



HYDRASURE



HYDRASURE *description*

HydraSure Clamp Nuts are the modern, safe and efficient way to precise tool clamping. HydraSure Clamp Nuts replace conventional torque-loaded threaded nuts to make shaft tensioning a simple, efficient and safe hydraulically assisted operation.

They are manufactured in a wide range of sizes to suit applications throughout many industries. "AR" Model HydraSure Clamp Nuts are made in a standard range to suit thread sizes from 50 mm to 300 mm and other sizes by request.

HYDRASURE *applications*

Typical HydraSure applications include:

- Metal slitting mills
- Coil rewinders
- Marine propeller shafts
- Sugar milling equipment
- Manufacturing machinery such as punches and presses
- Steel rolling mills
- Bearing setting and removal

HYDRASURE *features*

With HydraSure, precise clamp forces are generated by the internal action of hydraulic pressure acting on a constrained area within the nut. Unlike other types of hydraulic nut used in similar applications, HydraSure Clamp Nuts are fitted with mechanical locking rings to retain these tensile loads.

Other HydraSure advantages include:

- Vastly reduces down time and maintenance problems, thereby improving productivity
- Is user-friendly – fast and easy to fit
- Greatly enhances tool life
- Repeatable accuracy of the tensioning operation reduces product variation
- Achieves faster throughput without compromising product quality
- Minimises risk of personal injury and collateral damage to capital equipment during blade and tool changes
- Threaded locking collar counteracts loosening forces of impact on rotating shafts
- Requires low level of skill for operation

THE HYDRASURE_{advantage}

To hold a joint together, clamping forces must be sufficiently higher than the externally applied working load to prevent the parts from separating during operation.

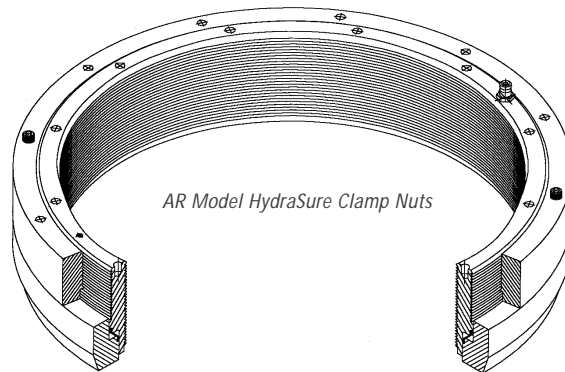
Generating such forces is impossible when using flogging spanners and hammers. Other torque generating equipment such as hydraulic wrenches may be inappropriate for use on such elements as shafts and arbours.

All torque dependent means are subject to variables of friction between mating surfaces, with some 90% of applied effort lost. Accurate determination of preload is an impossibility.

HydraSure clamping eliminates these problems. The loads generated are precise and easily repeatable, with no damage to equipment.

HYDRASURE_{technical specifications}

- AR Model HydraSure Clamp Nuts are made in a standard range to suit thread sizes from 50 mm to 300 mm. Other sizes and designs are available on request.
- "C" spanner for fitting is supplied with each pair of HydraSure Clamp Nuts.
- Maximum operating pressure is 70 Mpa (700 Bar).



Australian and International Patents Pending Australian Patent No. 25403/88 USA Patent No. 07/478009 International PCT/AU88/00381 and others applied for.

Model No.	Max O.D. of thread (mm)	Height (assembled) (mm)	O.D. Diameter (mm)	Max. Force (kN)	Stroke (mm)
AR050	50	48	105	146	5
AR060	60	48	115	166	5
AR072	72	54	130	193	10
AR080	80	54	140	245	10
AR090	90	58	150	233	10
AR100	100	58	155	208	10
AR110	110	58	170	273	10
AR120	120	58	180	293	10
AR130	130	58	190	313	10
AR140	140	58	210	339	10
AR150	150	58	220	366	10
AR160	160	68	230	386	10
AR170	170	68	240	406	15
AR180	180	68	260	577	15
AR190	190	68	265	446	15
AR200	200	74	285	639	15
AR210	210	74	295	665	15
AR220	220	74	310	793	15
AR230	230	74	320	727	15
AR240	240	74	330	745	15
AR250	250	86	340	781	15
AR260	260	86	355	913	15
AR270	270	86	370	1053	15
AR280	280	86	385	1098	15
AR290	290	86	400	1357	15
AR300	300	86	410	1410	15



The S12402 HydraSure Clamp Nut specially developed for BHP Steel.



HydraSure Clamp Nut during test fitting to shredder shaft for sugar mill.



HydraSure Clamp Nut used in steel rolling mill.



The S12402 HydraSure Clamp Nut is one of the larger sizes developed for use in the Port Kembla works of BHP Steel. Specifically engineered for this duty, it is applied to the roll shafts of the plate mill at the steelworks. It is shown here installed on a roll stand.

3340-B Greens Road, Suite 605
Houston, TX 77032

Phone: 281.449.9994 Fax: 281.449.9996

E-Mail sales @titanti.com

TITAN
TECHNOLOGIES INTERNATIONAL, INC



All statements, technical information and recommendations contained herein are based on tests believed to be reliable, but no guarantee is given as to their accuracy and/or completeness. The user must determine the suitability of the product for their own particular purpose, either alone or in combination with other products, and shall assume all risk and liability in connection therewith. Nothing herein should be taken as an inducement to infringe any particular patent. Technofast Products, including those disclosed herein, are the subject of International Patents granted and pending, and the proprietors reserve all rights, including copyright, as permitted under law.