

- **Barracuda Brick Slip Support System**

Manufacturer/Specialist Supplier: James & Taylor Ltd, Unit 8 Metroplex Park, 230 Red Lion Road, Surbiton, Surrey, KT6 7QB. Tel:+44(0)20 8942 3688.

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- **General Description**

Barracuda Brick Slip Support System for supporting and securing brick slips to form the visible outer layer of the building façade.

Suitable for attachment to structures constructed with reinforced concrete frames, steel frames and timber frames with backing walls constructed from masonry, concrete and lightweight metal studwork.

Suitable for use above DPC level.

The nominal weight of the Barracuda system inclusive of brick slips and mortar is 92kg per M² (based upon a combined brick and mortar density of 2000kg per M³).

- **Location(s):** External walling areas to xxxxxx

- **Drawing reference(s):** xxxxxx

Barracuda System Supply Specification:

- **System Product Reference:** James & Taylor Product Reference: Barracuda: xxxxxx (consult James & Taylor Ltd for project specific product Reference).

- **Brick Type:** xxxxxx (must be agreed with James & Taylor Ltd).

- **Brick Slip Thickness:** Brick slips cut to 40mm thickness. Datum cut accurately from front face of brick. Cuts must be 'planar' and parallel to front face of brick.

- **Brick Slip/System Orientation:** Horizontal/Stretcher Bond (or other, specify as required).

- **Brick Bond Pattern:** Stretcher Bond (or other, specify as required).

- **Backing Wall Type:** Lightweight metal studwork (or other, specify as required)

- **Barracuda Rails:**

Barracuda 'Standard' Rail

Component Ref: BAR-R1-2400

Barracuda 'Bottom' Rail

Component Ref: BAR-R2-2400

Barracuda 'Top' Rail

Component Ref: BAR-R3-2400

- **Material:**
R1 Rails - Cold Rolled Stainless Steel Grade EN 1.4310
R2 & R3 Rails – Cold Rolled Stainless Steel Grades EN 1.4301 or EN 1.4401
- **Barracuda Substructure with ‘integral’ brick course ‘gauge’ tabs**
Gauge tabs @ 75mm centres:
Barracuda ‘L’ Rail Component Ref: BAR-VL-xxxx (Typical length: xxxx)
Barracuda ‘T’ Rail Component Ref: BAR-VT-xxxx (Typical length: xxxx)
- **Material:** Extruded Aluminium 6063 T6
- **Fasteners:**
Barracuda Rails BAR-R1-2400 to Barracuda Substructure
4.8 x 8mm Long All Stainless Steel (both body and mandrel) Rivet.
Bralo Product Ref: 01260004808 (or alternative rivet providing equivalent or better performance).
- Barracuda Rails BAR-R2-2400 to Barracuda Substructure**
4.8 x 8mm Long All Stainless Steel (both body and mandrel) Rivet.
Bralo Product Ref: 01260004808 (or alternative rivet providing equivalent or better performance).
- Barracuda Rails BAR-R3-2400 to Barracuda Substructure**
4.8 x 19mm Long All Stainless Steel Self Drilling/Self Tapping Screw
Ejot Product Ref: JT4-ZT-4-4.8 x 19mm Long - without sealing washer
(or alternative screw providing equivalent or better performance and equivalent screw head diameter).
- **Mortar:** CPI Euromix M1ANPM000 (or similar)
- **Mortar Colour:** xxxxxx
- **Tooled Joint Finish:** Shallow (22mm) ‘Bucket Handle’ profile.

Design/Performance requirements:

- **Independent Empirical Test Minimum Performance Requirements:**
The brick slip system must achieve the following minimum performance values, verified by testing, carried out by a UKAS accredited test facility. Performance compliance must be demonstrated by the submission of test reports.

The minimum test panel size must be 3M (H) x 3.6M (W) with the backing wall construction such that deflections within the backing wall are equal to or exceed those that will be exhibited by the actual project construction.

The test panel must incorporate brick slips that represent the full brick slip height tolerance range in which bricks compliant with BS EN 771 might be supplied. Testing must demonstrate that the brick slip system achieves the minimum required performance values with brick slips that range in height from 58mm to 70mm.

– **Watertightness – Static Pressure:**

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005/BS EN 12154:2000.

Classification / Declared Value: R7 / 600 pascals

Required Result: Watertightness – Static Pressure = Pass

Required Result: Controlled Dismantle = Pass

– **Watertightness – Dynamic:**

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005

Classification / Declared Value: 600 pascals

Required Result: Watertightness – Dynamic = Pass

Required Result: Controlled Dismantle = Pass

– **Wind Resistance – Serviceability:**

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005/BS EN 13116: 2001

Classification / Declared Value: \pm 2400 pascals

Required Result: Serviceability = Pass

– **Wind Resistance – Safety:**

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005/BS EN 13116: 2001

Classification / Declared Value: \pm 3600 pascals

Required Result: Safety = Pass

Required Result: Controlled Dismantle = Pass

– **Impact Resistance – Soft Body Serviceability:**

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Class 1 / 120J

Required Result: Serviceability = Pass

– **Impact Resistance – Soft Body Safety:**

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Negligeable Risk / 350J and 500J

Required Result: Safety = Pass

– **Impact Resistance – Hard Body Serviceability:**

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Class 1 / 3J, 6J and 10J

Required Result: Serviceability = Pass

– **Impact Resistance – Hard Body Safety:**

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Negligeable Risk / 3J and 10J

Required Result: Safety = Pass

– **Long Term Durability – Heat/Rain, Freeze/Thaw, Cyclic Wind Load and Impact Testing:**

Test to be carried out in general accordance with EAD 090062-00-0404 and DD CEN/TS 772-22: 2006 and CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Heat/Rain

The sample must be subjected to 100 No. Heat/Rain cycles.

1. Heating to 70°C rising for 1 hour, maintain for 2 hours at 10% to 30% RH.
 2. Water Spray at 1 Litre per M² per minute for 1 hour with water temperature 15°C.
 3. Drain for 2 hours.
- Total single cycle time 6 hours.

Freeze/Thaw

The same sample must then be subjected to 100 No. Freeze/Thaw cycles.

1. Temperature to fall from 20°C to -15°C in more than 20 but less than 30 minutes. Temperature maintained at -15°C for more than 90 but less than 100 minutes.
 2. Temperature to rise from -15°C to 20°C in more than 15 but less than 20 minutes. The total warm air period including the period of temperature rise must be 20 minutes.
 3. Water Spray at 6 Litre per LM of sample panel per minute for 120 seconds.
- Total single cycle time 150 minutes.

Cyclic Wind Load

The same sample must then be subjected to 7681 No. Wind Load cycles.

Wind load cycling to be in accordance with BRE Digest 346 Part 7 Table 1.

The following sequence must be repeated six times followed by a single pulse at design wind pressure, representing 60 years of natural wind exposure.

Wp = design wind pressure

Design wind pressure = ± 2400 pascals

- 1 No. cycle at $0.9 \times Wp = \pm 2160$ pascals
- 960 No. cycles at $0.4 \times Wp = \pm 960$ pascals
- 60 No. cycles at $0.6 \times Wp = \pm 1440$ pascals
- 240 No. cycles at $0.5 \times Wp = \pm 1200$ pascals
- 5 No. cycles at $0.8 \times Wp = \pm 1920$ pascals
- 14 No. cycles at $0.7 \times Wp = \pm 1680$ pascals

Impact Testing

The same sample must then be subjected to impact testing.

The following impact tests must be carried out.

Impact Resistance – Soft Body Serviceability:

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Class 1 / 120J

Required Result: Serviceability = Pass

Impact Resistance – Soft Body Safety:

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Negligible Risk / 350J and 500J

Required Result: Safety = Pass

Impact Resistance – Hard Body Serviceability:

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Class 1 / 3J, 6J and 10J

Required Result: Serviceability = Pass

Impact Resistance – Hard Body Safety:

Test to be carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Negligible Risk / 3J and 10J

Required Result: Safety = Pass

After all preceding testing has been carried out; the test panel must be both serviceable and safe. From a viewing distance of 1M, no damage to the panel must be evident.

Required Result: Long Term Durability = Pass

Required Result: Controlled Dismantle = Pass

– **Brick Slip Pull Out Testing – Brick Slips in their Un-Mortared (Temporary) State – Wind Resistance – Safety:**

Brick slips, of the type intended to be supplied, ranging in height from 58mm to 70mm must resist a pull-out load of 100N per brick. Each brick slip must resist the following sequence of pull-out loads applied perpendicular to the plane of the brickwork without detachment.

3 No. x 85N applied for a 30 second duration with a 30 second recovery period

1 No. x 100N applied for a 30 second duration with a 60 second recovery period

Displacements must be measured after each recovery period.

Required Result: = Pass

– **Brick Slip Impact Testing – Brick Slips in their Un-Mortared (Temporary) State – Safety:**

Brick slips, of the type intended to be supplied, ranging in height from 58mm to 70mm must achieve the following minimum performance values.

Impact Resistance (Un-mortared) – Soft Body Safety:

Testing carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Negligeable Risk 500J

Required Result: Safety = Pass

Impact Resistance (Un-mortared) – Hard Body Safety:

Testing carried out in accordance with the CWCT Standard Test Methods for Building Envelopes: 2005 TN75 and TN76

Classification / Declared Value: Low Risk 10J

Required Result: Safety = Pass