

014



Aviator[®]

STANDING SEAM ROOF SYSTEM – BULB TYPE

PRODUCT DATA SHEET
REPORT NO: 014

REVISION NO: 002

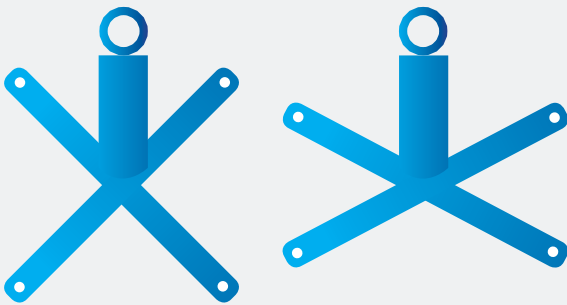
PRODUCT CODE: STSM230



PRODUCT DESCRIPTION:

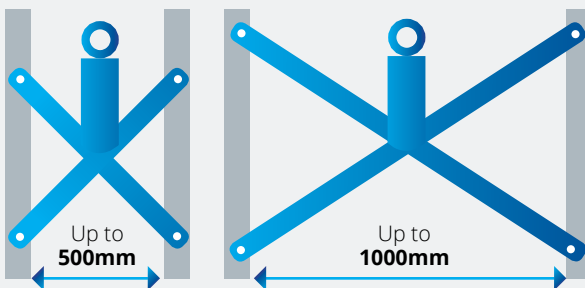
A safety line bracket system for installation on standing seam roof systems up to a 15 degree pitch. The brackets are installed onto the completed roof system with block clamps that are designed to prevent any penetration to the roof sheet. The unique scissor action allows the roof sheets to expand and contract with the atmospheric temperature preventing any pressure points on the roof.

Central pivot allows scissor action



Brackets are supplied in galvanised steel. Block clamps are extruded aluminium and separated by washers to prevent galvanic corrosion. Brackets are supplied in a length suitable to accommodate standard roof peak widths of up to 500mm wide. Longer brackets which will accommodate a 1000mm seam are available on request. No additional sealing is required on completion of an installation. Both

Seam widths



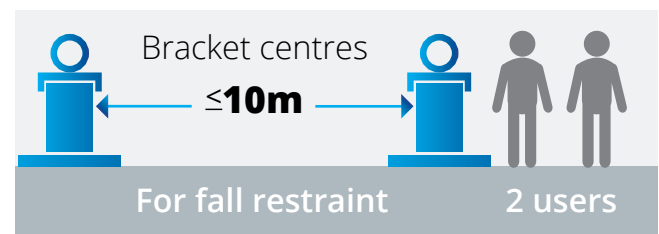
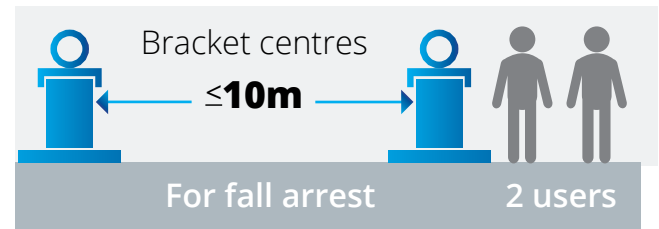
brackets and cable can be installed in a single visit.

The safety line system is designed to operate as a fall restraint system or a fall arrest system depending on the layout design.

All systems are fitted with an in-line shock absorber on the end brackets. The shock absorbing capabilities when used together with a shock absorbing lanyard, will ensure that no more than 4kN force is exerted on the users at any point in the system. We recommend a maximum of 2 users on a fall arrest system



The fall restraint systems can be designed for up to 2 users at any one time and provide unrestricted access along the full length of the system. Corners and intermediate brackets allow the line shuttle to move smoothly along the full length of the cable between end brackets.



MATERIAL SPECIFICATION:

Brackets - galvanised steel

Yield	275 N/mm ² C 0.15 – 0.26; Si < 0.35; Mn < 1.5; P < 0.035; S < 0.040; Mo 0.4 – 0.6.
Young's Modulus of Elasticity	200 x 10 ³ MPa at 20 °C
Density	7.87 g/cm ³ at 20 °C
Coefficient of Thermal Expansion	Low-Carbon/HSLAS: 12.4 µm/m/°C in 20 °C to 100 °C range I-F Steel: 12.9 µm/m/°C in 20 °C to 100 °C range
Thermal Conductivity	Low-Carbon/HSLAS: 89 W/m°C at 20°C I-F Steel: 93 W/m°C at 20°C
Specific Heat	481 J/kg/°C in 50 °C to 100 °C range
Electrical Resistivity	0.142 µΩ·m at 20 °C

Component parts

Stainless Steel - Grade 304 (UNS S30400)

Fe, <0.08% C, 17.5-20% Cr, 8-11% Ni, <2% Mn, <1% Si, <0.045% P, <0.03% Stainless Steel

Nylon up stand – incorporates stainless steel insert

Maximum Temperature: 210°F 99°C

Minimum Temperature: -94°F -70°C

Autoclavable: No

Melting Point: 420°F 216°C

Tensile Strength: 40MPa

Hardness: R92

UV Resistance: Good

Colour Dark grey

Rigid

Specific Gravity: 1.13

Block clamp

Extruded aluminium 0.50 - 0.75 Si, Max 0.35, Fe 0.40 - 0.70 Mg

Tensile strength PSI 25,000 Yield strength 103MPa



OPERATING AND DESIGN STANDARDS:

Eurocodes are designated by EN

British standards are designated by BS



- BS EN 795:2012 Class C – flexible safety lines
- BS EN 795:2012 Class A – single anchors, anti-pendulum anchors
- BS 7883: 2005 – Design, selection, installation, use and maintenance for anchors conforming to EN 795
- BSMA 29: 1982 – specification for steel wire rope
- ACR (M) 002:2009
- ACR (CP) 007:2008
- ISO 9001:2008
- ISO 14001:2004
- BS OHSAS 18001:2007
- Work at height regulations 2005 (Ref.7)
- Work at height (amendment) Regulations 2007 (Ref.8) WAHR
- Provision and use of work equipment regulations 1998 PUWER 98 (Ref. 5)
- PD CEN/TS 16415:2013 Multiple users

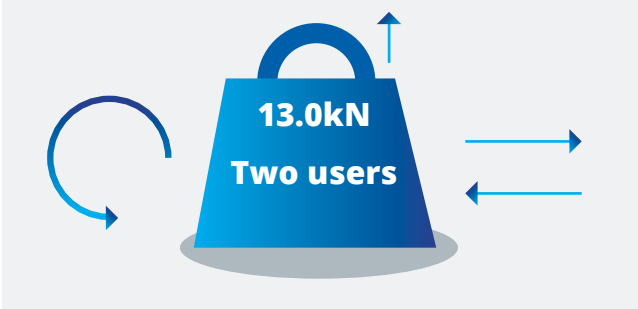
The company operates to the following standards



- Management of health and safety at work regulations 1999 MHSWR (Ref.2)
- The work at height safety association WAHSA guidance on inspecting eyebolts used for personal fall protection purposes

Typical connection loads (bracket height up to 150mm)

Ultimate factored load on bracket base



Bracket moment



Note: For guidelines only to be checked by Chief Engineer.

INSPECTION/MAINTENANCE/TRAINING

INSPECTION ROUTINE:

All systems to be inspected at least every 12 months from date of installation.

In harsh environments all systems to be inspected at least every 3 months.

Inspections must be carried out by approved Aviator engineers.

Inspections must be approved to SIMS (Safety Inspection and Maintenance Service) standards.

All inspections to be carried out to EN795:2012 and BS 7883:2005 and WAHSA (inspection of eyebolts) requirements for safety line and anchor points.

All inspections to be carried out to EN364 requirements for personal protective equipment.

Contact Sayfa Systems to arrange inspections.

MAINTENANCE SCHEDULE:

All maintenance to be carried out by approved Aviator engineers. Maintenance to be in accordance with Sayfa Systems UK (manufacturer) guidelines and recommendations.

In harsh environments all systems to be inspected at least every 3 months.



Maintenance to be in accordance with SIMS standards. (details available on request)

Maintenance to be carried out at time of yearly inspection.

Contact Sayfa Systems to arrange system maintenance.



TRAINING REQUIREMENTS:

All personnel who use the Aviator system should have attended a Sayfa Systems Ltd, Aviator users course.

Courses are available from Sayfa Systems UK Ltd.

Courses cover the use of all Aviator and Payload products, the legal and practical side of the Working at Height legislation - 2005 and how to use and carry out safety checks on harnesses and all necessary PPE equipment.

CERTIFICATE

OF
OPERATIVE INSTRUCTIONAL TECHNIQUES AND
WORKING AT HEIGHT SAFETY

In recognition of successful completion of training for the installation and assembly, use, handling and safety checks of:-

Aviator Safety Line Systems	<input checked="" type="checkbox"/>
Aviator Mobile Anchors	<input type="checkbox"/>
Payload Access Ladder Systems	<input type="checkbox"/>
Payload Handrail Systems	<input type="checkbox"/>
Aviator PPE	<input checked="" type="checkbox"/>

To: _____

Location of Training: _____

Certificate Number: _____

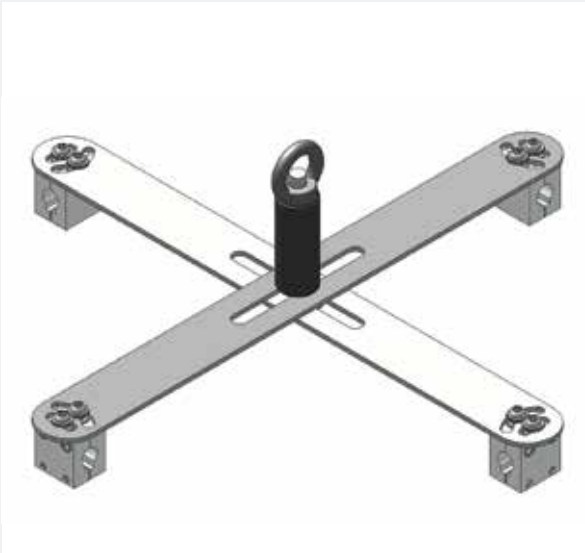
Name of trainee: _____ Signed by trainee: _____

Instructor's name: Adrian Stutterheim..... Signed: *Adrian Stutterheim*.....

Date of Training: 00 January 1900

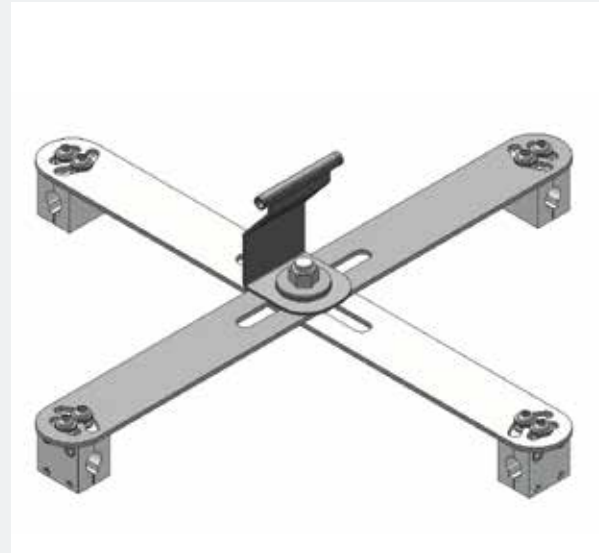
COMPONENT PART DETAILS: End bracket STSM231

BIM No: SpecEquip_RfSftySymStandSeamEndBkt_ SayfaSystems_STSM231_M3_G2



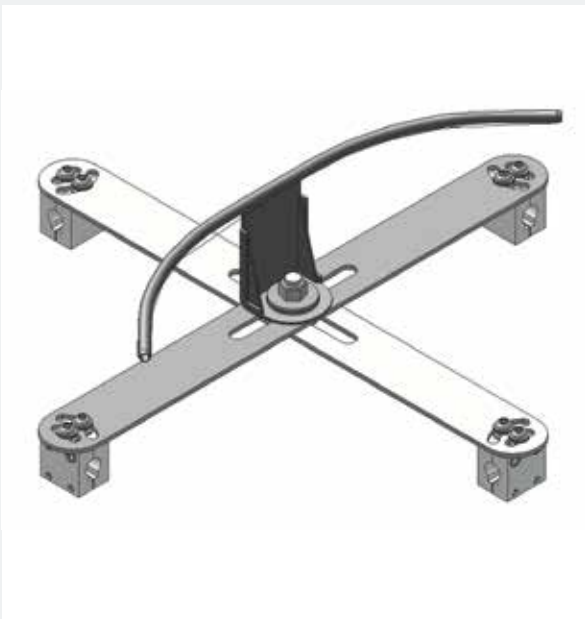
Intermediate bracket STSM232

BIM No: SpecEquip_RfSftySymStandSeamInterBkt_SayfaSystems_STSM232_M3_G2



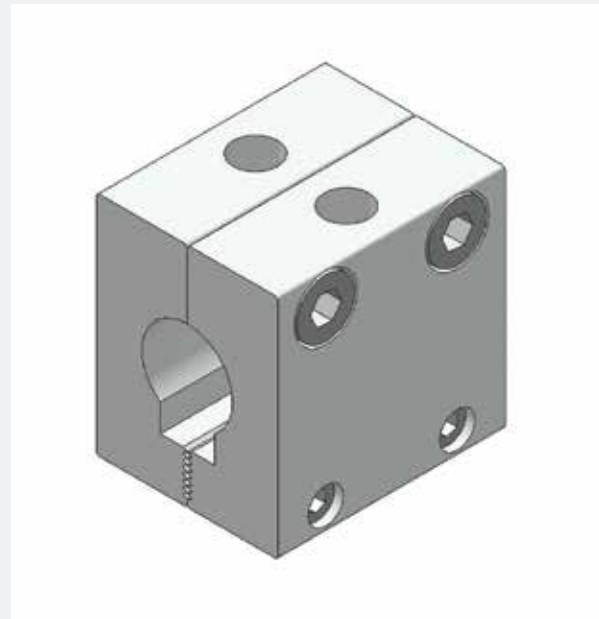
Corner bracket STSM234

BIM No: SpecEquip_RfSftySymStandSeamCornrBkt_ SayfaSystems_STSM234_M3_G2

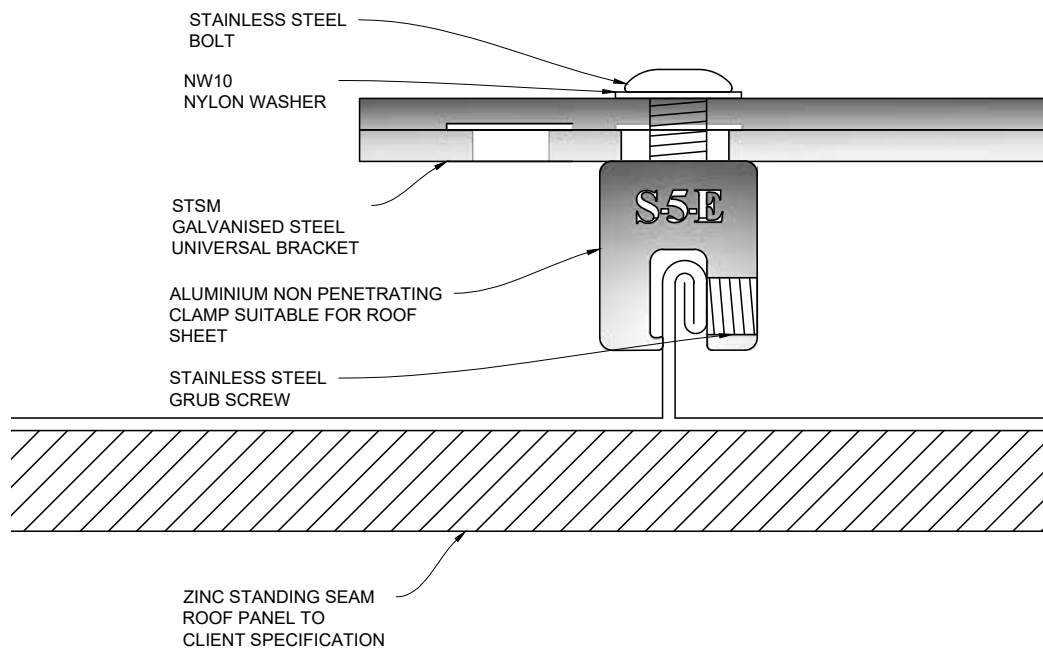
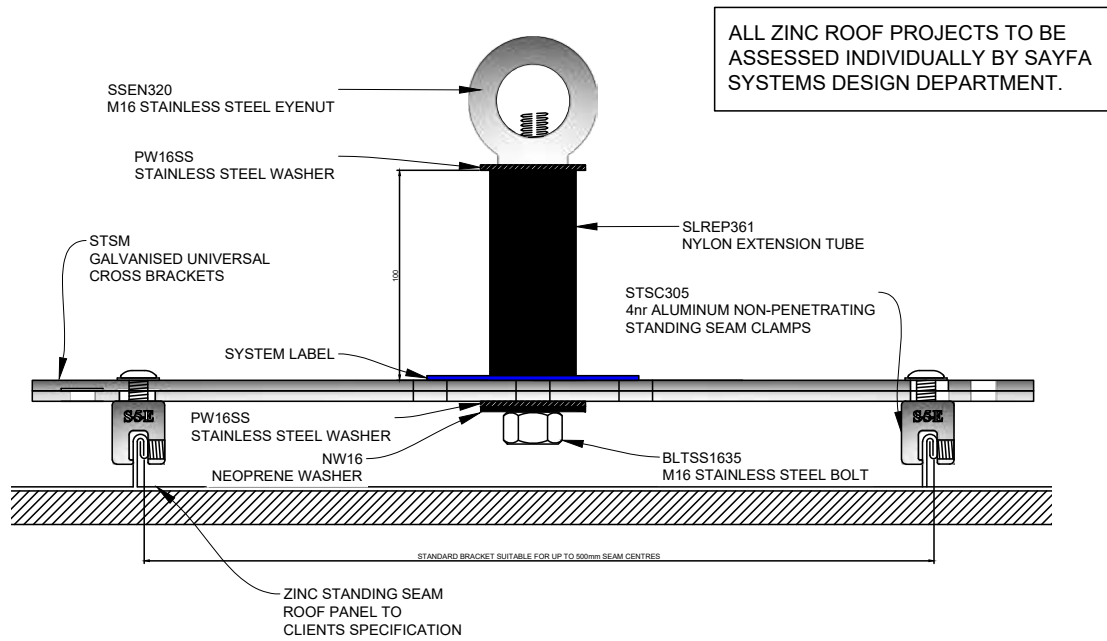


Block clamp STSC305

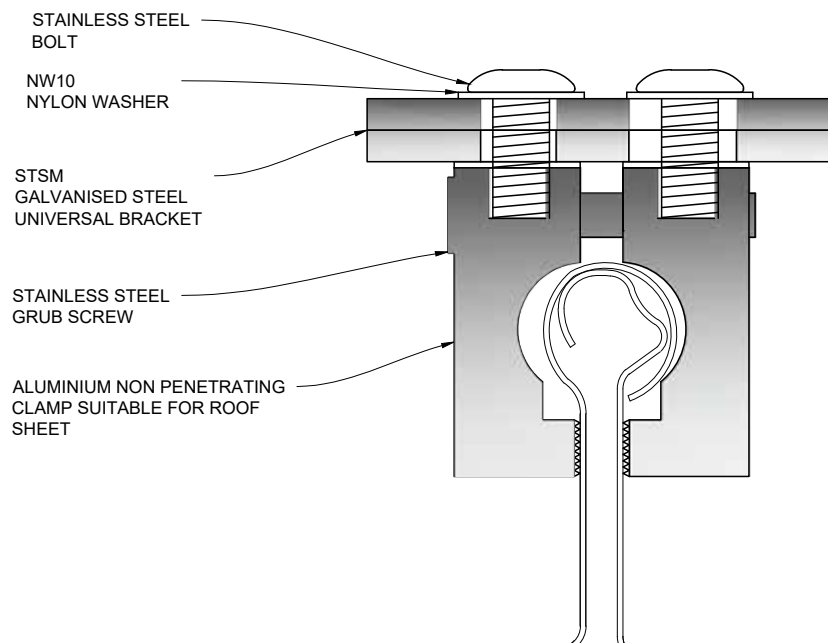
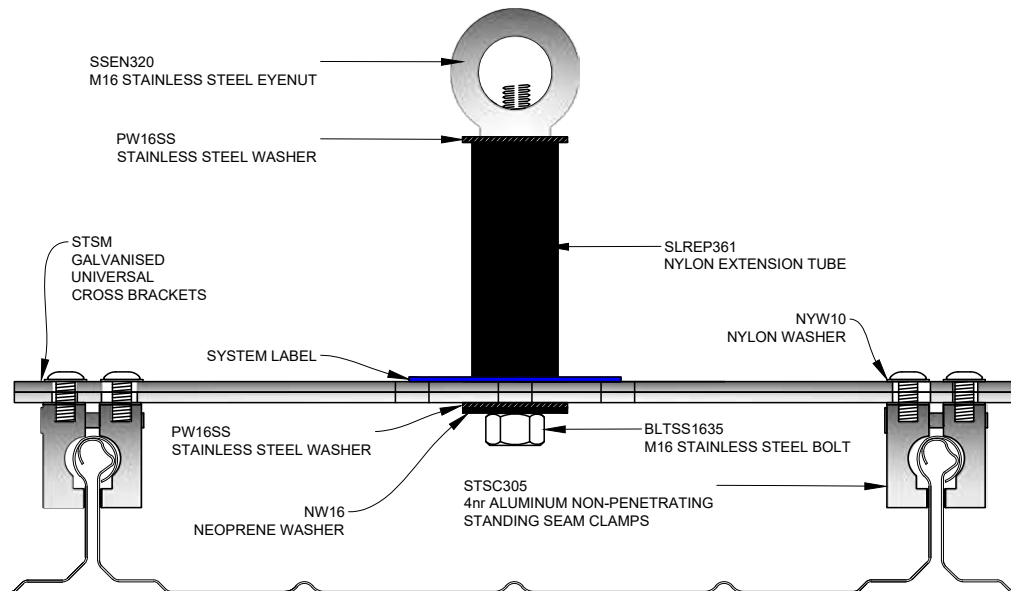
BIM No: SpecEquip_RfSftySymStandSeamClmp_SayfaSystems_STSC305_M3_G2



Aviator™ Standing Seam Zinc Roof System Bracket Fixed To Zinc Standing Seam Roof Sheet



Aviator™ Standing Seam Roof System Bracket Fixed To Bulb Type Standing Seam Roof Sheet





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