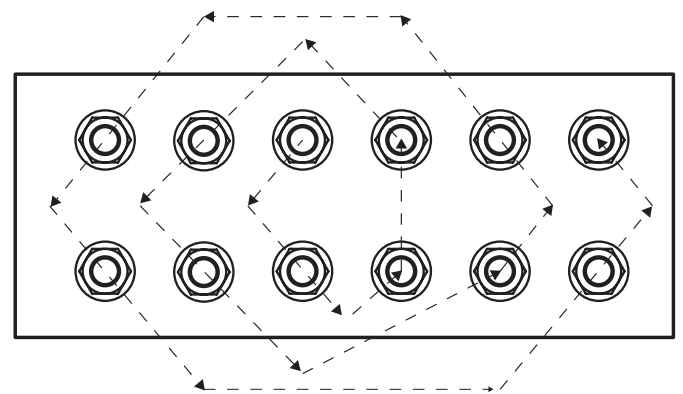
Snug tight

Prior to final tensioning of structural bolts the steel plies must be brought into effective contact. This is referred to as Snug-tight i.e. no gap between the steel plies.

Snug-tight can be achieved by a few impacts of an impact wrench or by the full effort of a person using a standard podger spanner. Correct bolt tension is required to ensure effective load transmission on the joint. Effective load transmission will not be achieved if a gap between the steel plates remains, which can occur if there is deformation from welding.

Tightening pattern

Snug-tightening and final tensioning of the bolts in a connection shall proceed from the stiffest part of the connection towards the free edges. An example interpretation of a systematic pattern for tightening is provided:



Delivery, storage and handling




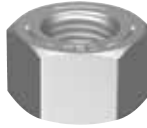
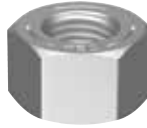
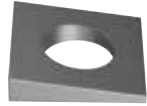
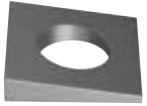



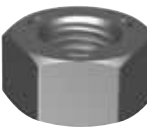

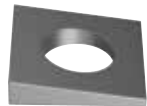
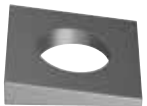






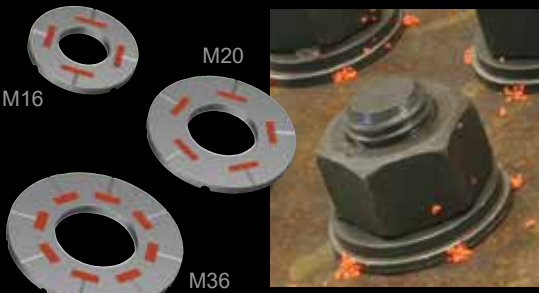
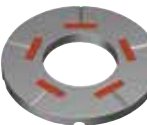
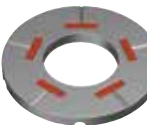
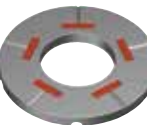

Structural bolt assemblies supplied to AS 1252 must be stored in the manufacturers carton protected from wet weather. White rusting on the galvanised surface, dust and removal of the water soluble lubricant on the nut can severely effect installation and correct tensioning.

Re-use of structural assemblies

Under no circumstances can a structural bolt which has been fully tensioned (i.e. the minimum values shown above) be re-used. If a bolt has been tensioned and then has to be removed it must be marked accordingly and destroyed.



STRUCTURAL

| | | | | | | |
|---|---|--|--|---|---|---|
| <p>HDG AS 1252: 2016 Class 8.8</p>  <p>K0 STRUCTURAL ASSEMBLY KBHK0GCM</p> | <p>HDG AS 1252: 2016 35-41 HRC</p>  <p>K0 STRUCTURAL WASHER WRK0GM</p> | <p>PLN AS 1252: 2016 35-41 HRC</p>  <p>K0 STRUCTURAL WASHER WRK0PM</p> | <p>HDG AS 1252: 2016 Class 8.8</p>  <p>K0 STRUCTURAL NUT NHK0GCM</p> | <p>PLN AS 1252: 2016 Class 8.8</p>  <p>K0 STRUCTURAL NUT NHK0PCM</p> | <p>HDG AS 1252: 2016 33-41 HRC</p>  <p>K0 TAPER WASHER 8° SQUARE WTK0GM</p> | <p>PLN AS 1252: 2016 33-41 HRC</p>  <p>K0 TAPER WASHER 8° SQUARE WTK0PM</p> |
| <p>HDG AS 1252: 1983 Class 8.8</p>  <p>STRUCTURAL ASSEMBLY KBHSTGCM</p> | <p>HDG AS 1252: 1983 26-45 HRC</p>  <p>STRUCTURAL WASHER WRSTGM</p> | <p>PLN AS 1252: 1983 35-45 HRC</p>  <p>STRUCTURAL WASHER WRSTPM</p> | <p>HDG AS 1252: 1983 Class 8</p>  <p>STRUCTURAL HEX NUT NHSTGCM</p> | <p>PLN AS 1252: 1983 Class 8</p>  <p>STRUCTURAL HEX NUT NHSTPCM</p> | <p>HDG AS 1252: 1983 26-45 HRC</p>  <p>TAPER WASHER 8° SQUARE WTSTGM</p> | <p>PLN AS 1252: 1983 35-45 HRC</p>  <p>TAPER WASHER 8° SQUARE WTSTPM</p> |
| <p>HDG EN 14399: 2005 Class 8.8</p>  <p>K2 STRUCTURAL ASSEMBLY KBHK2GCM</p> | <p>HDG EN14399-6 K2 32-45 HRC</p>  <p>K2 STRUCTURAL WASHER WRK2GM</p> | <p>PLN AS 1252: 1983 Class 8.8</p>  <p>STRUCTURAL BOLT BLANK BHSTPBM</p> | <p>SS 301 HEC</p>  <p>FEELER GAUGE 0.13MM XGF013</p> | <p>Cartridge 425g</p>  <p>STICK WAX LUBRICANT XXWSC</p> |  | |
|  <p>SQUIRTER® WASHER Direct Tension Indicator</p> | | | <p>MGAL ASTM F959M Class 8.8</p>  <p>METRIC SQUIRTER® DT WASHER WDSTGM</p> | <p>PLN ASTM F959M Class 10.9</p>  <p>METRIC SQUIRTER® DT WASHER WD10PM</p> | <p>MGAL ASTM F959M Class 10.9</p>  <p>METRIC SQUIRTER® WASHER WD10MM</p> | <p>MGAL ASTM F959M Class 8.8</p>  <p>METRIC LOAD INDICATOR WISTGM</p> |

STRUCTURAL



**Save 25% on your bolting installation cost.
Ask us how.**

Bolting made Safe, Easy and Accurate

TONE® Electric Torque Control Wrench



PART: XT-STC7TE



PART: XT-STC12TE

Featuring:





























- » 2 x Safety Reaction Arms
- » L-Shape Arm + Long Bar Arm 230mm
- » Light Weight (7TE 6.2kg, 12TE 9.0kg)
- » Non Impacting
- » Low Noise
- » Automatic Shut-off at Pre-set Torque
- » Torque Range 7TE 350-700Nm
- » Torque Range 12TE 500-1100Nm
- » 1" Square Drive (Both Models)

TONE®














Japanese Engineering



| | | | | | | |
|--|---|--|--|--|---|---|
| <p>Z/P DIN 912 Class 12.9</p>  <p>METRIC CAP SCREW SOCKET</p> <p>SHSOZCM</p> | <p>PLN DIN 912 Class 12.9</p>  <p>METRIC CAP SCREW SOCKET</p> <p>SHSOPCM</p> | <p>PLN DIN 7984 Alloy Steel</p>  <p>METRIC LOW HEAD SOCKET</p> <p>SLSOPCM</p> | <p>Z/P DIN 7991 Class 12.9*</p>  <p>METRIC CSK SOCKET</p> <p>SCSOZCM</p> | <p>PLN DIN 7991 Class 12.9*</p>  <p>METRIC CSK SOCKET</p> <p>SCSOPCM</p> | <p>Z/P ISO 7380 Class 12.9*</p>  <p>METRIC BUTTON HEAD SOCKET</p> <p>SBSOZCM</p> | <p>PLN ISO 7380 Class 12.9*</p>  <p>METRIC BUTTON HEAD SOCKET</p> <p>SBSOPCM</p> |
| <p>Z/P DIN 912 Class 8.8</p>  <p>METRIC CAP SCREW SOCKET</p> <p>SH88ZCM</p> | <p>PLN ANSI B18.3 ASTM A574</p>  <p>UNC CAP SCREW SOCKET</p> <p>SHSOP</p> | <p>PLN BS 2470 ASTM A574</p>  <p>BSW CAP SCREW SOCKET</p> <p>SHSOPW</p> | <p>PLN ANSI B18.3 ASTM A574</p>  <p>UNF CAP SCREW SOCKET</p> <p>SHSOPF</p> | <p>PLN ANSI B18.3 Alloy Steel</p>  <p>UNC LOW HEAD SOCKET</p> <p>SLSOP</p> | <p>PLN ANSI B18.3 ASTM F835</p>  <p>UNC CSK SOCKET</p> <p>SCSOP</p> | <p>PLN BS 2470 ASTM F835</p>  <p>BSW CSK SOCKET</p> <p>SCSOPW</p> |
| <p>PLN ANSI B18.3 ASTM F835</p>  <p>UNF CSK SOCKET</p> <p>SCSOPF</p> | <p>PLN ANSI B18.3 ASTM F835</p>  <p>UNC BUTTON HEAD SOCKET</p> <p>SBSOP</p> | <p>PLN BS 2470 Class 12.9*</p>  <p>BSW BUTTON HEAD SOCKET</p> <p>SBSOPW</p> | <p>PLN ANSI B18.3 ASTM F835</p>  <p>UNF BUTTON HEAD SOCKET</p> <p>SBSOPF</p> | <p>PLN ISO 4029 Alloy Steel</p>  <p>METRIC PLN PT SOCKET</p> <p>SSSPPCM</p> | <p>Z/P ISO 4029 Alloy Steel</p>  <p>METRIC KNURL CUP PT SOCKET</p> <p>SSSKZCM</p> | <p>PLN ISO 4029 Alloy Steel</p>  <p>METRIC KNURL CUP PT SOCKET</p> <p>SSSKPCM</p> |
| <p>PLN DIN 915 Alloy Steel</p>  <p>METRIC DOG PT SOCKET</p> <p>SSSDPCM</p> | <p>PLN ANSI B18.3 ASTM F912</p>  <p>UNC PLN PT SOCKET</p> <p>SSSPPC</p> | <p>PLN ANSI B18.3 ASTM F912</p>  <p>UNC KNURL CUP PT SOCKET</p> <p>SSSKP</p> | <p>PLN BS2470 Alloy Steel</p>  <p>BSW KNURL CUP PT SOCKET</p> <p>SSSKPW</p> | <p>PLN ANSI B18.3 ASTM F912</p>  <p>UNF KNURL CUP PT SOCKET</p> <p>SSSKPF</p> | <p>PLN ANSI B18.3 ASTM F912</p>  <p>UNF PLN PT SOCKET</p> <p>SSSPPF</p> | <p>PLN AS1112.1 Class 12</p>  <p>METRIC HEX NUT</p> <p>NH12PCM</p> |








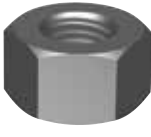




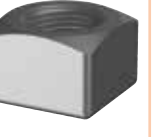
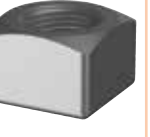




| | | | | | | |
|--|---|---|--|--|--|---|
| <p>PLN ANSI B18.3 Alloy Steel</p>  <p>UNC SHOULDER SOCKET</p> <p>SOSOPC</p> | <p>PLN ISO 7379 Class 12.9</p>  <p>METRIC SHOULDER SOCKET</p> <p>SOSOPCM</p> | <p>PLN BS 2470 Alloy Steel</p>  <p>BSW SHOULDER SOCKET</p> <p>SOSOPW</p> | <p>PLN Alloy Steel</p>  <p>NPTF PRESSURE PLUG HEX</p> <p>PPSOPN</p> | <p>PLN Alloy Steel</p>  <p>BSP PRESSURE PLUG HEX</p> <p>PPSOPB</p> | <p>PLN Alloy Steel</p>  <p>LEVEL SEAL PRESSURE PLUG HEX</p> <p>PPSOPL</p> | <p>PLN Alloy Steel</p>  <p>METRIC PRESSURE PLUG HEX</p> <p>PPSOPTM</p> |
| <p>Z/P HEC</p>  <p>SEL-LOCK SPRING PIN</p> <p>PLSOZ</p> | <p>PLN HEC ISO Class 10.9</p>  <p>METRIC T-BOLT</p> <p>BTSOPCM</p> | <p>PLN HEC ISO Class 10.9</p>  <p>BSW T-BOLT</p> <p>BTSOPW</p> |  <p>Reliable Precision High Tensile</p> | | | |

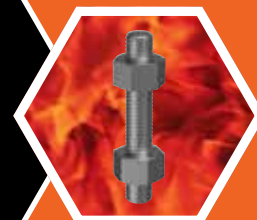




EARTHMOVING

| | | | | | | |
|--|---|--|---|---|--|---|
| <p>PLN HEC Grade 9</p>  <p>UNC PLOW BOLT</p> <p>CBPG9PC</p> | <p>PLN HEC Grade 9</p>  <p>UNC STEPPED PLOW BOLT</p> <p>CBXG9PC</p> | <p>PLN HEC Grade 8</p>  <p>UNC PLOW BOLT</p> <p>CBPG8PC</p> | <p>PLN HEC Grade 9</p>  <p>METRIC FINE DOME HEX TRACK BOLT</p> <p>CBTG9DFM</p> | <p>PLN HEC Grade 9</p>  <p>UNF DOME HEX TRACK BOLT</p> <p>CBTG9DF</p> | <p>PLN HEC Grade 9</p>  <p>METRIC FINE HEX TRACK BOLT</p> <p>CBTG9HFM</p> | <p>PLN HEC Grade 9</p>  <p>UNF HEX TRACK BOLT</p> <p>CBTG9HF</p> |
| <p>PLN HEC Grade 8</p>  <p>UNC HEX PLOW NUT</p> <p>CNPG8PC</p> | <p>PLN HEC Grade 8</p>  <p>UNF HEX TRACK NUT</p> <p>CNTG8HF</p> | <p>PLN HEC Grade 8</p>  <p>METRIC FINE SQ COLLAR TRACK NUT</p> <p>CNTG8CFM</p> | <p>PLN HEC Grade 8</p>  <p>UNF SQ RND FACE TRACK NUT</p> <p>CNTG8RF</p> | <p>PLN HEC Grade 8</p>  <p>METRIC FINE SQ RND FACE TRACK NUT</p> <p>CNTG8RFM</p> | <p>PLN HEC Grade 8</p>  <p>UNF SQUARE TRACK NUT</p> <p>CNTG8QF</p> | <p>PLN HEC Grade 8</p>  <p>METRIC FINE SQUARE TRACK NUT</p> <p>CNTG8QFM</p> |
| <p>PLN HEC Grade 8</p>  <p>UNF SQ STEPPED TRACK NUT</p> <p>CNTG8SF</p> | <p>PLN HEC Grade 8</p>  <p>UNF HEX RND FACE TRACK NUT</p> <p>CNTG8EF</p> | | | | | |





STUD BOLT & NUT KITS – ASTM A193 / A194

| | | | |
|-----|---------------|-----|---------|
| PLN | Grade B7 / 2H | UNC | KSPB7PC |
| PLN | Grade B7 / 2H | UN8 | KSPB7PU |
| HDG | Grade B7 / 2H | UNC | KSPB7GC |

| | | | |
|-----|---------------|-----|---------|
| HDG | Grade B7 / 2H | UN8 | KSPB7GU |
| XYB | Grade B7 / 2H | UNC | KSPB7BC |
| XYB | Grade B7 / 2H | UN8 | KSPB7BU |



STUD BOLT – ASTM A193

| | | | |
|-----|---------------|-----|--------|
| PLN | Grade B8 CL2 | UNC | SP82PC |
| PLN | Grade B8 CL2 | UN8 | SP82PU |
| PLN | Grade B8M CL2 | UNC | SPM2PC |
| PLN | Grade B8M CL2 | UN8 | SPM2PU |
| PLN | Grade B7 | UNC | SPB7PC |
| PLN | Grade B7 | UN8 | SPB7PU |
| HDG | Grade B7 | UNC | SPB7GC |
| HDG | Grade B7 | UN8 | SPB7GU |

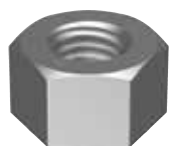
| | | | |
|-----|----------|-----|--------|
| XYB | Grade B7 | UNC | SPB7BC |
| XYB | Grade B7 | UN8 | SPB7BU |
| CAD | Grade B7 | UNC | SPB7CC |
| CAD | Grade B7 | UN8 | SPB7CU |
| Z/P | Grade B7 | UNC | SPB7ZC |
| Z/P | Grade B7 | UN8 | SPB7ZU |
| ZYP | Grade B7 | UNC | SPB7YC |
| ZYP | Grade B7 | UN8 | SPB7YU |



ALLTHREAD ROD – ASTM A193

| | | | |
|-----|----------|-----|--------|
| PLN | Grade B7 | UNC | APB7PC |
|-----|----------|-----|--------|

| | | | |
|-----|----------|-----|--------|
| PLN | Grade B7 | UN8 | APB7PU |
|-----|----------|-----|--------|



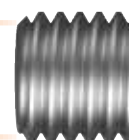
HEAVY HEX NUT – ASTM A194 / M

| | | | |
|-----|----------|--------|---------|
| PLN | Grade 8 | UNC | NPG8PC |
| PLN | Grade 8 | UN8 | NPG8PU |
| PLN | Grade 8 | METRIC | NPG8PCM |
| PLN | Grade 8M | UNC | NP8MPC |
| PLN | Grade 8M | UN8 | NP8MPU |
| PLN | Grade 8M | METRIC | NP8MPCM |
| PLN | Grade 2H | UNC | NP2HPC |
| PLN | Grade 2H | UN8 | NP2HPU |
| HDG | Grade 2H | UNC | NP2HGC |

| | | | |
|-----|----------|-----|--------|
| HDG | Grade 2H | UN8 | NP2HGU |
| XYB | Grade 2H | UNC | NP2HBC |
| XYB | Grade 2H | UN8 | NP2HBU |
| CAD | Grade 2H | UNC | NP2HCC |
| CAD | Grade 2H | UN8 | NP2HCU |
| Z/P | Grade 2H | UNC | NP2HZC |
| Z/P | Grade 2H | UN8 | NP2HZU |
| ZYP | Grade 2H | UNC | NP2HYC |
| ZYP | Grade 2H | UN8 | NP2HYU |



Hobson hold an **extensive range of L7 and B16 materials** ex-stock and source special materials on request.



UNC ≤ 1 Inch

UN8 > 1 Inch

KEY

CAD: Cadmium

XYB: Xylan Blue



STAINLESS HARDWARE

| | | | | | | |
|--|---|--|--|---|--|---|
| SS 316 HEC  D SHACKLE STANDARD HSH16DSM | SS 316 HEC  D SHACKLE CAPTIVE PIN HSH16CPM | SS 316 HEC  D SHACKLE LONG HSH16LGM | SS 304 HEC  D SHACKLE LIGHTWEIGHT HSH04LWM | SS 316 HEC  D SHACKLE INTERNAL HEX PIN HSH16HPM | SS 316 HEC  D SHACKLE WIDE MOUTH HSH16WMM | SS 316 HEC  D SHACKLE BOW HSH16BWM |
| SS 316 HEC  SHACKLE TWISTED HSH16TWM | SS 316 HEC  D SHACKLE DOUBLE BAR HSH16DBM | SS 316 HEC  SHACKLE REPLACEMENT PIN HXPINS | SS 316 HEC  SWIVEL EYE SNAP HSW16EP | SS 316 HEC  SWIVEL EYE + EYE HSW16EE | SS 316 HEC  SWIVEL JAW + JAW HSW16JJ | SS 316 HEC  SWIVEL EYE SNAP SHACKLE HSW16EK |
| SS 316 HEC  SWIVEL JAW SNAP SHACKLE HSW16JK | SS 304 HEC  S HOOK HHK04S | SS 316 HEC  SNAP HOOK CAST HHK16CP | SS 316 HEC  SPRING HOOK ASYMMETRIC HHK16SA | SS 316 HEC  SNAP HOOK SAFETY LATCH HHK16CL | SS 316 HEC  SNAP HOOK RIGID EYE HHK16CR | SS 316 HEC  SPRING HOOK HHK16SP |
| SS 316 HEC  SPRING HOOK EYE HHK16SE | SS 316 HEC  SPRING HOOK EYE & NUT HHK16SN | SS 316 HEC  PELICAN HOOK HHK16PEM | SS304 HEC  PAD EYE DIAMOND HEP04DI | SS304 HEC  PAD EYE OVAL HEP04OV | SS304 HEC  PAD EYE OBLONG HEP04OB | SS304 HEC  PAD EYE OBLONG RING HEP04OR |


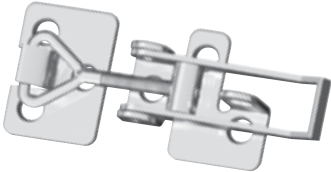












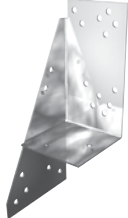
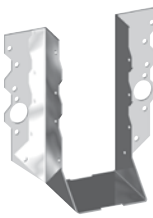







STAINLESS HARDWARE



| | | | | | | |
|--|---|---|--|--|--|--|
| <div>SS304 HEC</div> <div></div> <div>PAD EYE ROUND BOLT</div> <div>HEP04RB</div> | <div>SS304 HEC</div> <div></div> <div>PAD EYE ROUND</div> <div>HEP04RD</div> | <div>SS304 HEC</div> <div></div> <div>PAD EYE ROUND OPEN</div> <div>HEP04RO</div> | <div>SS316 HEC</div> <div></div> <div>EYE NUT</div> <div>HEN16PM</div> | <div>SS 316 HEC</div> <div></div> <div>EYE BOLT KIT COLLAR</div> <div>HEC16KM</div> | <div>SS 316 HEC</div> <div></div> <div>LAG SCREW EYE COLLAR</div> <div>HES16CL</div> | <div>SS 304 HEC</div> <div></div> <div>EYE BOLT KIT</div> <div>HEB04PM</div> |
| <div>SS 316 HEC</div> <div></div> <div>EYE BOLT COLLAR</div> <div>HEC16PM</div> | <div>SS 316 HEC</div> <div></div> <div>U BOLT KIT ROUND</div> <div>KUR16PCM</div> | <div>SS 304 HEC</div> <div></div> <div>U BOLT KIT + PLATE CRIMP</div> <div>HUR04KPM</div> | <div>SS 316 HEC</div> <div></div> <div>U BOLT KIT SQUARE</div> <div>KUS16PCM</div> |  | | |
| <div>SS 316 HEC</div> <div></div> <div>U BOLT KIT SQ WITH SPRING WASHER</div> <div>KUS16PSM</div> | | | | | | |



STAINLESS HARDWARE

| | | | | | |
|--|---|--|---|---|--|
| SS 316 HEC  CHAIN LINK REGULAR POLISHED HCH16LP | SS 304 HEC  TOGGLE LATCH ADJUSTABLE HLT04A | SS 316 HEC  PULLEY NYLON BLOCK HPB16RP | SS 316 HEC  PULLEY NYLON BLOCK SWIVEL HPB16BP | SS 304 HEC  WELDED RING DEE HRG04WD | SS 304 HEC  WELDED RING TRIANGLE HRG04WT |
| | SS 304 HEC  WELDED RING ROUND HRG04WR | SS 316 HEC  WELDED RING ROUND HRG16WR | SS 316 HEC  CHAIN LINK CLIP POLISHED HCH16LC | SS 316 HEC  CHAIN LINK QUICK POLISHED HCH16LQ | SS 316 HEC  MULTI-GRIP HGM16D |
| | | SS 316 HEC  TRIPLE-GRIP LEFT HAND HGT16L | | | |
| SS 304 HEC  PIANO HINGE DRILLED HHP04D | SS 304 HEC  PIANO HINGE UNDRILLED HHP04U | SS 316 HEC  TRIPLE-GRIP RIGHT HAND HGT16R | SS 316 HEC  JOIST HANGER HHJ16D | SS 304 HEC Screws included  BUTT HINGE 4 HOLE FIXED PIN HHB04D-050 | SS 304 HEC Screws included  BUTT HINGE 6 HOLE FIXED PIN HHB04D-075 |
| | | SS 304 HEC Screws included  BUTT HINGE 8 HOLE LOOSE PIN HHB04L | SS 304 HEC  HATCH HINGE EVEN HHH04E | SS 304 HEC  HATCH HINGE UNEVEN HHH04U | SS 316 HEC  HATCH HINGE EVEN HHH16E |
| | | SS 316 HEC  HATCH HINGE UNEVEN HHH16U | | | |












STAINLESS BALUSTRADE



| | | | | | | | | | | |
|--|--|---|---|--|--|---|--|--|--|--|
| <div>SS 316 HEC</div> <div></div> <div>WIRE ROPE 1 x 19 RIGID <div>HRW16119</div></div> | <div>SS 316 HEC</div> <div></div> <div>WIRE ROPE 7 x 7 WORKABLE <div>HRW16707</div></div> | <div>SS 316 HEC</div> <div></div> <div>WIRE ROPE 7 x 7 PVC COATED <div>HRW16707P</div></div> | <div>SS 316 HEC</div> <div></div> <div>WIRE ROPE 7 x 19 FLEXIBLE <div>HRW16719</div></div> | <div>SS 316 HEC</div> <div></div> <div><div>WIRE ROPE 3.2mm 305m per roll</div><div>100m and 1000m rolls also available</div><div>HRW16</div></div> | | | | | | |
|  | | | | | | <div>SS 316 HEC</div> <div></div> <div>TERMINAL SWAGE FORK <div>HTS16FK</div></div> | <div>SS 316 HEC</div> <div></div> <div>TERMINAL SWAGE FORK MINI TYPE <div>HTS16FM</div></div> | <div>SS 316 HEC</div> <div></div> <div>TERMINAL SWAGE FORK TOGGLE <div>HTS16FT</div></div> | <div>SS 316 HEC</div> <div></div> <div>TERMINAL SWAGE STUD MINI <div>HTS16MT</div></div> | <div>SS 316 HEC</div> <div></div> <div>TERMINAL SWAGE EYE <div>HTS16EY</div></div> |
| | | | | | | <div>Nickel Plate Copper HEC</div> <div></div> <div>MACHINE FERRULE <div>HXFEM</div></div> | <div>Nickel Plate Copper HEC</div> <div></div> <div>HAND FERRULE <div>HXFEH</div></div> | <div>SS 316 HEC</div> <div></div> <div>TERMINAL SWAGE BUTTON HEAD <div>HTS16BH</div></div> | <div>SS 304 HEC</div> <div></div> <div>WIRE ROPE THIMBLE <div>HXTH04</div></div> | <div>SS 304 HEC</div> <div></div> <div>SADDLE EYE STRAP <div>HED04ST</div></div> |
| | | | | | | <div>SS 316 HEC</div> <div></div> <div>WIRE ROPE GRIP <div>HXRW16G</div></div> | <div>SS 304 HEC</div> <div></div> <div>HEAD TENSIONER ALLEN KEY <div>HXHT04AK</div></div> | <div>SS 304 HEC</div> <div></div> <div>HEAD TENSIONER HEX HEAD <div>HXHT04HH</div></div> | <div>SS 304 HEC</div> <div></div> <div>CROSS CONNECTOR <div>HXCC04</div></div> | <div>Nylon HEC</div> <div></div> <div>BLACK BUSH SPLIT TYPE <div>HXNBB</div></div> |
| | | | | | | <div>Chrome Plate Brass HEC</div> <div></div> <div>BEVELLED WASHER <div>HXWBBC</div></div> | <div>SS 316 HEC</div> <div></div> <div>WIRE ROPE SHELF SUPPORT CLIP <div>HXSS16</div></div> | | | |

















STAINLESS HARDWARE

| | | | | | |
|---|---|--|--|--|--|
| <div>SS 316 HEC</div> <div></div> <div>ROUND BALL INTERNAL THREAD</div> <div>HXRB16TM</div> | <div>SS 316 HEC</div> <div></div> <div>ROUND BALL</div> <div>HXRB16</div> | <div></div> | | <div>SS 316 HEC</div> <div></div> <div>TIMBER INS CSK HEX SOCKET L/H</div> <div>HXTI16CLM</div> | <div>SS 316 HEC</div> <div></div> <div>TIMBER INS CSK HEX SOCKET R/H</div> <div>HXTI16CRM</div> |
| <div>SS 316 HEC</div> <div></div> <div>EYE SCREW METAL THREAD</div> <div>HES16PCM</div> | <div>SS 316 HEC</div> <div></div> <div>LAG EYE SCREW</div> <div>HES16PL</div> | <div>SS 316 HEC</div> <div></div> <div>CLEVIS REPLACEMENT PIN</div> <div>HXPINC</div> | <div>SS 316 HEC</div> <div></div> <div>RETAINING CLIP</div> <div>HXRC</div> | <div>MGAL HEC</div> <div></div> <div>SOCKET DRIVE</div> <div>HXSD</div> | <div>KEY</div> <div>CHR: Chrome</div> <div>HDG: Hot Dip Galvanised</div> <div>MGAL: Mechanical Galvanised</div> <div>PLN: Plain</div> <div>SS: Stainless Steel</div> <div>Z/P: Zinc Plated</div> <div>ZYP: Zinc Yellow Passivate</div> |
| <div>WIRE ROPE CUTTER</div> <div></div> <div>Suits up to 5mm wire rope</div> <div>HTHRC-008</div> | <div>WIRE ROPE CUTTER</div> <div></div> <div>Suits up to 12mm wire rope</div> <div>HTHRC-450</div> | <div>WIRE ROPE CUTTER</div> <div></div> <div>Suits up to 16mm wire rope</div> <div>HTHRC-800</div> | <div>Chrome Plate HEC</div> <div></div> <div>RIGGING SCREW SPANNER</div> <div>HXRSS</div> | | |
| <div>CUTTING AND SWAGING COMBO</div> <div></div> <div>Suits up to 3.5mm wire rope</div> <div>HTHSC-350</div> | <div>CUTTING AND SWAGING COMBO</div> <div></div> <div>Suits up to 5.0mm wire rope</div> <div>HTHSC-600</div> | <div>CUTTING</div> <div></div> | <div>SWAGING</div> <div></div> | | |

STAINLESS HARDWARE



| | | | | | | |
|---|---|---|---|--|---|---|
| SS 316 HEC | SS 316 HEC | SS 316 HEC | SS 316 HEC | SS 316 HEC | SS 316 HEC | SS 316 HEC |
|  |  |  |  |  |  |  |
| RIGGING SCREW LAG + SWAGE | TERMINAL SWAGE INT. THREAD | TERMINAL SWAGE LAG SCREW LEFT | TERMINAL SWAGE LAG SCREW RIGHT | TERMINAL SWAGE STUD RIGHT HAND | TERMINAL SWAGE STUD LEFT HAND | RIGGING SCREW EYE + EYE |
| HRS16LS | HTS16IT | HTS16LL | HTS16RL | HTS16ST | HTS16SL | HRS16EE |
| SS 316 HEC | SS 316 HEC | SS 316 HEC | SS 316 HEC | SS 316 HEC | SS 316 HEC | SS 316 HEC |
|  |  |  |  |  |  |  |
| RIGGING SCREW JAW + JAW | RIGGING SCREW JAW + SWAGE | RIGGING SCREW TOG + SWAGE | TURNBUCKLE OPEN BODY JAW + JAW | TURNBUCKLE OPEN BODY HOOK + EYE | TURNBUCKLE OPEN BODY HOOK + HOOK | TURNBUCKLE OPEN BODY EYE + EYE |
| HRS16JJ | HRS16JS | HRS16TS | HTB16JJ | HTB16HE | HTB16HH | HTB16EE |










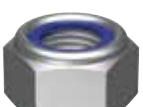


STAINLESS FASTENERS

| | | | | | | |
|---|---|---|---|---|---|---|
| SS 304 DIN 975  METRIC ALLTHREAD 1m & 3m AL04PCM | SS 304 IFI 136C  UNC ALLTHREAD 3ft AL04PC | SS 304 AS 3501  BSW ALLTHREAD 3ft AL04PW | SS 316 DIN 975  METRIC ALLTHREAD 1m & 3m AL16PCM | SS 316 IFI 136C  UNC ALLTHREAD 3ft AL16PC | SS 316 IFI 136C  UNF ALLTHREAD 3ft AL16PF | SS 316 AS 3501  BSF ALLTHREAD 3ft AL16PS |
| SS 316 AS 3501  BSW ALLTHREAD 3ft AL16PW | SS 316 HEC  METRIC COUPLER HEX AXHC16PCM | SS 304 DIN 933  METRIC HEX SET SCREW BS04PCM | SS 316 DIN 933  METRIC HEX SET SCREW BS16PCM | SS 304 ANSI B18.2.1  UNC HEX SET SCREW BS04P | SS 316 ANSI B18.2.1  UNC HEX SET SCREW BS16PC | SS 304 ANSI B18.2.1  UNF HEX SET SCREW BS04PF |
| SS 304 BS 1083  BSW HEX SET SCREW BS04PW | SS 316 BS 1083  BSW HEX SET SCREW BS16PW | SS 304 DIN 931  METRIC HEX BOLT BH04PCM | SS 316 DIN 931  METRIC HEX BOLT BH16PCM | SS 304 ANSI B18.2.1  UNC HEX BOLT BH04PC | SS 316 ANSI B18.2.1  UNC HEX BOLT BH16PC | SS 304 ANSI B18.2.1  UNF HEX BOLT BH04PF |
| SS 316 BS 1083  BSW HEX BOLT BH16PW | SS 316 DIN 931  HEX BOLT BLANK BH16PBM | SS 304 DIN 603  METRIC CUP HEAD SQUARE BC04PCM | SS 316 DIN 603  METRIC CUP HEAD SQUARE BC16PCM | SS 304 ANSI B18.5  UNC CUP HEAD SQUARE BC04PC | SS 316 DIN 571  METRIC COACH SCREW BH16PLM | SS 304 HEC  UNC HEX DOME ND04P |

STAINLESS FASTENERS



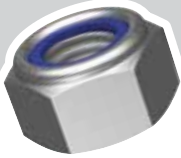
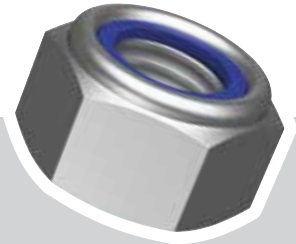
| | | | | | | |
|--|--|---|--|--|---|--|
| SS 304 DIN 1587  METRIC HEX DOME ND04PCM | SS 316 DIN 1587  METRIC HEX DOME ND16PCM | SS 304 HEC  METRIC 2PC DOME HEX NUT ND04WCM | SS 304 HEC  METRIC SHEAR NUT NS04PCM | SS 304 ISO 4161  METRIC SERRATED FLANGE NUT NF04PCM | SS 316 IFI 145 / B18 2.2  UNC SERRATED FLANGE NUT NF16PC | SS 316 ISO 4161  METRIC SERRATED FLANGE NUT NF16PCM |
| SS 304 DIN 929  METRIC WELD HEX NUT NH04WCM | SS 316 ANSI B18.2.2  UNC HEX NUT NH16P | SS 316 DIN 934  METRIC HEX NUT NH16PCM | SS 316 DIN 934  LEFT HAND HEX NUT NH16PDM | SS 316 ANSI B18.2.2  UNF HEX NUT NH16PF | SS 316 BS1083  BSW HEX NUT NH16PW | SS 304 ANSI B18.2.2  UNC HEX NUT NH04P |
| SS 304 DIN 934  METRIC HEX NUT NH04PCM | SS 304 DIN 934  METRIC FINE HEX NUT NH04PFM | SS 304 ANSI B18.2.2  UNF HEX NUT NH04PF | SS 304 BS1083  BSW HEX NUT NH04PW | SS 304 ANSI B18.2.2  UNC THIN HEX LOCK NUT NL04PC | SS 304 DIN 439  METRIC THIN HEX LOCK NUT NL04PCM | SS 316 DIN 439  METRIC THIN HEX LOCK NUT NL16PCM |
| SS 316 ANSI B18.2.2  UNC THIN HEX LOCK NUT NL16PC | SS 316 ANSI B18.2.2  UNF THIN HEX LOCK NUT NL16PF | SS 304 HEC  METRIC FINE HOBLOCH™ HEX NUT NN04HFM | SS 304 HEC  METRIC HOBLOCH™ HEX NUT NN04HCM | SS 304 IFI-100/107 NYLOC  UNC NYLOC® NUT NN04P | SS 304 DIN 985 NYLOC  METRIC NYLOC® NUT NN04PCM | SS 304 HEC NYLOC  UNF NYLOC® NUT NN04PF |



STAINLESS FASTENERS

NYLOC®

Nylon insert locknuts




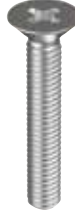
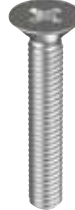


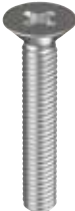
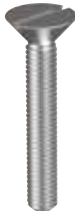
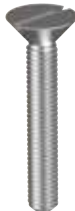


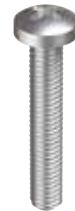



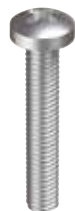
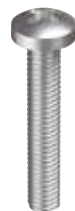

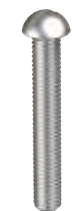


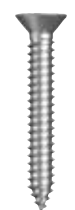
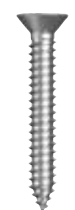
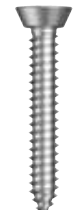
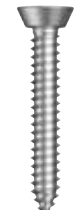
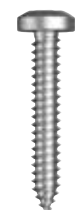
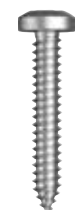


Anti-vibration solution.

| | | | | | | |
|---|--|--|--|--|--|---|
| SS 304 HEC NYLOC BSW NYLOC® NUT NN04PW | SS 304 HEC NYLOC UNC NYLOC® NUT THIN NN04TC | SS 304 HEC NYLOC UNF NYLOC® NUT THIN NN04TF | | | | |
| SS 316 IFI 100/107 NYLOC UNC NYLOC® NUT NN16P | SS 316 DIN 985 NYLOC METRIC NYLOC® NUT NN16PCM | SS 316 HEC NYLOC UNF NYLOC® NUT NN16PF | SS 316 HEC NYLOC BSW NYLOC® NUT NN16PW | SS 316 DIN 557 METRIC SQUARE NUT NQ16PCM | SS 304 ANSI B18.17 UNC WING NUT NW04P | SS 304 ANSI B18.17 METRIC WING NUT NW04PCM |
| SS 316 ANSI B18.17 UNC WING NUT NW16P | SS 316 ANSI B18.17 METRIC WING NUT NW16PCM | SS 316 ANSI B18.17 BSW WING NUT NW16PW | SS 304 ANSI B18.3 UNC BUTTON HEAD SOCKET SB04P | SS 304 ISO 7380 METRIC BUTTON HEAD SOCKET SB04PCM | SS 316 ISO 7380 METRIC BUTTON HEAD SOCKET SB16PCM | SS 304 ANSI B18.3 UNC CSK FLAT SOCKET SC04P |
| SS 304 DIN 7991 METRIC CSK FLAT SOCKET SC04PCM | SS 316 DIN 7991 METRIC CSK FLAT SOCKET SC16PCM | SS 304 ANSI B18.3 UNC CUP POINT SOCKET SG04P | SS 304 DIN 916 METRIC CUP POINT SOCKET SG04PCM | SS 304 ANSI B18.3 UNC SOCKET HEAD CAP SCREW SH04P | SS 304 DIN 912 METRIC SOCKET HEAD CAP SCREW SH04PCM | SS 316 ANSI B18.3 UNC SOCKET HEAD CAP SCREW SH16PC |

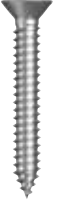
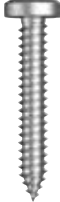


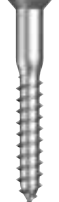











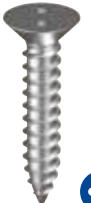









STAINLESS FASTENERS



| | | | | | | |
|---|--|---|--|--|---|--|
| SS 316 DIN 912  METRIC SOCKET HEAD CAP SCREW SH16PCM | SS 304 DIN 7984  METRIC LOW HEAD SOCKET SL04PCM | SS 304 ANSI B18.6.3  UNC CSK HEAD PHILLIPS MS04CP | SS 304 DIN 965 (H)  METRIC CSK HEAD PHILLIPS MS04CPM | SS 304 BS 450  BSW CSK HEAD PHILLIPS MS04CPW | SS 304 ANSI B18.6.3  UNF CSK HEAD PHILLIPS MS04CPF | SS 316 DIN 965 (H)  METRIC CSK HEAD PHILLIPS MS16CPM |
| SS 316 BS 450  BSW CSK HEAD PHILLIPS MS16CPW | SS 304 DIN 963  METRIC CSK HEAD SLOTTED MS04CSM | SS 316 DIN 963  METRIC CSK HEAD SLOTTED MS16CSM | SS 304 DIN 84  METRIC CHEESE HEAD SLOTTED MS04ESM | SS 316 DIN 84  METRIC CHEESE HEAD SLOTTED MS16ESM | SS 304 ANSI B18.6.3  UNC PAN HEAD PHILLIPS MS04PP | SS 304 DIN 7985 (H)  METRIC PAN HEAD PHILLIPS MS04PPM |
| SS 304 BS 450  BSW PAN HEAD PHILLIPS MS04PPW | SS 304 ANSI B18.6.3  UNF PAN HEAD PHILLIPS MS04PPF | SS 316 DIN 7985 (H)  METRIC PAN HEAD PHILLIPS MS16PPM | SS 316 BS 450  BSW PAN HEAD PHILLIPS MS16PPW | SS 304 BS 450  BSW ROUND HEAD SLOTTED MS04OSW | SS 316 BS 450  BSW ROUND HEAD SLOTTED MS16OSW | SS 304 AS 1427  METRIC MUSHROOM PHILLIPS MS04MPM |
| SS 304 BS 450  BSW MUSHROOM PHILLIPS MS04MPW | SS 304 ANSI B18.6.4  SELF TAPPING CSK HEAD PHILLIPS T04SSCP | SS 304 ANSI B18.6.4  SELF TAPPING CSK HEAD SQUARE DR T04SSCQ | SS 304 ANSI B18.6.4  SELF TAPPING UNDERCUT CSK PHILLIPS T04SSDP | SS 304 ANSI B18.6.4  SELF TAPPING UNDERCUT CSK SQUARE DR T04SSDQ | SS 304 ANSI B18.6.4  SELF TAPPING PAN HEAD SQUARE DR T04SSPQ | SS 304 ANSI B18.6.4  SELF TAPPING PAN HEAD PHILLIPS T04SSPP |

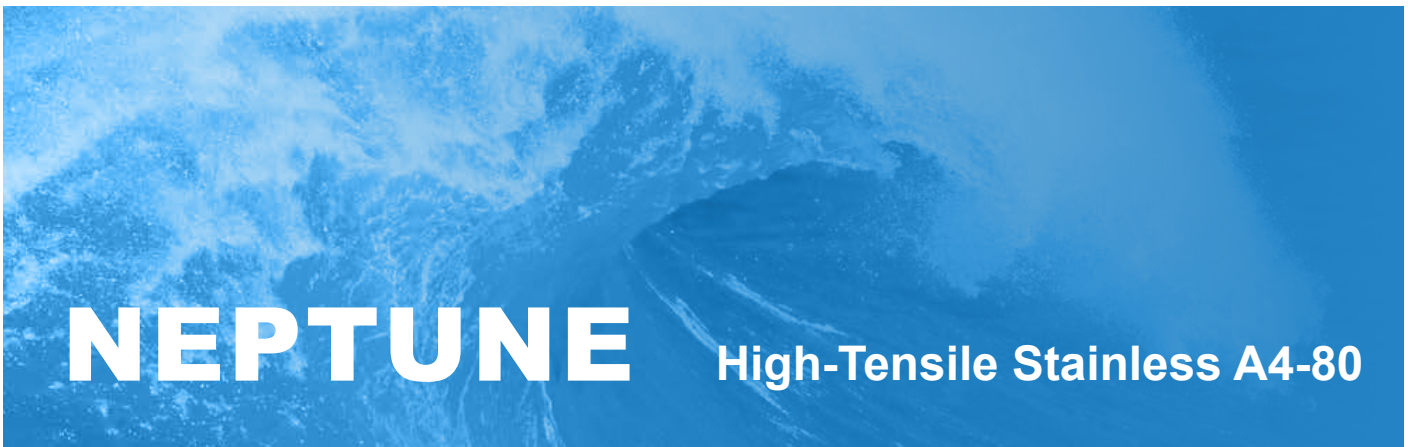


STAINLESS FASTENERS

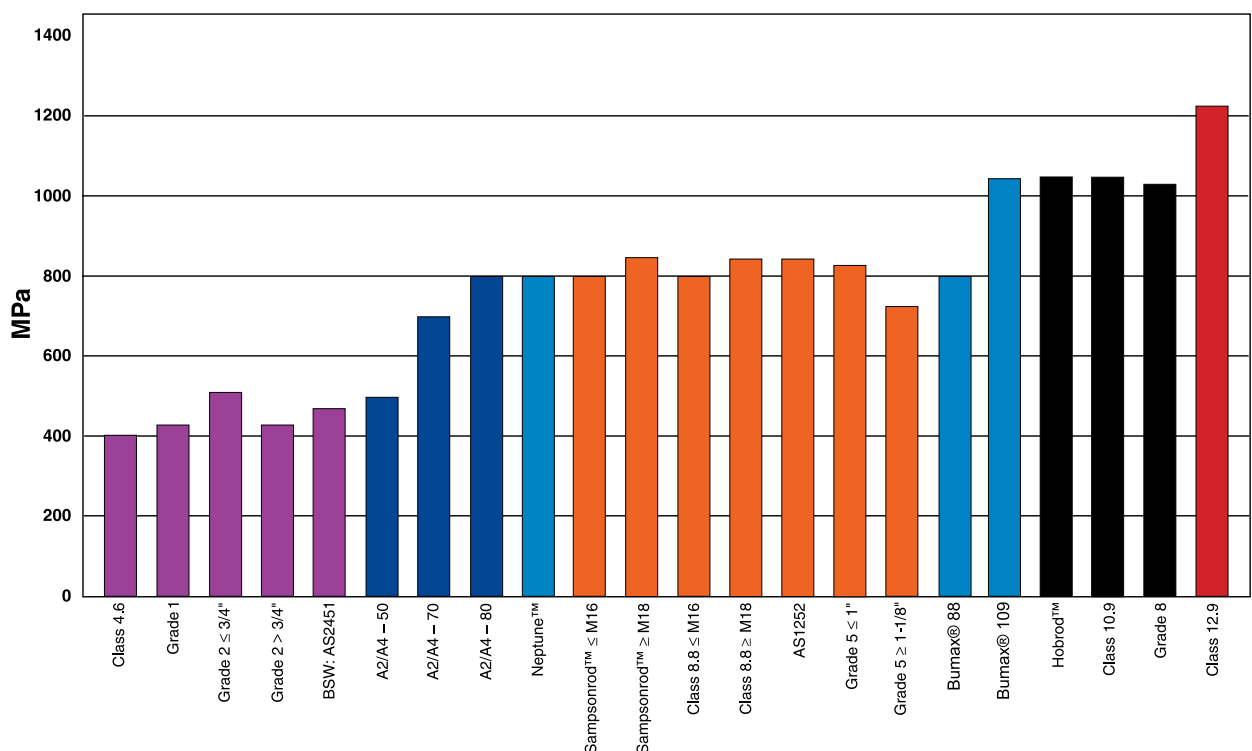
| | | | | | | |
|---|---|---|--|---|---|---|
| SS 316 ANSI B18.6.4  SELF TAPPING CSK HEAD PHILLIPS T16SSCP | SS 316 ANSI B18.6.4  SELF TAPPING PAN HEAD PHILLIPS T16SSPP | SS 410 ANSI B18.6.4  SELF TAPPING PAN HEAD PHILLIPS T41PSP | SS 304 ANSI B18.6.4  TYPE U DRIVE SCREW QDS04RU | SS 304 JIS B1112  WOOD SCREW CSK HEAD PHILLIPS T04DSCP | Security SS 304 HEC  SELF TAPPING SKT BUTTON POST TORX® I04SSBT | Security SS 304 HEC  SELF TAPPING SKT CSK POST TORX® I04SSCT |
| Security SS 304 HEC  SELF TAPPING SKT CSK POST HEX I04SSCH | Security SS 304 HEC  SELF TAPPING RAISED HEAD ONE WAY I04SSRO | Security SS 304 HEC  METRIC SKT BUTTON POST TORX® IMS04BTM | Security SS 304 HEC  METRIC SKT BUTTON POST HEX IMS04BHM | Security SS 304 HEC  METRIC SKT CSK POST TORX® IMS04CTM | Security SS 304 HEC  METRIC SKT CSK POST HEX IMS04CHM | Security SS 304 HEC  METRIC PAN HEAD EYE DRIVE IMS04PEM |
| Security SS 304 HEC  METRIC CSK HEAD EYE DRIVE IMS04CEM | Security SS 304 HEC  SELF TAPPING PAN HEAD EYE DRIVE I04SSPE | Security SS 304 HEC  SELF TAPPING CSK HEAD EYE DRIVE I04SSCE | Security PLN HEC  SECURITY SOCKET BIT POST HEX ISBPH | Security PLN HEC  SECURITY SOCKET BIT POST TORX ISBPT | Security PLN HEC  SOCKET EYE DRIVE BIT ISBED | Security PLN HEC  SECURITY SOCKET KEY POST HEX ISKPH |
| Security PLN HEC  SECURITY SOCKET KEY POST TORX ISKPT | SS 420 HEC  SPRING WAVE PIN QPW20PM | SS 304 DIN 94  METRIC SPLIT PIN QPS04PM | SS 316 DIN 94  METRIC SPLIT PIN QPS16PM | SS 316 HEC  LINCH PIN QPL16PM | KEY CHR: Chrome HDG: Hot Dip Galvanised MGAL: Mechanical Galvanised PLN: Plain SS: Stainless Steel Z/P: Zinc Plated ZYP: Zinc Yellow Passivate | |



| | | | | | | |
|----------------------------|----------------------------|----------------------------|----------------------------|-------------------------------|----------------------------|--------------------------------|
| SS 316 DIN 975 A4-80 | SS 316 DIN 931 A4-80 | SS 316 DIN 933 A4-80 | SS 316 DIN 912 A4-80 | SS 316 DIN 985 A4-80 | SS 316 DIN 934 A4-80 | SS 316 DIN 125A A4-80 |
| | | | | | | |
| METRIC NEPTUNEROD® | METRIC HEX BOLT | METRIC SET SCREW | METRIC SOCKET SCREW | NYLOC METRIC NYLOC® NUT | METRIC HEX NUT | METRIC FLAT ROUND WASHER |
| AL16NCM | BH16NCM | BS16NCM | SH16NCM | NN16NCM | NH16NCM | WR16NM |



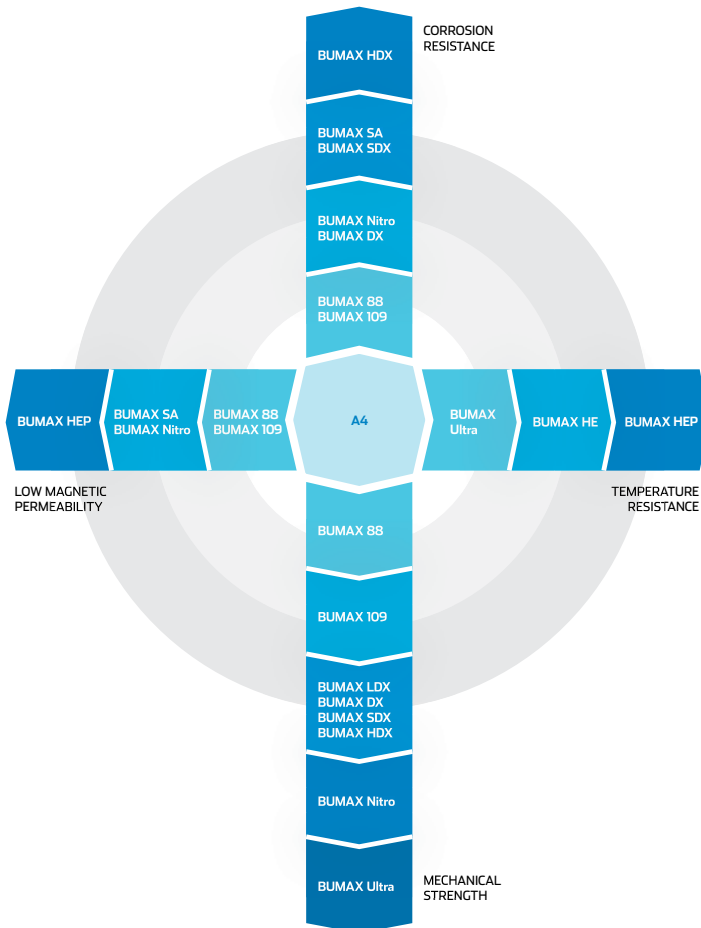
Breaking Strength Comparison





Swedish Engineering

BUMAX®
THE WORLD'S STRONGEST
STAINLESS STEEL BOLT



BUMAX 88 is a premium A4 fastener that offers better corrosion resistance than standard A4 due to higher molybdenum content. The PRE value of Bumax 88 is 27 and of a standard A4 only 23. Bumax 88 offers higher strength and lower amount of inclusions than standard A4 fasteners, that gives superior mechanical properties and fatigue resistance and less variations compared to standard A4. Bumax 88 fasteners are used in many applications that demands very low magnetic permeability, it has lower magnetic permeability and less variation from batch to batch compared to standard A4 fasteners. Bumax 88 is also widely used in cryogenic applications down to -269°C (4 K) and can also be provided with a pre-approval PMA for PED certificate for pressure vessels.

BUMAX 109 is the strongest A4 fastener on the market. We use the same material as Bumax 88 but achieve higher strength due to a special manufacturing process.

BUMAX Nitro, an austenitic stainless steel with high nitrogen content, characterized by very high strength and fatigue resistance, in combination with good corrosion resistance. It is an excellent choice for marine applications and can be supplied in strength class up to 12.9. PRE value 35.

BUMAX Super Austenite (SA), Grade EN 1.4547; UNS S31254 (254 SMO) is a 6Mo high-alloy aus-

tenitic stainless steel for seawater and other aggressive chloride bearing medias. Excellent resistance to general, crevice, pitting and stress corrosion with a PRE value of 43. Strength class up to 10.9.

BUMAX Lean Duplex (LDX), Grade EN 1.4162; UNS S32101 (LDX 2101) offers an economical solution for high strength fasteners (up to 12.9) in low -medium corrosive environments. PRE 26.

BUMAX Duplex (DX), Grade EN 1.4462; UNS S32205 (2205) is characterized by excellent strength, ductility and fatigue resistance in combination with good general, pitting, crevice and stress corrosion properties. Strength class up to 12.9 with an excellent ductility giving an elongation of >0,3 x diameter and PRE >34.

BUMAX Super Duplex (SDX), Grades EN 1.4410, UNS S32750 & EN 1.4501, UNS S32760; is characterized by excellent mechanical properties and very good corrosion resistance. Excellent resistance to general crevice, pitting and stress corrosion in chloride bearing medias with a PRE of 42. Strength class up to 12.9 with an excellent ductility giving an elongation of >0,3 x diameter.

BUMAX Hyper Duplex (HDX), Grade EN 1.4658, UNS S32707; a ground-breaking alloy used in the most demanding applications. Suited for use in severe corrosive environments such as hot chlorinated sea-water

and for aggressive acidic chloride containing media in chemical, oil & gas, marine and petrochemical industry.

BUMAX Ultra, a unique precipitation hardenable stainless steel that can be delivered in ultra-high strength levels. Offers a unique combination of ultra-high strength combined with excellent ductility and good corrosion resistance in chloride environments, PRE 25. Strongest stainless steel fastener on the market with a strength class up to 16.9.

BUMAX Heat (HE), Grade EN 1.4980, UNS S66286 (A286); a high temperature resistant material for applications requiring high strength and good oxidation resistance at temperatures up to 700°C. Can be precipitation hardened.

BUMAX Heat Plus (HEP), Grade EN 2.4952, UNS N07080 (Nimonic 80). A nickel base alloy which is a precipitation hardenable high temperature resistant material with excellent oxidation resistance and high tensile and creep properties at temperatures up to 815°C.

BUMAX Lock, all-metal lock nut made out of the same steel grade as Bumax 88.

BUMAX Hard, is a thread forming and self-tapping screw made out of the same steel grade as Bumax 88 and a hardened thread profile with a surface hardness > HV 1200.



| | | | | | | |
|--|---|---|--|--|--|--|
| <p>Bumax®88 DIN 976</p>  <p>ALLTHREAD ROD</p> <p>ALB8PCM</p> | <p>Bumax®88 ISO 4014</p>  <p>HEX BOLT</p> <p>BHB8PCM</p> | <p>Bumax®88 ISO 4017</p>  <p>HEX SET SCREW</p> <p>BSB8PCM</p> | <p>Bumax®88 ISO 4762</p>  <p>SOCKET HEAD CAP SCREW</p> <p>SHB8PCM</p> | <p>Bumax®88 ISO 10642</p>  <p>FLAT SOCKET SCREW</p> <p>SCB8PCM</p> | <p>Bumax®88 ISO 4032</p>  <p>HEX NUT</p> <p>NHB8PCM</p> | <p>Bumax®88 ISO 4161</p>  <p>HEX FLANGE NUT</p> <p>NFB8PCM</p> |
| <p>Bumax®88 BUMAX</p>  <p>COLLARED HEX LOCK NUT</p> <p>NLB8CCM</p> | <p>Bumax®88 BUMAX</p>  <p>FLANGE HEX LOCK NUT</p> <p>NLB8FCM</p> | <p>Bumax®88 ISO 7089</p>  <p>METRIC FLAT ROUND WASHER</p> <p>WRB8PM</p> | <p>Bumax®88 ISO 7089 Geomet</p>  <p>METRIC FLAT ROUND WASHER</p> <p>WRB8EM</p> | <p>Bumax®88 ISO 7093</p>  <p>METRIC MUDGUARD WASHER</p> <p>WRB8MM</p> | <p>Bumax®88 DIN 931</p>  <p>UNC HEX BOLT</p> <p>BHB8PC</p> | <p>Bumax®88 ISO 4762</p>  <p>UNC SOCKET HEAD CAP SCREW</p> <p>SHB8PC</p> |
| <p>Bumax®88 DIN 934</p>  <p>UNC HEX NUT</p> <p>NHB8PC</p> | <p>Bumax®88 ISO 7089</p>  <p>IMPERIAL FLAT ROUND WASHER</p> <p>WRB8P</p> | <p>Bumax®109 ISO 4014</p>  <p>HEX BOLT</p> <p>BHB9PCM</p> | <p>Bumax®109 ISO 4017</p>  <p>HEX SET SCREW</p> <p>BSB9PCM</p> | <p>Bumax®109 ISO 4762</p>  <p>SOCKET HEAD CAP SCREW</p> <p>SHB9PCM</p> | <p>Bumax®109 ISO 4032</p>  <p>HEX NUT</p> <p>NHB9PCM</p> | <p>Bumax®109 ISO 7089</p>  <p>FLAT ROUND WASHER</p> <p>WRB9PM</p> |

| |
|--|
| <p>Bumax®129 ISO 4762 DUPLEX</p>  <p>SOCKET HEAD CAP SCREW</p> <p>SHX9PCM</p> |
|--|

BUMAX®

- » Bumax® 88 tensile strength equivalent to Class 8.8.
- » Bumax® 109 tensile strength equivalent to Class 10.9.
- » Unmatched corrosion resistance.
- » Guaranteed traceability. Test certificates online.
- » Lower install cost solution. Smaller bolt with greater strength.
- » Low and High Temperature Applications (-200°C to +400°C).
- » Non Magnetic.











Swedish Engineering



NORD-LOCK GROUP

| | | | | | |
|---|---|--|---|--|---|
| Delta Protekt® Hardened Steel EN 1.7182 | Delta Protekt® Hardened Steel EN 1.7182 | Delta Protekt® Hardened Steel EN 1.7182 | Delta Protekt® Hardened Steel EN 1.7182 |  <h2>SC Washer</h2> <p>Nord-Lock® SC-washers are specially designed for steel construction applications and to fit EN 14399: 2005 K2 8.8 HR Structural Assemblies (refer to page 11).</p> | Delta Protekt® Hardened Steel EN 1.7182 |
|  <p>METRIC STANDARD WASHER WNHTDDM</p> |  <p>IMPERIAL STANDARD WASHER WNHTDD</p> |  <p>METRIC LARGE OD WASHER WNHTLDM</p> |  <p>IMPERIAL LARGE OD WASHER WNHTLD</p> | |  <p>STANDARD SC WASHER WNSCDD</p> |



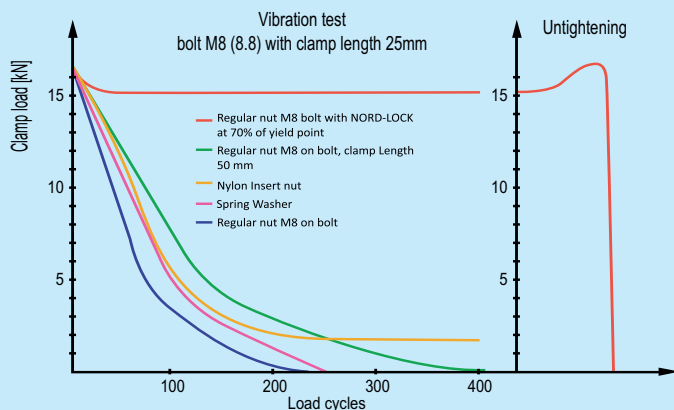
Utilising a unique multifunctional design, Nord-Lock X-series™ washers offer the highest security against both spontaneous bolt loosening and slackening. Combining Nord-Lock's unrivaled wedge-effect solution (to prevent spontaneous loosening) with an exceptional spring effect (to compensate for loss of preload due to slackening), Nord-Lock X-series™ washers give you a total security option for those situations in which there can be no compromise.

| | | |
|---|---|---|
| Delta Protekt® Hardened Steel EN 1.7225 | Delta Protekt® Hardened Steel EN 1.7225 | Delta Protekt® Hardened Steel EN 1.7225 |
|  <p>IMPERIAL X SERIES WASHER WNXTDD</p> |  <p>METRIC X SERIES WASHER WNXTDDM</p> |  <p>METRIC X SERIES LARGE OD WASHER WNXTLD</p> |

NORD-LOCK®

PART OF THE NORD-LOCK GROUP

- » Anti-vibration solution. Wedge-locking action meeting DIN25201 using tension not friction.
- » Zinc Plate coated (Delta Protekt®) and stainless steel. Large OD available.
- » Laser traceability on each product.
- » Wheel nut safety. M22-1.5 pitch.



SUPERBOLT™

PART OF THE NORD-LOCK GROUP

Superbolt™ multi-jackbolt tensioners (MJTs) from Nord-Lock offer an innovative technology for tightening bolts & studs

The multi-jackbolt tensioners offer you simple and cost effective tightening for large size bolts.



Superbolt™ tensioners are designed as direct replacements for conventional nuts and bolts. These devices can be threaded onto a new or existing bolt, stud, threaded rod or shaft. The main thread serves to position the tensioner on the bolt or stud against the hardened washer and the load bearing surface. Once it is positioned, actual tensioning of the bolt or stud is accomplished with simple hand tools by torquing the jackbolts which encircle the main thread. The jackbolts transfer the preload evenly into the main thread and, consequently, onto the joint. The main thread is tightened in pure tension.



Swedish Engineering

NORD-LOCK GROUP



| | | | | | | |
|---|-----------------------------------|----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Delta Protekt® Hardened Steel EN 1.7182 | SS 316L AISI 316L EN 1.4404 | Delta Protekt® Class 10 | SS 316L AISI 316L EN 1.4404 | SS 316L AISI 316L EN 1.4404 | SS 316L AISI 316L EN 1.4404 | SS 316L AISI 316L EN 1.4404 |
| | | | | | | |
| STANDARD WASHER KIT | STANDARD WASHER KIT | METRIC WHEEL NUT | METRIC STANDARD WASHER | IMPERIAL STANDARD WASHER | METRIC LARGE OD WASHER | IMPERIAL LARGE OD WASHER |
| WNXAHT | WNXASS | NL10DNM | WN16DPM | WN16DP | WN16LPM | WN16LP |



Expander®

*A permanent solution
for pivot wear*

The System consists of an assembly that includes: an axle which is tapered at both ends, two expansion sleeves, two tension washers and two fasteners. When the fasteners are torqued, the tension washers push the expansion sleeves up the tapered part of the pin, thereby locking the system into the lug ears and eliminating movement that causes pivot wear.

The double-sided locking mechanism provides increased stability, security and a backlash-free joint. Installation can be easily done in the field, reducing downtime and cost.



Nord-Lock® washer material / type guide

| Application parameter | Steel washers | Stainless steel (ss) washers | 254 SMO® washers | INCONEL®/HASTELLOY® C-276 washers | INCONEL® 718 washers |
|--------------------------|---|---|--|--|--|
| Steel type (EN) | 1.7182 or equivalent | 1.4404 or equivalent | 1.4547 or equivalent | 2.4819 or equivalent | 2.4667 or equivalent |
| Examples of applications | General steel applications | General stainless steel applications. Non chlorine / acid environments | General salt water applications, pumps, chloride applications, heat exchangers, nuclear, desalination, food processing & medical equipment | General acidic environments, process and chemical industry, evaporators, offshore downhole tooling | Applications with high temperatures, gas turbines, turbo charges, incinerators |
| Available for bolt sizes | M3-M130 | M3-M80 | M3-M39 | M3-M39 | M3-M39 |
| Washer types | Regular outer diameter (NL3-NL130) | Regular outer diameter (NL3ss-NL80ss) | Regular outer diameter (NL3ss-254-NL39ss-254) | Regular outer diameter (NL3ss-276-NL39ss-276) | Regular outer diameter (NL3ss-718-NL39ss-718) |
| | Enlarged outer diameter (NL3,5sp-NL36sp) | Enlarged outer diameter (NL3,5spss-NL30spss) | Enlarged outer diameter (NL3,5spss-254-NL-27spss-254) | Enlarged outer diameter (NL3,5spss-276-NL-27spss-276) | Enlarged outer diameter (NL3,5spss-718-NL-27spss-718) |
| Treatment | Through hardened | Surface hardened | Surface hardened | Surface hardened | Surface hardened |
| Surface coating | Delta Protekt® base coat (KL100) and top coat (VH302GZ) | | | | |
| Washer hardness* | ≥ 465 HV1 | ≥ 520HV0,05 | ≥ 600HV0,05 | ≥ 520HV0,05 | ≥ 620HV0,05 |
| Corrosion resistance | Minimum 600 hours in salt spray test (according to ISO9227) | PREN 27** | PREN 45** | PREN 68** | PREN 29** |
| Bolt grades | Up to 12.9 | Up to A4-80 | Up to A4-80 | Up to A4-80 | Up to A4-80 |
| Temperature range*** | -50°C to 200°C | -160°C to 500°C | -160°C to 500°C | -160°C to 500°C | -160°C to 700°C |

* In order to assure the unique mechanical locking function of the Nord-Lock washers, the hardness of the mating surfaces must be lower than the hardness of the Nord-Lock washers (see table above).

** PREN (Pitting Resistance Equivalent Number) = %Cr + 3,3x%Mo + 16x%N. Figures in table valid for base material. A higher PRE number indicates better corrosion resistance.

*** Temperature recommendations based on information from the raw material supplier and from tests. Locking function not affected within the specification.



German Engineering



SCHNORR[®]
DISC SPRING ENGINEERING

MANAGING MAXIMUM FORCE – EVEN IN EXTREME CONDITIONS



SCHNORR[®]
DISC SPRING ENGINEERING

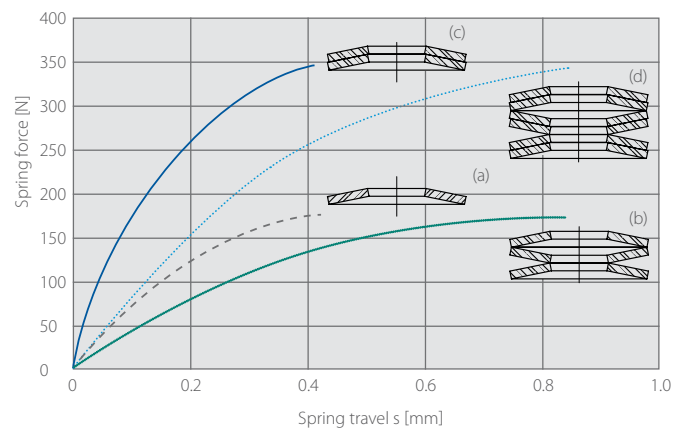
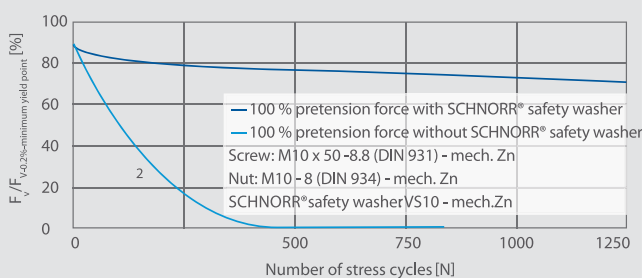
SCHNORR[®] is an international leader in the engineering and manufacturing of safety washers and disc springs for the automotive, aerospace and machine construction industries.

Original SCHNORR[®] safety washer

Vibration test according to DIN 61511

Results of vibration test according to DIN 61511

($F_{V-0.2\%}$ - minimum yield point = 37.1 kN)



- (a) Single disc spring
- (b) Stacked in series; example 3 x 1 = triple deflection
- (c) Stacked in parallel; example 1 x 2 = double force
- (d) Parallel pairs arranged in series; example 3 x 2 = double force and triple deflection.



German Engineering

SCHNORR®

DISC SPRING ENGINEERING



| | | | | | | |
|-----------------------------|------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| PLN DIN EN 16983* | MGAL DIN EN 16983* | SS 304 DIN EN 16983* | Z/P Serrated | PLN Serrated | Z/P Serrated | PLN Serrated |
| | | | | | | |
| DISC SPRING | DISC SPRING | DISC SPRING | TYPE S SAFETY WASHER | TYPE S SAFETY WASHER | TYPE VS SAFETY WASHER | TYPE VS SAFETY WASHER |
| WOHTDP | WOHTDG | WO04DP | WOHTSZM | WOHTSPM | WOHTVZM | WOHTVPM |
| SS 304 Serrated | SS 304 Serrated | Z/P DIN 6796 | PLN DIN 6796 | ZYP 25µm DIN 6796 | Z/P DIN 267 | PLN DIN 267 |
| | | | | | | |
| TYPE S SAFETY WASHER | TYPE VS SAFETY WASHER | HDS LOAD HEAVY DUTY WASHER | HDS LOAD HEAVY DUTY WASHER | HDS LOAD HEAVY DUTY WASHER | HS LOAD HIGH STRESS WASHER | HS LOAD HIGH STRESS WASHER |
| WO04SPM | WO04VPM | WOHTHZM | WOHTHPM | WOHTHYM | WOHTLZM | WOHTLPM |

SCHNORR®

DISC SPRING ENGINEERING

Disc Springs:

- » Space saver with high spring force.
- » No setting or fatigue under normal loads.
- » Long service life.

Safety Washers:

- » High resistance to vibration.
- » Patented technology.
- » Extensive range.



Geomet 321B
DIN 267



HS LOAD
HIGH STRESS
WASHER
WOHTLEM

PLN
Type K
Non-slotted






















BEARING
PRELOAD
SPRING
WOHTKP

*DIN EN 16983 replaces DIN 2093 effective 1 February 2017.


















WASHERS

| | | | | | | |
|--|---|--|--|--|---|---|
| Red Fibre HEC  METRIC FLAT ROUND WRRFPM | Z/P AS1237:1973 Mild Steel  METRIC ENGINEERS WASHER WEMSZM | HDG HEC Mild Steel  METRIC FLAT ROUND WRMSGM | Z/P HEC Mild Steel  METRIC FLAT ROUND WRMSZM | PLN HEC Mild Steel  METRIC FLAT ROUND WRMSPM | Z/P HEC Mild Steel  IMPERIAL FLAT ROUND WRMSZ | ZYP DIN 125A Mild Steel  METRIC FLAT ROUND WRMSYM |
| SS 304 HEC  METRIC FLAT ROUND WR04PM | SS 304 DIN 125A  METRIC FLAT ROUND WR04TM | SS 304 HEC  IMPERIAL FLAT ROUND WR04P | SS 316 HEC  METRIC FLAT ROUND WR16PM | SS 316 DIN 125A  METRIC FLAT ROUND WR16TM | SS 316 HEC  IMPERIAL FLAT ROUND WR16P | Brass HEC BS 3410  IMPERIAL FLAT ROUND WRBRP |
| HDG AS1237.1-2002 Mild Steel  METRIC X LARGE FLAT ROUND WXMSGM | Z/P AS1237.1-2002 Mild Steel  METRIC X LARGE FLAT ROUND WXMSZM | Z/P AS 1237.1-2002 Mild Steel  METRIC PANEL WPMSZM | Z/P HEC Mild Steel  IMPERIAL MUDGUARD WRMSZU | SS 304 DIN 9021  METRIC MUDGUARD WR04MM | SS 316 DIN 9021  METRIC MUDGUARD WR16MM | Brass HEC AS 1237  METRIC FLAT ROUND WRBRPM |
| Z/P HEC Mild Steel  LARGE FLAT RND SUPA® WASHER WRMSZLM | PLN HEC Mild Steel  LARGE FLAT RND SUPA® WASHER WRMSPLM | HDG HEC Mild Steel  LARGE FLAT RND SUPA® WASHER WRMSGLM | SS 304 ANSI B18.21.1  IMPERIAL SPRING FLAT SECTION WR04S0 | SS 304 HEC 127B  METRIC SPRING FLAT SECTION WR04SM | SS 316 ANSI B18.21.1  IMPERIAL SPRING FLAT SECTION WR16S | SS 316 HEC 127B  METRIC SPRING FLAT SECTION WR16SM |



WASHERS

| | | | | | | |
|--|--|--|--|---|--|---|
| HDG HEC 127B Spring Steel  METRIC SPRING FLAT SECTION WRMSGSM | Z/P HEC 127B Spring Steel  METRIC SPRING FLAT SECTION WRMSZSM | ZYP HEC 127B Spring Steel  METRIC SPRING FLAT SECTION WRMSYSM | Z/P ANSI B18.21.1 Spring Steel  IMPERIAL SPRING FLAT SECTION WRMSZS | Z/P HEC 7980 Spring Steel  METRIC SPRING SQ SECTION WRMSZSQM | ZYP HEC 7980 Spring Steel  METRIC SPRING SQ SECTION WRMSYSQM | HDG ANSI B18.21.1 Spring Steel  IMPERIAL SPRING SQ SECTION WRMSGSQ |
| Z/P ANSI B18.21.1 Spring Steel  IMPERIAL SPRING SQ SECTION WRMSZSQ | Z/P IFI 532 Type A  LOCK INTERNAL TOOTH WLMSZTIM | Z/P IFI 532 Type A  LOCK EXTERNAL TOOTH WLMSZTEM | Z/P ASME B18.21.1 Type A  LOCK INTERNAL TOOTH WLMSZTI | Z/P ASME B18.21.1 Type A  LOCK EXTERNAL TOOTH WLMSZTE | SS 304 DIN 6797 Type A  LOCK EXTERNAL TOOTH WL04TEM | SS 304 DIN 6797 Type J  LOCK INTERNAL TOOTH WL04TIM |
| SS 316 DIN 6798 Type A  LOCK EXT SERR TOOTH WL16SEM | SS 304 DIN 6798 Type A  LOCK EXT SERR TOOTH WL04SEM | SS 304 DIN 6798 Type J  LOCK INT SERR TOOTH WL04SIM | SS 304 HEC  CUP WASHER WR04C | SS 304 HEC  METRIC BELLEVILLE WASHER WR04BM | SS 316 HEC  METRIC SQUARE WS16PM | HDG HEC Mild Steel  METRIC SQUARE WSMSGM |
| ZYP HEC Mild Steel  METRIC SQUARE WSMSYM | HOBKOTE® HEC Mild Steel  METRIC SQUARE WSMSHM | HDG HEC Mild Steel  SQUARE WASHER SQUARE HOLE WSMSGQ | PLN HEC 38-45 HRC  METRIC FLAT ROUND SAMPSON™ WR43PM | Z/P ASTM F436M 38-45 HRC  METRIC FLAT ROUND SAMPSON™ WR43ZM | PLN ASTM F436 38-45 HRC  IMPERIAL FLAT ROUND SAMPSON™ WR43P | ZYP ASTM F436 38-45 HRC  IMPERIAL FLAT ROUND SAMPSON™ WR43Y |



WASHERS

**Xylan Blue
HEC
38-45 HRC**



**IMPERIAL
FLAT ROUND
SAMPSON™**

WR43B

**HDG
AS 1237
35-41 HRC**



**METRIC
FLAT ROUND
HARDENED**

WRHTGM

**H9
IMPACT™
43-49 HRC**



**PLN
HEC
43-49 HRC**



**IMPERIAL
FLAT ROUND**

WRH9P

**ZYP
HEC
43-49 HRC**



**IMPERIAL
FLAT ROUND**

WRH9Y


**PLN
AS 1085.7**



**FISHBOLT
SPRING
WASHER**

DWRHTPSM

**HDG
HEC
Mild Steel**



**METRIC
SECURITY
MESH CLIP**

HWCMSGM

**SS 316
HEC**



**VOLUTE
SPRING
WASHER**

WV16PM

Other Washers

Hobson Engineering have a wide variety of specialised Washers, more of which can be found here:

Structural  **p10**

Bumax  **p34**

Nord-Lock  **p36**

Schnorr  **p38**

Nylon  **p44**










Washers Gauge Converter

| gauge no. | inch | mm |
|-----------|---------|--------|
| 8 | 0.1570" | 3.988 |
| 9 | 0.1398" | 3.551 |
| 10 | 0.1250" | 3.175 |
| 12 | 0.0991" | 2.517 |
| 14 | 0.0785" | 1.994 |
| 16 | 0.0625" | 1.588 |
| 18 | 0.0495" | 1.257 |
| 19 | 0.0420" | 1.0668 |
| 20 | 0.0350" | 0.8890 |
| 21 | 0.0320" | 0.8128 |
| 22 | 0.0290" | 0.7366 |
| 30 | 0.0123" | 0.3124 |



WASHERS

Types of Washers

| | | | |
|---|---|--|--|
|  | <p>Standard Washers</p> <p>A standard washer is a thin plate typically round or square with a hole that is normally in the centre. They are used for two main reasons:</p> <ol style="list-style-type: none"> 1. To minimise scouring or scratch damage to mating material as a result of nut rotation. 2. To increase the effective bearing surface of the bolt and or nut. That is, to distribute the load of a threaded fastener over a larger area and prevent deformation of the bearing surfaces. |  | <p>Belleville Washer</p> <p>A Belleville washer, also known as a coned-disc spring or conical washer and cupped spring washer, is a type of spring shaped like a washer. It has a frusto-conical shape which gives the washer a spring characteristic. The Belleville name comes from the inventor Jullian F. Belleville. In the initial tightening, the effect on the joint is similar to a split type spring washer. However, as the tightening continues and the washer is flattened, it actually reduces the applied load in the bolt assembly. In this way, if the joint is loosened, the load will increase and hence counteract the loosening of the joint.</p> <p>Multiple Belleville washers may be stacked to modify the spring constant or amount of deflection.</p> |
|  | <p>Squirter Washers (DTIs)</p> <p>Direct tension indicating (DTI) washers are used to ensure the required pre-load tension in a joint is achieved. They are hardened washers with protruding lugs or bumps on the bearing face. When the bolt assembly is tightened, these lugs are deformed to a prescribed level and hence indicate that the required tension in the assembly has been achieved. During the lug deformation process, silicone is squeezed out, giving a visible sign of correct tension in the bolt assembly.</p> |  | <p>Spherical Washers</p> <p>Spherical washers are designed to accommodate a 10-15 degree variation in the alignment of a joint. A cone washer fits inside a cup washer and they slide against each other to reduce bending stresses in the bolt. One application for these washers is in racing kart seats where the chassis twists dramatically.</p> |
|  | <p>Load Indicating Washers (LIWs)</p> <p>Work much the same as Squirter Washers (DTIs) minus the silicone process.</p> |  | <p>Lock Washers</p> <p>A toothed lock washer, also known as a star washer, has teeth or prongs which extend radially inward and/or outward. This maintains tension and opposes any loosening influence on the fastener. The flexed teeth absorb shock, vibration and slipping. These washers are designed to retain fasteners by achieving an increased friction between the fastener and the mating material through mechanical interlocking or interference. They also provide some tension, as with spring washers but at a vastly reduced magnitude. There are two main types, teeth twisted out of plane (Type A) and edges of the teeth folded in opposite directions (Type B).</p> |
|  | <p>Split type</p> <p>Developed 110 years ago, the split type spring washer was the first washer that offered a solution to the loosening of bolted assemblies. These are hardened washers that are split with out of plane deformations. They should be used under the head of the bolt with the assembly being tensioned by rotating the nut. If they need to be used on the nut side, another hardened flat round washer should be used between the nut and the split washer.</p> <p>When the washers are flattened, a prescribed tension is achieved in the assembly. Naturally, these washers do not indicate any over-tightening of the bolt assembly. The split-lock washers are made from hardened spring steel that strongly resists compression. When the threaded fasteners are tightened, the protruding corner edges of the split-lock washers bite into both compressing surfaces in a manner that resists counter-clockwise rotation to vibration in a manner similar to a ratchet .</p> |  | <p>Lock Washers – 2 piece type (Nord-Lock)</p> <p>Two piece lock washers that are designed to prevent bolt assemblies loosening through vibration. They consist of two disks with interposing ramps. "Sharp ridges on the upper and lower surfaces of the disks grab the nut and joint surfaces. If the nut backs off a little it drags its disc along with it; the ramps on its disk climb the ramps on the lower disk. The interaction of these ramp or cam surfaces prevent loss of tension in the bolt"².</p> |
|  | <p>Spring Washers</p> <p>"Threaded assemblies inherently involve the mating of inclined planes under load. These inclined planes consist of the lead and flank angle of the screw or bolt thread and the angle of the mating thread in the nut plate. There is a natural tendency for these mating threads to slide "downhill" until tension is lost in an assembly. If assembled materials are soft or yield under load, or if thermocycling causes expansion and contraction of the materials, essential tension dissipates fairly quickly"¹. There are various types of spring washers that are designed to prevent loosening of bolted assemblies.</p> | | |

References:

Ajax technical note AFI/02/007

¹ Charles F Jacobs. American Fastener Journal 1997

² An Introduction to the design and behaviour of bolted joints. John H Bickford Nuts, Bolts, Fasteners and Plumbing Handbook. Carroll Smith Wikipedia


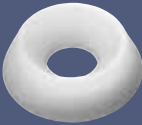
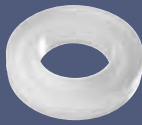
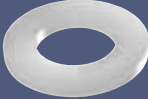
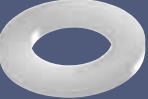
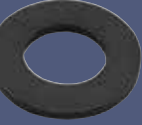



NYLON

| | | | | | | |
|---|---|---|---|---|---|--|
| <p>Natural Nylon HEC</p>  <p>UNC HEX SET SCREW</p> <p>BS66PC</p> | <p>Natural Nylon DIN 933</p>  <p>METRIC HEX SET SCREW</p> <p>BS66PCM</p> | <p>Natural Nylon HEC</p>  <p>UNC HEX BOLT</p> <p>BH66PC</p> | <p>Natural Nylon DIN 931</p>  <p>METRIC HEX BOLT</p> <p>BH66PCM</p> | <p>Natural Nylon DIN 963</p>  <p>METRIC CSK SLOT SCREW</p> <p>MS66CSM</p> | <p>Natural Nylon HEC</p>  <p>UNC CSK SLOT SCREW</p> <p>MS66CS</p> | <p>Natural Nylon DIN 84</p>  <p>METRIC CHEESE SLOT SCREW</p> <p>MS66ESM</p> |
| <p>Natural Nylon HEC</p>  <p>UNC ROUND SLOT SCREW</p> <p>MS66OS</p> | <p>Natural Nylon HEC</p>  <p>UNC SLOT FILLISTER SCREW</p> <p>MS66LS</p> | <p>Natural Nylon DIN 316</p>  <p>METRIC WING SCREW</p> <p>MS66PWM</p> | <p>Natural Nylon DIN 7985</p>  <p>BINDER HEAD PHILLIPS SCREW</p> <p>MS66BPM</p> | <p>Natural Nylon DIN 913</p>  <p>METRIC HEX SOCKET GRUB SCREW</p> <p>SG66PCM</p> | <p>Natural Nylon DIN 551</p>  <p>SLOTTED SOCKET GRUB SCREW</p> <p>SG66PSM</p> | <p>Natural Nylon DIN 912</p>  <p>METRIC SOCKET HEAD CAP SCREW</p> <p>SH66PCM</p> |
| <p>Natural Nylon HEC</p>  <p>UNC ALLTHREAD ROD</p> <p>AN66PC</p> | <p>Natural Nylon DIN 975</p>  <p>METRIC ALLTHREAD ROD</p> <p>AN66PCM</p> | <p>Natural Nylon HEC</p>  <p>UNC HEX NUT</p> <p>NH66P</p> | <p>Natural Nylon DIN 934</p>  <p>METRIC HEX NUT</p> <p>NH66PCM</p> | <p>Nylon Black UV Stable HEC</p>  <p>METRIC HEX THIN NUT</p> <p>NL66UCM</p> | <p>Natural Nylon HEC</p>  <p>UNC WING NUT</p> <p>NW66PC</p> | <p>Natural Nylon DIN 315</p>  <p>METRIC WING NUT</p> <p>NW66PCM</p> |
| <p>Natural Nylon HEC</p>  <p>UNC DOME HEX NUT</p> <p>ND66P</p> | <p>Natural Nylon Form A</p>  <p>METRIC DOME HEX NUT</p> <p>ND66PAM</p> | <p>Natural Nylon DIN 1587</p>  <p>METRIC DOME HEX NUT</p> <p>ND66PCM</p> | <p>Natural Nylon HEC</p>  <p>METRIC HEX FLANGE NUT</p> <p>NF66PCM</p> | <p>Natural Nylon HEC</p>  <p>SPACER ROUND</p> <p>SR66P</p> | <p>Nylon Black UV Stable HEC</p>  <p>SPACER ROUND</p> <p>SR66U</p> | <p>Natural Nylon HEC</p>  <p>METRIC SCREW INSULATOR</p> <p>WB66PIM</p> |

NYLON



| | | | | | | |
|---|--|--|--|--|---|--|
| Natural Nylon Flat Round + Taper  METRIC ANTI-LOSS WASHER WR66PAM | Natural Nylon HEC  METRIC CUP WASHER WR66PCM | Natural Nylon Locking + Sealing  METRIC HUBO™ WASHER WR66PHM | Natural Nylon HEC  METRIC FLAT ROUND WASHER WR66PM | Natural Nylon HEC  IMPERIAL FLAT ROUND WASHER WR66P | Nylon Black UV Stable HEC  METRIC WASHER WR66UM | Natural Nylon HEC  METRIC HOLDING WASHER WR66POM |
|---|--|--|--|--|---|--|

| |
|--|
| Natural Nylon HEC  BUSHING WASHER WB66PSM |
|--|

Electrical Properties

| | PA | PA | PP | POM | PE | PVDF |
|--------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Transversal resistance ohm.cm | 10 ¹² | 10 ¹⁵ | 10 ¹⁷ | 10 ¹⁵ | 10 ¹⁷ | 10 ¹⁴ |
| Dielectric strength Kv/mm | 30 | 60 | 50 | 20 | 50 | 20 |

Resistance Chart

| | |
|--|---------------------------|
| | Good Resistance |
| | Limited Resistance |
| | Not Resistant |

Types of Polymer

Glass Fibre Reinforced Nylon (GFR PA6.6):

Same properties as PA6.6 with enhanced mechanical properties of tensile strength, fatigue strength, impact strength, friction and abrasion resistance.

Polypropylene (PP)

Polypropylene is very resistant to fatigue and complies with food standards. A major use is in piping systems where rigidity and resistance to corrosion and chemical leaching are required.

Polyethylene (PE)

Is the most widely used plastic in the world with annual production of approximately 80 million tonnes and is used extensively in packaging applications such as foam, shrink wrapping and plastic bags.

Polycarbonate (PC)

It is a very durable transparent material with high impact resistance but low scratch resistance.

Polyvinylidene Fluoride (PVDF)

Is a highly non-reactive thermoplastic fluoropolymer. It has excellent resistance to solvents and acids.

Acetal (POM)

Acetal resins are odourless, tasteless and non-toxic. Acetal is widely used in the automotive, electrical, machinery, equipment and watch making industries.

Polyamide Nylon (PA, PA6.6, 66)

Is the standard polymer used in the Hobson range of fasteners and is recognised worldwide for being the most suitable material for fasteners. It offers excellent filling qualities and hence is easily moulded even into very difficult long shapes such as threaded rod.

It provides good toughness, tensile strength and resistance to creep, particularly in the high temperature range. Nylon has excellent wear properties, low coefficient of friction and exceptional chemical resistance to aromatic hydrocarbons, greases and oils.






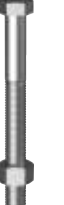



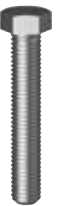
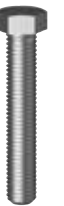
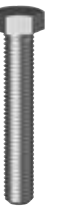
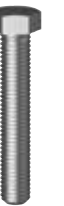














Nylon is a hygroscopic material which has a tendency to absorb water or moisture from the surrounding environment. The amount of absorption will depend on the environmental conditions. When water or moisture is absorbed by Nylon, it behaves like a plasticizer in plastics reducing the tensile strength, stiffness; and increasing elongation, impact strength and energy absorbing characteristics.

Outdoor weathering can be improved by the addition of carbon black. Nylon will perform well in long range service in most applications. Nylon is a translucent to off white in colour. Depending on the raw material used, there will always be slight colour differences from bright white to a very dull off white to light grey.

| PVDF | PC | PA6 / 6.6 / 66 | PP | POM | PE - LD | PE - HD | Material |
|------|-----------|----------------|-------------|-------------|---------|---------|--|
| | | | | | | | Substances |
| | | | | | | | Cold Water |
| | | | | | | | Hot Water |
| | | | | | | | Diluted acid |
| | | | | | | | Concentrated acid |
| | | | | | | | Oxidized acid |
| | | | | | | | Hydrofluoric acids |
| | | | | | | | Diluted potassium |
| | | | | | | | Concentrated potassium |
| | | | | | | | Inorganic bases |
| | | | | | | | Dry halogen |
| | | | | | | | Hydrocarbons |
| | | | | | | | Hydrocarbons (chlorinated) |
| | | | | | | | Alcohols |
| | | | | | | | Ester |
| | | | | | | | Ketone |
| | | | | | | | Ether |
| | | | | | | | Aldehyde |
| | | | | | | | Amino acids |
| | | | | | | | Organic acids |
| | | | | | | | Aromatic hydrocarbons |
| | | | | | | | Petrol |
| | | | | | | | Mineral oils |
| | | | | | | | Greases and oils |
| | | | | | | | Hydrocarbons (non-saturated chlorinated) |
| | | | | | | | Oil of turpentine |
| 0.03 | 0.1 - 0.2 | 1.3 - 1.9 | 0.01 - 0.03 | 0.22 - 0.25 | <0.01 | <0.01 | Humidity absorption % to ASTM d 570 |








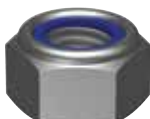
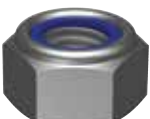
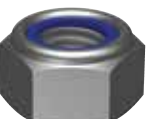
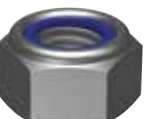
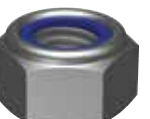
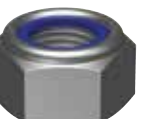
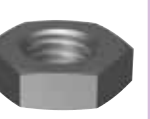










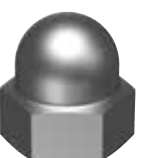




COMMERCIAL

| | | | | | | |
|--|--|---|--|---|--|---|
| <div>HDG AS 1111.1 Class 4.6</div> <div></div> <div>METRIC HEX BOLT & NUT KBH46GCM</div> | <div>Z/P AS 1111.1 Class 4.6</div> <div></div> <div>METRIC HEX BOLT & NUT KBH46ZCM</div> | <div>PLN AS 1111.1 Class 4.6</div> <div></div> <div>METRIC HEX BOLT & NUT KBH46PCM</div> | <div>HDG AS 2451 Mild Steel</div> <div></div> <div>BSW HEX BOLT & NUT KBHMSGW</div> | <div>Z/P AS 2451 Mild Steel</div> <div></div> <div>BSW HEX BOLT & NUT KBHMSZW</div> | <div>HDG AS 1111.1 Class 4.6</div> <div></div> <div>METRIC LONG THREAD ASSEMBLED KBX46GCM</div> | <div>Z/P AS 1111.1 Class 4.6</div> <div></div> <div>METRIC HEX BOLT BH46ZCM</div> |
| <div>Z/P AS 2451 Mild Steel</div> <div></div> <div>BSW HEX BOLT BHMSZW</div> | <div>PLN AS 2451 Mild Steel</div> <div></div> <div>BSW HEX BOLT BHMSPW</div> | <div>HDG AS 1111.2 Class 4.6</div> <div></div> <div>METRIC HEX SET SCREW BS46GCM</div> | <div>Z/P AS 1111.2 Class 4.6</div> <div></div> <div>METRIC HEX SET SCREW BS46ZCM</div> | <div>PLN AS 1111.2 Class 4.6</div> <div></div> <div>METRIC HEX SET SCREW BS46PCM</div> | <div>Z/P AS 2451 Mild Steel</div> <div></div> <div>BSW HEX SET SCREW BSMSZW</div> | <div>HDG AS 1390 Class 4.6</div> <div></div> <div>METRIC CUP HEAD BOLT & NUT KBC46GCM</div> |
| <div>Z/P AS 1390 Class 4.6</div> <div></div> <div>METRIC CUP HEAD BOLT & NUT KBC46ZCM</div> | <div>PLN AS 1390 Class 4.6</div> <div></div> <div>METRIC CUP HEAD BOLT & NUT KBC46PCM</div> | <div>Z/P HEC AS 2451</div> <div></div> <div>BSW CUP HEAD BOLT & NUT KBCMSZW</div> | <div>HDG AS 1393 Class 4.6</div> <div></div> <div>METRIC HEX COACH BH46GLM</div> | <div>Z/P AS 1393 Class 4.6</div> <div></div> <div>METRIC HEX COACH BH46ZLM</div> | <div>HDG HEC Class 5.8</div> <div></div> <div>HEX WASHER HEAD POLE STEP STEEL KBW58GCM</div> | <div></div> <div>HEX WASHER HEAD POLE STEP TIMBER BW58GLM</div> |
| <div>HDG HEC Class 4.6</div> <div></div> <div>PURLIN HEX FLANGE BOLT & NUT KBFMSGCM</div> | <div>Z/P HEC Class 4.6</div> <div></div> <div>PURLIN HEX FLANGE BOLT & NUT KBFMSZCM</div> | <div>Z/P HEC Class 4.6</div> <div></div> <div>PURLIN HEX 2 WASHERS BOLT & NUT KBHMSZCM</div> | <div>HDG HEC Class 4.6</div> <div></div> <div>FASCIA HEX WASHER BOLT & NUT KBAMSGCM</div> | <div>Z/P HEC Class 4.6</div> <div></div> <div>FASCIA HEX WASHER BOLT & NUT KBAMSZCM</div> | <div>Z/P HEC Class 4.6</div> <div></div> <div>SHOULDER PURLIN HEX BOLT & NUT KBOMSZCM</div> | |
| | | | | | | |






















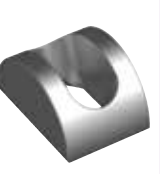



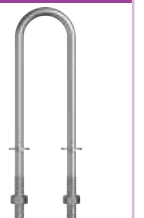




COMMERCIAL

| | | | | | | |
|---|--|--|---|--|---|---|
| <p>HDG AS 1112.3 Class 5</p>  <p>METRIC HEX NUT</p> <p>NH05GCM</p> | <p>Z/P AS1112.3 Class 5</p>  <p>METRIC HEX NUT</p> <p>NH05ZCM</p> | <p>PLN AS 1112.3 Class 5</p>  <p>METRIC HEX NUT</p> <p>NH05PCM</p> | <p>HDG AS 2451</p>  <p>BSW HEX NUT</p> <p>NHMSGW</p> | <p>Z/P AS 2451</p>  <p>BSW HEX NUT</p> <p>NHMSZW</p> | <p>PLN AS 2451</p>  <p>BSW HEX NUT</p> <p>NHMSPW</p> | <p>PLN AS1112.3 Class 5</p>  <p>METRIC LEFT HAND HEX NUT</p> <p>NH05PDM</p> |
| <p>MGAL DIN 985 Class 6</p> <p>NYLOC</p>  <p>METRIC NYLOC® NUT</p> <p>NN06GCM</p> | <p>Z/P DIN 985 Class 6</p> <p>NYLOC</p>  <p>METRIC NYLOC® NUT</p> <p>NN06ZCM</p> | <p>MGAL IFI-100NE Grade 2</p> <p>NYLOC</p>  <p>BSW NYLOC® NUT</p> <p>NNG2GW</p> | <p>Z/P IFI-100NE Grade 2</p> <p>NYLOC</p>  <p>BSW NYLOC® NUT</p> <p>NNG2ZW</p> | <p>Z/P IFI-100NE Grade 2</p> <p>NYLOC</p>  <p>UNC NYLOC® NUT</p> <p>NNG2ZC</p> | <p>Z/P IFI-100NE Grade 2</p> <p>NYLOC</p>  <p>UNF NYLOC® NUT</p> <p>NNG2ZF</p> | <p>HDG AS 1112.4 Use with Class 5</p>  <p>METRIC THIN HEX LOCK NUT</p> <p>NL05GCM</p> |
| <p>PLN HEC Class 5</p>  <p>ACME 6 TPI HEX NUT</p> <p>NHMSPA</p> | <p>PLN HEC Class 5</p>  <p>ACME 6 TPI LEFT HAND HEX NUT</p> <p>NHMSPB</p> | <p>Brass AS 1112.3</p>  <p>METRIC HEX NUT</p> <p>NHBRPCM</p> | <p>Brass HEC</p>  <p>UNC HEX NUT</p> <p>NHBRPC</p> | <p>Brass AS 2451</p>  <p>BSW HEX NUT</p> <p>NHBRPW</p> | <p>Brass AS 1427: 1996</p>  <p>METAL THREAD COUNTERSUNK SLOTTED</p> <p>MSBRPCS</p> | <p>Brass AS 1427: 1996</p>  <p>METAL THREAD PAN SLOTTED</p> <p>MSBRPPS</p> |
| <p>Z/P AS 1427: 1996 Mild Steel</p>  <p>METRIC METAL THREAD PAN PHILLIPS</p> <p>MSMSZPPM</p> | <p>Zinc Black AS 1427: 1996 Mild Steel</p>  <p>METRIC METAL THREAD PAN PHILLIPS</p> <p>MSMSVPPM</p> | <p>Z/P AS 1427:1996 Mild Steel</p>  <p>METRIC METAL THREAD CSK PHILLIPS</p> <p>MSMSZCPM</p> | <p>HDG DIN 1587 Class 5</p>  <p>METRIC DOME HEX NUT</p> <p>ND05GCM</p> | <p>Chrome DIN 1587 Class 5</p>  <p>METRIC DOME HEX NUT</p> <p>ND05CCM</p> | <p>HDG HEC Class 5</p>  <p>METRIC SHEAR NUT</p> <p>NS05GCM</p> | <p>Z/P DIN 935 Class 5</p>  <p>METRIC FINE SLOTTED HEX NUT</p> <p>NO05ZFM</p> |

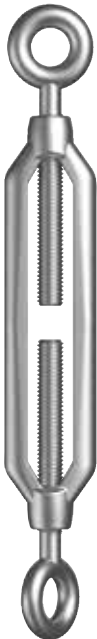
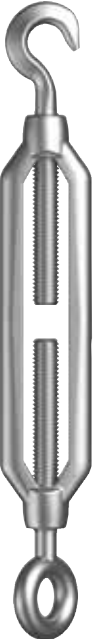
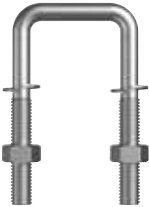

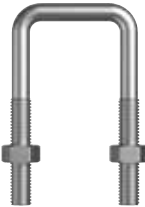







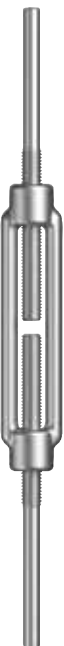





LOW-TENSILE

| | | | | | | |
|---|---|--|---|---|--|---|
| <p>Z/P DIN 975 Class 4.6</p>  <p>METRIC ALLTHREAD 1m & 3m</p> <p>ASMSZCM</p> | <p>HDG DIN 975 Class 4.6</p>  <p>METRIC ALLTHREAD 1m & 3m</p> <p>ASMSGCM</p> | <p>HDG DIN 975 Class 4.6</p>  <p>METRIC FOUNDATION STUD</p> <p>ASMSGCM</p> | <p>PLN DIN 975 Class 4.6</p>  <p>METRIC ALLTHREAD 1m & 3m</p> <p>ASMSPCM</p> | <p>PLN DIN 975 Class 4.6</p>  <p>METRIC ALLTHREAD LEFT HAND</p> <p>ASMSPDM</p> | <p>PLN DIN 975 Class 4.6</p>  <p>METRIC FINE ALLTHREAD 1m</p> <p>ASMSPFM</p> | <p>Z/P AS 2451 Mild Steel</p>  <p>BSW ALLTHREAD</p> <p>ASMSZW</p> |
| <p>PLN HEC Grade 1</p>  <p>ACME 6 TPI ALLTHREAD 12ft</p> <p>ASMSPA</p> | <p>PLN HEC Grade 1</p>  <p>ACME 6 TPI ALLTHREAD LEFT HAND 12ft</p> <p>ASMSPB</p> | <p>PLN AS 2451 Mild Steel</p>  <p>BSW ALLTHREAD</p> <p>ASMSPW</p> | <p>PLN AS 2451 Mild Steel</p>  <p>BSW ALLTHREAD LEFT HAND</p> <p>ASMSPX</p> | <p>PLN IFI 136C Grade 1</p>  <p>UNC ALLTHREAD 3ft</p> <p>ASMSCP</p> | <p>PLN IFI 136C Grade 1</p>  <p>UNF ALLTHREAD 3ft</p> <p>ASMSPF</p> | <p>PLN AS 2451 Mild Steel</p>  <p>BSF ALLTHREAD 3ft</p> <p>ASMSPS</p> |
| <p>PLN AS 2451 Mild Steel</p>  <p>2BA ALLTHREAD 3ft</p> <p>ASMSPS2BA</p> | <p>PLN AS 2451 Mild Steel</p>  <p>4BA ALLTHREAD 3ft</p> <p>ASMSPS4BA</p> | <p>Brass HEC DIN 975</p>  <p>METRIC ALLTHREAD 1m</p> <p>ABBRPCM</p> | <p>Brass HEC AS 3501</p>  <p>BSW ALLTHREAD 3ft</p> <p>ABBRPW</p> | <p>HDG HEC Class 5</p>  <p>METRIC HEX COUPLER</p> <p>AXHC05GCM</p> | <p>Z/P HEC Class 5</p>  <p>METRIC HEX COUPLER</p> <p>AXHC05ZCM</p> | <p>Z/P HEC Mild Steel</p>  <p>BSW HEX COUPLER</p> <p>AXHCMSZW</p> |
| <p>Z/P HEC Cast Iron</p>  <p>METRIC WIND BRACE D BRACKET</p> <p>AXWWCIZ</p> | <p>HDG HEC Mild Steel</p>  <p>FISH PLATE FOR 40-50mm TRAILER AXLE</p> <p>HPFGS</p> | <p>HDG HEC Mild Steel</p>  <p>METRIC U BOLT KIT ROUND</p> <p>KURMSGCM</p> | <p>HDG HEC Mild Steel</p>  <p>BSW U BOLT KIT ROUND</p> <p>KURMSGW</p> | <p>HDG HEC Mild Steel</p>  <p>METRIC U BOLT KIT ROUND WITH WASHER</p> <p>KURMSGWM</p> | <p>Z/P HEC Mild Steel</p>  <p>1/4" BSW U BOLT KIT ROUND</p> <p>KURMSZW</p> | <p>HDG HEC Class 4.8</p>  <p>FOUNDATION L-BOLT</p> <p>LB48GCM</p> |



LOW-TENSILE

| <div>HDG HEC Mild Steel</div> <div></div> <div>TURNBUCKLE EYE & EYE</div> <div>HTBMSGGE</div> | <div>HDG HEC Mild Steel</div> <div></div> <div>TURNBUCKLE HOOK & EYE</div> <div>HTBMSGH</div> | <div>HDG HEC Mild Steel</div> <div></div> <div>METRIC U BOLT KIT SQ WITH SPRING WASHER</div> <div>KUSMSGSM</div> | <div>HDG HEC Mild Steel</div> <div></div> <div>METRIC U BOLT KIT SQUARE</div> <div>KUSMSGCM</div> | <div>Z/P HEC Mild Steel</div> <div></div> <div>METRIC U BOLT KIT SQUARE</div> <div>KUSMSZCM</div> | <div>Z/P HEC Mild Steel</div> <div></div> <div>BSW EYE BOLT KIT LARGE</div> <div>KELMSZW</div> | <div>HDG HEC Mild Steel</div> <div></div> <div>BSW EYE BOLT KIT</div> <div>KENMSGW</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|-----|---------|-----|------------|--|--|------------------|--|--|--|--|------|--|--|--------|------|------------|-----|-----|-----|-----|-----|------|---|----|------|---|---|---|---|----|---|---|----|---|----|-----|---|---|---|---|----|---|---|---|---|----|---|---|---|----|---|----|---|---|------|---|----|------|---|---|----|---|----|---|---|---|---|----|---|---|---|----|---|----|---|---|----|------|----|-----|---|---|----|---|----|----|---|------|---|----|-----|---|---|----|---|----|---|---|----|---|----|-----|---|---|----|---|----|---|---|----|-------|-----|-----|---|---|----|---|----|----|----|---|---|-----|---|---|---|----|---|----|---|---|----|------|---|---|---|---|----|---|----|----|----|----|-------|---|------|---|---|----|---|----|----|----|-----|------|---|-----|------|---|----|---|----|----|----|---|-------|---|---|---|---|----|---|----|----|----|-----|------|---|------|-----|------|----|---|----|----|----|-----|-------|---|---|-----|---|----|---|----|----|----|-----|------|---|---|-----|---|----|---|----|----|----|-----|---|---|-----|-----|---|---|---|---|---|---|-----|------|---|-----|-----|---|----|---|----|----|----|-----|------|---|-----|-----|---|---|---|----|---|----|-----|----|---|---|---|---|---|---|---------|---|----|-----|--------|---|---|---|---|---|---|----|---|---|-----|--------|---|-----|---|---|---|---|----|---|---|-----|--------|---|-----|---|---|---|---|----|---|---|-----|--------|---|---|---|---|---|---|----|---|---|-----|--------|---|---|---|---|---|---|---|---|---|-----|---|---|-----|---|---|---|---|---|---|---|-----|--------|---|-----|---|---|---|---|---|---|---|-----|--------|---|---|---|---|---|---|---|---|---|--|--|--|--|--|
| | | <div>Z/P HEC Mild Steel</div> <div></div> <div>BSW EYE BOLT KIT</div> <div>KENMSZW</div> | <div>Z/P HEC Mild Steel</div> <div></div> <div>1/4" BSW HOOK BOLT KIT</div> <div>KHBMSZW</div> | <div>Z/P HEC Mild Steel</div> <div></div> <div>HEAVY EYE SCREW WOOD</div> <div>SEMSZL</div> | <div>Z/P HEC Mild Steel</div> <div></div> <div>HEAVY HOOK SCREW WOOD</div> <div>SHMSZL</div> | <div>HDG ISO 898-1 Class 4.6 UTS</div> <div></div> <div>FORGED EYEBOLT KIT</div> <div>KEFMSGCM</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>HDG HEC Mild Steel</div> <div></div> <div>TURNBUCKLE STUB ENDS</div> <div>HTBMSGGS</div> | <div>Z/P HEC Mild Steel</div> <div></div> <div>BSW LAG SCREW</div> <div>LSMSZW</div> | <div>Black HEC Replacement Die</div> <div></div> <div>ALLTHREAD CUTTER M10 / M12</div> <div>XTBD-M</div> | <table><tr><th colspan="3"></th><th colspan="3">Pitch (mm)</th><th colspan="5">Threads Per Inch</th></tr><tr><th colspan="3">Size</th><th>Coarse</th><th>Fine</th><th>Extra Fine</th><th>UNC</th><th>UN8</th><th>UNF</th><th>BSW</th><th>BSF</th></tr><tr><td>M1.6</td><td>-</td><td>#0</td><td>0.35</td><td>-</td><td>-</td><td>-</td><td>-</td><td>80</td><td>-</td><td>-</td></tr><tr><td>M2</td><td>-</td><td>#1</td><td>0.4</td><td>-</td><td>-</td><td>-</td><td>-</td><td>72</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>#2</td><td>-</td><td>-</td><td>-</td><td>56</td><td>-</td><td>64</td><td>-</td><td>-</td></tr><tr><td>M2.5</td><td>-</td><td>#3</td><td>0.45</td><td>-</td><td>-</td><td>48</td><td>-</td><td>56</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>#4</td><td>-</td><td>-</td><td>-</td><td>40</td><td>-</td><td>48</td><td>-</td><td>-</td></tr><tr><td>M3</td><td>1/8"</td><td>#5</td><td>0.5</td><td>-</td><td>-</td><td>40</td><td>-</td><td>44</td><td>40</td><td>-</td></tr><tr><td>M3.5</td><td>-</td><td>#6</td><td>0.6</td><td>-</td><td>-</td><td>32</td><td>-</td><td>40</td><td>-</td><td>-</td></tr><tr><td>M4</td><td>-</td><td>#8</td><td>0.7</td><td>-</td><td>-</td><td>32</td><td>-</td><td>36</td><td>-</td><td>-</td></tr><tr><td>M5</td><td>3/16"</td><td>#10</td><td>0.8</td><td>-</td><td>-</td><td>24</td><td>-</td><td>32</td><td>24</td><td>32</td></tr><tr><td>-</td><td>-</td><td>#12</td><td>-</td><td>-</td><td>-</td><td>24</td><td>-</td><td>28</td><td>-</td><td>-</td></tr><tr><td>M6</td><td>1/4"</td><td>-</td><td>1</td><td>-</td><td>-</td><td>20</td><td>-</td><td>28</td><td>20</td><td>26</td></tr><tr><td>M8</td><td>5/16"</td><td>-</td><td>1.25</td><td>1</td><td>-</td><td>18</td><td>-</td><td>24</td><td>18</td><td>22</td></tr><tr><td>M10</td><td>3/8"</td><td>-</td><td>1.5</td><td>1.25</td><td>1</td><td>16</td><td>-</td><td>24</td><td>16</td><td>20</td></tr><tr><td>-</td><td>7/16"</td><td>-</td><td>-</td><td>-</td><td>-</td><td>14</td><td>-</td><td>20</td><td>14</td><td>18</td></tr><tr><td>M12</td><td>1/2"</td><td>-</td><td>1.75</td><td>1.5</td><td>1.25</td><td>13</td><td>-</td><td>20</td><td>12</td><td>16</td></tr><tr><td>M14</td><td>9/16"</td><td>-</td><td>2</td><td>1.5</td><td>-</td><td>12</td><td>-</td><td>18</td><td>12</td><td>16</td></tr><tr><td>M16</td><td>5/8"</td><td>-</td><td>2</td><td>1.5</td><td>-</td><td>11</td><td>-</td><td>18</td><td>11</td><td>14</td></tr><tr><td>M18</td><td>-</td><td>-</td><td>2.5</td><td>1.5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>M20</td><td>3/4"</td><td>-</td><td>2.5</td><td>1.5</td><td>-</td><td>10</td><td>-</td><td>16</td><td>10</td><td>12</td></tr><tr><td>M22</td><td>7/8"</td><td>-</td><td>2.5</td><td>1.5</td><td>-</td><td>9</td><td>-</td><td>14</td><td>9</td><td>11</td></tr><tr><td>M24</td><td>1"</td><td>-</td><td>3</td><td>2</td><td>-</td><td>8</td><td>8</td><td>12 (14)</td><td>8</td><td>10</td></tr><tr><td>M27</td><td>1 1/8"</td><td>-</td><td>3</td><td>2</td><td>-</td><td>7</td><td>8</td><td>12</td><td>7</td><td>9</td></tr><tr><td>M30</td><td>1 1/4"</td><td>-</td><td>3.5</td><td>2</td><td>-</td><td>7</td><td>8</td><td>12</td><td>7</td><td>9</td></tr><tr><td>M33</td><td>1 3/8"</td><td>-</td><td>3.5</td><td>2</td><td>-</td><td>6</td><td>8</td><td>12</td><td>6</td><td>8</td></tr><tr><td>M36</td><td>1 1/2"</td><td>-</td><td>4</td><td>3</td><td>-</td><td>6</td><td>8</td><td>12</td><td>6</td><td>8</td></tr><tr><td>M39</td><td>1 5/8"</td><td>-</td><td>4</td><td>3</td><td>-</td><td>-</td><td>8</td><td>-</td><td>5</td><td>8</td></tr><tr><td>M42</td><td>-</td><td>-</td><td>4.5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>M45</td><td>1 3/4"</td><td>-</td><td>4.5</td><td>-</td><td>-</td><td>5</td><td>8</td><td>-</td><td>5</td><td>7</td></tr><tr><td>M48</td><td>1 7/8"</td><td>-</td><td>5</td><td>-</td><td>-</td><td>-</td><td>8</td><td>-</td><td>-</td><td>-</td></tr></table> | | | | | | | Pitch (mm) | | | Threads Per Inch | | | | | Size | | | Coarse | Fine | Extra Fine | UNC | UN8 | UNF | BSW | BSF | M1.6 | - | #0 | 0.35 | - | - | - | - | 80 | - | - | M2 | - | #1 | 0.4 | - | - | - | - | 72 | - | - | - | - | #2 | - | - | - | 56 | - | 64 | - | - | M2.5 | - | #3 | 0.45 | - | - | 48 | - | 56 | - | - | - | - | #4 | - | - | - | 40 | - | 48 | - | - | M3 | 1/8" | #5 | 0.5 | - | - | 40 | - | 44 | 40 | - | M3.5 | - | #6 | 0.6 | - | - | 32 | - | 40 | - | - | M4 | - | #8 | 0.7 | - | - | 32 | - | 36 | - | - | M5 | 3/16" | #10 | 0.8 | - | - | 24 | - | 32 | 24 | 32 | - | - | #12 | - | - | - | 24 | - | 28 | - | - | M6 | 1/4" | - | 1 | - | - | 20 | - | 28 | 20 | 26 | M8 | 5/16" | - | 1.25 | 1 | - | 18 | - | 24 | 18 | 22 | M10 | 3/8" | - | 1.5 | 1.25 | 1 | 16 | - | 24 | 16 | 20 | - | 7/16" | - | - | - | - | 14 | - | 20 | 14 | 18 | M12 | 1/2" | - | 1.75 | 1.5 | 1.25 | 13 | - | 20 | 12 | 16 | M14 | 9/16" | - | 2 | 1.5 | - | 12 | - | 18 | 12 | 16 | M16 | 5/8" | - | 2 | 1.5 | - | 11 | - | 18 | 11 | 14 | M18 | - | - | 2.5 | 1.5 | - | - | - | - | - | - | M20 | 3/4" | - | 2.5 | 1.5 | - | 10 | - | 16 | 10 | 12 | M22 | 7/8" | - | 2.5 | 1.5 | - | 9 | - | 14 | 9 | 11 | M24 | 1" | - | 3 | 2 | - | 8 | 8 | 12 (14) | 8 | 10 | M27 | 1 1/8" | - | 3 | 2 | - | 7 | 8 | 12 | 7 | 9 | M30 | 1 1/4" | - | 3.5 | 2 | - | 7 | 8 | 12 | 7 | 9 | M33 | 1 3/8" | - | 3.5 | 2 | - | 6 | 8 | 12 | 6 | 8 | M36 | 1 1/2" | - | 4 | 3 | - | 6 | 8 | 12 | 6 | 8 | M39 | 1 5/8" | - | 4 | 3 | - | - | 8 | - | 5 | 8 | M42 | - | - | 4.5 | - | - | - | - | - | - | - | M45 | 1 3/4" | - | 4.5 | - | - | 5 | 8 | - | 5 | 7 | M48 | 1 7/8" | - | 5 | - | - | - | 8 | - | - | - | | | | | |
| | | | Pitch (mm) | | | Threads Per Inch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Size | | | Coarse | Fine | Extra Fine | UNC | UN8 | UNF | BSW | BSF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1.6 | - | #0 | 0.35 | - | - | - | - | 80 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 | - | #1 | 0.4 | - | - | - | - | 72 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | - | #2 | - | - | - | 56 | - | 64 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2.5 | - | #3 | 0.45 | - | - | 48 | - | 56 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | - | #4 | - | - | - | 40 | - | 48 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 | 1/8" | #5 | 0.5 | - | - | 40 | - | 44 | 40 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3.5 | - | #6 | 0.6 | - | - | 32 | - | 40 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | - | #8 | 0.7 | - | - | 32 | - | 36 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M5 | 3/16" | #10 | 0.8 | - | - | 24 | - | 32 | 24 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | - | #12 | - | - | - | 24 | - | 28 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M6 | 1/4" | - | 1 | - | - | 20 | - | 28 | 20 | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M8 | 5/16" | - | 1.25 | 1 | - | 18 | - | 24 | 18 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M10 | 3/8" | - | 1.5 | 1.25 | 1 | 16 | - | 24 | 16 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | 7/16" | - | - | - | - | 14 | - | 20 | 14 | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M12 | 1/2" | - | 1.75 | 1.5 | 1.25 | 13 | - | 20 | 12 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M14 | 9/16" | - | 2 | 1.5 | - | 12 | - | 18 | 12 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M16 | 5/8" | - | 2 | 1.5 | - | 11 | - | 18 | 11 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M18 | - | - | 2.5 | 1.5 | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M20 | 3/4" | - | 2.5 | 1.5 | - | 10 | - | 16 | 10 | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M22 | 7/8" | - | 2.5 | 1.5 | - | 9 | - | 14 | 9 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M24 | 1" | - | 3 | 2 | - | 8 | 8 | 12 (14) | 8 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M27 | 1 1/8" | - | 3 | 2 | - | 7 | 8 | 12 | 7 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M30 | 1 1/4" | - | 3.5 | 2 | - | 7 | 8 | 12 | 7 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M33 | 1 3/8" | - | 3.5 | 2 | - | 6 | 8 | 12 | 6 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M36 | 1 1/2" | - | 4 | 3 | - | 6 | 8 | 12 | 6 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M39 | 1 5/8" | - | 4 | 3 | - | - | 8 | - | 5 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M42 | - | - | 4.5 | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M45 | 1 3/4" | - | 4.5 | - | - | 5 | 8 | - | 5 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M48 | 1 7/8" | - | 5 | - | - | - | 8 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div>HEC</div> <div></div> <div>ALLTHREAD CUTTER M10 / M12</div> <div>XTBAB-M</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |










CYCLONE

| | | | | | | |
|---|---|---|--|--|--|---|
| HOBKOTE® DIN 975 Class 4.6  METRIC ALLTHREAD ASMSHCM | Z/P DIN 975 Class 4.6  METRIC ALLTHREAD ASMSZCM | HDG DIN 975 Class 4.6  METRIC ALLTHREAD ASMSGCM | HOBKOTE® HEC Class 5  METRIC HEX COUPLER AXHC05HCM | HOBKOTE® AS 1112.3 Class 5  METRIC HEX NUT NH05HCM | HOBKOTE® HEC Mild Steel  METRIC FLAT ROUND WASHER WRMSHM | HDG HEC Mild Steel  METRIC STARTER BAR L BOLT LBMSGCM |
| HOBKOTE® HEC Mild Steel  METRIC STARTER BAR L BOLT LBMSHCM | HOBKOTE® HEC Mild Steel  METRIC SQUARE WSMSHM | HDG HEC Mild Steel  U SHAPE WITH BAR GUPGB | SS 316 HEC  U SHAPE WITH BAR GUPSB | HDG HEC Mild Steel  U SHAPE BOLT ON GUPGT | HDG HEC Mild Steel  U STIRRUP ROD STEM GUSGR | HDG HEC Mild Steel  L STIRRUP ROD STEM GLSGR |
| HDG HEC Mild Steel  L STIRRUP ROD STEM GLSGR035 | HDG HEC Mild Steel  T STIRRUP ROD STEM GTSGR | HDG HEC Mild Steel  T BLADE BOLT ON GTPGB | HDG HEC Mild Steel  T BLADE BOLT ON EXTRA H/DUTY GTXGB | HDG HEC Mild Steel  ANGLE BRACKET M10 / 2 HOLES GABGS10 | HDG HEC Mild Steel  ANGLE BRACKET M12 / 2 HOLES GABGS12 | HDG HEC Mild Steel  ANGLE BRACKET M12 / 3 HOLES GABGS12 |
| HDG HEC Mild Steel  ANGLE BRACKET M12 / 4 HOLES GABGS12 | HDG HEC Mild Steel  ANGLE BRACKET M16 / 2 HOLES GABGS16 | HDG HEC Mild Steel  ANGLE CONNECTOR TIMBER M6 GACGT06 | HDG HEC Mild Steel  ANGLE CONNECTOR TIMBER M12 GACGT12 | HDG HEC Mild Steel  ANGLED CONNECTOR TIMBER M16 GACGT16 | HDG HEC Mild Steel  ANGLE CONNECTOR TIMBER M12/16 GACGT12016 | HDG HEC Mild Steel  FISH TAIL POST SUPPORT GFTG |



CYCLONE

| HDG HEC Mild Steel | HDG HEC Mild Steel | HDG HEC Mild Steel | HDG HEC Mild Steel | HDG HEC Mild Steel | HDG HEC Mild Steel | HOBKOTE® HEC Mild Steel |
|---|---|---|---|--|---|---|
|  |  |  |  |  |  |  |
| FLAT CONNECTOR TIMBER M12 | FLAT CONNECTOR TIMBER M12 | FLAT CONNECTOR TIMBER M12 | FLAT CONNECTOR TIMBER M16 | TRUSS CONNECTOR BOND BEAM | TRUSS CONNECTOR Z BRACKET | TRUSS CONNECTOR Z BRACKET |
| GFCGF30050 | GFCGF45050 | GFCGF45065 | GFCGF16450 | GTBGB | GTCGZ | GTCHZ |

Builder's Guide

Hobson stock Metric Class 4.6 UTS Builders Allthread rod and accessories in Zinc Plated, Hobkote® and Hot Dip Galvanised finish.

Zinc Plated product conforms to ISO 4042 [Fasteners – Electroplated coatings] with 5 micron in thickness.

The Hobkote® coating conforms to ISO 4042 with between 5-8 micron in thickness and a specially formulated passivation. The Hobkote® coating performs with 33% more corrosion resistance than Zinc Plated product.

Hot Dip Galvanised product conforms to AS 1214 [Hot-Dip Galvanised Coatings On Threaded Fasteners] with 42 micron in thickness and Mechanically Galvanised product conforms to ASTM B695 Class 40 [Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel] with 40 micron in thickness.

Hobson Galvanised products comply with AS 1684 [Residential timber-framed construction – Cyclonic areas] requirement of 40 micron from AS 1397 [Steel sheet and strip--Hot-dip zinc-coated or aluminium/zinc-coated] coating class Z275.





KITS

Assortment Kits

Hobson Engineering have a wide variety of Assortment Kits. All available in a **handy, tough, metal case**.

Each Kit has a selection of mixed or similar items, in various sizes.

They look **professional**, are extremely **useful** and incredibly **compact**.



| Zinc Plated Metric Flange Class 8.8 | Zinc Plated Metric Fine Class 8.8 | Stainless 316 Metric HEC | Stainless 316 Metric HEC | Zinc Plated HEC | PLN Metric Class 12.9 |
|---|---|---|--|--|--|
| | | | | | |
| SERRATED BOLTS & NUTS M5 M6 M8 M10 | BOLTS & NUTS M8 M10 M12 | BOLTS NUTS & WASHERS M5 M6 | BOLTS NUTS & WASHERS M8 M10 | WASHERS RND/ MUDGUARD/ SPRING | SOCKET HEAD CAP SCREWS M5 M6 M8 M10 |
| FEFK003 | FEFK004 | FEFK005 | FEFK006 | FEFK007 | FEFK008 |
| 5.74kg / 579pcs | 6.55kg / 303pcs | 3.19kg / 810pcs | 3.65kg / 324pcs | 6.06kg / 1770pcs | 4.55kg / 354pcs |

KITS



| Zinc Plated Steel HEC | Zinc Plated Aluminium / Steel | Zinc Yellow HEC | Zinc Plated HEC | Zinc Plated Metric Class 8.8 | Zinc Plated UNC Grades 5 & 8 |
|---|--|-----------------------------------|---|---|---|
| | | | | | |
| SPLIT PINS 1.6 2.0 2.5 3.2 4.0 5.0 Ø | BLIND RIVETS DOME 3.2mm 4.0mm 4.8mm | SELF DRILLING METAL SCREWS | PHILLIPS SELF TAPPING PAN HEAD 6-12G | BOLTS & NUTS M6 M8 M10 M12 | BOLTS & NUTS 1/4 5/16 3/8 1/2 |
| FEFK009 | FEFK010 | FEFK011 | FEFK012 | FEFK015 | FEFK016 |
| 4.13kg / 1705pcs | 3.54kg / 1150pcs | 4.4kg / 1180pcs | 4.77kg / 1545pcs | 7.07kg / 513pcs | 6.59kg / 420pcs |



Assortment MASTER Kits

Contain the following:

Bolts: Set Screw

Nuts: Hex, NYLOC®, Dome, Flanged

Washers: Round, Spring, Mudguard

*M5 also contains **Socket Screws**






























M5, M6, M8,
M10 or M12

| Black Zinc Plated HEC | Zinc Plated /PLN High Tensile Class 8.8 | Zinc Plated High Tensile Class 8.8 | Zinc Plated High Tensile Class 8.8 | Zinc Plated High Tensile Class 8.8 | Zinc Plated High Tensile Class 8.8 |
|---|---|--|--|--|--|
| | | | | | |
| PHILLIPS SELF TAPPING PAN HEAD 6-10G | SHCS BOLTS NUTS WASHERS (FLANGE) | SET SCREWS BOLTS NUTS & WASHERS | SET SCREWS BOLTS NUTS & WASHERS | SET SCREWS BOLTS NUTS & WASHERS | SET SCREWS BOLTS NUTS & WASHERS |
| FEFK018 | FEFK019 | FEFK020 | FEFK021 | FEFK022 | FEFK023 |
| 4.38kg / 1640pcs | 4.93kg / 1460pcs | 6.17kg / 1185pcs | 6.58kg / 700pcs | 6.7kg / 430pcs | 6.79kg / 290pcs |



Swiss Quality


































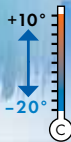


| | | | | | | |
|--|---|--|---|---|---|--|
| <p>Z/P m1t Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER</p> <p>MUMM1T0</p> | <p>Z/P m1t-C Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER - DIN 9021</p> <p>MUMM1TC</p> | <p>SS 316 m1tr Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER</p> <p>MUMM1TR0</p> | <p>SS 316 m1tr-C Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER - DIN 9021</p> <p>MUMM1TRC</p> | <p>GreenTec® m2 Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER</p> <p>MUMM200</p> | <p>KEY</p>  <p>Directly compatible with SA TS 101: 2015 and AS 5216</p>  <p>Fire Rated</p>  <p>Seismic Load Approval</p> | |
| <p>GreenTec® m2 Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER IN MINI-BOX</p> <p>MUMM2MBP</p> | <p>Z/P m2-C Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER - DIN 9021</p> <p>MUMM2C0</p> | <p>HDG m2f Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER</p> <p>MUMM2F</p> | <p>SS 316 m2r Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER</p> <p>MUMM2R0</p> | <p>SS 316 m2r-C Carbon Steel</p>  <p>THROUGHBOLT WITH WASHER - DIN 9021</p> <p>MUMM2RC</p> | <p>Z/P m2-l Carbon Steel</p>  <p>INTERNALLY THREADED BOLT</p> <p>MUMM2I</p> | <p>SS 316 m2r-l Carbon Steel</p>  <p>INTERNALLY THREADED BOLT</p> <p>MUMM2RI</p> |
| <p>SS 316 HL-B Carbon Steel</p>  <p>HEAVY DUTY ANCHOR HEX</p> <p>MUMHL4SZ</p> | <p>Z/P HL-S (SZ-S) Carbon Steel</p>  <p>HEAVY DUTY ANCHOR HEX</p> <p>MUMHLSSZ</p> | <p>Z/P HL-B (SZ-B) Carbon Steel</p>  <p>HEAVY DUTY ANCHOR</p> <p>MUMHLBSZ</p> | <p>Z/P HL-SK (SZ-SK) Carbon Steel</p>  <p>CSK HEAD HEAVY DUTY ANCHOR</p> <p>MUMHLSK</p> | <p>Zinc Flake MCS-S Carbon Steel</p>  <p>HEX HEAD CONCRETE SCREW HEX</p> <p>MUMMCSS0</p> | <p>Z/P MCS-SK Carbon Steel</p>  <p>CSK HEAD CONCRETE SCREW TORX</p> <p>MUMMCSSK</p> | <p>Z/P MCS-P Carbon Steel</p>  <p>PAN HEAD CONCRETE SCREW TORX</p> <p>MUMMCSP</p> |
| <p>Z/P MCS-PG Carbon Steel</p>  <p>LRG PAN HEAD CONCRETE SCREW TORX</p> <p>MUMMCSPG</p> | <p>Z/P MCS-I Carbon Steel</p>  <p>CSK SOCKET HEAD CONCRETE SCREW HEX</p> <p>MUMMCISI</p> | <p>SS 316 MCSr-S Carbon Steel</p>  <p>HEX HEAD CONCRETE SCREW HEX</p> <p>MUMMCIRS</p> | <p>SS 316 MCSr-SK Carbon Steel</p>  <p>CSK HEAD CONCRETE SCREW TORX</p> <p>MUMMCIRK</p> | <p>SS 316 MCSr-P Carbon Steel</p>  <p>PAN HEAD CONCRETE SCREW TORX</p> <p>MUMMCIRP</p> | <p>Z/P MSS Carbon Steel</p>  <p>SHIELD ANCHOR</p> <p>MUMMSS</p> | <p>Z/P MHA-S Carbon Steel</p>  <p>SLEEVE ANCHOR HEX SCREW</p> <p>MUMMHAS</p> |

| | | | | | | |
|--|---|--|---|--|---|--|
| <p>Z/P MHA-B Carbon Steel</p>  <p>SLEEVE ANCHOR</p> <p>MUMMHAB</p> | <p>Z/P ESA (E) Carbon Steel</p>  <p>DROP IN ANCHOR</p> <p>MUMESAE</p> | <p>Z/P ESAK (ES) Carbon Steel</p>  <p>DROP IN ANCHOR WITH COLLAR</p> <p>MUMESAKE</p> | <p>SS 316 ESAr (E A4)</p>  <p>DROP IN ANCHOR</p> <p>MUMESARE</p> | <p>Z/P MEA Carbon Steel</p>  <p>DROP IN ANCHOR</p> <p>MUMMEAE0</p> | <p>SS 316 MEAr</p>  <p>DROP IN ANCHOR</p> <p>MUMMEARE</p> | <p>Z/P MEA-WZ</p>  <p>SETTING TOOL FOR MEA WITH HAND GUARD</p> <p>MUMMEAWZ</p> |
| <p>Z/P MEA-SDS-PLUS Carbon Steel</p>  <p>SETTING TOOL FOR MEA</p> <p>MUMMEASD</p> | <p>Z/P MEA-BB Carbon Steel</p>  <p>STOP DRILL BIT</p> <p>MUMMEABB</p> | <p>Brass MMD</p>  <p>BRASS ANCHOR</p> <p>MUMMMD</p> | <p>Z/P MHDA Carbon Steel</p>  <p>HOLLOW CEILING ANCHOR</p> <p>MUMMHDA0</p> | <p>SS 316 MHDAr</p>  <p>HOLLOW CEILING ANCHOR</p> <p>MUMMHDAr</p> | <p>Z/P MAN Carbon Steel</p>  <p>CEILING ANCHOR</p> <p>MUMMAN</p> | <p>MANr</p>  <p>CEILING ANCHOR</p> <p>MUMMANR0</p> |
| <p>Z/P MMS Carbon Steel</p>  <p>CONCRETE FRAME ANCHOR POZI DR</p> <p>MUMMMSO</p> | <p>Z/P MMM Carbon Steel</p>  <p>MASONRY FRAME ANCHOR MULTI POZI DR</p> <p>MUMMMM</p> | <p>Z/P MEN Carbon Steel</p>  <p>EXPRESS NAIL</p> <p>MUMMEN</p> | <p>Z/P MDB-M</p>  <p>METAL DISC DIAM 38MM</p> <p>MUMMDBM3</p> | <p>Z/P MDB-M</p>  <p>METAL DISC DIAM 38MM WHITE</p> <p>MUMMDBMW</p> | <p>Z/P MDB-M</p>  <p>METAL DISC DIAM 70MM</p> <p>MUMMDBM7</p> | <p>Z/P MRS-H Carbon Steel</p>  <p>TRIM HEAD 8.3 WALL SCREW TORX DR</p> <p>MUMMRSH</p> |
| <p>Z/P MRS-U Carbon Steel</p>  <p>CSK HEAD 11.5 WALL SCREW TORX DR</p> <p>MUMMRSU</p> | <p>Z/P MJB Carbon Steel</p>  <p>ADJUSTABLE SCREW T25 TORX DR</p> <p>MUMMJB</p> | <p>Z/P TR-R Carbon Steel</p>  <p>FRAME FIXING SCREW RAFIX HEX DR</p> <p>MUMTRR0</p> | <p>Z/P TR-RK Carbon Steel</p>  <p>FRAME FIXING SCREW RAFIX HEX DR</p> <p>MUMTRRK</p> | <p>Z/P TR Carbon Steel</p>  <p>TOPLOC SPACER HEX DR</p> <p>MUMTR0</p> | <p>Z/P TR-B Carbon Steel</p>  <p>TOPLOC SPACER HEX DR</p> <p>MUMTRB0</p> | <p>Z/P TR-BS Carbon Steel</p>  <p>TOPLOC SPACER HEX DR</p> <p>MUMTRBS</p> |



Swiss Quality



| MIT-Hybrid | MIT600RE | MIT-SE Plus | MIT-SP | MIT-Rock | MIT-Cool Plus | MIT-Tropical |
|--|--|--|---|--|---|---|
| Mortar for highest performance in concrete | Pure Epoxy for highest loads in concrete | Mortar for use in concrete | Mortar for use in masonry | Mortar for use in natural stone | Mortar for low temperatures | Mortar for high temperatures |
| 280 ml  | 385 ml  | 165 ml  | 300 ml  | 400 ml  | 300 ml  | 350 ml  |
| 350 ml  | 585 ml  | 280 ml  | 350 ml  | | 400 ml  | |
| 400 ml  | 1400 ml  | 300 ml  | 400 ml  | | | |
| 825 ml  | | 350 ml  | | | | |
| | | 400 ml  | | | | |
| | | 825 ml  | | | | |
|  |  |  |  | |  |  |
| | |  |  | |  | |
| | | |  | | | |
| | | | |  | | |
|  | | | |  | | |
| | | | | | |  |



recommended



suitable

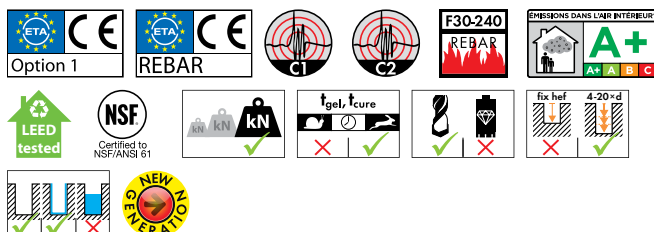


Swiss Quality



MIT-Hybrid Mortar for highest performance in concrete

HOBSON Part prefix: MUCMTHYB <<



Features

- European Technical Approval Option 1 for cracked and non-cracked concrete with anchor rod and with rebar used as anchor
- European Technical Approval for post-installed rebar connections
- The anchor may also be used under seismic influence for performance category C1 + C2
- Fire resistance test certification F30-F240 (Rebar)
- VOC free according to Swiss legislation and certified A+ according to DEVL 1101903D / DEVL 1104875A
- LEED - Test Report
- Certification for drinking water systems
- High loads
- Fast curing
- Variable setting depth
- Dry and damp drill holes
- Suitable for overhead fixings
- Styrene free and low odour
- Colour of mortar: grey
- Indoor (zinc plated) and outdoor (stainless steel) applications



Applications

steel constructions, wooden constructions, façades, façade scaffolds, railings, high-racks, machines, staircases, ladders, cable trays, canopies, hand-rails, consoles

Temperatures

| | -5÷+1°C | 0÷4°C | 5÷9°C | 10÷14°C | 15÷19°C | 20÷29°C | 30÷40°C |
|--|---------|-------|-------|---------|---------|---------|---------|
| Working time, in minutes (t_{gel}) | 50 | 25 | 15 | 10 | 6 | 3 | 2 |
| Curing time, dry in minutes (t_{cure}) | 5 h | 3.5 h | 2 h | 1 h | 40 | 30 | 30 |
| Curing time, wet in minutes (t_{cure}) | 10 h | 7 h | 4 h | 2 h | 80 | 60 | 60 |

Installation



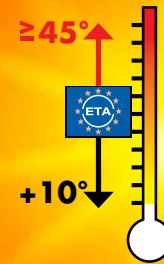


Swiss Quality



MIT-Tropical Mortar for high temperatures

HOBSON Part prefix: MUCMTTRO <<

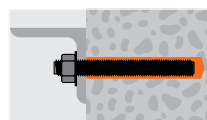


MIT-Tropical



Applications

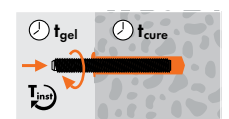
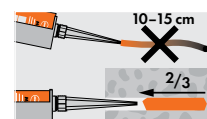
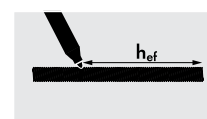
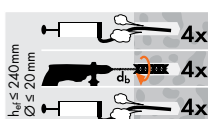
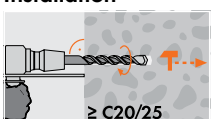
steel constructions, wooden constructions, façades, façade scaffolds, railings, high-racks, machines, staircases, ladders, cable trays, canopies, hand-rails, consoles



Temperatures

| | 10+14°C | 15+19°C | 20+29°C | 30+34°C | 35+39°C | 40+44°C | >45°C |
|--|---------|---------|---------|---------|---------|---------|-------|
| Working time, in minutes (t_{gel}) | 30 | 20 | 15 | 10 | 6 | 4 | 2 |
| Curing time, in minutes (t_{cure}) | 300 | 210 | 145 | 80 | 45 | 25 | 20 |

Installation





Swiss Quality

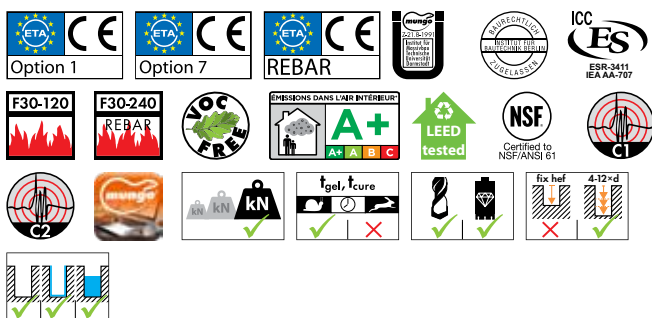


MIT600RE Pure Epoxy for highest loads in concrete

HOBSON Part prefix: MUCMT600 <<



MIT600RE



Features

- European Technical Approval Option 1 for cracked and non-cracked concrete with anchor rod and with rebar used as anchor
- European Technical Approval Option 7 for diamond drilled holes in non-cracked concrete
- European Technical Approval for post-installed rebar connections
- German National Approval for post-installed rebar connections
- ICC-ES Report ESR-3411
- Fire resistance test certification F30-F120
- Fire resistance test certification F30-F240 (Rebar)
- VOC free according to Swiss legislation and certified A+ according to DEVL 1101903D / DEVL 1104875A
- LEED - Test Report
- Certification for drinking water systems
- The anchor may also be used under seismic influence for performance category C1 + C2 (M12-M30)
- High loads
- Long working time for filling of big and deep drill holes
- Variable setting depth
- Application also in damp and water-filled drill holes
- Suitable for overhead fixings
- Shelf life: 24 months
- Colour of mortar: grey
- Indoor (zinc plated) and outdoor (stainless steel) applications

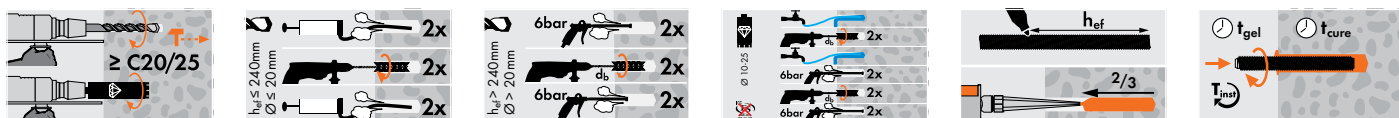
Applications

post-installed rebar connections, steel constructions, profiles, closing of ceilings, repair works

Temperatures

| | 5÷9°C | 10÷19°C | 20÷29°C | 30÷39°C | ≥ +40°C |
|--|-------|---------|---------|---------|---------|
| Working time, in minutes (t_{gel}) | 120 | 90 | 30 | 20 | 12 |
| Curing time, dry in hours (t_{cure}) | 50 | 30 | 10 | 6 | 4 |
| Curing time, wet in hours (t_{cure}) | 100 | 60 | 20 | 12 | 8 |

Installation










Swiss Quality



| | | | | | | |
|--|---|---|--|--|--|--|
| <p>Vinylester urethane MIT-HYBRID</p> <p>CARTRIDGE 280ML</p> <p>MUCMTHYB1710091</p> | <p>Vinylester urethane MIT-HYBRID</p> <p>CARTRIDGE 350ML</p> <p>MUCMTHYB1710093</p> | <p>Vinylester urethane MIT-HYBRID</p> <p>CARTRIDGE 400ML</p> <p>MUCMTHYB1710094</p> | <p>Vinylester urethane MIT-HYBRID</p> <p>CARTRIDGE 825ML</p> <p>MUCMTHYB1710095</p> | <p>Pure Epoxy MIT600RE</p> <p>CARTRIDGE 385ML</p> <p>MUCMT6001710001</p> | <p>Pure Epoxy MIT600RE</p> <p>CARTRIDGE 585ML</p> <p>MUCMT6001710010</p> | <p>Pure Epoxy MIT600RE</p> <p>CARTRIDGE 1400ML</p> <p>MUCMT6001710012</p> |
| <p>MIT-K</p> <p>REBAR CASE FOR MIT600RE & MIT-SE PLUS</p> <p>MUCMTK0</p> | <p>Vinylester MIT-SE Plus</p> <p>STYRENE FREE CARTRIDGE 165ML</p> <p>MUCMTSEP1710024</p> | <p>Vinylester MIT-SE Plus</p> <p>STYRENE FREE SELF-OPENING CARTRIDGE 280ML</p> <p>MUCMTSEP1710015</p> | <p>Vinylester MIT-SE Plus</p> <p>STYRENE FREE CARTRIDGE 300ML</p> <p>MUCMTSEP1710017</p> | <p>Vinylester MIT-KE</p> <p>SYSTEM-CASE MIT-SE PLUS 22 X 300ML</p> <p>MUCMTKE3</p> | <p>Vinylester MIT-SE Plus</p> <p>STYRENE FREE CARTRIDGE 350ML</p> <p>MUCMTSEP1710025</p> | <p>Vinylester MIT-BE</p> <p>MAXI-BOX MIT-SE PLUS 20 X 350ML</p> <p>MUCMTBE</p> |
| <p>Vinylester MIT-SE Plus</p> <p>STYRENE FREE CARTRIDGE 400ML</p> <p>MUCMTSEP1710026</p> | <p>Vinylester MIT-SE Plus</p> <p>STYRENE FREE CARTRIDGE 825ML</p> <p>MUCMTSEP1710022</p> | <p>Polyester MIT-SP</p> <p>STYRENE FREE CARTRIDGE 300ML</p> <p>MUCMTSP01710050</p> | <p>Polyester MIT-SP</p> <p>STYRENE FREE CARTRIDGE 350ML</p> <p>MUCMTSP01710057</p> | <p>Polyester MIT-SP</p> <p>STYRENE FREE CARTRIDGE 400ML</p> <p>MUCMTSP01710052</p> | <p>Polyester MIT-KP</p> <p>SYSTEM-CASE MIT-SP 22 X 300ML</p> <p>MUCMTKP3</p> | <p>Epoxy-Acrylate MIT-ROCK</p> <p>CARTRIDGE 400ML</p> <p>MUCMTE40</p> |
| <p>Vinylester MIT-TROPICAL</p> <p>CARTRIDGE 350ML</p> <p>MUCMTTRO</p> | <p>Vinylester MIT-COOL PLUS Low Temperature</p> <p>STYRENE FREE CARTRIDGE 300ML</p> <p>MUCMTC30</p> | <p>Vinylester MIT-COOL PLUS Low Temperature</p> <p>STYRENE FREE CARTRIDGE 400ML</p> <p>MUCMTC40</p> | <p>MIT-PP-H0 11 IN 1 FOR ALL MIT</p> <p>INJECTION GUN</p> <p>MUCMTPH0</p> | <p>MIT-PP-H1 FOR MIT 165/280/300ML</p> <p>EASY-PRESS</p> <p>MUCMTPH11710034</p> | <p>MIT-PP-H1 FOR MIT 350ML</p> <p>EASY-PRESS</p> <p>MUCMTPH11710035</p> | <p>MIT-PP-H1 FOR MIT 400ML</p> <p>EASY-PRESS</p> <p>MUCMTPH11710036</p> |

| | | | | | | |
|---|--|--|---|--|---|---|
| MIT-PP-HK FOR MIT 165-300ML  SYSTEM-CASE EASY-PRESS MUCMTPHK1710201 | MIT-PP-HK FOR MIT 350ML  SYSTEM-CASE EASY-PRESS MUCMTPHK1710202 | MIT-PP-HK FOR MIT 400ML  SYSTEM-CASE EASY-PRESS MUCMTPHK1710203 | MIT-PP-H2 FOR MIT 165/280/300ML  INJECTION GUN MUCMTPH21710029 | MIT-PP-H2 FOR MIT 350ML  INJECTION GUN MUCMTPH21710033 | MIT-PP-H2 FOR MIT 300/385/585ML  INJECTION GUN MUCMTPH21710019 | MIT-PP-H2 FOR MIT 400ML  INJECTION GUN MUCMTPH21710009 |
| MIT-PP-A FOR MIT 350ML  CORDLESS INJECTION GUN MUCMTPPA1710221 | MIT-PP-A FOR MIT 165-300ML  CORDLESS INJECTION GUN MUCMTPPA1710046 | MIT-PP-A FOR MIT 400ML  CORDLESS INJECTION GUN MUCMTPPA1710021 | MIT-PP-P FOR MIT 165-350ML  PNEUMATIC INJECTION GUN MUCMTPPP1710040 | MIT-PP-P FOR MIT 385-585ML  PNEUMATIC INJECTION GUN MUCMTPPP1710048 | MIT-PP-P FOR MIT 400ML  PNEUMATIC INJECTION GUN MUCMTPPP1710020 | MIT-PP-P FOR MIT 825ML  PNEUMATIC INJECTION GUN MUCMTPPP1710031 |
| MIT-PP-P FOR MIT 1400ML  PNEUMATIC INJECTION GUN MUCMTPPP1710049 | MIT-BN-H1  NYLON BRUSH MUCMTBNH | MIT-BS-H0  UNIVERSAL STEEL BRUSH MUCMTBH0 | MIT-BS-H1  STEEL BRUSH MUCMTBH1 | MIT-BS-M1  STEEL BRUSH MUCMTBM1 | MIT-BS-MV  BRUSH EXTENSION MUCMTBMV | MIT-BS-MA  SDS-PLUS ADAPTER M6 MUCMTBMA |
| MIT-AP-HG1  PURGING PUMP 840ML MUCMTAPG | MIT-AP-HK0  PURGING PUMP 320ML MUCMTAPK | MIT-AP-D1  COMPRESSED AIR TOOL MUCMTAPD | MIT-VS  PISTON PLUGS MUCMTVS | Plastic MIT-MI-1  MIXER IN TWO PARTS FOR MIT600RE MUCMTMI1 | Plastic MIT-MI-2  MIXER UNIVERSAL MUCMTMI2 | Plastic MIT-MI-3  MIXER FOR MIT-COOL MIT-ROCK MUCMTMI3 |



Swiss Quality



| | | | | | | |
|--|--|--|---|--|---|---|
| Plastic MIT-MI-V1  MIXER EXTENSION MUCMTMV1 | PVC MIT-MI-V2  EXTENSION 1M MUCMTMV2 | Plastic MIT-SH-K0  SLEEVE MUCMTSH0 | Plastic MIT-SH-K1  SLEEVE MUCMTSH1 | Plastic MIT-SH-K2  SLEEVE MUCMTSH2 | Metal MIT-SH-S0  SLEEVE MUCMTSHS | Z/P MIT-S Class 5.8  ANCHOR ROD KIT MUCMTS0 |
| SS 316 MIT-Sr  ANCHOR ROD KIT MUCMTSR | Z/P MIT-IGH  ANCHOR SLEEVE INT THREAD MUCMTIGH | SS 316 MIGr-M  ANCHOR SLEEVE WITH INTERNAL THREAD MUCMIGRM | Z/P MIG-M  ANCHOR SLEEVE WITH INTERNAL THREAD MUCMIGM0 | SS 304 MIT-AKH  ANCHOR SLEEVE MUCMTAKH | SS 304 MIT-ESH  INSERT ANCHOR MUCMTESH | Epoxy- Acrylate MVA  RESIN CAPSULE MUCMVA0 |
| Z/P MVA-S Class 5.8  ANCHOR ROD KIT EXT. HEX MUCMVAS0 | SS 316 MVA-Sr  ANCHOR ROD KIT EXT. HEX MUCMVASR | Z/P MVA-WZ  SETTING TOOL MUCMVAWZ | Z/P MVA-I Class 5.8  ANCHOR SLEEVE INT THREAD MUCMVAI0 | SS 316 MVA-Ir  ANCHOR SLEEVE INT THREAD MUCMVAIR | PU Foam MPU-P50/B1  FIRE RATED DISPENSER FOAM 750ML MUCMPU5B | PU Foam MPU-P50 Universal Use  DISPENSER FOAM 750ML MUCMPU50 |
| PU Foam MPU-M50 Universal Use  HAND HELD PU FOAM 750ML MUCMPUM5 | PU Foam MPU-PS50  CONCRETE FRAMEWORK 750ML MUCMPUS5 | PU Foam MPU-M45/B2  HAND HELD PU FOAM 750ML MUCMPUM4 | PU Foam MPU-PP Perifix  PERIMETRE ADHESIVE 750ML MUCMPUPP | MRM-PU Cleaner  FOR PU-FOAM AND DISPENSER 500ML MUCMRMPU | MPP-M  METAL DISPENSER MUCMPPM | MPP-K  NYLON/METAL DISPENSER MUCMPPK |

| | | | | | | |
|--|---|--|--|--|--|---|
| <div>Neutral Silicone MSI-NP Universal Use</div> <div></div> <div>FUNGUS-INHIBITING 310ML</div> <div>MUCMSINP</div> | <div>Acrylic MDA Indoor/Outdoor</div> <div></div> <div>SEALANT PAINTABLE WHITE 310ML</div> <div>MUCMDA</div> | <div>MMK-U Universal Use</div> <div></div> <div>ADHESIVE TRANSPARENT 290ML</div> <div>MUCMMKU</div> | <div>MMK-U Universal Use</div> <div></div> <div>ADHESIVE GREY 290ML</div> <div>MUCMMKU</div> | <div>Nylon MN</div> <div></div> <div>ALL ROUNDER NYLON PLUG</div> <div>MUNMNPP</div> | <div>Nylon MN</div> <div></div> <div>NYLON PLUG MINI-BOX BULK PACKED</div> <div>MUNMNPB</div> | <div>Nylon MN</div> <div></div> <div>NYLON PLUG MAXI-BOX</div> <div>MUNMNPX</div> |
| <div>Nylon MN</div> <div></div> <div>NYLON PLUG CARTON BULK PACKED</div> <div>MUNMNPL</div> | <div>Nylon MNK</div> <div></div> <div>NYLON PLUG WITH COLLAR</div> <div>MUNMNK</div> | <div>Nylon MNL</div> <div></div> <div>NYLON PLUG LONG</div> <div>MUNMNL</div> | <div>Nylon MQ</div> <div></div> <div>QUATTRO® 80% > MN NYLON PLUG</div> <div>MUNMQPP</div> | <div>Nylon MQ</div> <div></div> <div>QUATTRO® NYLON PLUG MINI-BOX</div> <div>MUNMQPB</div> | <div>Nylon MQ</div> <div></div> <div>QUATTRO® NYLON PLUG MAXI-BOX</div> <div>MUNMQPX</div> | <div>Nylon MQ</div> <div></div> <div>QUATTRO® NYLON PLUG BULK PACKED</div> <div>MUNMQPL</div> |
| <div>Nylon MOB</div> <div></div> <div>NYLON PLUG MQ/MU KIT 230 PCS</div> <div>MUNMOB</div> | <div>Nylon MU</div> <div></div> <div>HOLLOW WALL MULTI PLUG NYLON</div> <div>MUNMUPP</div> | <div>Nylon MU</div> <div></div> <div>MULTI PLUG NYLON MINI-BOX</div> <div>MUNMUPB</div> | <div>Nylon MU</div> <div></div> <div>MULTI PLUG MAXI-BOX</div> <div>MUNMUPX</div> | <div>Nylon MQ QUATTRO Nylon Plug Kit</div> <div></div> <div>KIT IN MUNGO BOX</div> <div>MUNMQPM</div> | | |
| <div>Nylon MU</div> <div></div> <div>MULTI PLUG NYLON BULK PACKED</div> <div>MUNMUPL</div> | <div>Nylon ML</div> <div></div> <div>HOLLOW BRICK PLUG DIAM 6/8</div> <div>MUNML060</div> | <div>Nylon ML</div> <div></div> <div>HOLLOW BRICK PLUG DIAM 10/14</div> <div>MUNML100</div> | <div>Nylon MLK</div> <div></div> <div>HOLLOW BRICK PLUG COLLAR DIAM 8</div> <div>MUNMLK08</div> | <div>Nylon MLK</div> <div></div> <div>HOLLOW BRICK PLUG COLLAR DIAM 14</div> <div>MUNMLK14</div> | <div>Nylon SD</div> <div></div> <div>SOUND INSULATION PLUG</div> <div>MUNSD0</div> | <div>Nylon SDK</div> <div></div> <div>COLLAR SOUND INSULATION PLUG</div> <div>MUNSDK</div> |



Swiss Quality



| | | | | | | |
|--|---|---|---|--|--|--|
| <p>Z/P & Nylon MNA-S</p> <p>HAMMER SCREW CSK COLLAR POZI DR</p> <p>MUNMNAS0</p> | <p>Z/P & Nylon MNA-S</p> <p>HAMMER SCREW CSK COLLAR POZI DR</p> <p>MUNMNASN</p> | <p>Z/P & Nylon MNA-Z</p> <p>HAMMER SCREW CYL COLLAR POZI DR</p> <p>MUNMNAZ</p> | <p>Z/P & Nylon MNA-G</p> <p>HAMMER SCREW LARGE COLLAR POZI DR</p> <p>MUNMNAGZ</p> | <p>Z/P & Nylon MNA-G</p> <p>HAMMER SCREW LARGE COLLAR TORX DR</p> <p>MUNMNAGO</p> | <p>SS 304 & Nylon MNAr-S</p> <p>HAMMER SCREW CSK COLLAR POZI DR</p> <p>MUNMNARS</p> | <p>SS 304 & Nylon MNAr-Z</p> <p>HAMMER SCREW CYL COLLAR POZI DR</p> <p>MUNMNARZ</p> |
| <p>Nylon White MDB</p> <p>NYLON DISC WHITE</p> <p>MUNMDB</p> | <p>Z/P & Nylon MNAF</p> <p>HAMMER SCREW WHITE POZI DR</p> <p>MUNMNAFW</p> | <p>Z/P & Nylon MNAF</p> <p>HAMMER SCREW YELLOW POZI DR</p> <p>MUNMNAFY</p> | <p>Z/P & Nylon MNAF</p> <p>HAMMER SCREW DARK BROWN POZI DR</p> <p>MUNMNAFB</p> | <p>Z/P & Nylon MQL-ST</p> <p>UNIVERSAL FRAME PLUG TORX DR</p> <p>MUNMQLST</p> | <p>Z/P & Nylon MQL-SS</p> <p>UNIVERSAL FRAME PLUG HEX</p> <p>MUNMQLSS</p> | <p>Z/P & Nylon MQLK-STB</p> <p>UNIVERSAL FRAME PLUG TORX/HEX DR</p> <p>MUNMQLKB</p> |
| <p>HDG & Nylon MQLK-STBf</p> <p>UNIVERSAL FRAME PLUG TORX/HEX DR</p> <p>MUNMQLKF</p> | <p>SS 316 & Nylon MQL-Str</p> <p>UNIVERSAL FRAME PLUG TORX DR</p> <p>MUNMQLSR</p> | <p>SS 316 & Nylon MQLK-STBr</p> <p>UNIVERSAL FRAME PLUG TORX/HEX DR</p> <p>MUNMQLKR</p> | <p>Z/P & Nylon MB-ST</p> <p>FRAME PLUG SOFT MATERIALS TORX DR</p> <p>MUNMBST0</p> | <p>Z/P & Nylon MB-SS</p> <p>FRAME PLUG SOFT MATERIALS HEX</p> <p>MUNMBSS0</p> | <p>HDG & Nylon MB-SSf</p> <p>FRAME PLUG SOFT MATERIALS HEX</p> <p>MUNMBSSF</p> | <p>Z/P & Nylon MB-S</p> <p>FRAME PLUG SOFT MATERIALS POZI DR</p> <p>MUNMBS0</p> |
| | <p>Z/P & Nylon MBK-STB</p> <p>FRAME PLUG SOFT MATERIALS TORX/HEX DR</p> <p>MUNMBKSB</p> | <p>SS 316 & Nylon MB-STr</p> <p>FRAME PLUG SOFT MATERIALS TORX DR</p> <p>MUNMBSTR</p> | <p>SS 316 & Nylon MB-SSr</p> <p>FRAME PLUG SOFT MATERIALS HEX</p> <p>MUNMBSSR</p> | <p>SS 316 & Nylon MBK-STBr</p> <p>FRAME PLUG SOFT MATERIALS TORX/HEX</p> <p>MUNMBKSR</p> | <p>Z/P & Nylon MB-SK MN5 Plug</p> <p>FRAME PLUG WITH HEAD HOLE TORX</p> <p>MUNMBSK</p> | <p>Z/P & Nylon MB-SK M5 Thread</p> <p>FRAME PLUG WITH HEAD HOLE TORX</p> <p>MUNMBSKM</p> |



Swiss Quality





| | | | | | | |
|---|---|---|--|---|---|--|
| <p>Z/P & Nylon MBR-ST</p>  <p>FRAME PLUG SOLID MATERIALS TORX</p> <p>MUNMBRST</p> | <p>Z/P & Nylon MBR-SS</p>  <p>FRAME PLUG SOLID MATERIALS HEX</p> <p>MUNMBRSS</p> | <p>Z/P & Nylon MBR-S</p>  <p>FRAME PLUG SOLID MATERIALS POZI</p> <p>MUNMBRS0</p> | <p>Z/P & Nylon MBRK-STB</p>  <p>FRAME PLUG SOLID MATERIALS TORX/HEX</p> <p>MUNMBRKS</p> | <p>SS 316 & Nylon MBR-STr</p>  <p>FRAME PLUG SOLID MATERIALS TORX</p> <p>MUNMBRTR</p> | <p>SS 316 & Nylon MBR-SSr</p>  <p>FRAME PLUG SOLID MATERIALS HEX</p> <p>MUNMBRSR</p> | <p>Z/P & Nylon MBR-SK MN5 Plug</p>  <p>FRAME PLUG WITH HEAD HOLE TORX</p> <p>MUNMBRSK</p> |
| <p>Z/P & Nylon MBR-SKm M5 Thread</p>  <p>FRAME PLUG WITH HEAD HOLE TORX</p> <p>MUNMBRSM</p> | <p>Z/P & Nylon MBR-XT</p>  <p>HIGH PERFORMANCE FRAME PLUG</p> <p>MUNMBRXT</p> | <p>Z/P & Nylon MBRK-XTB</p>  <p>HIGH PERFORMANCE FRAME PLUG</p> <p>MUNMBRKX</p> | <p>SS 316 & Nylon MBR-XTr</p>  <p>HIGH PERFORMANCE FRAME PLUG</p> <p>MUNMBRXX</p> | <p>SS 316 & Nylon MBRK-XTr</p>  <p>HIGH PERFORMANCE FRAME PLUG</p> <p>MUNMBRKR</p> | <p>Nylon MGD</p>  <p>SCAFFOLD PLUG</p> <p>MUNMGD</p> | <p>Z/P MGV</p>  <p>SCAFFOLD SCREW</p> <p>MUNMGV0</p> |
| <p>Phosphated SBS-FG Drywall</p>  <p>BUGLE HEAD PHILLIPS</p> <p>MUMSBSFG</p> | <p>Phosphated SBS-GG Drywall</p>  <p>BUGLE HEAD PHILLIPS</p> <p>MUMSBSGG</p> | <p>Phosphated SBS-HG Drywall</p>  <p>CSK RIBBED PHILLIPS</p> <p>MUMSBSHG</p> | <p>Phosphated SBS-TE Drywall</p>  <p>BUGLE HEAD PHILLIPS</p> <p>MUMSBSTE</p> | <p>Anchors and Plugs MKS-P Sample Case</p>  <p>MUNGO SAMPLE CASE INCLUDES A LARGE SELECTION OF MUNGO PRODUCTS IN A HANDY CARRY CASE</p> <p>MUXMSKP</p> | | |
| <p>Phosphated SBS-FK Drywall</p>  <p>LARGE WAFER PHILLIPS</p> <p>MUMSBSFK</p> | <p>Phosphated SBS-ZK Metal</p>  <p>LARGE WAFER PHILLIPS</p> <p>MUMSBSZK</p> | <p>Phosphated SBS-GS Drywall</p>  <p>CSK RIBBED PHILLIPS</p> <p>MUMSBSGS</p> | <p>Nylon MVS</p>  <p>END CAP FOR SCAFFOLD PLUG</p> <p>MUNMVS</p> | | | |



Swiss Quality



| | | | | | | |
|--|---|---|---|--|--|---|
| <p>Z/P MGVm</p>  <p>SCAFFOLD SCREW</p> <p>MUNMGVM</p> | <p>Plastic MDD-S Carbon Steel</p>  <p>INSULATION FIXING DIAM 60MM</p> <p>MUIMDDS</p> | <p>Plastic MDD-VZ</p>  <p>DISC FOR MDD-S / MDD-CE</p> <p>MUIMDDVZ</p> | <p>Plastic MDD-CE</p>  <p>INSULATION FIXING DIAM 60MM</p> <p>MUIMDDCE</p> | <p>Black MDS</p>  <p>INSULATION FIXING DIAM 90MM</p> <p>MUIMDS0</p> | <p>White MIS Lightweight Panel</p>  <p>INSULATION FIXING DIAM 88MM</p> <p>MUIMIS0</p> | <p>Black MIS Lightweight Panel</p>  <p>INSULATION FIXING DIAM 60MM</p> <p>MUIMISB0</p> |
| <p>White MIP Mineral Wool</p>  <p>INSULATION FIXING DIAM 45MM</p> <p>MUIMIPO</p> | <p>Z/P MIDS</p>  <p>INSULATION NAIL DIAM 30/35MM</p> <p>MUIMIDS0</p> | <p>Z/P MDB</p>  <p>METAL DISC FOR SOFT INSULATION</p> <p>MUIMDBZ</p> | <p>SS 304 MIDSr</p>  <p>INSULATION NAIL DIAM 30/35MM</p> <p>MUIMIDSR</p> | <p>SS 304 MDBr</p>  <p>METAL DISC FOR SOFT INSULATION</p> <p>MUIMDBA2</p> | <p>Z/P MIDS-K</p>  <p>INSULATION NAIL DIAM 54MM</p> <p>MUIMIDSK</p> | <p>Nylon MDI</p>  <p>INSULATION PLUG</p> <p>MUIMDI25</p> |
| <p>Nylon MDI</p>  <p>INSULATION PLUG</p> <p>MUIMDI00</p> | <p>Nylon MDIm</p>  <p>INSULATION PLUG FOR M8-M10</p> <p>MUIMDIM0</p> | <p>Z/P MJP39</p>  <p>JET PLUG METAL</p> <p>MUSMJ390</p> | <p>Z/P MJP32</p>  <p>JET PLUG METAL</p> <p>MUSMJ32</p> | <p>Z/P MJP25</p>  <p>JET PLUG METAL</p> <p>MUSMJ25</p> | <p>Z/P MJP39-S</p>  <p>JET PLUG METAL POZI DR</p> <p>MUSMJ39S</p> | <p>Z/P MJP32-S</p>  <p>JET PLUG METAL POZI DR</p> <p>MUSMJ32S</p> |
| <p>Z/P MJPM</p>  <p>JET PLUG METAL</p> <p>MUSMJPM0</p> | <p>Natural Nylon MFJ32</p>  <p>JET PLUG PLASTERBOARD CHIPBOARD</p> <p>MUSMFJ32</p> | <p>Z/P & Nylon MFJ32-S</p>  <p>JET PLUG PLASTERBOARD CHIPBOARD</p> <p>MUSMFJ3S</p> | <p>Natural Nylon MFJ25</p>  <p>JET PLUG PLASTERBOARD CHIPBOARD</p> <p>MUSMFJ25</p> | <p>Z/P MSN</p>  <p>STEEL NAIL</p> <p>MUSMSN</p> | <p>Z/P MK-M</p>  <p>CAVITY TOGGLE</p> <p>MUSMKM00</p> | <p>Z/P MK-H</p>  <p>CAVITY TOGGLE WITH HOOK</p> <p>MUSMKH00</p> |

| | | | | | | |
|---|---|--|--|--|---|---|
| <p>MPC Pro Cut</p>  <p>CUTTING DISC 1.0 - 1.9</p> <p>MUDMPCP1</p> | <p>MPC Pro Cut</p>  <p>CUTTING DISC 2.5 - 3.0</p> <p>MUDMPCP2</p> | <p>MPG Pro Grind</p>  <p>GRINDING DISC 6.5</p> <p>MUDMPGPG</p> | <p>MDC Laser Beton</p>  <p>DIAMOND BLADE</p> <p>MUDMDCLB</p> | <p>MDC Power M</p>  <p>DIAMOND BLADE</p> <p>MUDMDCPM</p> | <p>DS500</p>  <p>DIAMOND BLADE</p> <p>MUDDS500</p> | <p>MFB</p>  <p>DIAMOND DRILL BIT</p> <p>MUDMFB00</p> |
|  | | | | <p>Z/P MEF</p>  <p>EASY-FIX LIGHTWEIGHT CONCRETE</p> <p>MUSMEF</p> | <p>SDS-PLUS JET-TRAC TRIPLO</p>  <p>DRILL BIT 3 CUTTER</p> <p>MUDJTTTPR</p> | <p>KEY</p>  <p>SDS-PLUS</p>  <p>SDS-MAX</p> |
| <p>SDS-PLUS MPM</p>  <p>FLAT CHISEL</p> <p>MUDMPMFC</p> | <p>SDS-PLUS MPM</p>  <p>HOLLOW CHISEL</p> <p>MUDMPMHC</p> | <p>SDS-PLUS MPM</p>  <p>POINTED CHISEL</p> <p>MUDMPMPC</p> | <p>SDS-PLUS MPM</p>  <p>SPADE CHISEL</p> <p>MUDMPMSC</p> | <p>SDS-PLUS MPM</p>  <p>TILE CHISEL CRANKED</p> <p>MUDMPMTC</p> | <p>SDS-MAX MXM</p>  <p>BUSHING TOOL</p> <p>MUDMXMBT</p> | <p>SDS-MAX MXM</p>  <p>CHANNEL CHISEL</p> <p>MUDMXMCC</p> |
| <p>SDS-MAX MXM</p>  <p>FLAT CHISEL</p> <p>MUDMXMFC</p> | <p>SDS-MAX MXM</p>  <p>HOLLOW CHISEL</p> <p>MUDMXMHC</p> | <p>SDS-MAX MXM</p>  <p>SLOTTED CHISEL</p> <p>MUDMXMLC</p> | <p>SDS-MAX MXM</p>  <p>POINTED CHISEL</p> <p>MUDMXMPC</p> | <p>SDS-MAX MXM</p>  <p>SPADE CHISEL</p> <p>MUDMXMSC</p> | <p>SDS-MAX MXM</p>  <p>SEAM TOOL</p> <p>MUDMXMST</p> | <p>SDS-MAX MXM</p>  <p>WING CHISEL</p> <p>MUDMXMWCC</p> |



CONXTRACT



Simple, Easy, Reliable Wedge Anchor (Through Bolt)
pre-assembled single unit wedge type anchor for fixing to solid concrete.

ZYP
HEC
Class 5.8



**CLAWBOLT®
WEDGE
ANCHOR**

MAW58YCM

ZYP
HEC
Class 4.6



**CLAWBOLT®
WEDGE
ANCHOR**

MAW46YCM

MGAL
HEC
Class 5.8



**CLAWBOLT®
WEDGE
ANCHOR**

MAW58GCM

MGAL
HEC
Class 4.6



**CLAWBOLT®
WEDGE
ANCHOR**

MAW46GCM

SS 316
HEC



**CLAWBOLT®
WEDGE
ANCHOR**

MAW16PCM

ZYP
HEC
Carbon Steel



**TY9aBolt®
SLEEVE
ANCHOR**

MTBMSYM

MGAL
HEC
Carbon Steel



**TY9aBolt®
SLEEVE
ANCHOR**

MTBMSGM

SS 316
HEC



**TY9aBolt®
SLEEVE
ANCHOR**

MTB16PM

ZYP
HEC
Class 8.8



**TY9aBolt® FLUSH
HEAD SLEEVE
ANCHOR**

MTH88YM

SS 316
HEC



**TY9aBolt® FLUSH
HEAD SLEEVE
ANCHOR**

MTH16PM

TY9aBolt®

Simple, Easy, Reliable Sleeve Anchor pre-assembled single unit wedge type anchor for fixing to solid concrete.

Z/P
HEC
Carbon Steel



**HOLLOW WALL
ANCHOR
STANDARD**

MWHDZPCM

Wall Anchor Tool
HEC
Carbon Steel



**SETTING TOOL
RATCHET
STYLE**

MATWHR

ZYP
HEC
Carbon Steel



**DROP IN
ANCHOR
WITH LIP**

MDLMSYCM

ZYP
HEC
Carbon Steel



**DROP IN
ANCHOR**

MDIMSYCM

SS 316
HEC



**DROP IN
ANCHOR**

MDI16PCM

Z/P
HEC
Carbon Steel



**DROP-IN
SETTING TOOL**

MATMSZM

Red Grip
HEC
Carbon Steel



**DROP IN
SETTING TOOL
WITH HANDLE**

MATR

NYLON
HEC
Steel Pin



**NAIL IN
ANCHOR
MUSHROOM**

MNMNM

NYLON
HEC
SS 304 Pin



**NAIL IN
ANCHOR
MUSHROOM**

BNMMSM

NYLON
HEC
Steel Pin



**NAIL IN
ANCHOR
ROUND**

MNRNM

NYLON
HEC
SS 304 Pin



**NAIL IN
ANCHOR
ROUND**

BNRSM

Z/P
HEC
Steel Pin



**NAIL IN
ANCHOR
MUSHROOM**

MNPZM

ZYP
HEC
Carbon Steel



**TIE WIRE
SUSPENSION
ANCHOR**

MSTMSYM

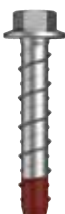
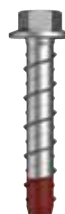


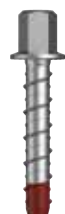

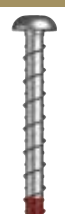
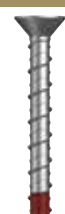
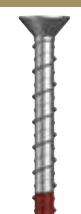
ZYP
HEC
Carbon Steel



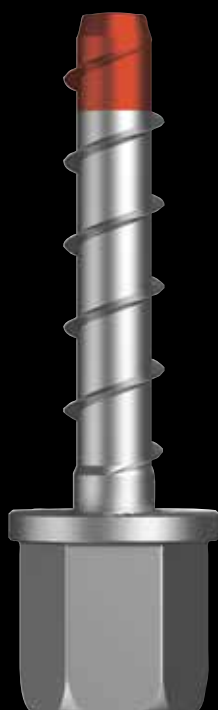
**SUSPENSION
ANCHOR**

MSAMSYM



| | | | | | |
|---|---|--|---|--|---|
| <p>MGAL HEC Carbon Steel</p>  <p>XBolt® HEX FLANGE HEAD</p> <p>MXHMSGM</p> | <p>ZYP HEC Carbon Steel</p>  <p>XBolt® HEX FLANGE HEAD</p> <p>MXHMSYM</p> | <p>ZYP HEC Carbon Steel</p>  <p>XBolt® EYE</p> <p>MXEMSYM</p> | <p>ZYP HEC Carbon Steel</p>  <p>XBolt® COUPLER</p> <p>MXCMSYM</p> | <p>MGAL HEC Carbon Steel</p>  <p>XBolt® COUPLER</p> <p>MXCMSGM</p> | <p>Blue HEC For M10 XBolt®</p>  <p>VERTICAL HANGER SOCKET</p> <p>MXSVSM</p> |
| <p>MGAL HEC Carbon Steel</p>  <p>XBolt® BUTTON HEAD TORX DR</p> <p>MXDMSGM</p> | <p>MGAL HEC Carbon Steel</p>  <p>XBolt® CSK HEAD HEX DR</p> <p>MXKMSGM</p> | <p>ZYP HEC Carbon Steel</p>  <p>XBolt® CSK HEAD HEX DR</p> <p>MXKMSYM</p> | | | |

XBolts® are single unit screw type anchors that are used in solid concrete applications. Fixing is achieved by screwing the anchor into a drilled hole in concrete. As it is screwed in, the anchor taps the hole, thus enabling it to produce a mechanical interlock with the concrete.



XBolt® VERTICAL HANGER

MVXMSZIM

| |
|--|
| <p>ZYP HEC Carbon Steel</p>  <p>XBolt® VERTICAL HANGER</p> <p>MVXMSZIM</p> |
|--|

Primary applications:

- » Fastening hangers for HVAC (Heating, Ventilation and Air Conditioning) ducting, electrical cable trays, pipe brackets and pipes
- » Fastening hangers for ceiling frames





CONXTRACT

R1000 hrs
HEC
Carbon Steel



**WALL KATT™
UNIVERSAL PAN
SQUARE**

MWKXRPQ

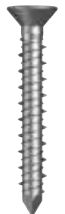
Z/P
HEC
Carbon Steel



**WALL KATT™
UNIVERSAL PAN
PHILLIPS**

MWKXZPP

R1000 hrs
HEC
Carbon Steel



**TX-CON™
ANCHOR CSK
PHILLIPS**

MTXTRCP

R1000 hrs
HEC
Carbon Steel



**TX-CON™
ANCHOR HEX
SLOTTED**

MTXTRHL

Z/P
HEC
Carbon Steel



**TX-CON™
FRAMING
ANCHOR TORX**

MTXSZGO



TX-CON™ is designed for medium duty applications when fixing to concrete, brick or block. These anchors tap the drilled concrete hole mechanically locking to the concrete. Ideal for quick installation, close anchor spacing or edge distance and removability.



Hobson - Impact Type expanded mechanical anchor for fast and easy installation in concrete, brick, block or stone.


Z/P
HEC
Carbon Steel



**H-IT™
TIE WIRE
ANCHOR**

MHAHTZTM

MGAL
HEC
Carbon Steel



**H-IT™
COUNTERSUNK
ANCHOR**

MHAHTMCM

MGAL
HEC
Carbon Steel



**H-IT™
MUSHROOM
ANCHOR**

MHAHTMMM

SS 316
HEC



**H-IT™
MUSHROOM
ANCHOR**

MHA16PMM

Z/P
HEC
Carbon Steel



**H-IT™
MINI SPLICE
WEDGE**

MHWMSZSM

KEY

CHR: Chrome
HDG: Hot Dip Galvanised
MGAL: Mechanical Galvanised
PLN: Plain
SS: Stainless Steel
Z/P: Zinc Plated
ZYP: Zinc Yellow

Z/P
HEC
Metal



**PANTHA PLUG®
SUIT 8G
SCREW**

MWPPM

NYLON
HEC



**PANTHA PLUG®
SUIT 8G
SCREW**

MWPPP


NYLON
HEC
Grey



**UNIVERSAL
WALL PLUG
TAPERED POINT**

MWPNUG

PVC
HEC
Yellow



**1-2-3G SCREW
TAPERED
POINT**

MWPFY

PVC
HEC
White



**4-5G SCREW
TAPERED
POINT**

MWPFW

PVC
HEC
Red



**8-9G SCREW
TAPERED
POINT**

MWPFRR

PVC
HEC
Green



**10-12G SCREW
TAPERED
POINT**

MWPFGR

PVC
HEC
Blue



**14-16G SCREW
TAPERED
POINT**

MWPFBR

PVC
HEC
Orange



**16-18G SCREW
TAPERED
POINT**

MWPFOR

PVC
HEC
Grey



**20-24G SCREW
TAPERED
POINT**

MWPFGE



SA TS 101: 2015 – Now AS 5216



SA TS 101: 2015 is a **Standards Australia Technical Specification** that covers minimum requirements for anchorage design and product prequalification. The **2016 National Construction Code (NCC)**, officially released in May 2016, refers to **SA TS 101: 2015** as “deemed to satisfy”. Together, the revised **NCC** and **SA TS 101: 2015** further uplifts the level of safety and security in safety critical fastenings to concrete. **SA TS 101** covers both design of anchor connections and how anchor products should be prequalified, be it post-installed anchors or cast-in channels. Only anchors that have been prequalified in

accordance with the provisions of **SA TS 101** Appendix B can be used with the new standard. Furthermore, **SA TS 101** Appendix B notes that anchor products with acceptable **European Technical Approvals/Assessments (ETA)** may be used with **SA TS 101**.















SA TS 101: 2015 – Hobson Engineering supply **Mungo** mechanical and chemical anchor products that have ETAs, specifically for customers requiring European approved anchor products. Our **Mungo** product portfolio remains strong and ready for the changes in our anchor industry, as a result of the **NCC** requirements.

SA TS 101: 2015 has been transferred to AS 5216.

Visit hobson.com.au for Articles.



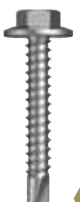


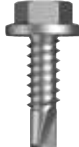
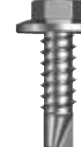
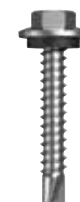
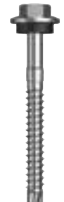


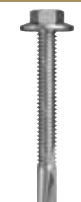


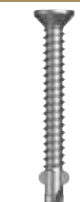

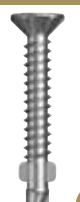
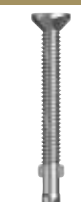



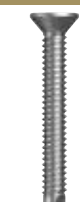
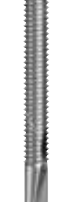
Products which include the ETA logo are directly compatible with SA TS 101: 2015 and AS 5216.

| | | | | | | |
|---|---|--|--|--|---|---|
| Z/P MKT® Carbon Steel  INT THREAD CHEMICAL STUD V-IG MCIM5ZGM | Z/P MKT® Carbon Steel  VMZ-A THREADED STUD MCZM5ZAM | SS 316 MKT®  VMZ-A THREADED STUD MCZM4PAM | SS 316 HEC  CHEMICAL ANCHOR KIT EXT. HEX MCA16PCM | ZYP HEC Class 5.8  CHEMICAL ANCHOR KIT EXT. HEX MCA58YCM | HDG HEC Class 5.8  CHEMICAL ANCHOR KIT EXT. HEX MCA58GCM | HDG HEC Class 5.8  CHEMICAL ANCHOR KIT FLAT TOP STUD MCS58GCM |
| SS 316 HEC  CHEMICAL ANCHOR KIT FLAT TOP STUD MCS16PCM | SS 316 HEC  POST HEAD COUNTERSUNK INT THREAD MPC16PM | Plastic HEC  CENTERING SLEEVE VM-ZR MCXSZM | Z/P HEC Carbon Steel  VERTICAL HANGER METAL MVMMSZIM | Z/P HEC Carbon Steel  VERTICAL SIDE HANGER METAL MVMMSZSM | Z/P HEC Carbon Steel  VERTICAL HANGER T17 TIMBER MVWMSZIM | Blue HEC For M6/M8/M10  VERTICAL HANGER SOCKET MXSVS-SI |



DRILLX[®]

DRILLX[®]

| | | | | | | |
|---|--|--|---|---|--|--|
| <p>Metal Class 3</p>  <p>HEX HEAD FLANGE</p> <p>T9PM3FH</p> | <p>Metal ZYP</p>  <p>HEX HEAD FLANGE</p> <p>T9PMYFH</p> | <p>Metal Z/P</p>  <p>HEX HEAD FLANGE</p> <p>T9PMZFH</p> | <p>Metal Class 4</p>  <p>HEX HEAD FLANGE</p> <p>T9PM4FH</p> | <p>Metal Class 3</p>  <p>REDUCED HEX HEAD FLANGE</p> <p>T9PM3RH</p> | <p>Metal Class 4</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PM4SH</p> | <p>Metal Class 4 Scratchguard[®]</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PM4SS</p> |
| <p>Metal Class 4 XGRiP[®] Scratchguard[®]</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PM4XS</p> | <p>Metal Class 4 XGRiP[®]</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PM4XH</p> | <p>s500 Class 4</p>  <p>HEX HEAD FLANGE</p> <p>T9P54FH</p> | <p>s500 Class 4</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9P54SH</p> | <p>s500 Class 3</p>  <p>WAFER HEAD PHILLIPS</p> <p>T9P53WP</p> | <p>Metal ZYP</p>  <p>CSK RIBBED WITH WINGS SQUARE DR</p> <p>T9PGYRQ</p> | <p>s500 Class 4 XGRiP[®]</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9P54XH</p> |
| <p>Metal Class 3</p>  <p>CSK RIBBED WITH WINGS SQUARE DR</p> <p>T9PG3RQ</p> | <p>Metal Class 3</p>  <p>CSK RIBBED WITH WINGS HEX DR</p> <p>T9PG3SI</p> | <p>Metal Cyclone Class 4</p>  <p>HEX HEAD WITH MULTISEAL</p> <p>T9PM4YM</p> | <p>s500 Cyclone Class 4</p>  <p>HEX HEAD WITH MULTISEAL</p> <p>T9P54YM</p> | <p>Metal Poly Assembly Class 3</p>  <p>HEX HEAD WITH CUTTER & SEAL</p> <p>T9PM3PU</p> | <p>Metal ZYP</p>  <p>CSK HEAD PHILLIPS</p> <p>T9PMYCP</p> | <p>s500 Class 4 XGRiP[®]</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9P54XH</p> |

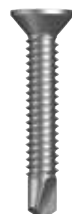
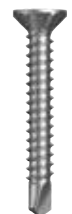
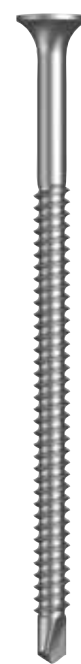
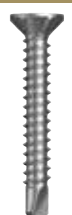
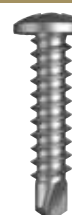
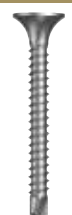
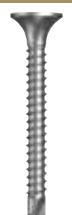
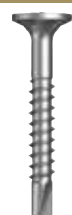
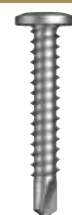
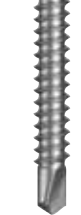
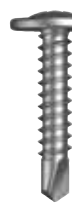
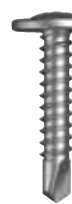


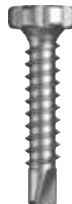



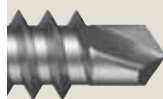

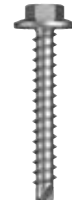





Hobson Engineering DRILLX® screws are an innovative and cost-effective Self Drilling Screw with the same Hobson high quality the Australian fastener market demands. Featuring the DX3™ & DX4™ coating*.

A massive range of painted screws are held ex-stock as well as painting on request.

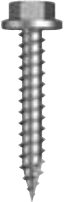
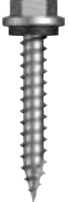
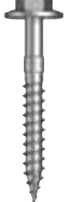
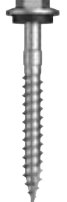

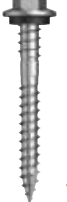


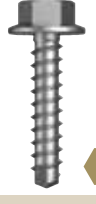
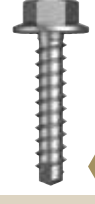
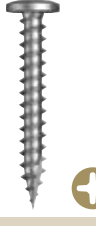
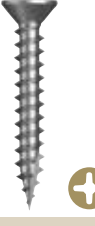
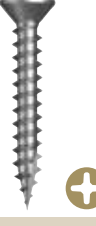
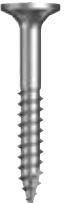
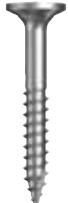
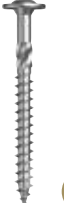
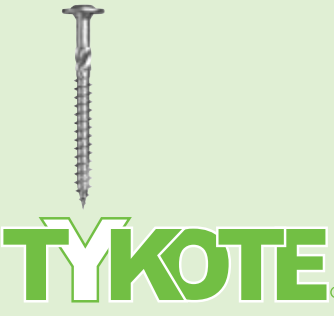

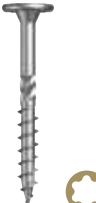
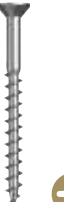
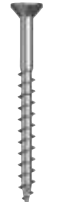
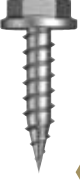
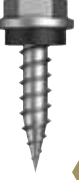
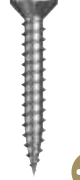
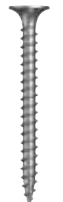
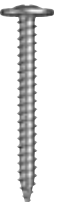
* Warranty details available online.

DX3™ DX4™

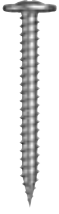




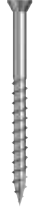
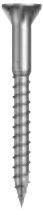


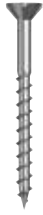
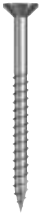
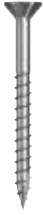
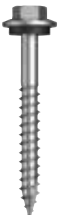
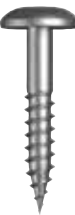
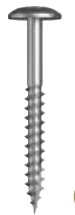

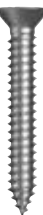
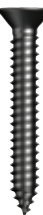
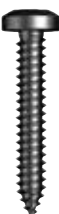
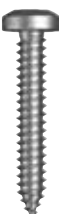
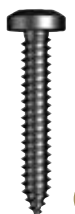


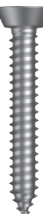
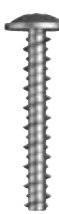
| | | | | | | | |
|--|--|--|--|--|---|---|---|
| <p>Hobson Engineering DRiLLX® screws are an innovative and cost-effective Self Drilling Screw with the same Hobson high quality the Australian fastener market demands. Featuring the DX3™ & DX4™ coating*.</p> <p>A massive range of painted screws are held ex-stock as well as painting on request.</p> <p>* Warranty details available online.</p> <div><div>DX3™</div><div>DX4™</div></div> | | | | <div>Metal Class 3</div> <div></div> <div>CSK HEAD PHILLIPS</div> <div>T9PM3CP</div> | <div>Metal ZYP</div> <div></div> <div>CSK RIBBED PHILLIPS</div> <div>T9PMYRP</div> | <div>Metal Class 3</div> <div></div> <div>BUGLE HEAD PHILLIPS</div> <div>T9PM3BP</div> | |
| <div>Metal Class 3</div> <div></div> <div>CSK RIBBED PHILLIPS</div> <div>T9PM3RP</div> | <div>Metal ZYP</div> <div></div> <div>PAN HEAD PHILLIPS</div> <div>T9PMYPP</div> | <div>Metal ZYP</div> <div></div> <div>BUGLE HEAD PHILLIPS</div> <div>T9PMYBP</div> | <div>Metal Z/P</div> <div></div> <div>BUGLE HEAD PHILLIPS</div> <div>T9PMZBP</div> | <div>Metal Class 3</div> <div></div> <div>BUGLE BATTEN RIB HEAD HEX DR</div> <div>T9PM3BH</div> | <div>Metal Class 3</div> <div></div> <div>WAFFER HEAD PHILLIPS</div> <div>T9PM3WP</div> | <div>Metal Class 3</div> <div></div> <div>BUGLE HEAD PHILLIPS</div> <div>T9PM3BP</div> | |
| <div>Metal ZYP</div> <div></div> <div>WAFFER BUTTON PHILLIPS</div> <div>T9PMYAP</div> | <div>Metal Class 3</div> <div></div> <div>WAFFER BUTTON PHILLIPS</div> <div>T9PM3AP</div> | <div>Metal ZYP</div> <div></div> <div>FLAT HEAD PHILLIPS</div> <div>T9PMYLP</div> | <div>Metal Class 3</div> <div></div> <div>FLAT HEAD PHILLIPS</div> <div>T9PM3LP</div> | <div>Metal ZYP</div> <div></div> <div>FLOWER HEAD SELF EMBED PHILLIPS</div> <div>T9PMYOP</div> | <div>Framing Screw Class 3</div> <div></div> <div>SERRATED FLAT HEAD PHILLIPS</div> <div>T9PF3EP</div> | <div>Truss Framing Class 3</div> <div></div> <div>HEX HEAD FLANGE</div> <div>T9PF3FH</div> | |
| <div>Metal Class 3</div> <div></div> <div>PAN HEAD TRILOBULAR DRIVE</div> <div>T9PM3PI</div> | <div></div> <div></div> <div>vmaX® feature a universal drilling point. Suitable for fastening roof sheeting to thin metal battens, timber trusses and steel purlins up to 1.9mm thick.</div> | | | <div>Class 3</div> <div></div> <div>BATTEN HEX HEAD FLANGE</div> <div>T9PV3FH</div> | <div>Class 4 XGRiP® Scratchguard®</div> <div></div> <div>HEX HEAD FLANGE WITH SEAL</div> <div>T9PV4XS</div> | <div>Class 4</div> <div></div> <div>HEX HEAD FLANGE WITH SEAL</div> <div>T9PV4SH</div> | <div>Poly Assembly Class 3</div> <div></div> <div>HEX HEAD WITH CUTTER & SEAL</div> <div>T9PV3PU</div> |



DRILLX®

| | | | | | | |
|--|--|--|--|--|---|--|
| <p>Type 17 Class 4</p>  <p>HEX HEAD FLANGE</p> <p>T9PW4FH</p> | <p>Type 17 Class 4</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PW4SH</p> | <p>Type 17 Class 4 Scratchguard®</p>  <p>HEX HEAD FLANGE</p> <p>T9PW4FS</p> | <p>Type 17 Class 4 Scratchguard®</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PW4SS</p> | <p>Type 17 Class 4 XGRiP®</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PW4XH</p> | <p>Type 17 Class 4 XGRiP® Scratchguard®</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PW4XS</p> | <p>Type 17 Cyclone Class 4</p>  <p>HEX HEAD WITH MULTISEAL</p> <p>T9PW4YM</p> |
|  <p>Engineered point for self-drilling and fixing metal plate to timber without splitting.</p> | | <p>SS 316</p>  <p>HEX HEAD FLANGE</p> <p>T16JSFH</p> | <p>Class 3</p>  <p>HEX HEAD FLANGE</p> <p>T9PJ3FH</p> | <p>Type 17 Class 3</p>  <p>FLAT WAFER HEAD PHILLIPS</p> <p>T9PW3WP</p> | <p>Type 17 ZYP</p>  <p>CSK HEAD PHILLIPS</p> <p>T9PWYCP</p> | <p>Type 17 Class 3</p>  <p>CSK HEAD PHILLIPS</p> <p>T9PW3CP</p> |
| <p>Type 17 Class 3</p>  <p>BUGLE BATTEN RIB HEAD HEX DR</p> <p>T9PW3BH</p> | <p>Type 17 ZYP</p>  <p>BUGLE BATTEN RIB HEAD HEX DR</p> <p>T9PWYBH</p> | <p>Type 17 Class 3</p>  <p>WASHER HEAD HEX DR</p> <p>T9PW3GI</p> |  <p>A high performance coating, specially formulated for resisting treated pine chemicals.</p> | | <p>Type 17</p>  <p>WASHER HEAD HEX DR</p> <p>T9PWTGI</p> | <p>Type 17</p>  <p>WASHER HEAD TORX DR</p> <p>T9PWTGO</p> |
| <p>Chipboard ZYP</p>  <p>CSK RIBBED PHILLIPS</p> <p>T9PDYRP</p> | <p>Treated Pine Class 3</p>  <p>CSK SELF EMBEDDING SQUARE DR</p> <p>T9PD3SQ</p> | <p>Needle Point Class 4</p>  <p>HEX HEAD FLANGE</p> <p>T9PN4FH</p> | <p>Needle Point Class 4</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T9PN4SH</p> | <p>Needle Point ZYP</p>  <p>CSK RIBBED PHILLIPS</p> <p>T9PNYSP</p> | <p>Needle Point Plasterboard ZYP</p>  <p>BUGLE HEAD PHILLIPS</p> <p>T9PNYBP</p> | <p>Needle Point Class 3</p>  <p>LARGE WAFER PHILLIPS</p> <p>T9PN3AP</p> |

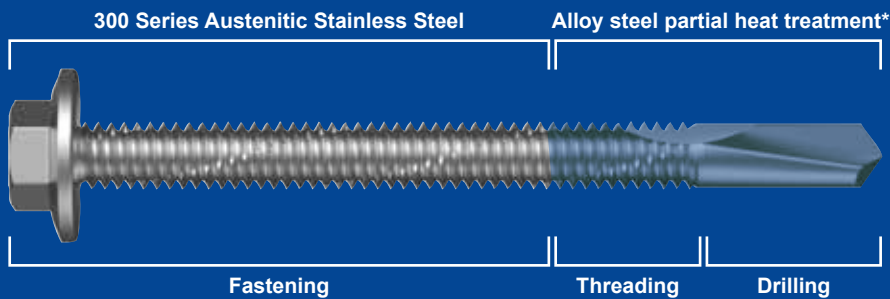


| | | | | | |
|---|--|--|--|--|--|
| <p>Needle Point ZYP</p>  <p>LARGE WAFER PHILLIPS</p> <p>T9PNYAP</p> | <p>Needle Point Class 3</p>  <p>FLAT HEAD PHILLIPS</p> <p>T9PN3LP</p> | <p>Needle Point ZYP</p>  <p>FLAT HEAD PHILLIPS</p> <p>T9PNYLP</p> |  <p>TDX[®]</p> <p>Timber decking screw. Featuring: corrosion resistant stainless steel; a special point, cut and thread; a trim head; a No.1 square drive and square thread for greater holding power which prevents the deck from lifting.</p> | <p>Type 17 SS 304</p>  <p>TRIM HEAD 4 RIBS SQUARE DR</p> <p>T04WSTD</p> | <p>Type 17 SS 304</p>  <p>TRIM HEAD 6 RIBS SQUARE DR</p> <p>T04WSTQ</p> |
| <p>Type 17 SS 316</p>  <p>BUGLE BATTEN 4 RIBS SQUARE DR</p> <p>T16WSBQ</p> | <p>Type 17 SS 316</p>  <p>BUGLE BATTEN 4 RIBS HEX DR</p> <p>T16WSBH</p> | <p>Type 17 SS 304</p>  <p>BUGLE BATTEN 4 RIBS HEX DR</p> <p>T04WSBH</p> | <p>Needle Point SS 304</p>  <p>CSK HEAD 4 RIBS SQUARE DR</p> <p>T04NS4Q</p> | <p>Type 17 SS 304</p>  <p>CSK HEAD 6 RIBS SQUARE DR</p> <p>T04WS6Q</p> | <p>Type 17 SS 316</p>  <p>CSK SELF EMBEDDING SQUARE DR</p> <p>T16WSSQ</p> |
| <p>Type 17 SS 316</p>  <p>HEX HEAD FLANGE WITH SEAL</p> <p>T16WSSH</p> | <p>Needle Point SS 304</p>  <p>BUTTON HEAD SQUARE DR</p> <p>T04NSUQ</p> | <p>Type 17 SS 316</p>  <p>BUTTON HEAD SQUARE DR</p> <p>T16WSUQ</p> | <p>Zinc Black ANSI B18.6.4</p>  <p>CSK HEAD SELF TAPPER PHILLIPS</p> <p>T9PSVCP</p> | <p>Z/P ANSI B18.6.4</p>  <p>CSK HEAD SELF TAPPER PHILLIPS</p> <p>T9PSZCP</p> | <p>Zinc Black ANSI B18.6.4</p>  <p>CSK HEAD SELF TAPPER SQUARE DR</p> <p>T9PSVCQ</p> |
| <p>Zinc Black ANSI B18.6.4</p>  <p>PAN HEAD SELF TAPPER PHILLIPS</p> <p>T9PSVPP</p> | <p>Z/P ANSI B18.6.4</p>  <p>PAN HEAD SELF TAPPER PHILLIPS</p> <p>T9PSZPP</p> | <p>Zinc Black ANSI B18.6.4</p>  <p>PAN HEAD SELF TAPPER SQUARE DR</p> <p>T9PSVPQ</p> | <p>Z/P ANSI B18.6.4</p>  <p>PAN HEAD SELF TAPPER SQUARE DR</p> <p>T9PSZPQ</p> | <p>Z/P ANSI B18.6.4</p>  <p>UNDERCUT CSK SELF TAPPING PHILLIPS</p> <p>T9PSZDP</p> | <p>Z/P ANSI B18.6.4</p>  <p>UNDERCUT CSK SELF TAPPING SQUARE DR</p> <p>T9PSZDQ</p> |
| | | | | | <p>Z/P HEC</p>  <p>ELECTRICAL PANEL SCREW PHILLIPS</p> <p>T9PPZAP</p> |



DRILLX[®]

Bi-FixTM



| | | | |
|---|--|--|---|
| <p>Metal SS 304 BI-Metal</p>   <p>HEX HEAD</p> <p>T4XMXHH</p> | <p>Metal SS 304 BI-Metal</p>   <p>HEX HEAD WITH ALUM SEAL</p> <p>T4XMXAH</p> | <p>Metal SS 304 BI-Metal</p>   <p>PAN HEAD PHILLIPS</p> <p>T4XMXPP</p> | <p>Metal SS 304 BI-Metal</p>   <p>WAFER HEAD PHILLIPS</p> <p>T4XMXWP</p> |
| <p>Metal SS 316 BI-Metal</p>   <p>WAFER HEAD SQUARE DR</p> <p>T6XMXWQ</p> | <p>s500 SS 304 BI-Metal</p>   <p>HEX HEAD FLANGE</p> <p>T4X5XFH</p> | <p>Metal SS 304 BI-Metal</p>   <p>CSK HEAD WITH WINGS SQUARE DR</p> <p>T4XGXRQ</p> | <p>s500 SS 304 BI-Metal</p>   <p>CSK HEAD WITH WINGS SQUARE DR</p> <p>T4XHXRQ</p> |

A Bi-Metallic screw, is comprised of two metal types. The point is manufactured from high carbon steel that is heat treated to give it the ability to self-drill. The head section is manufactured from a corrosion resistant stainless steel (304 or 316). The two metals are “fused together” to form a screw that offers excellent self-drilling properties, combined with exceptional corrosion resistance.

Protective Coating

Hobson Bi-metallic screws are all coated with a metallic zinc layer and then a second baked top coat that provides an extra layer of corrosion protection and lubrication. This protective coating offers an added benefit of reducing the electrolytic corrosion potential. Our 304 range is coated with a 1000hr protection coating and our 316 range is coated with a 1500hr protection coating.

*Colour for illustrative purposes only.





To find a rivet or screw in any of the colours below, simply replace the **9P** in the part number with the colour code in brackets.

Example: If you choose the colour

PAPERBARK® (PA)

T9PM4FH1016016 (no paint)



TPAM4FH1016016 (painted)



R9P73OAS404 (no paint)



RPA73OAS404 (painted)



Hobson stock DRILLX® screws and rivets with painted heads in the Colorbond® range of colours.

| | | |
|--|---|---|
| BASALT® (BA) | HEADLAND® (HE) NZ MAPLE | PLANTATION® (PL) |
| BLUE RIDGE® (BR) NZ PACIFIC BLUE | IRONSTONE® (IS) | PRIMROSE™ (PR) |
| BUSHLAND® (BU) | JASPER® (JA) NZ SORRELL | SANDBANK® (SA) NZ STRAW |
| CLASSIC CREAM™ (CC) NZ SMOOTH CREAM | LOFT® (LO) | SHALE GREY™ (SG) NZ GULL GREY |
| COTTAGE GREEN® (CG) NZ PERMANENT GREEN | MANGROVE® (MA) | STONE® (ST) NZ RIVERSAND |
| COVE® (CO) | MANOR RED® (MR) NZ SCORIA | SURFMIST® (SM) NZ TITANIA |
| DEEP OCEAN® (DO) NZ STORM BLUE | MONUMENT® (MO) | TERRAIN® (TE) |
| DOVE WHITE™ (DW) | NIGHT SKY® (NS) NZ EBONY | WALLABY® (WA) |
| DUNE® (DU) | PALE EUCALYPT® (PE) NZ MIST GREEN | WILDERNESS® (WI) NZ RIVERGUM |
| EVENING HAZE® (EH) | PALE TERRACOTTA™ (PT) | WINDSPRAY® (WN) NZ SMOKEY |
| GULLY® (GU) | PAPERBARK® (PA) | WOODLAND GREY® (WG) NZ THUNDER GREY |

● ○ Discontinued Colours - Screws painted upon request.

*Colours are representative only.


Colorbond® is a registered trademark of BlueScope Steel Limited.

**Other NZ colours available on request.






DRILLX[®]

| | | | | | | |
|--|---|---|---|---|--|---|
| <p>S2 Alloy Drive Bit 1/4</p>  <p>DOUBLE ENDED PHILLIPS</p> <p>TXDDDPH</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>INSERT BIT HOLDER</p> <p>TXDDIBH</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>INSERT HEX</p> <p>TXDDIHx</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>PLASTERBOARD INSERT PHILLIPS</p> <p>TXDDIPD</p> |  <p>Plasterboard/Drywall Indenter Bit</p> <p>Once the screw is just below the plasterboard surface, the aluminium collar will force the PH2 bits to disengage and set plasterboard screws perfectly flush.</p> | | |
| <p>S2 Alloy Drive Bit 1/4</p>  <p>INSERT PHILLIPS</p> <p>TXDDIPH</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>INSERT SLOTTED</p> <p>TXDDISL</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>INSERT SQUARE</p> <p>TXDDISQ</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>MAGNETIC NUT SETTER</p> <p>TXDDPNS</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>POWER HEX</p> <p>TXDDPHX</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>POWER PHILLIPS</p> <p>TXDDPPH</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>POWER SLOTTED</p> <p>TXDDPSL</p> |
| <p>S2 Alloy Drive Bit 1/4</p>  <p>POWER SQUARE</p> <p>TXDDPSQ</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>POWER TRILOBULAR</p> <p>TXDDPTR</p> | <p>S2 Alloy Drive Bit 1/4</p>  <p>POWER TORX</p> <p>TXDDPTX</p> | <p>HEC Drive Bit 1/4</p>  <p>MAGNET BOOSTER</p> <p>TXDMPB</p> |  <p>Magnet Booster</p> <p>Also Suits Hex Keys & Screwdrivers</p> | | |



Titan NTM



Titanium Nitride coating increases surface hardness. Extended life in general purpose applications.

| | | |
|--|--|---|
| <p>S2 Alloy TitaN Bit 1/4</p>  <p>INSERT PHILLIPS</p> <p>TXDTIPH</p> | <p>S2 Alloy TitaN Bit 1/4</p>  <p>POWER HEX</p> <p>TXDTPHX</p> | <p>S2 Alloy TitaN Bit 1/4</p>  <p>POWER PHILLIPS</p> <p>TXDTPPH</p> |
|--|--|---|



impax[™]

Drive Bits designed for high impact forces of modern power tools.

| | | | | | | | |
|---|--|--|---|---|---|--|---|
| <p>S2 Alloy Black impax Bit 1/4</p>  <p>INSERT BIT HOLDER</p> <p>TXDIIBH</p> | <p>S2 Alloy Black impax Bit 1/4</p>  <p>INSERT BIT HOLDER MAG COLLAR</p> <p>TXDIIBM</p> |  | | | | <p>S2 Alloy Black impax Bit 1/4</p>  <p>INSERT HEX</p> <p>TXDIIHX</p> | <p>S2 Alloy Black impax Bit 1/4</p>  <p>INSERT PHILLIPS</p> <p>TXDIIPH</p> |
| <p>S2 Alloy Black impax Bit 1/4</p>  <p>INSERT SQUARE</p> <p>TXDIISQ</p> | <p>S2 Alloy Black impax Bit 1/4</p>  <p>MAGNETIC NUT SETTER</p> <p>TXDIPNS</p> | <p>S2 Alloy Black impax Bit 1/4</p>  <p>POWER HEX</p> <p>TXDIPHX</p> | <p>S2 Alloy Black impax Bit 1/4</p>  <p>POWER PHILLIPS</p> <p>TXDIPPH</p> | <p>S2 Alloy Black impax Bit 1/4</p>  <p>POWER SQUARE</p> <p>TXDIPSQ</p> | <p>S2 Alloy Black impax Bit 1/4</p>  <p>POWER TORX</p> <p>TXDIPTX</p> | <p>Drive Types</p> <ul style="list-style-type: none"> PHILLIPS HEX SQUARE TORX SLOTTED TRILOBULAR | |
| <p>S2 Alloy impax Bit 1/4</p>  <p>SDS-PLUS ADAPTOR</p> <p>TXDIPAI</p> |  <p>Pull-back Release</p> | | | | | <p>You might also be interested in...</p> <p>SDS-PLUS JET-TRAC TRIPLO</p>  <p>DRILL BIT MUDJTTPR</p> <p>page 67</p> <p>SECURITY BITS</p> <div> <p>POST HEX ISBPH</p> <p>POST TORX ISBPT</p> <p>EYE DRIVE ISBED</p> </div> <p>page 32</p> | |



DRILLX®

Rivets



5052 AL
Steel ZP



**DOME HEAD
OPEN RIVET**

R9P73OAS

5056 AL
Steel ZP



**DOME HEAD
OPEN RIVET**

R9P73O6S

Steel ZP



**DOME HEAD
OPEN RIVET**

R9P73OSS

SS 304



**DOME HEAD
OPEN RIVET**

R0473OLL

SS 316



**DOME HEAD
OPEN RIVET**

R1673OLL

5052
Aluminium



**DOME HEAD
OPEN RIVET**

R9P73OAA

Monel
Steel ZP



**DOME HEAD
OPEN RIVET**

R9P73OMS

304 SS
Steel ZP



**DOME HEAD
OPEN RIVET**

R0473OLS

5052 AL
Steel ZP



**DOME HEAD
OPEN RIVET
LARGE FLANGE**

R9P73LAS

5052 AL
Steel PHOS



**DOME HEAD
SEALED RIVET**

R9P73TAP

Copper
Steel PHOS



**DOME HEAD
SEALED RIVET**

R9P73TCP

5056 AL
Steel ZP



**DOME HEAD
SEALED RIVET**

R9673T6S

304 SS



**DOME HEAD
SEALED RIVET**

R0473TLL

5056 AL
Steel ZP



**DOME HEAD
PEEL RIVET**

R9673P6S

5052 AL
Steel ZP



**DOME HEAD
MULTI-GRIP
RIVET**

R9P73MAS

5052
Aluminium



**DOME TRIFORM
RIVET WITH
WASHER**

R9P73WAA

5052 AL
Steel ZP



**COUNTERSUNK
OPEN RIVET**

R9P72OAS

SS 304



**COUNTERSUNK
OPEN RIVET**

R0472OLL

Monel
Steel ZP



**COUNTERSUNK
OPEN RIVET**

R9P72OMS

PLN
HEC



**EPDM SEAL
FLUTED**

TXW9PEFS

PLN
HEC



**EPDM SEAL
SMOOTH**

TXW9PEPS

EPDM
HEC



**DOME EPDM
WASHER**

TXW9PPCM

PLN
HEC



**CYCLONE
MULTISEAL
WASHER**

TXW9PYM

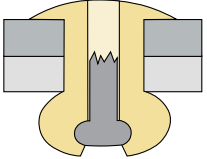
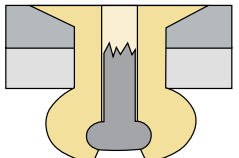
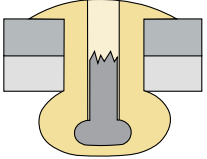
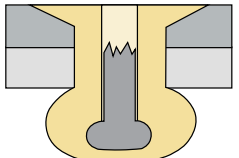
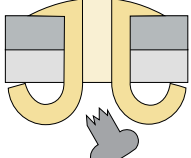
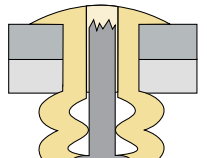
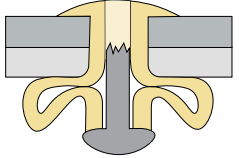
Sealing Washers

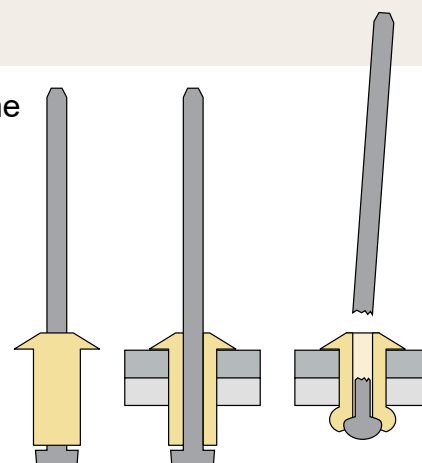




Rivet Head Types

The most common rivets are the Truss type often referred to as Dome head or type 73, and the Countersunk head, known as type 72.

| Head | Type | Head Designation | |
|---|------------|------------------|---|
| Truss Head (Dome Head) / Large Flange Head | Open | 73 |  |
| Countersunk Provides a completely flush finished surface. | Open | 72 |  |
| Truss Head (Dome Head) / Large Flange Head | Sealed | 73 |  |
| Countersunk | Sealed | 72 |  |
| Truss Head (Dome Head) | Peel | 73 |  |
| Truss Head (Dome Head) | Multi-Grip | 73 |  |
| Truss Head (Dome Head) | Triform | 73 |  |



Head

| | | |
|------------------------|----------|--|
| Truss Head (Open) Dome | O | Protrudes above the face of the job, and used in most industrial applications. |
| Countersunk (Open) | O | No part of the fastener protrudes from the face of the material. |
| Large Flange Head | L | Large head diameter used for fastening soft materials. |

Type

| | | |
|-----------------------|----------|--|
| Open | O | The set rivet is not sealed by the stem. |
| Sealed | T | The mandrel is attached to the inside of the shell which ensures there are no gaps for water or air. |
| Multi-Grip | M | Provides a secure joint across various grip ranges. |
| Peel | P | Provide good cohesion of soft materials without distortion. Useful for uneven surfaces. |
| Grooved | G | Grooves around the shell mean effective holding power when set in less stiff materials e.g. Plastic |
| Triform (with washer) | W | During setting, the rivet body splits into 3 parts, preventing the material from being damaged. |

| Shell Material | Stem (mandrel) Material | Code |
|-----------------|-------------------------|-----------|
| Aluminium 5052 | Steel Zinc Plated | AS |
| Aluminium 5056 | Steel Zinc Plated | 6S |
| Steel | Steel Zinc Plated | SS |
| Aluminium 5052 | Steel Phosphated | AP |
| Stainless Steel | Stainless Steel | STST (LL) |
| Monel | Steel Zinc Plated | MS |
| Copper | Steel Phosphated | CP |
| Aluminium | Aluminium | AA |



TRADEPAX™

NEW

TRADEPAX™



All of your favourite fasteners are now available in handy hang packs.

PX™

TRADEPAX™



How to find TRADEPAX™

If you would like a product packaged in the **TRADE PAX™** hang packs, just add **FS** to the start of the item number in your online order.

Metal
Class 4



HEX HEAD
FLANGE

FST9PM4FH



Look for the



logo when you
select a product
online.

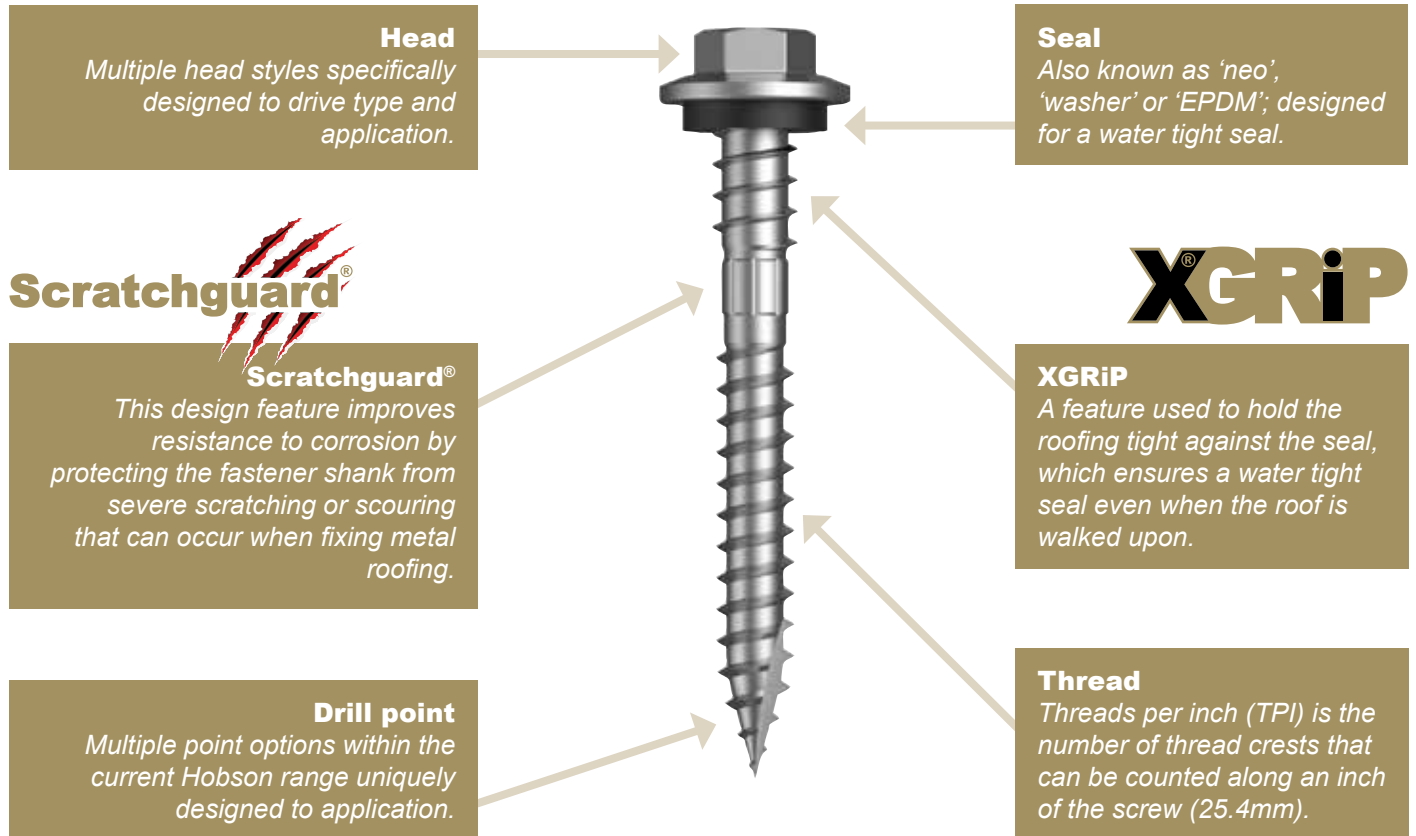
TRADEPAX™



DRILLX[®]

Self Drilling Screws

Manufactured for specific applications, these screws eliminate the need for pre-drilled holes and are engineered for ease of use. Basic features of the screw include:

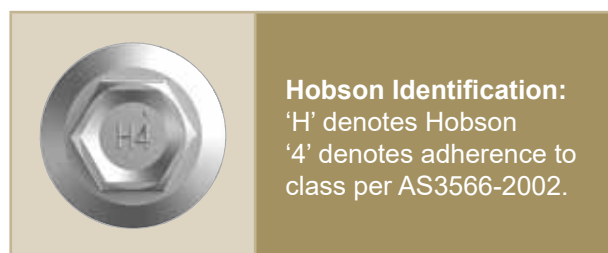


Identifying Head Stamping

As per the AS 3566.1—2002 1.12 MARKING, the requirement for head stamping follows:

The manufacturer's identification mark and/or trademark shall be marked on the heads of the following screws:

- (a) Hexagon headed screws ST 4.8 (No. 10) and larger.
- (b) Bugle head screws Type 17 ST 4.8 (No. 10) and larger.
- (c) Class 3 or Class 4 corrosion resistant screws ST 4.8 (No. 10) and larger.

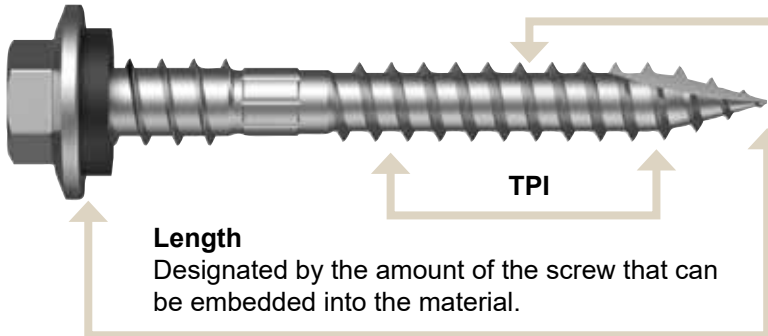


Drive Types

| | | | |
|--|---------------------|--|------------|
| | Slotted | | Square |
| | Phillips | | Torx |
| | Combi Slot Phillips | | Post Torx |
| | Hex Internal | | Eye |
| | Hex External | | Pozi |
| | Post Hex | | Trilobular |



Screw Size and Type Identification



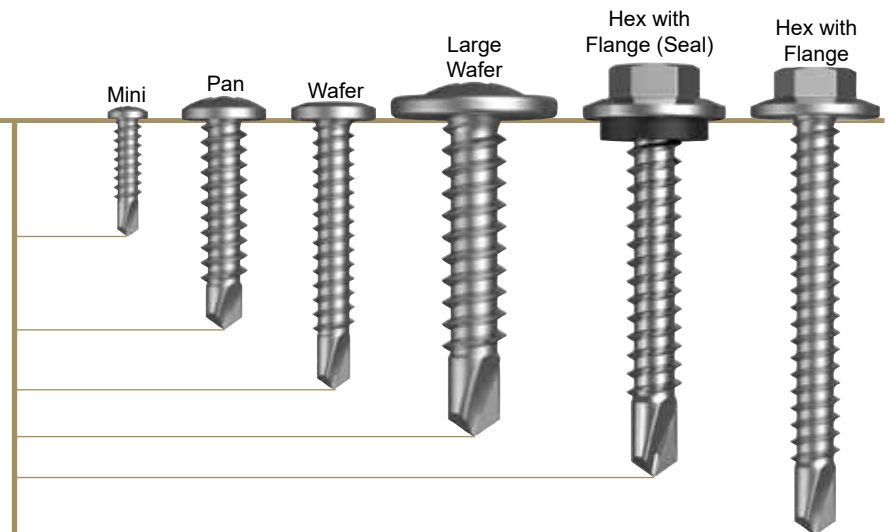
Screw Gauge

Thickness of thread major diameter.

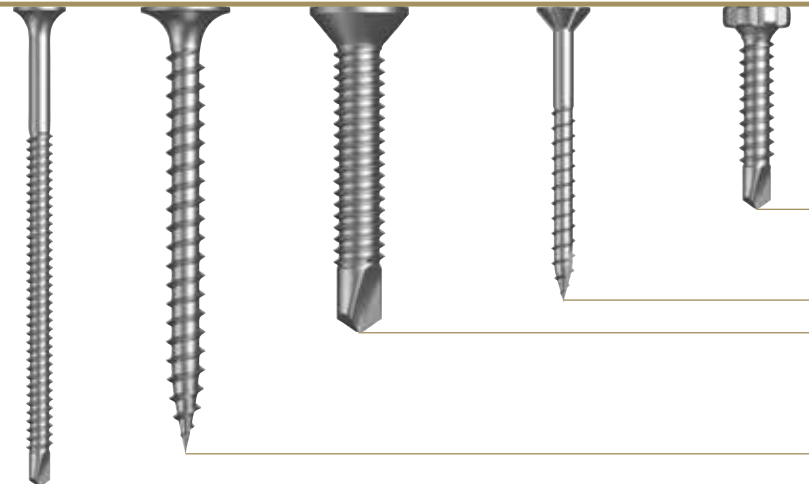
| Gauge | Major Diameter |
|-------|----------------|
| 6g | 3.5mm |
| 8g | 4.2mm |
| 10g | 4.8mm |
| 12g | 5.5mm |
| 14g | 6.3mm |

Measuring the Length of Screws

Screw types to measure from the underside of the head



Bugle Plasterboard Countersunk Self Embedding Flower



Screw types to measure from the top of the head



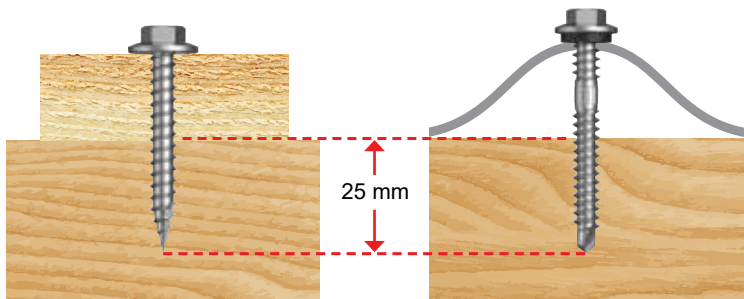
DRILLX[®]

Screw Embedment

Maximises the ability of the screw to achieve the required pull out loads.

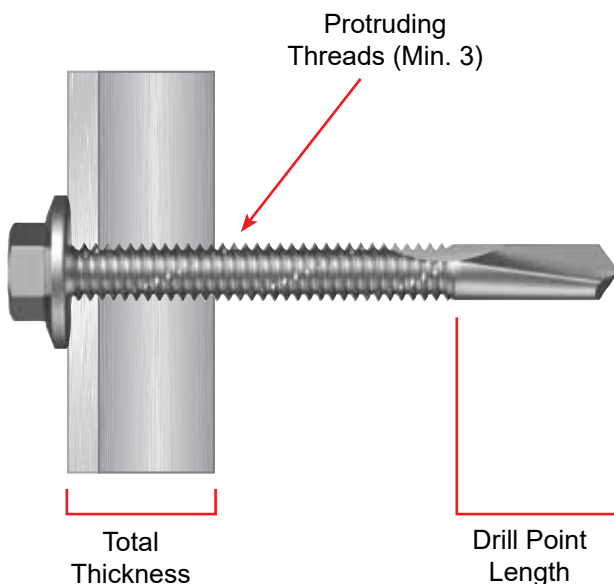
Timber

As a general rule, the minimum embedment required to achieve maximum pull out values is 25mm for #12 and 35mm for #14.










Metal

A minimum of three threads protruding to achieve maximum pull out values.



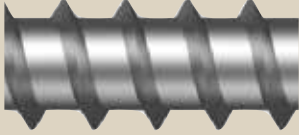
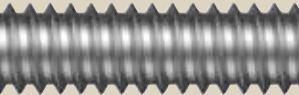
Screw Identification by Point Type:

| | |
|--|--|
|  | Series 500 (S) Commonly referred to as a deep driller, this point is designed for drilling and fastening into thick steel. |
|  | Winged (G) This point is designed for fastening timber and/or composite materials to steel. The wings drill a hole through the timber or composite which is wider than the threads, preventing the threads from lifting the material and allowing the screw to self drill into the steel. The wings break off once the steel is engaged. |
|  | Metal Point (M) This point is designed for drilling steel sections such as purlins, tophats, roofing and cladding. The length of the point will vary depending on steel thickness designed to drill. |
|  | Type 17 (W) This point is designed for drilling through lighter steel sections and fastening with timber. |
|  | Needle Point (N) This point is used on screws of a general purpose nature. |
|  | vmaX[®] (V) Universal drilling point, suitable for fastening steel to timber. Ideal for roofing applications. |
|  | Chipboard / Treated Pine (D) This point is designed for fastening chipboard or timber. |



















Determining Thread Type

Thread per inch (TPI) is the number of thread crests that can be counted along an inch (25.4mm).

| | |
|---|---|
|  | <p>Coarse thread (up to 16TPI)</p> <p>Otherwise known as space threads, screws with a <i>coarse thread</i> are generally used for timber applications and for lighter steel sections.</p> <ul style="list-style-type: none"> → Simple rule of thumb – coarse thread secures lighter steel sections. → Typical applications in pre-engineered steel buildings include: cladding, framing and roofing. → Common sizes include 10g-16TPI; 12g-14TPI and 14g-10TPI. |
|  | <p>Fine thread (over 16TPI)</p> <p>Generally known as <i>metal threads</i>, these screws are only used in steel applications and particularly thicker steels from 2mm upward.</p> <ul style="list-style-type: none"> → Simple rule of thumb – fine thread secures heavier steel sections. → Typical applications in pre-engineered steel buildings include: framing (brackets to purlins) and roofing (lapped purlins). → Common sizes include 8g-18TPI; 10g-24TPI and 12g-24TPI. |

Screw Head and Seal Styles

| | | | | | |
|---|----------------------|---|---------------|---|------------------------------|
|  | Hex Flange Head |  | Pan Head |  | Washer Head |
|  | Countersunk |  | Mini Pan |  | Large Washer Head |
|  | Countersunk Ribbed |  | Large Wafer |  | Flower |
|  | Undercut Countersunk |  | Wafer |  | Hex Head with Seal |
|  | Bugle |  | Button Head |  | Hex Head with EPDM Seal |
|  | Bugle Batten Ribbed |  | Flat Head |  | Hex Head with Multiseal |
|  | Trim Head Ribbed |  | Flat Serrated |  | Hex Head with Aluminium Seal |



PRODUCT TYPES

| CATEGORY | HIGH-TENSILE | STRUCTURAL | SOKO | EARTHMOVING | PETROCHEMICAL | STAINLESS HARDWARE | STAINLESS FASTENERS | NEPTUNE | BUMAX | NORD-LOCK | SCHNORR | WASHERS | NYLON | COMMERCIAL | LOW-TENSILE | CYCLONE | MUNGO | CONSTRUCT | DRILLX |
|----------------------|--------------|------------|------|-------------|---------------|--------------------|---------------------|---------|-------|-----------|---------|---------|-------|------------|-------------|---------|-------|-----------|--------|
| Product Types | | | | | | | | | | | | | | | | | | | |
| Allthread | ● | | | | ● | | ● | ● | ● | | | | ● | | ● | ● | | | |
| Stud Bolts & Nuts | | | | | ● | | | | | | | | | | | | | | |
| Bolts | ● | ● | ● | ● | ● | | ● | ● | ● | | | | ● | ● | | | | | |
| Nuts | ● | ● | ● | ● | ● | | ● | ● | ● | ● | | | ● | ● | ● | ● | | | |
| Washers | | ● | | | | | | ● | ● | ● | ● | ● | ● | | | ● | | | ● |
| Anchors | | | | | | | | | | | | | | | | | ● | ● | |
| Adhesives | | | | | | | | | | | | | | | | | ● | | |
| Machine Screws | | | | | | | ● | | | | | | ● | ● | | | | | |
| Socket Screws | | | ● | | | | ● | ● | ● | | | | ● | | | | | | |
| Self Tapping Screws | | | | | | | ● | | | | | | | | | | | | ● |
| Self Drilling Screws | | | | | | | | | | | | | | | | | | | ● |
| Security Screws | | | | | | | ● | | | | | | | | | | | | |
| Hardware | | | | | | ● | | | | | | | | | ● | ● | | | |
| Bent Bolts | ● | | | | | ● | | | | | | | | | ● | ● | | | |
| Rivets | | | | | | | | | | | | | | | | | | | ● |
| Pins | | | | | | | ● | | | | | | | ● | | | | | |
| Drive & Drill Bits | | | | | | | ● | | | | | | | | | | ● | ● | ● |
| Abrasives & Cutting | | | | | | | | | | | | | | | | | ● | | |
| Sealants & Silicones | | | | | | | | | | | | | | | | | ● | | |
| Tools | | ● | | | | ● | | | | | | | | | ● | | | ● | |

DID YOU KNOW?

about our...

NEW AND FEATURED PRODUCTS

You can
find them
ONLINE:
» hobson.com.au

DID YOU KNOW?

about our... **TYPE 17 TRIM HEAD – 6 RIB**




NEW PRODUCT

An effective trim head screw that adds value and finish to any timber decking project

TYPE 17 TRIM HEAD – 6 RIB
304 STAINLESS / SQUARE DRIVE

| Part | QFind | Size Gauge | Major Dia (mm) | TPI | Length (mm) | Drive Size | Pack Qty | Head Size (mm) |
|----------------|-------|------------|----------------|------|-------------|------------|----------|----------------|
| T04WSTQ0810050 | QT45 | 8 | 4.2 | 10.0 | 50 | #1 | 1000 | 6.05 - 6.45 |
| T04WSTQ0909053 | QT24 | 9 | 4.5 | 9.0 | 53 | #2 | 1000 | 6.05 - 6.48 |

NEW PRODUCT





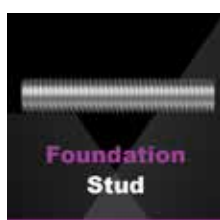
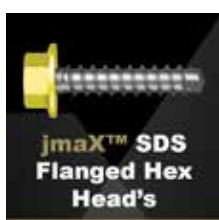
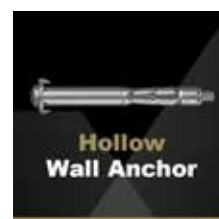
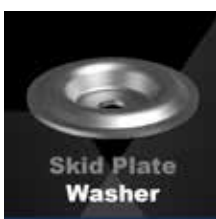
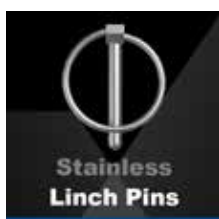
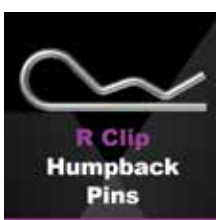
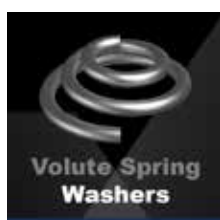
DRILLX

Application:
» Timber Decking

A superior decking screw that provides a sleek architectural finish. Can be used with timber and composite materials. For both conventional through fixing or concealed/hidden decking. Pre-drilling recommended prior to installation.

hobson.com.au **QUALITY FASTENERS SINCE 1935**





DRILLX

TDX

NYLOC

XGRIP

Bi-FIX

SOKO

vmaX

NORD-LOCK
PART OF THE NORD-LOCK GROUP

H-IT

XBolt

BUMAX
THE WORLD'S STRONGEST
STAINLESS STEEL BOLT

mungo

**H9
IMPACT**

impaX

SCHNORR
DISC SPRING ENGINEERING

CLAWBOLT

TRADEPAX

TY9aBolt

TYKOTE

TX-CON

SAMPSONROD
Fully Certified Class 8.8 & Grade 5 Allthread

Scratchguard

jmaX

**applied
bolting**
TECHNOLOGY

Neptune

TONE

18PG-2_HOB

Founding Member
AEFAC
Australian Engineered
Fasteners and Anchors Council

AUSTRALIAN
TRUSTED
TRADER

NATA
ACCREDITED FOR
TECHNICAL
COMPETENCE

ISO 9001
BUREAU VERITAS
Certification
Nº.9000117

