FORGING THE
FUTURE
OF FASTENING
SYSTEMS

HOW TO ORDER

KONNECT FASTENING SYSTEMS

nubco

Members of the Coventry Group, the exclusive distribution partner of Segnuts in Australia and New Zealand.

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SEGNUT™
SAFER. FASTER. SMARTER.

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A1.0

SEGNUT™
SAFER. FASTER. SMARTER.

CAPABILITY STATEMENT

FORGING THE FUTURE OF FASTENING SYSTEMS.

SAFER. FASTER. SMARTER.

Segnut is a world-first, proprietary nut and bolt system that delivers unprecedented value through safer work practices and the better utilisation of time and labour.

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AGILE
COMMERCIAL
COLLABORATIVE

COMPANY PROFILE

Our mission is to reinvent best practice to deliver a commercial advantage to our clients.

Founded in 2015, Segnut is an Australian-owned company with a core purpose to bring to market innovative products that provide safer, more efficient industrial solutions.

We have a spirit of entrepreneurship and a drive to challenge the norm to deliver intelligent solutions that result in a clear return on investment around safety, efficiency and productivity. We bring to the market high quality, reliable products and systems, backed by world's best practice processes.

In 2016, Segnut was a finalist in the Emerging Innovation Category in the West Australian Innovator of the Year awards.

WESTERN AUSTRALIA Innovator of the Year 2016
CELEBRATING 10 YEARS OF INNOVATION
EMERGING INNOVATION CATEGORY FINALIST

Segnut has also been the recipient of an Australian Federal Government EIP-AC Grant, which has supported the on-going development of the product.

Experience

We have a depth of engineering expertise and capabilities to support, adapt and innovate to find solutions for existing and emerging market needs. Leading the team is a highly experienced technical and commercial management group with specialist experience in the fastening industry, backed by a respected board that brings to the table multi-industry knowledge.

Look. Innovate. Deliver. We are a knowledge-based company, made up of clever, motivated people. We encourage and reward innovation and a solutions mindset. This is backed by a culture of awareness and communications, and supported by our values centered around agility, commerciality and collaboration.

Distribution

Konnect Fastening Systems® is the exclusive distribution partner of Segnut in Australia and New Zealand. A part of the Coventry Group, it is principally a specialist distributor of industrial products.

With over 60 stores across Australasia and strategically placed distribution centres, the Konnect network enables the fast and efficient delivery of the Segnut product direct to site.

Segnut also has networks internationally and is capable of supporting projects worldwide.

THE SEGNUT SYSTEM

SEAMLESS INNOVATION THAT DELIVERS SAFER AND BETTER COMMERCIAL OUTCOMES

The Segnut system is a world-first, proprietary technology that delivers unprecedented value through safer work practices and better utilisation of time and labour.

The Segnut itself is an industrial grade threaded nut manufactured with a world-first release mechanism that enables the rapid and safe release of the nut – even when the thread is damaged and seized.

UP TO 95% FASTER REMOVAL TIME

SAFER

It is a unique product which completely mitigates risk from dangerous work practices that result from hot works and injuries caused by tripping, hand-arm vibration, handling the fastener during removal, noise and fatigue.

FASTER

Removal time can be reduced by up to 95% when compared to conventional nuts. This translates to less equipment downtime and faster turn-around times, and better utilisation of labour and machines.

SMARTER

It delivers a clear return on investment through improved productivity and safety. It is also seamless in that the nuts fit standard bolts and studs and do not require special equipment, licences, training or work areas.

WHY SEGNUT?

IMPROVED SAFETY

- No hot works and risk of fires
- Less risk of trip injuries from oxy-acetylene hoses
- Less exposure to hand-arm vibration and laceration injuries
- Less exposure to noise from rattle gun use
- Reduced fatigue.

BETTER PRODUCTIVITY & FASTER TURN-AROUND TIMES

- Less equipment downtime with significantly faster removal time
- Frees up labour
- No hot work permits or exclusion zones
- Reduces the torque required to remove nuts therefore less time with rattle guns or rad guns
- Increased re-usability of bolts and studs.

EASE & RELIABILITY

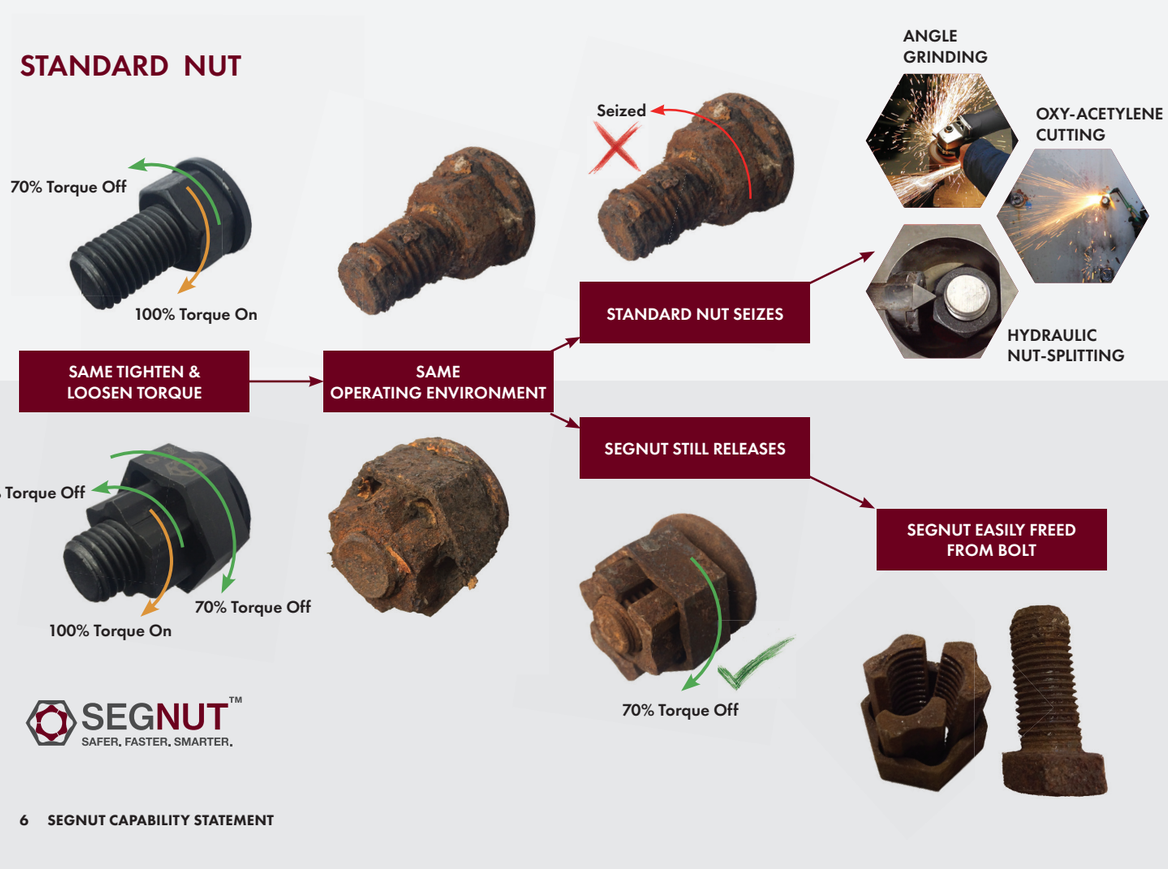
- Specially designed controlled release sleeve interface system to allow effective nut release when required
- Fit on standard bolts and studs
- Tightened to the same torque and tension
- The nut is released independent of the condition of the bolt thread
- Uses standard hex sockets
- Manufactured to Australian and international standards
- Full product traceability (AS 1252 Batch Control).

BETTER PRODUCTIVITY + SAFETY

Segnuts deliver a clear return on investment through improved productivity provided by the safe, efficient and reliable removal of nuts on equipment in multiple industries and across multiple applications.

Threaded metallic nuts are universal in industrial and commercial applications. Nut removal is required for maintenance, inspection or disassembly. In the resources sector, for example, the maintenance budget can be 30% - 50%+ of the mine site total operating cost and part of this involves the regular unfastening of nuts. With use over time, nut removal can become difficult and even impossible as a result of damage, painted coatings, corrosion, debris etc. Oxy flame cutting is the common method of removal requiring hot work permits which not only increases time but add to risks in fire and injury.

Segnuts have the full structural properties of standard nuts and can be used as a replacement in normal applications. The return on investment comes into play when there is a need for safe and timely change overs of equipment parts.



APPLICATIONS

In highly competitive market sectors where increased productivity through better management of operational cost and efficiencies and improved safety standards are key, Segnut will deliver a clear return.

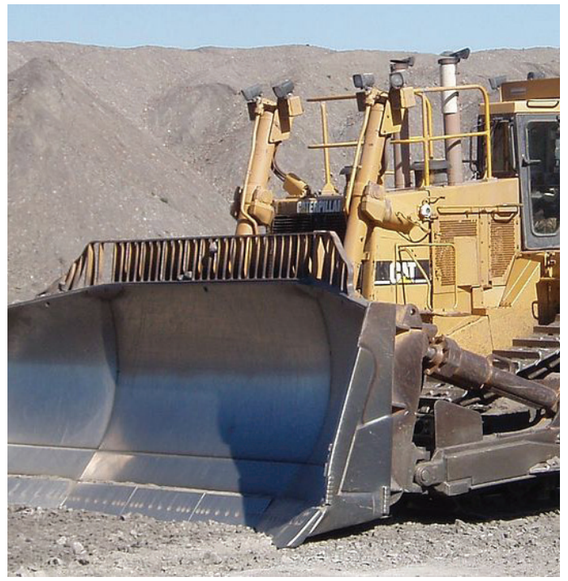
MULTIPLE APPLICATIONS

- Ground engaging tools (GET)
- Wear plates
- Conveyor liners
- Mining equipment
- Steel structures
- Any application where timing and safety of component changeover are critical.

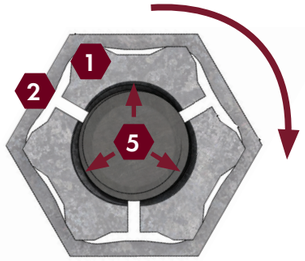
DIVERSE INDUSTRIES

- Mining
- Infrastructure
- Oil & gas
- Construction.

The return on investment comes into play when there is a need for multiple change overs of equipment parts.

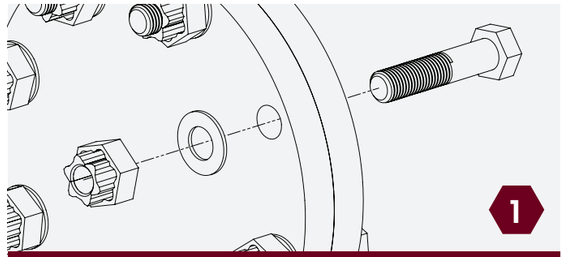


HOW IT WORKS

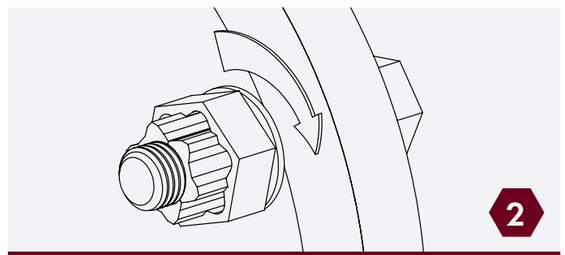


1. **Segmented inner nut**
   The three segments enable the nut to release away from the bolt/stud threads.
2. **Outer sleeve**
   Holds the three segments together so that a bolt clamp force can be generated. The sleeve's profile has clearance to allow segments to move away from the bolt/stud when it's rotated relative to the inner nut.
3. **Inner nut corners**
   Prevents the outer sleeve from moving upward and provides flats for a standard hex wrench/socket.
4. **Hardened washer**
5. **Dilation**
   Force is generated as the bolt is tightened. This force is resisted by the outer sleeve, holding the inner segments in place until it's turned and the segments are free to release away from the bolt/stud.

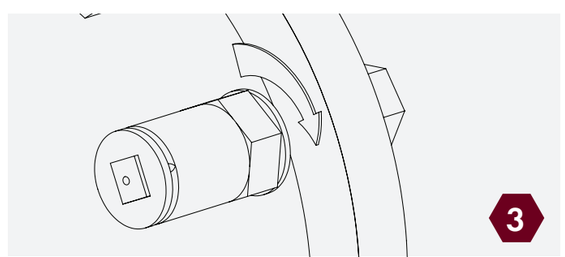
ASSEMBLY



Assemble joint components

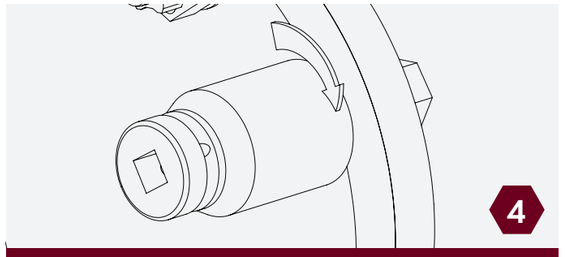


Spin Segnut down thread

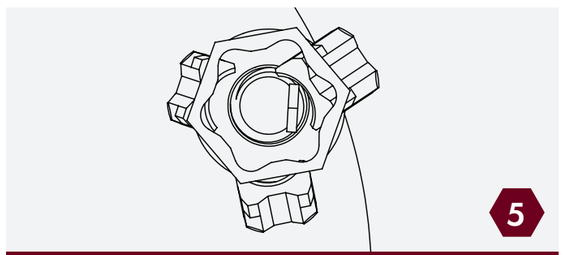


Tighten inner nut

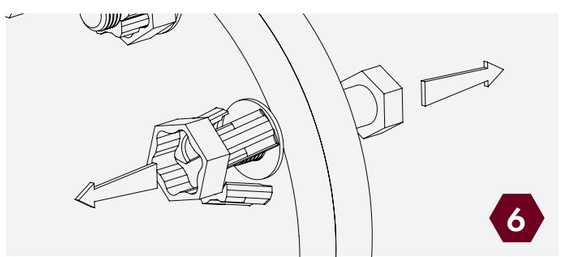
REMOVAL



Rotate outer sleeve



Segments release from thread



Remove sleeve and bolt

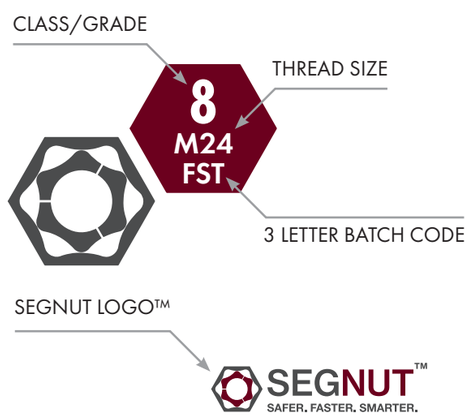
QUALITY ASSURANCE

Segnuts meet or exceed applicable AS, ISO, ASTM & OEM requirements.

Segnuts are designed and tested to current fastener specifications and conformance to bolting standards. Mechanical and material specifications are set based on the advisory of industry-leading professionals to meet or exceed the performance of conventional fasteners.

Extensive quality control and traceability procedures ensure the consistent outperformance against of all other fastener systems. Testing is conducted both internally and externally at NATA-accredited facilities. Independent NATA certified testing for proof loadings (as a minimum requirement to supporting external trials) have been conducted.

- Fully traceable to requirements of AS 1252.1 section 6
- Quality control testing in accordance with ISO 3269



In place:

- Australian and International Patents Pending
- Trademark registrations
- Design registrations.

Extensive testing includes:

- proof load
- hardness
- assembly test
- torque-tension (K-value) testing and
- material composition.

Segnut has engaged with industry and academic experts and tested at various sites across a broad range of applications including high vibration loading and direct impact. Segnut products are protected by national and international patents and patents pending, design registration, trademarks and copyrights.

Key features:

- Release torque of a tensioned Segnut can be controlled by design parameters to be within a desired window (e.g. between 50% and 75% of the initial tightening torque)
- Rapid release, even when corroded or when debris has entered between the release sleeve and the inner segments

PRODUCT GUIDE

SEGNUT

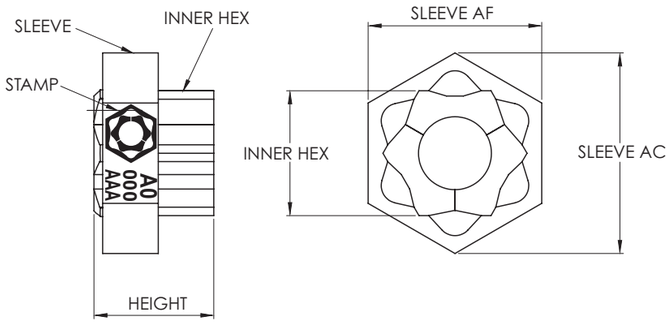
FEATURES

- Fits on standard, non-oversized bolts
- Meets ISO and SAE strength requirements
- Tightened via inner hex with approx. the same torque as standard nuts
- Released via outer sleeve with approx. 70% of torque used to tighten
- Can be tightened via any method (torque, angle, tension)
- Eliminates the need for gas axing or other dangerous nut removal methods.

IMPORTANT INFORMATION

- When installed with rattleguns, sleeve may prematurely release. To prevent, tighten snug by hand tool (1/4 turn min) before using rattlegun
- Always install with hardened washers, to help ensure segments release from thread
- Ensure a sufficiently long bolt is used such that the bolt threads are visible past the nut
- Segnut is not an anti-vibration nut (locknut). Use with Nordlock/safety washer if required.

For more information, see the Segnut Engineering Guide.



1. SEGNUT TRADEMARK
2. CLASS/GRADE
3. THREAD SIZE
4. BATCH CODE

THREAD SIZE	HEIGHT (mm)	INNER AF (mm)	SLEEVE AF (mm)	SLEEVE AC (mm)
M12 x 1.75	20.25	21	27	31.2
M16 x 2.0	27	21	32	37.0
M20 x 2.5	34.5	30	40	46.2
M24 x 3.0	34.5	36	50	57.7
5/8"-11	27	21	32	37.0
3/4"-10	34.5	30	40	46.2
7/8"-9	34.5	36	50	57.7
1"-8	43	41	55	63.5

MATERIAL	U 20452 medium carbon steel quenched and tempered		**GB T699**
COATING	Chemical black iron oxide		-
PROOF LOAD STRESS	Metric:	920 MPa (Class 8)	**ISO 898-2 (Class 8)**
	Imperial:	800 MPa (Grade 5)	**SAE J995 (Grade 5)**
THREAD TOLERANCE	Metric:	6H	**ISO 965 - 2**
	Imperial:	2B	**ASME B1.1**
HARDNESS	24-30 Rockwell C		**ASTM F606/F606M**
TRACEABILITY	Batch code traces every test and process back to the original nut material. Certificates can be provided on request		-
QUALITY	Factory production control & random sample testing		**ISO 3269**

SEGNUT S9

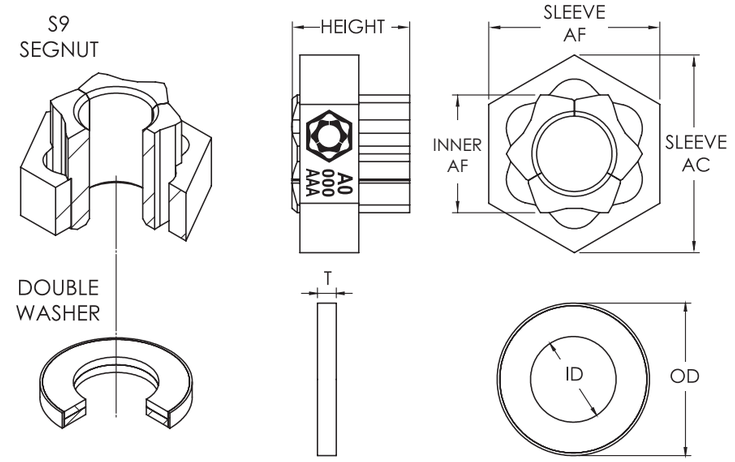
FEATURES

- Exceeds SAE Grade 8 strength requirements
- Supplied with Segnut double washer to control friction and bolt tension
- Tighten and loosen using inner hex
- Release using outer sleeve
- Eliminates the need for gas axing or other dangerous nut removal methods.

IMPORTANT INFORMATION

- Wrench tighten firmly before using a large impact-gun or 'rattlegun' to prevent premature release of the sleeve during tightening
- Longer bolts are required. Thread must be visibly protruding from the nut when installed
- Always install with the supplied double washers.

For more information, see the Segnut S9 Engineering Guide.



1. SEGNUT TRADEMARK
2. CLASS/GRADE
3. THREAD SIZE
4. BATCH CODE

THREAD SIZE	HEIGHT (mm)	INNER AF (mm)	SLEEVE AF (mm)	SLEEVE AC (mm)	T	ID	OD
1 1/4" - 7TPI	44	45	64	73.9	7	32.5	57

All dimensions are in mm unless specified.

S9 SEGNUT

MATERIAL	U 20452 medium carbon steel quenched and tempered	**GB T699**
COATING	Chemical black iron oxide	-
NUT PROOF STRESS	Exceeding SAE Grade 8 requirements (1240 Mpa / 180 KSI)	**SAE J995 (Grade 8)**
HARDNESS	26-43 HRC	**ASTM F606/F606M**
QUALITY	Factory production control & random sample testing	**ISO 3269**
TRACEABILITY	Batch code traces every test and process back to the original nut material. Certificates can be provided on request	-

DOUBLE WASHER

MATERIAL	Medium carbon steel Q&T / Silicon rubber retaining ring	-
COATING	Electroplated zinc	-
HARDNESS	40-50 HRC	**ASTM F606/F606M**