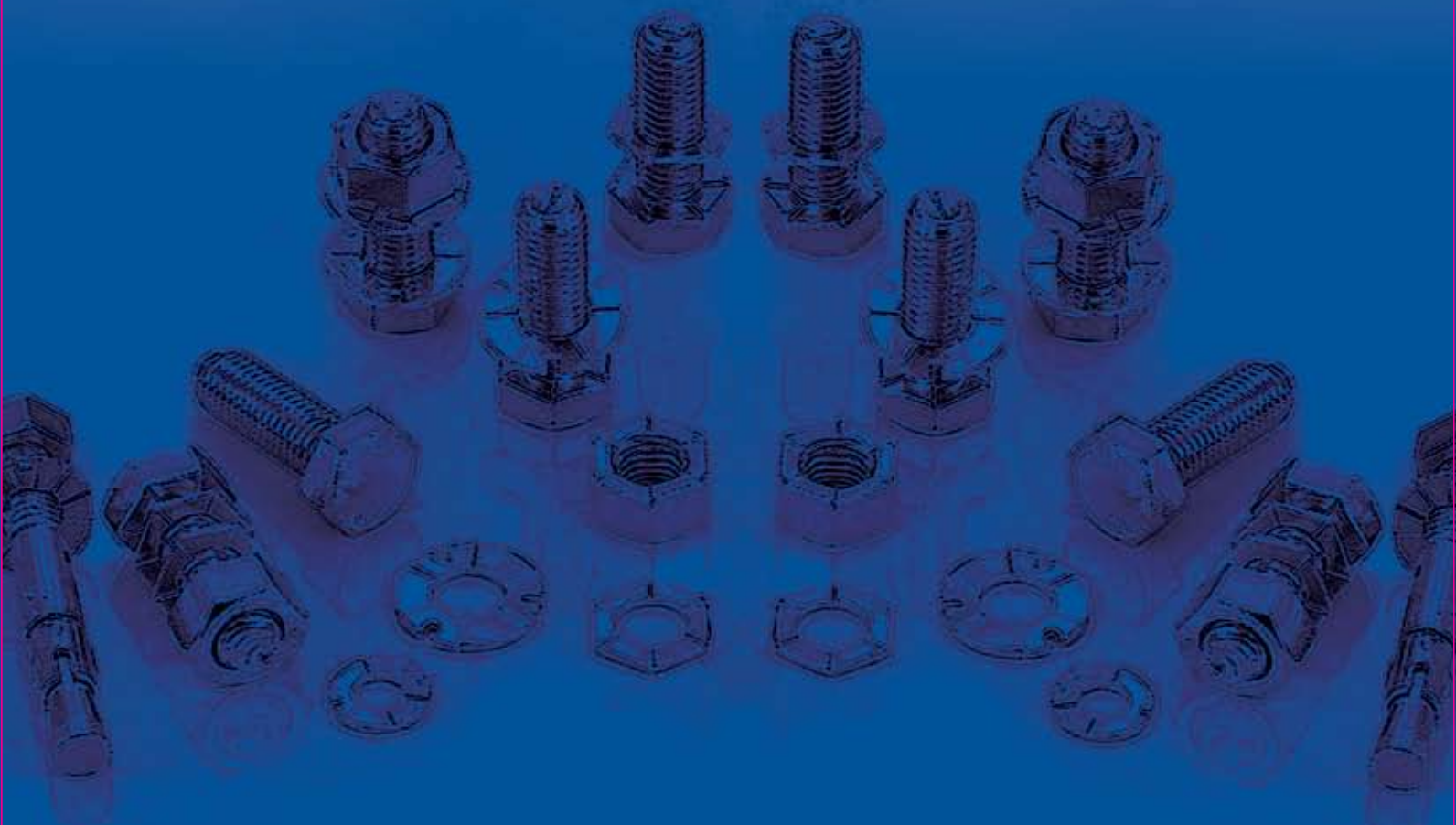




First Choice Solutions®

SBS

SECURE BOLTS SYSTEM



LOOSENING FIXINGS?

IEC provides the answer...

Overview

The SBS (Secure Bolt System) Fastener is a patented and reusable self-locking system that can be used where a standard bolt, washer or nut would be required. It has been tested to stringent industry specifications by accredited test laboratories worldwide to prove its effectiveness in applications subject to extreme vibration.

The system provides an excellent solution to manufacturers experiencing the loosening of their fasteners in applications prone to vibration.

It provides a mechanically based, self locking, reusable fastener system that will not lose torque under high vibration and heat applications.

The SBS Fastener is a new unique fastener system that is protected by world wide patents.

This product is available in both SAE and Metric sizes as well as different grades or classes. Customized designs for specific applications are also available on request.

benefits

- **Vibration and shock resistant**
- **Anti theft design**
- **Easy to use**
- **Reusable**
- **Good performance over range of torque settings**
- **Wide operating temperature range compared to adhesive solution**
- **Single source fastening solution**



PUT SBS TO THE TEST
ON YOUR PRODUCTS!
FREE SAMPLES
AVAILABLE!

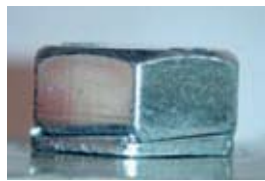
How it works...

a safer lock system

Before



After



the description...

The SBS Fastener consists of a standard hexagon shaped nut or bolt and washer that includes a specially designed wedge integrated into its design.

the concept...

Once the bolt is tightened, the washer and bolt head fit together. The nut or bolt cannot back off as it acts as a 'wedge' and will put a downward force onto the metal as it attempts to back off, due to the opposing wedges on the nut or bolt head and washers.

Two types of washer designs



(1) **Standard hex** design for applications where removal with standard wrench is required

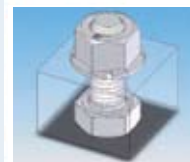
(2) **Round** design requiring a special indexed socket for removal for tamperproof applications.



How the SBS Fastener works



The SBS Fastener consists of a bolt, two washers and a nut. Both the underside of the hex bolt head and the nut are designed with wedges which correspond with the wedges found on the washers.



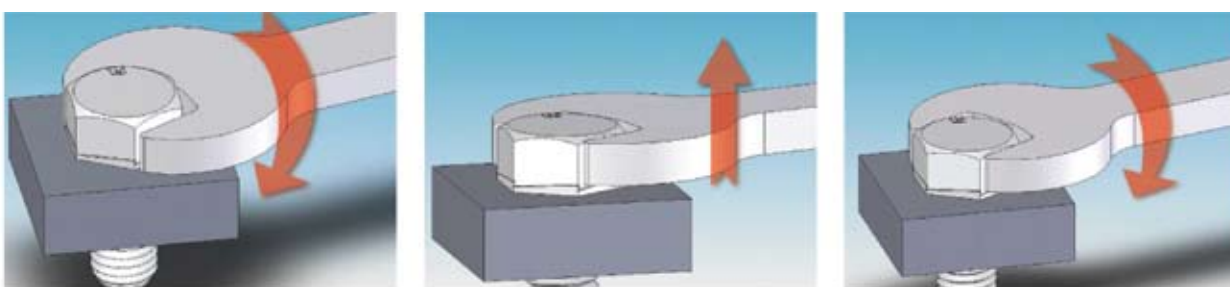
The wedges on the washer should be facing the wedges on the nut and bolt head and the flat part of the washer should be facing the surface of the material that is being fastened. Using a standard wrench or socket turn the bolt clockwise to tighten ensuring that the wrench or socket is engaged on both the bolt head and washer at the same time. Once the bolt and washer are tightened to the desired torque, remove wrench or socket from the washer and proceed to tighten the bolt head until the wedges on the bolt head sit flat up against the wedges on the washer. This ensures that the fastener is fully engaged.



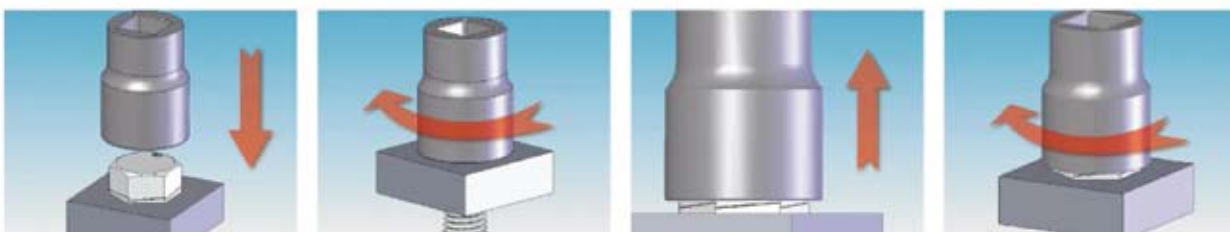
Assembly & applications...

total flexibility

The SBS Fastener can be assembled and tightened using a standard wrench or socket. This applies to either type of washer used (hex or round).



However, removal of the nut/bolt requires a different approach depending on which type of washer is used. Using the hex washer with the nut/bolt allows the fastening to be loosened using a standard wrench or socket.



The round washer however cannot easily be loosened using the same standard tools. In this instance the use of a specially designed SBS indexed socket is used.

This has the benefit of adding an 'anti-theft' element to this combination of nut/bolt and washer.

The Secure Bolt System can be used in a wide range of different applications.



Product range

mm

Nut Description	Bolt Description	Torque in N/M			Bolt Length in mm								
		8.8	10.9	12.9	20	25	30	35	40	45	50	60	70
M6 x 1.0P	M6 x 1.0P	10.1	14.7	17.0	•	•	•	•	•				
M8 x 1.25P	M8 x 1.25P	24.6	35.6	41.0	•	•	•	•	•				
M10 x 1.5P	M10 x 1.5P	49.4	70.6	81.0	•	•	•	•	•				
M12 x 1.75P	M12 x 1.75P	85.1	123.1	142.1		•	•	•	•			•	
M14 x 2.0P	M14 x 2.0P	135.0	195.2	226.2				•					
M16 x 2.0P	M16 x 2.0P	211.2	305.3	350.3				•	•	•	•	•	•
M18 x 2.5P	M18 x 2.5P	290.3	420.3	485.5					•		•		•
M20 x 2.5P	M20 x 2.5P	412.4	596.5	685.7					•		•	•	•
M22 x 2.5P	N/A	517.4	811.8	931.0							•		•
M24 x 2.5P	N/A	713.7	1032.0	1181.0									•

inches

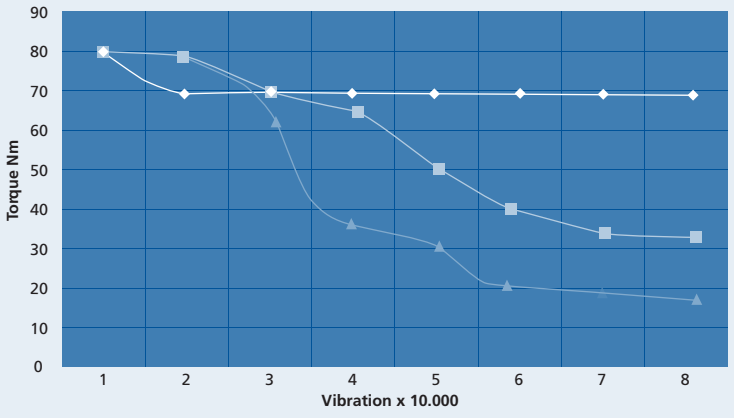
Nut Description	Bolt Description	Torque in 1lb/ft			Bolt Length in inches								
		G5 8.8	G8 10.9	N/A	¾	1	1¼	1½	1¾	2	2¼	2½	2¾
1/4" 20UNC	1/4" 20UNC	8.6	12.2	-	•	•	•						
5/16" 18UNC	5/16" 18UNC	17.8	25.3	-				•	•				
3/8" 16UNC	3/8" 16UNC	31.8	44.8	-				•		•		•	
1/2" 13UNC	1/2" 13UNC	77.7	109.0	-						•		•	
5/8" 11UNC	N/A	154.0	217.3	-									•

Material: High tensile steel according to DIN 17 240 as defined within DIN 267 part 13
 316 Stainless Steel
Finish: Zinc plate - standard
 Dacromet
 Nickel plate
Manufacturing: According to DIN933 and DIN931

Test results

- SBS Lock System ◆
- Hex Nut & Conical Washer ■
- Normal Nut & Flat Washer ▲

- Tested under -**
- JQA Vibration Laboratories
 - SGS Vibration Laboratories
 - NAS 3350



Our difference...



We are a family owned company founded in 1938 to supply quality mechanical components. Today we serve a broad band of industry with a wide range of quality products.

These are manufactured by companies of international repute who are each specialists in their own field.

We are approved to BS EN ISO 9001:2000.

We aim to provide the best in both products and service

- Experienced informative staff give fast, effective and friendly service.
- Technical support nationwide.
- Large stocks - same day despatch - Kanban and JIT deliveries.
- Cost effective solutions.
- Modern technology combined with people.
- Listen, communicate - no surprises!
- Think long term - everlasting customers.



...the team that cares

Integrity • Expertise • Commitment

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