

## ■ Rollshutter Curtain Profiles and Habitat Screen™ Fabric

# Written Specifications Content Library

### HQ Macro

Used for sun protection in residential applications, used when security is not a concern.

The Rollshutter curtain is to be made from rollformed aluminum profiles with injected polyurethane foam core and shall have a cover width of 42 mm and a thickness of 9 mm. Minimum aluminum gauge to be 0.36 mm. Finish to be baked-on enamel with a dry film thickness of at least 0.05 mm. The weight per square metre to be 4.0 kg. Manufacturer's description: **HQ Macro**.

### SHIELD Mini

Used for sun protection in residential and commercial applications, used for interior counter enclosures, used for medium security protection

The Rollshutter curtain is to be made from individual rollformed aluminum profiles with an injected insulated hard foam core and shall have a cover width of 40 mm and a thickness of 9 mm. The minimum aluminum gauge is to be 0.33 mm. Finish being a polyurethane/polyamide topcoat with a dry film thickness of at least 0.03 mm. The minimum weight per square metre is to be 4.55 kg. Manufacturer's description: **SHIELD MINI**.

### SAFE Mini

High security profile used in residential, commercial and institutional applications where high security or storm protection is needed.

The Rollshutter curtain is to be made from individual rollformed aluminum profiles with an injected super-hard resin foam core and shall have a cover width of 38 mm and a thickness of 9 mm. Minimum aluminum gauge to be 0.62 mm. Finish to be baked-on enamel with a dry film thickness of at least 0.05 mm. The minimum weight per square metre to be 8.0 kg. Manufacturer's description: **SAFE MINI**.

### SHIELD Standard

Used in residential and commercial applications for medium to high security where the opening is too large for SAFE Mini

The rollshutter curtain is to be made from rollformed aluminum profiles with an injected hard foam core and shall have a cover width of 55 mm and a thickness of 13.5 mm. Minimum aluminum gauge to be 0.36 mm. Finish to be a polyurethane/polyamide, BASF Certified Coating, with a dry film thickness of at least 0.03 mm. The minimum weight per square metre to be 6.0 kg. Manufacturer's description: **SAFE STANDARD**.

### Tuffscreen

Used when insect protection and/or air flow is needed but solar and thermal protection are not a concern

The Habitat Screen™ curtain is to be made from heavy duty, vinyl-coated polyester insect screening. The openness factor (O-F) is approximately 45%. The fabric is tear and puncture resistant. The weight of the curtain is to be 283.5 g/m<sup>2</sup>, 0.000403 lbs/inch<sup>2</sup>, or 7.3 oz/yd<sup>2</sup>. The thickness of the Habitat Screen™ curtain is to be 0.686 mm, 0.027 inch. The breaking strength of the Habitat Screen™ curtain is warp: 140 lbs/inch and fill: 112 lbs/inch. Each side of the Habitat Screen curtain must feature a #4.5 coil zipper attached via heat weldable film and welding process. Standard fabric roll widths of 120", to minimize visible seams. Horizontal seaming of screen material is required when the height and width of the Habitat Screen™ exceeds the size of the fabric roll width. Manufacturer's description: **TuffScreen®**.

## Rollshutter Curtain Profiles and Habitat Screen™ Fabric (continued)

### SunTex 90

Used when solar protection is required

The Habitat Screen™ curtain is to be made from exterior, vinyl-coated polyester roller shade fabric, with a 31% polyester, 69% vinyl on polyester composition. The openness factor (O-F) is approximately 10%. The weight of the curtain is to be 583.18 g/m<sup>2</sup>, 0.0008295 lbs/inch<sup>2</sup>, or 17.2 oz/yd<sup>2</sup>. The thickness of the Habitat Screen curtain is to be 0.99mm, 0.039 inch. The breaking strength of the Habitat Screen™ curtain is warp: 480 lbs/inch and fill: 340 lbs/inch. Each side of the Habitat Screen curtain must feature a #4.5 Coil zipper attached via heat weldable film and welding process. Standard fabric roll widths of 120", to minimize visible seams. Horizontal seaming of screen material is required when the height and width of the Habitat Screen™ exceeds the size of the fabric roll width.

Fire classification for Habitat Screen™ Fabric is:

- California Technical Bulletin 117-2013
- NFPA 101 (Class A Rating)
- IBC Section 803.1.1 (Class A Rating)
- CAN/ULC-S 109-03 (large scale)

Manufacturer's description: **SUNTEX® 90.**

### SunTex 95

Used when maximum solar protection with visibility is required.

The Habitat Screen™ curtain is to be made from exterior, vinyl-coated polyester roller shade fabric, with a 28% polyester, 72% vinyl on polyester composition. The openness factor (O-F) is approximately 5%. The weight of the curtain is to be 522 g/m<sup>2</sup>, 0.000742 lbs/inch<sup>2</sup>, or 15.4 oz/yd<sup>2</sup>. The thickness of the Habitat Screen curtain is to be 0.74mm, 0.029 inch. The breaking strength of the Habitat Screen™ curtain is warp: 350 lbs/inch and fill: 235 lbs/inch. Each side of the Habitat Screen curtain must feature a #4.5 Coil zipper attached via heat weldable film and welding process. Standard fabric roll widths of 126", to minimize visible seams. Horizontal seaming of screen material is required when the height and width of the Habitat Screen™ exceeds the size of the fabric roll width.

Fire classification for Habitat Screen Fabric is:

- California Technical Bulletin 117-2013
- NFPA 101 (Class A Rating)
- IBC Section 803.1.1
- CAN/ULC-S 109-03 (large scale)

Manufacturer's description: **SUNTEX® 95.**

## ■ Guide Rails

### Rollshutters PRO and PRO-40 Rail

Typically used in residential or interior commercial applications when security is not a concern

The guide rails are to be heavy gauge aluminum extrusions fitted with two noise and weather insulating strips. All guide rails must have undergone a multiple stage chromate procedure and be painted with a baked-on paint. Guide rails to be acid, alkali and oil resistant. Curtain penetration into the guide rail shall be at least 26 mm (1") for sections less than 1.83 m (72") in width and at least 40mm (1-9/16") for section over 1.83 m (72") in width. Manufacturer's description: PRO RAIL and PRO-40 RAIL respectively.

On rollshutter sections where width dimensions exceed 3.05 m (120"), split the rollshutter into two or more sections by means of a centre guide rail(s). Manufacturer's description: **PRO CENTRE RAIL**.

### Rollshutters SAFE and SAFE-40 Rails

Typically used in all exterior commercial and institutional applications and where ever high security is required

The guide rails are to be minimum 0.065" or 1.60 mm gauge aluminum extrusions fitted with two noise and weather insulating strips. All guide rails must have undergone a multiple stage pretreatment procedure and be painted with a baked-on paint. Guide rails to be acid, alkali and oil resistant. The guide rail is to be made of two snap-together parts that prevent unauthorized access to the mounting screws. Curtain penetration into the guide rail shall be at least 41 mm (1 5/8") for sections less than 1.83 m (72") in width and at least 66 mm (2 5/8") for sections over 1.83 m (72") in width. Manufacturer's description: SAFE RAIL and SAFE-40 RAIL respectively.

On rollshutter sections where width dimensions exceed 3.05 m (120"), split the rollshutter into two or more sections by means of a centre guide rail(s). Manufacturer's description: **SAFE CENTRE RAIL**.

### Habitat Screens™ PRO Rail with Edge Retention Insert

Used in all Habitat Screen™ applications

The guide rails are to be heavy gauge aluminum extrusions fitted with a PVC guide rail insert. All guide rails must have undergone a multiple stage chromate procedure and be painted with a baked-on paint. Guide rails to be acid, alkali and oil resistant. The guide rail is to include ¼", 6.5 mm build-up to incorporate slide-on Talius aluminum build-up. Curtain penetration into the guide rail shall be at least 26 mm (1"). Manufacturer's description: **HABITAT SCREEN™ PRO GUIDE RAIL WITH EDGE RETENTION INSERT**.

## ■ Bottom Profile

### Habitat Screen™ Bottom Profile

Used in all Habitat Screen™ applications.

The Habitat Screen Bottom Profile is to be made of two aluminum extrusions fitted together with a retaining channel for the screen fabric at the bottom. The extrusions are to be minimum 0.055" or 1.40 mm wall thickness and weighing 1.10kg/lineal meter raw combined extrusion. The Bottom profile will be fitted with a weather insulating seal at the bottom. The Bottom Profile must allow for secure fitting of internal weight bars where required. The Bottom Profile must have undergone a multiple stage chromating procedure and be painted with baked-on paint. Bottom Profile to be acid, alkali, and oil resistant. The ends of the Bottom Profile must be capped off with a PVC caps.

## ■ Sill

### Rollshutter SAFE U-Sill:

Used when security of sun protection is a concern.

If applicable, provide a 30 mm x 47 mm (1-1/8" x 1-13/16") U-shaped aluminum sill to hold the curtain securely in place when closed. Manufacturer's description: **SAFE U-SILL**. Where the U-sill is exposed to weather, drill a minimum of two "weep" holes in the inside channel of the U-sill to allow for moisture drainage.

### Rollshutter & Habitat Screen™ L Sill:

Used for rollshutters when security is not a concern and there is no natural sill. Used in Habitat Screen™ installations for aesthetic reasons.

If applicable, provide a 22 mm x 42 mm (7/8" x 1-11/16") L-shaped aluminum sill for the bottom profile to rest upon when closed. Manufacturer's description: **L-SILL**.

## ■ Build-Up

### Rollshutter & Habitat Screen™ Build Up:

Used in installations on existing buildings when the opening is uneven or if there are obstructions to build the unit around.

If applicable, provide heavy-gauge aluminum build-up underneath the guide rails, along the panel box top, and panel box bottom. Unless otherwise specified, the width of the build-up is to be 35 mm (1-3/8"), depth to be suitable to provide obstruction free operation of the curtain.

## ■ Panel Box Housing

### Rollshutter Panel Boxes

Panel boxes are to be precision rollformed from 1.0 – 1.2 mm (0.040" – 0.0472") aluminum with an electro-statically bonded and baked finish. Lower half of the panel box must be detachable for future servicing access. Panel box service lid to be secured with tamper-proof security screws on all panel boxes below 2.13 m (7') off the ground. All panels to be delivered to jobsite covered with protective, adhesive plastic film to prevent scratching. The protective film is to be removed by installer after job completion. All panel box endplates to be manufactured by pressure die-casting procedure from high grade aluminum alloy. Endplates must be chromed and laminated with a resistant PVC surface. The panel box style to be 5-corner. Panel box sizes to suit Rollshutters dimensions.

### Habitat Screen Panel Boxes

Panel boxes are to be precision rollformed from 1.0 – 1.2 mm (0.040" – 0.0472") aluminum with an electro-statically bonded and baked finish. Lower half of the panel box must be detachable for future servicing access. Panel box service lid to be secured with tamper-proof security screws on all panel boxes below 2.13 m (7') off the ground. All panels to be delivered to jobsite covered with protective, adhesive plastic film to prevent scratching. The protective film is to be removed by installer after job completion. All panel box endplates to be manufactured by pressure die-casting procedure from high grade aluminum alloy. Endplates must be chromed and laminated with a resistant PVC surface. The panel box style to be 5-corner. Panel box size is 125 mm, or 5".

## ■ Colour Selection

### Rollshutter Colour Selection:

Unless otherwise indicated, items to be selected from manufacturer's standard colour range:

- rollshutter curtain
- rollshutter curtain bottom profile
- guide rails
- sill
- aluminum build-up
- panel box housing

### Habitat Screen™ Colour Selection

Unless otherwise indicated, items to be selected from manufacturer's standard colour range:

- Habitat Screen™ curtain
- Habitat Screen™ bottom profile
- guide rails
- sill
- aluminum build-up
- panel box housing

## ■ Operation

### Manual Crank with Gear Operation:

The operation shall be manual by means of a crank rod control. The panel box housing shall incorporate a sealed, permanently lubricated worm wheel or crown & pinion gear. Each gear shall be of sufficient reduction and be equipped with a brake. Each gear shall incorporate either a bottom limit or an Anti-Blocking-System (A.B.S.) clutch. A double-jointed universal with a ball bearing base shall be connected to the gear at a downwards slope as shown on the drawings. A folding crank rod of at least 1,330 mm length made of silver anodized aluminum shall be connected securely to the universal. The crank rod's turning radius shall be at least 140 mm. There shall be a wall mounting clip for crank rod storage when not in use.

### Standard Limit Motor Operation

Unless otherwise indicated, the unit shall be electrically operated. Provide a tubular 120 VAC motor installed inside the shaft. The motor unit shall be constructed with solenoid brakes, thermal overload protection switch with automatic reset and enclosed, permanently lubricated bearings and gears. All electrical components to be C.S.A. and U.L. certified. Each motor unit shall be controlled by a maintained-contact, three position paddle switch. The switches are to fit standard electrical boxes. Switch locations as shown on drawings.

The Wiring is per manufacturer's instructions and to local electrical code requirements.

Supply and installation of electrical wiring (including drilling of wiring routing holes through mounting surfaces), mounting of supplied electrical switches, and the connection of all wiring to be performed by certified electricians.

## Operation *(continued)*

### **Somfy RTS Motor Operation**

Unless otherwise indicated, the unit shall be electrically operated. Provide a tubular 120 VAC motor installed inside the shaft. The motor shall be constructed with an internal Radio Frequency Receiver and programmable limits. The motor unit shall be constructed with solenoid brakes, thermal overload protection switch with automatic reset and enclosed, permanently lubricated bearings and gears. The motor shall be controlled wirelessly. All electrical components to be C.S.A. and U.L. certified. The Wiring is per manufacturer's instructions and to local electrical code requirements.

Supply and installation of electrical wiring (including drilling of wiring routing holes through mounting surfaces), mounting of supplied electrical switches, and the connection of all wiring to be performed by certified electricians.

### **Somfy RTS Motor with Sun Sensor Operation**

Unless otherwise indicated, the unit shall be electrically operated. Provide a tubular 120 VAC motor installed inside the shaft. The motor shall be constructed with an internal Radio Frequency

Receiver and electronically programmable limits. The motor unit shall be constructed with solenoid brakes, thermal overload protection switch with automatic reset and enclosed, permanently lubricated bearings and gears. The motor shall be controlled wirelessly by a solar powered RTS Sun Sensor. For service and building maintenance by district staff: Exterior Solaris RTS remotes required to allow for individual shade control and to allow for turning on/off sun sensors, to accommodate service and building maintenance needs. All electrical components to be C.S.A. and U.L. certified. The Wiring is per manufacturer's instructions and to local electrical code requirements.

Supply and installation of electrical wiring (including drilling of wiring routing holes through mounting surfaces), mounting of supplied electrical switches, and the connection of all wiring to be performed by the certified electricians.

### **Rollshutter with Manual Override**

The motor unit shall be connected to a manual over-ride control in order to operate the rollshutter in case of power failure. A metal pin extrusion shall be connected to a stainless steel universal joint at a downward angle of at least 45 degrees. A longhandle crank of at least 1450 mm made from anodized aluminum shall be connected to the universal joint on the operating person's side. The crank shall have two joints and a wall mounted clip for storing when not in use. Color of the crank rod to be silver.

## ■ Locking Devices *(Rollshutters Only)*

### No Lock Required

All rollshutters shall be equipped with hangers constructed of rust proofed spring steel and chromed bottom bars. All hangers must be painted to prevent chemical reaction with curtains. Hangers are to be installed at sufficient intervals between shafts and curtains to prevent curtains to be lifted by more than six inches from the closed position, without the use of an operator.

### Manual Sliding Lock Bars

Used when security is not a concern and the lock side is not accessible by the public side, not recommended with motorized operators

In addition, each rollshutter shall be equipped with two manually locking security devices. Each device shall be installed in the aluminum bottom profile with two metal bars sliding into notches in the guide rails. This device shall prevent any lifting movement of the curtain opposite to the operator's side, when in the locked position. Manufacturer's description: **MANUAL SLIDING LOCK BARS**

### Centre Key Lock (Access Both Sides)

Used in interior applications where medium security is needed. Not recommended with motorized operators unless unit is at the only point of entry

In addition, each rollshutter shall be equipped with a manually sliding key lock device, mounted either in the centre of the bottom profile or up to 32" up from the bottom of the bottom profile. This locking device shall lock by means of key and is operable from both sides. Two sliding lock bars slide into a notch inside the guide rails when engaged. This device shall prevent any lifting of the curtain when in the locked position. Manufacturer's description: **CENTRE KEY LOCK (ACCESS BOTH SIDES)**

### Octopod Centre-Mounted Sliding Bar Key Lock

Used in applications where high security is needed, not recommended with motorized operators unless unit is located at the only point of entry.

In addition, each rollshutter shall be equipped with a sliding key lock device, mounted in the centre of the bottom profile. This locking device shall be installed in the aluminum bottom profile and lock by means of a key, and operable from one side only. This locking device features a mortise cylinder, allowing for key matching to common commercial 1 1/8" mortise cylinder locks. Two stainless steel lock bars slide into a notch inside the guide rails. This device shall prevent any lifting movement of the curtain when in the locked position. Manufacturer's description: **OCTOPOD CENTRE KEYLOCK**

### Talius Hanger Locks

Used on windows, doors, counter enclosures, and units with both manual and motorized operators when high security is needed.

All rollshutters will be equipped with hanger locks constructed of corrosion resistant materials. Hanger locks are to be installed at sufficient intervals between shaft and curtain in order to prevent the curtains from being lifted by more than 40 mm (1 9/16") from the closed position, without the use of an operator. Talius hanger locks meet the requirements of European Standard EN 13659 and resist an upward force of 100kg (220lbs). Manufacturer's description: **HANGER LOCKS**

## ■ Storm Bars

Used when additional protection is needed from high winds

All rollshutters will be equipped with one cross bar and one storm bar. The cross bar and storm bar are to be a minimum 5/32" or 4mm gauge aluminum extrusions that have undergone multiple stage pre-treatment procedure and painted with baked on paint. Storm bar and cross bar to be acid, alkali and oil resistant. Manufacturer's description: **HEAVY DUTY STORM BAR**

On rollshutter sections where width dimensions exceed 2.4m (96") multiple storm bars must be installed. In cases where there is no barrier behind the rollshutter, a storm bar must be installed on both sides of the curtain.

## ■ Habitat Screen™ Bug Brush

Used when additional insect protection is required.

The Habitat Screen bottom profile includes either 3/4" (19.05mm) or 2" (50.8mm) nylon slide in style bug brush along its length. The panel box includes a 1 1/2" (38.1mm) nylon bug brush with aluminum extrusion installed along its length. Manufacturers description: **BUG BRUSH**