# Buildex®

## Product Guide 2010

Buildex®

# Corporate Profile

## ITW Construction Products (SEA)

Founded in 1912, ILLINOIS TOOL WORKS INC. (ITW) designs and produces an array of highly engineered fasteners, components, assemblies and systems. These products improve customers' competitive positions by increasing productivity and quality, while reducing manufacturing and assembly costs.

A leading diversified manufacturing company with nearly 100 years of history, ITW has 875 decentralized business units in 54 countries employing approximately 65,000 men and women who are focused on creating value-added products and innovative customer solutions.

In 1973, ITW Asia, a wholly owned subsidiary of ITW, was established and strategically located in Singapore. As part of ITW Worldwide Construction Group, ITW Asia, now known as ITW Construction Products (SEA), is committed to customer service and satisfaction, principally in the form of job site assistance, consultation and short delivery time. This service orientation is the cornerstone of ITW's success, enabling us to provide our customers with the type of industry-leading technology they require, wherever and whenever they need it.

To serve our valuable customers in the region better, ITW Construction Products (Thailand), the branch sales office of ITW Construction Products (SEA), was also officially set up in Bangkok, Thailand, in May 2009. This enabled our representative to provide professional and efficient service, support and delivery to the Thai construction industry.

Today, ITW Construction Products (SEA) has grown its business in all the Asean countries that includes Singapore, Malaysia, Indonesia, Thailand, Philippines and Vietnam. Products marketed in this region include array of Buildex® Self-Drilling Screws and Ramset™ Fastening System.

## ITW Buildex® is Australia's leading manufacturer and supplier of self drilling screws and fasteners.

Established in Australia since 1917, the head office is based in Melbourne Victoria, with an on-site manufacturing plant producing hundreds of millions of self-drilling screws annually, from Heading to Neo Assembly, alloy-plating to head painting and stainless steel fasteners.

ITW Buildex® has sales, warehousing, technical service and dispatch facilities in 8 branch locations across Australia, and exports to 18 countries throughout Asia, Africa, Europe and the Pacific.

ITW Buildex® is committed to being the leading Australian manufacturer and marketer of construction fastener solutions based on:

- **Innovative Products**
- **Outstanding Quality**
- **Uncompromising Customer Service**

# Contents

# Buildex® Self-Drilling Screws

## ITW Buildex® is Australia's leading manufacturer and supplier of self drilling screws and fasteners.

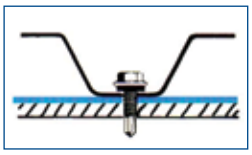



The Melbourne, Australia manufacturing plant produces hundreds of millions of fasteners annually and is involved in all fastening manufacture processes:

- Heading
- Forging
- Thread Rolling
- Heat Treatment
- Mechanical Plating
- Climaseal®
- Head Painting
- Neo Assembly
- Packaging and Distribution

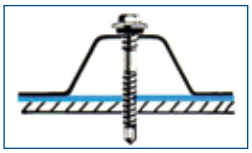

- Buildex® Fasteners are made to exacting high standards of quality, with strict inspection and testing procedures.
- Buildex® is the first to offer warranties for screws. Only Buildex brand screws can give you assurance against corrosion for your projects.
- Buildex® is Australian quality endorsed to ISO9001 and committed to developing modern, innovative products with constant research and development.
- Buildex® has the appropriate fastener solution for every type of application. All Buildex® Fasteners are designed to do their particular job more efficiently and effectively than conventional fasteners.
- Buildex® Fasteners are available in a choice of finishes that comply with both Australian (AS3566) and International standards, to provide maximum endurance over a wide range of climatic and environmental conditions.

## Key Fixings of Self-Drilling Screws



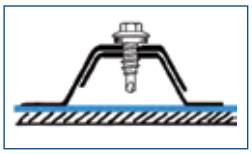
### Valley Fixing

It is fixing at the lowest end of the sheet profile against the steel purlin/support



### Crest Fixing

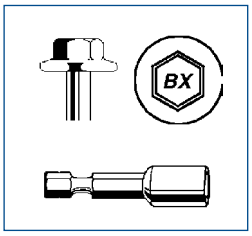
It is the securing at top of the profile against the steel purlin and away from the path of the waterflow.



### Stitching or Lapping

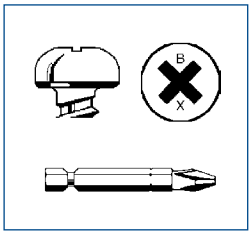
It is the securing of the thin steel sheets together.

## Buildex® Head Styles



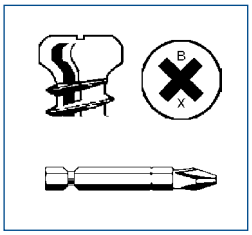

### Hexagon Head with Washer Face

The integral washer recess is to accommodate a resilient watertight sealing washer. The washer face provides a bearing surface to the drive socket.
**Available in 1/4”, 5/16” and 3/8” socket sizes.**



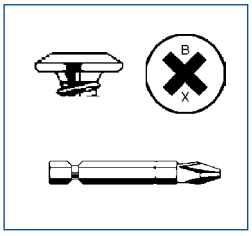
### Pan Head

A round head with a flat underside fully threaded for accurate clamping. Designed for applications fixing against metal surfaces.
**Driven with a Philips #2 drive bit**



### Special Pan Head

A low profile head found on Buildex® RippleTeks screws. Used for fixing mini-corrugated sheeting, it seals without a washer and does not deform the sheeting.
**Driven with a Philips #2 drive bit**



### Wafer Head

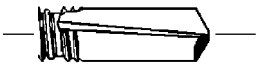
A versatile head style used for many fastening applications. When used with fixing clips, the low head design eliminates the risks of dimpling the roof when the tradesperson walks on it.
**Driven with a Philips #2 drive bit**

# Buildex® Self-Drilling Screws

## Screw Point Types

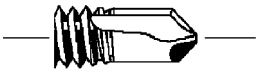
### T17 Point

Forward cutting blade for use through roofing sheet into timbers.



### Teks 5 Point

Forge drill point for drilling through steel up to 12.5mm.



### Teks Point

Forged drill point for drilling through steel of up to 6mm.

### Zips Point

Multiple application drill point for direct drilling in timber battens, steel purlins of 1.9mm and thin gauge steel battens.

## Screw Size Identification

For all screw descriptions in the Buildex® range, the first figure indicates the gauge of the screw (g), the second figure indicates the threads per inch (TPI), and the third figure indicates the length of the screw (mm).

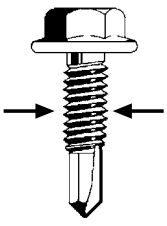
**eg. 14-10 x 20mm**
***= 14 gauge, 10 threads per inch, 20mm in length***

### Gauge

The gauge of a screw is determined by the basic size of the thread outside diameter

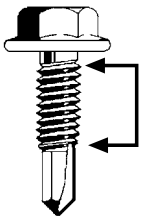
Standard guages for Buildex® screws

| | |
|---|---|
| **6 gauge** | **2.5mm** |
| **8 gauge** | **4.2mm** |
| **10 gauge** | **4.8mm** |
| **M6** | **6.0mm** |
| **12 gauge** | **5.5mm** |
| **13 gauge** | **6.1mm** |
| **14 gauge** | **6.3mm** |
| **15 gauge** | **6.5mm** |



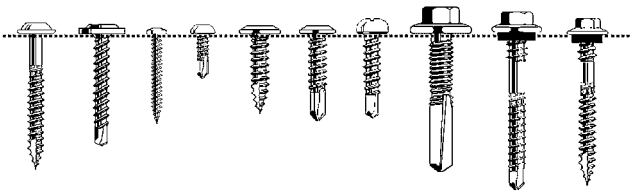
### TPI (Threads per Inch)

The TPI is the number of thread crests that can be counted along a lineal measurement of 1 inch (25.4mm).

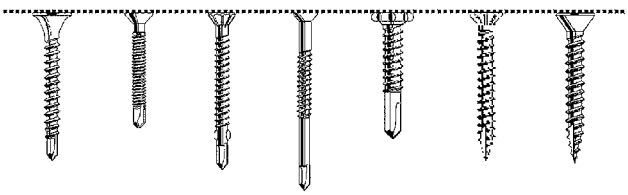


### Length of Fasteners

The following types of fasteners are measured from the underside of the head to the point of the screw.



The following types of fasteners are measured from the top of the head to the point of the screw.

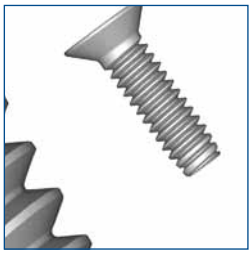




# Basic Types of Threads

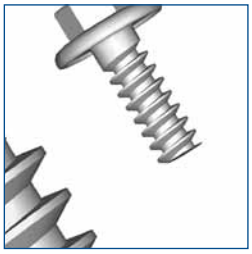
### Coarse Thread (up to 16TPI)

Also known as spaced threads, they are normally used for all timber applications and for steel for the lesser thicknesses (1mm to 4.5mm normally). Coarse threads are also used in preference when heavy protective coatings are specified eg.: Climaseal® 4 and ZACS 4®.



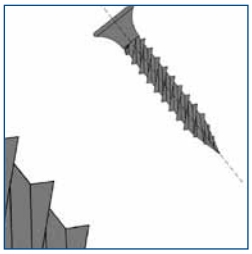
### Fine Thread (over 16TPI)

Also known as machine threads, are only used in steel applications. Fine threads are for use with thicker steels (2.4mm to 12mm thickness)



### Buttress Thread

Buttress thread is used for the best holding power in thin metal (0.4mm to 1.0mm). Currently used on Buildex® Metal Batten Teks, FibreZips® and RoofZips®.

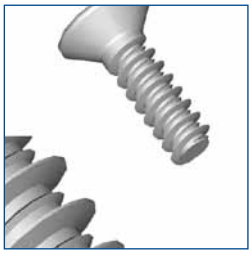


### Twin Start Thread

Also known as twin lead threads, they move forward at twice the speed during installation. They are used for low grade fixings such as plasterboard which is also glued to the host material.

### Taptite Thread

Taptite threads are used into pre-drilled holes in steel and plastics. They form their own threads in the same way as other self-drilling screws. Due to the trilobular shape the thread forming occurs at a lower torque and they have superior locking and resistance to loosening.



### Hi-Lo Thread

Are used in soft timbers, plastics and into thin steel sections. Hi-Lo Threads have superior holding power compared to conventional coarse threads in these types of materials.

# Buildex® Self-Drilling Screws

## Patent Protected Product Features

With constant research and development, Buildex® is the pacesetter in the design and manufacture of fasteners for the building industry, with a range of unique product features.

### Buildex® Warranty

An industry first, it indicates what Buildex® fasteners are covered by our comprehensive warranty, guaranteeing the highest quality and performance.
**For full details see inner back cover**

### HiGrip®

Design feature prevents the possibility of water entry through the roof sheeting.
**For full details see page 15**

### ShankGuard®

Design feature that protects the fastener shank from scratching and scouring during installation, increasing the corrosion protection.
**For full details see page 14**

### Available Head Painted

Indicates fasteners are available head painted to match the colour of the cladding / sheeting.
**For more details see page 19**

## Corrosion Coatings

Buildex® Fasteners are available in a range of anti-corrosive coatings which meet both Australian and International Standards providing maximum endurance over a wide range of climatic and environmental conditions.

### Climaseal® 4

A coating that meets and exceeds AS3566.2-2002 Class 4, under real world testings.
**For full details see page 13**

### Climacoat® 3

A sacrificial Zinc based coat with organic top coat for protection against treated timbers.

### Climaseal® 3

A coating that meets AS3566.2-2002 Class 3 under real world testing.
**For full details see page 12**

### Zincalloy® 3

A sacrificial Zinc based coat with organic top coat.

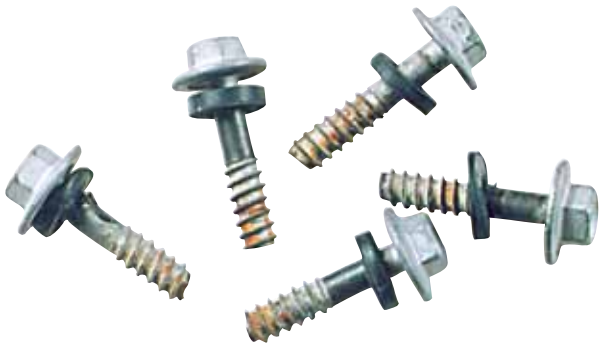
# Why Corrosion is a Problem?

## Fasteners have long been the weak link in any building structure.

**The problem lies not in any design or performance of the fastener, but their failure occurring as a result of a weakening over time due to the insidious effects of corrosion.**

Corrosion is normally associated with non-precious metals such as steel, zinc, aluminum and to a lesser extent copper. These metals only exist as they are refined from ore by smelting. In the presence of air, water or salt, these metal will corrode rapidly. The presence of oxygen will cause oxides to form, which gives the metals a disfigured appearance and will eventually cause them to be unsafe or useless. Corrosion is the natural process of reverting the metal to the ores from which it came.

Corrosion of fasteners can be caused by salt laden air from the ocean, airborne acids from industry and chemical sprays, U.V from the sun or humidity in tropical and moist areas.



Corrosion dramatically affects the performance of fasteners over their lifetime, and subsequently effecting the long term structural integrity of any construction. Exposure to corrosion can cause a weakening, cracks will form and grow where the fastener was carrying the load, and a failure will occur.

This photo highlights under-roof corrosion of roofing fasteners.

The fasteners are in a dangerously advanced state of deterioration due to corrosion, and in one case have broken off completely the connection between the roofing profile and the metal batten.

The structure is approximately 12 years old and located in an area classified as mild to moderate marine, with strong prevailing winds.

# Corrosion Class Categories

## CLASS 1

For general **internal** use where corrosion resistance is of minor importance. Most ZINC/YELLOW drywall and chipboard screws are in this category. The thickness of the plating on the fastener is generally 3-5μm (microns).

## CLASS 2

For general **internal** use where significant levels of condensation occurs. Electroplated ZINC/YELLOW is generally used to meet this class. The thickness of the plating on the fastener is generally 10-12μm

## CLASS 3

For general **external** use in mild and moderate industrial and mild marine application. In moderate marine applications Buildex® strongly recommends Climaseal® 4.

The class is intended for roofing and cladding screws in standard applications. Fastener compliance used to be achieved by accelerated laboratory testing. The new revision recommends the use of 'real-world' testing – exposure on an outdoor test site with a maximum observable rust presence of 5%.

In the case of heavy zinc coatings, 40μm is deemed to comply. Alloy plating of ZINC/TIN 25μm is equivalent to heavy zinc at 40μm.

**Buildex coating Climaseal® 3 complies with this class.**

## CLASS 4

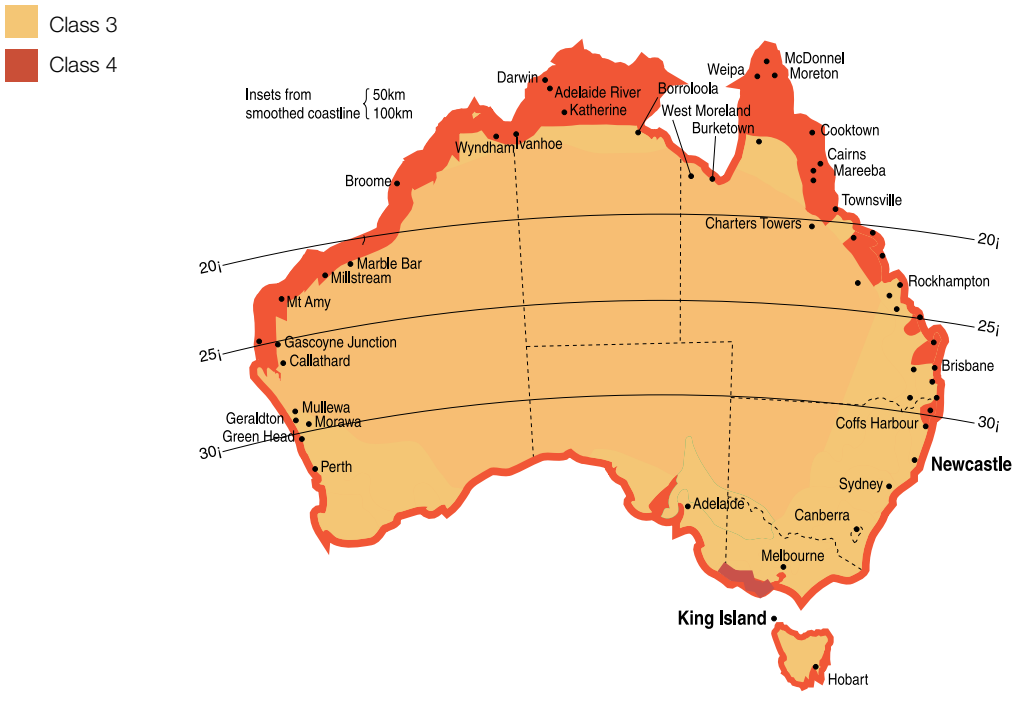
For **external** use in moderate and severe marine environments, classified in accordance with ISO 9223 as generally between 100m from the beach front to approximately 300m inland. In high winds this may extend further inland.

Compliance is to be assessed through real world testing. These outdoor test sites must be located less than 500m from the mean high water line, in a coastal area with surf for most of the year.

**Buildex coating Climaseal® 4 complies with this class.**

**Note: When fixing polycarbonate, stainless steel and aluminum roofing profiles in highly corrosive encironments, it is recommended that stainless steel fasteners should be used. To confirm the correct application contact the Buildex® technical team.**

**External Corossive regions of Australia**



# Real World Test

## Only Buildex® uses Real World outdoor exposure Testing to develop superior coatings

**Buildex® has pioneered real world testing to measure actual corrosion performance of both Buildex® and competitor products.**

Outdoor test sites expose the fasteners to the combination of corrosive influences that exist in the real world including salt spray, humidity, ultra-violet light, acid rain and compatibility with roof sheeting.

Coastal climates are generally highly corrosive and can extend tens of kilometers inland, depending on the prevailing winds and topography. Being located in the Southern hemisphere and surrounded by the worlds largest ocean regions, means that Australia is exposed to more chlorides in the air than countries in the Northern hemisphere.

Corrosion dramatically affects the performance of fasteners over their lifetime, subsequently affecting the long-term structural integrity of any construction. As a result, Buildex® fasteners must be able to withstand the corrosion action in order to achieve a reasonable service life.

***Our customers expect it!***

## Real World Test Sites

In order to test the actual corrosion performance of our products, Buildex® operates and supports a research, development and testing program. Buildex® pioneered the use of “real world” outdoor exposed testing, operating since 1994 three outdoor testing stations and using a further four sites controlled by BHP and CSIRO.

These stations are built in known corrosively aggressive locations around Australia, such as Bellambi Point (NSW), Flinders (VIC), King Island (TAS), and Newcastle (NSW) in order that Buildex® can obtain the test results quickly. The severe conditions at these sites will give an indication of the product performance after approximately one year.

Unlike traditional “accelerated” laboratory testing only outdoor test sites expose the fasteners to the combinations of corrosive influences that exist in the “real world” such as:

- Chlorides (Marine conditions)
- Humidity (Atmospheric condensation)
- Acid rain (Industrial areas)
- Ultra Violet (Sun exposure)

# Real World Test

Panels representing sections of roofing, complete with screws, are exposed to the elements and the results are monitored regularly. From these results, Buildex® can pinpoint which coatings perform best, regularly putting out new panels with new coatings, as well as panels for checking the consistency of our existing coating process over time. We also put out comparative panels of competitor products on a regular basis.

The sheltered rack simulates under-roof and non-rain washed situations.

Each outdoor site contains two exposure racks. The open rack simulates conditions on the roof.

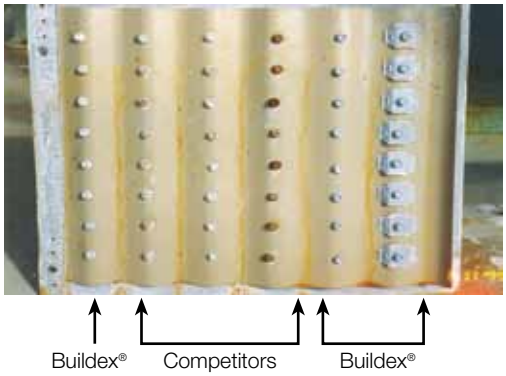
# The "Real" Australian Standard

## Results from Testing Program

Buildex® has nearly 15 years experience with real world testing. Many of our products have been developed and improved as a direct result from what has been learned during the testing.

Many competitors' anti-corrosive coatings which pass laboratory testing have failed miserably under "real world" outdoor exposure testing, even those that achieve "deem to comply".

This outdoor exposure panel clearly illustrates none of our competitors products can compare with Buildex®.





Buildex®


Brand I


Brand M

**Buildex® is your 1st CHOICE in fasteners when fighting corrosion!**


Brand S


Brand T1


Brand B


Brand M


Brand P


Brand T2

All screws are from a sheltered rack at the test site at King Island (TAS) and were exposed for 16 month period between August 2005 and November 2006.

The new Australian Standard AS3566 Class 4 is for the external usage of self-drilling screws in severe marine environments. It requires that the screws be "tested at an approved test site, with no red rust present on the significant surfaces of 95% of the fasteners tested". These outdoor test sites must be located less than 500m from the mean high water line in a coastal area with surf for most of the year.

# Climaseal® 3

## Climaseal® 3 is a unique anti-corrosive coating system consisting of 3 distinct layers which combine to give exceptional corrosion protection:

1. A mechanically deposited zinc tin alloy coating giving excellent galvanic protection.
2. A passivation coating to passivate the zinc tin alloy, further inhibiting coating loss.
3. An aluminum filled polyester coating with good all-round corrosion and long-term weathering resistance.

Designed to conform to AS3566 Class 3, real life atmospheric testing has confirmed that the performance of Climaseal® 3 far exceeds the standard!

### Benefits of Climaseal® 3

- Minimal risk of coating damage during installation thanks to new and tougher coating formula.
- Better driving performance because of a smoother, harder finish.
- Superior performance in extreme temperatures, developed and tested in Australia for Australasian conditions.
- Effective sealing of roofing sheets and cladding. The black seal remains elastic in extreme temperatures and will not breakdown or allow water entry.

**Climaseal® 3 should be used for general external use in mild and moderate industrial, and mild marine applications.**

**Climaseal® 3 screws are easily recognisable by their silver grey appearance, and the silver stripe found on the label packaging of Buildex® bulk boxes.**


**For your sign of quality, look for the "BX" mark on the screw head.**

Pudong Airport

### Buildex® Warranty Periods – Climaseal® 3

| | |
|---|---|
| Very Severe Marine | *Not Recommended* |
| Severe Marine | *Not Recommended* |
| Mild and Moderate Marine | *7 Years* |
| Very Severe Industrial | *Not Recommended* |
| Severe Industrial | *Not Recommended* |
| Industrial | *20 Years* |
| Light Industrial / Urban | *30 Years* |
| Mild Urban / Rural | *40 Years* |

**For Full Warranty details see inside back cover**

# Climaseal® 4

## Climaseal® 4, the new coating finish from Buildex®, is the end-result of over ten years of "real world" testing, providing a thorough understanding of corrosion and its prevention.

Real world testing has exposed many deficiencies with the acceptance of coated finishes as "deem to comply", simply because of thickness and density measurements.

The new Climaseal® 4 coating is a layered system, combining both a high density sacrificial coating substrate, over which a barrier top coat has been applied.

The Climaseal® 4 is then applied by a new environmentally friendly, processing system. Climaseal® 4 meets and exceeds AS3566 Class 4 specifications.

Unisys Office (Pune, India)

**Climaseal® 4 should be used in coastal areas where salt, wind, UV and moisture are prevalent, in tropical zones and industrial areas. It is particularly recommended for use in moderate and severe marine environments.**

**All Climaseal® 4 coated screws are easily recognisable by their silver/blue appearance, the "BXZ4" marking on the screw head, and the blue stripe found on the label packaging of Buildex® bulk boxes and trade packs.**

**For your sign of quality, look for the "BXZ4" mark on the screw head.**

### Buildex® Warranty Periods – Climaseal® 4

| | |
|---|---|
| Very Severe Marine | *Not Recommended* |
| Severe Marine | *12 Years* |
| Mild and Moderate Marine | *20 Years* |
| Very Severe Industrial | *Not Recommended* |
| Severe Industrial | *20 Years* |
| Industrial | *30 Years* |
| Light Industrial / Urban | *50 Years* |
| Mild Urban / Rural | *60 Years* |

**For Full Warranty details see inside back cover**

# ShankGuard®


## Scratched Screws Problems

Under roof corrosion of roofing fasteners is the great hidden danger. All protective coatings are subjected to damage during installation. This damage is a scratching by the roof sheeting along the shank of fastener.

Example of the protective coating on the shank being damage during installation allowing the corrosive environment to attack the expose metal of the fastener shank.

## Buildex® Solution

ShankGuard® is a revolutionary patented design feature, specially developed by Buildex® to guard and protect fastener shanks from scratching and scouring that can occur when crest fixing metal roofing.

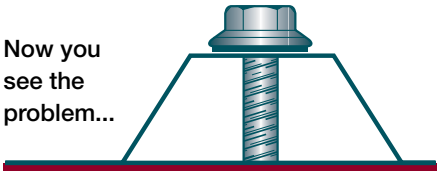
## ShankGuard® Mechanism

ShankGuard® actually cuts a slightly larger hole in the roofing profile than the shank diameter, guarding and protecting it against scratching and scouring from the sharp edges of the pierced hole in the metal roof. ShankGuard® allows the fastener shank to remain free of scratches and damage during installation, which in turn keeps the corrosion coating intact and fully functioning.


Comparative tests on the corrosion resistance of fastener shanks carried out in accordance with AS3566 show an increase in corrosion resistance as a result of ShankGuard®.

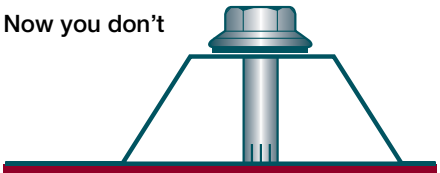
***Warning: Beware of ineffective imitations which do not provide the same protection as Buildex® ShankGuard®!***

**Now you see the problem...**



Typical scratching and scouring of fastener shank caused by the sharp edges of the pierced hole during installation

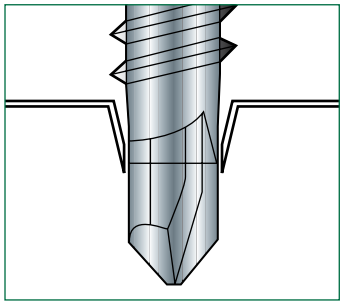
**Now you don't**



The slightly over-sized hole cut by Shank Guard protects the shank of the fastenenr. Corrosion resisitance of fastener head and shank are now are the same.

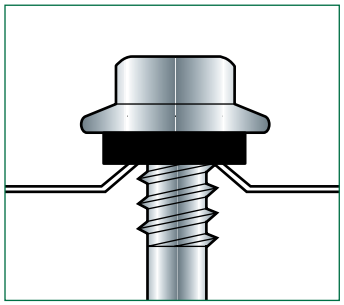
# HiGrip®

## HiGrip® from Buildex® is a revolutionary design in roof fasteners that overcomes the traditional problems with crest fixing metal roofing to steel or timber.



### Water Entry due to Indentation

When roofing screws are placed on the top of the roofing profile prior to installation, an indent area sometimes forms around the screw due to the operator forcing down heavily before drilling commencement. When the profile is fixed down with a non-HiGrip® fastener, this indentation remains around fastener, causing water entry.



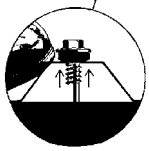
### Buildex® Solution

HiGrip® is a secondary thread located at the top of the shank under the washer face. During installation the thread of the HiGrip® is carrying the roof profile in an upward motion while the washer face is carrying the fastener in the downward motion.

The upward pressure at the HiGrip® tends to straighten or reverse the indent made by the initial penetration, therefore preventing the possibility of water entry.

### HiGrip® is designed to achieve a number of functions:

- The operator feels the thread bite, a clear signal to prevent over-drilling.
- Restricts 'over-driliing' which leads to ponding or dimpling.
- Prevents sheet moving down shank when roof is walked on.



- Grips sheets to provide 'positive' joint with EPDM washer.
- Extrudes metal around the fastener hole upwards making water ingress more difficult.
- Unthreaded shank prevents profile riding up during fixing.

# FibreZIPS®

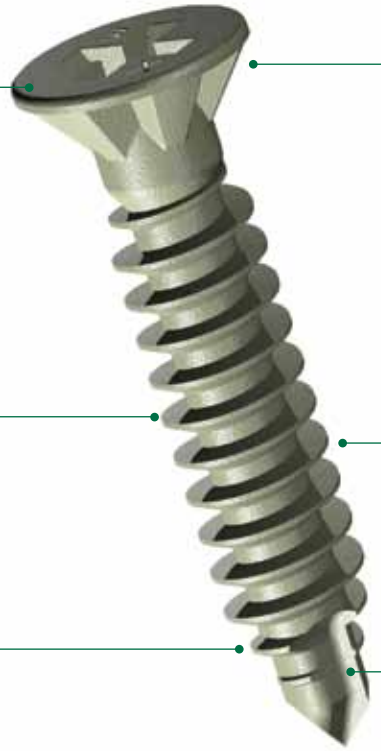
## FibreZIPS®

## Unique ‘Patent Protected’ Product Features:

**Countersunk rib head** designed with cutters to remove fibre cement material as the head advances into the sheeting. Now available with a Bugle Head for compressing rather than embedding into 4.5mm sheeting.

**Zincalloy® 3** coating to meet AS3566 Class 3.

**Fluted lead threads** equispaced near the point of the screw which help to ream out and break up the sheet material during fixing.

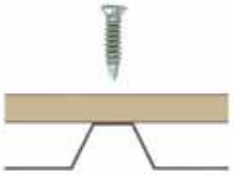


**Patented lip feature**, ensures the screw will stop as soon as it makes contact with the surface of the board. Prevents overdriving but allows for minimum embedment and a flush finish.

**Specially designed** buttress thread which unlike conventional threads has a thirty degree angle on one side and seven degrees on the other. This reduces the distortion of the purlin or batten when fixing. As a result there is a stronger and more robust connection, greater holding power and a better ability to handle movement of the sheet material.

**ZIPS® point** design allows for quick and easy installation when fixing to both timber battens and thin metal battens up to 1.6mm

## How the FibreZIPS® works:



**1.** Use a Phillips #2 drive bit attached to a battery or mains powered gun. No pre-drilling or countersinking required.

**2.** Zips® point design allows for maximum removal of fibre cement from the hole.

**3.** Fluted lead threads break up the cement fibre during the drilling of the sheet, ensuring clearance for the thread.

**4.** Buttress thread ensures superior holding power in thin metal.

**5.** Cutters under the head remove fibre cement material as the head advances into the sheet.

**6.** Lip feature ensures the screw stops as soon as it makes contact with the surface of the board.

**7.** Head is fully embedded to create a flush finish.

# PolyZIPS®

POLY ZIPS®
Fixing polycarbonate roofing to timber & steel battens

## Predrills its own expansion hole

**Save up to 50% installation time!**

- Suitable for roofing profile heights 16mm to 29mm
- New ZIPS® drill point for fast and easy fastening into both timber and metal battens up to 1.6mm thick
- Uniquely designed 26mm EPDM washer with inner sealing ring to prevent water entry
- Climaseal® 3 coated that meets real world testing to AS3566 Class 3
- Patent pending wing design drills an over sized hole into the polycarbonate material, eliminates sheet buckling and water entry due to expansion in high temperatures
- Backed by the Buildex® Warranty to match the life of the sheeting


PATENT PROTECTED

**No predrilling required**


Available in recyclable plastic boxes in quantites of 500

# SQUARE-LOK®

## Square-Rib Roofing Cyclone Assembly

**SQUARE-LOK's unique design allows it to outperform current conventional bonded washers systems under cyclonic conditions.**

SQUARE-LOK® has a large contact area with the roofing profile and self-aligns with the roofing profile, even when installed off centre. This spreads the up-force load from heavy winds evenly across the surface of the cyclone plate. It eliminates the problems of chafing and small contact area of conventional bonded washers systems.


### SQUARE-LOK® Testing

SQUARE-LOK® has been tested by the **James Cook University, Cyclone Structural Testing Station** in report TS570. Cyclic fatigue load trials were performed at 10,000 cycles as described in clause 3b of the Northern Territory BCA appendix. Lysaght 0.42mm BMT Trimdek cladding was attached to 1.6mm cold formed steel sections, over 1200mm spans, for a permissible stress design load of 4.2kPa.

**SQUARE-LOK® successfully completed the required 10,000 load cycles. The roofing resisted the proof load, with some evidence of cracking observed from the fixing locations.**


100 cycles


400 cycles


1,000 cycles


10,000 cycles PASSED

## Benefits & Advantages

- Significantly improves the roof's holding capability
- Quicker and easier to install
- Self-aligns to the surface of the roof sheet
- Tested and passed by the James Cook University Cyclone Testing Station
- DABM Approved
- Provides a neater, more aesthetic roof appearance
- Includes a double washer system, an upper and lower EPDM Seal, preventing water entry between the screw head, cyclone plate and roofing profile

- ColorMatch® paint to match the colour of the roofing profile

# ColourMatch®

## Matching your Imagination

ColorMatch® is a durable coating on the heads of Buildex® fasteners and cyclone plates. It not only provides optimum colour-matching to coloured roofing or cladding, but is designed to “age” at the same time.

It is the perfect match for today’s aesthetically inspired roof colours!

## More than Good Looks

Developed in Australia and unique to Buildex®, the ColorMatch® process incorporates the latest advances in UV-resistance technology. The process ensures that fastener colours “age” at the same rate as the coloured roofing sheets they are matched to, hence eliminating costly call backs.

The coating has been extensively field tested under the most extreme conditions.

## Benefits with ColorMatch®

Resistant to damage during installation

Optimum colour-matching for any color of roofing

UV resistant, won’t crack or split

# DEKS®

## Dektite®

### Perfect for flashing pipes on metal roofs

| Code | Pipe mm | Base mm | Pitch | Colour |
|---|---|---|---|---|
| DFE 0-35 | 0-35 | 99 x 99 | 0 - 60º | **Black** (EPDM)* |
| DFE 5-55 | 5-55 | 137 x 137 | 0 - 45º | **Grey** (EPDM)* |
| DFE 50-70 | 50-70 | 178 x 178 | 0 - 45º | **Red** (EPDM)* |
| DFE 5-120 | 5-120 | 218 x 218 | 0 - 45º | |
| DFE 110-170 | 110-170 | 284 x 284 | 0 - 45º | |
| DFE 160-220 | 160-220 | 365 x 365 | 0 - 45º | |
| DFE 160-300 | 160-300 | 453 x 453 | 0 - 45º | |
| DFE 290-440 | 290-440 | 581 x 581 | 0 - 45º | |

*E.P.D.M. withstands temperatures from -50ºC to 115ºC, & up to 150ºC intermittently

## Dektite® EZi-Seal™

### Forget the silicone – just screw it down

| Code | Pipe mm | Base mm | Pitch | Colour |
|---|---|---|---|---|
| DFE 0-35EZ | 0-35 | 99 x 99 | 0 - 60º | **Black** (EPDM)* |
| DFE 5-55EZ | 5-55 | 137 x 137 | 0 - 45º | |
| DFE 50-70EZ | 50-70 | 178 x 178 | 0 - 45º | |
| DFE 5-120EZ | 5-120 | 218 x 218 | 0 - 45º | |
| DFE 110-170EZ | 110-170 | 284 x 284 | 0 - 45º | |
| DFE 160-220EZ | 160-220 | 365 x 365 | 0 - 45º | |
| DFE 160-300EZ | 160-300 | 453 x 453 | 0 - 45º | |
| DFE 290-440EZ | 290-440 | 581 x 581 | 0 - 45º | |

*E.P.D.M. withstands temperatures from -50ºC to 115ºC, & up to 150ºC intermittently

## Dektite® Retrofit™

### When it has to flash around, not over

| Code | Pipe mm | Base Ø mm | Pitch | Colour |
|---|---|---|---|---|
| RF 801 | 20 - 70 | 160 | 0 - 40º | **Black** (EPDM)* |
| RF 802 | 50 - 185 | 273 | 0 - 40º | **Grey** (EPDM)* |
| RF 803 | 85 - 255 | 369 | 0 - 40º | **Red** (EPDM)* |
| RFS 4 | 235 - 425 | 780 x 680 | 0 - 40º | **Grey** (EPDM)* |

*E.P.D.M. withstands temperatures from -50ºC to 115ºC, & up to 150ºC intermittently

## Dektite® Flashing

### Dekstrip® forms and stretches to solve all those flashing problems

| Code | Length m | Width mm | Colour |
|---|---|---|---|
| DS23-180 | 23 | 180 | **Grey** (EPDM) Thermoplastic EPDM will withstand temperatures from -50ºC to 115ºC, & up to 150ºC intermittently |
| DS23-235 | 23 | 235 | |
| DS23-305 | 23 | 305 | |
| DS15-450 | 15 | 450 | |
| DS10-180 | 10 | 180 | |
| DS10-235 | 10 | 235 | |
| DS10-305 | 10 | 305 | |
| DS3-235 | 3.1 | 235 | |

Separate strip of aluminium included in all roll lengths except the 3.1mm

# Metal Teks® Roofing & Cladding Screws

## For fixing 2.5mm to 6mm roofing & cladding profiles to steel purlins

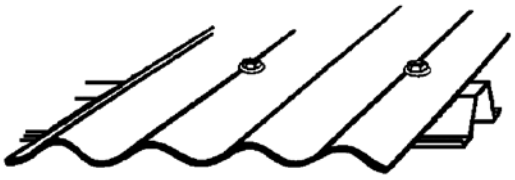
### Hexagon Head TEKS® – Climaseal® 3 with & without EPDM

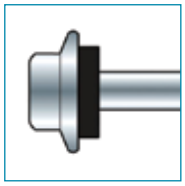
**Buildex® Warranty**

**Climaseal® 3**

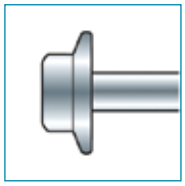
**HiGrip®**

**ShankGuard®**





Cut Washer



| Gauge | T.P.I x Length | Washer Type | Pack / Carton Qty | Part Number | Product Description | Product Feature |
|---|---|---|---|---|---|---|
| *Valley Fixing* | | | | | | |
| 4.8mm / 10g | 16 x 16 | Cut Washer | 1000 / 4 | 1A-CT10-1616-HS | CTEKS 10-16x16 HWFS | |
| 5.5mm / 12g | 14 x 20 | Cut Washer | 500 / 4 | 1A-CT12-1420-HS | CTEKS 12-14x20 HWFS | |
| | 14 x 30 | Cut Washer | 500 / 3 | 1A-CT12-1430-HS | CTEKS 12-14x30 HWFS | |
| *Crest Fixing* | | | | | | |
| 5.5mm / 12g | 14 x 50 | Cut Washer | 1000 | 1A-CT12-1450-HG | CTEKS 12-14x50 HGS | |
| | 14 x 55 | Cut Washer | 1000 | 1A-CT12-1455-HG | CTEKS 12-14x55 HGS | |
| | 14 x 68 | Cut Washer | 1000 | 1A-CT12-1468-HG | CTEKS 12-14x68 HGS | |
| *Stitching* | 15 x 20 | Cut Washer | 500 / 3 | 1A-BT15-1520-HS | CMBT 15-15x20 HWFS | |
| *Concealed Clip Fixing* | | | | | | |
| 4.8mm / 10g | 24 x 16 | None | 1000 / 4 | 1A-MT10-2416-WF | MTEKS 10-24x16 WAF | |
| | 24 x 22 | None | 1000 / 4 | 1A-MT10-2422-WF | MTEKS 10-24x22 WAF | |
| | 24 x 30 | None | 1000 / 4 | 1A-MT10-2430-WF | MTEKS 10-24x30 WAF | |

*Head painted colours on request (minimum order quantity applies)*

## For fixing 2.5mm to 6mm roofing & cladding profiles to steel purlins

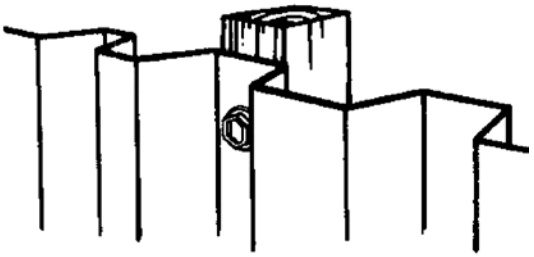
### Hexagon Head TEKS® – Climaseal® 4 with EPDM

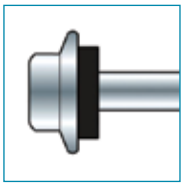
**Buildex® Warranty**

**Climaseal® 4**

**HiGrip®**

**ShankGuard®**





Cut Washer

| Gauge | T.P.I x Length | Washer Type | Pack / Carton Qty | Part Number | Product Description | Product Feature |
|---|---|---|---|---|---|---|
| *Valley Fixing* | | | | | | |
| 4.8mm / 10g | 16 x 16 | Cut Washer | 1000 / 4 | 1A-ZAC4-1016-16 | #10-16x16 HWFS C4 | BX C4 |
| 5.5mm / 12g | 14 x 20 | Cut Washer | 500 / 4 | 1A-ZAC4-1214-20 | #12-14x20 HWFS C4 | BX C4 |
| 6.3mm / 14g | 20 x 22 | Cut Washer | 500 / 3 | 1A-ZAC4-1420-22 | #14-20x22 HWFS C4 | BX C4 |
| *Crest Fixing* | | | | | | |
| 5.5mm / 12g | 14 x 50 | Cut Washer | 1000 | 1A-ZAC4-1214-50 | #12-14x50 HGS C4 | BX C4 SG HG |
| | 14 x 68 | Cut Washer | 1000 | 1A-ZAC4-1214-68 | #12-14x68 HGS C4 | BX C4 SG HG |
| | 14 x 80 | Cut Washer | 500 | 1A-ZAC4-1214-80 | #12-14x80 HWFS C4 | BX C4 SG HG |
| | 20 x 115 | Cut Washer | 500 | 1A-ZAC4-1420-HS | #14-20x115 HWFS C4 | BX C4 SG |
| 6.3mm / 14g | 10 x 50 | Cut Washer | 1000 | 1A-ZAC4-1410-50 | #14-10x50 HWFS C4 | BX C4 SG |
| | 10 x 75 | Cut Washer | 500 | 1A-ZAC4-1410-75 | #14-10x75 HWFS C4 | BX C4 SG |
| | 10 x 95 | Cut Washer | 500 | 1A-ZAC4-1410-95 | #14-10x95 HWFS C4 | BX C4 SG |
| *Stitching* | | | | | | |
| 6.3mm / 14g | 10 x 25 | Cut Washer | 500 / 3 | 1A-ZAC4-1410-25 | CT 17 14-10x25 HWFS C4 | BX C4 |

*Head painted colours on request (minimum order quantity applies)*

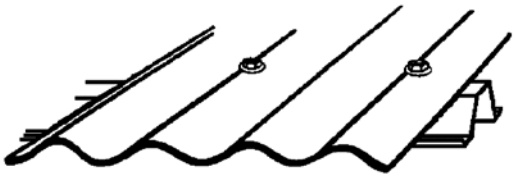
# SuperTeks® Series 500

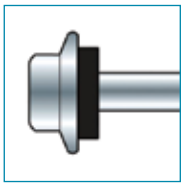
## For fixing to thick steels (hot rolled steel) from 4mm to 12.5mm

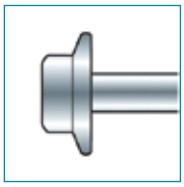
### Hexagon Head SuperTEKS® – Climaseal® 3 with & without EPDM

**Buildex® Warranty**

**Climaseal® 3**







Cut Washer

| Gauge | T.P.I x Length | Washer Type | Pack / Carton Qty | Part Number | Product Description | Product Feature |
|---|---|---|---|---|---|---|
| *Valley Fixing* | | | | | | |
| 5.5mm / 12g | 24 x 32 | Cut Washer | 500 / 3 | 1A-C512-2432-HS | CTEK5 12-24x32 HWFS | |
| *Crest Fixing* | | | | | | |
| 5.5mm / 12g | 24 x 50 | Cut Washer | 1000 | 1A-C512-2450-HS | CTEK5 12-24x50 HWFS | |
| | 24 x 65 | Cut Washer | 1000 | 1A-C512-2465-HS | CTEK5 12-24x65 HWFS | |
| *Concealed Clip Fixing* | | | | | | |
| 5.5mm / 12g | 24 x 32 | None | 500 / 4 | 1A-C512-2432-WF | CTEK5 12-24x32 WAF | |

*Head painted colours on request (minimum order quantity applies)*

# TYPE 17 Self-Drilling Wood Screws

## For fixing thin metal battens to timber trusses

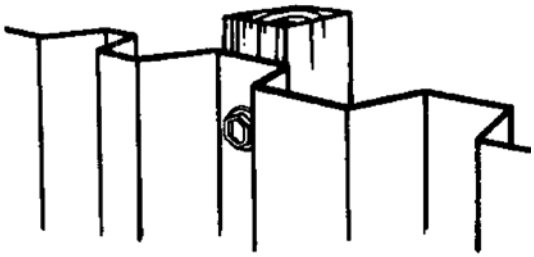
### Type 17 Self-Drilling Wood Screws – Climaseal® 3 with & without EPDM

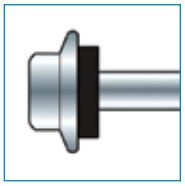
**Buildex® Warranty**

**Climaseal® 3**

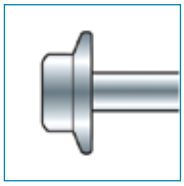
**HiGrip®**

**ShankGuard®**





Cut Washer



| Gauge | T.P.I x Length | Washer Type | Pack / Carton Qty | Part Number | Product Description | Product Feature |
|---|---|---|---|---|---|---|
| *Valley Fixing* | | | | | | |
| 4.8mm / 10g | 12 x 25 | Cut Washer | 500 / 4 | 1A-TY17-1025-HS | CT17 10-12x25 HWFS | |
| *Crest Fixing* | | | | | | |
| 5.5mm / 12g | 11 x 50 | Cut Washer | 1000 | 1A-TY17-1250-HG | CT17 12-11x50 HGS | |
| | 11 x 65 | Cut Washer | 1000 | 1A-TY17-1265-HG | CT17 12-11x65 HGS | |
| *Concealed Clip Fixing* | | | | | | |
| 4.8mm / 10g | 12 x 25 | None | 1000 / 4 | 1A-TY17-1025-WF | CT17 10-12x25 WAF | |

*Head painted colours on request (minimum order quantity applies)*

# WingTEKS®

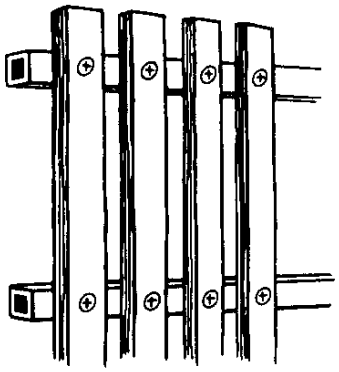
WingTEKS Self Drilling Screws

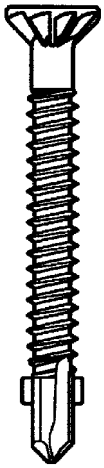
## For fixing timber and composite boards to metal

CC **Climacoat® 3**

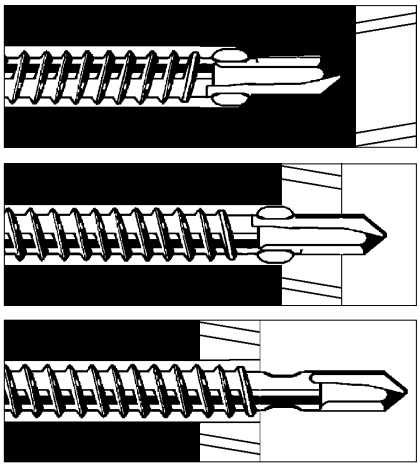
Specially designed to enable the fastener to fix timber to metal without the timber rising to the top of the screw while the metal is being drilled. Features a flat head with reaming cutters in the underside to enable the head of the fastener to self-embed for a flush or recessed finish. The new, simplified Buildex® WingTeks® range now have a new wing design, making them even quicker and easier to install.

They are available in our exclusive Climacoat® 3 finish, providing greater protection in treated timbers.





### How the Wing-Teks® Work



A. The drill point drills the timber, as the wings counter bore the hole larger than the thread diameter. With the hole being larger the thread will not engage into the timber.

B. After the Teks® point drills through the metal, the wings break off on contact with the metal.

C. The thread cutting feature on the shank cuts a mating thread in the metal and the thread continues to engage.The head then clamps this material firmly together.

| Gauge | T.P.I x Length | Pack / Carton Qty | Part Number | Product Description | Product Feature |
|---|---|---|---|---|---|
| 4.8mm / 10g | 16 x 40 | 500 / 4 | 1A-WT10-1640-CR | WINGTEKS 10-16x40 CSK/RIB | CC |
| | 16 x 45 | 500 / 4 | 1A-WT10-1645-CR | WINGTEKS 10-16x45 CSK/RIB | CC |
| | 16 x 55 | 1000 | 1A-WT10-1655-CR | WINGTEKS 10-16x55 CSK/RIB | CC |

# FibreZIPS® Self-Drilling Screws

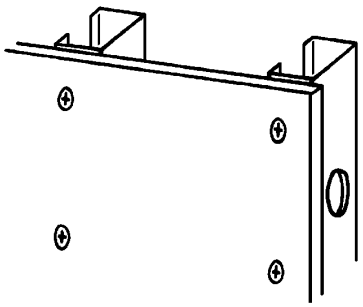
FibreZIPS®

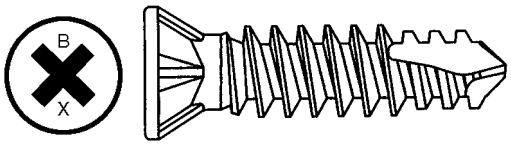
**For fixing Fibre Cement Sheeting to Timber and Thin Metal Battens up to 1.6mm**

## Countersunk Ribbed Head - FibreZIPS®

**Buildex® Warranty**

**Zincalloy® 3**






| Gauge | T.P.I x Length | Pack / Carton Qty | Part Number | Product Description | Product Feature |
|---|---|---|---|---|---|
| M5 | 18 x 20 | 1000 | 1A-FZM5-1820-CR | FIBREZIPS M5-18x20 CSK/RIB | |
| | 18 x 30 | 1000 | 1A-FZM5-1830-CR | FIBREZIPS M5-18x30 CSK/RIB | |

## Performance Data

| | Pullout Load (N) | | Pullover Load (N) | | |
|---|---|---|---|---|---|
| Host Material | | Sheeting: 4.5mm* | 6mm | 7.5mm | 9mm |
| Rondo 303 Furring Channel 0.42mm G275 | 740 | 150 | 650 | 720 | 720 |
| Rondo 129 Furring Channel 0.50mm G275 | 840 | 200 | 650 | 720 | 720 |
| Lysaght Topspan 40 0.55mm Roof Batten G550 | 1380 | 250 | 650 | 1020 | 1270 |
| Lysaght Topspan 40 0.75mm Roof Batten G550 | 2190 | 250 | 650 | 1040 | 1400 |
| Lysaght Stud 1.20mm G300 | 2700 | 250 | 650 | 1040 | 1400 |
| Lysaght Purlin 1.5mm G450 | 4200 | 250 | 650 | 1040 | 1400 |
| Pine F5 11mm Embedment | 510 | 250 | 510 | 510 | 510 |

Values given are actual averages obtained under laboratory conditions. Appropriate safety factors should be applied for design purposes.
*Values obtained from the Bugle Head FibreZIPS®.

# PolyZIPS®

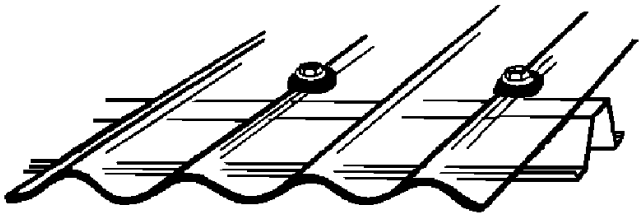
POLY ZIPS®
Fixing polycarbonate roofing to timber & steel battens

## For fixing polycarbonate roofing to timber & steel battens

For fixing Polycarbonate sheeting with a crest height of 15 – 30mm into Timber and 15 – 24mm into Steel up to 1.6mm thick

**Buildex® Warranty**

**Climaseal® 3**



| Gauge | T.P.I x Length | Pack / Carton Qty | Part Number | Product Description | Product Feature |
|---|---|---|---|---|---|
| 6.5mm / 14g | 14 x 50 | 500 | 1A-PZ14-1450-HS | POLYZIPS 14-14x50 HWFS | |

**Technical Specifications** (kN = Kilo Newtons, Nm = Newton Metres)

| Gauge / TPI | Single Shear (kN) | Axial Tensile (kN) | Torsional Strength (Nm) |
|---|---|---|---|
| M6.5 / 14g – 14 | 11.1 | 20.5 | 19.6 |

# Cyclonic Plates & Washers

Cyclonic Plates & Washers

For protection in high wind situation, Buildex® has a range of cyclone plates approved by James Cook University, the leading Australian testing Authority. **All plates are approved and suitable for use in the most severe Category 5 Cyclone (Hurricane, Typhoon) regions and have been designed to suit corrugated and square rib profiles.**

C4 **Climaseal® 4**

## KLIPLOK® Steel Plate Assembly Components for Klip-LOK® Profiles

Steel support washers with EPDM
Seals used in assembly with roofing screws
For corrugated roofing profiles

| Part Number | Product Description |
|---|---|
| 1Y-KLIP-LOKV | KLIPLOK® STEEL PLATE |

## Square-LOK® Cyclone Assembly Components for Square Rib Profiles

Steel support washers with EPDM
Seals used in assembly with roofing screws
For Square Rib Profiles with a maximum width of 28mm at the top of profile

| Part Number | Product Description | Product Feature |
|---|---|---|
| 1Y-SQUA-RELO-KV | SQUARE-LOK CYCLONE PLATE C4 | C4 |

# Accessories

## Tools and Insert Bits

### SELECTION GUIDE

| Application | Recommended Screw: |
|---|---|

For use with Buildex Hexagon Head screws.

**Hexagon Sockets**

Product Range

| Description Pack Type | Quantity | Part Number |
|---|---|---|
| 1/4" x 45mm | Blister Card 1 | 1-991-1360-3 |
| 5/16" x 45mm | Blister Card 1 | 1-991-1365-2 |
| 5/16" x 65mm | Blister Card 1 | 1-991-1366-9 |
| 3/8" x 65mm | Blister Card 1 | 1-991-1370-4 |

For twice the usable life of a Single Phillips Drive Bit

**Phillips Drive Bit (Double Ended)**

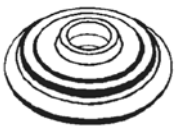
Product Range

| Description Pack Type | Quantity | Part Number |
|---|---|---|
| # 2 x 45mm | Blister Card 1 | 1-991-1241-1 |
| # 2 x 65mm | Blister Card 1 | 1-991-1244-6 |
| # 2 x 100mm | Blister Card 1 | 1-991-1247-2 |

## Washers and Accessories

| 14 Gauge Aluminium Washers & E.P.D.M. Washers | | Range | Part Number |
|---|---|---|---|
| An E.P.D.M seal bonded to a cone-shaped metal washer. Used in assembly with roofing for securing ridge capping in cyclonic areas. |  | 16mm x 0.9mm<br>25mm x 1.2mm | 6-980-0019-9<br>6-980-0021-8 |

| 12/14 Gauge Aluminium Bonded Washers | | Range | Part Number |
|---|---|---|---|
| Used in assembly with roofing screws for securing ridge capping in cyclone prone areas. |  | 16mm x 0.9mm | 6-980-0005-1 |

| Weatherlok Washers | | Range | Part Number |
|---|---|---|---|
| Resilient bellows action washers for weather-sealing high crowned roofing profiles or profiles subject to expansion and contraction. (cement sheet or fibreglass). |  | 32mm Trade Pack<br>32mm Bulk Pack | 1-696-9001-6TP<br>8-696-0001-5 |

| Polycarbonate Roofing Washers | | | |
|---|---|---|---|
| Moulded E.P.D.M. washer for polycarbonate sheeting. |  | 23mm Dome Washer | 6-989-300503 |

# Technical Specifications

## Buildex® Teks® Screws

| Average pullout data into G450 Steel (Kilo Newtons kN) | | | | | | |
|---|---|---|---|---|---|---|
| Gauge - TPI | 1.0mm | 1.2mm | 1.5mm | 1.9mm | 2.4mm | 3.2mm |
| 6-18 | 2.0 | 2.4 | 3.3 | - | - | - |
| 6-20 | 1.8 | 2.4 | 3.4 | - | - | - |
| 8-18 | 2.3 | 2.9 | 3.7 | 2.8 | 6.3 | - |
| 10-16 | 2.8 | 3.5 | 4.3 | 5.8 | 8.3 | 9.5 |
| 10-24 | 2.4 | 2.8 | 3.5 | 3.1 | 7.0 | 10.4 |
| 12-14 | 2.8 | 3.1 | 4.2 | 5.5 | 7.3 | 9.4 |
| 12-24 | 2.4 | 2.9 | 3.9 | 5.4 | 7.3 | 10.4 |
| 14-10 | 3.0 | 3.4 | 4.6 | 6.4 | 8.3 | 9.8 |
| 14-20 | 2.6 | 3.2 | 4.2 | 5.5 | 7.7 | 11.0 |

| Average pullout data into G240/G300 Steel (Kilo Newtons kN) | | | | | | |
|---|---|---|---|---|---|---|
| Gauge - TPI | 1.0mm | 1.2mm | 1.5mm | 1.9mm | 2.4mm | 3.2mm |
| 6-18 | 1.3 | 2.0 | 2.7 | - | - | - |
| 6-20 | 1.3 | 1.9 | 2.7 | - | - | - |
| 8-18 | 1.5 | 2.1 | 3.0 | 2.6 | 5.9 | - |
| 10-16 | 1.8 | 2.5 | 3.4 | 4.9 | 7.0 | 8.4 |
| 10-24 | 1.5 | 2.2 | 3.3 | 2.8 | 8.4 | 8.1 |
| 12-14 | 1.7 | 2.4 | 3.4 | 3.0 | 6.9 | 8.9 |
| 12-24 | 1.5 | 2.1 | 3.0 | 2.8 | 6.3 | 8.2 |
| 14-10 | 1.8 | 2.5 | 3.7 | 6.4 | 7.6 | 9.7 |
| 14-20 | 1.4 | 2.1 | 3.6 | 3.0 | 6.8 | 9.2 |

| Average pullout data into RONDO Steel (Kilo Newtons kN) | | | |
|---|---|---|---|
| Gauge - TPI | 0.6mm Rondo | 0.8mm Rondo | 1.2mm Rondo |
| 6-18 | 0.6 | 0.9 | 1.7 |
| 6-20 | 0.6 | 0.9 | 1.6 |
| 8-18 | 0.7 | 1.1 | 1.8 |
| 10-16 | 0.8 | 1.3 | 2.2 |
| 10-24 | 0.7 | 1.0 | 1.9 |
| 12-14 | 0.9 | 1.3 | 2.0 |
| 12-24 | 0.7 | 1.0 | 1.8 |
| 14-10 | 1.0 | 1.4 | 2.4 |
| 14-20 | 0.8 | 1.1 | 1.8 |

## Mechanical Properties

| Shear (kN), Tensile (kN) and Torsional Strengths (Nm) | | | |
|---|---|---|---|
| Gauge - TPI | Single Shear | Axial Tensile | Torsional |
| 6-18 | 3.4 | 4.2 | 3.4 |
| 6-20 | 3.5 | 4.3 | 3.5 |
| 8-18 | 5.1 | 6.3 | 5.9 |
| 10-16 | 6.8 | 11.9 | 8.4 |
| 10-24 | 6.2 | 11.4 | 8.6 |
| 12-14 | 8.8 | 15.3 | 13.2 |
| 12-24 | 9.0 | 16.7 | 13.5 |
| 14-10 | 10.9 | 19.7 | 18.5 |
| 14-20 | 11.2 | 21.2 | 20.4 |
| 15-15 | 6.4 | 15.3 | 12.6 |

Note: All values are averages obtained under laboratory conditions (N.A.T.A approved)
Appropriate safety factors should be applied for design purposes. These figures apply to Buildex® (BX head marked) products only.

# Problems & Solutions

Buildex® self-drilling screws are designed with features to suit a wide number of applications and materials, and it is important that they are used correctly. In many cases, installation problems have been found to be due to simple faults in product use or operator technique.

The following chart should be able to assist users to obtain maximum efficiency from Buildex® self-drilling screws. Always use a TEK® gun with a clutch, minimum 600W / 1500rpm.

| PROBLEMS | POSSIBLE CAUSES | SOLUTIONS |
|---|---|---|
| **Drill points are difficult to start and keep sliding on metal surface** | • The screw is not being held at right angles to the work surface.<br>• Insufficient force being applied when starting drilling action.<br>• Steel being drilled is too hard.<br>• Screwdriver running in reverse. | • Hold the screw at 90 degrees to the work being drilled.<br>• For most efficient operation, 10kg of force should be applied. Place screw in driver position at workplace and give sharp pressure downward to create a centre mark on the material. Simultaneously squeezing the trigger of the driver, apply extra force to the drill point to assist it to "dig-in" as it rotates.<br>• Change switch to forward position. |
| **Screws wobble and are difficult to start** | • Drive bit broken, worn or clogged. | • Clean driver bit or replace with new driver bit. Screw must fit firmly on the drive bit. |
| **Screws drill but will not thread** | • Thickness of material being drilled is too thick.<br>• Insufficient power in screwdriver, drops in power & speed. | • Check overall thickness of materials.<br>• Reduce lead length. Use heavy duty screwdriver 600W minimum. |
| **Heads "break off" when tightened** | • Screwdriver depth locater not set correctly.<br>• Torque clutch set too high. | • Adjust depth locater further forward so that drive will disengage at correct depth.<br>• Back off driver ratchet to reduce torque. |
| **Drill points commence to drill but have difficulty in completion of drilling** | • Steel being drilled is too hard in sections.<br>• Materials too thick for gauge of screw (point length) | • Test screws into another piece of steel.<br>• Select right gauge screw with correct drilling capacity. |
| **Screw threads stripping in steel** | • Steel being drilled is too thin. | • Use a coarser thread product. |
| **Drill points breaking** | • After drilling through one thickness of materials, drill point may be crashing forward onto the second thickness when there is an air-gap in between.<br>• Driver is set in reverse mode. | • A longer or extended drill point is recommended where the application involves drilling through one material, then passing through air, to drill through and fasten into a second steel member.<br>• Change switch to forward position. |
| **Sealing washers squashing out under head** | • Depth locater incorrectly set.<br>• Excessive force driving fastener | • Adjust the depth locater forward.<br>• Use less force setting fastener. |
| **Cross recess driver bits breaking or wearing out prematurely** | • Torque or depth on screwdriver incorrectly set.<br>• Incorrect cross recess being used.<br>• Incorrect tool being used. | • Re-set to avoid over tightening of the screw, maintain firm pressure setting the screw.<br>• Replace with correct type of driver bit (Philips).<br>• Use a Tek® gun. |

# Buildex® Warranty

| Environmental Characteristics (To determine the type of environment,an inspection of buildings in the area is usually necessary) | Warranty Periods: Climaseal® 3 AS3566 Class 3 | Warranty Periods: ZACS® 4 AS3566 Class 4 / Climaseal® 4 AS3566 Class 4 |
|---|---|---|
|  **VERY SEVERE MARINE (ISO CATEGORY 5)** Includes off-shore areas and up to 100m from the high waterline of areas with breaking surf. | **Not recommended** | **Not recommended** |
|  **SEVERE MARINE (ISO CATEGORY 4)** Generally between 100m from the beach front to approximately 300m inland. In highwind areas, may extend further inland depending on prevailing wind and geography of the area. Characterised by strong salt smell and haze, salt smearing and salt build-up in unwashed areas of structures. Generally a noticeable deterioration of most building materials is evident. | **Not recommended** | **12 Years** |
|  **MILD AND MODERATE MARINE (ISO CATEGORY 3)** Generally between 300m and 1000m from marine surf, **although topography and/or strong prevailing winds may extend this distance.** Characterised by occasionally noticeable salt smell. Airborne salt present but not visible as haze. ITW Buildex strongly recommends Climaseal® 4 coatings in moderate marine conditions. | **7 Years** | **20 Years** |
|  **VERY SEVERE INDUSTRIAL (ISO CATEGORY 5)** Characterised by heavy fall-out and emissions from stacks, and strong sulphur and acid smells. Generally very high rates of corrosion in most building structures is evident. | **Not recommended** | **Not recommended** |
|  **SEVERE INDUSTRIAL (ISO CATEGORY 4)** Characterised by fall-out and emissions from stacks, sulphur and acid smells.Includes only plant buildings themselves and any building immediately under stacks. Also includes buildings with high internal humidity and/or corrosion from operations within. | **Not recommended** | **20 Years** |
|  **INDUSTRIAL (ISO CATEGORY 3)** Characterised by fall-out from adjoining severe industrial environments or where small industries lead to significant industrial fall-out. Generally includes other service buildings located near heavy industrial plants, including out-buildings of the plant itself. | **20 Years** | **30 Years** |
|  **LIGHT INDUSTRIAL/URBAN (ISO CATEGORY 2–3)** This environment is widespread in industrial/urban areas, away from all environments listed above and typically more than 500m from heavy industries fall-out, or where small industries lead to a moderate level of fall-out from small stacks, etc. | **30 Years** | **50 Years** |
|  **MILD URBAN/RURAL (ISO CATEGORY 1–2)** Away from all above environments and corrosive fall-out within 2km. | **40 Years** | **60 Years** |

**Conditions**

1. Any claim must be notified in writing and is conditional on inspection by ITW Buildex before any action is taken.The decision of the ITW Inspector is conclusive of the type of environment of the structure.
2. To the extent permitted by law, ITW will not be liable for any other loss or damage (apart from the replacement of any defective screws) howsoever caused including and direct, indirect, consequential or incidential damages.
3. This Warranty covers the structural performance of the screws from the date of installation, not the aesthetic performance of the coatings.
4. This Warranty is not transferable from the original owner.

**Principal Office:**

**ITW Construction Products (SEA) Pte Ltd**
4 Changi South Lane,
#06-01 Nan Wah Building, Singapore 486127
Tel: (+65) 6746 1177 Fax: (+65) 6746 1482
Email: sales@itwcpsea.com Website: www.itwcpsea.com

Print Reference: ITW09-Nov-PG01

Distributor's Stamp