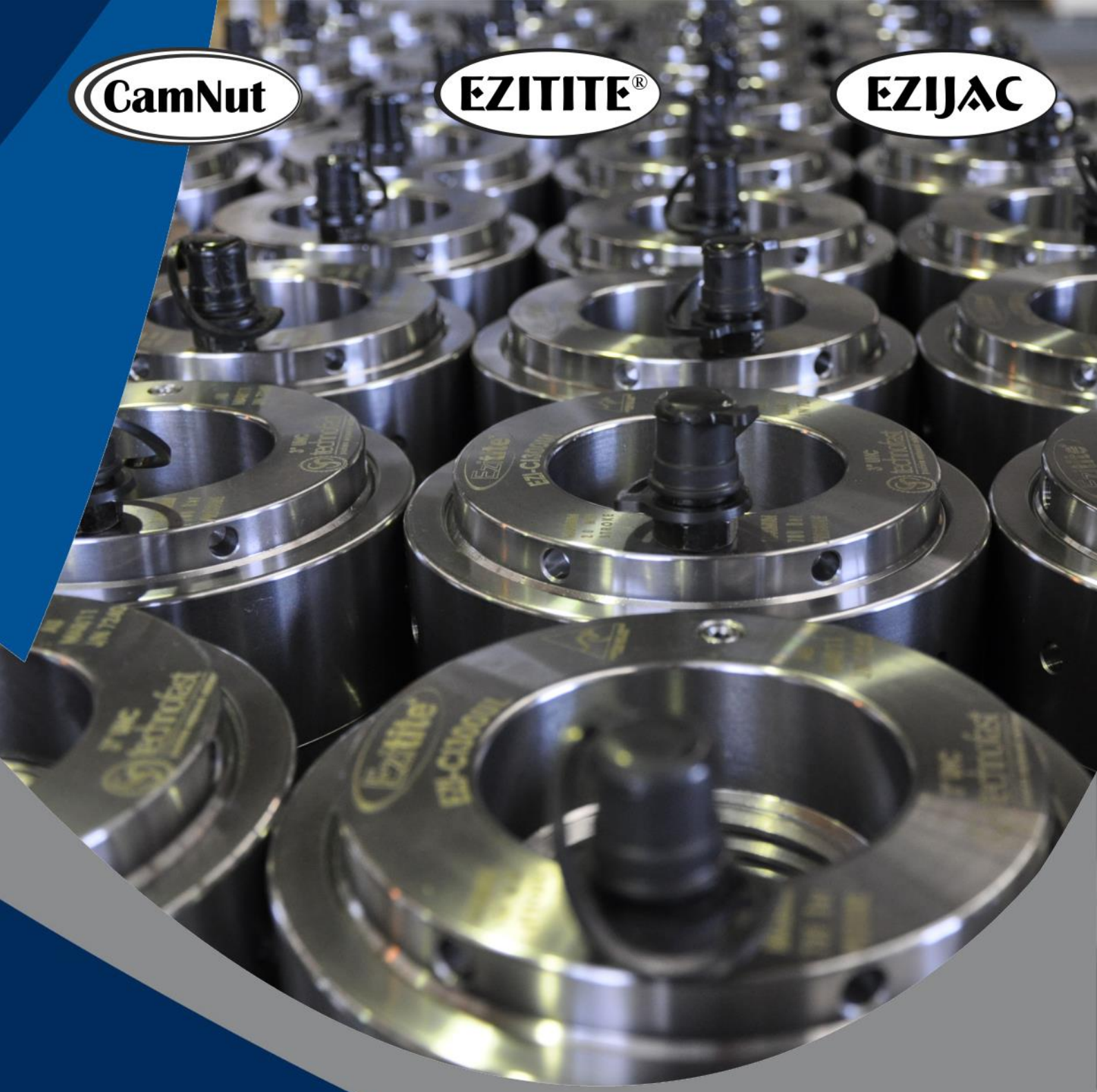
CamNut

EZITITE®

EZIJAC



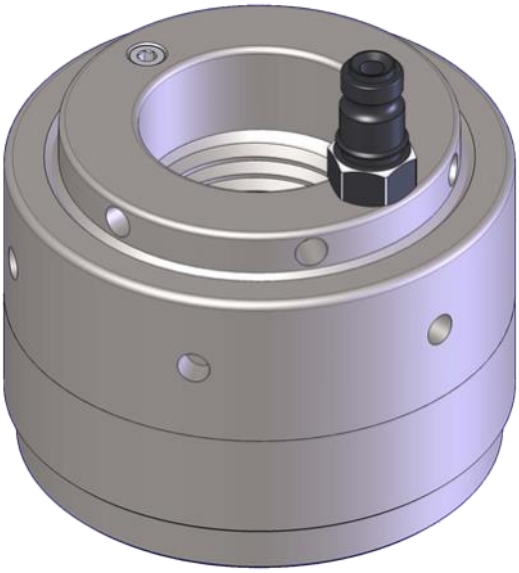
A New Generation in Fasteners

AUSTRALIAN MADE

technofast
precision engineered solutions

COPYRIGHT © 2014 Technofast Industries Pty Ltd

EziTite® Hydraulic Nut



The EziTite® Hydraulic Nut is a precision engineered, high pressure, high performance, hydraulically operated bolt tensioning device that can be quickly and easily fitted and used with Technofast pumping equipment (eg. Hand Pumps, Electric/ Hydraulic or Air / Hydraulic).

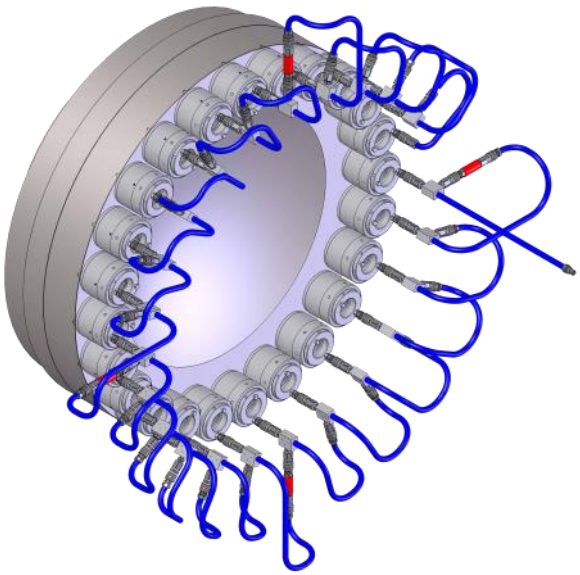
It is manufactured in a choice of alloy or stainless steel of tensile strength to suit the required application.

Features:

The patented design of the EziTite® has given it improved technical efficiency of operation and cost/benefit advantages over other tensioning devices. The EziTite® Hydraulic Nut provides advantages such as:

- Reduced maintenance down time.
- Improved safety on the job.
- Gives reliable and precise tensioning.
- Is user-friendly.
- Fast to fit and remove.

- **SAFE**
- **EASY TO OPERATE**
- **ACCURATE BOLT TENSIONING**
- **MULTIPLE TENSIONING**



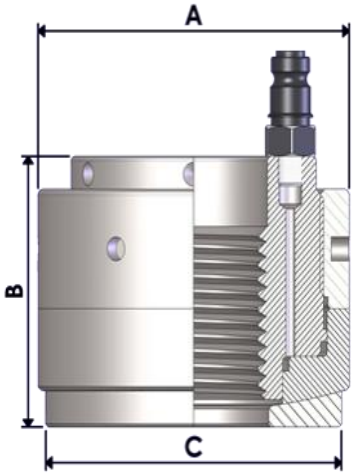
Operation:

The EziTite® Hydraulic Nut assembly is screwed by hand onto the bolt (replacing the original Nut) until the base is tight against the working face. Hydraulic pressure is then applied through the nipple fitting on top of the nut body into the sealed chamber, forcing the piston and the nut body apart, thus stretching and tensioning the bolt through the joint.

The threaded lock ring, mounted on the nut body, is then screwed against the abutting face to retain the induced load in the bolt. The pressure is then simply released and the hydraulic coupling removed from the nipple fitting to complete the operation.

COPYRIGHT © Technofast Industries Pty Ltd ABN 27 063 281 952

EziTite® Hydraulic Nut Specifications



Long Stroke part numbers have an 'L' at the end of the part number. Eg: EZI-CI112UL

Model Part No.	Thread Size	Force (kN)	(A) Nut OD (mm)	(B) Height short stoke (mm)	(B) Height long stoke (mm)	Short Stroke (mm)	Long Stroke (mm)	(C) Washer Diameter	Weight Approx. Short (kg)	Weight Approx. Long (kg)
EZI-CM24X3	M24	57	Ø58	61	73	6	12	Ø52	1.00	1.21
EZI-CI100U	1	64	Ø58	61	73	6	12	Ø52	0.99	1.19
EZI-CI102U	1.125	80	Ø64	63.5	75.8	6	12	Ø58	1.22	1.46
EZI-CM30X35	M30	86	Ø68	66.2	78.2	6	12	Ø62	1.48	1.72
EZI-CI104U	1.25	106	Ø72	65.5	77.5	6	12	Ø68	1.62	1.91
EZI-CI106U	1.375	119	Ø78	68	80	6	12	Ø74	1.97	2.31
EZI-CM36X4	M36	135	Ø78	68	80	6	12	Ø74	1.91	2.27
EZI-CI108U	1.5	143	Ø82	69.7	81	6	12	Ø78	2.17	2.56
EZI-CI110U	1.625	177	Ø88	72.5	84.5	6	12	Ø82	2.57	3.01
EZI-CM42X45	M42	177	Ø88	72.5	84.5	6	12	Ø82	2.54	2.99
EZI-CI112U	1.75	186	Ø94	79.2	102.2	8	20	Ø86	3.21	4.17
EZI-CM48X5	M48	234	Ø104	80.2	103.2	8	20	Ø98	4.00	5.18
EZI-CI200U	2	245	Ø108	86.9	108.9	8	20	Ø102	4.62	5.83
EZI-CM56X55	M56	335	Ø122	90.6	112.6	8	20	Ø116	6.14	7.70
EZI-CI204U	2.25	335	Ø122	90.6	112.6	8	20	Ø116	6.13	7.66
EZI-CI208U	2.5	439	Ø136	96.1	116.1	8	20	Ø132	8.17	9.88
EZI-CM64X6	M64	439	Ø136	96.1	116.1	8	20	Ø132	8.13	9.86
EZI-CI212U	2.75	527	Ø150	105	122.9	8	20	Ø146	10.86	12.83
EZI-CM72X6	M72	527	Ø150	105	122.9	8	20	Ø146	10.74	12.68
EZI-CI300U	3	638	Ø160	107	124	8	20	Ø156	12.57	14.66
EZI-CM80X6	M80	706	Ø170	108.5	125.5	8	20	Ø162	14.38	16.77

Commercial grade Imperial EziTite nuts are calculated at approximately 65% proof load of a SAE Grade 2 bolt.
Commercial grade Metric EziTite nuts are calculated at approximately 65% proof load of a Grade 4.6 bolt.
Maximum operating pressure for commercial grade is 700 Bar

Model Part No.	Thread Size	Force pro-duced (kN)	Nut OD (mm)	Height short stoke (mm)	Height long stoke (mm)	Short Stroke (mm)	Long Stroke (mm)	Washer Diameter	Weight Approx. Short (kg)	Weight Approx. Long (kg)
EZI-HM24X3	M24	160	Ø70	59.9	72	6	12	Ø66	1.52	1.84
EZI-HI100U	1	160	Ø70	59.9	72	6	12	Ø66	1.52	1.82
EZI-HI102U	1.125	171.9	Ø74	62.3	74.3	6	12	Ø68	1.67	2.01
EZI-HM30X35	M30	249.3	Ø84	65	77	6	12	Ø80	2.32	2.79
EZI-HI104U	1.25	249.3	Ø84	65	77	6	12	Ø80	2.30	3.00
EZI-HI106U	1.375	277.9	Ø92	68.3	80.3	6	12	Ø88	2.89	3.42
EZI-HM36X4	M36	357	Ø100	69.6	80.6	6	12	Ø96	3.52	4.09
EZI-HI108U	1.5	332.5	Ø100	69.6	80.6	6	12	Ø96	3.46	4.03
EZI-HI110U	1.625	409	Ø110	78.9	88.9	6	12	Ø106	4.68	5.34
EZI-HM42X45	M42	456	Ø114	78.3	88.3	6	12	Ø110	5.02	5.74
EZI-HI112U	1.75	456	Ø114	80.3	103.3	8	20	Ø110	5.11	6.66
EZI-HM48X5	M48	629.3	Ø128	84	106	8	20	Ø124	6.84	8.72
EZI-HI200U	2	598.5	Ø128	84	106	8	20	Ø124	6.74	8.61
EZI-HM56X55	M56	821.1	Ø146	89.5	110.5	8	20	Ø142	9.52	11.90
EZI-HI204U	2.25	785.4	Ø146	89.5	110.5	8	20	Ø142	9.47	11.81
EZI-HI208U	2.5	940.5	Ø156	95.6	115.6	8	20	Ø152	11.47	13.90
EZI-HM64X6	M64	1108.4	Ø166	95.8	115.8	8	20	Ø162	13.26	16.05
EZI-HI212U	2.75	1128.3	Ø172	100.6	120.6	8	20	Ø168	14.82	17.85
EZI-HM72X6	M72	1474.9	Ø190	99.5	119.5	8	20	Ø186	18.29	22.09
EZI-HI300U	3	1379.9	Ø190	99.9	119.9	8	20	Ø186	17.99	21.78
EZI-HM80X6	M80	1770.3	Ø206	105.9	124.9	8	20	Ø202	22.80	26.98

High Tensile Grade Imperial—are calculated at approximately 65% proof load of a SAE Grade 5 bolt.
High Tensile Grade Metric— are calculated at approximately 65% proof load of a Grade 8.8 bolt.
Maximum Operating pressure for High Tensile Grade is 1000 Bar

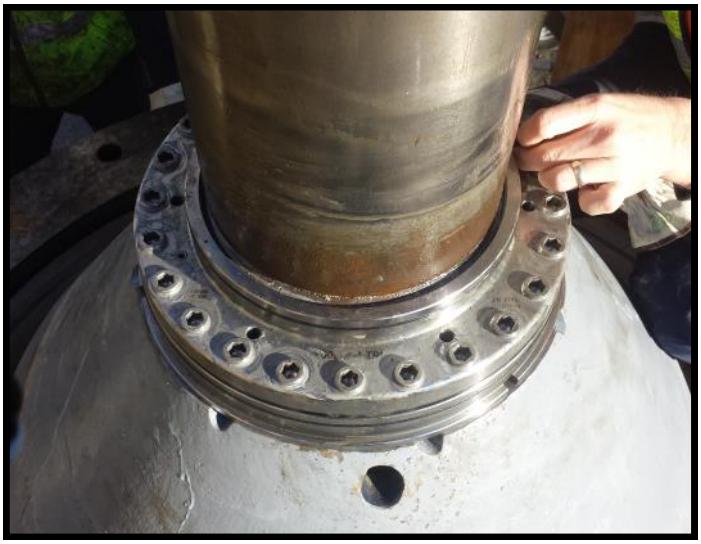
All standard EziTite® Hydraulic Nuts are equipped with CEJN type male snap fittings, 1/8" BSPP porting and bleed plugs.

- EziTite® Hydraulic Nuts are supplied with spherical self-aligning washers as standard.
- Maximum force is generated using the stated maximum pressure.

If the standard range above does not suit, our technical staff will modify the design to suit the application.

COPYRIGHT © Technofast Industries Pty Ltd ABN 27 063 281 952

EziTite® Hydraulic Head Nut



Since the development of the gyratory crusher, the quarrying industry has sought better means for effectively tightening mantle head nuts.

Technofast Industries have successfully developed the EziTite® Hydraulic HeadNut system to replace standard mantle head huts. In addition to technical and performance criteria, major considerations of the design are aimed at protection of operators from strike or shrapnel injuries commonly occurring when hammering tight the standard mantle head nut.

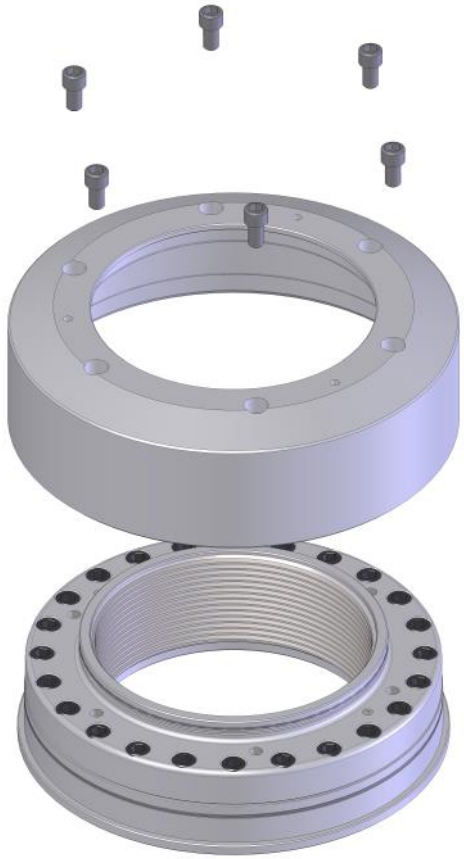
The EziTite® HeadNut features a hydraulic clamping nut with an integral sacrificial protective cover which can be constructed according to the abrasive nature of the material being crushed.

Features:

Precise clamping forces are generated by hydraulic pressure acting on a constrained area within the assembly. The EziTite® HeadNut is fitted with mechanical locking rings to retain these tensile loads.

In the unlikely situation that there is a hydraulic malfunction, a simple patented sacrificial ring that is positioned between the lock ring and the piston can be used to release the load on the shaft.

- **SAFE**
- **EASY TO OPERATE**
- **ACCURATE MANTLE SEATING**



Operation

The EziTite® Hydraulic HeadNut assembly is screwed by hand onto the crusher shaft (replacing the original nut) until the base is tight against the working face of the mantle. Hydraulic pressure is then applied through the nipple fitting on top of the nut body into the sealed chamber, forcing the piston and the nut body apart, thus seating the mantle on to the machines taper.

When it is time to remove the EziTite® Hydraulic HeadNut the installation procedure is repeated and the nut is removed by hand eliminating the need for large hammers and flame cutting of the burn ring, improving site safety.

Patent No: PCT/WO2006/037173

Australian and International Patents Granted and Pending

COPYRIGHT © Technofast Industries Pty Ltd ABN 27 063 281 952

General Servicing

Ensuring your tooling is maintained to the highest quality, Technofast Industries offers general servicing of all hydraulic bolt tensioning tooling. This includes hydraulic nuts, hydraulic bolt tensioners and various ancillary equipment that support these tools. The range of applications and complexity of hydraulic bolt tensioners has increased markedly with the increased popularity of this type of tool. Many designs incorporate highly stressed components which have a finite usage cycle life, and care must be taken to observe correct operating procedures and also to perform a range of tests upon components to ensure that these are suitable for operation. All precautions for dealing with high pressure tooling should be strictly observed.

The main reasons for catastrophic component failure of hydraulic bolt tensioners are generally related to overuse or misuse. All highly stressed components will have a finite service life, and this will be considerably shortened by factors such as over pressurization of the tool, operation of the tool on uneven surfaces, insufficient engagement with stud protrusion, and a range of other incorrect procedures. Other noted problems are physical damage to components, such as from hammer blows or grinding to make them fit tight applications. Technofast utilize a range of Inspection Procedures to identify apparent and latent faults

During service all tooling is inspected after having being stripped completely undergoing comprehensive assessment by both Technofast's Production and Engineering teams. Comprehensive finding, testing and completed service reports are generated documenting the process, and provided for your records.

Hose Pressure Testing and Certification

Flexible Hoses used for Hydraulic Bolt Tensioning operations are subjected to any number of situations which may impair their continued safe use. Hoses may sustain damage from having been stretched, twisted, crushed, cut or coiled inside their recommended minimum bend radius. Any such defect has the potential to cause leakage under pressure or catastrophic failure by bursting. Any such incident is extremely dangerous, often with life-threatening consequences. As part of acceptable workplace practice, pressure hoses and fittings should be regularly inspected and tested to relevant standards.

In accordance with procedures detailed in ISO 6605 and SAE J343 Standards, High Pressure Hydraulic Hose assemblies used in heavy duty hydraulic tensioning services and heavy industry worksites' require annual testing and recertification to meet standard performance criteria.

Technofast industries provides a complete Hose Testing, Certification and Identification service to ensure the safety and integrity of high pressure hoses. The sole purpose of governing regular preventative maintenance for hydraulic pressure hoses used within heavy industries ensures the integrity of the equipment, reducing risk to the user and improves overall site safety.

Example One : Crushed Hose

Example Two : Ruptured Casing

Technofast Hose Service includes:

- Full visual inspection
- Thorough Clean and Oil Replacement.
- Stringent Pressure Testing to above maximum working pressure.
- Test Tag; installed and updated stating the next test due date.
- Provision of a Technofast Serial Number; allowing the full working history of the Hose to be recorded for future reference.
- An ongoing Maintenance Record retained by Technofast
- Failure Reports generated as required

COPYRIGHT © Technofast Industries Pty Ltd ABN 27 063 281 952

Technofast Training

The introduction of new technologies and processes is implemented to achieve benefits such as improvements in safety, mechanical integrity and productivity. To get maximum optimisation, it is vitally important that those responsible for the implementation are fully trained and familiar with the operation and maintenance of such equipment and processes. Technofast therefore offers tailored training packages to ensure that end users are able to achieve maximum benefit from their investment.

Training can cater for small or large groups and can be structured in co-operation with the end user to incorporate specific procedures and relevant site requirements.

Training can be conducted in a venue to suit customers' needs, whether on-site, a nominated local venue or at Technofast Industries' facilities. More complex training which may include engineering demonstrations can be arranged and presented at Technofast Industries' Brisbane Head Office.

Features:

- Training ideally tailored for each site and particular application. Accounts for existing skill sets and knowledge.
- On Site; prior to or during an Installation for hands-on experience
- Visual Presentation may be provided
- Comprehensive review of the operation of Technofast Products included
- Reference material supplied for all attendees.

Contact

For further information regarding Training Packages, contact
Technofast Industries (Head Office)
Phone 07 3803 6550
Email sales@technofast.com
OR:
Contact your local Technofast Products Distributor.

COPYRIGHT © Technofast Industries Pty Ltd ABN 27 063 281 952

To ensure that any enquiry can be addressed promptly and accurately, Technofast's consultants require particular information to enable specification of appropriate products. To assist this process, please copy this page and complete the following data.

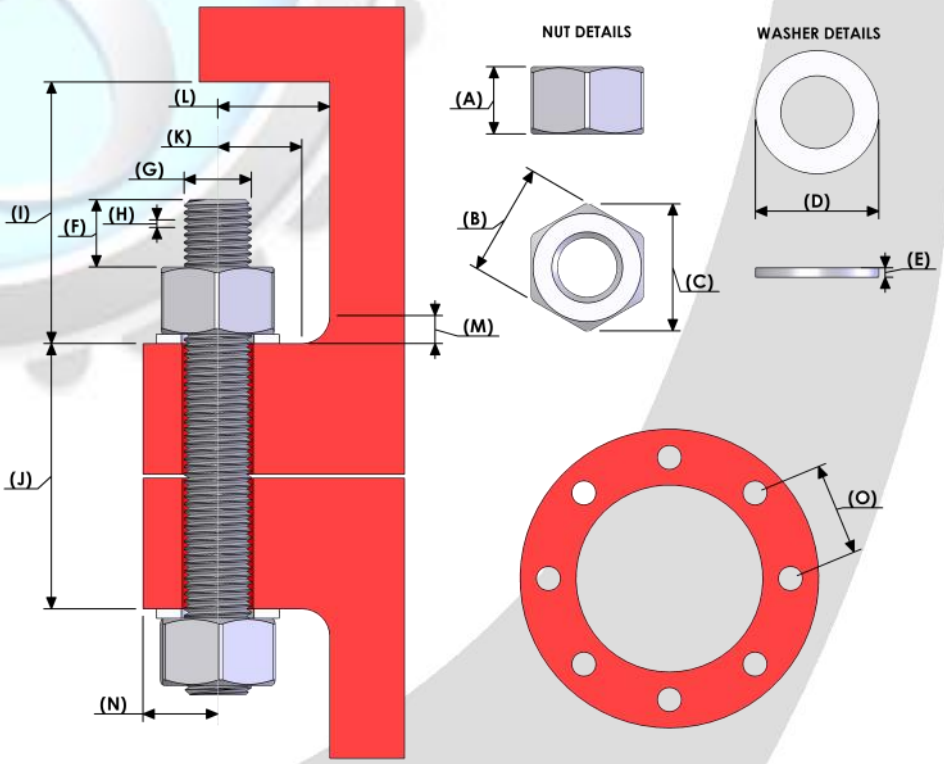
Date Of Enquiry	
Company	
Contact Name	
Application Details	
Industry	
Torque or Force—If Used: (N/m or Ibf-ft)	
Bolt grade or material	
Lubricant	

Nut Height	**A**	
A.F (Across the flats)	**B**	
A.C (Across the corners)	**C**	
Washer Ø	**D**	
Washer Thickness	**E**	
Thread Grip length	**F**	
Bolt Ø	**G**	
Thread pitch	**H**	
Top clearance to obstruction	**I**	
Grip length of flange.	**J**	
Centre of bolt to obstruction (chamfer/ radius)	**K**	
Centre of bolt to obstruction.	**L**	
Height of chamfer/radius	**M**	
Centre of bolt to side of flange.	**N**	
Centre of bolt holes.	**O**	

If all information is not immediately available, provisional specification may be commenced using the following:

- Thread size and Material Grade of bolt or stud
- Required Tension (may be provided as recommended torque)
- Space allowed for fitting of fastener

Further information such as photographs, drawings or sketches will assist the Technofast Team in handling your enquiry efficiently.



Notes / Comments:

COPYRIGHT © Technofast Industries Pty Ltd ABN 27 063 281 952

General Comments

technofast
precision engineered solutions

TECHNOFAST INDUSTRIES PTY LTD

2-4 Calcium Court,
Crestmead QLD 4132
(PO Box 888, Browns Plains BC 4118)
ABN 27 063 281 952

T: +61 7 3803 6550
F: +61 7 3803 4843
E: sales@technofast.com
W: www.technofast.com