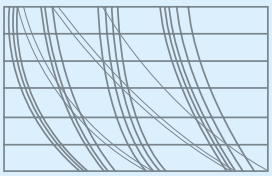
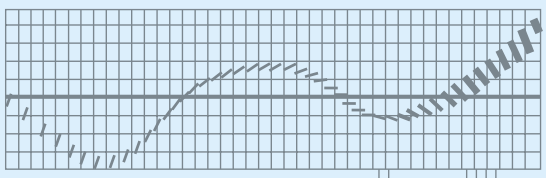
arena-walsall

Salamandre®

SWIFTS®

# CABLE MANAGEMENT SOLUTIONS CATALOGUE 2003/04






A COMPLETE CABLE MANAGEMENT SOLUTION FOR COMMERCIAL AND INDUSTRIAL APPLICATIONS

legrand®

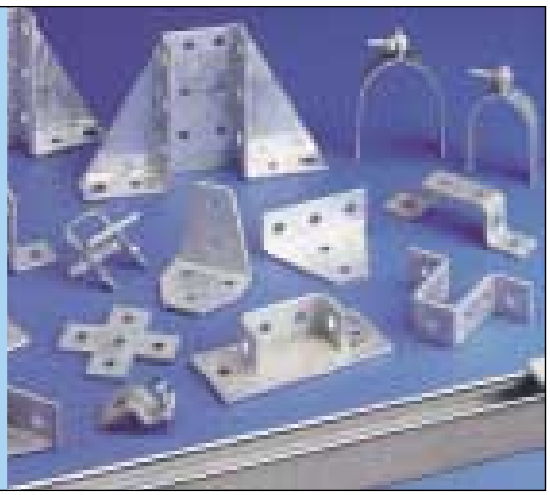
www.legrand.co.uk

# THE BACKBONE OF ALL YOUR SUPPORT NEEDS

High quality selection of channels

Available in a range of finishes, including stainless steel, this fully-integrated, high strength support system for cable management and building services will meet the needs of even the most demanding applications.

The choice of components is vast, encompassing high strength nuts and bolts, brackets, clamps and fastenings, as well as a selection of channels in either light or standard gauge for a solid, rigid framework



For even faster installation, the unique “Easi-clip” allows MRF tray to be fitted firmly on to the channel support system with a simple clip-on action

Channels can also be supplied in handy packs of 18 pre-cut lengths for use as hangers, helping to speed up the installation process even further

# Swiftrack channel support system

## channels



## Single Channels

### Standard Channels

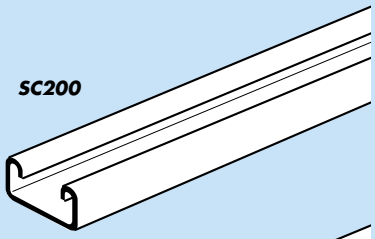
| | |
|---|---|
| 3m long | **SC200/3m** |
| 6m long | **SC200/6m** |
| 3m long | **SC400/3m** |
| 6m long | **SC400/6m** |

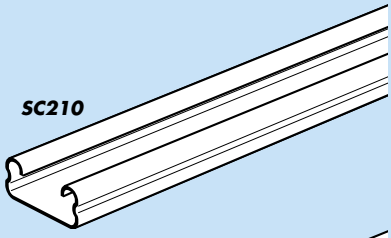
### Light Gauge Channels

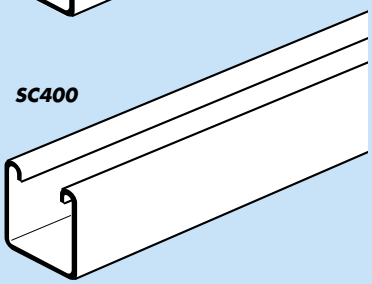
| | |
|---|---|
| 3m long | **SC210/3m** |
| 6m long | **SC210/6m** |
| 3m long | **SC410/3m** |
| 6m long | **SC410/6m** |

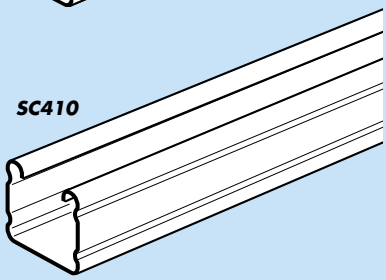
## Back-to-Back Channels

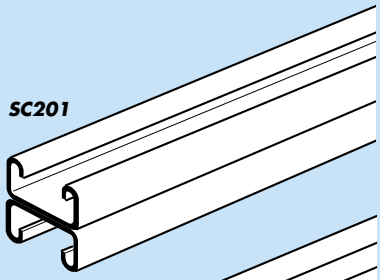
| | |
|---|---|
| 3m long | **SC201/3m** |
| 6m long | **SC201/6m** |
| 3m long | **SC401/3m** |
| 6m long | **SC401/6m** |

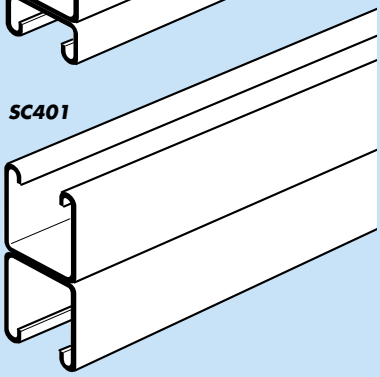


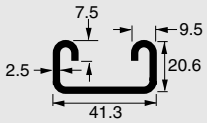



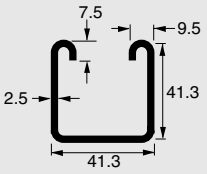

**SC200**

Weight 1.8kg/m




**SC400**

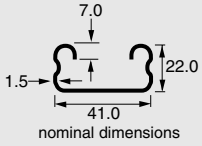
Weight 2.6kg/m




**SC210**

Ribbed strut designed to fit Channel Nuts

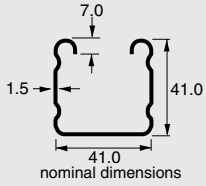
Weight 1.2kg/m




**SC410**

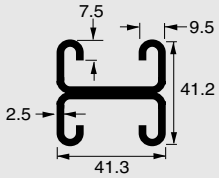
Ribbed strut designed to fit Channel Nuts

Weight 1.7kg/m



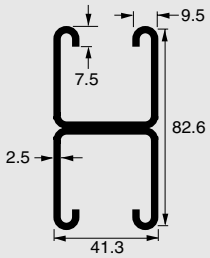

**SC201**

Weight 3.6kg/m




**SC401**

Weight 5.2kg/m




**FINISHES**

The standard finish for channels is Pre-galvanized mild steel to BS EN 10147. For other finishes add the appropriate suffix:

**-/G** Hot dip galvanized after manufacture to BS EN ISO 1461

**-/SS** Stainless steel to BS EN 10088 grade 1-4401 (equivalent to 316S31), see note.

***NOTE:***

*Channels SC210 and SC410 are not available in -/SS finish.*

In addition to the Back-to-Back Channels, Legrand can supply other configurations to special order. Contact our Sales Support for details.

# Swiftrack channel support system

## channels and channel nuts

## Slotted Channels

### Standard Channels

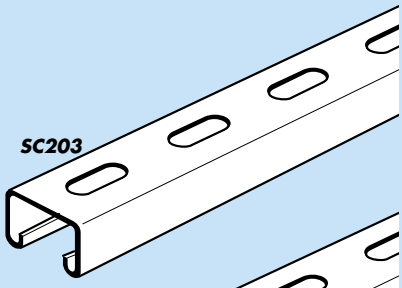
| | |
|---|---|
| 3m long | **SC203/3m** |
| 6m long | **SC203/6m** |
| 3m long | **SC403/3m** |
| 6m long | **SC403/6m** |

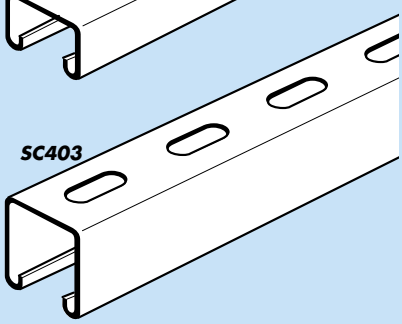
### Light Gauge Channels

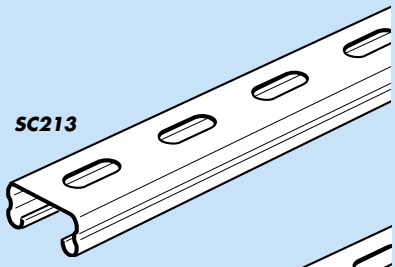
| | |
|---|---|
| 3m long | **SC213/3m** |
| 6m long | **SC213/6m** |
| 3m long | **SC413/3m** |
| 6m long | **SC413/6m** |

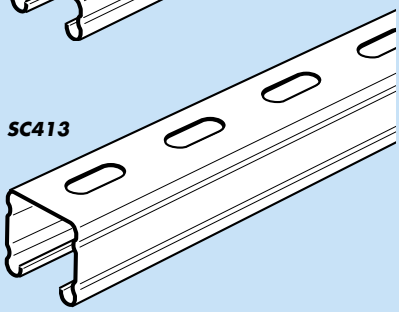
### Cut Lengths

| | | |
|---|---|---|
| 300mm long | pack 18 | **SC403/300** |
| 350mm long | pack 18 | **SC403/350** |
| 500mm long | pack 18 | **SC403/500** |



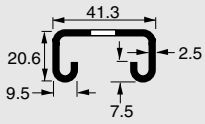



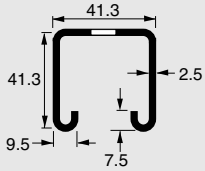

**SC203**

Weight 1.6kg/m




**SC403**

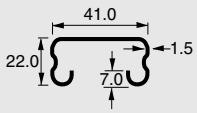
Weight 2.4kg/m




**SC213**

Ribbed strut designed to fit Channel Nuts

Weight 1.0kg/m

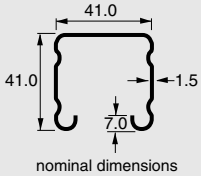



nominal dimensions

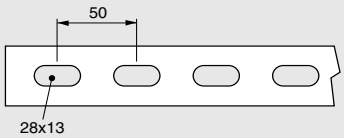
**SC413**

Ribbed strut designed to fit Channel Nuts

Weight 1.5kg/m




nominal dimensions




Slot pattern may differ on stainless steel channels. Consult our Sales Support for advice.

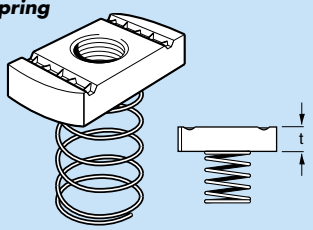
**Slotted Channel - Cut Lengths**
Slots are approximately 10mm from each end.

***NOTE:***
*Channels SC213 and SC413 are not available in -/SS finish.*

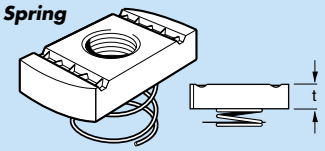
## Channel Nuts

| | | | |
|---|---|---|---|
| M6, | Long Spring | pack 100 | **PN061** |
| M8, | Long Spring | pack 100 | **PN081** |
| M10, | Long Spring | pack 100 | **PN101** |
| M12, | Long Spring | pack 100 | **PN121** |
| M6, | Short Spring | pack 100 | **PN062** |
| M8, | Short Spring | pack 100 | **PN082** |
| M10, | Short Spring | pack 100 | **PN102** |
| M12, | Short Spring | pack 100 | **PN122** |
| M6, | No Spring | pack 100 | **PN060** |
| M8, | No Spring | pack 100 | **PN080** |
| M10, | No Spring | pack 100 | **PN100** |
| M12, | No Spring | pack 100 | **PN120** |

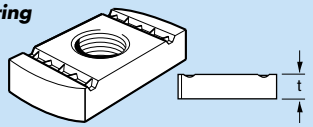
***Long Spring***




***Short Spring***




***No Spring***




For use with all channels.

For maximum load capacity M12 channel nuts should always be used.

| Ref. | t | Depth of channels |
|---|---|---|
| PN061 | 6mm | 41mm |
| PN081 | 6mm | 41mm |
| PN101 | 8mm | 41mm |
| PN121 | 10mm | 41mm |
| PN062 | 6mm | 21mm |
| PN082 | 6mm | 21mm |
| PN102 | 8mm | 21mm |
| PN122 | 8mm | 21mm |
| PN060 | 6mm | all |
| PN080 | 6mm | all |
| PN100 | 8mm | all |
| PN120 | 10mm | all |

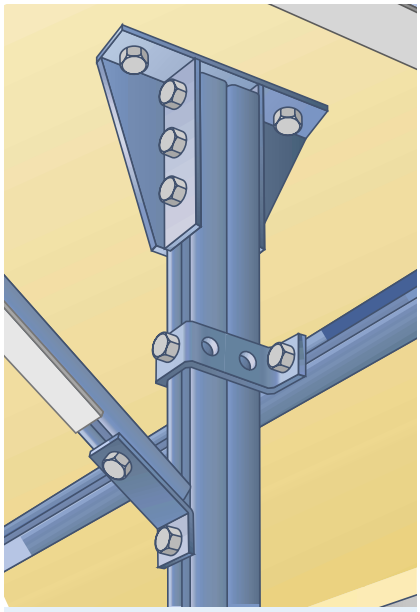
**Fastenings**
Use hexagon head setscrews, see page 92. For suggested setscrew sizes, see page 93.

**FINISHES**
The standard finish for all nuts is zinc plated to BS3382: Part 2, stainless steel grade 316 is also available.

# Swiftrack channel support system

## framework brackets

**The range of brackets and fittings illustrated on pages 80 - 85 will cover most applications. Special designs can be manufactured to suit particular applications.**



Brackets are manufactured to BS6946.

Unless otherwise stated, brackets are made from 6mm thick steel (5mm thick in stainless steel), are 40mm wide and have 14mm diameter holes to accept M12 (or smaller) setscrews.

All bend radii are 5mm unless otherwise stated.

Steel complies with BS EN 10111

Minimum Yield Stress of material is 170 N/mm$^2$.

Maximum loads for individual brackets are given in the following illustrations.

All loads are for hot dip galvanized brackets fixed with M12 setscrews and M12 zinc plated channel nuts. Loads for stainless steel brackets are available on request - contact our Sales Support.

Bracket weights are given in the following illustrations.

All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

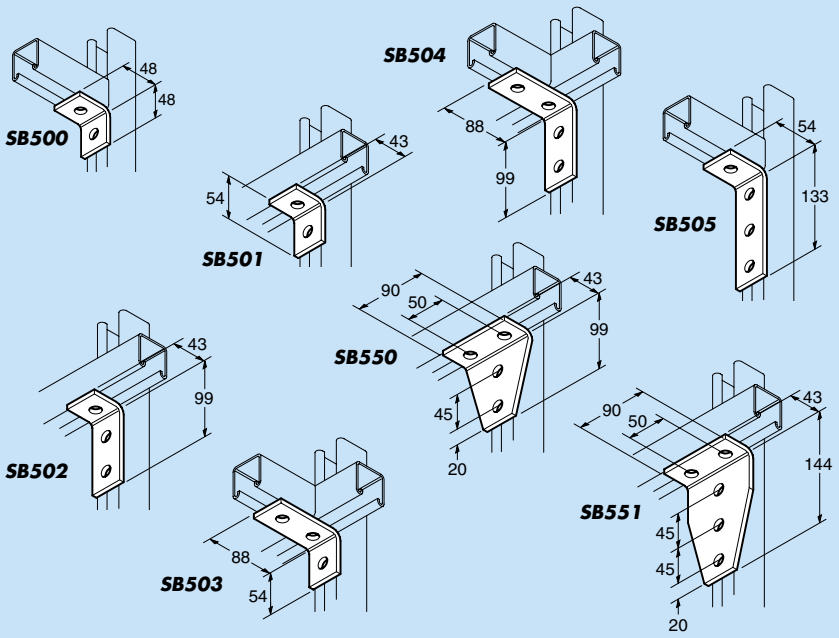
**Channel Nuts** page 79
**Setscrews** page 92

**FINISHES**

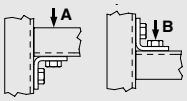
The standard finish for all brackets is hot dip galvanized to BS EN ISO 1461. Stainless steel grade 316 is also available unless otherwise stated.

## 90° Brackets

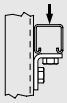
| | |
|---|---|
| 90° Bracket | **SB500** |
| 90° Bracket | **SB501** |
| 90° Bracket | **SB502** |
| 90° Bracket | **SB503** |
| 90° Bracket | **SB504** |
| 90° Bracket | **SB505** |
| 90° Bracket | **SB550** |
| 90° Bracket | **SB551** |



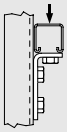

**SB500**
Maximum load on each bracket with both ends supported
A - 400kgf. B - 245kgf.
Unit Weight 0.14kg



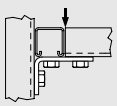

**SB501**
Maximum load on each bracket 230kgf.
Unit Weight 0.14kg



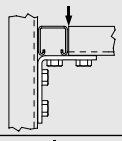
**SB502**
Maximum load on each bracket 230kgf.
Unit Weight 0.23kg



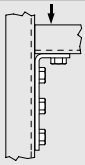
**SB503**
Maximum load on each bracket with both ends supported 120kgf.
Unit Weight 0.23kg



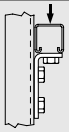
**SB504**
Maximum load on each bracket 120kgf.
Unit Weight 0.32kg



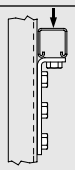
**SB505**
Maximum load on each bracket 500kgf.
Unit Weight 0.32kg



**SB550**
Maximum load on each bracket 600kgf.
Unit Weight 0.43kg



**SB551**
Maximum load on each bracket 600kgf.
Unit Weight 0.61kg

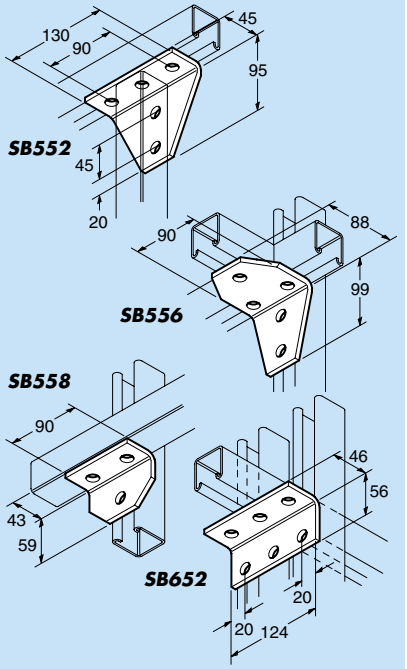


# Swiftrack channel support system

## framework brackets

### 90° Brackets

| | |
|---|---|
| 90° Bracket | **SB552** |
| 90° Bracket | **SB556** |
| 90° Bracket | **SB558** |
| 90° Bracket | **SB652** |

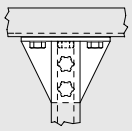



**SB552**

Maximum load on each bracket 700kgf.

5mm thick.

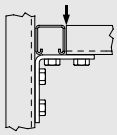
Unit Weight 0.50kg



**SB556**

Maximum load on each bracket with both ends supported 260kgf.

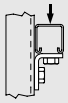
Unit Weight 0.57kg



**SB558**

Maximum load on each bracket 400kgf.

Unit Weight 0.34kg

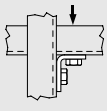


**SB652**

Maximum load on each bracket 800kgf.

Holes spaced at 42mm centres.

Unit Weight 0.40kg



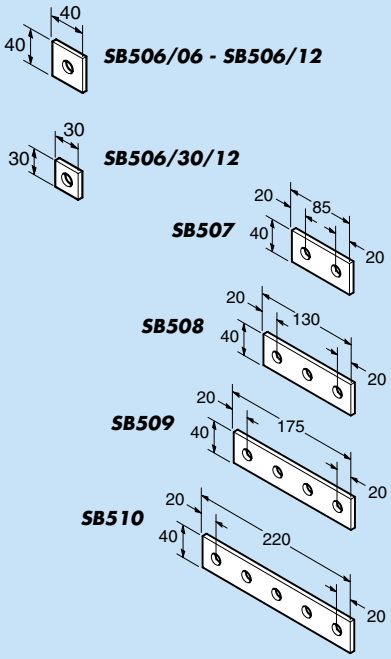
### Square and Splice Plates

#### Square Plates

| | |
|---|---|
| M6 hole | **SB506/06** |
| M8 hole | **SB506/08** |
| M10 hole | **SB506/10** |
| M12 hole | **SB506/12** |
| M12 hole | **SB506/30/12** |

#### Splice Plates

| | |
|---|---|
| 2 hole | **SB507** |
| 3 hole | **SB508** |
| 4 hole | **SB509** |
| 5 hole | **SB510** |




**SQUARE PLATES**

**SB506/06 - SB506/12**

Use as location plate when attaching any special fitment which will not sit across both channel sides.

Unit Weight 0.07kg

**SB506/30/12**

Use when fixing M12 bolts through slots in SC203 and SC403 channels.

Unit Weight 0.07kg

*SB506/30/12 is not available in -/SS finish.*

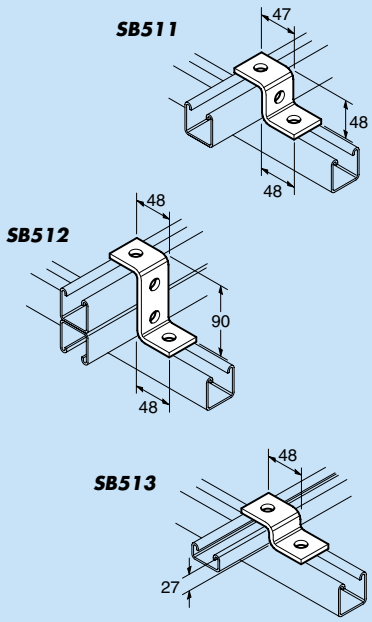
**SPLICE PLATES**

Holes spaced at 45mm centres.

**SB507** Unit Weight 0.14kg
**SB508** Unit Weight 0.23kg
**SB509** Unit Weight 0.32kg
**SB510** Unit Weight 0.41kg

### Z Brackets

| | |
|---|---|
| 40mm Z Bracket | **SB511** |
| 80mm Z Bracket | **SB512** |
| 20mm Z Bracket | **SB513** |




**SB511**

Unit Weight 0.22kg

**SB512**

Unit Weight 0.29kg

**SB513**

Unit Weight 0.18kg

# Swiftrack channel support system

## framework brackets



### U Brackets

| | |
|---|---|
| 20mm U Bracket | **SB514** |
| 40mm U Bracket | **SB515** |
| 80mm U Bracket | **SB516** |
| Side by Side U Bracket | **SB517** |

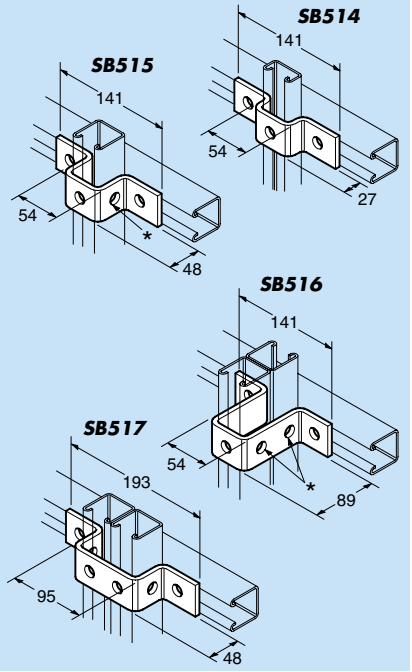
### Angle Brackets and Plates

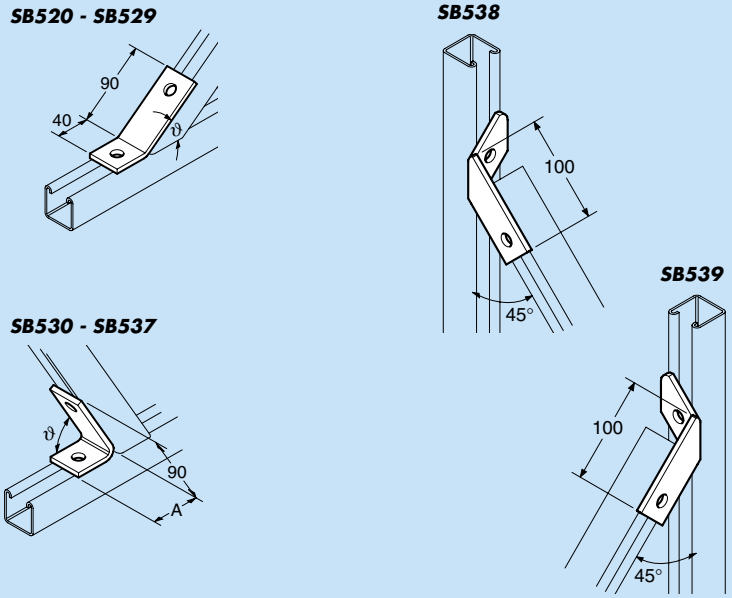
#### Obtuse Angle Brackets

| | |
|---|---|
| 15° | **SB520** |
| 22½° | **SB521** |
| 30° | **SB522** |
| 37½° | **SB523** |
| 45° | **SB524** |
| 52½° | **SB525** |
| 60° | **SB526** |
| 67½° | **SB527** |
| 75° | **SB528** |
| 82½° | **SB529** |

#### Acute Angle Brackets

| | |
|---|---|
| 30° | **SB530** |
| 37½° | **SB531** |
| 45° | **SB532** |
| 52½° | **SB533** |
| 60° | **SB534** |
| 67½° | **SB535** |
| 75° | **SB536** |
| 82½° | **SB537** |




**SB514**

Unit Weight 0.29kg

**SB515**

* Hole on one side of bracket only.

Unit Weight 0.37kg

**SB516**

* Holes on one side of bracket only.

Unit Weight 0.52kg

**SB517**

Unit Weight 0.45kg

**SB520 - SB529**

| Ref. | Unit Weight kg |
|---|---|
| SB520 | 0.25 |
| SB521 | 0.25 |
| SB522 | 0.25 |
| SB523 | 0.25 |
| SB524 | 0.25 |
| SB525 | 0.25 |
| SB526 | 0.25 |
| SB527 | 0.25 |
| SB528 | 0.25 |
| SB529 | 0.25 |

**SB530 - SB537**

| Ref. | Unit Weight kg | A mm |
|---|---|---|
| SB530 | 0.32 | 70 |
| SB531 | 0.32 | 70 |
| SB532 | 0.29 | 60 |
| SB533 | 0.29 | 60 |
| SB534 | 0.25 | 40 |
| SB535 | 0.25 | 40 |
| SB536 | 0.25 | 40 |
| SB537 | 0.25 | 40 |

All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

**Channel Nuts** page 79
**Setscrews** page 92

All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

**Channel Nuts** page 79
**Setscrews** page 92

# Swiftrack channel support system

## framework brackets

## Angle Brackets and Plates

### Angle Brackets

| | |
|---|---|
| Right Hand Angle Bracket | **SB538** |
| Left Hand Angle Bracket | **SB539** |

### Angle Plates

| | |
|---|---|
| Adjustable Angle Plate | **SB541** |
| Angle Plate | **SB557** |

## T Plates and Brackets

### T Plates

| | |
|---|---|
| T Plate | **SB554** |
| T Plate | **SB555** |

### T Bracket

| | |
|---|---|
| T Bracket | **SB603** |

### Cross Plate

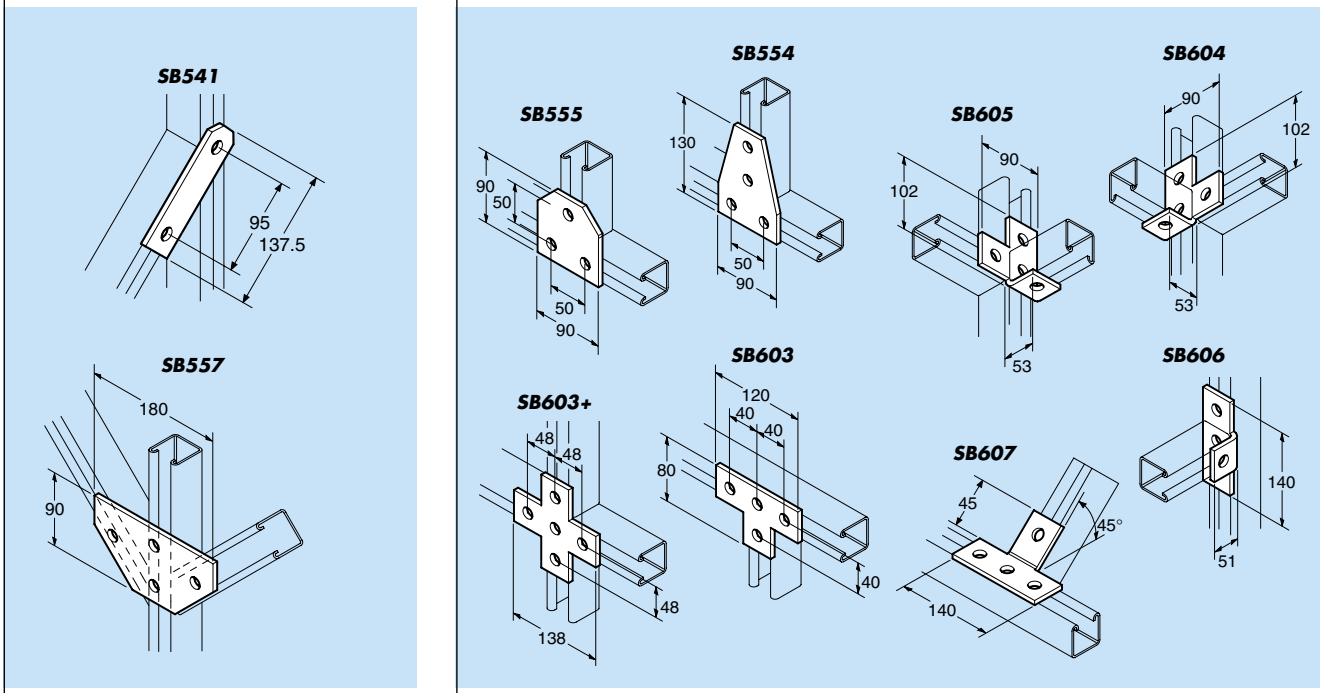
| | |
|---|---|
| Cross Plate | **SB603+** |

### T Corner Brackets

| | |
|---|---|
| Right Hand T Corner Bracket | **SB604** |
| Left Hand T Corner Bracket | **SB605** |

### T Brackets

| | |
|---|---|
| 90° T Bracket | **SB606** |
| 45° T Bracket | **SB607** |




**SB538**
Unit Weight 0.25kg

**SB539**
Unit Weight 0.25kg

**SB541**
Unit Weight 0.24kg

**SB557**
Unit Weight 0.56kg

**SB554**
Unit Weight 0.43kg

**SB555**
Unit Weight 0.34kg

**SB603**
Unit Weight 0.32kg

**SB603+**
Unit Weight 0.35kg

**SB604**
Unit Weight 0.32kg

**SB605**
Unit Weight 0.32kg

**SB606**
Unit Weight 0.32kg

**SB607**
Unit Weight 0.32kg

*SB604, SB605, SB606 and SB607 are not available in -/SS finish.*

All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

**Channel Nuts** page 79
**Setscrews** page 92

# Swiftrack channel support system

## framework brackets



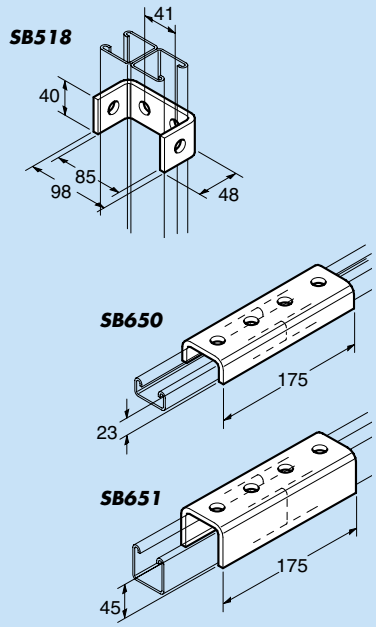
### Jointing Brackets and Channels

#### Channel Jointing Bracket

| | |
|---|---|
| Channel Jointing Bracket | **SB518** |

#### Jointing Channels

| | |
|---|---|
| Jointing Channel | **SB650** |
| Jointing Channel | **SB651** |




**SB518**
Unit Weight 0.31kg

**SB650**
For SC200 channel.
23mm deep.
5mm thick.
Unit Weight 0.55kg

**SB651**
For SC400 channel.
45mm deep.
5mm thick.
Unit Weight 0.85kg

All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

**Channel Nuts** page 79
**Setscrews** page 92

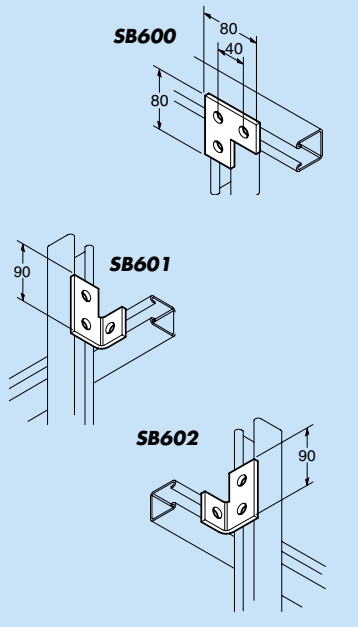
### L Brackets

#### L Bracket

| | |
|---|---|
| L Bracket | **SB600** |

#### L Corner Brackets

| | |
|---|---|
| Right Hand L Corner Bracket | **SB601** |
| Left Hand L Corner Bracket | **SB602** |




**SB600**
Unit Weight 0.27kg

**SB601**
Unit Weight 0.27kg

**SB602**
Unit Weight 0.27kg

*SB601 and SB602 are not available in -/SS finish.*

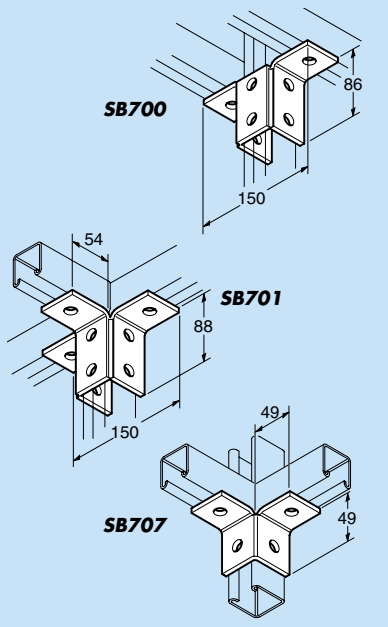
All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

**Channel Nuts** page 79
**Setscrews** page 92

### Wing Brackets

| | |
|---|---|
| 2 Lug Wing Bracket | **SB700** |
| 3 Lug Wing Bracket | **SB701** |
| Angled Wing Bracket | **SB707** |




**SB700**
Unit Weight 0.66kg

**SB701**
Unit Weight 0.75kg

**SB707**
Unit Weight 0.28kg

*SB707 is not available in -/SS finish.*

All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

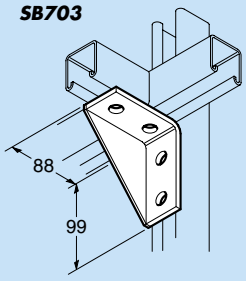
**Channel Nuts** page 77
**Setscrews** page 90

# Swiftrack channel support system

## framework brackets

### Shelf Bracket

| | |
|---|---|
| Shelf Bracket | **SB703** |




**SB703**
Gusset only, 3mm thick
Unit Weight 0.51kg

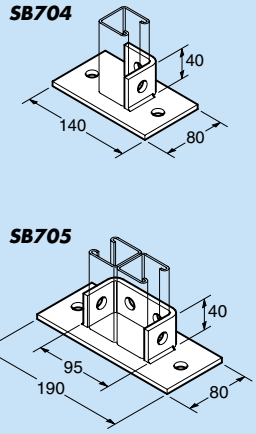
All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

**Channel Nuts** page 79
**Setscrews** page 92

### Base Plates

| | |
|---|---|
| Single Channel Base Plate | **SB704** |
| Double Channel Base Plate | **SB705** |




**SB704**
Distance between hole centres 100mm.
Unit Weight 0.71kg

**SB705**
Distance between hole centres 150mm.
Unit Weight 1.00kg

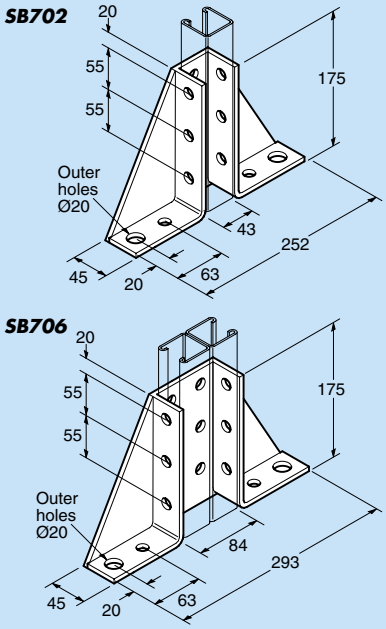
All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

**Channel Nuts** page 79
**Setscrews** page 92

### Gussetted Brackets

| | |
|---|---|
| Single Channel Gussetted Bracket | **SB702** |
| Double Channel Gussetted Bracket | **SB706** |




**SB702**
Gussets 5mm thick.
Angles 6mm thick.
Unit Weight 2.09kg

**SB706**
Gussets 5mm thick.
Angles 6mm thick.
Unit Weight 2.37kg

All dimensions are in millimetres.

Channel nuts and setscrews are not supplied with brackets, therefore must be ordered separately.

**Channel Nuts** page 79
**Setscrews** page 92

# Swiftrack channel support system

## clamps

## Pipe and Beam Clamps

### Pipe Clamps

| | |
|---|---|
| for 10-14mm pipe dia. | **SP960** |
| for 13-17mm pipe dia. | **SP961** |
| for 17-22mm pipe dia. | **SP964** |
| for 22-26mm pipe dia. | **SP965** |
| for 25-35mm pipe dia. | **SP968** |
| for 32-42mm pipe dia. | **SP969** |
| for 42-59mm pipe dia. | **SP972** |
| for 54-65mm pipe dia. | **SP973** |

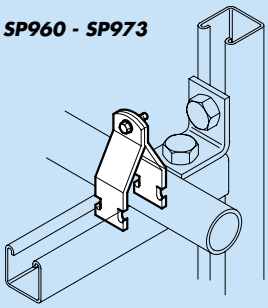
### Pipe Clamps

| | |
|---|---|
| for 62-71mm pipe dia. | **SP975** |
| for 73-83mm pipe dia. | **SP976** |
| for 81-87mm pipe dia. | **SP977** |
| for 89-101mm pipe dia. | **SP978** |
| for 101-113mm pipe dia. | **SP979** |
| for 113-125mm pipe dia. | **SP980** |
| for 125-135mm pipe dia. | **SP981** |
| for 145-155mm pipe dia. | **SP982** |
| for 170-180mm pipe dia. | **SP983** |
| for 200-212mm pipe dia. | **SP984** |
| for 220-230mm pipe dia. | **SP985** |

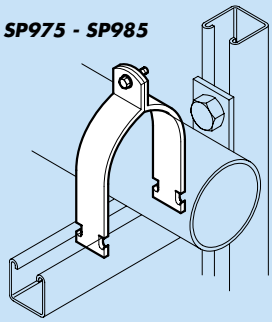
### Beam Clamps

| | |
|---|---|
| Beam Clamp | **SC850** |
| Beam Clamp | **SC851** |
| Window Beam Clamp | **SC852/21** |
| Window Beam Clamp | **SC852/41** |
| Window Beam Clamp | **SC852/82** |

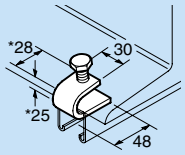
**SP960 - SP973**



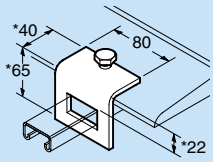
**SP975 - SP985**



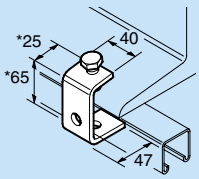
**SC850**



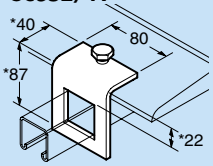

**SC852/21**



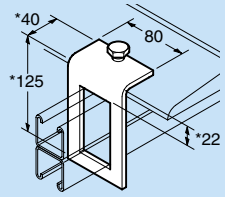

**SC851**




**SC852/41**




**SC852/82**




| Ref. | Unit Weight kg |
|---|---|
| SB960 | 0.06 |
| SB961 | 0.07 |
| SB964 | 0.08 |
| SB965 | 0.09 |
| SB968 | 0.10 |
| SB969 | 0.11 |
| SB972 | 0.13 |
| SB973 | 0.15 |
| SB975 | 0.16 |
| SB976 | 0.17 |
| SB977 | 0.19 |
| SB978 | 0.20 |
| SB979 | 0.22 |
| SB980 | 0.24 |
| SB981 | 0.25 |
| SB982 | 0.29 |
| SB983 | 0.33 |
| SB984 | 0.38 |
| SB985 | 0.41 |

Nuts and bolts where shown are included.

**FINISHES**
All pipe clamps are available pre-galvanized to BS EN10147: Part 2, and stainless steel grade 316.

**SC850**
Maximum load 400kgf/pair. Use in pairs.
Unit Weight 0.16kg *Not available in -/SS finish.*

**SC851**
Maximum load 200kgf. Unit Weight 0.26kg

**SC852/21** For 21mm channel.
Maximum load 475kgf/pair. Use in pairs.
Unit Weight 0.37kg

**SC852/41** For 41mm channel and 21mm back-to-back channels.
Maximum load 475kgf/pair. Use in pairs.
Unit Weight 0.52kg

**SC852/82** For 41mm back-to-back channels.
Maximum load 475kgf/pair. Use in pairs.
Unit Weight 0.56kg *Not available in -/SS finish.*

**SC853**
Maximum load 900kgf/pair. Use in pairs.
Unit Weight 0.36kg

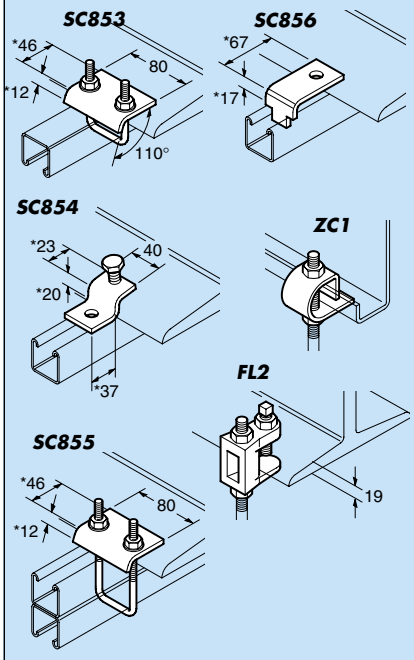
Nuts, bolts, cone point screws and U bolts where shown are included. All dimensions in millimetres.
* Inside dimensions.

# Swiftrack channel support system

## clamps and accessories

### Beam Clamps

| | |
|---|---|
| Beam Clamp | **SC853** |
| Beam Clamp | **SC854** |
| Beam Clamp | **SC855** |
| Toe Beam Clamp | **SC856** |
| Beam Clamp | **ZC1** |
| Beam Clamp | **FL2** |




**SC854**
Maximum load 350kgf/pair. Use in pairs.
Unit Weight 0.17kg

**SC855**
Maximum load 900kgf/pair. Use in pairs.
Unit Weight 0.37kg

**SC856**
Maximum load 400kgf/pair. Use in pairs.
Requires 2 setscrews and channel nuts for fixing (not included). Unit Weight 0.15kg

**ZC1**
Maximum load 25kg. Use M10 Rod. Zinc plated to BS3382: Part 2.

**FL2**
Maximum load 240kg. Use M10 Rod. Zinc plated to BS3382: Part 2. Unit Weight 0.15kg
*Not available in -/SS finish.*

**FINISHES**
All beam clamps are available hot dip galvanized to BS729 and stainless steel grade 316 unless otherwise stated.

### Channel Accessories

***Channel End Caps***
***for 41mm Deep Channel***

| | |
|---|---|
| Channel End Cap, black | **SC950B** |
| Channel End Cap, white | **SC950W** |

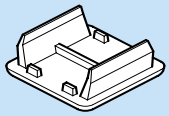
***Channel End Caps***
***for 21mm Shallow Channel***

| | |
|---|---|
| Channel End Cap, black | **SC951B** |
| Channel End Cap, white | **SC951W** |

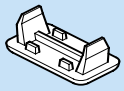
***Closure Strips***

| | |
|---|---|
| Closure Strip, plastic | **SC952** |
| Closure Strip, metal | **SC953** |

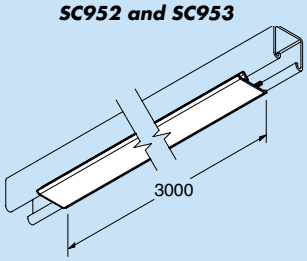
***SC950B and SC950W***



***SC951B and SC951W***



***SC952 and SC953***




**SC950B and SC950W**
For SC400, SC401 and SC403 channels.
Weight 0.9kg per 100.

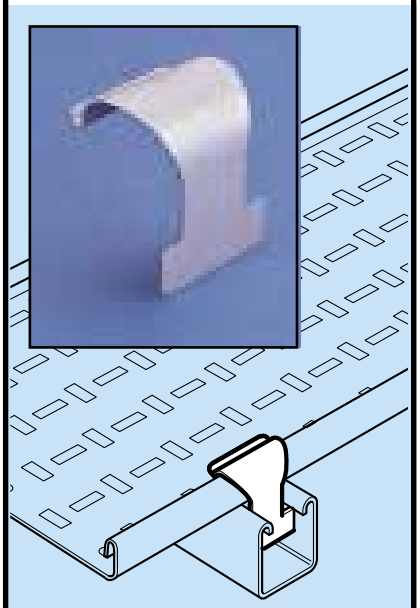
**SC951B and SC951W**
For SC200, SC201 and SC203 channels.
Weight 0.4kg per 100.

**SC952**
Standard length 3 metres.
Unit Weight 0.4kg

**SC953**
Standard length 3 metres.
Unit Weight 1.0kg

### Easi-clip


| | |
|---|---|
| for MRF Tray, pack 50 | **CKP25** |




Use in pairs.
Zinc coated finish.

# Swiftrack channel support system

## supports

Cantilever Arms are also available in stainless steel grade 316.

**In addition to the cantilever arms listed, there are many other specialist support brackets for use with Cable Tray, Cable Ladder or Fastrack F31. These are detailed in the relevant sections in this catalogue.**

## Cantilever Arms

### Cantilever Arms

| | |
|---|---|
| 150mm long | **SA750** |
| 225mm long | **SA751** |
| 300mm long | **SA752** |
| 450mm long | **SA753** |
| 600mm long | **SA754** |
| 750mm long | **SA755** |
| 900mm long | **SA757** |

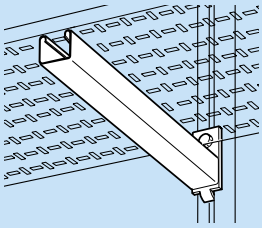
### Cantilever Arms, Universal

| | |
|---|---|
| 150mm long | **SA760** |
| 225mm long | **SA761** |
| 300mm long | **SA762** |
| 450mm long | **SA763** |
| 600mm long | **SA764** |
| 750mm long | **SA765** |
| 900mm long | **SA766** |

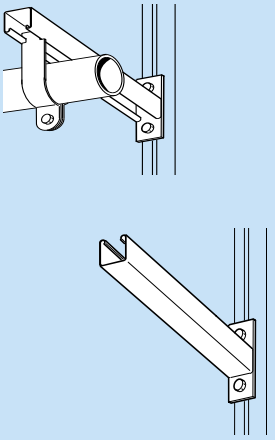
### Cantilever Arms, Side

| | |
|---|---|
| 150mm long | **SA790** |
| 225mm long | **SA791** |
| 300mm long | **SA792** |
| 450mm long | **SA793** |
| 600mm long | **SA794** |
| 750mm long | **SA795** |
| 900mm long | **SA796** |

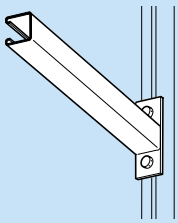
***Cantilever Arms***



***Cantilever Arms, Universal***



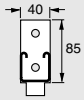
***Cantilever Arms, Side***



**Cantilever Arms**

Supplied loose.

| Ref. | Unit Weight kg | Maximum uniformly distributed load kgf |
|---|---|---|
| SA750 | 0.64 | 400* † |
| SA751 | 0.85 | 396 † |
| SA752 | 1.03 | 304 |
| SA753 | 1.42 | 202 |
| SA754 | 1.81 | 150 |
| SA755 | 2.20 | 110 |
| SA757 | 2.60 | 90 |

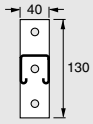



* Slip limits loading capacity.

**Cantilever Arms, Universal**

Supplied loose.

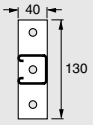
| Ref. | Unit Weight kg | Maximum uniformly distributed load kgf |
|---|---|---|
| SA760 | 0.64 | 700 † |
| SA761 | 0.85 | 456 |
| SA762 | 1.03 | 350 |
| SA763 | 1.42 | 230 |
| SA764 | 1.81 | 170 |
| SA765 | 2.20 | 136 |
| SA766 | 2.60 | 110 |




**Cantilever Arms, Side**

Supplied loose.

| Ref. | Unit Weight kg |
|---|---|
| SA790 | 0.64 |
| SA791 | 0.85 |
| SA792 | 1.03 |
| SA793 | 1.42 |
| SA794 | 1.81 |
| SA795 | 2.20 |
| SA796 | 2.60 |




**STAINLESS STEEL CANTILEVER ARMS**

The loads for stainless steel Cantilever Arms are 60% of those given in the tables, except those marked † where the limit is 50%.

Contact our Sales Support for details.

# Swiftrack channel support system

## supports

## Cantilever Arms

### Cantilever Arms, Double Channel

| | |
|---|---|
| 150mm long | **SA770** |
| 225mm long | **SA771** |
| 300mm long | **SA772** |
| 450mm long | **SA773** |
| 600mm long | **SA774** |
| 750mm long | **SA775** |
| 900mm long | **SA776** |

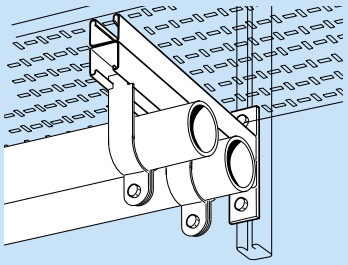
### Cantilever Arm Bracket

| | |
|---|---|
| Cantilever Arm Bracket | **SA756** |

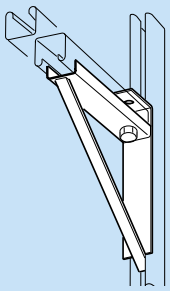
### Cantilever Arms, Pre-galvanized

| | |
|---|---|
| 100mm long | **ST860** |
| 150mm long | **ST861** |
| 225mm long | **ST862** |
| 300mm long | **ST863** |
| 450mm long | **ST864** |
| 600mm long | **ST865** |
| 750mm long | **ST866** |
| 900mm long | **ST867** |

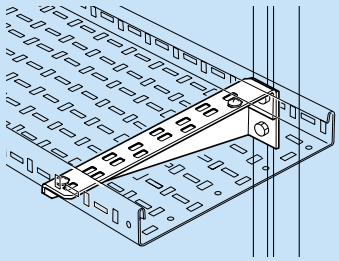
***Cantilever Arms, Double Channel***



***Cantilever Arm Bracket***



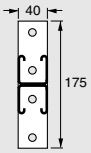
***Cantilever Arms, Pre-galvanized***



**Cantilever Arms, Double Channel**

Supplied loose.

| Ref. | Unit Weight kg | Maximum uniformly distributed load kgf |
|---|---|---|
| SA770 | 1.14 | 800* † |
| SA771 | 1.68 | 800* † |
| SA772 | 2.02 | 650 |
| SA773 | 2.90 | 430 |
| SA774 | 3.78 | 320 |
| SA775 | 4.66 | 250 |
| SA776 | 5.60 | 200 |



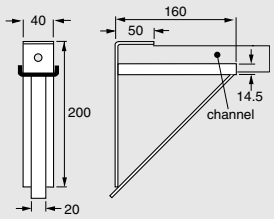

* Slip limits loading capacity.

**Cantilever Arm Bracket**

Supplied loose.

Horizontal arm section from 3mm steel only.

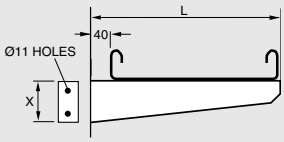
Unit Weight 1.13kg




**Cantilever Arms, Pre-galvanized**

Supplied loose.

Particularly suitable for use with pre-galvanized cable tray.




| Ref. | L mm | X mm | Unit Weight kg | SWL kgf* |
|---|---|---|---|---|
| ST860 | 140 | 75 | 0.30 | 120[1] |
| ST861 | 190 | 75 | 0.40 | 120[1] |
| ST862 | 265 | 90 | 0.60 | 150 |
| ST863 | 340 | 90 | 0.80 | 150 |
| ST864 | 490 | 120 | 1.20 | 150 |
| ST865 | 640 | 180 | 2.50 | 300 |
| ST866 | 790 | 230 | 4.10 | 300 |
| ST867 | 940 | 280 | 5.60 | 300 |

* Per cantilever arm for load uniformly distributed across complete arm using two fixing holes. Safety factor: 2.

[1] When one fixing hole is used the recommended safe working load = 100 kgf.

**STAINLESS STEEL CANTILEVER ARMS**

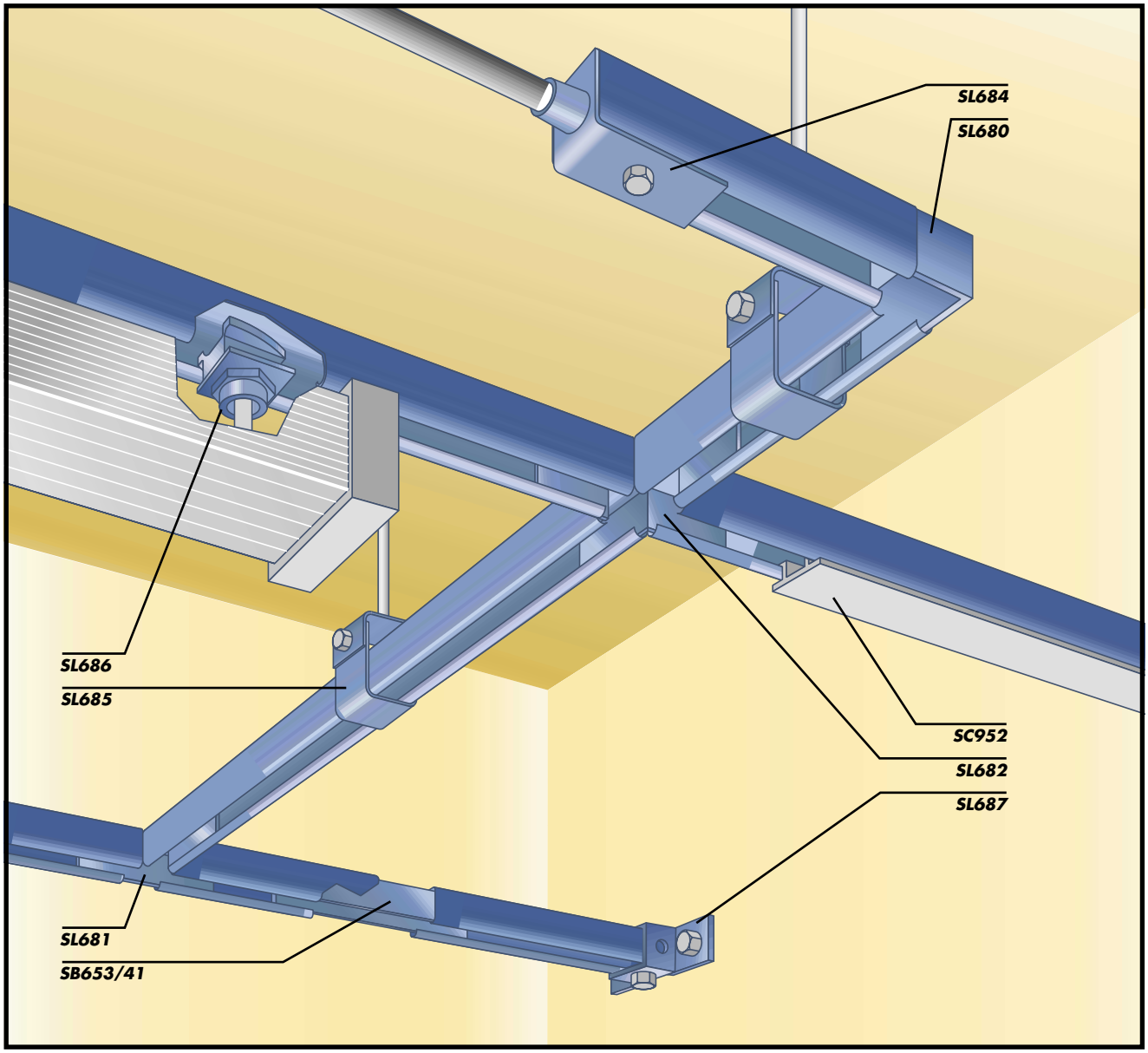
The loads for stainless steel Cantilever Arms are 60% of those given in the tables, except those marked † where the limit is 50%.

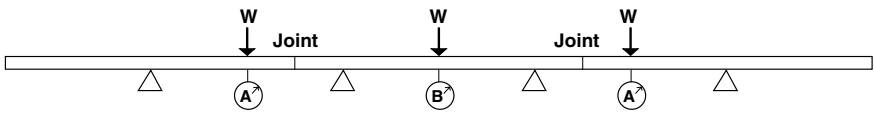
Contact our Sales Support for details.

# Swiftrack channel support system

## lighting channel

**A Swiftrack system can be used as a form of lighting trunking to contain and protect electric cables and to support light fittings and ceiling panels.**




**DEFLECTION**
(in millimetres)

| L Metres | W=0 | | W=5 kgf | | W=10 kgf | | W=15 kgf | | W=20 kgf | | W=25 kgf | | W=30 kgf | | Span |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | A | B | A | B | A | B | A | B | A | B | A | B | 200 |
| 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 3 | 0 | 3 | 0 | 10 |
| 3 | 0 | 1 | 0 | 2 | 2 | 4 | 4 | 5 | 5 | 6 | 5 | 7 | 5 | 8 | 15 |
| *4 | 0 | 1.5 | 5 | 3 | 7 | 7 | 9 | 9 | 11 | 11 | 12 | 14 | 15 | 17 | 21 |
| *5 | 0 | 2 | 5 | 0 | 15 | 2 | 20 | 4 | — | — | — | — | — | — | 26 |

* Loads given for 4m and 5m spans are for 6m lengths of channel.

Load/deflection information given in the table is based upon a typical installation of 3-6.0m lengths of channel joined with two SB653/41 Internal Jointing Channels. The joints were placed equidistant from the central support positions and the outer ends were left unrestrained.

The loads detailed were applied as point loads at mid-span and the deflection measurements were also taken at the mid-span positions.

# Swiftrack channel support system

## lighting channel

## Lighting Channel Fittings

| | |
|---|---|
| 90° Bend | **SL680** |
| Tee | **SL681** |
| 4-Way Crosspiece | **SL682** |
| End Cover | **SL683** |
| End Conduit Connector | **SL684** |
| Suspension Bracket | **SL685** |

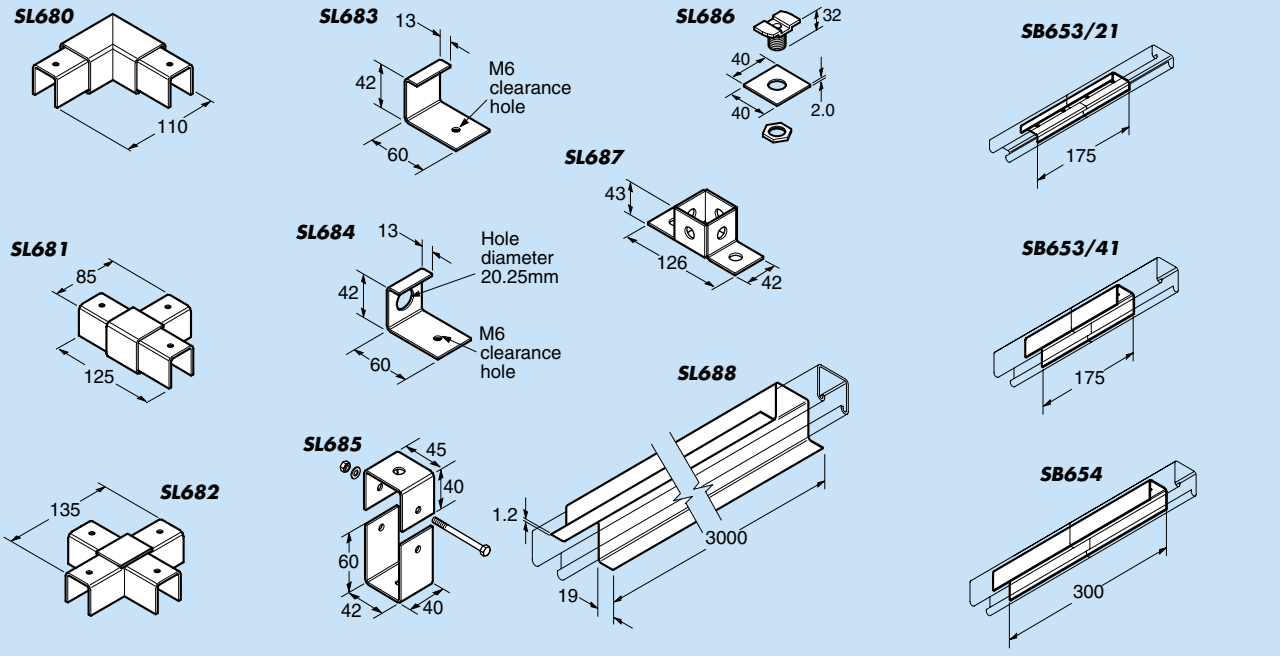
| | |
|---|---|
| Adaptor | **SL686** |
| Flange Connector | **SL687** |
| Top Hat Section | **SL688** |

### *Internal Jointing Channels*
***for 41mm Deep Channel***

| | |
|---|---|
| Internal Jointing Channel | **SB653/41** |
| Internal Jointing Channel | **SB654** |

### *Internal Jointing Channel*
***for 21mm Shallow Channel***

| | |
|---|---|
| Internal Jointing Channel | **SB653/21** |




**SL680**
Supplied complete with M5 x 8mm pan head screws.
2mm thick galvanized steel.
Unit Weight 0.48kg

**SL681**
Supplied complete with M5 x 8mm pan head screws.
2mm thick galvanized steel.
Unit Weight 0.35kg

**SL682**
Supplied complete with M5 x 8mm pan head screws.
2mm thick galvanized steel.
Unit Weight 0.39kg

**SL683**
Requires one M6 x 20mm setscrew and one SN060 channel nut for fixing (not supplied).
1.6mm thick pre-galvanized steel.
Unit Weight 0.06kg

**SL684**
Requires one M6 x 20mm setscrew and one SN060 channel nut for fixing (not supplied).
1.6mm thick pre-galvanized steel.
Unit Weight 0.06kg

**SL685**
1.6mm thick pre-galvanized steel.
Unit Weight 0.16kg

**SL686**
For attaching fluorescent fittings or 20mm conduit.
Hole diameter 16mm.
Thread diameter 20mm.
Unit Weight 0.07kg

**SL687**
Requires one M6 x 20mm setscrew and one SN060 channel nut for fixing (not supplied).
3mm thick hot dip galvanized steel.
Unit Weight 0.61kg

**SL688**
1.2mm thick pre-galvanized steel.
Standard length 3 metres.
Unit Weight 4.63kg

**SB653/21**
For 21mm channel.
Supplied complete with M5 x 8mm pan head screws.
2mm thick pre-galvanized steel.
Standard length 175mm
Unit Weight 0.17kg

**SB653/41**
For 41mm channel.
Supplied complete with M5 x 8mm pan head screws.
2mm thick pre-galvanized steel.
Standard length 175mm
Unit Weight 0.25kg

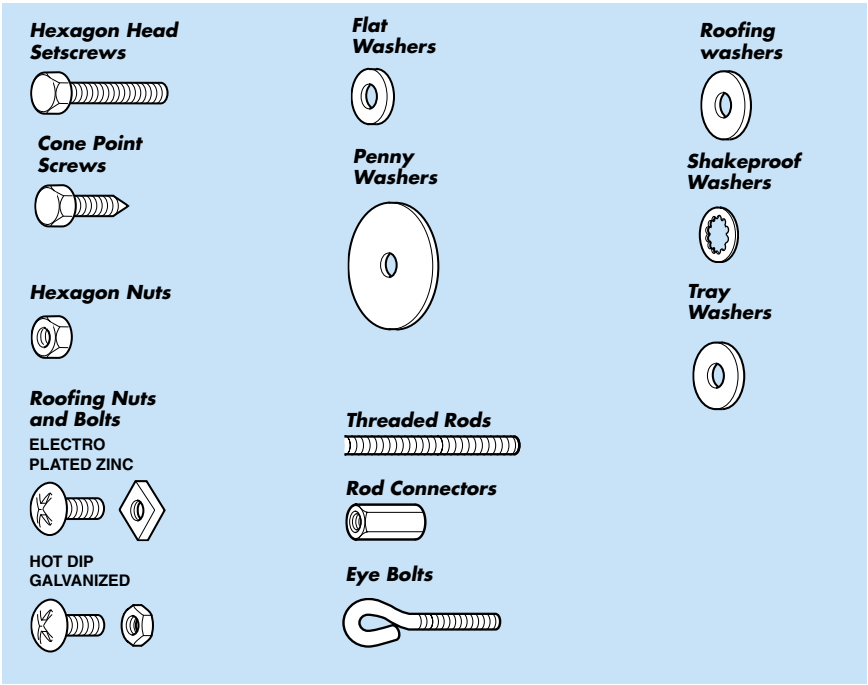
**SB654**
For 41mm channel.
Supplied complete with M5 x 8mm pan head screws.
2mm thick pre-galvanized steel.
Standard length 300mm
Unit Weight 0.45kg

*SL686 and SL688 are not available in -/SS finish.*

# Swiftrack channel support system

## standard fixings and fastenings






## Screws

### Hexagon Head Setscrews

| ELECTRO PLATED ZINC | | |
|---|---|---|
| M6 x 16 | pack 200 | **SS0616** |
| M6 x 20 | pack 200 | **SS0620** |
| M6 x 25 | pack 200 | **SS0625** |
| M6 x 30 | pack 200 | **SS0630** |
| M8 x 20 | pack 200 | **SS0820** |
| M8 x 25 | pack 200 | **SS0825** |
| M8 x 30 | pack 200 | **SS0830** |
| M8 x 35 | pack 200 | **SS0835** |
| M8 x 40 | pack 200 | **SS0840** |
| M8 x 50 | pack 200 | **SS0850** |
| M10 x 16 | pack 200 | **SS1016** |
| M10 x 20 | pack 200 | **SS1020** |
| M10 x 25 | pack 200 | **SS1025** |
| M10 x 30 | pack 200 | **SS1030** |
| M10 x 35 | pack 100 | **SS1035** |
| M10 x 40 | pack 100 | **SS1040** |
| M10 x 45 | pack 100 | **SS1045** |
| M10 x 50 | pack 100 | **SS1050** |
| M10 x 60 | pack 100 | **SS1060** |
| M12 x 20 | pack 100 | **SS1220** |
| M12 x 25 | pack 100 | **SS1225** |
| M12 x 30 | pack 100 | **SS1230** |
| M12 x 35 | pack 100 | **SS1235** |
| M12 x 40 | pack 100 | **SS1240** |
| M12 x 50 | pack 100 | **SS1250** |
| HOT DIP GALVANIZED | | |
| M6 x 12 | pack 200 | **SSG0612** |
| M6 x 16 | pack 200 | **SSG0616** |
| M6 x 20 | pack 200 | **SSG0620** |
| M6 x 35 | pack 200 | **SSG0635** |
| STAINLESS STEEL | | |
| M6 x 20 | pack 100 | **SS0620/SS** |
| M6 x 25 | pack 100 | **SS0625/SS** |
| M8 x 25 | pack 100 | **SS0825/SS** |
| M8 x 35 | pack 100 | **SS0835/SS** |
| M8 x 40 | pack 100 | **SS0840/SS** |
| M10 x 16 | pack 100 | **SS1016/SS** |
| M10 x 25 | pack 100 | **SS1025/SS** |
| M10 x 40 | pack 100 | **SS1040/SS** |
| M12 x 25 | pack 100 | **SS1225/SS** |

### Cone Point Screws

| ELECTRO PLATED ZINC | | |
|---|---|---|
| M10 x 35 | pack 100 | **CP1035** |
| STAINLESS STEEL | | |
| M10 x 35 | pack 100 | **CP1035/SS** |

# Swiftrack channel support system

## standard fixings and fastenings

## Nuts and Bolts

### Hexagon Nuts

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 | pack 500 | **HN06** |
| M8 | pack 500 | **HN08** |
| M10 | pack 200 | **HN10** |
| M12 | pack 200 | **HN12** |
| **HOT DIP GALVANIZED** | | |
| M6 | pack 500 | **HNG06** |
| **STAINLESS STEEL** | | |
| M6 | pack 100 | **HN06/SS** |
| M8 | pack 100 | **HN08/SS** |
| M10 | pack 100 | **HN10/SS** |
| M12 | pack 100 | **HN12/SS** |

### Roofing Nuts and Bolts

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 x 12 | pack 200 | **RB0612** |
| M6 x 16 | pack 200 | **RB0616** |
| M6 x 20 | pack 200 | **RB0620** |
| M6 x 25 | pack 200 | **RB0625** |
| M6 x 30 | pack 100 | **RB0630** |
| M6 x 40 | pack 100 | **RB0640** |
| M6 x 50 | pack 100 | **RB0650** |
| **HOT DIP GALVANIZED** | | |
| M6 x 12 | pack 100 | **RBG0612** |
| M6 x 16 | pack 100 | **RBG0616** |
| **STAINLESS STEEL** | | |
| M6 x 12 | pack 100 | **RB0612/SS** |
| M6 x 16 | pack 100 | **RB0616/SS** |
| M6 x 20 | pack 100 | **RB0620/SS** |

## Washers

### Flat Washers

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 | pack 500 | **FW06** |
| M8 | pack 500 | **FW08** |
| M10 | pack 500 | **FW10** |
| M12 | pack 200 | **FW12** |
| **STAINLESS STEEL** | | |
| M6 | pack 100 | **FW06/SS** |
| M8 | pack 100 | **FW08/SS** |
| M10 | pack 100 | **FW10/SS** |
| M12 | pack 100 | **FW12/SS** |

### Roofing Washers

| | | |
|---|---|---|
| **HOT DIP GALVANIZED** | | |
| M6 | pack 500 | **RWG06** |

### Penny Washers

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 x 25 | pack 400 | **PW06** |
| M8 x 25 | pack 400 | **PW08** |
| M10 x 38 | pack 400 | **PW10** |
| M12 x 40 | pack 400 | **PW12** |

### Shakeproof Washers

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 | pack 400 | **SW06** |
| M8 | pack 400 | **SW08** |
| M10 | pack 400 | **SW10** |
| M12 | pack 400 | **SW12** |

### Tray Washers

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 x 20 | pack 400 | **TW06** |
| **HOT DIP GALVANIZED** | | |
| M6 x 20 | pack 100 | **TWG06** |

## Threaded Rods and Connectors

### Threaded Rods

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 x 3m | single | **TR06** |
| M8 x 3m | single | **TR08** |
| M10 x 3m | single | **TR10** |
| M12 x 3m | single | **TR12** |
| **STAINLESS STEEL** | | |
| M6 x 3m | single | **TR06/SS** |
| M8 x 3m | single | **TR08/SS** |
| M10 x 3m | single | **TR10/SS** |
| M12 x 3m | single | **TR12/SS** |

### Threaded Rod Connectors

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 | single | **RC06** |
| M8 | single | **RC08** |
| M10 | single | **RC10** |
| M12 | single | **RC12** |

## Eye Bolts

| | | |
|---|---|---|
| **ELECTRO PLATED ZINC** | | |
| M6 x 80 | single | **EB06** |
| M8 x 80 | single | **EB08** |
| M10 x 80 | single | **EB10** |
| M12 x 80 | single | **EB12** |

**Threaded Rods - maximum load for connector**

| Rod Ref | Size | SWL, kgf |
|---|---|---|
| TR06 | M6 | 91 |
| TR08 | M8 | 165 |
| TR10 | M10 | 262 |
| TR12 | M12 | 381 |

# Swiftrack channel support system

## loads

### *Channels Used as Beams*

The maximum safe load for a channel can be calculated knowing the strength of the steel (Yield Stress). Alternatively, if the appearance of the channel under load is considered important, then its deflection can be kept within visually acceptable limits.

Deflection limitations may render a lower recommended loading than that calculated from the strength of the steel.

Thus the two alternative approaches are:

1) To apply a maximum mid-span deflection of 1/200th of the span.
2) To place no limit on deflection and to apply a maximum load derived from calculations which include both the minimum yield stress of the steel and a safety factor (1.6).

Details of the maximum recommended uniformly distributed and point loads under both of these conditions are given in the table on the page opposite; these are provided for unrestrained condition (see below) and they apply to the worst situation of a simple single span only.

If in practice loads are neither uniformly distributed across the complete beam nor imposed at mid-span only, it is still possible to use a safe approximation and assess the suitability of a channel section. Do this by assuming that all loads are point loads imposed at mid-span only, and then consider the point load data in the table. This approximation will render a cautious result, which is nevertheless sufficient in most cases to show that a channel is satisfactory. However, if it does yield an unsatisfactory result check with Legrand, as the degree of inherent caution is such that the design may still be safe. Legrand will be pleased to recheck your calculations, using your intended loadings.

The data provided in the table opposite is calculated in accordance with BS5950: Part 5.

### *Channels Used as Columns*

It is rare that any loads will be applied only to the end of a vertical column; most practical loading conditions involve the use of brackets and fittings attached to the open side of the channel. Loads applied in this way will produce a combined axial force down the column and a bending force on the side of the column which will reduce the allowable maximum load. The effects of such eccentric loadings should be carefully checked in accordance with standard design practice as given in BS5950 Part 5.

**Legrand will be pleased to give further advice and assistance on request.**

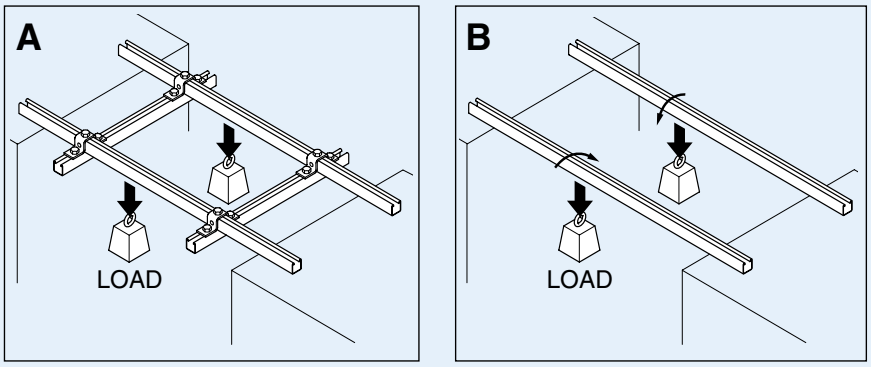
### *Fully Restrained and Unrestrained Loads*

There are two alternative approaches to providing information on the structural strength of channel section used as beams.

Data is sometimes given on the basis of a **fully restrained** condition, which assumes that the channel section is in some way completely prevented from twisting under load (see illustration A). Alternatively data may be given on the basis of an **unrestrained** condition which assumes that, because no channel is perfect, placing it under load may result in some twisting taking place even though the ends of the channel are firmly secured (see illustration B).

Because the channel is constrained to remain in the optimum position, data given on a fully restrained basis will, for larger spans, suggest that a far higher load can be applied than with the unrestrained condition.

Both alternative sets of data are given in the Legrand Engineering Manual; however, unless positive intermediate restraint is applied to completely prevent any twisting it is recommended that the data for unrestrained channels, given in the table opposite, should normally be used.



## Beam Loads

| Section | Distance Between Supports m | LATERALLY UNRESTRAINED CONDITION – Safe Maximum Loads: Uniformly Distributed Across Span kgf | LATERALLY UNRESTRAINED CONDITION – Safe Maximum Loads: Point Load at Mid-Span kgf | LATERALLY UNRESTRAINED CONDITION – Maximum Deflection of Span/200: UD Load kgf | LATERALLY UNRESTRAINED CONDITION – Maximum Deflection of Span/200: Point Load at Mid-Span kgf | FULLY LATERALLY RESTRAINED CONDITION – Safe Maximum Loads: Uniformly Distributed Across Span kgf | FULLY LATERALLY RESTRAINED CONDITION – Safe Maximum Loads: Point Load at Mid-Span kgf | FULLY LATERALLY RESTRAINED CONDITION – Maximum Deflection of Span/200: UD Load kgf | FULLY LATERALLY RESTRAINED CONDITION – Maximum Deflection of Span/200: Point Load at Mid-Span kgf |
|---|---|---|---|---|---|---|---|---|---|
| SC400 | 0.20 | †800 | †800 | † 800 | † 800 | †1020 | †1020 | § 1020 | §1020 |
| SC200 | | 687 | 343 | § 687 | §343 | 687 | 343 | § 687 | § 343 |
| SC401 | | †800 | †800 | † 800 | † 800 | †1019 | †1019 | § 1019 | §1019 |
| SC201 | | †800 | †800 | † 800 | † 800 | †1019 | 914 | § 1019 | § 914 |
| SC400 | 0.40 | †800 | 561 | † 800 | §561 | †1019 | 561 | § 1019 | § 561 |
| SC200 | | 343 | 171 | § 343 | §171 | 343 | 171 | § 343 | § 171 |
| SC401 | | †800 | †800 | † 800 | †800 | †1018 | †1018 | § 1018 | §1018 |
| SC201 | | †800 | 457 | † 800 | §457 | 913 | 457 | § 913 | § 457 |
| SC400 | 0.60 | 747 | 374 | § 747 | § 374 | 747 | 374 | § 747 | § 374 |
| SC200 | | 226 | 113 | § 226 | § 113 | 228 | 114 | § 228 | § 114 |
| SC401 | | †800 | †800 | † 800 | † 800 | †1017 | 973 | § 1017 | § 973 |
| SC201 | | 603 | 302 | § 603 | § 302 | 608 | 304 | § 608 | § 304 |
| SC400 | 0.80 | 543 | 271 | § 543 | § 271 | 560 | 280 | § 560 | § 280 |
| SC200 | | 164 | 82 | 134 | § 82 | 170 | 85 | 134 | 84 |
| SC401 | | †800 | 708 | † 800 | § 708 | †1016 | 729 | § 1016 | § 729 |
| SC201 | | 437 | 218 | § 437 | § 218 | 455 | 227 | § 455 | § 227 |
| SC400 | 1.00 | 419 | 210 | § 419 | § 210 | 447 | 223 | § 447 | § 223 |
| SC200 | | 126 | 63 | 85 | 53 | 136 | 68 | 85 | 53 |
| SC401 | | †800 | 548 | †800 | § 548 | †1015 | 582 | § 1015 | § 582 |
| SC201 | | 337 | 168 | § 337 | § 168 | 363 | 181 | § 363 | § 181 |
| SC400 | 1.20 | 336 | 168 | § 336 | § 168 | 371 | 186 | § 371 | § 186 |
| SC200 | | 101 | 50 | 58 | 36 | 113 | 56 | 58 | 36 |
| SC401 | | †800 | 440 | † 800 | § 440 | 969 | 484 | § 969 | § 484 |
| SC201 | | 270 | 135 | § 270 | § 135 | 301 | 151 | 277 | § 151 |
| SC400 | 1.40 | 275 | 138 | 271 | § 138 | 317 | 159 | 271 | § 159 |
| SC200 | | 83 | 41 | 42 | 26 | 96 | 48 | 42 | 26 |
| SC401 | | 723 | 361 | § 723 | § 361 | 829 | 414 | § 829 | § 414 |
| SC201 | | 221 | 111 | 202 | § 111 | 257 | 128 | 202 | 126 |
| SC400 | 1.60 | 230 | 115 | 206 | § 115 | 277 | 139 | 206 | 129 |
| SC200 | | 69 | 35 | 31 | 19 | 83 | 42 | 31 | 19 |
| SC401 | | 604 | 302 | § 604 | § 302 | 723 | 362 | § 723 | § 362 |
| SC201 | | 185 | 93 | 153 | § 93 | 224 | 112 | 153 | 95 |
| SC400 | 1.80 | 194 | 97 | 162 | § 97 | 245 | 123 | 162 | 101 |
| SC200 | | 59 | 29 | 23 | 15 | 73 | 37 | 23 | 15 |
| SC401 | | 510 | 255 | § 510 | § 255 | 641 | 321 | § 641 | § 321 |
| SC201 | | 157 | 79 | 119 | 74 | 198 | 99 | 119 | 74 |
| SC400 | 2.00 | 165 | 83 | 130 | 81 | 220 | 110 | 130 | 81 |
| SC200 | | 51 | 25 | 18 | 11 | 66 | 33 | 18 | 11 |
| SC401 | | 434 | 217 | § 434 | § 217 | 575 | 288 | § 575 | § 288 |
| SC201 | | 135 | 67 | 94 | 59 | 177 | 88 | 94 | 59 |
| SC400 | 2.20 | 142 | 71 | 106 | 66 | 199 | 100 | 106 | 66 |
| SC200 | | 44 | 22 | 14 | 9 | 59 | 29 | 14 | 9 |
| SC401 | | 371 | 186 | § 371 | § 186 | 521 | 261 | § 521 | § 261 |
| SC201 | | 116 | 58 | 76 | 47 | 159 | 80 | 76 | 47 |
| SC400 | 2.40 | 123 | 61 | 87 | 55 | 182 | 91 | 87 | 55 |
| SC200 | | 38 | 19 | 11 | 7 | 53 | 27 | 11 | 7 |
| SC401 | | 319 | 160 | § 319 | § 160 | 476 | 238 | 460 | § 238 |
| SC201 | | 101 | 50 | 62 | 39 | 145 | 72 | 62 | 39 |
| SC400 | 2.60 | 107 | 53 | 73 | 46 | 167 | 83 | 73 | 46 |
| SC200 | | 33 | 17 | 8 | 5 | 49 | 24 | 8 | 5 |
| SC401 | | 276 | 138 | § 276 | § 138 | 436 | 219 | 389 | § 219 |
| SC201 | | 88 | 44 | 51 | 32 | 133 | 66 | 51 | 32 |
| SC400 | 2.80 | 94 | 47 | 61 | 38 | 154 | 77 | 61 | 38 |
| SC200 | | 29 | 15 | 6 | 4 | 45 | 22 | 6 | 4 |
| SC401 | | 240 | 120 | § 240 | § 120 | 405 | 202 | 333 | § 202 |
| SC201 | | 77 | 39 | 42 | 26 | 122 | 61 | 42 | 26 |
| SC400 | 3.00 | 82 | 41 | 52 | 33 | 143 | 71 | 52 | 33 |
| SC200 | | 25 | 13 | 4 | 3 | 41 | 21 | 4 | 3 |
| SC401 | | 209 | 105 | § 209 | § 105 | 376 | 188 | 286 | 179 |
| SC201 | | 68 | 34 | 34 | 21 | 113 | 56 | 34 | 21 |

## Column Loads

| # Maximum AXIAL Column Load – Column Height m | kgf |
|---|---|
| 0.20 | 6325 |
| | 4279 |
| | 11475 |
| | 8190 |
| 0.40 | 6217 |
| | 3850 |
| | 11375 |
| | 7853 |
| 0.60 | 5982 |
| | 2879 |
| | 11041 |
| | 7308 |
| 0.80 | 5640 |
| | 1867 |
| | 10621 |
| | 6348 |
| 1.00 | 5102 |
| | 1253 |
| | 10035 |
| | 5010 |
| 1.20 | 4346 |
| | 891 |
| | 9193 |
| | 3803 |
| 1.40 | 3549 |
| | 664 |
| | 8088 |
| | 2917 |
| 1.60 | 2872 |
| | 513 |
| | 6889 |
| | 2289 |
| 1.80 | 2345 |
| | 408 |
| | 5792 |
| | 1838 |
| 2.00 | 1938 |
| | *332 |
| | 4874 |
| | 1506 |
| 2.20 | 1625 |
| | *276 |
| | 4131 |
| | 1255 |
| 2.40 | 1381 |
| | *233 |
| | 3534 |
| | 1062 |
| 2.60 | 1186 |
| | *199 |
| | 3051 |
| | 910 |
| 2.80 | 1030 |
| | *172 |
| | 2658 |
| | *788 |
| 3.00 | 902 |
| | *150 |
| | 2335 |
| | *689 |

## Notes to Tables

**§**
Based on a limited deflection of $\frac{L}{200}$, the safe maximum load value is given which will give a deflection of $< \frac{L}{200}$.

**†**
Limited by slip on a single bolt connection each end.

*
For columns the limited slenderness ratio of 180 is exceeded at the length indicated.

**#**
It should be noted that maximum axial column loads are supplied for guidance only. It is unlikely that columns will be loaded with axial load only. Most practical load conditions will involve the use of brackets and fittings attached to the column. Loads applied in this way will produce both axial load and bending on the columns which will reduce the allowable maximum load.

The above loads have been treated as imposed loads in accordance with BS5950 and accordingly a load factor of f = 1.6 has been assumed. Should the loads to be applied be of a permanent nature it may be appropriate to use a load factor of f = 1.4. This would lead to an increase in the load capacity provided that capacity is not limited by bolt slip or deflection.

**Loads given in the chart are for pre-galvanized channels to BS EN 10147 grade Fe E 250G (previously Z25). The process of manufacturing channel does increase the strength of the steel and this increase has been allowed for in the data (as recommended in BS5950 Part 5). However, if channels are subsequently hot dip galvanized the stresses created during manufacture are relieved by the heat of the process, thereby negating the strength enhancement. Therefore for hot dip galvanized channels the loads in the chart should be reduced by between 10% and 20% depending on the section. A 20% reduction will provide a conservative maximum load value for all types of hot dip galvanized channel.**

**All loads are for brackets fixed with M12 setscrews and M12 zinc plated channel nuts.**

# Swiftrack channel support system

**engineering data**

## *Channels*

**Standard channels** are cold rolled to BS6946 from 2.5mm pre-galvanized mild steel to BS EN 10147 grade Fe E 250G.

**Light gauge channels** are cold rolled from 1.5mm pre-galvanized mild steel to BS EN 10147 grade Fe E 250G.

**Back-to-back channels** are formed by spot welding together two finished single channels at 150mm centres under controlled conditions to BS5950: Part 5 1987. All welds and spot welds are suitably protected.

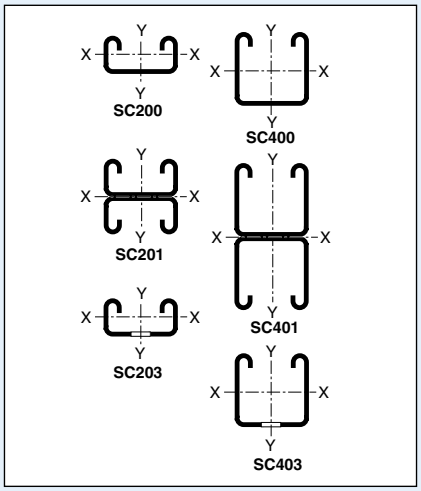
The standard lengths for single or multiple channels are 3m and 6m $^{+6mm}_{-0mm}$

Minimum yield strength, Ys: 250N/mm$^2$

Minimum ultimate strength: 350N/mm$^2$

Minimum design strength, Py: 250N/mm$^2$

### SECTION PROPERTIES




| SECTION | Wt kg/m | A mm$^2$ | $I_{xx}$ mm$^4$ | $Z_{top}$ (min) mm$^3$ | $Z_{btm}$ (max) mm$^3$ | $r_{xx}$ mm | $I_{yy}$ mm$^4$ | $r_{yy}$ mm |
|---|---|---|---|---|---|---|---|---|
| SC200 | 1.8 | 219 | 10779 | 862 | 1330 | 7.1 | 49776 | 15.1 |
| SC201 | 3.6 | 439 | 50507 | 2451 | 2451 | 10.8 | 99552 | 15.1 |
| SC203 | 1.6 | 219 | 8960 | 794 | 961 | 6.4 | 49318 | 15.0 |
| SC400 | 2.6 | 322 | 67157 | 2857 | 3772 | 14.5 | 88783 | 16.6 |
| SC401 | 5.3 | 645 | 339300 | 8215 | 8215 | 23.0 | 177566 | 16.6 |
| SC403 | 2.4 | 322 | 57221 | 2645 | 2909 | 13.3 | 88325 | 16.5 |

Wt = weight of section (kg/m)

A = cross sectional area (mm$^2$)

$I_{xx}$ = moment of inertia = second moment of area (mm$^4$)

$I_{yy}$ = moment of inertia = second moment of area (mm$^4$)

$Z_{top}$ = section modulus about xx axis (mm$^3$)

$Z_{bottom}$ = section modulus about xx axis (mm$^3$)

$r_{xx}$ = radius of gyration (mm)

$r_{yy}$ = radius of gyration (mm)

$_{xx}$ = about xx axis

$_{yy}$ = about yy axis

# Swiftrack channel support system

**engineering data**

## *Channel Nuts*

The safe working loads for zinc plated channel nuts only.

| | | |
|---|---|---|
| Slip | M12: 4.0kN | |
| | M10: 3.0kN | |
| Pullout | M12: 8.0kN | |
| | M10: 6.0kN | |
| Safety Factor | 3 when tested to BS6946 | |
| Torque | Tightened to | M12: 7 kgf.m (50 ftlb) |
| | | M10: 5.5 kgf.m (40ftlb) |

## *Framework Brackets*

Brackets are manufactured to BS6946.

Unless otherwise stated, brackets are made from 6mm thick steel to BS EN 111.

**Material Properties**

Minimum Yield Stress: 170 N/mm$^2$.

**Maximum Loads**

Maximum loads for individual brackets are given with the illustrations in this catalogue. In most cases the mode of failure will be slippage of the bracket along the channel. However there are few channel/bracket combinations where the maximum load is dependent upon the strength of the bracket itself. Only M10 or M12 channel nuts and bolts should be used for the attachment of load-bearing brackets.

## *Fastenings*

**Fastening brackets and supports to Swiftrack channel.**

Standard fastenings for Swiftrack are high tensile hexagon head setscrews to BS3692-8.8, these being zinc plated to BS83382: Part 2.

| Channel type | Fitting Thickness[1] | Recommended Fastening[2] |
|---|---|---|
| Deep channel SC400 series | 6mm and 8mm<br>5mm and 6mm | M10 or M12 x 35mm[3]<br>M10 or M12 x 20mm |
| Shallow channel SC200 series | 7mm and 8mm<br>5mm and 6mm | M10 or M12 x 25mm[3]<br>M10 or M12 x 20mm |

1 *Most standard Swiftrack brackets are made from 6mm gauge steel.*

2 *The use of too long a fastening will prevent proper tightening because the bolt end will foul the bottom of the channel before the head tightens down on the fitting.*

3 *When fastening brackets other than Swiftrack, longer bolts may be required if the bracket thickness is greater than 8mm.*

**Fastening tray to supports.**

Use M6 x 16mm zinc plated roofing bolts or pan head bolts.

**Fastening ladder to supports.**

Use M6 x 16mm high tensile hexagon head setscrews.

**Legrand will be pleased to give further advice and assistance on request.**

# Swiftrack channel support system

**engineering data**

## *Cantilever Arms*

Maximum uniformly distributed loads for individual cantilever arms are given with the illustrations in this catalogue. However, should the loading not be uniform then the safe limit can be obtained by calculating the bending moment produced by the intended loads and comparing this with the maximum permissible bending moment for the relevant arm.

45 kgf.m for SA750 - SA755 and SA757

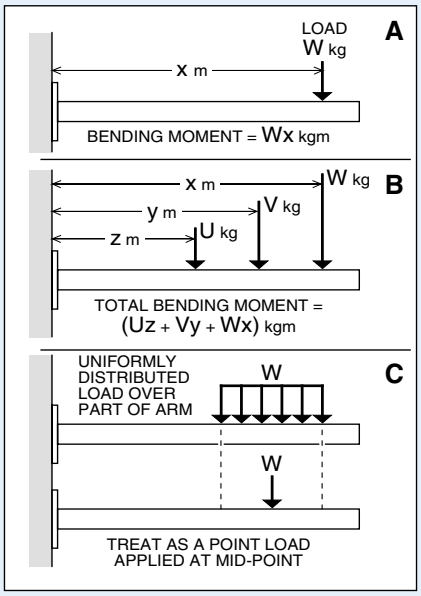
52 kgf.m for SA760 - SA766

95 kgf.m for SA770 - SA776

To obtain the bending movement resulting from any point load, multiply the size of the load by its distance from the inner end of the arm (see illustration A).

If several point loads exist then the total bending moment will be the sum of the individual bending moment produced by each point load (see illustration B).

If some part of the total load applied to an arm is uniformly distributed along a section of the arm only, then this part load can be treated as a point load acting at the mid-point of that section of arm to which it is applied (see illustration C).



# Swiftrack channel support system

## engineering data

**MAXIMUM SAFE RECOMMENDED LOADINGS**

**(Based upon a load factor of 1.6 for hot dipped galvanized unrestrained condition as specified in BS5950 Part 5)**

### CANTILEVER ARMS

| Component reference | Arm length mm | Uniformly distributed across arm kgf | Point load at outer end kgf |
|---|---|---|---|
| SA750 | 150 | 400* † | 303 |
| SA751 | 225 | 396 † | 198 |
| SA752 | 300 | 304 | 152 |
| SA753 | 450 | 202 | 101 |
| SA754 | 600 | 150 | 75 |
| SA755 | 750 | 110 | 55 |
| SA757 | 900 | 90 | 45 |

Values assume the tray, ladder or other loading medium is rigidly fixed to cantilever arm.
* Slip limits loading capacity.

### CANTILEVER ARMS, UNIVERSAL

| Component reference | Arm length mm | Uniformly distributed across arm kgf | Point load at outer end kgf |
|---|---|---|---|
| SA760 | 150 | 700 † | 350 |
| SA761 | 225 | 456 | 228 |
| SA762 | 300 | 350 | 175 |
| SA763 | 450 | 230 | 115 |
| SA764 | 600 | 170 | 85 |
| SA765 | 750 | 136 | 68 |
| SA766 | 900 | 110 | 55 |

Values assume the tray, ladder or other loading medium is rigidly fixed to cantilever arm.

### CANTILEVER ARMS, DOUBLE CHANNEL

| Component reference | Arm length mm | Uniformly distributed across arm kgf | Point load at outer end kgf |
|---|---|---|---|
| SA770 | 150 | 800* † | 648 |
| SA771 | 225 | 800* † | 420 |
| SA772 | 300 | 650 | 325 |
| SA773 | 450 | 430 | 215 |
| SA774 | 600 | 320 | 160 |
| SA775 | 750 | 250 | 125 |
| SA776 | 900 | 200 | 100 |

Values assume the tray, ladder or other loading medium is rigidly fixed to cantilever arm.
* Slip limits loading capacity.

***NOTE:***

*The loads for stainless steel cantilever arms are 60% of those given in the tables, except those marked † where the limit is 50%.*