

WELCOME TO THE MONTHLY NEWSLETTER CREATED TO HIGHLIGHT DEVELOPMENTS AT **GRAMPIAN FASTENERS** AND OUR KEY SUPPLIERS.

WELCOME

Angus Engineering & Construction Showcase



The Engineering & Construction Showcase:

This month, Grampian Fasteners was joined by leading hand tools manufacturer Beta and bolt securing systems manufacturer Nordlock to deliver a series of technical demonstrations; to offer advice and share their experiences.

This was part of an all day event organised by Angus College to give students an insight into their future careers in the engineering and construction industries.

Keeping it 'Lean': Tool Control & Protection



Tool Control & Protection Solutions:

'Lean' is a globally-recognized production process that helps companies to operate without waste.

Applying 'Lean' principles to your tool management can improve safety, efficiency and productivity in your workshop / garage - allowing staff to focus on quality delivery.

Call +44 (0) 1224 772777 or visit www.grampianfasteners.com for more info.



NEW BETA WORKWEAR RANGE
Remarkable Italian Design
Promo valid until 31st March 2010

Since 2001, Beta, one of the world's leading professional hand tool manufacturers, has been developing an exclusive collection of stylish work apparel and safety footwear to supplement their wide range of tools.

The new Beta Workwear range has been specially fashioned to meet the requirements of the modern working man who wants practical, durable protective clothing which also looks good and feels comfortable.

As such, the range has been designed to epitomize Beta's distinctive character and attention to detail - made from durable, wear-resistant materials that combine Beta's modern Italian styling with comfort and functionality that's ideal for work and leisure:

The range includes: **Protective Overalls, Work Trousers, Safety Shoes & Boots, Work Jackets & Fleece, Waterproof Wear, Shirts, Polos & T-Shirts, Caps, Hats & Beanie's.**

Visit www.grampianfasteners.com or call +44 (0) 1224 772777 for more info.

Is Safety At Height An Issue?
Auto-Brake Pulley System

Safelift's Auto-Brake Pulley provides a safe method of manually lifting and lowering of loads up to 25kg.

Designed for 1-man operation, it incorporates an automatic braking system that engages as soon as the operator stops pulling or releases the rope.

The lightweight system is supplied with a dedicated mounting arm - fully compatible with scaffolding or steelwork structures. A quick release fitting allows the user to remove the pulley, rope, etc separately.

Comes with full Load Test & Inspection Certification.

Visit www.grampianfasteners.com/safelift for more info.



NEW BETA CATALOGUE 2010

Discover the new catalogue from Beta Tools:

- Over 360 pages of product information
- New products highlighted for easy identification
- Colour-coded categories / pages

Request your free copy from:
marketing@grampianfasteners.com





LOCTITE is the global market leader in the development and manufacture of **adhesives, sealants, and chemical products**; offering a multitude of applications to satisfy the needs of different target groups - from consumers and DIY users, to professional craftsmen and industrial businesses; in markets as diverse as electronics, automotive, aerospace, biomedical and manufacturing industries.

Grampian Fasteners have a wide range of Loctite® products available from stock as well as competitive lead times for non-stock items - so, you can be sure that we have the right solution to suit your needs, matched with timely delivery and friendly service...

Grampian Fasteners can also help you to develop **custom / bespoke solutions** for your business or specific application by calling on the **technical back-up** and **expertise** available to us from Loctite®'s **field-based technical specialists**.

Which solution? Ask us for the **Loctite® Solution Guide**; a clear, quick guide to effective solutions for the most common problems.

For more information please visit www.grampianfasteners.com/loctite.aspx or call Grampian Fasteners on **+44 (0) 1224 772777**.

Su Doku Difficulty Level: Medium

Instructions:

To solve a Sudoku puzzle, every digit from 1 to 9 must appear in each of the 9 vertical columns, in each of the 9 horizontal rows, and in each of the 9 boxes.

Solve the puzzle by logic and reasoning alone, there is no maths involved.

Good Luck!

	3	7		5				6
		4	3					
1	6				4			3
								9
	8	1			5			
7	4		2		3			8
3			5	8	7	4		
		6		2		8		
1	8	4						2

TECHNICAL CORNER: STAINLESS STEEL

A large percentage of the fasteners sold by Grampian Fasteners are Stainless Steel...

Q: When is it best to use A2, and when is it best to use A4 grade Stainless Steel?

A: The most common grade of steel is A2; it provides outstanding corrosion resistance whether under normal atmospheric conditions, in wet environments, when exposed to oxidising & organic acids, and many alkaline & salt solutions.

A4 is a more corrosion resistant steel grade than A2; it has an increased percentage of nickel and added molybdenum in its composition. It offers better resistance to aggressive conditions e.g. in sea climates (chlorides), industrial atmospheres (sulphur dioxide), and/or where oxidising acids are present. Recently, we've seen an increase in the number of customers opting to use A4 grade fasteners as opposed to A2 grade.

Q: So, what is the difference between A4-70 and A4-80?

A: The number that follows 'A4-' represents the Property Class that the material belongs to, and also indicates the strength of the material. This table shows each class' properties:

Property Class	Diameter Range	Bolts, Screws & Studs (Part 1)			Nuts (Part 2)
		Tensile Strength R_m (Nmm ⁻²)	0.2% Proof Strength $R_{p0.2}$ (Nmm ⁻²)	Elongation A (mm)	Stress Under Proof Load S_p (Nmm ⁻²)
50	<=M39	500	210	0.6d	500
70	<=M24	700	450	0.4d	700
80	<=M24	800	600	0.3d	800

An A4-80 bolt has the equivalent tensile strength of a high tensile grade 8.8 bolt. A4-50 is less common and is available for fasteners with diameters between M27 and M39.