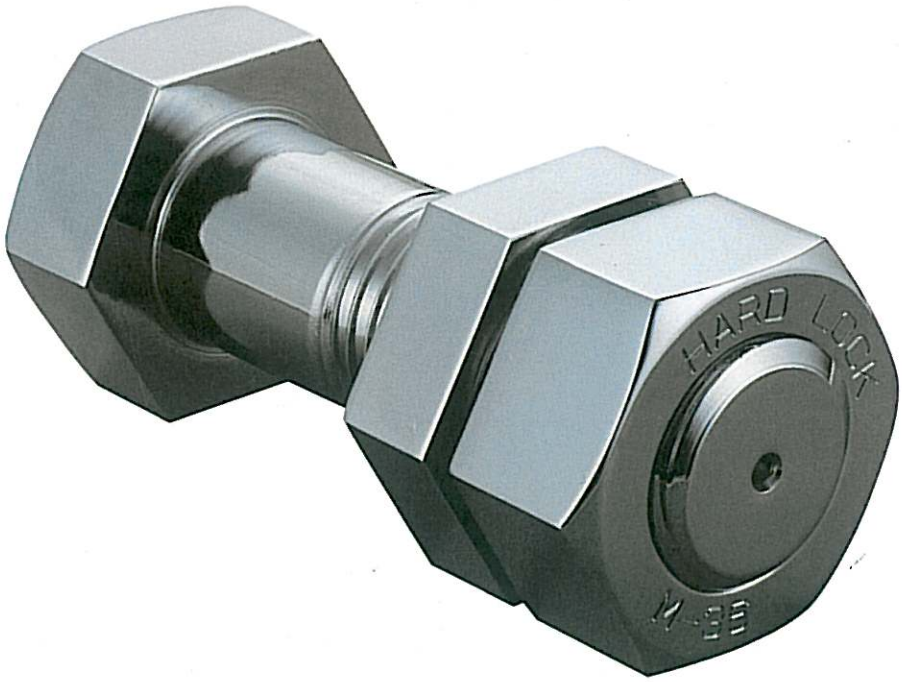
Supplying industrial fasteners for 30 years



Staytite

dedicated to meeting all your fastening needs

Introduction

Contact us

Tel: 00-44-1494-462322
Fax: 00-44-1494-464747
Sales: fasteners@staytite.com

www.staytite.com

At Staytite we provide industrial fasteners to original equipment manufacturers in a range of industries around the world, from aerospace to telecommunications.

This multi-language brochure introduces the Hardlock Nut to you. Hardlock is an innovative all-metal locking nut that resists loosening caused by high levels of vibration. This exceptional performance does not decline over time.

We offer reliable fastening solutions, which make your production more efficient and cost-effective.

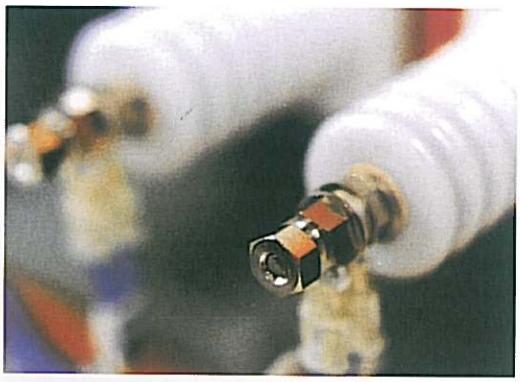
Staytite is a family-owned business that was established in 1978. During this time we have built an unrivalled wealth of knowledge and expertise in industrial fastening applications to offer you with solutions you need.

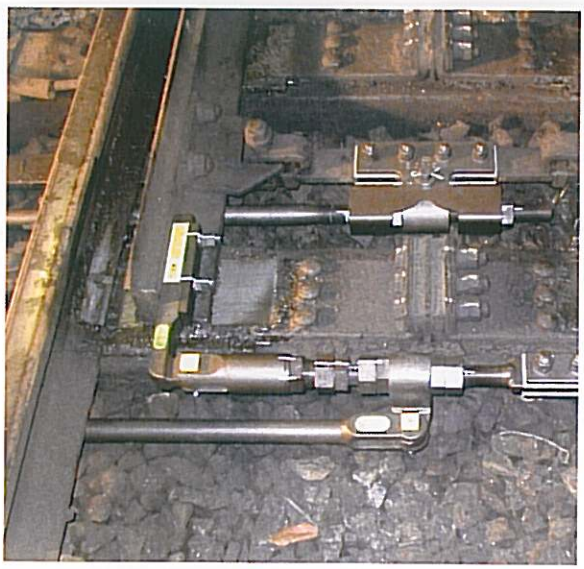
Trading from our purpose built industrial headquarters in High Wycombe, we have successfully met the challenges presented by customers in the automotive, hand tool, white goods, electronics and telecommunications industries.

We are dedicated to customer service and supplying high quality products at competitive prices. Our specialized team provides you with excellent support and bespoke engineered solutions.

Andrew Black

Andrew Black
Managing Director





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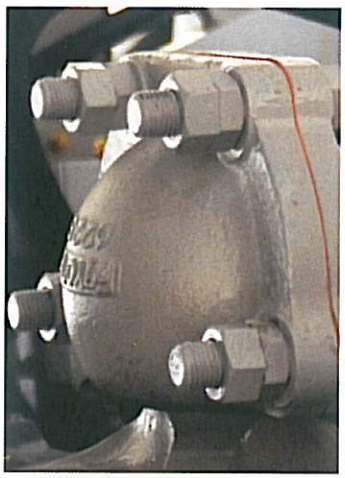
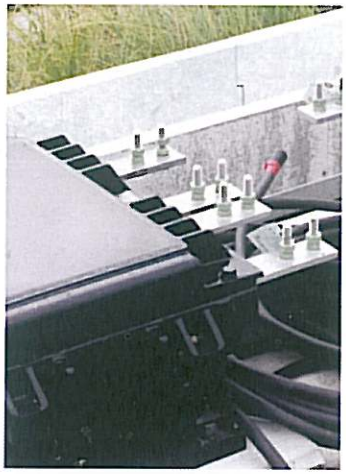


UNITED KINGDOM

HARDLOCK NUTS - A PROVEN SOLUTION TO VIBRATION

HARDLOCK NUTS ARE SPECIFIED BY MANUFACTURERS IN ALL THESE INDUSTRIAL SECTORS AND OTHERS...

Railways (Rolling Stock, Points & Signalling, Infrastructure and Electrical installations), Structural Building Steelwork, Safety Critical Machinery, Shipbuilding, Automotive, Mining and Quarrying machinery, Earthmoving Machinery and many others...

The Hardlock series of anti-loosening lock nuts have achieved a reputation of complete customer satisfaction in Japan, the United Kingdom, Europe and all over the world.

The design is based on the 'wedge-effect' principle.

Each Hardlock Nut passes the American vibration and impact test to the NAS 3350 & NAS 3354 (National Aerospace Standard) by a huge margin.

This testing certifies that each Hardlock Nut provides a remarkable locking force, being able to resist any impact and remain in a stable locked condition.

The range of applications which benefit from using Hardlock Nuts is almost limitless.

Within the Railway Industry applications include Track, Points, Rolling Stock and Infrastructure.

Other industry sectors include, Highways, Bridges, Skyscraper buildings, Steel towers, Wind Power Farms.

In fact Hardlock Nuts should be considered for any application where resistance to loosening by shock or vibration is an engineering concern.

The high anti-loosening effect achieved by all Hardlock Nuts will satisfy all user needs, including easy installation, re-useability (several dozen times), and reduced lifetime costs because of less maintenance and inspection.

HARDLOCK – ITS STRENGTHS: IT DOES NOT HAVE TO BE SEATED IT IS RE-USABLE WITHOUT LOSS OF PERFORMANCE ONLY SIMPLE TOOLS ARE REQUIRED FOR INSTALLATION

HOW CAN IT DO THIS?

The Concave Upper Nut is threaded down the screw until the concentric conical recess comes into contact with the eccentric conical protrusion of the Convex Lower Nut.

The Convex Lower Nut is held stationary, either by being seated, or by being held stationary with a spanner, if seating is not required.

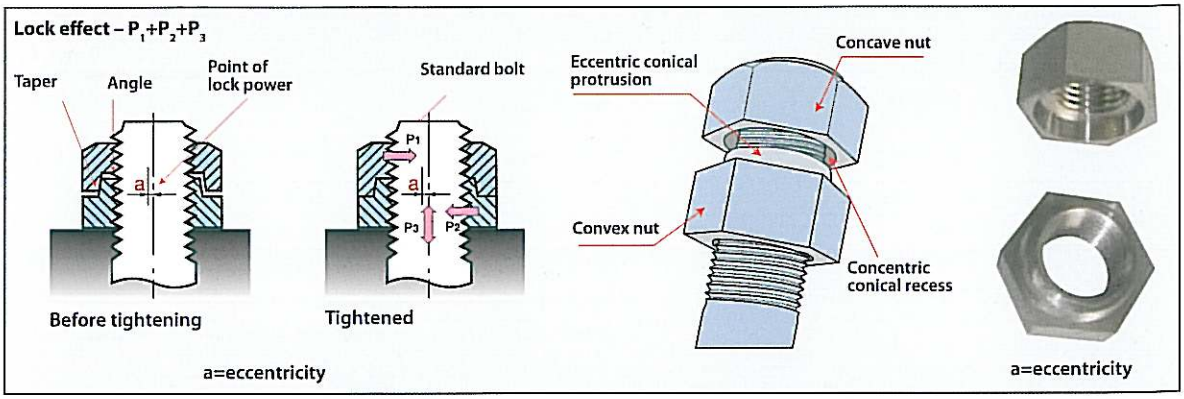
When the Concave Upper Nut is tightened to the recommended tightening torque, locking forces between the Upper and Lower Nuts are induced.

A vertical force - P3 (up and down the thread) is created, and two opposing horizontal forces - P1 & P2 are induced at the same time.

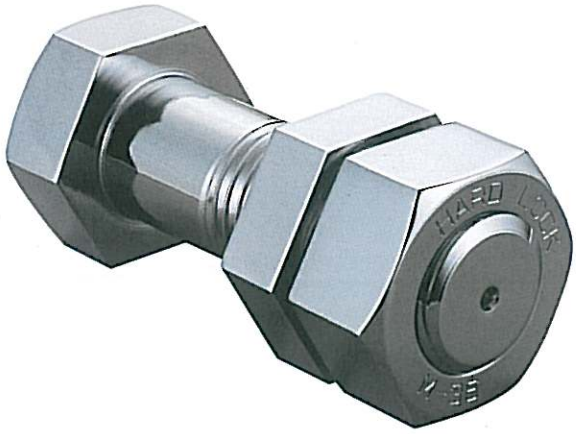
The Concave Upper Nut is pulled into the screw threads in one direction, while the Convex Lower Nut is pulled into the screw threads in the opposite direction.

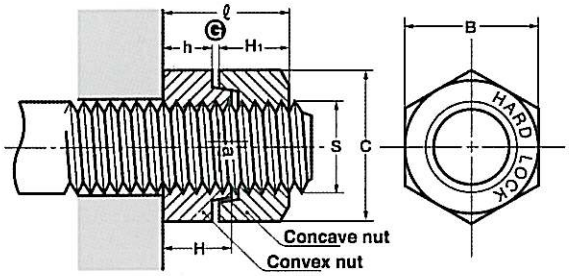
Hardlock is therefore held secure by the combination of three different locking forces.

Repeated usage does not reduce the locking ability of Hardlock Nuts. Neither will there be undue wear on either of the nuts, or on the thread of the bolt as a result of frequent removals and subsequent re-installations.



HARDLOCK NUTS (HL):
STANDARD SIZE LIST AND TORQUE TABLE





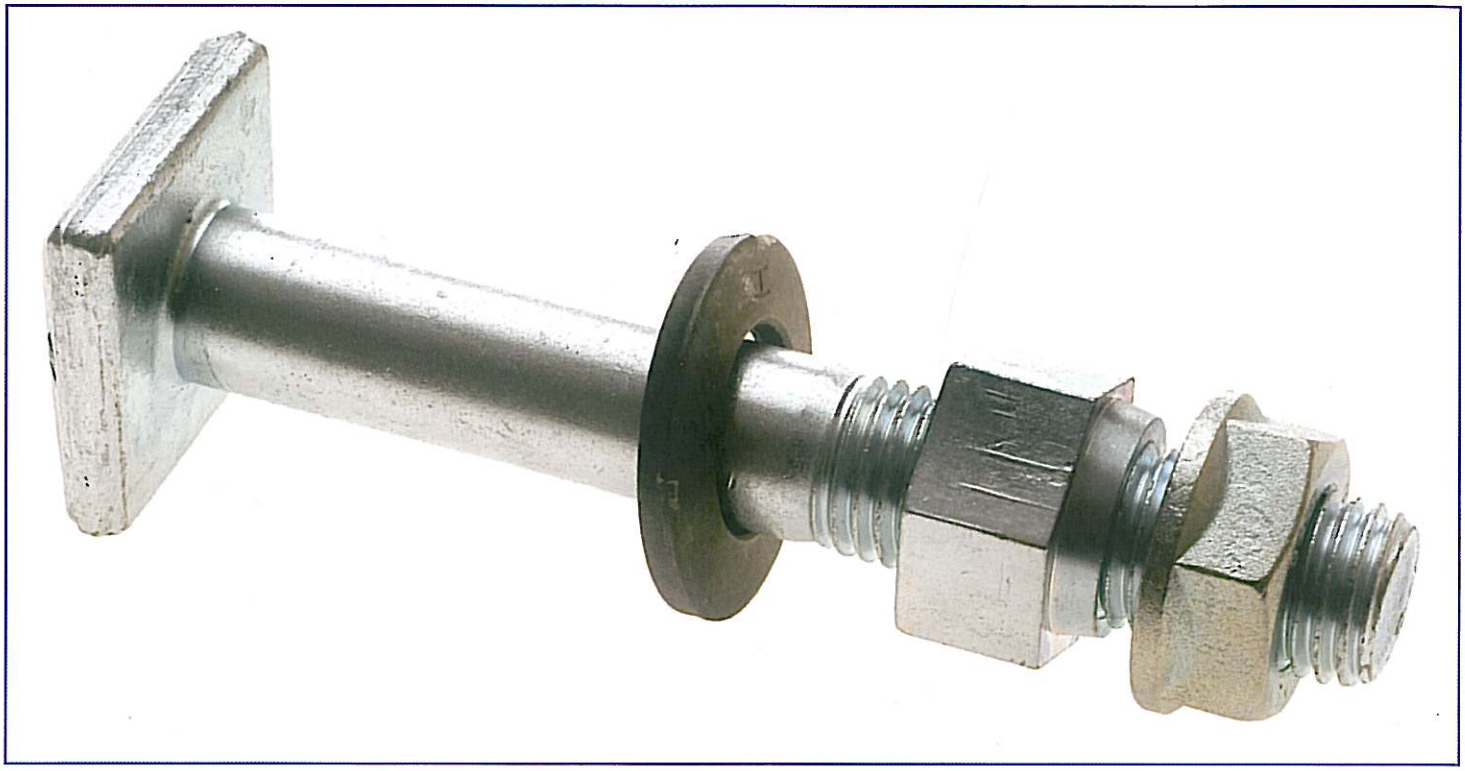
a=eccentricity

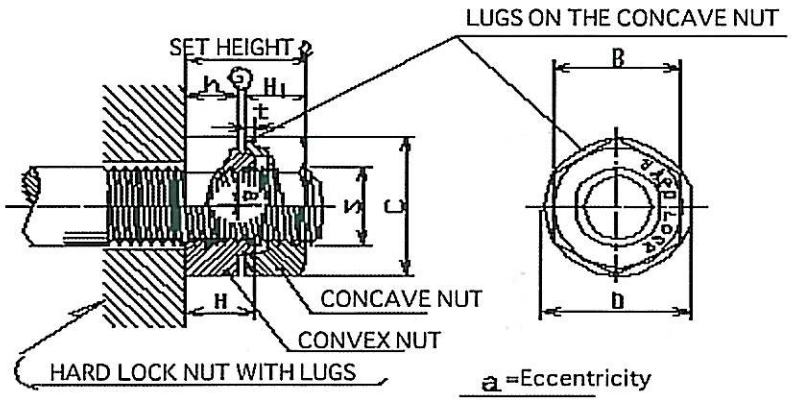
When both convex and concave nuts are tightened correctly, Hardlock Nut's exceptional anti-vibration performance is assured.

After correct installation a gap between the convex and concave nut may be visible. This is acceptable so long as the correct installation procedure has been followed.

SIZE	PITCH	H CONVEX NUT		H1 CONCAVE NUT		B WIDTH		C	L HEIGHT		h	WEIGHT	Convex Nut (fastening nut) Tightening torque figure by material (ref. only)				Concave Nut (lock nut)
dia.	pitch	mm	allowance	mm	allowance	mm	allowance	approx	mm	allowance	approx	gms/set	Class 4	Class 8	Class 10	Class A2	Tightening torque
M6	1.0	5	0 -0.48	5	0 -0.48	10	0 -0.6	11.5	8.3	±0.6	3.3	3.3	2.3-6.0	4.6-12	6.5-17	3.3-9.0	4.0-5.0
M8	1.25	6.5	0 -0.58	6.5	0 -0.58	13	0 -0.7	15	11	±0.8	4.5	8.6	5.6-15	11.2-30	15.8-42	7.9-21	9.0-13
M10	1.5	8	–	8	–	17	–	19.6	13.5	–	5.5	17.6	11-30	22-59	31-84	16-42	18-24
M12	1.75	10	–	10	–	19	0 -0.8	21.9	17	–	7.0	27.3	19-52	39-104	55-146	27-73	27-39
M14	2.0	11	0 -0.7	11	0 -0.7	22	–	25.4	18.5	±1.2	7.5	39	31-82	62-165	87-232	44-116	40-58
M16	2.0	13	–	13	–	24	–	27.7	22.5	–	9.5	52.8	48-129	97-257	136-362	68-181	70-100
M18	2.5	15	–	15	–	27	–	31.2	25.5	–	10.5	80	66-177	133-354	187-498	44-116	100-150
M20	2.5	16	–	16	–	30	–	34.6	27.5	–	11.5	105	94-251	188-502	265-706	62-165	120-200
M22	2.5	18	–	18	–	32	0 -1.0	37	31.5	–	13.5	130	128-341	256-683	360-960	84-224	150-250
M24	3.0	19	0 -0.84	19	0 -0.84	36	–	41.6	33	±1.8	14	180	163-434	325-868	458-1220	107-285	160-300
M27	3.0	22	–	22	–	41	–	47.3	38	–	16	246	238-635	458-1269	669-1785	156-416	250-390
M30	3.5	24	–	24	–	46	–	53.1	42	–	18	375	323-862	646-1723	909-2424	212-566	270-440
M33	3.5	26	–	26	–	50	–	57.7	46	–	20	480	440-1173	879-2345	1237-3298	289-770	290-440
M36	4.0	29	–	29	–	55	0 -1.2	63.5	50	–	21	630	565-1506	1129-3012	1588-4235	371-988	340-590
M39	4.0	31	0 -1.0	31	0 -1.0	60	–	69.3	54	±2.2	23	935	731-1949	1462-3898	2056-5481	480-1279	390- 640

HARDLOCK NUTS WITH FLANGE (HL-R): SIZE LIST AND TORQUE TABLES





The Upper and Lower Nuts are available in Class 4 and Class 8.

When ordering please specify which material you require.

The following sizes are the standard range. Other sizes and nut heights are available on request.

All parts will be Zinc and Trivalent Passivate (CR3) plated unless specified otherwise.

Hardlock Nuts with Flange provide greater locking security.

The Flange ensures that when tightening the Upper Nut the Lower Nut cannot be tightened in error.

SIZE	PITCH	H CONVEX NUT (LOWER NUT)		H1 CONCAVE NUT (UPPER NUT)		B WIDTH (ACROSS FLATS)		C	L TOTAL HEIGHT	h	t Flange thickness	weight g	Tightening toruqe for lower nut (N.m) ref. only				Suggested torque for upper nut	
													SS400 equiv.		S45C equiv.			
		basic size	allowance	basic size	allowance	basic size	allowance	approx	approx	approx	approx	approx	Class4		Class8		common (N.m)	
													min.	max.	min.	max.	min.	max.
M6	1.0	5	0 -0.48	5	0 -0.48	10	0 -0.6	11.5	8.3	3.3	0.6	4	2.3	6	4.6	12	4	5
M8	1.25	6.5	0 -0.58	6.5	0 -0.58	13	0 -0.7	15	11	4.5	1.0	8.9	5.6	15	11.2	30	9	13
M10	1.5	8	0 -0.58	8	0 -0.58	17	0 -0.7	19.6	13.5	5.5	1.0	18	11	30	22	59	18	24
M12	1.75	10	0 -0.58	10	0 -0.58	19	0 -0.8	21.9	17	7	1.5	28	19	52	39	104	27	39
M16	2.0	13	0 -0.7	11	0 -0.7	24	0 -0.8	27.7	20.5	9.5	2.0	46	48	129	97	257	70	100
M20	2.5	16	0 -0.7	14	0 -0.7	30	0 -0.8	34.6	25.5	11.5	2.5	93	94	251	188	502	120	200

BULGARIA

Гайки от вид HARDLOCK – проверено решение на проблема с вибрациите

Гайки от вид HARDLOCK са използвани от производителите във всички тези Промишлени Сектори и други...

Железопътници – Железопътен парк, Железничарски стрелки и сигнализации, Инфраструктура и електрически съединения, Стоманени конструкции за строителството, Машини и съоръжения, които имат непосредствено влияние върху безопасността, Корабостроителство, Автомобилна промишленост, Минни и копачни машини, Машини за земни работи, Вятърни турбини и кули, Конструкции на стълбове и мачти за високо напрежение и много други...

Серията устойчиви на разхлабване законтрящи гайки Hardlock са спечелили признание в Япония, Великобритания, Европа и в целия свят, като напълно удовлетворяващи клиента. Конструкцията е създадена въз основа на механизъм за заклинване.

Всяка гайка Hardlock Nut със значителен запас изпълнява изискванията на американският тест за устойчивост на вибрации и удари според норма NAS 3350 & NAS 3354 (National Aerospace Standard – Норма на Агенцията за Аеронавтика). Изпитвана според норма DIN 65151 гайка от вид Hardlock постига по-добри резултати от всички други видове законтрящи гайки.

Областта на приложение, в която използването на гайки от вид Hardlock принася ползи е почти неограничена.

Гайките Hardlock трябва да се вземат под внимание за приложение навсякъде, където устойчивостта на разхлабване в резултат на удари и вибрации е съществен инженерен проблем. Високата устойчивост на разхлабване, постигана от всички гайки Hardlock ще изпълни всички очаквания на потребителите, такива като лесен монтаж, възможност за многократна употреба (десетки пъти), а също така ниски разходи за поддръжка поради по-рядката необходимост от консервация и контрол.

Гайките HARDLOCK – това е сила • Не трябва да се вграждат
Може да се използват много пъти без да загубят своите способности
За техният монтаж се използват прости инструменти

Как е възможно това?

Горната вдлъбната гайка се завинтва на болта докато концентричната конусна вдлъбнатина допре до ексцентричната конусовидната издатина на долната гайка.

Изпъкналата долна гайка е прикрепена на място или чрез вграждане или ако вграждането не е изисквано, с помощта на ключ.

Когато изпъкналата горна гайка е затегната до постигането на съответният въртящ момент на затягане, са предизвиквани блокиращи сили между горната и долната гайка.

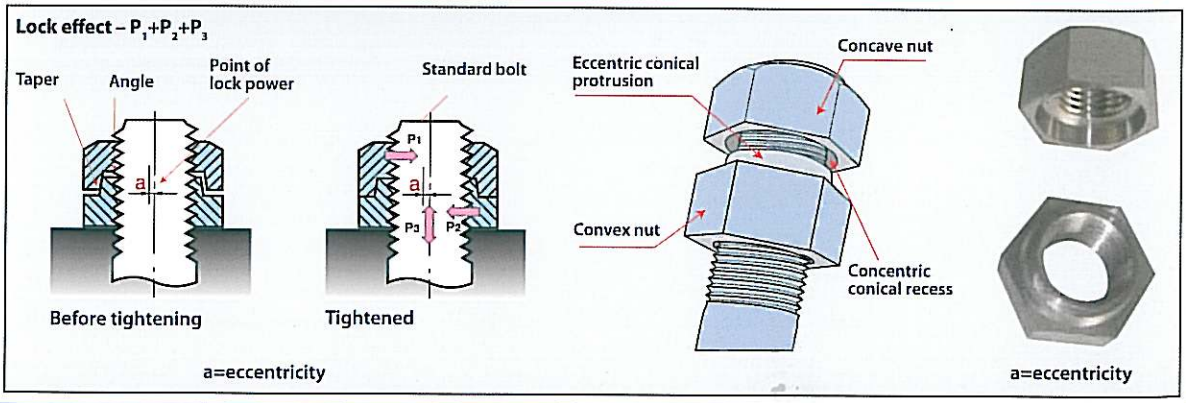
Създадена е вертикална сила – P3 (нагоре и надолу в болта), а в същото време са постигнати две противопосочни хоризонтални сили (P1 и P2).

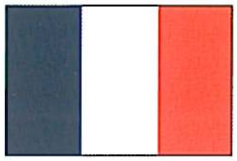
Вдлъбнатата горна гайка е завинтвана на резбата на болта в една посока, докато изпъкналата долна гайка е завинтвана на резбата на болта в противоположна посока.

По този начин гайката Hardlock е монтирана безопасно, благодарение на три различни блокиращи сили.

Многократната употреба не намалява законтрящите способности на гайките Hardlok. Няма също прекалено изтриване на гайките или резбата в резултат на честото им демонтиране и монтиране.

Моля свържете се със Staytite Ltd за да получите повече информации, технически данни и проби за изпитване. Ще Ви насочим към най-близкият търговски представител в страната.





FRANCE

CONTRE-ÉCROUS HARDLOCK – UNE SOLUTION ÉPROUVÉE POUR LES PROBLÈMES DE LA VIBRATION

LES CONTRE-ÉCROUS HARDLOCK SONT MENTIONNÉS PAR LES FABRIQUANTS DE TOUS CES SECTEURS INDUSTRIELS ET AUTRES...

Chemins de fer – Matériel roulant Aiguilles et signalisation Infrastructure et raccord de connexion Construction en fer pour le bâtiment Machines et appareils ayant une influence direct sur la sécurité Construction navale Industrie automobile Machines minières et d'abattage Machines pour les travaux de terrassement Turbines éoliennes et tours Structures des pylônes haute tension et des mâts et beaucoup d'autres...

Les séries des contre-écrous Hardlock anti-desserrement sont réputées au Japon, en Grande Bretagne, en Europe et dans le monde entier comme tout à fait satisfaisants le client. Le projet base sur le principe d'effet de coin.

Chaque contre-écrou Hardlock satisfait largement aux exigences de l'essai américain sous l'angle de la résistance aux vibrations et aux chocs selon la norme NAS 3350 & NAS 3354 (National Aerospace Standard – une norme aérospatiale nationale). Testé selon la norme DIN 65151, le contre-écrou Hardlock atteint meilleurs résultats que tous les autres types de contre-écrous.

Leur champ d'application est presque illimité.

L'application des contre-écrous Hardlock doit être prise en considération dans toutes les situations où la résistance au desserrage résultant des chocs et des vibrations constitue un problème important pour les ingénieurs. Une haute résistance au desserrage atteinte par tous les contre-écrous Hardlock satisfera à toutes les attentes des utilisateurs, cela veut dire une simple installation, la possibilité de réutilisation (dizaines de fois) ainsi que le coût de durée de vie réduit à cause des entretiens et des contrôles moins fréquents.

CONTRE-ÉCROUS HARDLOCK – C'EST DE LA FORCE • ILS NE DOIVENT PAS ÊTRE CALÉS IL EST POSSIBLE DE LES RÉUTILISER PLUSIEURS FOIS SANS PERDRE LEURS PROPRIÉTÉS POUR LEUR INSTALLATION, ON N'A BESOIN QUE DE SIMPLES OUTILS.

COMMENT C'EST POSSIBLE?

L'écrou concave est enfilé vers le bas d'une vis jusqu'à ce que la concavité conique concentrique entre en contact avec une saillie conique excentrique de l'écrou concave inférieur.

L'écrou concave inférieur est maintenu immobile, soit en étant calé, soit en étant maintenu immobile avec une clé si le calage n'est pas exigé.

Lorsque l'écrou est serré pour obtenir le couple de serrage approprié, les forces de blocage sont crées entre l'écrou supérieur et celui inférieur.

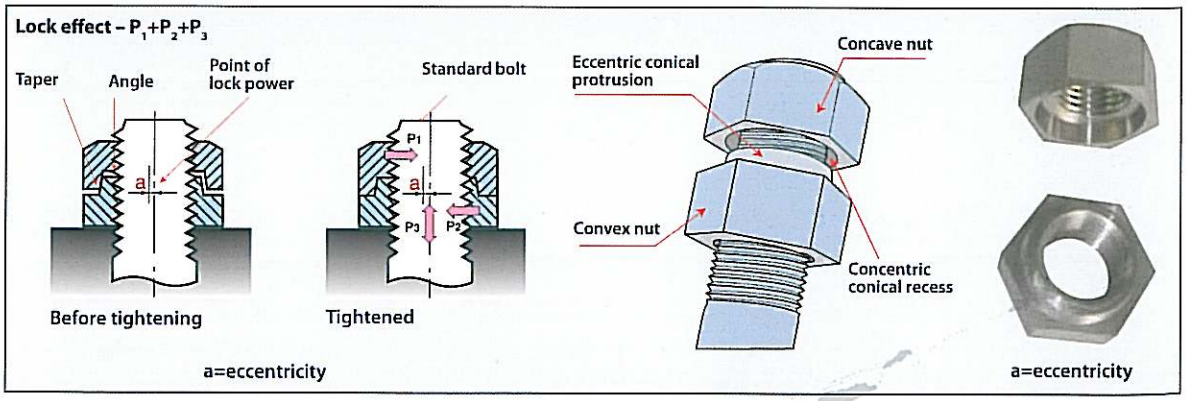
Une force verticale est crée – P3 (vers le bas et vers le haut du filetage), et en même temps, on obtient deux forces horizontales antagonistes (P1 et P2).

L'écrou concave supérieur est tiré dans les filetages de la vis dans une direction alors que l'écrou concave inférieur est tiré dans les filetages de la vis dans la direction opposée.

Le contre-écrou Hardlock est donc bien fixé grâce à l'action simultanée des trois forces de blocage différentes.

Une utilisation fréquente ne diminue pas les propriétés de blocage des contre-écrous Hardlok. Elle n'entraîne pas non plus une usure exagérée des écrous ni des filetages de la vis suite aux enlèvements et réinstallations fréquents.

Veuilliez contacter Staytite Ltd pour obtenir plus d'information ainsi que les données techniques et des échantillons pour les tester. Nous vous mettrons en contact avec l'agent national le plus proche.



Die Hardlock Sicherungsmuttern – die geprüfte Lösung für Schwingungsprobleme

Germany

Die Hardlock Sicherungsmuttern sind von Herstellern in diesen und viel anderen Industriebrangen bevorzugt...

Bahn und Bahnfahrzeuge, Weichen und Signalanlagen, Infrastruktur und Elektroverbindungen, Stahlbaukonstruktionen, Sicherheitsmaschinen und –anlagen, Schiffbau, Autoindustrie, Bergbaumaschinen, Windturbinen und Türme, Hochspannungsmasten und viel, viel mehr...

Die Serien der lockerungsfesten Hardlock Sicherungsmuttern haben sich einen guten Ruf für vollständige Kundenzufriedenheit erworben, nicht nur in Japan, sondern in der ganzen Welt. Das Konzept basiert auf dem Keileffektprinzip.

Jede Hardlock Nut Mutter entspricht den amerikanischen Schwingungs- und Stoßtests NAS3350 & 3354 (National Aerospace Standard - Nationale Luft- und Raumfahrtnorm) spielend leicht. Die Testergebnisse einer nach der DIN 65151 getesteten Hardlock Mutter waren besser als die Ergebnisse anderer Sicherungsmutterntyps.

Der Anwendungsbereich, in dem die Hardlock Muttern ein Vorteil sind, ist fast unbegrenzt.

Wo Schwingungs- und Stoßfestigkeit zu einem Ingenieurproblem werden, sollen die Hardlock Sicherungsmuttern berücksichtigt werden. Die Sicherheit und die besonders hohe Lockerungsfestigkeit aller Hardlock Mutterntype werden alle Kundenanforderungen – einfache und schnelle Montage, Wiederverwendungsmöglichkeit (mehrere Dutzend Mal), kleine Instandhaltungskosten wegen seltener Wartung und Kontrolle, gerecht.

Die Hardlock Mutter – einfach Kraft.
Braucht nicht eingepasst zu werden.
Kann ohne Funktionsverlust wiederverwendet werden.
Für die Installation ist nur ein Schraubenschlüssel forderlich

Wie ist das möglich?

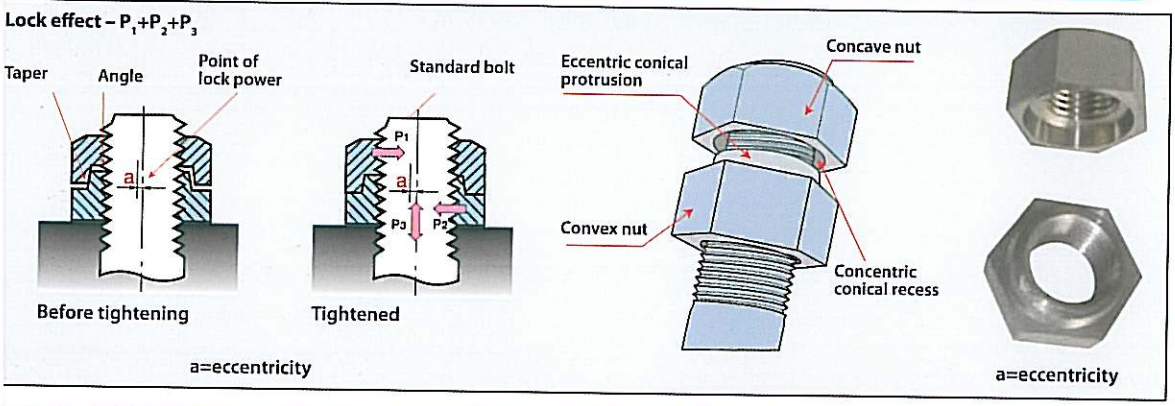
Die konkave Mutter wird auf die Schraube gedreht, bis die konzentrische konische Vertiefung über dem exzentrischen konischen Vorsprung der konvexen Mutter liegt. Die konvexe Mutter wird stationär festgehalten, entweder indem sie eingepasst oder indem sie mit einem Schraubenschlüssel festgehalten wird, falls sie nicht eingepasst ist. Ein Anzugsmoment zwischen den beiden Muttern wird induziert.

Dabei handelt es sich nicht nur um ein senkrechtes Installationsmoment – P3 (entlang des Gewindes), sondern gleichzeitig wird auch eine waagerechte Kraft (P1 und P2) durch den exzentrischen konischen Vorsprung der konvexen Mutter induziert. Die konkave Mutter wird in einer Richtung auf das Schraubengewinde gezogen, während die konvexe Mutter in die entgegengesetzte Richtung gezogen wird.

Die Sperrsicherung der Hardlock Mutter wird somit durch drei Sperrkräfte gesichert.

Die wiederholte Verwendung reduziert die Sperrfähigkeit der Hardlock Sicherungsmuttern nicht, und es gibt auch keinen ungewöhnlichen Verschleiß der Muttern oder des Schraubengewindes infolge der wiederholten Abnahme der Muttern und der anschließenden Wiederverwendung.

Bei Rückfragen wenden Sie sich bitte an Staytite Ltd, wo Sie weitere Informationen, technische Daten, Warenproben für weitere Tests beauftragen und Kontakt mit Ihrem Landeshandelsvertreter aufnehmen können.



HUNGARY

HARDLOCK TÍPUSÚ ANYACSAVAROK –MEGBÍZHATÓ MEGOLDÁS A VIBRÁCIÓ PROBLÉMÁJÁRA

A HARDLOCK TÍPUSÚ ANYACSAVAROKAT MINDEN ALÁBBI IPARI ÉS MÁS SZEKTOR GYÁRTÓJA ISMERI...

Vasút - Géppark, Váltó- és jelz berendezések, Infrastruktúra és elektromos csatlakoztatások, Építészeti acélszerkezetek, Biztonságot közvetlenül befolyásoló berendezések és gépek, Hajóépítés, Autógyártás, Bányászati és kitermel gépek, Gépek földmunka végzéséhez, Szélturbinák és tornyok, Távvezeték-oszlopok és -póznák, és sok más...

A lazulásnak ellenálló kontrázó Hardlock anyacsavarok sorozata elnyerte Japánban, Nagy-Britanniában Európa szerte és az egész világon elismerést nyert. A projekt az ékelődés mechanizmusának szabályára épül.

Mindegyik Hardlock Nut anyacsavar nagy ráhagyással eleget tesz a vibráció- és ütésállóságot vizsgáló amerikai teszteknek a NAS 3350 és NAS 3354 (National Aerospace Standard – Aeronautikai Ügynökség Szabványa). A DIN 65151 szabvány szerint tesztelt Hardlock típusú anyacsavar jobb eredményeket ér el, mint az összes többi típusú kontrázó anyacsavar.

Azon felhasználási területek száma, melyeken a Hardlock kontrázó anyacsavarok alkalmazásából előny származik, majdnem korlátlan.

A Hardlock anyacsavarok figyelembevétele minden olyan helyen igencsak javasolt, ahol a rázkódás ill. vibráció miatti lazulásnak való ellenállás lényeges mérnöki problémát jelent. Az összes Hardlock típusú anyacsavar lazulásnak való magas szintű ellenállása a felhasználók elvárásainak eleget tesz minden téren, mint pl.: egyszerű összeszerelés, többször használhatóság (többtíz alkalommal) vagy a ritkább ellenőrzésekből adódó alacsonyabb fenntartási költség.

A HARDLOCK ANYACSAVAROK – MAGA AZ ERŐ
NEM KELL BEÁGYAZNI AZOKAT
TÖBBSZÖR FELHASZNÁLHATÓ AZOK JELLEMZŐINEK CSÖKKENÉSE NÉLKÜL
AZ ÖSSZESZERELÉSHEZ CSUPÁN EGYSZERŰ SZERSZÁMOKRA VAN SZÜKSÉG

HOGYAN LEHETSÉGES EZ?

A csavarra a homorú felső anyacsavar addig van csavarva, hogy a koncentrikus kúpalakú bemélyedés összeérjen az alsó anyacsavar excentrikus kúpalakú kidudorodásával.

Az alsó domború anyacsavart beágyazás, vagy – ha ez nem megkövetelt – kulcs tartja helyben.

Amikor a domború felső anyacsavart a megfelelő szorítási forgatónyomaték eléréséig húzzuk, a felső és alsó anyacsavarok között blokkoló erők lépnek fel.

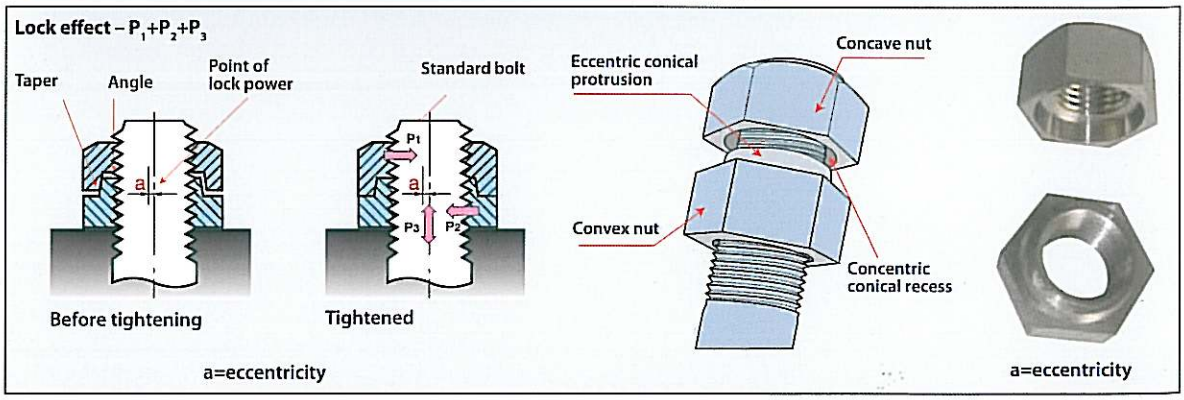
A meneten fölfelé és lefelé P3 függőleges erő lép fel, egyúttal két, egymással ellentétes P1 és P2 vízszintes erő jön létre.

A homorú felső anyacsavar egyik irányba való csavarmenetre szorításával egyidejűleg az alsó domború anyacsavar másik irányba szorul a csavar menetére.

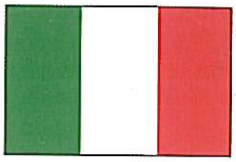
A Hardlock anyacsavar ily módon három blokkoló erőnek köszönhetően biztonságosan rögzül.

A többszöri használat nem csökkenti a Hardlock anyacsavarok blokkolási jellemzőit. Gyakori eltávolításkor és újbóli összeszereléskor nem lép fel se az anyacsavar, se a csavarmenet túlzott elhasználódása sem.

További információkért, műszaki adatokért és teszteléshez próbamintákért kérjük, vegye fel a kapcsolatot a Staytite Ltd-vel. Megadjuk Önöknek az országban lévő legközelebbi kereskedelmi képviselőhöz a kapcsolatot.



I DADI TIPO HARDLOCK – UNA SOLUZIONE GARANTITA DEL PROBLEMA DELLE VIBRAZIONI



ITALY

I DADI TIPO HARDLOCK SONO INDICATI DAI PRODUTTORI IN TUTTI QUESTI SETTORI INDUSTRIALI ED ALTRI...

Ferrovie – Rotabile, Scambi e segnalazioni, Infrastruttura e raccordi elettrici, Costruzioni d'acciaio per edilizia, Macchinari ed attrezzature aventi influenza diretta sulla sicurezza, Costruzioni navali, Industria automobilistica, Macchinari per miniera ed estrattivi, Macchinari per lavori di sterro, Turbine eoliche e torri, Costruzioni dei tralicci per alta tensione e pennoni, e tanti altri...

La serie di dadi a contro-azione Hardlock resistenti all'allentamento è stata riconosciuta in Giappone, Gran Bretagna, Europa ed in tutto il mondo come articolo che soddisfa completamente il cliente. Il progetto è basato sulla regola del meccanismo ad incuneamento.

Ogni dado Hardlock con spazio sufficiente adempie ai requisiti del test americano di resistenza alle vibrazioni e colpi secondo la norma NAS 3350 & NAS 3354 (National Aerospace Standard –Norma dell'Agenzia Aeronautica). Testata secondo la norma DIN 65151 dado tipo Hardlock ottiene risultati migliori rispetto agli altri tipi di dadi a contro-azione.

La portata di applicazione, nella quale l'uso dei dadi tipo Hardlock potrebbe apportare vantaggio è praticamente illimitata.

I dadi Hardlock bisogna prendere in considerazione in tutte quelle applicazioni nelle quali la resistenza all'allentamento come risultato dei sobbalzi e delle vibrazioni diventa il principale problema ingegneristico. L'alta resistenza all'allentamento ottenuta da tutti i dadi tipo Hardlock soddisfa completamente le richieste degli utenti come il semplice montaggio, la possibilità di uso molteplice (decine di volte), ed inoltre i bassi costi della manutenzione per il minor bisogno di conservazione e controllo.

I DADI HARDLOCK –SONO LA POTENZA • NON DEVONO ESSERE FISSATI POSSONO ESSERE USATI IN MODO MOLTEPLICE SENZA PERDITA DELLE PROPRIETÀ PER IL MONTAGGIO È RICHIESTA LA PIÙ SEMPLICE ATTREZZATURA

COME È POSSIBILE?

Il dado convesso superiore è avvitato sulla vite fino al momento in cui la cavità concentrica conica si incontri con la eccentrica e conica sporgenza del dado concavo inferiore.

Il dado concavo inferiore è fissato nel posto o tramite inserimento ovvero se questo non è necessario con l'aiuto della chiave.

Quando il dado convesso superiore viene fissato fino all'opportuno punto di bloccaggio, vengono create le forze di blocco tra dado superiore ed inferiore.

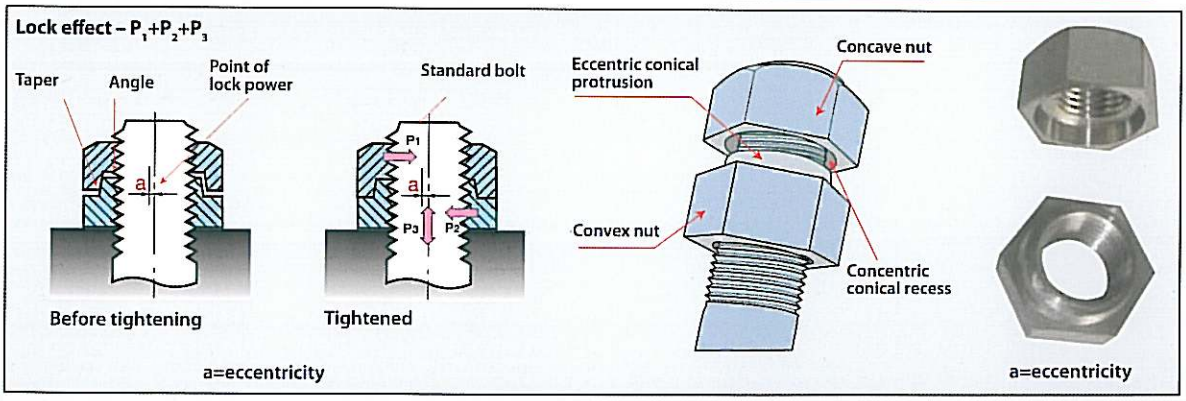
Si forma la forza verticale – P3 (in basso ed in alto del filetto), e nello stesso momento vengono create due opposte forze orizzontali (P1 e P2).

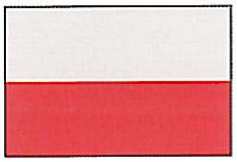
Il dado convesso superiore viene messo sul filetto della vite in una direzione mentre il dado concavo inferiore viene messo sul filetto della vite nella direzione opposta.

Il dado Hardlock in questo modo viene fissato in modo sicuro grazie all'unione delle tre forze bloccanti.

L'uso molteplice non diminuisce le proprietà bloccanti dei dadi Hardlock. Non si verifica neanche l'eccessivo uso dei dadi né del filetto della vite in conseguenza dell'uso costante e di altre successive installazioni.

Chiediamo di contattare Staytite Ltd allo scopo di ottenere altre informazioni, dati tecnici e campioni da testare. Vi indirizzero al più vicino rappresentante nazionale.





POLAND

NAKRĘTKI TYPU HARDLOCK – SPRAWDZONE ROZWIĄZANIE PROBLEMU WIBRACJI

NAKRĘTKI TYPU HARDLOCK WYMIENIANE SĄ PRZEZ PRODUCENTÓW WE WSZYSTKICH TYCH SEKTORACH PRZEMYSŁOWYCH ORAZ INNYCH...

Koleje – Tabor Zwrotnice i sygnalizacje, Infrastruktura i złącza elektryczne, Konstrukcje stalowe dla budownictwa, Maszyny i urządzenia mające bezpośredni wpływ na bezpieczeństwo, Budownictwo okrętowe, Przemysł samochodowy, Maszyny górnicze i wydobywcze, Maszyny do prac ziemnych, Turbiny wiatrowe i wieże, Konstrukcje słupów wysokiego napięcia i masztów i wiele innych...

Serie odpornych na luzowanie nakrętek kontrujących Hardlock zdobyły uznanie w Japonii, Wielkiej Brytanii, Europie i na całym świecie jako całkowicie satysfakcjonujące klienta. Projekt oparty jest na zasadzie mechanizmu klinowania.

Każda nakrętka Hardlock ze znacznym zapasem spełnia wymogi amerykańskiego testu odporności na wibracje i uderzenia według normy NAS 3350 & NAS 3354 (National Aerospace Standard – Norma Agencji Aeronautyki). Testowana według normy DIN 65151 nakrętka typu Hardlock osiąga wyniki lepsze niż wszystkie inne typy nakrętek kontrujących.

Zakres zastosowań, w których użycie nakrętek typu Hardlock przynosi korzyść, jest prawie nieograniczony.

Nakrętki Hardlock powinno się brać pod uwagę do wszelkich zastosowań, w których odporność na luzowanie w wyniku wstrząsów i wibracji jest istotnym problemem inżynieryjnym. Wysoka odporność na luzowanie osiągana przez wszystkie nakrętki typu Hardlock spełni wszelkie oczekiwania użytkowników, takie jak prosty montaż, możliwość wielokrotnego użycia (dziesiątki razy), a także niskie koszty utrzymania z powodu rzadszej konserwacji i kontroli.

NAKRĘTKI HARDLOCK – TO SIŁA • NIE MUSZĄ BYĆ OSADZANE MOGĄ BYĆ UŻYWANE WIELOKROTNIE BEZ UTRATY WŁAŚCIWOŚCI DO MONTAŻU UŻYWANE SĄ JEDYNIE PROSTE NARZĘDZIA

JAK TO MOŻLIWE?

Wklęsła nakrętka górna jest nakręcana na śrubę do momentu, kiedy koncentryczne stożkowate

zagłębienie zetknie się z mimośrodowym stożkowatym występem wypukłej nakrętki dolnej.

Wypukła nakrętka dolna jest utrzymywana w miejscu albo przez osadzenie, albo, jeżeli osadzanie nie jest wymagane, przy pomocy klucza.

Kiedy wypukła nakrętka górna zostaje dokręcona do uzyskania właściwego momentu obrotowego zacisku, wywoływane są siły blokujące pomiędzy nakrętką górną a dolną.

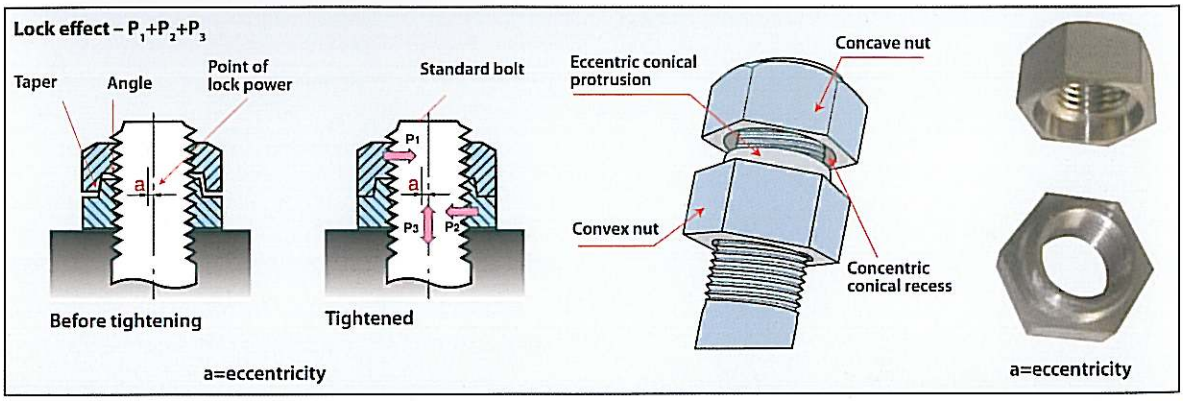
Zostaje wytworzona siła pionowa – P3 (w dół i w górę gwintu), a w tym samym czasie zostają uzyskane dwie przeciwstawne siły poziome (P1 I P2).

Wklęsła nakrętka górna jest naciągana na gwint śruby w jednym kierunku, podczas gdy wypukła nakrętka dolna jest naciągana na gwint śruby w przeciwnym kierunku.

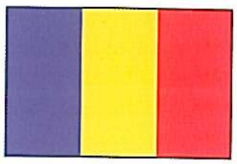
Nakrętka Hardlock jest więc bezpiecznie umocowana dzięki połączeniu trzech różnych sił blokujących.

Wielokrotne użycie nie zmniejsza właściwości blokujących nakrętek Hardlok. Nie występuje też nadmierne zużycie nakrętek ani gwintu śruby w wyniku częstego usuwania i kolejnych ponownych instalacji.

Prosimy o kontakt ze Staytite Ltd w celu uzyskania dalszych informacji, danych technicznych i próbek do testowania. Skierujemy Państwa do najbliższego krajowego przedstawiciela handlowego.



Piuliţele de tip Hardlock – o soluţie optimă în cazul vibraţiilor



ROMANIA

Piuliţele de tip Hardlock sunt destinate de producători pentru folosirea în ramurile industriale mai jos menţionate cât şi în multe altele...

C i ferate, Material rulant, Macaze i semnaliz ri, Infrastructur i racorduri electrice, Structuri din o el pentru construc ii, Ma ini i utilaje care influen eaz nemijlocit securitatea Construc ii navale, Industria auto - moto, Ma ini miniere i pentru industria extractiv, Ma ini pentru lucr rile de p mânt, Turbine de vânt i turnuri, Stâlpi de înalt tensiune i catarge i multe altele...

Seriile de contrapiuliţe Hardlock rezistente la desfacere au fost apreciate ca pe deplin satisfăcătoare de clienţii din Japonia, Marea Britanie, Europa şi din lumea întreagă. Proiectul se bazează pe principiul mecanismului de fixare prin împănare.

Fiecare piuliţă Hardlock îndeplineşte integral cerinţele impuse de testul american de rezistenţă la vibraţii şi lovituri conform normei NAS 3350 & NAS 3354 (National Aerospace Standard – Norma Agenţiei de Aeronautică). Piuliţa de tip Hardlock testată conform normei DIN 65151 înregistrează rezultate mult mai bune decât toate celelalte tipuri de contrapiuliţe.

Domeniile de folosire în care piuliţele de tip Hardlock se dovedesc a fi foarte eficace sunt aproape nelimitate.

Utilizarea piuliţelor Hardlock trebuie prevăzută peste tot unde rezistenţa la desfacere ca urmare a şocurilor şi vibraţiilor constituie o problemă inginerească importantă. Rezistenţa ridicată la slăbire a tuturor piuliţelor de tip Hardlock satisface cele mai exigente aşteptări ale utilizatorilor privind montajul uşor, posibilitatea de folosire repetată (de zeci de ori), precum şi cheltuielile de întreţinere care scad ca urmare a nevoilor reduse de lucrări de conservare şi control.

Piuliţele Hardlock – constituie forţe
Nu este necesară încastrarea lor
Folosirea lor poate fi repetată de multe ori
fără diminuarea proprietăţilor
Pentru montaj se folosesc unelte simple

Cum este posibil?

Piuliţa superioară concavă se înşurubează pe şurub până când adâncitura conică concentrică se întâlneşte cu proeminenţa excentrică conică a piuliţei inferioare convexe.

Piuliţa inferioară convexă este fixată ori prin încastrare ori, când încastrarea nu este necesară, cu ajutorul unei chei.

Când piuliţa superioară convexă se strânge până se obţine momentul de rotaţie corespunzător la prindere, intervin forţele de blocare între piuliţa superioară şi cea inferioară.

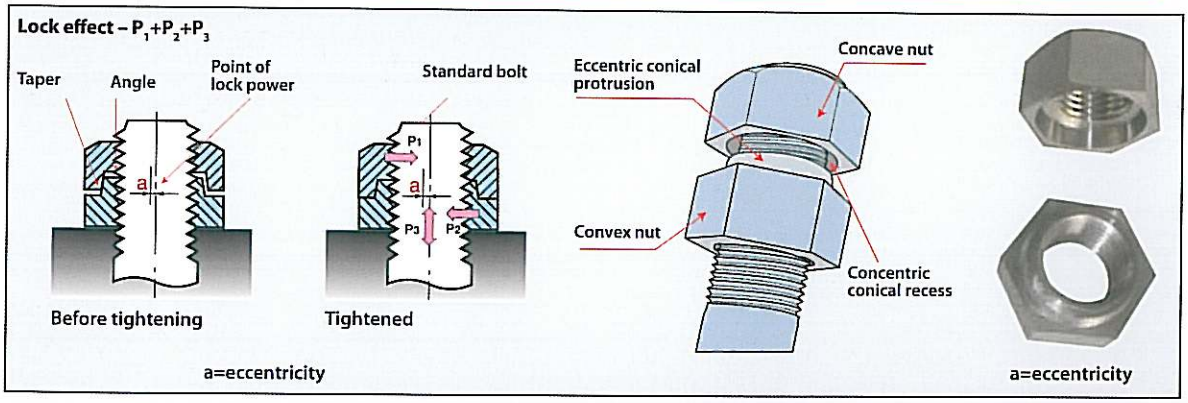
Se exercită o forţă verticală – P3 (în josul şi în susul filetului) şi în acelaşi timp se obţin două forţe orizontale opuse (P1 şi P2).

Piuliţa superioară concavă este trasă pe filetul şurubului într-un sens, în timp ce piuliţa inferioară convexă este trasă pe filetul şurubului în sens opus.

După cum se vede, Piuliţa Hardlock este fixată în siguranţă datorită acţiunii concomitente a trei forţe de blocare.

Folosirea repetată nu micşorează proprietăţile de blocare ale piuliţelor Hardlock. Deasemenea nu există fenomenul de consum prematur de piuliţe şi fileţi de şuruburi ca urmare a eliminării acestora şi instalarea unor elemente noi.

Pentru obţinerea de informaţii suplimentare, date tehnice şi mostre pentru teste, luaţi contact cu Staytite Ltd. Vă accesăm la cel mai apropiat reprezentant comercial.



SPAIN

TUERCAS DE TIPO HARDLOCK: UNA SOLUCIÓN COMPROBADA PARA EL PROBLEMA DE LA VIBRACIÓNN

LAS TUERCAS DE TIPO HARDLOCK SE MENCIONAN EN LAS OFERTAS DE FABRICANTES DE TODOS LOS SECTORES INDUSTRIALES.

Ferrocarril: material móvil, Agujas y señalizaciones, Infraestructuras y empalmes eléctricos, Construcciones de acero, Equipos y aparatos con influencia directa en la seguridad, Construcción naval, Industria automóvil, Equipos de minas y excavación, Equipos para los trabajos de explanación, Aerogeneradores y postes, Construcción de torres de alta tensión y postes, Otras aplicaciones...

Las series de contratuercas Hardlock resistentes al aflojamiento han recibido la aprobación de clientes totalmente satisfechos en Japón, Gran Bretaña, así como el resto de Europa y otros países de todo el mundo. El concepto de la tuerca se basa en el principio de enchavetamiento.

Cada tuerca Hardlock Nut responde con facilidad a las exigencias de la prueba norteamericana de resistencia a las vibraciones y golpes conforme a la norma NAS 3350 & NAS 3354 (National Aerospace Standard: Norma de la Agencia de Aeronáutica). En las pruebas según la norma DIN 65151, la tuerca de tipo Hardlock alcanza resultados superiores a todos los demás tipos de contratuercas.

El alcance de aplicación exitosa de las tuercas de tipo Hardlock es prácticamente ilimitado.

El uso de las tuercas Hardlock debe considerarse en las aplicaciones en las cuales la resistencia al aflojamiento provocado por golpes y vibraciones constituye un problema de ingeniería. La gran resistencia al aflojamiento que define a todas las tuercas tipo Hardlock satisfará todas las expectativas de los usuarios: montaje fácil, posibilidad de uso múltiple (decenas de veces), bajos costes de mantenimiento (control y conservación menos frecuente).

LA TUERCAS HARDLOCK SON POTENTES
NO HACE FALTA ENCAJARLAS
PUEDEN SER DE USO MÚLTIPLE Y NO PIERDEN SUS CUALIDADES
PARA SU MONTAJE SÓLO SE NECESITAN HERRAMIENTAS SIMPLES

CÓMO ES POSIBLE?

La tuerca cóncava de arriba se atornilla en el tornillo hasta el momento en que la concavidad concéntrica coniforme alcance el resalto excéntrico coniforme de la tuerca de abajo.

La tuerca convexa de abajo se mantiene inmóvil por medio del encaje o, si el encaje no es necesario, por medio de la llave.

Cuando la tuerca cóncava de arriba se atornilla para conseguir el momento de rotación de apretadura, se producen fuerzas de bloqueo entre la tuerca de arriba y la tuerca de abajo.

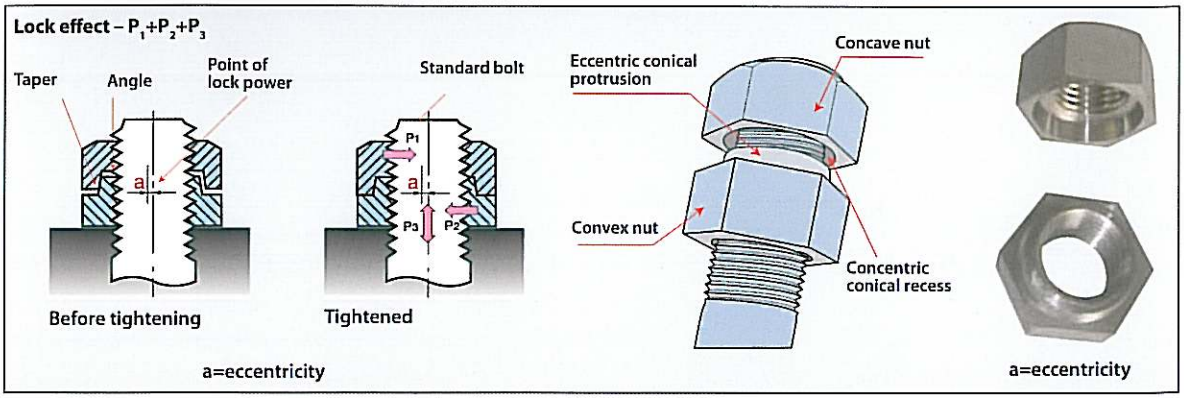
Se produce la fuerza vertical: P3 (hacia abajo y hacia arriba de la rosca) y al mismo tiempo se consiguen otras dos fuerzas contrarias horizontales (P1 I P2).

La tuerca cóncava de arriba se enrosca en el tornillo en una dirección, mientras que la tuerca convexa de abajo se enrosca en el tornillo en la dirección opuesta.

La fijación de la tuerca Hardlock es segura gracias a estas tres fuerzas de bloqueo diferentes.

El uso múltiple de las tuercas Hardlock no disminuye sus cualidades de bloqueo. Ni las tuercas, ni la rosca del tornillo se gastan excesivamente debido a la eliminación y la instalación frecuentes.

Para obtener más información, datos técnicos y muestras de prueba, pónganse en contacto con Staytite Ltd. Les pondremos en contacto con el agente nacional de venta más cercano.



Hardlock Somunlari - Titresime Kanitlanmiş Çözüm

Turkey

Hardlock Somunlari, bütün bu endüstriyel sektörler ve diğerlerinde imalatçilar tarafindan talep edilir...

Demiryolları - Demiryolu Araçları, Demiryolu Makasları ve Sinyalizasyon, Alt yapı ve Elektrik Bağlantıları, Çelik Bina İskeletleri, Güvenliği Önemli Makineler, Gemi Yapımı, Otomotiv, Madencilik Makineleri, Hafriyat Makineleri, Rüzgar Türbinleri ve Kuleleri, Sütun ve Direk Yapıları ve diğer birçok uygulamadaı...

Hardlock anti-gevşeme kilitli somunları, Japonya, Birleşik Krallık, Avrupa ve dünyanın diğer yerlerinde tam müşteri memnuniyetini sağlamayı başardı. Tasarım, "sıkıştırma etkisi " prensibini temel alır.

Herbir Hardlock somunu, Amerikan NAS 3350 & NAS 3354 (Ulusal Uzay Standardı) titresim ve darbe testlerini açık farkla geçmektedir. DIN 65151 testine tabi tutulduğunda, Hardlock tüm diğer kilitli somunlardan daha iyi sonuç almaktadır.

Hardlock'un kullanımından fayda sağlayabilecek uygulamaların sayısı neredeyse limitsizdir.

Hardlock'un , şok ve titresimin gevşemeye neden olabileceği mühendislik uygulamalarında kullanımı düşünülmelidir. Anti-gevşeme etkisi yüksek Hardlock Somunları kolay montaj, yeniden kullanılabilirlik ve düşük bakım, denetleme maliyetleri dahil, tüm kullanıcı ihtiyaçlarını karşılayacaktir.

Hardlock Dayaniklidir
Sonuna kadar sikilmayi gerektirmez
Özelliğini kaybetmeden yeniden kullanilabilir
Montaj için sadece basit aletler kullanmak yeterlidir

Bunu nasil yapabilir?

Üstteki içbükey somun, ortakmerkezli konik girinti, eksantrik konik çıkıntı ile temas edene kadar civataya sıkılır.

Alttaki dişbükey somun, sonuna kadar sıkılmak sureti ile veya sonuna kadar sıkılmanın gerekli olmadığı durumlarda İngiliz anahtarı ile istenilen yere sabitlenir.

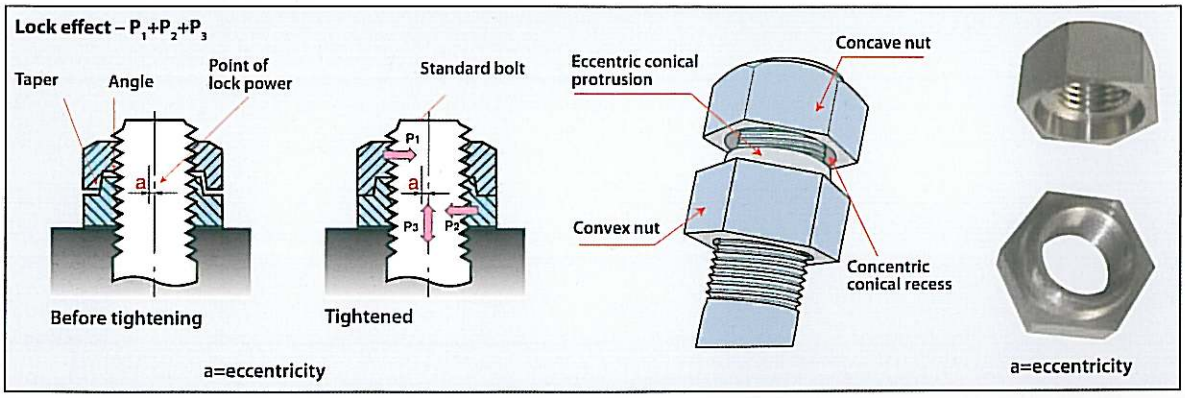
Üstteki içbükey somun, tavsiye edilen sıkıştırma torkuna kadar sıkıştırıldığında üstteki ve alttaki somunlar arasındaki kilitleme kuvvetlerini oluşturur.

Oluşturulan dikey kuvvet – P3(vidada yukarı aşağı) aynı anda iki karşıt yatay kuvvetin oluşumuna– P1 ve P2 sebep olur.

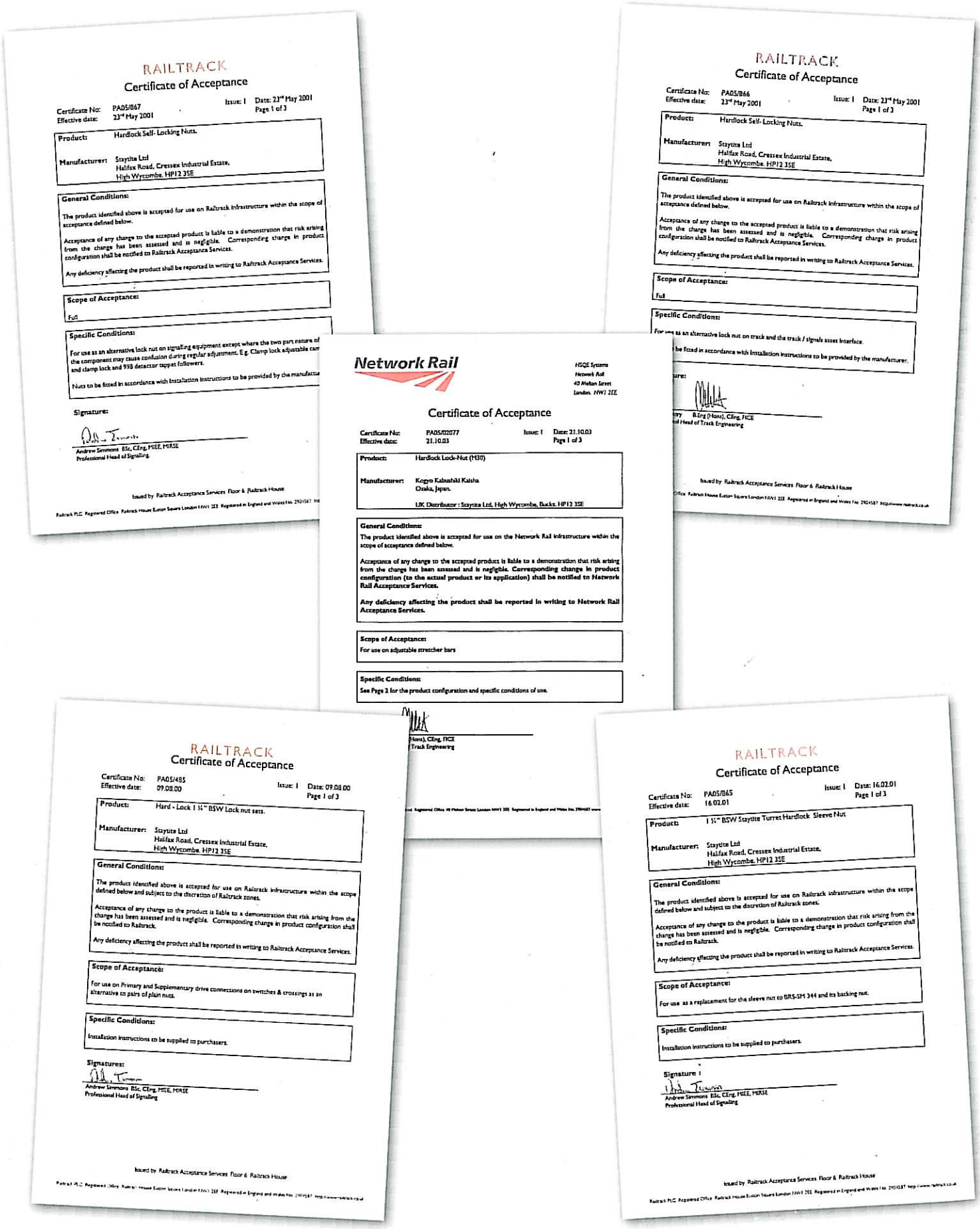
Üstteki içbükey somun civata dişlerine bir yöne doğru takılırken, alttaki dışbükey somun civataya ters yönde takılır.

Hardlock böylelikle üç değişik kilitleme kuvvetinin kombinasyonu ile güvenli bir şekilde sabitlenir.

Tekrarlanan kullanim Hardlock Somunlarinin kilitleme kabiliyetini azaltmaz. Somunların sıkça çıkarılıp takılması, somunlarda veya civata dişlerinde bir aşınmaya yol açmaz.



HARDLOCK NUTS - CERTIFICATES



RAILTRACK
Certificate of Acceptance

Certificate No: PA05/867 Issue: 1 Date: 23rd May 2001
Effective date: 23rd May 2001 Page 1 of 3

Product: Hardlock Self- Locking Nuts.

Manufacturer: Staytite Ltd
Halifax Road, Cressex Industrial Estate,
High Wycombe. HP12 3SE

General Conditions:

The product identified above is accepted for use on Railtrack infrastructure within the scope of acceptance defined below.

Acceptance of any change to the accepted product is liable to a demonstration that risk arising from the change has been assessed and is negligible. Corresponding change in product configuration shall be notified to Railtrack Acceptance Services.

Any deficiency affecting the product shall be reported in writing to Railtrack Acceptance Services.

Scope of Acceptance:

Full

Specific Conditions:

For use as an alternative lock nut on signalling equipment except where the two part nature of the component may cause confusion during regular adjustment. E.g. Clamp lock adjustable cam and clamp lock and 998 detector tappet followers.

Nuts to be fitted in accordance with Installation Instructions to be provided by the manufacture

Signature:

Andrew Simmons BSc, CEng, MIEE, MIRSE
Professional Head of Signalling

Issued by Railtrack Acceptance Services Floor 6 Railtrack House

Railtrack PLC Registered Office Railtrack House Euston Square London NW1 2EE Registered in England and Wales No. 2904587

RAILTRACK
Certificate of Acceptance

Certificate No: PA05/866 Issue: 1 Date: 23rd May 2001
Effective date: 23rd May 2001 Page 1 of 3

Product: Hardlock Self- Locking Nuts.

Manufacturer: Staytite Ltd
Halifax Road, Cressex Industrial Estate,
High Wycombe. HP12 3SE

General Conditions:

The product identified above is accepted for use on Railtrack infrastructure within the scope of acceptance defined below.

Acceptance of any change to the accepted product is liable to a demonstration that risk arising from the change has been assessed and is negligible. Corresponding change in product configuration shall be notified to Railtrack Acceptance Services.

Any deficiency affecting the product shall be reported in writing to Railtrack Acceptance Services.

Scope of Acceptance:

Full

Specific Conditions:

For use as an alternative lock nut on track and the track / signals asset interface.

be fitted in accordance with Installation Instructions to be provided by the manufacturer.

ure:

BEng (Hons), CEng, FICE
Head of Track Engineering

Issued by Railtrack Acceptance Services Floor 6 Railtrack House

Network Rail

HSQE Systems
Network Rail
40 Melton Street
London. NW1 2EE

Certificate of Acceptance

Certificate No: PA05/02077 Issue: 1 Date: 21.10.03
Effective date: 21.10.03 Page 1 of 3

Product: Hardlock Lock-Nut (M30)

Manufacturer: Kogyo Kabushiki Kaisha
Osaka, Japan.

UK Distributor : Staytite Ltd, High Wycombe, Bucks. HP12 3SE

General Conditions:

The product identified above is accepted for use on the Network Rail infrastructure within the scope of acceptance defined below.

Acceptance of any change to the accepted product is liable to a demonstration that risk arising from the change has been assessed and is negligible. **Corresponding change in product configuration (to the actual product or its application) shall be notified to Network Rail Acceptance Services.**

Any deficiency affecting the product shall be reported in writing to Network Rail Acceptance Services.

Scope of Acceptance:

For use on adjustable stretcher bars

Specific Conditions:

See Page 2 for the product configuration and specific conditions of use.

(Hons), CEng, FICE
Track Engineering

Registered Office 40 Melton Street London NW1 2EE Registered in England and Wales No. 2904587

RAILTRACK
Certificate of Acceptance

Certificate No: PA05/485 Issue: 1 Date: 09.08.00
Effective date: 09.08.00 Page 1 of 3

Product: Hard - Lock 1 ¼" BSW Lock nut sets.

Manufacturer: Staytite Ltd
Halifax Road, Cressex Industrial Estate,
High Wycombe. HP12 3SE

General Conditions:

The product identified above is accepted for use on Railtrack infrastructure within the scope defined below and subject to the discretion of Railtrack zones.

Acceptance of any change to the product is liable to a demonstration that risk arising from the change has been assessed and is negligible. Corresponding change in product configuration shall be notified to Railtrack.

Any deficiency affecting the product shall be reported in writing to Railtrack Acceptance Services.

Scope of Acceptance:

For use on Primary and Supplementary drive connections on switches & crossings as an alternative to pairs of plain nuts.

Specific Conditions:

Installation instructions to be supplied to purchasers.

Signatures:

Andrew Simmons BSc, CEng, MIEE, MIRSE
Professional Head of Signalling

Issued by Railtrack Acceptance Services Floor 6 Railtrack House

Railtrack PLC Registered Office Railtrack House Euston Square London NW1 2EE Registered in England and Wales No. 2904587

RAILTRACK
Certificate of Acceptance

Certificate No: PA05/865 Issue: 1 Date: 16.02.01
Effective date: 16.02.01 Page 1 of 3

Product: 1 ¼" BSW Staytite Turret Hardlock Sleeve Nut

Manufacturer: Staytite Ltd
Halifax Road, Cressex Industrial Estate,
High Wycombe. HP12 3SE

General Conditions:

The product identified above is accepted for use on Railtrack infrastructure within the scope defined below and subject to the discretion of Railtrack zones.

Acceptance of any change to the product is liable to a demonstration that risk arising from the change has been assessed and is negligible. Corresponding change in product configuration shall be notified to Railtrack.

Any deficiency affecting the product shall be reported in writing to Railtrack Acceptance Services.

Scope of Acceptance:

For use as a replacement for the sleeve nut to BRS-SH 344 and its backing nut.

Specific Conditions:

Installation instructions to be supplied to purchasers.

Signature :

Andrew Simmons BSc, CEng, MIEE, MIRSE
Professional Head of Signalling

Issued by Railtrack Acceptance Services Floor 6 Railtrack House

Railtrack PLC Registered Office Railtrack House Euston Square London NW1 2EE Registered in England and Wales No. 2904587

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