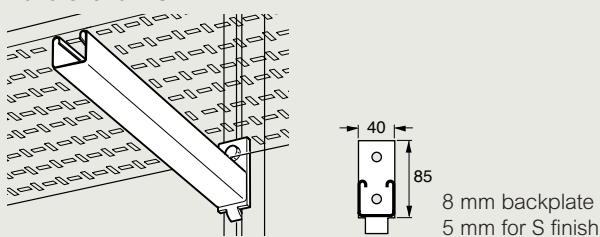# Swiftrack® channel support system
cantilever arms

Cantilever arms are supplied singly without fasteners
Cantilever arms conform to BS 6946

### ■ Dimensions and weights

Cantilever arms

40
85

8 mm backplate
5 mm for S finish

Cat. Nos.	Unit weight (kg)	Arm length (mm)	Maximum uniformly distributed load (kgf)[1]	Max. point load at outer end (kgf)[1]
SA750	0·64	150	350[2][3]	303
SA751	0·85	225	350[3]	198
SA752	1·03	300	304	152
SA753	1·42	450	202	101
SA754	1·81	600	150	75
SA755	2·20	750	110	55
SA757	2·60	900	90	45

Values assume the ladder or other loading medium is rigidly fixed to cantilever arm
(1) Based upon a load factor of 1·6 for hot dipped galvanised unrestrained condition as specified in BS EN 1993-1-3 : 2006
(2) Slip limits loading capacity
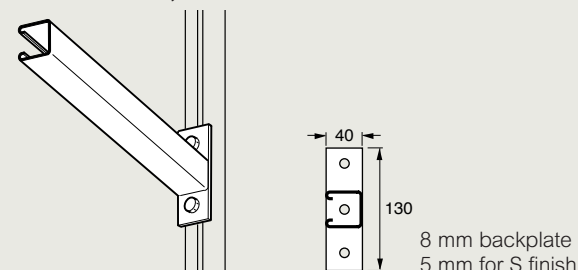(3) Load limit is 50%

Cantilever arms, universal
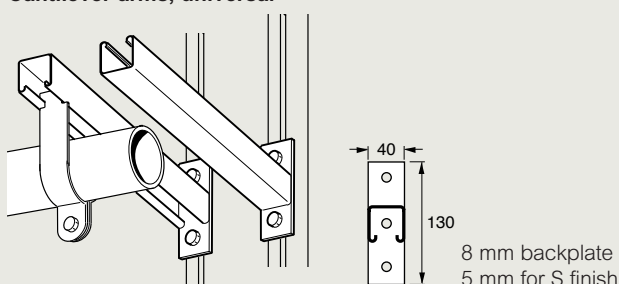
40
130

8 mm backplate
5 mm for S finish

Cat. Nos.	Unit weight (kg)	Arm length (mm)	Maximum uniformly distributed load (kgf)[1]	Point load at outer end (kgf)[1]
SA760	0·64	150	700[2]	350
SA761	0·85	225	456	228
SA762	1·03	300	350	175
SA763	1·42	450	230	115
SA764	1·81	600	170	85
SA765	2·20	750	136	68
SA766	2·60	900	110	55

Values assume the ladder or other loading medium is rigidly fixed to cantilever arm
(1) Based upon a load factor of 1·6 for hot dipped galvanised unrestrained condition as specified in BS EN 1993-1-3 : 2006
(2) Load limit is 50%

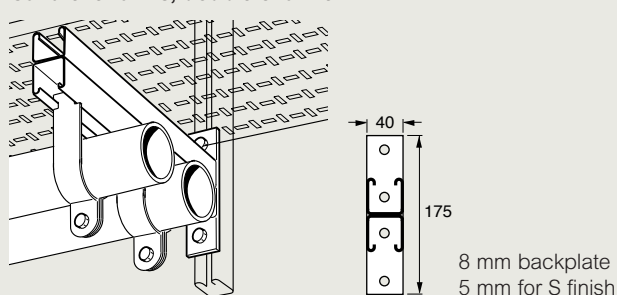### ■ Dimensions and weights (continued)

Cantilever arms, side

40
130

8 mm backplate
5 mm for S finish

Cat. Nos.	Unit weight (kg)	Arm length (mm)
SA790	0·64	150
SA791	0·85	225
SA792	1·03	300
SA793	1·42	450
SA794	1·81	600
SA795	2·20	750
SA796	2·60	900

Cantilever arms, double channel

40
175

8 mm backplate
5 mm for S finish

Cat. Nos.	Unit weight (kg)	Arm length (mm)	Maximum uniformly distributed load (kgf)[1]	Point load at outer end (kgf)[1]
SA770	1·14	150	700[2][3]	648
SA771	1·68	225	700[2][3]	420
SA772	2·02	300	650	325
SA773	2·90	450	430	215
SA774	3·78	600	320	160
SA775	4·66	750	250	125
SA776	5·60	900	200	100

Values assume the ladder or other loading medium is rigidly fixed to cantilever arm
(1) Based upon a load factor of 1·6 for hot dipped galvanised unrestrained condition as specified in BS EN 1993-1-3 : 2006
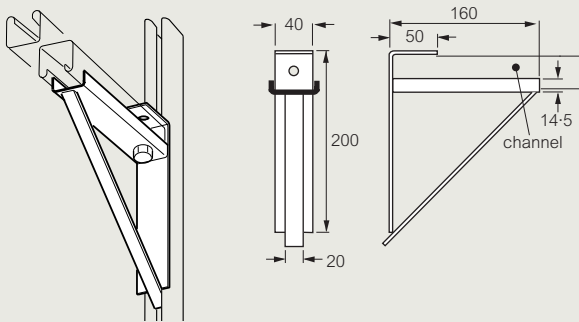(2) Slip limits loading capacity
(3) Load limit is 50%

All dimensions (mm) are nominal

Swiftrack® channel support system
cantilever arms (continued)

■ Dimensions and weights (continued)

Cantilever arm bracket SA 756

Horizontal arm section from 3 mm steel only
Weight each (kg) : 1·13

Weights

All weights given are in kilograms (kg) based on nominal thickness and standard finish

Loads

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

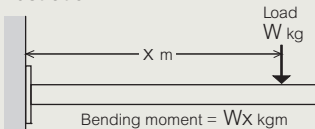45 kgf.m for SA750 – SA755 and SA757

52 kgf.m for SA760 – SA766

95 kgf.m for SA770 –- SA776

To obtain the bending moment resulting from any point load, multiply the size of the load by its distance from the inner end of the arm (see illustration A)
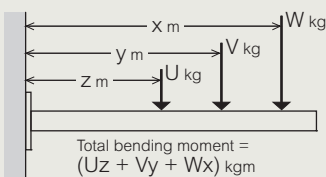
If several point loads exist then the total bending moment will be the sum of the individual bending moment produced by each point load (see illustration B)

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)
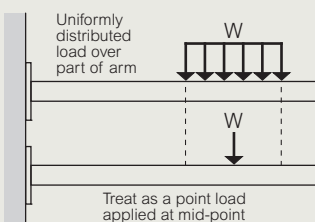
Illustration A

Bending moment = Wx kgm

Illustration B

Total bending moment =
$(Uz + Vy + Wx)$ kgm

Illustration C

Treat as a point load applied at mid-point

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

Stainless steel cantilever arms

Loads are 60% of those given in the tables, except for those marked (3), in the tables opposite, where the limit is 50%
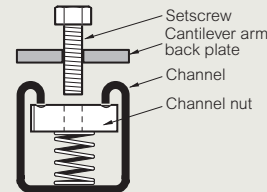
■ Finishes and standards

The standard finish for all cantilever arms is hot dip galvanised steel to BS EN ISO 1461

Stainless steel to BS EN 10088 : Grade 1.4404 (equivalent to S316L31) is also available as an alternative where applicable

■ Assembly

Fasteners (not included)

Cantilever arms to Swiftrack channel

Standard fasteners for Swiftrack are high tensile hexagon head setscrews to BS 3692-8.8, these being zinc plated to BS 3382: Part 2

Most standard Swiftrack brackets are made from 5 or 6 mm gauge steel

Standard cantilever arm backplates are made from 8 mm gauge steel

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

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

Channel type	Backplate thickness	Recommended fasteners
Deep channel SC400 series	6-8 mm	M10 or M12 x 35
	5-6 mm	M10 or M12 x 25
Shallow channel SC200 series	7-8 mm	M10 or M12 x 25
	5-6 mm	M10 or M12 x 20