

# FIXINGS



SYSTEM HANDBOOK

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ESTABLISHED IN 1864 AND ONE OF THE OLDEST COMPANIES  
IN THE MIDLANDS

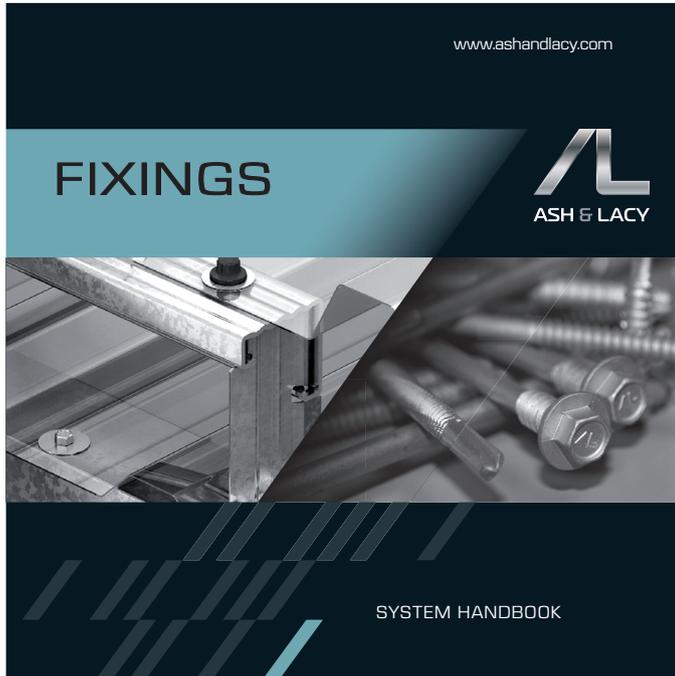
**The name Ash & Lacy is synonymous with Product Innovation and Engineering Excellence, keeping us at the forefront of building systems engineering and technology.**

Thanks to progressive development of our own manufacturing capabilities, construction professionals can procure complete and effective **envelope solutions** from a single-source.

Our extensive, state of the art product range is fully supported by our unrivaled in-house technical and **design expertise**, freely provided at every stage of planning and construction, together with our full site warranty schemes.

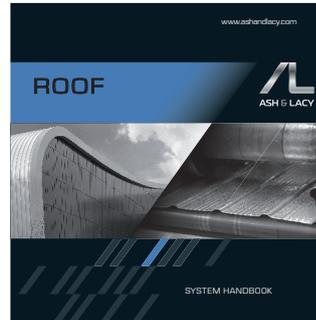
From Standing Seam **Roof** and Rainscreen Cladding **Façade** and **Screen** systems, architectural **Fabrications**, **Spacer System** and **Fixings** range, through to our most recent **Steel Frame** system innovation, all products undergo rigorous testing. They consequently offer exceptional performance and value, supported by best in class service and technical support.

This brochure provides extensive information on our range of **Fixings** and Fasteners for roofing and cladding systems. It forms part of a series of brochures and a specification support package designed to meet your complete system requirements.



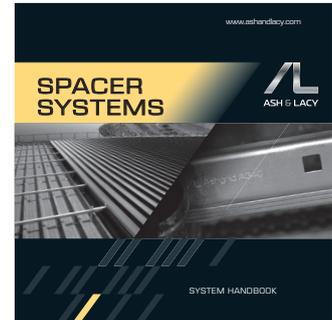
**Our comprehensive selection of roofing and cladding fixings provides quality solutions for almost any application. The range has evolved through extensive research and development, on-site experience and extensive 'real world' testing and engineering.**

As a result Ash & Lacy offer unrivalled product quality and performance, with stainless steel, carbon steel and colour headed options, providing the ultimate fixing solution for light/heavy section and timber applications.



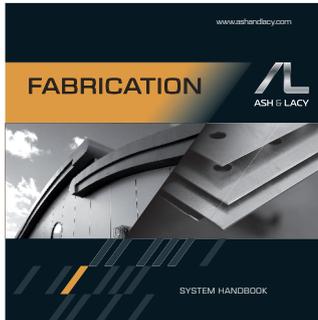
A superior quality raised standing seam roofing and cladding system that enhances aesthetics and provides a weather-tight joint above rainwater flow. The perfect choice for an exceptionally wide range of new build and refurbishment roofing and vertical façade applications from residential, industrial, commercial and public projects, to modular new build.

Available in a range of cover widths and a generous palette of material and colour finishes for optimum architectural design flexibility. Can also be specified with a steel frame solution, designed on a project by project basis, to form a pitched/curved roof above new or existing flat roofs.



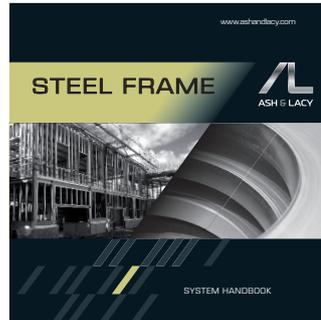
AshGrid from Ash & Lacy was the UK's first spacer support system for built-up metal roofing and cladding. It has continued to lead with innovations such as the unique Safe-Loc feature incorporated within the AshGrid bar and bracket.

Our spacer systems meet all relevant Building Regulations and make site installation safer and more efficient. We now offer aluminium extrusion options for façade projects, providing required support for external cladding while simultaneously ensuring that applied wind loads are properly transmitted to the supporting structure. It can also be used with a standing seam halter system to achieve ever more demanding 'U' values.



Our bespoke perimeter flashings and fabrications are available in a range of finishes and materials ranging from pre-coated steel to PPC aluminium to perfectly complement our standing seam system or façade panels. We can also provide a full range of ancillary components, such as fabricated stop ends and corner units.

We offer a similarly tailored service with our rainwater management components. Choose from a wide selection of materials from coated galvanised steel to high quality membrane lined options. Our range of ancillaries includes outlets, downpipes, bracketry and fabricated stop ends. A gutter calculation service is available, following order placement.



The cold rolled Steel Frame range offers a structurally robust and dimensionally stable, warm spaced wall construction that can be used with the majority of external finishes, across most applications.

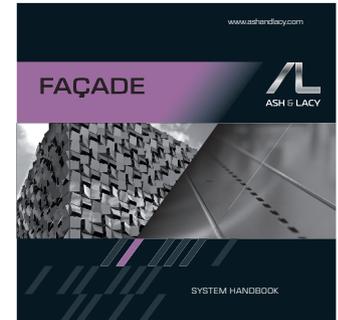
This component supply, structural stud & track system, is available to suit both infill and oversail systems, both of which provide early weather protection capability to the building, and offer many advantages over traditional construction methods.

State of the art custom-built in-house manufacturing facility offers flexibility to best suit site requirements and restrictions, offering components either cut to length or standard stock lengths, both of which can be individually marked allowing easy identification, thus resulting in faster installation.



A fully engineered fast-track solution for perfect enclosure of open spaces such as car parks and stair towers, improving aesthetics and providing a permanent and impenetrable barrier. The system transforms virtually any structure due to its availability in a wide range of attractive materials, patterns and finishes.

Straight or curved panel options, including the use of different panel types and finishes in the same elevation, provide tremendous architectural design versatility.



The Ash & Lacy Rainscreen Cladding Façade System out-performs other types of wall construction at an economic whole life cost, with low maintenance requirements and sustainable material options, backed by our renowned technical and fabrication expertise. Including full through wall construction system this multi-layer system can be fabricated from ACM (Aluminium Composite Material), solid aluminium, Cor-Ten steel, copper, zinc or aluminium honeycomb backed stone to create a ventilated 'cold' façade fixed to an adjustable aluminium carrier system.

Choose from a wide selection of vertical and horizontal joint configurations, in a variety of colours and finishes.

## Comprehensive range of BS, RAL & sheet colour moulded heads

- Improved aesthetics
- Longer life expectancy
- UV Stabilised

## Vulcanised washer

- 3mm thick EPDM
- 304 stainless steel

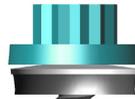
## Support thread

- Enlarged diameter to support outer skin of composite panel

## Heat treated carbon steel drill point & lead-in threads

- Fast efficient drilling of purlins/ sheeting rails

## Available in Carbon & both 304 and 316 in Stainless Steel



## Branded product

- Complies with MCRMA charter
- Easy traceability throughout the life of a building

## Profiled Bi-hexagonal Head

- Maximum grip
- Withstands high level of torque during installation

## 14mm flange under hexagon head

- Reduces the risk of washer inversion and improves pull over and stability
- No risk of detachment from fasteners

## Fixing design directly derived from on-site research

- Extensive 'real world' testing & engineering

## Designed for the Global market

- Optimised drill points and thread dimensions ensure the highest performance

Thanks to continuous **technical innovation and development**, the Ash & Lacy **Fixings** range of stainless steel, carbon steel, colour headed and low profile options provide the roofing and cladding industry's most cost-effective and comprehensive fixing solution for light and heavy section built-up and composite panel applications.

With numerous major system manufacturer approvals, all fasteners are produced to Ash & Lacy's design and performance specifications, following stringent quality control procedures to BS, ECCS and DIN standards. To ensure complete client satisfaction and peace of mind, all fixings undergo further testing in our state of the art facility at our headquarters.

The Ash & Lacy **Fixings** range is available nationwide from our strategically positioned regional distribution centres, ensuring availability and prompt service is provided at all times.

A highly skilled support team is available to discuss specific technical requirements and offer general application advice, irrespective of project size and complexity.

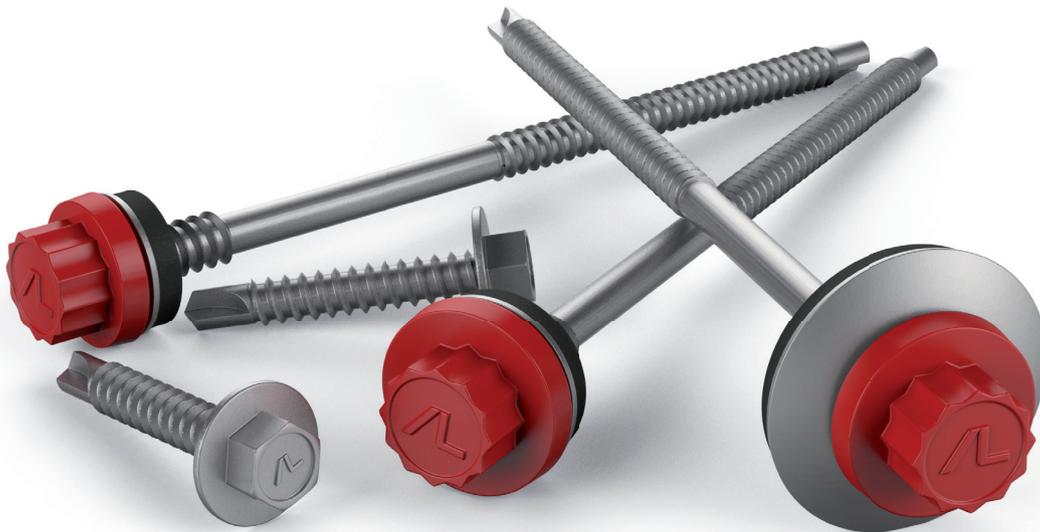
**For your closest distribution centre please see below;**

West Bromwich (Head Office) 0121 525 1444

Glasgow 0141 950 6040

London 0208 391 9700

Devon 01404 549100



Providing durability and long-term colour performance, our **Fixings** are offered in the comprehensive range of BS, RAL and sheet colours to match external cladding and create an aesthetically pleasing building exterior.

Our colour headed fixings are available in two head forms and a number of washer options covering roof, wall and rooflight applications, with drill points available for light and heavy section steel, stitchers and timber.

Manufactured from corrosion-free, UV stabilised nylon, the colour head is integrally moulded onto stainless/carbon steel hexagonal head form with 14mm flange to eliminate any risk of becoming detached.

The 11mm bi-hexagonal integral colour head is profiled to give maximum grip and withstand the high levels of torque received during drilling and tapping and offer excellent resistance to degradation or rounding. Even after long-term exposure to extreme conditions, the head remains intact to offer firm grip and easy turning. Specially designed sockets are available to retain the colour head during installation which helps eliminate 'rounding off' during the drilling stage.

The adjacent standard colours are available from stock, with other non-standard BS and RAL colours available to order (*some colours may be subject to a minimum order quantity*).

Rooflight version supplied with BS 04E53 Poppy Red 19mm moulded head and 29mm diameter stainless steel washer.

- *For technical reasons associated with colour reproduction, the colours shown give only an indication of shade and therefore Ash & Lacy Building Systems cannot accept responsibility or liability for errors or information that is found to be misleading*
- *No guarantee can be given that they will exactly match the powder or painted product*
- *Colour samples should be provided to ensure a more exact colour match*

Colour Name	BS	RAL
Alaska Grey		7000
Albatross	18B17	
Aztec Yellow	10E55	
Bahama Blue		5015
Bamboo	08C35	
Black	00E53	
Burano		3004
Goosewing Grey	10A05	
Hamlet		9002
Heritage Green		6002
Honesty	10C31	
Jade	14C37	
Juniper Green	12B29	
Meadowland	12B17	
Merlin Grey	18B25	
Moorland Green	12B21	
Mushroom	10B19	
Ocean Blue	18C39	

Colour Name	BS	RAL
Olive Green	12B27	
Oyster Grey		7035
Petra	04D44	
Pinewood Green	14C39	
Poppy Red	04E53	
Sargasso Blue		5003
Silver (Metallic*)		9006
Slate Blue	18B29	
Slate Grey		7012
Solent Blue	18E53	
Svelte Grey	10B23	
Terracotta	04C39	
Van Dyke Brown	08B29	
Wedgewood Blue	18C37	
White	00E55	
Zeus (Tata Colorcoat Prisma - Metallic*)		
Sirius (Tata Colorcoat Ultra - Metallic*)		
Orion (Tata Colorcoat Ultra - Metallic*)		

\* Metallic colours are not represented here by metallic inks and are not accurate to the finished product.



TOOL-5/16-SOCK-CRING 5/16" AF Drive Socket



TOOL-3/8-SOCK 3/8" AF Drive Socket



TOOL-MAG-BH Magnetic Bit Holder



TOOL-B/H-SOCK-CRING 11mm Bi-Hex Socket



TOOL-POZI 2 No.2 Pozi Bits



TOOL-POZI 3 No.3 Pozi Bits



TOOL-PHIL 2 No.2 Phillips



TOOL-PHIL 3 No.3 Phillips



TOOL-TORX-25 Torx 25 Drive Bit

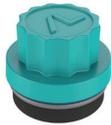
## Head styles

8mm Hex Head



Socket = TOOL-5/16-SOCK-CRING

11mm Bi-Hex Head



Socket = TOOL-B/H-SOCK-CRING

Countersunk



Socket = TOOL-MAG-BH & TOOL-PHIL3

Wafer



Socket = TOOL-MAG-BH & TOOL-PHIL3

Clip Fix



Socket = TOOL-MAG-BH & TOOL-PHIL3

Low-profile



Socket = TOOL-MAG-BH & TOOL-TORX-25

## Drill points

No.1 (Stitcher)



No.2/3 (Light Section)



No.5 (Heavy Section)



'S' Type (Timber-fix)

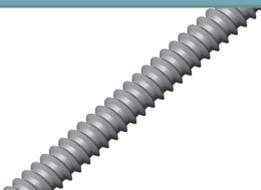


Winged

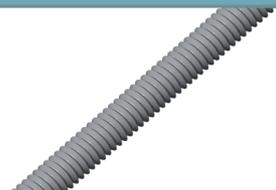


## Thread Forms

Course - 14 t.p.i.



Fine 24 t.p.i.



## CARBON STEEL

## Material Specification

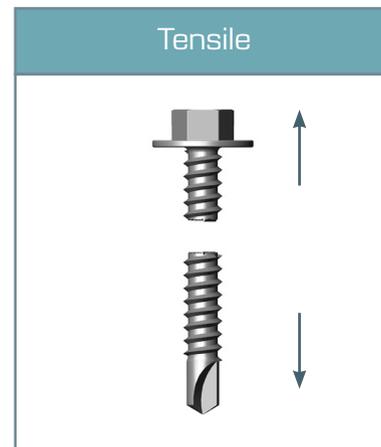
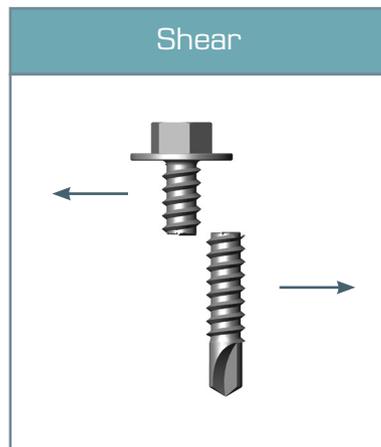
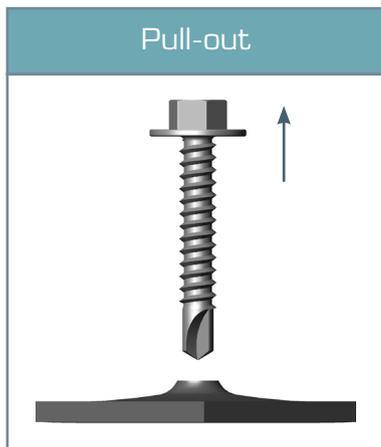
- Manufactured from high quality medium carbon cold forming steel
- Heat treated to give high quality drilling performance and mechanical strength

## Coating Specification

- Coating consists of 4 microns zinc followed by Ruspert - Type 2 -1000 S.S.T.
- Kesternich (sulphur dioxide) testing is performed as per DIN 50018
- Salt Spray Testing performance between 800 & 1000 hours

## Pull-out Performance

- Pull-out testing from 6.0mm steel or greater, the limiting factor is the tensile strength of the fixing
- *Steel & timber of different grades may provide different results*



## CARBON STEEL

### Ultimate Pull-out Values (kN)

Code	Drilling Capacity (mm)	Steel Grade & Thickness (mm)								
		390N/mm <sup>2</sup>	450N/mm <sup>2</sup>							43a
		AG40 (1.25)	1.2	1.4	1.6	1.8	2	2.5	3	6
<b>CPLS</b>	1.2 - 3.2		2.42	3.16	3.49	4.16	4.78	7.71	9.04	-
<b>LS</b>	1.2 - 3.2	2.91	2.32	2.74	3.76	4.13	5.15	7.05	8.60	-
<b>CPHS</b>	4.0 - 12.0	-	-	-	-	-	-	-	-	19.00
<b>HS</b>	4.0 - 12.0	-	-	-	-	-	-	-	-	17.67

For low profile data please contact Ash & Lacy's Technical department

### Ultimate Pull-out Values (kN)

Code	Drilling Capacity (mm)	Timber Grade & Embedment Depth (mm)			
		C16 Structural			
		40	50	60	70
<b>TF</b>	0.7mm to Timber	3.56	4.44	5.34	6.32

### Ultimate Performance

Screw Diameter (mm)	Steel Thickness (mm)	Ultimate Shear Strength	Ultimate Tensile Strength
<b>4.8</b>	1.20 - 3.0	6.10	8.60
<b>5.5</b>	1.25 - 3.0	9.00	12.60
<b>5.5</b>	4.0 - 12.0	9.30	17.67
<b>6.3</b>	0.7mm to Timber	11.50	18.00

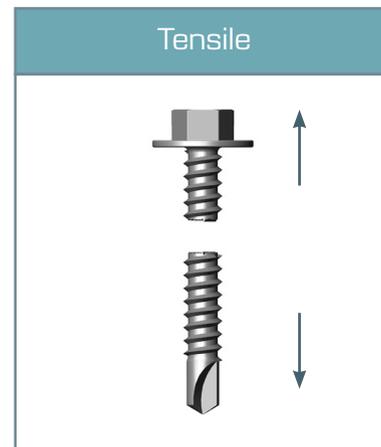
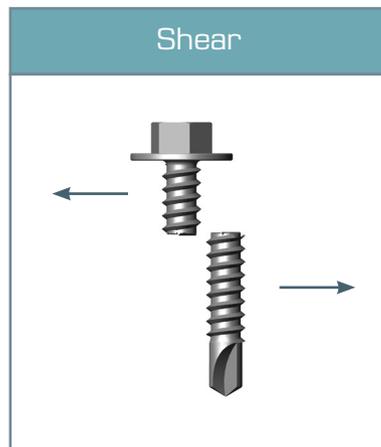
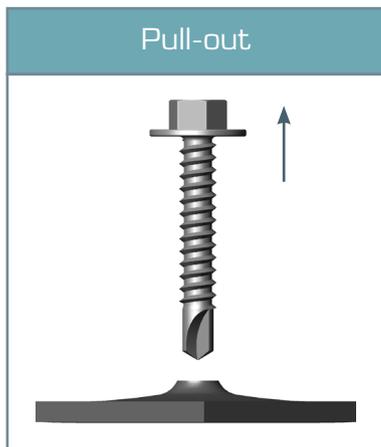
### BI-METAL STAINLESS STEEL

#### Material Specification

- Main body and head of fixings are manufactured in 304 and 316 grade Austenitic Stainless Steel – recognised for its optimum strength and corrosion resistance
- Drill point and lead-in threads are manufactured using heat treated carbon steel – providing fast and efficient drilling of purlins and sheeting rails
- Coated with a specialist three part organic based coating providing excellent corrosion resistance for the carbon steel drill point

#### Pull-out Performance

- Pull-out testing from 6.0mm steel or greater, the limiting factor is the tensile strength of the fixing
- *Steel & timber of different grades may provide different results*



## BI-METAL STAINLESS STEEL

Below are based on 304 grade, please contact Ash & Lacy technical team for 316 grade.

### Ultimate Pull-out Values (kN)

Code	Drilling Capacity (mm)	Steel Grade & Thickness (mm)								
		390N/mm <sup>2</sup>			450N/mm <sup>2</sup>					43a
		AG40 (1.25)	1.2	1.4	1.6	1.8	2	2.5	3	
BM-CPLS	1.2 – 3.2	2.56	3.32	3.26	3.66	4.23	5.28	7.57	9.50	-
BM-LS	1.2 – 3.2	2.32	3.06	3.07	3.35	4.17	5.20	7.04	8.19	-
BM-LSHF	1.2 – 2.0	3.53	3.63	4.45	5.33	5.46	7.04	-	-	-
BM-CPHS	4.0 – 12.0	-	-	-	-	-	-	-	-	11.23
BM-HS	4.0 – 12.0	-	-	-	-	-	-	-	-	12.91

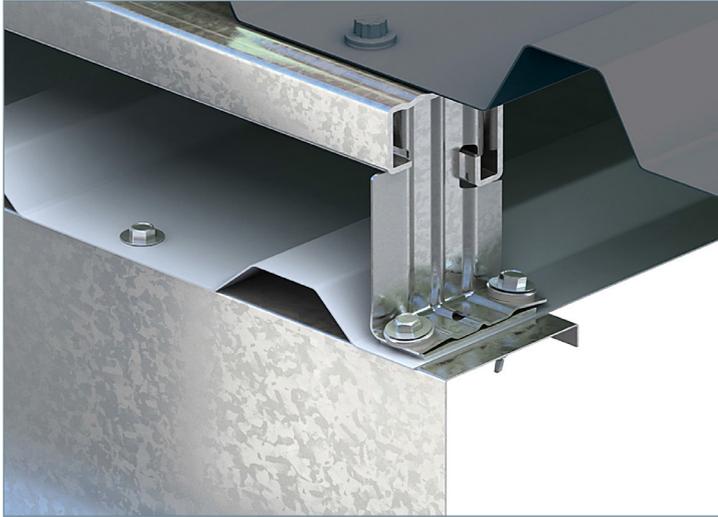
### Ultimate Pull-out Values (kN)

Code	Drilling Capacity (mm)	Timber Grade & Embedment Depth (mm)				
		C16 Structural				
		40	45	50	60	70
BM-CPLS	Panel to Timber	-	-	3.07	4.20	5.06
BM-TF50	0.7mm to Timber	-	4.58	-	-	-

### Ultimate Performance

Screw Diameter (mm)	Steel Thickness (mm)	Ultimate Shear Strength	Ultimate Tensile Strength
5.5	1.2 – 3.0	7.50	10.50
6.3	1.2 – 3.0	10.10	15.60
5.5	4.0 – 12.5	7.50	12.91

## BUILT-UP SYSTEM



Hex Head



Moulded Head



Low Profile Head



### Liner & Spacer Bracket Fixings **LS\*** **HS\*\***

\* Light Section \*\* Heavy Section

Carbon	Hex	p25	p27
Bi-Metal	Hex	p49	p51

### Main-fix

Carbon	Hex/Moulded	p25
	Low Profile	p33
Bi-Metal	Hex/Moulded	p49
	Low Profile	p61

### Stitchers

Carbon	Hex/Moulded	p31
	Low Profile	p33
Bi-Metal	Hex/Moulded	p55
	Low Profile	p61

### Butyl Sealants p69

## COMPOSITE PANEL



### Main-fix

**LS\*** **HS\*\***

\* Light Section \*\* Heavy Section

Carbon	Hex/Moulded	p21	p23
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Bi-Metal	Hex/Moulded	p45	p47
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### Stitchers

Carbon	Hex/Moulded	p31
	Low Profile	p33

Bi-Metal	Hex/Moulded	p55
	Low Profile	p61

Butyl Sealants	p69
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Hex Head



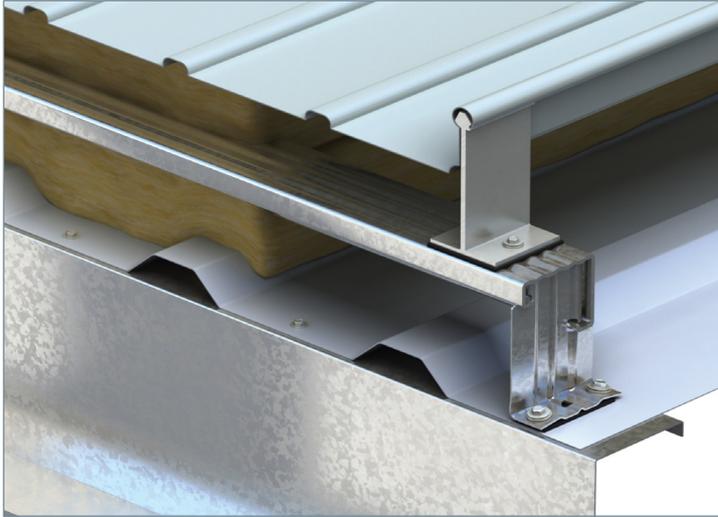
Moulded Head



Low Profile Head



## STANDING SEAM



### Liner & Spacer Bracket Fixings **LS\*** **HS\*\***

\* Light Section \*\* Heavy Section

Carbon	Hex	p25	p27
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Bi-Metal	Hex	p49	p51
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### Halter Fixings

Bi-Metal	Hex	p49
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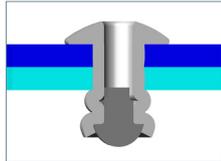
Rivets	p67
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Butyl Sealants	p69
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Hex Head



Rivet



## BUILT-UP SYSTEM FIBRE CEMENT



### Main-fix

Carbon	Hex	p35
--------	-----	-----

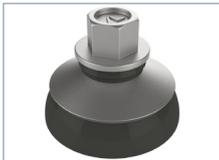
### Stitchers

RLP	Hex/Moulded	p59
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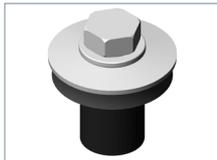
### Butyl Sealants

p69
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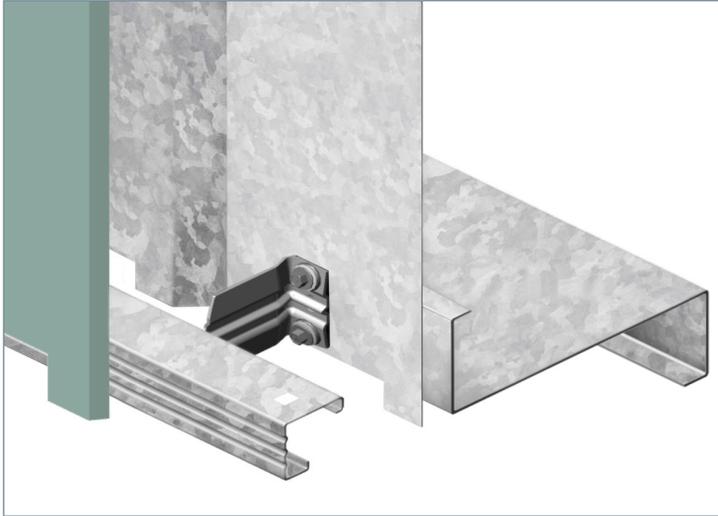
Hex Head



RLP Hex Head



## BUILT-UP CLADDING



Hex Head



Moulded Head



Low Profile Head



### Liner & Spacer Bracket Fixings **LS\*** **HS\*\***

\* Light Section \*\* Heavy Section

Carbon	Hex	p25	p27
Bi-Metal	Hex	p49	p51

### Main-fix

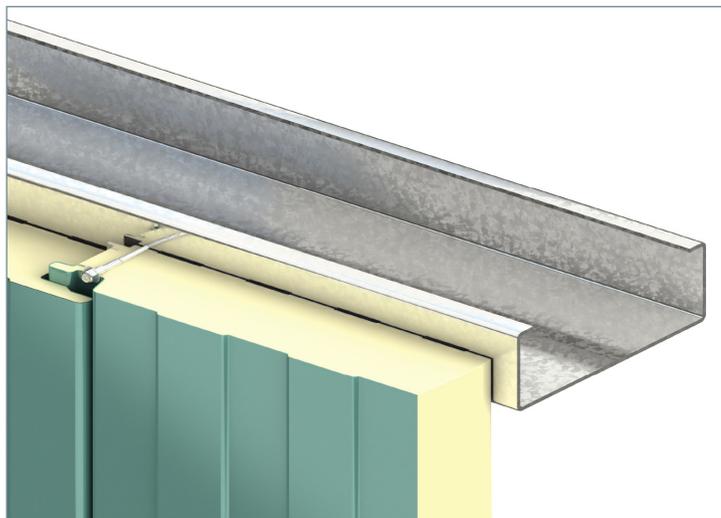
Carbon	Hex/Moulded	p25
	Low Profile	p33
Bi-Metal	Hex/Moulded	p49
	Low Profile	p61

### Stitchers

Carbon	Hex/Moulded	p31
	Low Profile	p33
Bi-Metal	Hex/Moulded	p55
	Low Profile	p61

### Butyl Sealants p69

## COMPOSITE PANEL



### Main-fix

**LS\*** **HS\*\***

\* Light Section \*\* Heavy Section

Carbon	Hex/Moulded	p21	p23
--------	-------------	-----	-----

Bi-Metal	Hex/Moulded	p45	p47
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### Stitchers

Carbon	Hex/Moulded	p31
	Low Profile	p33

Bi-Metal	Hex/Moulded	p55
	Low Profile	p61

### Butyl Sealants

p69

Hex Head



Moulded Head



Low Profile Head



## COMPOSITE PANEL FIXINGS TO LIGHT STEEL

### Material Specification

- Carbon Steel

### Application

- Composite panels
- Sheet and Rigid Insulation

### Substrates

- LIGHT SECTION steel purlins and rails – 1.2mm to 3.2mm
- Structural grade timber (*min. 50mm embedment*)

### Features

- Enlarged high-thread diameter supports outer skin of panel
- Thread-free zone to prevent stripping out of the high-thread in the outer skin
- Thread lengths designed to provide maximum coverage
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours

### Washer Options

#### 8mm Hex Head

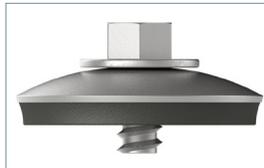
W-S16



W-S19



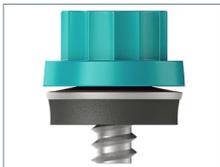
W-S29



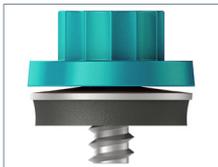
Example code with washer: CPLS115-S19

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: CPLS115-S19-RAL/BS Reference

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

### COMPOSITE PANEL FIXINGS TO LIGHT STEEL

8mm Hex Head



11mm Bi-Hex Head



Code	Diameter x Length (mm)	Build-up Range (mm)		Panel Range (mm)	
		Panel Min.	Panel Max (inc. Purlin)	Min.	Max.
<b>CPLS65</b>	5.5/6.7 x 65	33	50	35	45
<b>CPLS75</b>	5.5/6.7 x 75	35	60	40	55
<b>CPLS85</b>	5.5/6.7 x 85	45	70	50	65
<b>CPLS115</b>	5.5/6.7 x 115	55	100	60	95
<b>CPLS135</b>	5.5/6.7 x 135	75	120	80	115
<b>CPLS150</b>	5.5/6.7 x 150	90	135	95	130
<b>CPLS175</b>	5.5/6.7 x 175	115	160	120	155
<b>CPLS235*</b>	5.5/6.7 x 235	155	220	160	215

\* Not available in 11mm Bi-hex head

## COMPOSITE PANEL FIXINGS TO HEAVY STEEL

### Material Specification

- Carbon Steel

### Application

- Composite panels
- Sheet and Rigid Insulation

### Substrates

- HEAVY SECTION steel purlins and rails – 4.0mm to 12.0mm

### Washer Options

#### 8mm Hex Head

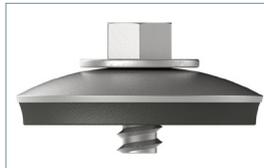
W-S16



W-S19



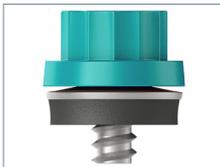
W-S29



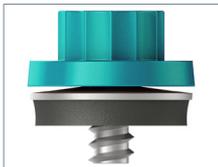
Example code with washer: CPHS85-S19

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: CPHS85-S19-RAL/BS Reference

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

### Features

- Enlarged high-thread diameter supports outer skin of panel
- Consistent pitch and thread-free zone prevent stripping out of the high-thread in the outer skin
- Thread lengths designed to provide maximum coverage
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Modified lower thread and thread-free zone prevent stripping the outer skin of the panel
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours

### COMPOSITE PANEL FIXINGS TO HEAVY STEEL

8mm Hex Head



11mm Bi-Hex Head



Code	Diameter x Length (mm)	Build-up Range (mm)		Panel Range (mm)	
		Panel Min.	Panel Max (inc. Purlin)	Min.	Max.
<b>CPHS85</b>	5.5/6.7 x 85	40	62	40	50
<b>CPHS105</b>	5.5/6.7 x 105	45	82	50	70
<b>CPHS125</b>	5.5/6.7 x 125	55	102	60	90
<b>CPHS150</b>	5.5/6.7 x 150	80	127	80	115
<b>CPHS185</b>	5.5/6.7 x 185	115	162	120	150
<b>CPHS245*</b>	5.5/6.7 x 245	155	220	160	205

\* Not available in 11mm Bi-hex head

## BUILT-UP & SINGLE SKIN FIXINGS TO LIGHT STEEL

### Material Specification

- Carbon Steel

### Application

- Single skin sheeting
- Built-up Systems
- Bracket Fix
- Liner Fix
- General purpose self-drilling fixing

### Washer Options

#### 8mm Hex Head

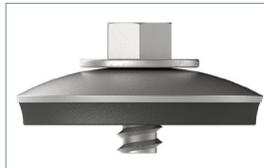
W-S16



W-S19



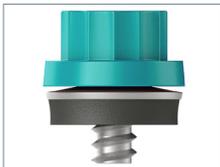
W-S29



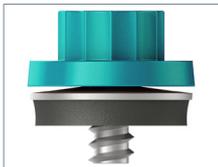
Example code with washer: LS25-S19

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: LS25-S19-RAL/BS Reference

### Notes & Considerations

When ordering colour-headed fixings, please specify the RAL/BS reference or colour name.

### Substrates

- LIGHT SECTION steel purlins and rails – 1.2mm to 3.2mm
- Structural grade timber (*min. 50mm embedment*)

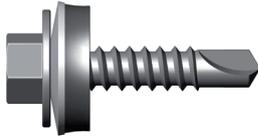
### Features

- Fully threaded
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours

To conform to the HSE guidelines regarding fragility and to minimise air-leakage, where applicable, we suggest liner fasteners be ordered with a minimum 16mm diameter bonded washer.

### BUILT-UP & SINGLE SKIN FIXINGS TO LIGHT STEEL

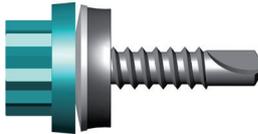
8mm Hex Head



LT19 - 8mm Hex Head



11mm Bi-Hex Head



LT19 - 8mm Hex Head  
Painted White



Code	Diameter x Length (mm)	Effective Thread Length		
		No Washer	Washed	29mm Washer
LT17	4.8 x 17	5	-	-
LT19	4.8 x 19	7	-	-
LS25	5.5 x 25	13	10	-
LS32	5.5 x 32	20	17	15
LS38	5.5 x 38	26	23	21
LS46	5.5 x 46	34	31	29
LS57	5.5 x 57	45	42	40
LS70	5.5 x 70	58	55	53

## BUILT-UP & SINGLE SKIN FIXINGS TO HEAVY STEEL

### Material Specification

- Carbon Steel

### Application

- Single skin sheeting
- Bracket Fix
- Liner Fix
- General purpose self drilling fixing

### Substrates

- HEAVY SECTION steel purlins and rails – 4.0mm to 12.0mm

### Features

- Fully threaded
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours

### Washer Options

#### 8mm Hex Head

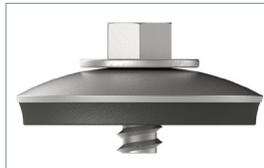
W-S16



W-S19



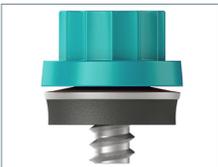
W-S29



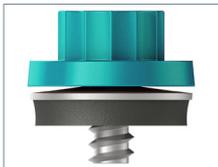
Example code with washer: HS38-S19

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: HS38-S19-RAL/BS Reference

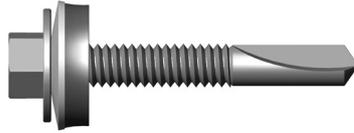
To conform to the HSE guidelines regarding fragility and to minimise air-leakage, where applicable, we suggest liner fixings be ordered with a minimum 16mm diameter bonded washer.

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

### BUILT-UP & SINGLE SKIN FIXINGS TO HEAVY STEEL

8mm Hex Head



11mm Bi-Hex Head



Code	Diameter x Length (mm)	Effective Thread Length		
		No Washer	Washed	29mm Washer
<b>HS38</b>	5.5 x 38	16	13	11
<b>HS55</b>	5.5 x 55	33	30	28
<b>HS75</b>	5.5 x 75	53	50	48

## SINGLE SKIN & COMPOSITE FIXINGS TO TIMBER

### Material Specification

- Carbon Steel

### Application

- Single skin
- Composite panel

### Substrates

- Timber purlins and rails

### Features

- Type 'S' drill point reduces the risk of splitting the timber
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Enlarged high-thread diameter supports outer skin of composite panel
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours

### Washer Options

#### 8mm Hex Head

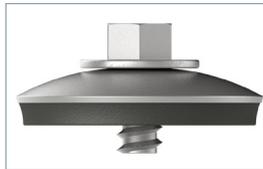
W-S16



W-S19



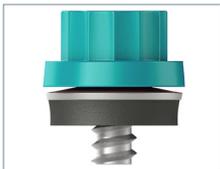
W-S29



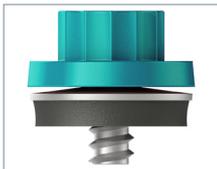
Example code with washer: TF45-S16

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: TF45-S19-RAL/BS Reference

Recommended embedment into timber is dependant on application. For structural applications a minimum of 40mm embedment is recommended with the 6.3mm diameter TF range.

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

### SINGLE SKIN & COMPOSITE FIXINGS TO TIMBER

8mm Hex Head



11mm Bi-Hex Head



8mm Hex Head



11mm Bi-Hex Head



#### Single Skin to Timber

Code	Diameter x Length (mm)	Effective Thread length	
		No Washer	Washed
TF25	6.3 x 25	25	22
TF32	6.3 x 32	32	29
TF45	6.3 x 45	45	42

#### Composite Panel to Timber

Code	Diameter x Length (mm)	Panel Range (mm)	
		Min.	Max.
TF65	6.3 x 65	10	20
TF80	6.3 x 80	25	35
TF95	6.3 x 95	25	50
TF105	6.3 x 105	40	60
TF125	6.3 x 125	60	80
TF150	6.3 x 150	70	100

#### Minimum Fixings Spacings

As per recommendation in MCRMA Technical Paper 12	With self-drilled or pre-drilled holes
Edge distance parallel to grain	10d
Edge distance perpendicular to grain	5d
Distance between lines of fixings, perpendicular to grain	3d
Distance between adjacent fixings in any one line, parallel to grain	10d

Note: d is the shank diameter of the fixing

## STITCHING FIXINGS

### Material Specification

- Carbon Steel

### Application

- Sheet to sheet stitching
- Side laps and flashings
- Repair Screw (Mega Stitcher)

### Substrates

- Maximum 2 x 0.9mm

### Washer Options

#### 8mm Hex Head

W-S16



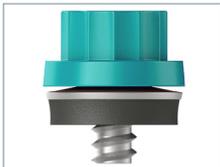
W-S19



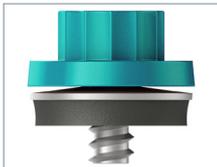
Example code with washer: ST22-S16

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



Example code with washer: ST22-S16-RAL/BS Reference

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

### Features

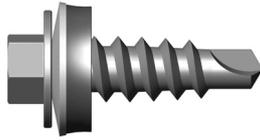
- Reduced point gives improved torque to strip and pull-out values
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours

## STITCHING FIXINGS

### 8mm Hex Head

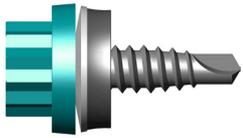


6.3mm Dia.

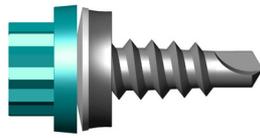


8.0mm Dia.

### 11mm Bi-Hex Head



6.3mm Dia.



8.0mm Dia.

Code	Diameter x Length (mm)	Effective Thread Length	
		No Washer	Washed
ST22	6.3 x 22	10	7
ST27	6.3 x 27	15	12
ST25	8.0 x 25	13	10

## LOW PROFILE FIXINGS

### Material Specification

- Carbon Steel

### Application

- Single Skin Sheeting
- Stitching
- Side Laps and Flashings

### Substrates

- LP-LS LIGHT STEEL purlins and rails – 1.2mm to 3.2mm
- LP-HS HEAVY STEEL purlins and rails – 4.0mm to 12.0mm
- LP-ST STITCHER Maximum 2 x 0.9mm

### Features

- Discreet low profile head
- Precision fit Torx T25 internal drive recess ensures easier installation
- Painted head available to match cladding sheet colour
- All fixings assembled with a Stainless Steel bonded washer

### Low Profile Head

Plain



Example code: LP-LS25

Painted



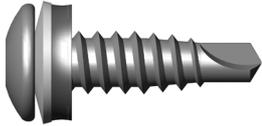
LP-LS25-RAL/BS Reference

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

## LOW PROFILE FIXINGS

Stitcher



Light Section



Heavy Section



Code	Diameter x Length (mm)	Effective Thread Length (mm)	Drilling Capacity (mm)
LP-LS25	5.5 x 25	10	1.2 - 3.2
LP-ST22	6.3 x 22	7	2 x 0.9
LP-HS38	5.5 x 38	13	4.0 - 12.0

## FIBRE CEMENT FIXINGS

### Material Specification

- Carbon Steel

### Application

- Fibre cement sheeting

### Substrates

- FCL LIGHT STEEL purlins and rails – 1.2mm to 3.2mm
- FCH HEAVY STEEL purlins and rails – 4.0mm to 12.0mm
- FCT TIMBER purlins and rails

### Washer Options

8mm Hex Head

BAZ



### Features

- Mid-shank wings create a clearance hole to allow for any movement
- BAZ washer ensures an effective seal against the curvature of the sheet

### Notes & Considerations

#### **Fibre/Asbestos Cement**

Special care and consideration needs to be taken with fibre/asbestos cement sheets that are installed beyond 15° pitch.

Holding clips should be used to ensure that the weight is not transferred to the fixing.

As with all instances where contact with asbestos is likely, special health and safety considerations need to be taken into account.

When drilling through asbestos type materials, it is likely that asbestos fibres will be released which can lead to ill health.

Precautions should always be taken to protect the operative and any other person that may be affected by operations such as site visitors and the public. NFRC technical bulletins 24 and 31 give practical guidance and further information is available from the HSE website.

Current legislation should always be followed and risks assessed and controlled.

## FIBRE CEMENT FIXINGS



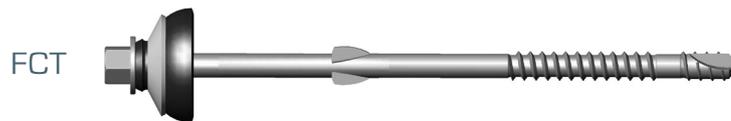
Fibre cement to LIGHT SECTION steel purlins and rails – 1.2mm to 3.2mm

Code	Diameter x Length (mm)	Build-up Range (mm)	
		Min.	Max (inc Purlin)
<b>FCL110-BAZ</b>	6.3 x 110	27	80
<b>FCL145-BAZ</b>	6.3 x 145	62	115
<b>FCL190-BAZ</b>	6.3 x 190	107	160



Fibre cement to HEAVY SECTION steel purlins and rails – 4.0mm to 12.0mm

Code	Diameter x Length (mm)	Build-up Range (mm)	
		Min.	Max (inc Purlin)
<b>FCH120-BAZ</b>	6.3 x 120	35	85
<b>FCH155-BAZ</b>	6.3 x 155	70	125
<b>FCH195-BAZ</b>	6.3 x 195	110	165



Fibre cement to TIMBER purlins and rails

Code	Diameter x Length (mm)	Build-up Range (mm)	
		Min.	Max (inc Purlin)
<b>FCT130-BAZ</b>	6.3 x 130	30	65 Sheet

## WINGED DRILL FIXINGS

## Material Specification

- Carbon Steel

## Application

- Timber to steel substrates
- Composite panel to steel substrates

## Substrates

- WDLS LIGHT STEEL purlins and rails – 1.5mm to 3.2mm
- WDHS HEAVY STEEL purlins and rails – 4.0mm to 12.0mm

## Features

- Drill point wings create a clearance hole through timber to prevent thread engagement
- Wings designed to snap off upon contact with steel substrate

Countersunk Head



Wafer Head



## Notes &amp; Considerations

Not suitable for use with some high density timber products.

Not recommended for use with timber treated with preservatives containing copper, mercury or other aggressive chemicals.

May not be suitable for some external applications where the fixing is exposed to repeated wetting, or in applications subjected to repeat shock or vibratory loads.

## WINGED DRILL FIXINGS

WDLS



Timber to LIGHT SECTION steel purlins and rails – 1.5mm to 3.2mm

Code	Diameter x Length (mm)	Build-up Range (mm)		Phillips Drive
		Min.	Max (inc. Purlin)	
<b>WDLS38</b>	4.8 x 38	10	23	No. 2
<b>WDLS50</b>	5.5 x 50	10	35	No. 3
<b>WDLS60</b>	5.5 x 60	15	45	No. 3
<b>WDLS85</b>	5.5 x 85	25	70	No. 3
<b>WDLS109</b>	5.5 x 109	50	94	No. 3
<b>WDLS127*</b>	5.5 x 127	40	112	No. 3

\*Wafer head

150mm & 180mm are available on request

WDHS



Fibre cement to HEAVY SECTION steel purlins and rails – 4.0mm to 12.0mm

Code	Diameter x Length (mm)	Build-up Range (mm)		Phillips Drive
		Min.	Max (inc. Purlin)	
<b>WDHS60</b>	5.5 x 60	10	36	No. 3
<b>WDHS85</b>	5.5 x 85	10	61	No. 3
<b>WDHS109</b>	5.5 x 109	40	85	No. 3

130mm & 150mm are available on request

## SELF TAPPING FIXINGS

## Material Specification

- Carbon Steel

## Application

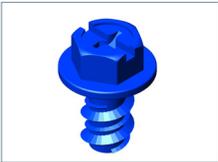
- General purpose fixing

## Substrates

- Concrete/masonry
- Brickwork

## Head Options

MF 8mm Hex Head



MF-C Countersunk Head



## Features

- Blue Ruspert finish provides excellent corrosion resistance
- Available in both countersunk or 8mm hex heads
- 8mm Hex head also has slotted and Phillips drive
- Direct fixing (no plug required)
- Supplied with a free straight shank drill bit per 100 fixings

## Notes &amp; Considerations

Minimum embedment for concrete is 25mm.

Minimum embedment for brickwork is 35mm.

Drill hole depth should be a minimum of 10mm more than the embedment depth.

Performance is dependant on concrete/masonry or brickwork material.

Site testing of brick or masonry is recommended. For further information please contact the technical department.

## SELF TAPPING FIXINGS

### MF HEX HEAD



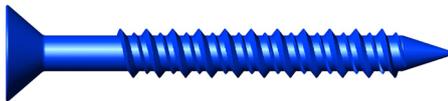
Hex head to concrete or masonry

Code	Diameter x Length (mm)	Build-up Range (mm)	
		Min.	Max (inc Purlin)
MF32	6.3 x 32	0	7
MF45*	6.3 x 45	5	20
MF57	6.3 x 57	17	32
MF70	6.3 x 70	30	45
MF82	6.3 x 82	42	57
MF100	6.3 x 100	60	75
MF125	6.3 x 125	85	100

\* This size also available in Stainless Steel

Available with a galvanised washer only. Example code MF32-G16

### MFC COUNTERSUNK



Countersunk head to concrete or masonry

Code	Diameter x Length (mm)	Build-up Range (mm)	
		Min.	Max (inc Purlin)
MF45C	6.3 x 45	5	20
MF57C	6.3 x 57	17	32
MF70C	6.3 x 70	30	45
MF82C	6.3 x 82	42	57
MF100C	6.3 x 100	60	75
MF125C	6.3 x 125	85	100

### Drill Bits

Code	Diameter x Length (mm)	Drill Bit Anchor Range (mm)
MF-DR140	5.15 x 140	32 - 100

## CLIP FIX FIXINGS

## Material Specification

- Carbon Steel

## Application

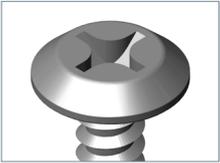
- Clip fix for Standing Seam System

## Substrates

- CFLS LIGHT STEEL purlins and rails – 1.5mm to 3.2mm
- CFHS HEAVY STEEL purlins and rails – 4.0mm to 12.0mm

## Head Options

Clip Fix Head



## Features

- Phillips No.3 head
- Low profile head prevents obstruction

## CLIP FIX FIXINGS

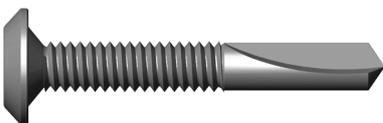
CFLS



Clip systems to LIGHT SECTION 1.2mm to 3.2mm

Code	Diameter x Length (mm)	Effective Thread Length	Phillips Drive
<b>CFLS25</b>	5.5 x 25	13	No.3

CFHS



Clip systems to HEAVY SECTION 4.0mm to 12.0mm

Code	Diameter x Length (mm)	Effective Thread Length	Phillips Drive
<b>CFHS38</b>	5.5 x 38	16	No.3

## SELF TAPPING FIXINGS

### Material Specification

- Carbon Steel

### Application

- General purpose fixing

### Substrates

- Light Steel\*
- Heavy Steel\*
- Timber/ply\*

\* See opposite for pilot hole sizes

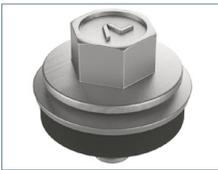
### Features

- High-quality medium carbon cold forming steel

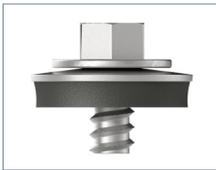
### Washer Options

#### 8mm Hex Head

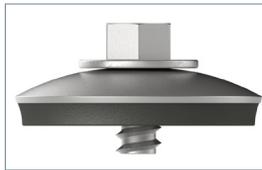
W-S16



W-S19



W-S29



Example code with washer: TCAB40

## SELF TAPPING FIXINGS

TCAB



Code	Diameter x Length (mm)	Thread Length
TCAB25	6.3 x 25	FULL
TCAB40	6.3 x 40	FULL
TCAB50	6.3 x 50	FULL
TCAB65	6.3 x 65	FULL
TCAB75	6.3 x 75	FULL
TCAB100	6.3 x 100	75
TCAB120	6.3 x 120	75
TCAB180	6.3 x 180	75
TCAB200	6.3 x 200	75

The following table provides guidance on the installation of 6.3mm self tapping fixings. Please note that the hole sizes can vary if different grades of steel are used and testing by site operatives is the best way of establishing the optimum hole size.

Purlin Thickness (mm)	1.5-3.0	4.0-5.0	> 5.0
Recommended pilot hole (mm)	4.9	5.3	5.8

Recommended embedment into timber is dependant on application.  
 For structural applications a minimum of 40mm embedment is recommended.  
 Recommended pilot hole for Timber is 3.2mm.

## COMPOSITE PANEL FIXINGS TO LIGHT STEEL

### Material Specification

- Austenitic Bi-Metal Stainless Steel

### Application

- Composite panels
- Sheet and Rigid Insulation

### Substrates

- LIGHT SECTION steel purlins and rails – 1.2mm to 3.2mm
- Structural grade timber (min. 50mm embedment)

### Washer Options

#### 8mm Hex Head

W-S16



W-S19



W-S29



Example code with washer: BM-CPLS115-S19

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: BM-CPLS115-S19-RAL/BS Reference

### Features

- Enlarged high-thread diameter supports outer skin of panel
- Thread lengths designed to provide maximum coverage
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours
- Austenitic Stainless Steel offers advanced corrosion resistance
- Functional Life Expectancy exceeding 40 years
- Warranty of up to 25 years in most environments – available on request
- Heat treated Carbon Steel drill points and lead-in threads provide fast and effective drilling

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

Effective thread length dimensions are calculated to ensure that all the threads within and above the purlin are austenitic stainless steel.

### COMPOSITE PANEL FIXINGS TO LIGHT STEEL

8mm Hex Head



11mm Bi-Hex Head



Code	Diameter x Length (mm)	Build-up Range (mm)		Panel Range (mm)	
		Panel Min.	Panel Max (inc. Purlin)	Min.	Max.
<b>BM-CPLS065</b>	5.5/6.3 x 65	27	46	30	40
<b>BM-CPLS082</b>	5.5/6.3 x 82	35	61	40	60
<b>BM-CPLS100</b>	5.5/6.3 x 100	43	79	45	70
<b>BM-CPLS115</b>	5.5/6.3 x 115	60	94	60	80
<b>BM-CPLS135</b>	5.5/6.3 x 135	65	114	70	100
<b>BM-CPLS150</b>	5.5/6.3 x 150	80	129	80	120
<b>BM-CPLS180</b>	5.5/6.3 x 180	110	159	120	150
<b>BM-CPLS240*</b>	5.5/6.3 x 240	165	220	175	200

\* Not available in 11mm Bi-hex head

## COMPOSITE PANEL FIXINGS TO HEAVY STEEL

### Material Specification

- Austenitic Bi-Metal Stainless Steel

### Application

- Composite panels
- Sheet and Rigid Insulation

### Substrates

- HEAVY SECTION steel purlins and rails – 4.0mm to 12.0mm

### Features

- Enlarged high-thread diameter supports outer skin of panel
- Thread lengths designed to provide maximum coverage
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours
- Austenitic Stainless Steel offers advanced corrosion resistance
- Functional Life Expectancy exceeding 40 years
- Warranty of up to 25 years in most environments – available on request
- Heat treated Carbon Steel drill points and lead-in threads provide fast and effective drilling

### Washer Options

#### 8mm Hex Head

W-S16



W-S19



W-S29



Example code with washer: BM-CPHS105-S19

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: BM-CPHS105-S19-RAL/BS Reference

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

Effective thread length dimensions are calculated to ensure that all the threads within and above the purlin are austenitic stainless steel.

### COMPOSITE PANEL FIXINGS TO HEAVY STEEL

8mm Hex Head



11mm Bi-Hex Head



Code	Diameter x Length (mm)	Build-up Range (mm)		Panel Range (mm)	
		Panel Min.	Panel Max (inc. Purlin)	Min.	Max.
<b>BM-CPHS080</b>	5.5/6.3 x 80	35	50	40	
<b>BM-CPHS105</b>	5.5/6.3 x 105	50	75	50	60
<b>BM-CPHS125</b>	5.5/6.3 x 125	70	95	70	80
<b>BM-CPHS150</b>	5.5/6.3 x 150	80	120	80	100
<b>BM-CPHS190</b>	5.5/6.3 x 190	110	160	120	150
<b>BM-CPHS250*</b>	5.5/6.3 x 250	170	220	175	200

\* Not available in 11mm Bi-hex head

## BUILT-UP & SINGLE SKIN & HALTER FIXINGS TO LIGHT STEEL

### Material Specification

- Austenitic Bi-Metal Stainless Steel

### Application

- Single skin sheeting
- Built-up Systems
- Bracket/Liner Fix
- General purpose self drilling fixing

### Substrates

- LIGHT SECTION steel purlins and rails – 1.2mm to 3.2mm
- Structural grade timber (min. 50mm embedment)

### Washer Options

#### 8mm Hex Head

W-S16



W-S19



W-S29



Example code with washer: BM-LS25-S19

#### Moulded 11mm Bi Hex Head

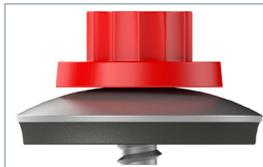
W-S16



W-S19



W-S29



Example code with washer: BM-LS25-S19-RAL/BS Reference

### Features

- Fully threaded
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colour
- Austenitic Stainless Steel offers advanced corrosion resistance solutions
- Functional Life Expectancy exceeding 40 years
- Warranty of up to 25 years in most environments – available on request
- Heat treated Carbon Steel drill points and lead-in threads provide fast and effective drilling

### Notes & Considerations

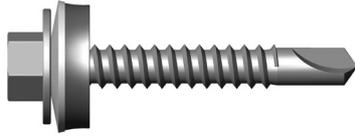
When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

To conform to HSE guidelines regards fragility and to minimise air-leakage, where applicable, we suggest liner fixings be ordered with a minimum 16mm diameter bonded washer.

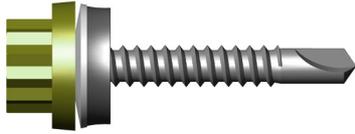
Effective thread length dimensions are calculated to ensure that all the threads within and above the purlin are austenitic stainless steel.

### BUILT-UP & SINGLE SKIN & HALTER FIXINGS TO LIGHT STEEL

8mm Hex Head



11mm Bi-Hex Head



8mm Hex Head



8mm Hex Head  
c/w S16 Washer



Code	Diameter x Length (mm)	Effective Thread Length		
		No Washer	Washed	29mm Washer
BM-LS25	5.5 x 25	9	6	-
BM-LS35	5.5 x 35	19	16	14
BM-LS55	5.5 x 55	39	36	34
BM-LS75	5.5 x 75	59	56	54

Code	Diameter x Length (mm)	Effective Thread Length	
		No Washer	Washed-S16
BM-LSHF38	6.5 x 38	19	17
BM-LSHF50	6.5 x 50	31	29

## BUILT-UP & SINGLE SKIN FIXINGS TO HEAVY STEEL

### Material Specification

- Austenitic Bi-Metal Stainless Steel

### Application

- Single skin sheeting
- Bracket Fix
- Liner Fix
- General purpose self drilling fixing

### Substrates

- HEAVY SECTION steel purlins and rails – 4.0mm to 12.0mm

### Features

- Fully threaded
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours
- Austenitic Stainless Steel offers advanced corrosion resistance solutions
- Functional Life Expectancy exceeding 40 years
- Warranty of up to 25 years in most environments – available on request
- Heat treated Carbon Steel drill points and lead-in threads provide fast and effective drilling

### Washer Options

#### 8mm Hex Head

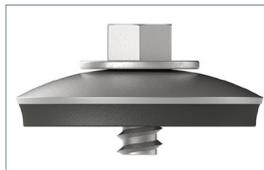
W-S16



W-S19



W-S29



Example code with washer: BM-HS38-S19

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: BM-HS38-S19-RAL/BS Reference

### Notes & Considerations

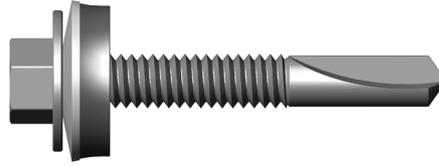
When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

To conform to HSE guidelines regards fragility and to minimise air-leakage, where applicable, we suggest liner fixings be ordered with a minimum 16mm diameter bonded washer.

Effective thread length dimensions are calculated to ensure that all the threads within and above the purlin are austenitic stainless steel.

### BUILT-UP & SINGLE SKIN FIXINGS TO HEAVY STEEL

8mm Hex Head



11mm Bi-Hex Head



Code	Diameter x Length (mm)	Effective Thread Length		
		No Washer	Washed	29mm Washer
<b>BM-HS38</b>	5.5 x 38	13	10	8
<b>BM-HS55</b>	5.5 x 55	30	27	25
<b>BM-HS75</b>	5.5 x 75	50	47	45

## BUILT-UP & COMPOSITE FIXINGS TO TIMBER

### Material Specification

- Austenitic Bi-Metal Stainless Steel

### Application

#### BM-TF

- Single skin sheeting
- Liner Fix

#### BM-CPLS

- Composite panels
- Sheet and Rigid Insulation

### Substrates

- Structural grade timber

### Washer Options

#### 8mm Hex Head

W-S16



W-S19



W-S29



Example code with washer: BM-CPLS115-S19

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



W-S29



Example code with washer: BM-CPLS115-S19-RAL/BS Reference

### Features

- Enlarged high-thread on BM-CPLS fixing diameter supports outer skin of panel
- Thread lengths designed to provide maximum coverage
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours
- Austenitic Stainless Steel offers advanced corrosion resistance solutions
- Functional Life Expectancy exceeding 40 years
- Warranty of up to 25 years in most environments – available on request
- Heat treated Carbon Steel drill points and lead-in threads provide fast and effective drilling

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

Recommended embedment into timber is dependant on application. For structural applications a minimum of 40mm embedment is recommended with the 6.3mm diameter BM-TF50 and 50mm for the 5.5mm diameter BM-CPLS fixing.

### BUILT-UP & COMPOSITE FIXINGS TO TIMBER

BM-TF

8mm Hex Head



11mm Hex Head



BM-CPLS

8mm Bi-Hex Head



11mm Bi-Hex Head



Code	Diameter x Length (mm)	Build-up Range (mm)	
		Min.	Max
<b>BM-TF50</b>	6.3 x 50	Fully Threaded	
<b>BM-CPLS082</b>	5.5/6.3 x 82	20	30
<b>BM-CPLS100</b>	5.5/6.3 x 100	20	40
<b>BM-CPLS115</b>	5.5/6.3 x 115	40	60
<b>BM-CPLS135</b>	5.5/6.3 x 135	50	80
<b>BM-CPLS150</b>	5.5/6.3 x 150	70	90
<b>BM-CPLS180</b>	5.5/6.3 x 180	100	125
<b>BM-CPLS240*</b>	5.5/6.3 x 240	150	175

\* Not available in 11mm Bi-hex head

## STITCHING FIXINGS

### Material Specification

- Austenitic Bi-Metal Stainless Steel

### Application

- Sheet to sheet stitching
- Side laps and flashings

### Substrates

- Maximum 2 x 0.9mm

### Washer Options

#### 8mm Hex Head

W-S16



W-S19



Example code with washer: BM-ST22-S16

#### Moulded 11mm Bi Hex Head

W-S16



W-S19



Example code with washer: BM-ST22-S16-RAL/BS Reference

### Features

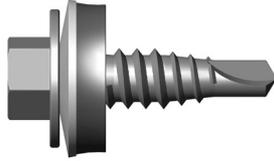
- Free spin zone prevents over-tightening and stripping-out
- Reduced point gives improved torque to strip and pull-out values
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours
- Austenitic Stainless Steel offers advanced corrosion resistance solutions
- Functional Life Expectancy exceeding 40 years
- Warranty of up to 25 years in most environments – available on request
- Heat treated Carbon Steel drill points and lead-in threads provide fast and effective drilling

### Notes & Considerations

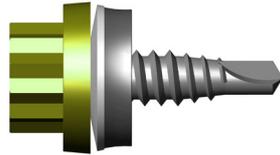
When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

### STITCHING FIXINGS

8mm Hex Head



11mm Bi-Hex Head



Code	Diameter x Length (mm)	Effective Thread Length	
		No Washer	Washed
<b>BM-ST19</b>	4.8 x 19	5	3
<b>BM-ST22</b>	6.3 x 22	7	5
<b>BM-ST27</b>	6.3 x 27	12	10

## IN-PLANE ROOFLIGHT FIXINGS – PRIMARY FIX

### Material Specification

- Austenitic Bi-Metal Stainless Steel
- Carbon Steel

### Application

- Single Skin
- Built-up
- Composite Panels

### Substrates

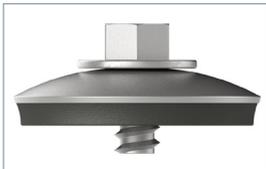
- LIGHT STEEL purlins and rails – 1.2mm to 3.2mm
- HEAVY STEEL purlins and rails – 4.0mm to 12.0mm
- TIMBER purlins and rails

### Features

- 29mm soft shore EPDM washer offers a greater watertight seal in exposed areas
- Saddle washer option provides a watertight seal whilst reducing the risk of damage to the polycarbonate rooflight or sheets
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded Poppy Red heads increase the visibility of the rooflight (other colours are available)

### Washer Options

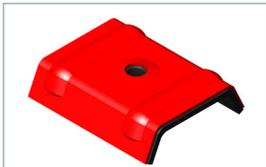
8mm Hex Head  
W-S29



Moulded 11mm Bi Hex Head  
W-S29



### Saddle Washer



Where crown fixing is specified then the washer may be reduced to 19mm and an additional saddle washer used.

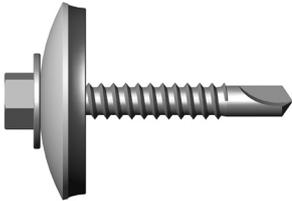
### Notes & Considerations

All of the codes opposite are for valley fixing.

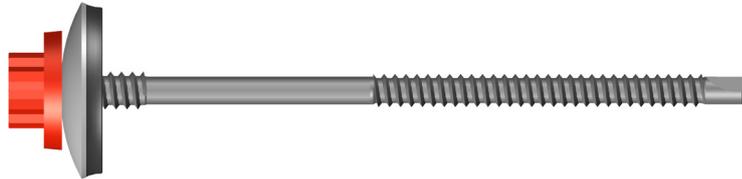
Effective thread length dimensions are calculated to ensure that all the threads within and above the purlin are austenitic stainless steel.

## IN-PLANE ROOFLIGHT FIXINGS – PRIMARY FIX

8mm Hex Head



11mm Bi-Hex Head



Application/ Systems	Fastener Material	Light Section Purlins		Heavy Section Purlins		Timber Purlins	
		Code	E.T.L.	Code	E.T.L.	Code	E.T.L.
<b>Single Skin</b>	Carbon	<b>RLLS32-S29-04E53</b>	15	<b>HS55-S29-04E53</b>	28	<b>TF45-S29-04E53</b>	41
	Stainless	<b>BM-LS35-S29-04E53</b>	14	<b>BM-HS55-S29-04E53</b>	25	<b>BM-TF50-S29-04E53</b>	46
<b>Built-up</b>	Liner	<b>LS32-S29</b>	15	<b>HS55-S29</b>	28	<b>TF45-S29</b>	41
	Liner	<b>BM-LS35-S29</b>	14	<b>BM-HS55-S29</b>	-	<b>BM-TF50-S29</b>	46
	Outer	<b>RLLS32-S29-04E53</b>	15	N/A	-	N/A	-
	Outer	<b>BM-LS35-S29-04E53</b>	14	N/A	-	N/A	-
<b>Composite</b>	Carbon	<b>CPLS-S29-04E53</b>	-	<b>CPHS-S29-04E53</b>	-	<b>TF-S29-04E53</b>	-
	Stainless	<b>BM-CPLS-S29-04E53</b>	-	<b>BM-CPHS-S29-04E53</b>	-	<b>BM-CPLS-S29-04E53</b>	-

For composite fixing lengths and panel thicknesses, refer to page 23 for Carbon Steel, page 45 for Bi-Metal.

### Guidance from H.S.E. (Health & Safety Executive) and N.A.R.M. (National Association of Rooflight Manufacturers)

All fixings in this section are austenitic stainless steel (unless noted). This is the industry recommended fixing material where a required period of non-fragility of the rooflight is 25 years.

If carbon steel fixings are selected, even though the rooflights would be expected to remain non fragile for the normal construction period, any extension of the non-fragility beyond the construction period would be dependent on others factors and could not be guaranteed. It is also recommended that the exposed fixings have integral moulded heads (Poppy Red – 04E53) rather than hexagon colour caps.

**For further information contact Ash & Lacy, the rooflight supplier or visit [www.narm.org](http://www.narm.org)**

## IN-PLANE ROOFLIGHT FIXINGS – SIDELAP

### Material Specification

- Austenitic Bi-Metal Stainless Steel
- Carbon Steel

### Application

- Sidelap stitching

### Substrates

- ST = Rooflight to steel sheet
- ST = Steel sheet to rooflight (with reinforcing strip)
- RLP = Rooflight to rooflight (without reinforcing strip)
- RLP = Steel sheet to rooflight (without reinforcing strip)
- RLP = Sinusoidal sheet stitching
- ST25 = Repair screw

### Features

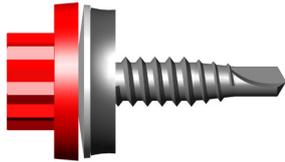
- Integral moulded Poppy Red heads increase the visibility of the rooflight
- Laplocks have a rubber sleeve around the shaft of the fixing which expands to give a firm and watertight fixing point
- Laplocks are complete with 19mm Stainless Steel EPDM bonded washer

### Notes & Considerations

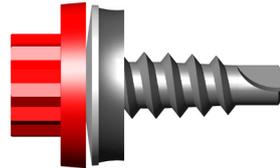
It is advisable to check with the actual rooflight supplier with regards fixing type, location and washer diameter recommended.

\*Laplocks are recommended where the rooflight is in the underlap and there are no metal underlap strips integral within the light. A 10mm clearance hole will be required.

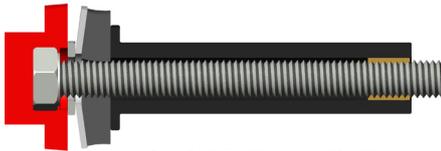
## IN-PLANE ROOFLIGHT FIXINGS – SIDELAP



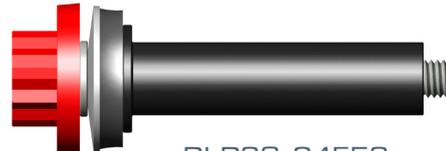
BM-ST27-S19-04E53



ST25-S19-04E53



RLP38-04E53-SectionThru



RLP38-04E53

Code	Fastener Material	Diameter x length (mm)	Max E.T.L.
RLP25-04E53*	Stainless	9.5 x 25	14
RLP38-04E53*	Stainless	9.5 x 38	24
BM-ST27-S16/S19-04E53	Stainless	6.3 x 27	10
ST27-S16/S19-04E53	Carbon	6.3 x 27	10
ST25-S16/S19-04E53	Carbon	8.0 x 25	10

Guidance from H.S.E. (Health & Safety Executive) and N.A.R.M. (National Association of Rooflight Manufacturers)

All fixings in this section are austenitic stainless steel (unless noted). This is the industry recommended fixing material where a required period of non-fragility of the rooflight is 25 years.

If carbon steel fixings are selected, even though the rooflights would be expected to remain non fragile for the normal construction period, any extension of the non-fragility beyond the construction period would be dependent on others factors and could not be guaranteed. It is also recommended that the exposed fixings have integral moulded heads (Poppy Red – 04E53) rather than hexagon colour caps.

**For further information contact Ash & Lacy, the rooflight supplier or visit [www.narm.org](http://www.narm.org)**

## LOW PROFILE FIXINGS

### Material Specification

- Austenitic Bi-Metal Stainless Steel

### Application

- Single Skin
- Stitching
- Side Laps and Flashings

### Substrates

- LP-BM-LS LIGHT STEEL purlins and rails – 1.2mm to 3.2mm
- LP-BM-HS HEAVY STEEL purlins and rails – 4.0mm to 12.0mm
- LP-BM-ST STITCHER Maximum 2 x 0.9mm

### Features

- Discreet low profile head
- Precision fit Torx T25 internal drive recess ensures easier installation
- Painted head available to match cladding sheet colour
- All fixings assembled with a Stainless Steel Bonded washer
- Austenitic Stainless Steel offers advanced corrosion resistance solutions
- Functional Life Expectancy exceeding 40 years
- Warranty of up to 25 years in most environments – available on request
- Heat treated Carbon Steel drill points and lead-in threads provide fast and effective drilling

### Low Profile Head

#### Plain



Example code:  
LP-BM-LS28

#### Painted



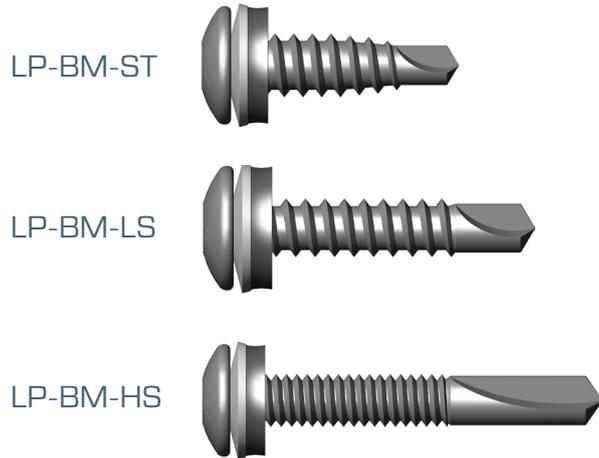
Example code:  
LP-BM-LS28-RAL/BS Reference

### Notes & Considerations

When ordering colour headed fixings, please specify the RAL/BS reference or colour name.

Effective thread length dimensions are calculated to ensure that all the threads within and above the purlin are austenitic stainless steel.

## LOW PROFILE FIXINGS



Code	Diameter x length (mm)	Effective Thread Length (mm)	Drilling Capacity (mm)
LP-BM-LS28	5.5 x 28	7	1.2 - 3.2
LP-BM-LS45*	5.5 x 45	24	1.2 - 3.2
LP-BM-ST22	6.3 x 22	5	2 x 0.9
LP-BM-HS45	5.5 x 45	17	4.0 - 12.0

\* Can be used for Single Skin to Timber.

## SELF TAPPING FIXINGS

### Material Specification

- Austenitic Bi-Metal Stainless Steel

### Application

- General purpose fixing

### Substrates

- Light Steel\*
- Timber/ply\*

\* See opposite for pilot hole sizes

### Features

- Manufactured from 304 grade Austenitic Stainless Steel
- Waxed to reduce tapping torque
- 14mm flange reduces the risk of washer inversion and improves pull over and stability
- Integral moulded, colour matched heads available in a comprehensive range of BS & RAL colours
- Designed and developed by Ash & Lacy to ensure outstanding performance
- Manufactured in accordance with BS EN ISO 9001:2008

### Washer Options

#### 8mm Hex Head

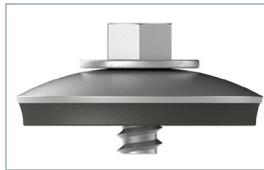
W-S16



W-S19



W-S29



Example code with washer: TSAB40

### Notes & Considerations

Stainless steel self tapping fixings should be installed using a maximum 600rpm slow-running screw gun.

## SELF TAPPING FIXINGS

TSAB



Code	Diameter x Length (mm)	Thread Length
TSAB25	6.3 x 25	FULL
TSAB32	6.3 x 32	FULL
TSAB40	6.3 x 40	FULL
TSAB50	6.3 x 50	FULL
TSAB65	6.3 x 65	FULL
TSAB75	6.3 x 75	FULL
TSAB100	6.3 x 100	75
TSAB120	6.3 x 120	75

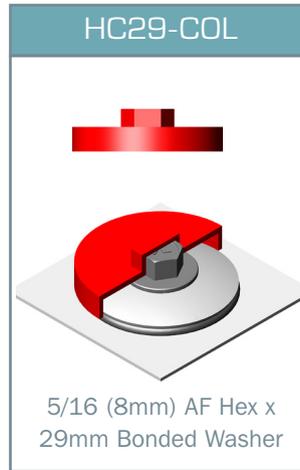
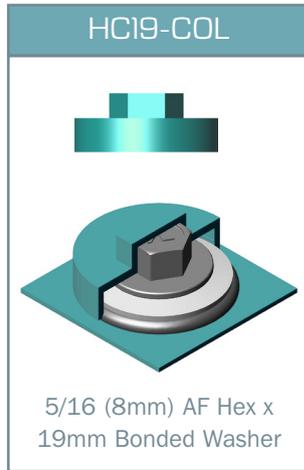
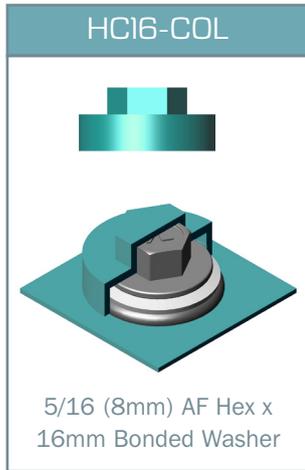
The following table provides guidance on the installation of 6.3mm self tapping fixings. Please note that the hole sizes can vary if different grades of steel are used and testing by site operatives is the best way of establishing the optimum hole size.

<b>Purlin Thickness (mm)</b>	1.5-3.0
<b>Recommended pilot hole (mm)</b>	4.9

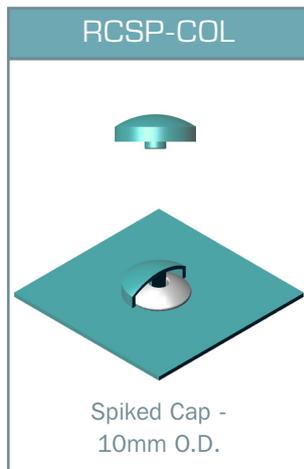
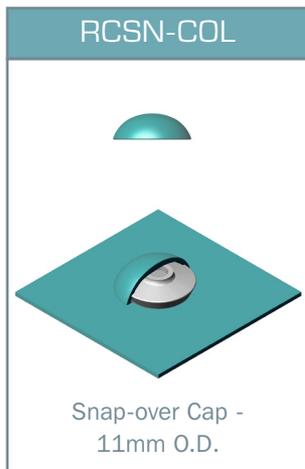
Recommended embedment into timber is dependant on application.  
 For structural applications a minimum of 40mm embedment is recommended.  
 Recommended pilot hole for Timber is 3.2mm.

## PUSH ON CAPS

### U.V. Stablised Hexagon Colour Caps

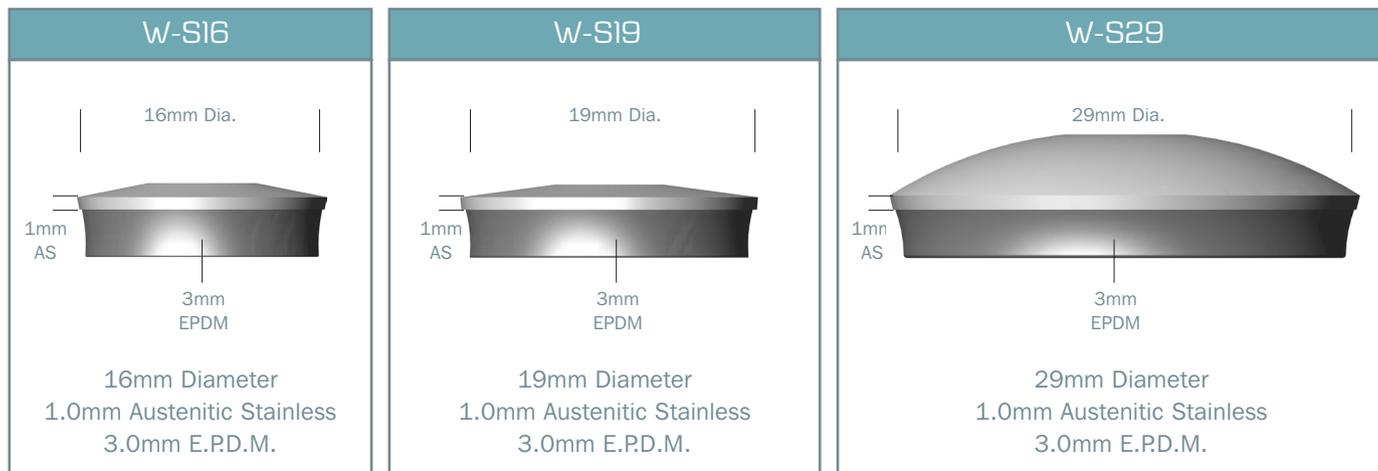


### U.V. Stablised Rivet Colour Caps

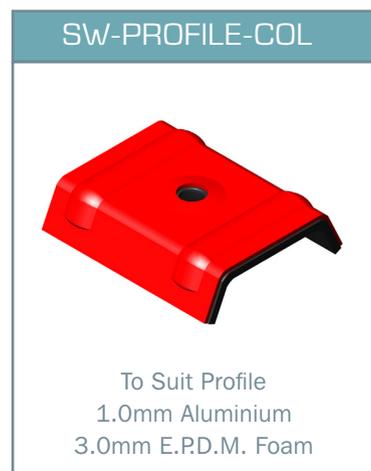


## WASHERS

### Bonded Washers – General Roofing and Cladding



### Saddle Washers



## RIVETS

### Material Specification

- Aluminium/Aluminium
- Aluminium/Steel
- Aluminium/Stainless
- Steel/Steel

### Application

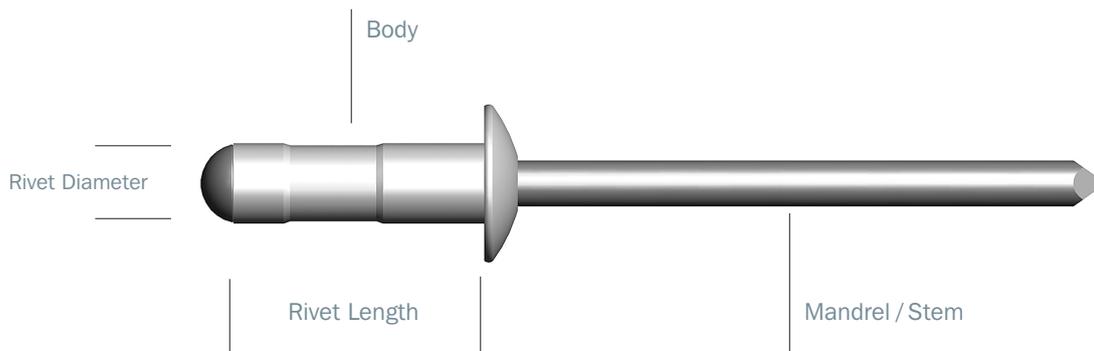
- General roofing and cladding

### Substrates

- Flashings and Sheet to Sheet
- Thick to Thin applications

### Features

- Grip range provides a solution for joining several material thicknesses
- Available in a range of head styles to best suit the application
- Multi-grip range available with painted colour matched heads
- Bulbtite and Sealed rivets available with colour match caps



## RIVETS

### Bulbrite Rivets

Code	Size	Body/stem Material	Grip Range mm	Hole $\phi$ mm
<b>RIV-4W</b>	5.2 x 19.1	Alu/Alu	1.5 - 6.4	5.3mm
<b>RIV-6W</b>	5.2 x 22.2	Alu/Alu	4.8 - 9.5	5.3mm
<b>RIV-8W</b>	5.2 x 25.4	Alu/Alu	7.9 - 12.7	5.3mm
<b>RIV-10W</b>	5.2 x 28.6	Alu/Alu	11.1 - 15.9	5.3mm
<b>RIV-12W</b>	5.2 x 31.8	Alu/Alu	14.3 - 19.1	5.3mm
<b>RCSN-COL</b>	11mm dia - snap-over U.V. Stabilised colour cap			

Supplied with assembled sealing washer.

Available with caps – see page 64.

Box quantity 100.



### Multi Grip Rivets

Code	Size	Body/stem Material	Grip Range mm	Hole $\phi$ mm
<b>RIV-0613</b>	4.8 x 10.3	Alu/Steel	1.6 - 6.4	4.9mm
<b>RIV-0619-COL</b>	4.8 x 15.1	Alu/Steel	4.8 - 11.0	4.9mm

Available with painted coloured head. (Subject to min order qty)

Box quantity 250.



### Sealed Rivets

Code	Size	Body/stem Material	Grip Range mm	Hole $\phi$ mm
<b>RIV-AD68</b>	4.8 x 11	Alu/Steel	4.5-6.0	4.9mm
<b>RIV-AD610</b>	4.8 x 12.5	Alu/Steel	6.0-7.5	4.9mm
<b>RIV-AD612</b>	4.8 x 14	Alu/Steel	7.5-9.0	4.9mm
<b>RIV-AD68SS</b>	4.8 x 11	Alu/Stainless	4.5-6.0	4.9mm
<b>RIV-AD612SS</b>	4.8 x 14	Alu/Stainless	7.5-9.0	4.9mm
<b>RCSP-COL</b>	10mm dia - spiked U.V. Stabilised colour cap			

Available with caps – see page 64.

Box quantity 500.



### Steel Rivet

Code	Size	Body/stem Material	Grip Range mm	Hole $\phi$ mm
<b>RIV-TSPD46BS (white)</b>	3.2 x 8	Steel	3.0 - 5.0	3.3mm
<b>RIV-TSPD44BS (white)</b>	3.2 x 6	Steel	1.5 - 3.0	3.3mm
<b>RIV-TSPD610BS (white)</b>	4.8 x 12	Steel	6.0 - 8.0	4.9mm

Suitable for firewalls.

Available coloured white.

Box quantity 500.



## BUTYL TAPES

## Material Specification

- **GCA** is a high performance butyl sealing compound

## Substrates

- Coated steel, Aluminium and Fibre Cement
- GRP and Polycarbonate rooflights
- Steel gutter joints

## Features

- Strong, flexible and designed specifically to accommodate movement
- Complies with Building Regulations Approved Document Part L Standard

## Material Specification

- **HP600** is a synthetic rubber-based preformed strip sealant

## Substrates

- Coated steel, Aluminium and Fibre Cement
- GRP and Polycarbonate rooflights
- DPMs and VCLs membranes

## Features

- Remains flexible throughout its service life
- Easy and accurate to use with little waste and no mess

## Material Specification

- **Polyband** is an extruded butyl tape laminated with a fixed polyester liner

## Substrates

- Steel decking
- Liner trays

## Features

- Can be applied in cold conditions without reduction in long term performance
- Outstanding adhesion to coated steel and aluminium sheets without the need for primers
- Special high strength non-tear laminated film

## Notes &amp; Considerations

GCA Standard colour: Grey

HP600 Standard colour: White

Lapstrip must have a nominal thickness just greater than maximum anticipated joint clearance.

Application temperature range: +5°C to +30°C

It is advisable to check with the system/rooflight provider to confirm their recommended size, type and position of sealing tapes.

Full technical and COSHH data is available on our ranges of GCA and HP600 butyl tapes, please request from our technical department.

The MCRMA technical paper can also offer practical advice with regards endlap sealing.

All our butyl sealing tapes comply to Class A as defined in the NFRC Technical Bulletin 36.

## BUTYL TAPES

Application		GCA Code 12yr Max Warranty	HP600 Code 25yr Max Warranty	Description	Mts/ Reel	Reels/ Case	
		Grey	White			GCA	HP600
<b>Metal Liner Sheeting</b>	End laps	<b>MAST-GCA-9x3</b>	<b>MAST-HP600-9x3</b>	9mm x 3mm	15	24	22
		<b>MAST-GCA-4x12B</b>	<b>MAST-HP600-4x12B</b>	4mm diameter bead	12	30	
	Side laps	<b>MAST-PB50</b>	<b>Consult Ash &amp; Lacy</b>	50mm x 1mm Polyband	35	6	
<b>External Metal Sheeting</b>	End & Side	<b>MAST-GCA-6x5</b>	<b>MAST-HP600-6x5</b>	6mm x 5mm	9.6	30	
	laps	<b>MAST-GCA-6x8B</b>	<b>MAST-HP600-6x8B</b>	6mm diameter bead	8	24	
		<b>MAST-GCA-8x6B</b>	<b>MAST-HP600-8x6B</b>	8mm diameter bead	6	20	
<b>Composite Panels</b>	End laps	<b>MAST-GCA-6x5</b>	<b>MAST-HP600-6x5</b>	6mm x 5mm	9.6	30	
	Side laps	<b>MAST-GCA-6x8B</b>	<b>MAST-HP600-6x8B</b>	6mm diameter bead	8	24	
<b>Rooflights</b>		<b>MAST-GCA-6x5</b>	<b>MAST-HP600-6x5</b>	6mm x 5mm	9.6	30	
		<b>MAST-GCA-6x8B</b>	<b>MAST-HP600-6x8B</b>	6mm diameter bead	8	24	
		<b>MAST-GCA-8x6B</b>	<b>MAST-HP600-8x6B</b>	8mm diameter bead	6	20	
		<b>MAST-GCA-18x4U</b>	<b>Consult Ash &amp; Lacy</b>	18mm x 4mm U channel	12	14	
<b>Metal Gutters</b>		<b>MAST-GCA-50x3</b>	<b>Consult Ash &amp; Lacy</b>	50mm x 3mm	15	6	
		<b>MAST-GCA-50x6</b>	<b>Consult Ash &amp; Lacy</b>	50mm x 6mm	5	6	
<b>Metal Flashings</b>		<b>MAST-GCA-9x3</b>	<b>MAST-HP600-9x3</b>	9mm x 3mm	15	24	22
		<b>MAST-GCA-6x5</b>	<b>MAST-HP600-6x5</b>	6mm x 5mm	9.6	30	
<b>Foam Fillers</b>		<b>MAST-GCA-9x1.5</b>	<b>Consult Ash &amp; Lacy</b>	9mm x 1.5mm	30	24	
<b>Roof and Wall Penetrations</b>		<b>MAST-GCA-9x3</b>	<b>MAST-HP600-9x3</b>	9mm x 3mm	15	24	22
		<b>MAST-GCA-6x5</b>	<b>MAST-HP600-6x5</b>	6mm x 5mm	9.6	30	
		<b>MAST-GCA-4x12B</b>	<b>MAST-HP600-4x12B</b>	4mm diameter bead	12	30	
		<b>MAST-GCA-6x8B</b>	<b>MAST-HP600-6x8B</b>	6mm diameter bead	8	24	
		<b>MAST-GCA-8x6B</b>	<b>MAST-HP600-8x6B</b>	8mm diameter bead	6	20	
<b>Other products available</b>		<b>MAST-GCA-15x2</b>	<b>Consult Ash &amp; Lacy</b>	15mm x 2mm	22.5	20	
		<b>MAST-GCA-19x3</b>	<b>Consult Ash &amp; Lacy</b>	19mm x 3mm	15	14	

## ISOLATING AND SEALING TAPES

## Material Specification

- P.V.C., Aluminium, Polycloth

## Application

Isolating Two Metal Surfaces

Code	Description
TAPE-PVC50	50mm wide x 33m Black PVC Barrier Tape
TAPE-PVC75	75mm wide x 33m Black PVC Barrier Tape
TAPE-PVC100	100mm wide x 33m Black PVC Barrier Tape

## Application

Sealing Liner Panel Sidelaps and Joints between Insulation Boards

Code	Description
TAPE-ALUM50	50mm wide x 45m Aluminium Foil Tape
TAPE-ALUM75	75mm wide x 45m Aluminium Foil Tape
TAPE-ALUM100	100mm wide x 45m Aluminium Foil Tape

## Application

Isolating Two Metal Surfaces/Seals Joints between Insulation Board

Code	Description
TAPE-CLOTH50	50mm wide x 50m Polycloth Tape
TAPE-CLOTH75	75mm wide x 50m Polycloth Tape
TAPE-CLOTH100	100mm wide x 50m Polycloth Tape

## Application

General Purpose EPDM Tape for Sealing, Isolating, Movement/Expansion Joints etc.

Code	Description
TAPE-10X4EPDM	10mm x 4mm x 10m B27 EPDM Tape
TAPE-15X10EPDM	15mm x 10mm x 10m B27 EPDM Tape
TAPE-25X4EPDM	25mm x 4mm x 10m B27 EPDM Tape
TAPE-50X3EPDM	50mm x 3mm x 10m B27 EPDM Tape

## EXPANDING FOAM TAPES

### Material Specification

- Open-cellular polyurethane foam impregnated with a modified acrylic dispersion, no plasticisers, added flame retardant fillings

### Application

- Sealing of variable width and expansion joints in profiled sheeting, flashings and other abutments cold bridging and air sealing

### Substrates

- Profiled sheeting
- Flashings

### Features

- Expands within minutes
- High resistance to weather and U.V. Light
- One-sided strong acrylic adhesive
- Colour – Black
- Expected life expectancy in excess of 20 years, depending upon temperature and joint design

Codes				
Pre-compressed, impregnated, expanding foam tape				
	compressed mm	expanded mm	width mm	roll length mm
TAPEEFT	2/	10/	10/	12.5
TAPEEFT	2/	10/	15/	12.5
TAPEEFT	3/	15/	10/	10.0
TAPEEFT	3/	15/	20/	10.0
TAPEEFT	4/	20/	20/	8.0
TAPEEFT	5/	25/	20/	6.6
TAPEEFT	5/	25/	30/	6.6
TAPEEFT	6/	30/	30/	5.6
TAPEEFT	8/	40/	40/	4.3
TAPEEFT	10/	50/	25/	3.3
TAPEEFT	10/	50/	50/	3.3
TAPEEFT	12/	60/	25/	2.6
TAPEEFT	12/	60/	30/	2.6

To create effective seals		
Air and Dust	50%	(GAP x 2)
Driving Rain	33%	(GAP x 3)
Watertight	25%	(GAP x 4)
200mm Head of water	20%	(GAP x 5)

e.g. 10mm wide x 2/10mm compressed to 2.5mm gives an effective watertight seal.

### Notes & Considerations

The width of the product should never be less than the compressed height.

## CARTRIDGE MASTICS

### BUTYL RUBBER SEALANT – NON SETTING

#### Material Specification

- A permanent plastic, one-component Polybutene sealant

#### Application

- General sealing of roofing and cladding where a thin joint is required e.g. flashings, seams and joints in duct work

#### Substrates

- All porous and non-porous surfaces such as wood, concrete, stone and other building materials

#### Features

- Standard colour: Grey, (White option is available)
- Forms an elastic and tight skin
- UV and weather resistant
- Good resistance against chemicals
- Can be painted over after 24 hours

#### Notes & Considerations

Application temperature range: +5°C to +30°C

**CODE: SOUD-MAST-GP-GR or SOUD-MAST-GP-WH**



### POLYURETHANE SEALANT

#### Material Specification

- A high quality, one-part moisture cured polyurethane

#### Application

- Sealing and bonding a variety of metal assemblies and flashings

#### Substrates

- Many common building materials including metal, wood and concrete

#### Features

- Provides good movement accommodation
- Adheres to a wide variety of surfaces
- High resistance to oils, grease and many chemicals
- Excellent UV resistance
- Available in Grey, White and Black

#### Notes & Considerations

Primers are not required for good adhesion to most non porous surfaces.

Prime porous surfaces.

Some plastics and painted surfaces may require a primer.

Application temperature range: +5°C to +35°C

**CODE: SOUD-FLEX40-GR (grey)/WH (white)/BL (black)**



## CARTRIDGE SILICONES

### LOW MODULUS SILICONE – NEUTRAL CURING SYSTEM

#### Material Specification

- LMN is a high-quality neutral, elastic one-component Polysiloxane sealant

#### Application

- Roofing and cladding trims, flashings and joints

#### Substrates

- All usual building surfaces

#### Features

- Conforms to ISO 11600 F&G 25LM
- Low modulus
- Permanent colour, UV-resistant
- Stays elastic after curing
- Available in Clear, White, Grey, Brown, Black and Silver

#### Notes & Considerations

Some porous surfaces may require primer 150.

Activator should be used to enhance adhesion to non porous surfaces.

Application temperature range: +5°C to +35°C

**CODE: SOUD-LOWMOD-CL/WH/GR/BR/BL/ALUM**



### LOW MODULUS SILICONE – NEUTRAL CURING SYSTEM

#### Material Specification

- A neutral cure, fully elastic one-component Polysiloxane sealant

#### Application

- Roofing and cladding trims, flashings and joints

#### Substrates

- All usual building surfaces, except PE, PP, PFTW and bituminous surfaces

#### Features

- Low modulus
- Permanent colour, UV-resistant
- Stays permanently elastic after curing

#### Notes & Considerations

Apply Primer 150 on porous surfaces in water-loaded applications.

No primer required for non porous surfaces.

Preliminary compatibility test recommended.

Application temperature range: +5°C to +35°C

**CODE: SOUD-LOWMOD-N-CL**



## CARTRIDGE FOAMS

### FIRE RETARDANT FOAM

#### Material Specification

- A single component, self expanding, Polyurethane fire foam

#### Application

- Where fire retardant characteristics are required

#### Substrates

- Excellent adhesion to a wide variety of building materials such as brick, concrete, metal and PVC-u

#### Features

- Fire rating of up to 360 minutes (in certain configurations)
- Efficient seal against smoke and gas
- Does not contain CFC's or H-CFC's
- Excellent stability – no shrink or post expansion
- Can be painted after full cure
- 1000ml yields approx 35L cured foam

### Notes & Considerations

Cured PU-foam must be protected from UV-radiation by painting or applying a top layer of sealant

**CODE: SOUD-FOAM-FIRE**



### CONSTRUCTION FOAM

#### Material Specification

- One-component, self expanding, Polyurethane foam

#### Application

- Sealing of all opening in roof constructions
- Connecting of insulation materials and roof constructions
- Filling of cavities

#### Substrates

- Excellent adhesion to a wide variety of building materials such as brick, concrete, metal and PVC-u

#### Features

- CFC free
- High thermal and acoustical insulation
- Excellent mounting and filling capacities
- Excellent stability – no shrink or post expansion
- 1000ml yields approx 35L cured foam

### Notes & Considerations

Always moisten surfaces in order to improve curing and cellular structure.

Cured PU foam must be protected from UV-radiation by painting or applying a top layer of sealants.

Application temperature range: +5°C to +30°C

**CODE: SOUD-FOAM-CONST**



## PAINTS AND REPAIR PASTES

### Material Specification

- PVC Paint
- Repair Paste

### Application

- PVC Paint and PASTE are designed for repairs to minor damage to sheet coatings
- PASTE is also suitable as a small gap/joint sealer on flashings and other fabricated items

### Substrates

- Plastisol and PVF2 Sheeting
- Aluminium Powder Coated Flashings

### Features

#### PVC Paste

- Will gap fill and bond readily, to form maintenance free joints of exceptional strength when used to bond and fill rigid and plasticised PVC and PVC coated metal
- Once dry the product will exhibit weathering, UV and chemical resistance similar to that of a good quality rigid PVC
- Sealed joints will retain a degree of flexibility to cater for minor expansion and contraction of the substrate whilst remaining water and gas tight
- Stelmax PVC Filler & Repair Paste is available from stock in a limited range of BS and RAL colours
- Good adhesion can also be achieved when used with many porous substrates

---

**CODE: PASTE-COL**

#### PVC Paint

- Excellent adhesion to plastics and other difficult substrates including powder coating
- Rapid drying times
- Extreme flexibility
- Available in a wide variety of colours
- Exceptional colour retention and durability
- 8-10m<sup>2</sup> per litre

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**CODE: PAINT-COL**

## PIPE FLASHINGS



### Dektite pipe flashings

Temperature range for Grey  
-50°C to 115°C & up to 150°C intermittently

Temperature range for Red  
-60°C to 200°C & up to 250°C intermittently

Code Grey	Base dimensions (mm)	Pipe diameters (mm)	Roof pitch	Code Red	No. of Fixing kits
PF-CPD-000-055	137 x 137	5 - 55	0 - 45		1
PF-CPD-050-120	218 x 218	50 - 120	0 - 45	PF-HPD-050-120	1
PF-CPD-075-175	280 x 280	75 - 175	0 - 45	PF-HPD-075-175	1
PF-CPD-125-230	363 x 363	125 - 230	0 - 45	PF-HPD-125-230	2
PF-CPD-150-300	456 x 456	150 - 300	0 - 45	PF-HPD-150-300	2
PF-CPD-230-508	681 x 681	230 - 508	0 - 45	PF-HPD-230-508	3
PF-CPD-380-610	1006 x 905	380 - 610	0 - 45	PF-HPD-380-610	4

Order fixing kits separately – **CODE: PF-KIT** see table



### Dekstrip flashings

Temperature range for Grey; 50°C to 115°C & up to 150°C intermittently

Code Grey	Width (mm)	Length (mm)
PF-DS180-23	180	23
PF-DS235-10	235	10
PF-DS305-10	305	10
PF-DS450-15	450	15

Separate strip of aluminium included in all roll lengths  
Order fixing kits separately – **CODE: PF-KIT** see table

## PIPE FLASHINGS



### Aquaseal Aquadapt Retro

Specifically designed for standard or retrofit metal roof applications. Flashing can be cut open down the seam and then crimped together using the stainless steel clips – **CODE: PF-CLIPS**

Temperature range for Black  
-40°C to 115°C

Temperature range for Red  
-50°C to 240°C



Code Black	Base dimensions (mm)	Pipe diameters (mm) at 0-25° pitch	Pipe diameters (mm) at 0-45° pitch	No. of clips	Code Red	No. of Fixing kits
PF-CP2R	155 x 155	10-90	10-70	4	PF-HP2R	1
PF-CP3R	210 x 210	50-100	50-80	5	PF-HP3R	1
PF-CP4R	255 x 255	75-150	75-135	6	PF-HP4R	1
PF-CP5R	313 x 313	125-200	125-165	7	PF-HP5R	1
PF-CP6R	370 x 370	150-250	150-230	8	PF-HP6R	1
PF-CP7R	440 x 440	195-300	195-255	9	PF-HP7R	2
PF-CP8R	540 x 597	230-380	230-355	10	PF-HP8R	2
PF-CP9R	650 x 720	315-500	315-450	11	PF-HP9R	5
PF-CP10R	965 x 995	400-750	400-630	12	PF-HP10R	6

Order fixing clips separately – **CODE: PF-CLIPS**

Order fixing kits separately – **CODE: PF-KIT** see table below

### Fixing Kits

Code	Standard Kit	Contents: 12 washered fasteners, 12 Hex caps - silver, 1 x 80g tube silicone sealant
PF-KIT		

## TOOLS & ACCESSORIES



Code	Description	Spare Parts	Code
<b>TOOL-W8VB2</b>	Hitachi Screwgun		
	W8 VB2 110V	5/16 Hex Magnetic Drive Socket	<b>TOOL-5/16-SOCK-CRING</b>
		3/8 Hex Magnetic Drive Socket	<b>TOOL-3/8-SOCK</b>
		11mm Bi-Hex Socket	<b>TOOL-B/H-SOCK-CRING</b>
<b>TOOL-BLK1.3-CS</b>	Fein Nibbler 110V	Nibbler Blade	<b>TOOL-BLK1.3-BLADE</b>
	Sinusoidal Sheet Blk 1.3-CS	Nibbler Die	<b>TOOL-BLK1.3-CS-DIE</b>
<b>TOOL-BLK1.3-TE</b>	Fein Nibbler 110V	Nibbler Blade	<b>TOOL-BLK1.3-BLADE</b>
	Traozoidal Sheet Blk 1.3-T	Nibbler Die	<b>TOOL-BLK1.3-T-DIE</b>
<b>TOOL-9069F</b>	Makita 9" Grinder 9069 F 110V	9" Flat Metal Cutting Discs	<b>TOOL-CD-9FM</b>
		9" Dished Metal Cutting Discs	<b>TOOL-CD-9DM</b>
<b>TOOL-GWS20-230</b>	Bosch 9" Grinder GWS 20-230 110V	9" Flat Stone Cutting Disc	<b>TOOL-CD-9FS</b>
		9" Dished Stone Cutting Disc	<b>TOOL-CD-DS</b>
<b>TOOL-GWS8-115</b>	Bosch 4" Grinder GWS8-115 110V		
<b>TOOL-JR3050T</b>	Makita (Reciprocating) Saw 110V	150 (Reciprocating) Blades	<b>TOOL-RS02B150</b>
		225 (Reciprocating) Blades	<b>TOOL-RS02B225</b>
		300 (Reciprocating) Blades	<b>TOOL-RS02B300</b>
<b>TOOL-LAZYT</b>	Lazy Tong		
	Riveting Tool		
<b>TOOL-ACCUBIRD</b>	AccuBird	Battery	<b>TOOL-ACCUBIRD-BATT</b>
	Riveting Tool		

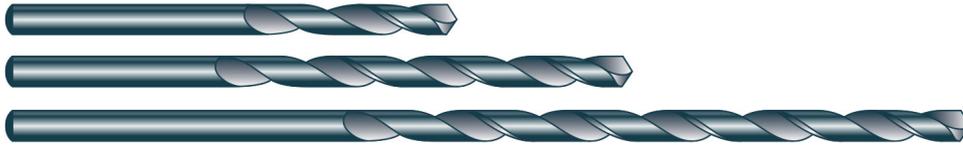
## TOOLS & ACCESSORIES



Code	Description	Spare Parts	Code
<b>TOOL-4350FCT</b>	Makita Jigsaw 110v	Jigsaw Blades, Pack of 5, cutting sheet metal 1-3mm (orange)	<b>TOOL-T118A</b>
		Jigsaw Blades, Pack of 5, cutting medium thick sheet metal 2.5-6mm (blue)	<b>TOOL-T118B</b>
		Jigsaw Blades, Pack of 5	<b>TOOL-T318A</b>
		Jigsaw Blades, Pack of 5	<b>TOOL-T318B</b>
		Jigsaw Blades, Pack of 5	<b>TOOL-T227D</b>
<b>TOOL-AV10</b> (16mm)	Bi-metal Holesaw	Arbours	<b>TOOL-M44</b> (AV10-AV19)
to			<b>TOOL-M44K</b> (AV10-AV96)
<b>TOOL-AV96</b> (152mm)			<b>TOOL-M45P</b> (AV20-AV38)
			<b>TOOL-M55P</b> (AV20-AV96)

Optional: Additional accessories and a full range of 110/240 volt drills including S.D.S

## DRILL BITS

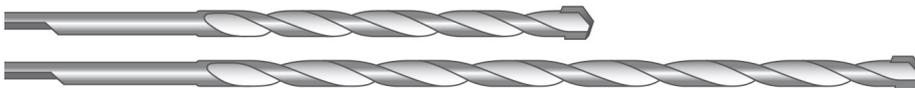


Split point twist

Stock sizes	Diameter	Code
Stub (62mm Overall length)	3.2	<b>DR-STUB-3.2</b>
	4.9	<b>DR-STUB-4.9</b>
	5.1	<b>DR-STUB-5.1</b>
	5.3	<b>DR-STUB-5.3</b>
	5.8	<b>DR-STUB-5.8</b>
	10	<b>DR-STUB-10.0</b>
Jobber (85mm Overall length)	12	<b>DR-STUB-12.0</b>
	4.9	<b>DR-JOB-4.9</b>
	5.1	<b>DR-JOB-5.1</b>
	5.3	<b>DR-JOB-5.3</b>
	5.8	<b>DR-JOB-5.8</b>
	5.9	<b>DR-JOB-5.9</b>
	6	<b>DR-JOB-6.0</b>
	8	<b>DR-JOB-8.0</b>
	10	<b>DR-JOB-10.0</b>

Split point twist

Stock sizes	Diameter	Code
Long series (132mm Overall length)	4.9	<b>DR-LONG-4.9</b>
	5.1	<b>DR-LONG-5.1</b>
	5.3	<b>DR-LONG-5.3</b>
	5.8	<b>DR-LONG-5.8</b>
	5.9	<b>DR-LONG-5.9</b>
Extra long (200mm Overall length)	4.9	<b>DR-EXLONG-4.9</b>
	5.1	<b>DR-EXLONG-5.1</b>
	5.3	<b>DR-EXLONG-5.3</b>
	5.8	<b>DR-EXLONG-5.8</b>
	5.9	<b>DR-EXLONG-5.9</b>



Masonry drill bits

Length	Diameter	Code	To suit
140	5.15	<b>MF-DR140</b>	32 - 100 Hex

## DRILL BITS



SDS Masonry drill bits

Length	Diameter	Code
110	5.0	DR-SDS-5.0/110
110	5.5	DR-SDS-5.5/110
110	6.0	DR-SDS-6.0/110
110	8.0	DR-SDS-8.0/110
160	5.0	DR-SDS-5.0/160
160	5.5	DR-SDS-5.5/160
160	6.0	DR-SDS-6.0/160
160	7.0	DR-SDS-7.0/160
160	10.0	DR-SDS-10.0/160
210	5.0	DR-SDS-5.0/210
210	5.5	DR-SDS-5.5/210
210	6.0	DR-SDS-6.0/210

## FOAM FILLERS

### Material Specification

- Polyethylene
- Supaseal (EPDM substitute)



Daylight Systems

### Application

- Eaves and Ridges
- Hips and Valleys
- Rooflights

### Features

- Made-to-measure
- High density and high tensile variations to thickness available
- Standard 6mm base
- Options:
  - Ventilated
  - Self-adhesive
  - Angle Cut
  - Extended Base
  - In spacer and strip form

Material	Polyethylene foam	SupaSeal
<b>Colour</b>	Black, White, Black & White	Black, White
<b>Thickness (mm)</b>	25, 30, 50	25, 50
<b>Density (kg/m<sup>3</sup>)</b>	30	30
<b>Service temp. (°C)</b>	-70° to +70°	-45° to +70°
<b>Functional life expectancy (dependent upon conditions)</b>	N/A	25 years +

### Available from stock

Code	Colour	Material	Pack size	Profile
<b>FF-BIG6-10</b>	Black & White	Polyethylene	10 PAIRS	Big 6
<b>FF-EP32-10</b>	Black & White	Polyethylene	10 PAIRS	European Profiles 32/1000R
<b>FF-EURO32-10</b>	Black & White	Polyethylene	10 PAIRS	Euroclad 32/1000R
<b>FF-KS1000-10</b>	Black & White	Polyethylene	10 PAIRS	Kingspan KS1000RW
<b>FF-KS1000-LRG</b>	Black	Polyethylene	25 LARGE	Kingspan KS1000RW
<b>FF-PMF/R32/10</b>	Black & White	Polyethylene	10 PAIRS	PMF R32/1000
<b>FF-RF1/32-10</b>	Black & White	Polyethylene	10 PAIRS	Rollformed 32/1000
<b>FF-TRISOMET-LRG</b>	Black	Polyethylene	10 LARGE	Trisomet 333
<b>FF-URP34-PRS</b>	Black & White	Polyethylene	10 PAIRS	URP 34/1000

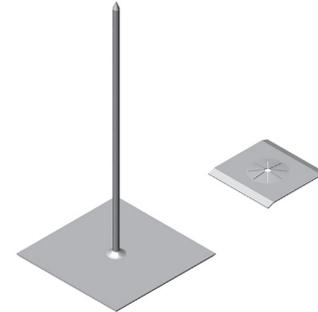
Other profiles are available upon request

## INSULATION HANGERS & SPACERS FERRULES

### Application

Instant mechanical fixing of insulation materials to various surfaces

Code	Description	Box Qty
IH62	62mm Self Adhesive with Washer	500
IH90	90mm Self Adhesive with Washer	500
IH110	110mm Self Adhesive with Washer	250
IH160	160mm Self Adhesive with Washer	250
IH203	203mm Self Adhesive with Washer	250



### Application

Spacer ferrules for liner tray systems

Code	Description
SF22	Ø26mm x 22mm Plastic Spacer Ferrule
SF25	Ø26mm x 25mm Plastic Spacer Ferrule
SF30	Ø26mm x 30mm Plastic Spacer Ferrule
SF35	Ø26mm x 35mm Plastic Spacer Ferrule
SF42	Ø26mm x 42mm Plastic Spacer Ferrule
SF50	Ø26mm x 50mm Plastic Spacer Ferrule



### Application

Thread and point protectors

Code	Description	Box Qty
TIPS-25W	12g x 25mm White P.V.C. Endtips	250



## INSTALLATION GUIDE

Ash & Lacy fixings are designed for installation only by professional operatives that are correctly trained in the use of such fixings.

It is not possible to provide advice on every installation combination and we would therefore recommend that the fixing instructions of the appropriate insulated panel/cladding system manufacturer are followed. For further information on the installation of Ash & Lacy fixings please contact our Technical Department.

### General

- It is imperative when installing all types of self drilling and/or self tapping fixings that the depth locating nosepiece on the screwdriver is used and correctly adjusted together with the appropriate accessories and drive system (eg: Hexagon or Phillips).

### Installing self drilling fixings

To install Ash & Lacy self drilling/self tapping fixings you will need a variable speed general purpose 110 volt screwdriver that will run from approx. 0-2500 rpm. If installing a large area using heavy steel it may be beneficial to use a heavy duty screwdriver. The following speeds are for guidance only as each installation will vary but the slower a fixing is installed the higher the mechanical performance obtained. Do not put your full body weight on the screwdriver when installing fixings.

- Specialist electric screwdrivers are required to install fixings correctly
- Over tightening fixings/washer combinations can cause water

### Notes & Considerations

When installing either Carbon Steel or 304 grade Stainless Steel self tapping fixings with correctly sized holes a powerful 110 volt single speed screwdriver is preferred that runs at 600 rpm.

ingress and may contribute towards increased air leakage and reduced pull over loads as a result of washer inversion

- If the fixing doesn't have a washer, the application should be checked prior to use
- As a guide, the majority of aluminium/steel roofing applications require a 19mm washer and the wall cladding requires a 16mm washer. GRP & PVC profile sheets require a 29mm washer on the main valley fixing or a shaped saddle washer if through the crowns (with poppy red moulded heads on rooflight applications)

Light Section Rail	Heavy Section Rail	Stitcher 0.7mm x 2
1800 - 2500 rpm	MAX - 1800 rpm	1800 - 2500 rpm

### Installing masonry self tapping fixings

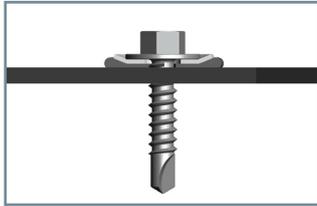
To install Ash & Lacy masonry self tapping fixings you will need to use a hammer drill, in the hammer drill mode to drill the hole into the base material. The hole can be drilled with either the drill bit provided or dependant on the base material, a 5.0mm or 5.5mm SDS drill bit. (Hole diameter/drill bit should be stated on any pull-out test reports) It is recommended that the hole is drilled a minimum of 10mm deeper than the fixing will penetrate the base material. Clean the hole of all dust/debris and then using the correct drive tool turn the fixing clockwise, applying slight pressure until the head of the fixing is tight against the material being fixed.

Make sure that the masonry fixing is not over-tightened because this may strip the threads in the base material and cause the fixing to spin in the hole.

## INSTALLATION GUIDE

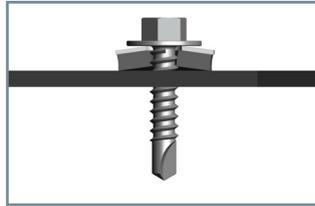
### Correct installation of a Hex Head fixing with bonded washer

Over tightened



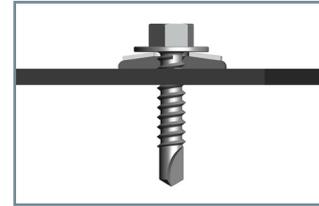
Causes reverse dishing and potential leakage under seal.

Under tightened



Likely to cause leakage under seal and around fixing.

Correctly tightened



Tight against surface. Seal flows inward to seal minor fixing diameter and surface voids.

### Correct installation of a Hex Head fixing with BAZ washer

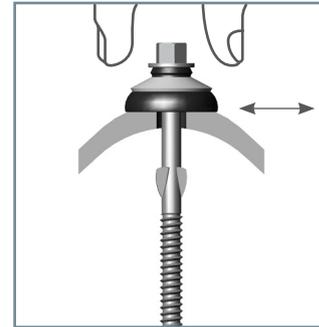
Over tightened



Under tightened



Correctly tightened



### Installing Ash & Lacy self tapping fixings

The following table provides guidance on the installation of Ash & Lacy 6.3mm self tapping fixings.

Please note that the hole sizes can vary if different grades of steel are used and testing by site.

Steel thickness	up to 3.00mm	4.00 to 5.0mm	over 5.0mm
Point Hole size	4.9mm	5.3mm	5.8mm

*Not suitable for Stainless TSAB*







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