



world class aerospace fasteners



# The Single Sided Temporary Fastener

### **OVERVIEW**

Kwikbolt is a revolutionary new single sided fastener (SSF) that are used blind, designed and manufactured for the tight tolerance and high performance requirements within the aerospace and defence industry. Originally designed for Europe's largest aerospace company, Kwikbolt's aerospace fasteners product range has been developed to provide a complete single-sided temporary fastener solution for use in multiple industries. Using modern technology and materials from our international patented designs, Kwikbolt delivers a temporary fastener range available on a global scale.

We are at the cutting edge of fastener technology; our blind bolt fasteners allow customers to benefit from temporary fasteners that are reusable. Our high performance product range reduces labour activity and improves the quality of the assembly processes while providing doweling and clamping from a single side.









## **PRODUCTS**

### **Standard Range**

Our off-the-shelf, standard product range provides single-sided temporary fastener solutions from 2.2mm (5/64 inch) to 25.4mm (1" inch) via lengths of 0.4mm (1/64 inch) to 152.4mm (6 inch). Most of our product ranges are available in both fully-flush (countersunk) and protruding head and can be ordered directly from us or via our distribution network. All of our products provide doweling and clamping to ensure correct placement, maximum hold and are rated for 500 cycles.

#### **Kwikbolt IHurricane**

Our Hurricane design is focused on high load, larger hole size applications and uses an expanding petal design to enlarge on the blind size of a structure and pull back on itself to provide clamping. As the petal moves through a ground cylinder, our Hurricane Kwikbolt keeps holes true and provides a high clamp and sheer performance.

	Part Code	A nominal mm (inch)	B mm (inch)	C mm (inch)	D1 min mm (inch)	Grip Range mm (inch) in 10mm (0.393) steps	Clamping Force Range N (lbf)	No of Cycles			
	Hurricane I Kwikbolt										
	1032-H2	7.94 (0.313)	Varies depending on grip range requested by customer	15.00 (0.590) to 19.00 (0.748)	15.00 (0.590)	1mm (0.039) to 150mm (5.905)	2,000 (450) - 4,000 (900)	500			
	1232-H2	9.53 (0.375)			19.00 (0.748)	1mm (0.039) to 150mm (5.905)	3,000 (675) - 6,000 (1,350)	500			
	1432-H2	11.15 (0.438)			22.00 (0.866)	1mm (0.039) to 150mm (5.905)	4,000 (900) - 8,000 (1,800)	500			
	1632-H2	12.70 (0.500)			24.00 (0.945)	1mm (0.039) to 150mm (5.905)	5,000 (1,125) - 10,000 (2,250)	500			
	1832-H2	14.24 (0.563)			27.00 (1.063)	1mm (0.039) to 150mm (5.905)	5,000 (1,125) - 10,000 (2,250)	500			
	2032-H2	15.90 (0.625)			30.00 (1.181)	1mm (0.039) to 150mm (5.905)	7,000 (1,600) - 14,000 (3,200)	500			
	2432-H2	19.05 (0.750)			38.00 (1.496)	1mm (0.039) to 150mm (5.905)	9,000 (2,025) - 18,000 (4,050)	500			
	3232-H2	25.40 (1.000)			48.00 (1.889)	1mm (0.039) to 150mm (5.905)	12,000 (2,700) - 24,000 (5,400)	500			
	Hard Torrate Description of the London of th										



Our Lightning design is focused on high load, smaller hole size applications and uses an expanding leg design to enlarge on the blind size of a structure and pull back over the main body to provide clamping. As the legs move over a ground cylinder, our Lightning Kwikbolt keeps holes true and provides a high clamp and sheer performance.







Part Code	A nominal mm (inch)	B mm (inch)	C mm (inch)	D1 min mm (inch)	Grip Range - L4 mm (inch) in 15mm (0.590) steps Grip Range - L6 mm (inch) in 6mm (0.236) steps	Clamping Force Range - L4 N (lbf)	Clamping Force Range - L6 N (lbf)	No of Cycles		
Lightning Long - L4 and Short - L6   Kwikbolt										
0532-L4/L6	3.96 (0.156)			7.00 (0.275)	1mm (0.039) to 150mm (5.905)	890 (200) - 1,780 (400)	890 (200) - 2,669 (600)	500		
0632-L4/L6	4.76 (0.188)	Varies depending on grip range requested by customer		9.00 (0.354)	1mm (0.039) to 150mm (5.905)	1,112 (250) - 2,224 (500)	1,112 (250) - 3,336 (750)	500		
0832-L4/L6	6.35 (0.250)		ing (0.137) ange to 4.50 ed (0.177)	12.00 (0.472)	1mm (0.039) to 150mm (5.905)	1,334 (300) - 2,669 (600)	1,334 (300) - 4,000 (900)	500		
1032-L4/L6	7.94 (0.313)			15.00 (0.590)	1mm (0.039) to 150mm (5.905)	1,779 (400) - 3,558 (800)	1,779 (400) - 5,338 (1,200)	500		
1232-L4/L6	9.53 (0.375)			19.00 (0.748)	1mm (0.039) to 150mm (5.905)	1,779 (400) - 3,558 (800)	1,779 (400) - 5,338 (1,200)	500		
1432-L4/L6	11.15 (0.438)			22.00 (0.866)	1mm (0.039) to 150mm (5.905)	1,779 (400) - 3,558 (800)	1,779 (400) - 5,338 (1,200)	500		
1632-L4/L6	12.70 (0.500)			24.00 (0.945)	1mm (0.039) to 150mm (5.905)	1,779 (400) - 3,558 (800)	1,779 (400) - 5,338 (1,200)	500		
1832-L4/L6	14.24 (0.563)			27.00 (1.063)	1mm (0.039) to 150mm (5.905)	2,224 (500) - 4,448 (1,000)	2,224 (500) - 6,672 (1,500)	500		
2032-L4/L6	15.90 (0.625)			30.00 (1.181)	1mm (0.039) to 150mm (5.905)	2,224 (500) - 4,448 (1,000)	2,224 (500) - 6,672 (1,500)	500		
2432-L4/L6	19.05 (0.750)			38.00 (1.496)	1mm (0.039) to 150mm (5.905)	2,669 (600) - 5,338 (1,200)	2,669 (600) - 8,000 (1,800)	500		
3232-L4/L6	25.40 (1.000)			48.00 (1.889)	1mm (0.039) to 150mm (5.905)	2,669 (600) - 5,338 (1,200)	2,669 (600) - 8,000 (1,800)	500		
Head Types   FP = Flat Protruding   SP = Countersunk Protruding   SF = Countersunk Flush Grip   Length Increments   Long 15mm Short 6mm										



Our Storm design is focused on wet applications that require high load, smaller hole size applications and uses a clean and clamp process via an expanding leg design to enlarge on the blind size of a structure and pull back over the main body to provide clamping. As the legs move over a ground cylinder, our Storm Kwikbolt keeps holes true, clean and provides a high clamp and sheer performance.







Part Code	A nominal	В	С	D1 min	Grip Range	Clamping Force Range	No of			
	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch) in 15mm (0.590) steps	N (lbf)	Cycles			
Storm I Kwikbolt										
0532-S1	3.96 (0.156)	Varies depending on grip range requested by customer	3.50 (0.137) to 4.50 (0.177)	7.00 (0.275)	1mm (0.039) to 150mm (5.905)	890 (200) - 1,780 (400)	500			
0632-S1	4.76 (0.188)			9.00 (0.354)	1mm (0.039) to 150mm (5.905)	1,112 (250) - 2,224 (500)	500			
0832-S1	6.35 (0.250)			12.00 (0.472)	1mm (0.039) to 150mm (5.905)	1,334 (300) - 2,669 (600)	500			
1032-S1	7.94 (0.313)			15.00 (0.590)	1mm (0.039) to 150mm (5.905)	1,779 (400) - 3,558 (800)	500			
1232-S1	9.53 (0.375)			19.00 (0.748)	1mm (0.039) to 150mm (5.905)	1,779 (400) - 3,558 (800)	500			
1432-S1	11.15 (0.438)			22.00 (0.866)	1mm (0.039) to 150mm (5.905)	1,779 (400) - 3,558 (800)	500			
1632-S1	12.70 (0.500)			24.00 (0.945)	1mm (0.039) to 150mm (5.905)	1,779 (400) - 3,558 (800)	500			
1832-S1	14.24 (0.563)			27.00 (1.063)	1mm (0.039) to 150mm (5.905)	2,224 (500) - 4,448 (1,000)	500			
2032-S1	15.90 (0.625)			30.00 (1.181)	1mm (0.039) to 150mm (5.905)	2,224 (500) - 4,448 (1,000)	500			
2432-S1	19.05 (0.750)			38.00 (1.496)	1mm (0.039) to 150mm (5.905)	2,669 (600) - 5,338 (1,200)	500			
3232-S1	25.40 (1.000)			48.00 (1.889)	1mm (0.039) to 150mm (5.905)	2,669 (600) - 5,338 (1,200)	500			
Head Types   EP = Flat Protruding   SP = Countersunk Protruding   SF = Countersunk Flush Grin Length Increments   15mm										

Head Types | FP = Flat Protruding | SP = Countersunk Protruding | SF = Countersunk Flush Grip Le



#### Kwikbolt | Thunder

Our Thunder design is focused on applications that require small blind side clearance and delivers high load, larger hole size applications and uses a driven bar design to engage clamping and drive the legs into the head and pull back on itself to provide clamping. As the bar moves through a ground collet, our Thunder Kwikbolt keeps holes true and provides a high clamp and sheer performance.







1.00	DES DECISION										
Part Code	A nominal mm (inch)	B mm (inch)	C mm (inch)	D1 min mm (inch)	<b>Grip Range</b> mm (inch) in 1-150mm (0.039 – 5.90)	Clamping Force Range N (lbf)	No of Cycles				
Thunder   Kwikbolt											
0332-T2	2.20 (0.086)	Varies depending on grip range requested by customer		7.00 (0.275)	1mm (0.039) to 150mm (5.905)	1,112(250) - 2,224 (500)	500				
0432-T2	3.26 (0.128)			7.00 (0.275)	1mm (0.039) to 150mm (5.905)	1,779(400) - 3,558 (800)	500				
0532-T2	3.96 (0.156)		Varies	7.00 (0.275)	1mm (0.039) to 150mm (5.905)	2,224(500) - 4,448 (1,000)	500				
0632-T2	4.76 (0.188)		depending on grip range requested by customer	9.00 (0.354)	1mm (0.039) to 150mm (5.905)	2,670 (600) - 5,340 (1,200)	500				
0832-T2	6.35 (0.250)			12.00 (0.472)	1mm (0.039) to 150mm (5.905)	2,670 (600) - 5,340 (1,200)	500				
1032-T2	7.94 (0.313)			15.00 (0.590)	1mm (0.039) to 150mm (5.905)	4,000 (900) - 8,000 (1,800)	500				
1232-T2	9.53 (0.375)			19.00 (0.748)	1mm (0.039) to 150mm (5.905)	4,000 (900) - 8,000 (1,800)	500				
1432-T2	11.15 (0.438)			22.00 (0.866)	1mm (0.039) to 150mm (5.905)	5,250 (1,180) - 10,500 (2,360)	500				
1632-T2	12.70 (0.500)			24.00 (0.945)	1mm (0.039) to 150mm (5.905)	5,250 (1,180) - 10,500 (2,360)	500				
1832-L9	14.24 (0.563)			27.00 (1.063)	1mm (0.039) to 150mm (5.905)	6,250 (1,400) - 12,500 (2,800)	500				
2032-L9	15.90 (0.625)			30.00 (1.181)	1mm (0.039) to 150mm (5.905)	7,250 (1,630) - 14,500 (3,260)	500				
2432-L9	19.05 (0.750)			38.00 (1.496)	1mm (0.039) to 150mm (5.905)	7,250 (1,630) - 14,500 (3,260)	500				
3232-L9	25.40 (1.000)			48.00 (1.889)	1mm (0.039) to 150mm (5.905)	8,000 (1,800) - 16,000 (3,600)	500				
Head Types   FP = Flat Protruding   SP = Countersunk Protruding   SF = Countersunk Flush   Grin   ength Increments   1.150mm											



#### Kwikbolt | Kleko360

The Kleko360 product range covers the standard hole sizes and grip ranges that are found within the aerospace and defence market. Each product is identified by part marketing and colour coding and can coalesce with the standard cylindrical and hex body tooling interface, this means that Kleko360 is a line replaceable range to our customers' existing tooling set up on aerospace build lines.

These single sided temporary fasteners (SSTP) allow for doweling, clamping and installation all from one side. They provide a high load and standard 1 inch grip range for hole diameters from 4/32 inch (3.175mm) to 5/16 inch (7.94mm) and can be installed with existing tooling.

The benefits of the Kleko360 over the traditional Cleco and Wedgelock is that Kleko360 increases the clamping area, increases the clamping loads, reduces damage and provides doweling, while at the same time improving the quality and speed of your aerospace production line with a high load, high sheers fastener.

It is provided by Kwikbolt's subsidiary Kleko360 and all information can be found at www.kleko360.com





## **BESPOKE KWIKBOLT**

We also provide a bespoke temporary blind fastener service to businesses with more specific requirements. We will design, manufacture, test and supply bespoke products, which undergo a stringent trial and evaluation process to ensure that the design meets all of our customers' business challenges with the minimum number of versions. Once approved, this bespoke product is produced in volume to provide the build line with our fastener technology solution.

Our bespoke service can be requested via email and one of our engineers will contact you to discuss your requirements and start the process.

#### The type of information we need is:

- Diameter of holes
- Holes tolerance
- Lengths of doweling required (min / max)
- Grip ranges (min / max)
- Clamp load requirements
- Head configuration
- Materials being clamped / dowelled
- Estimated quantities needed
- Estimated delivery date

Your new design will then be with you in 4 weeks for an engineering review.

## QUALITY

Kwikbolt products meet a wide range of both international and aerospace-specific quality standards. Due to the high level of cycle use (up to 500 times), our products are manufactured to meet these duration requirements as well as the high load, high sheer and clamping force. Every Kwikbolt fastener is tested before the product is shipped from our facilities in the UK. This includes mechanical and performance testing as well as a retained sample from each manufacturing batch.

Kwikbolt design and manufacture within an ISO9001:2015 and an EN BS9100 environment. This framework ensures that we deliver high-performance products that can be used immediately, on time.

## **ACCESSORIES**

At Kwikbolt we provide a complete fastening solution to customers and thus we have a full range of accessories to support the installation and removal of all of our fasteners. Each piece of equipment has been designed and modified to ensure the optimum performance of our Kwikbolts and to provide the guickest installation, removal and maintenance.

### **Installation / Removal Tools**

Our nut runners are set with the torque requirements for the correct installation and removal of your Kwikbolts, along with the interface for the head configuration and driver type.

### **Tooling Interface**

To ensure that each nut runner integrates correctly with all of the Kwikbolt sizes, we have created a range of interfaces.















For more information, to arrange a visit or request a quote, please contact the team.

Kwikbolt Ltd, Fleming Court, Leigh Road, Eastleigh, Hampshire. SO50 9PD. United Kingdom (UK)

Telephone: +44 (0) 23 8220 5775
Email: info@kwikbolt.com
Web: www.kwikbolt.com





