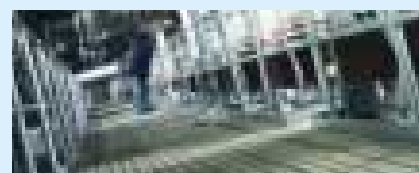
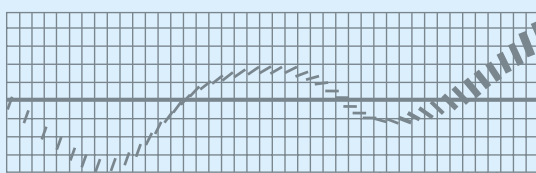
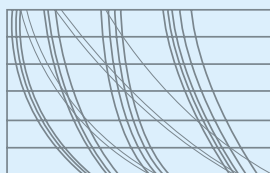


arena-walsall

Salamandre[®]

SWiFTS[®]

CABLE MANAGEMENT SOLUTIONS CATALOGUE 2003/04



A COMPLETE CABLE MANAGEMENT SOLUTION FOR COMMERCIAL AND INDUSTRIAL APPLICATIONS

legrand[®]

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THE LADDER OF SUCCESS

Swifts



Light and heavy duty options

This comprehensive system of
slotted rail cable ladder
incorporates all the latest
features demanded by
installation contractors and
enables the coupling of
lengths and accessories
without the need for drilling.

CABLE LADDER

The Opal ladder system has been designed with a high strength integral coupling system, eliminating the need for separate couplers



Dome-headed coach bolts can be fixed with a single tool and prevent any damage to cables... and when the ladder is cut to length, coupler slots will always align with ladder slots



A wide variety of accessories complete the range, including: articulated risers, cantilever arms, wall brackets and expansion couplers



Rapide... the faster easier way to design your cable management installations

See page 272 for details

www.legrand.co.uk

cable ladder systems

Opal light duty

Ordering Information

Component references are obtained by giving the component code followed by the width(s), angle and radius (where needed), and the finish.

EXAMPLES:

For a hot dip galvanized Opal Straight Length, 600mm wide:- **OL/600/G**

For a hot dip galvanized Opal 90° Flat Bend, 600mm wide:- **OFB/600/90/300/G**

Standard length: 3.0m

Standard widths:

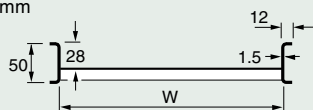
100, 150, 225, 300, 450 and 600mm

Rung spacing:

300mm between centres

Standard radius for accessories:

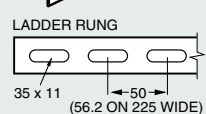
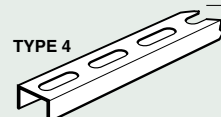
300mm



RUNG DETAILS

Opal Cable Ladder is supplied with Type 4 rungs shown below.

RUNG THICKNESS (t)	
Rung Length	t
Up to 300	1.0
Above 300	1.5



ACCESSORY RUNG	
WIDTH	PITCH A
100	48.5
150	49.0
225	55.5
300	49.5
450	49.7
600	49.7

Finishes

Standard Stocked Finish:

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

Additional Finishes:

-JSS Stainless steel to BS EN 10088 grade 1-4401 (equivalent to 316S31).

-E Plastic coated (to customer's specification).

Data Sheets are available for all Swifts' Opal Ladder, please contact our Sales Support.

The Data Sheet page reference is given with each component.

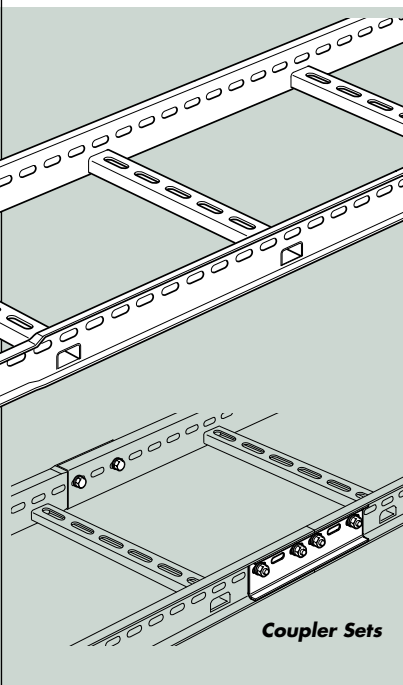
Straight Lengths and Accessories are supplied complete with fastenings.

Straight Lengths - 3m

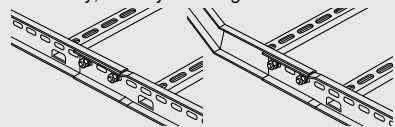
OL/ WIDTH / FINISH

Coupler Sets

OC/ FINISH



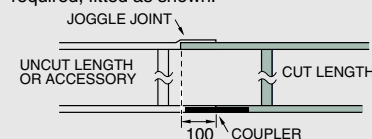
Integral couplers on straight lengths and accessories enable joints to be made quickly and easily, thereby reducing installation time.



Coupler Sets

Supplied in pairs with fastenings.

Required only where ladder has been cut to length. When joining a cut length to an uncut length or an accessory only one coupler is required, fitted as shown:-

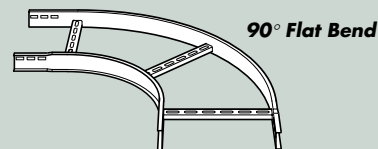


Data Sheets
Straight Lengths
Coupler Sets

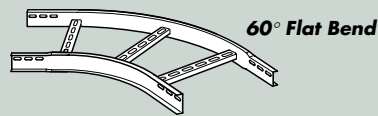
LR1.01
LR6.01

Flat Bends

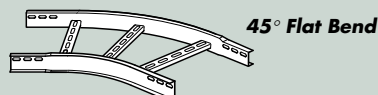
90°	OFB/ WIDTH /90/300/ FINISH
60°	OFB/ WIDTH /60/300/ FINISH
45°	OFB/ WIDTH /45/300/ FINISH
30°	OFB/ WIDTH /30/300/ FINISH



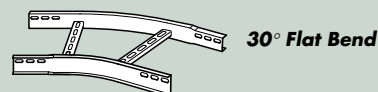
90° Flat Bend



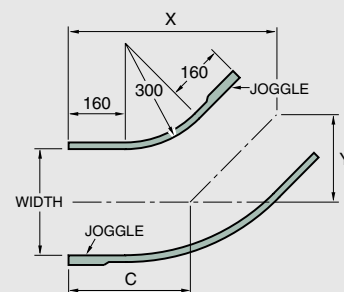
60° Flat Bend



45° Flat Bend



30° Flat Bend



For X, Y and C dimensions, see page 48. dimensions (mm) are nominal

Data Sheet

LR1.02

cable ladder systems

Opal light duty

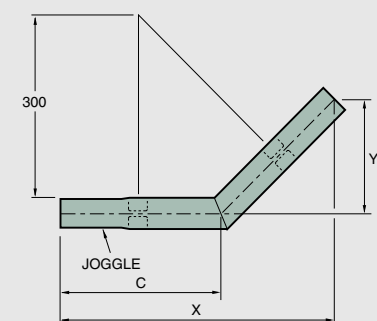
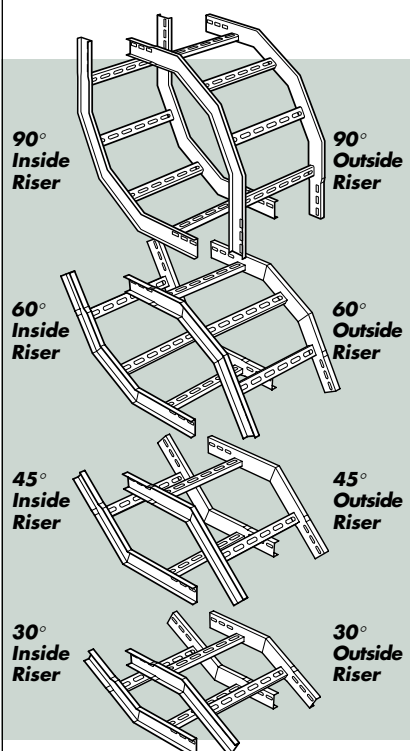
Risers

Inside Risers

90°	OIR/	WIDTH	/90/300/	FINISH
60°	OIR/	WIDTH	/60/300/	FINISH
45°	OIR/	WIDTH	/45/300/	FINISH
30°	OIR/	WIDTH	/30/300/	FINISH

Outside Risers

90°	OOR/	WIDTH	/90/300/	FINISH
60°	OOR/	WIDTH	/60/300/	FINISH
45°	OOR/	WIDTH	/45/300/	FINISH
30°	OOR/	WIDTH	/30/300/	FINISH



For X, Y and C dimensions, see page 49.
dimensions (mm) are nominal

Data Sheet

LR1.03

Tees

Equal Tees

OT/ WIDTH /300R/ FINISH

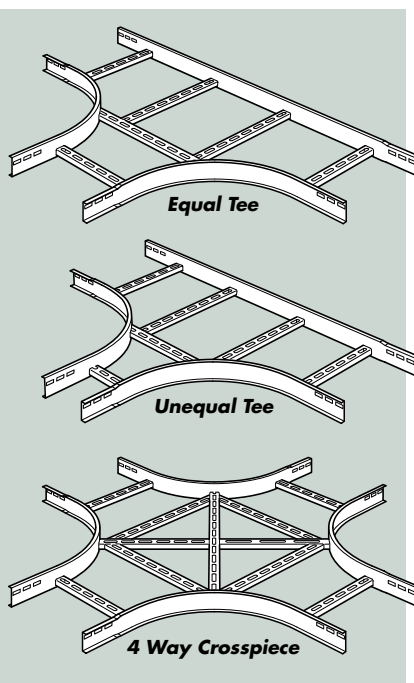
Unequal Tees

OUT/ WIDTH₁ / WIDTH₂ /300R/ FINISH

WIDTH₁ = Main Ladder Run
WIDTH₂ = Ladder Branch

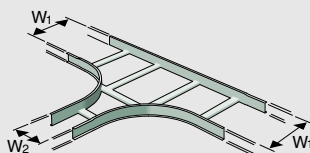
4-Way Crosspieces

OX/ WIDTH /300R/ FINISH



The ordering code for a hot dip galvanized Unequal Tee with a 300 main run (W₁) and a 150 branch (W₂):-

OUT/300/150/300/G.



For dimensions, see pages 49 and 50.
dimensions (mm) are nominal

Data Sheets
Equal Tees
Unequal Tees
4-Way Crosspieces

LR1.05

LR1.06

LR1.07

Reducers

Straight Reducers

OSR/ WIDTH₁ / WIDTH₂ / FINISH

Offset Reducers - Left Hand

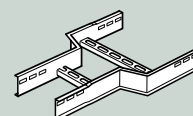
OLR/ WIDTH₁ / WIDTH₂ / FINISH

Offset Reducers - Right Hand

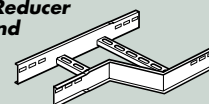
ORR/ WIDTH₁ / WIDTH₂ / FINISH

WIDTH₁ = Main Ladder Run
WIDTH₂ = Reduced Ladder Run

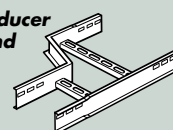
Straight Reducer



Offset Reducer Left Hand

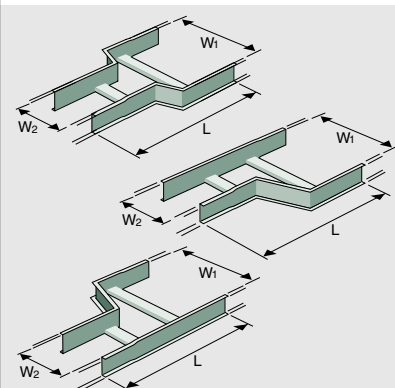


Offset Reducer Right Hand



The ordering code for a hot dip galvanized Straight Reducer with a 300 main run (W₁) reducing to 150 (W₂):-

OSR/300/150/G.



For L dimensions, see page 51.

Data Sheet

LR1.04

cable ladder systems

Topaz general purpose

Ordering Information

Component references are obtained by giving the component code followed by the width(s), angle and radius (where needed) and the finish.

EXAMPLES:

For a hot dip galvanized Topaz Straight Length, 600mm wide:- **ZL/600/G**

For a hot dip galvanized Topaz 90° Flat Bend, 600mm wide:- **ZFB/600/90/300/G**

Standard length: 3.0m

Standard widths:

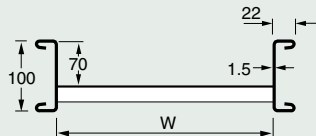
150, 300, 450, 600, 750 and 900mm.

Rung spacing:

300mm between centres.

Radii available for all Accessories:

300, 450, 600, 750 and 900mm.



RUNG DETAILS

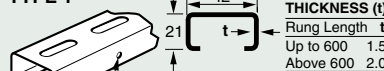
Topaz Cable Ladder can be supplied with rungs in a range of slot patterns and sections. In addition, all rungs can be inverted to special order.

Select a specific rung throughout or any combination of types 1 and 2 as required.

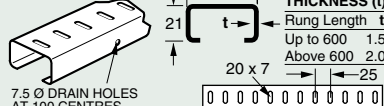
Type 1 will be supplied throughout unless otherwise specified.

Type 3 is not available in -DG finish.

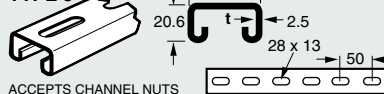
TYPE 1



TYPE 2



TYPE 3



Slot pattern may differ on stainless steel type 3 rungs. Contact our Sales Support for advice.

Finishes

Standard Stocked Finish:

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

Additional Finishes:

-DG Deep Galvanized Corten A steel.

-SS Stainless steel to BS EN 10088 grade 1-4401 (equivalent to 316S31).

-E Plastic coated (to customer's specification).

Data Sheets are available for all Swifts' Topaz Ladder, please contact our Sales Support.

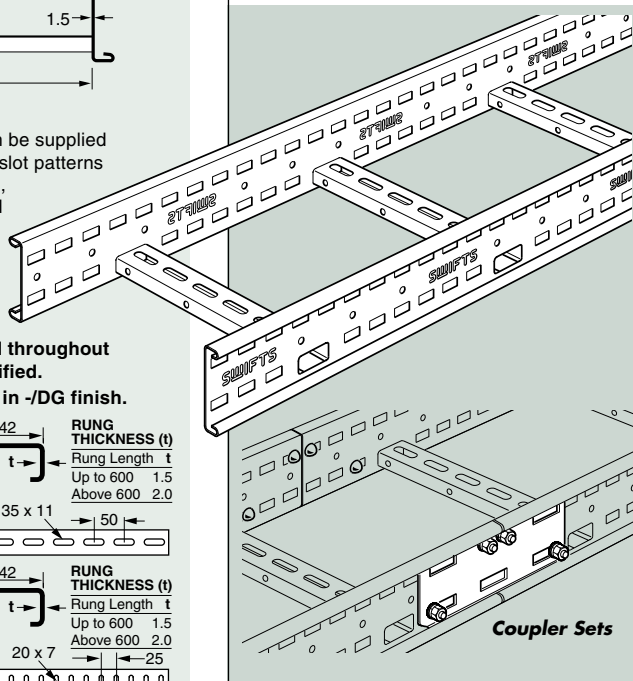
The Data Sheet page reference is given with each component.

Straight Lengths - 3m

ZL/ WIDTH / FINISH

Coupler Sets

ZC/ FINISH



Coupler Sets

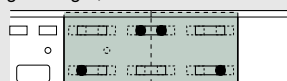
Supplied in pairs, with fastenings (4 per coupler). Use to couple straight lengths and accessories.

Even when ladder is cut to length, the slots in the coupler will always align with slots in the ladder side rail.

When bolting to cut ends adjust coupler to ensure 4 bolts can be inserted.

COUPLING DETAILS

Straight Length to: Straight Length, Risers and Reducers.



Straight Length to: Flat Bends, Tees and 4-way Crosspiece.



Data Sheets

Straight Lengths

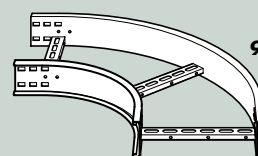
Coupler Sets

LR2.01

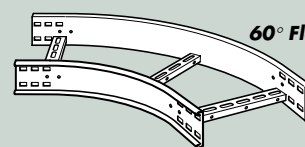
LR6.01

Flat Bends

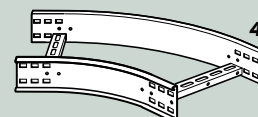
90°	ZFB/	WIDTH /90/	RADIUS /	FINISH
60°	ZFB/	WIDTH /60/	RADIUS /	FINISH
45°	ZFB/	WIDTH /45/	RADIUS /	FINISH
30°	ZFB/	WIDTH /30/	RADIUS /	FINISH



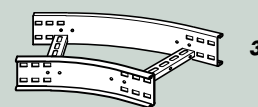
90° Flat Bend



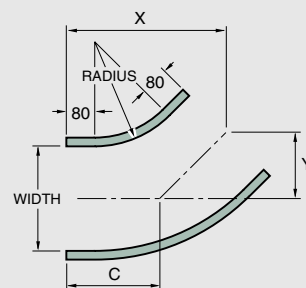
60° Flat Bend



45° Flat Bend



30° Flat Bend



For X, Y and C dimensions, see page 48. dimensions (mm) are nominal

Data Sheet

LR2.02

Topaz general purpose

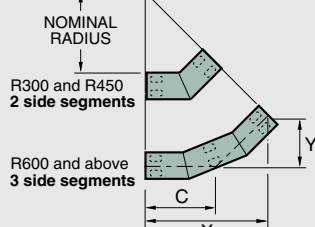
Inside Risers

Outside Risers

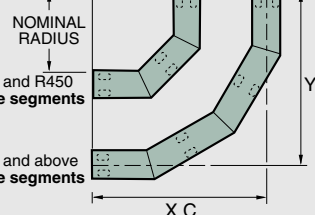
The image displays eight diagrams of riser configurations, arranged in two columns and four rows. Each diagram shows a perspective view of a riser structure made of interconnected beams. The left column shows 'Inside Riser' configurations, and the right column shows 'Outside Riser' configurations. The rows correspond to different angles: 90°, 60°, 45°, and 30°.

- 90° Inside Riser:** The riser is formed by beams connecting the inner faces of the steps.
- 90° Outside Riser:** The riser is formed by beams connecting the outer faces of the steps.
- 60° Inside Riser:** The riser is formed by beams connecting the inner faces of the steps at a 60-degree angle.
- 60° Outside Riser:** The riser is formed by beams connecting the outer faces of the steps at a 60-degree angle.
- 45° Inside Riser:** The riser is formed by beams connecting the inner faces of the steps at a 45-degree angle.
- 45° Outside Riser:** The riser is formed by beams connecting the outer faces of the steps at a 45-degree angle.
- 30° Inside Riser:** The riser is formed by beams connecting the inner faces of the steps at a 30-degree angle.
- 30° Outside Riser:** The riser is formed by beams connecting the outer faces of the steps at a 30-degree angle.

45° Risers



90° Risers



Data Sheet

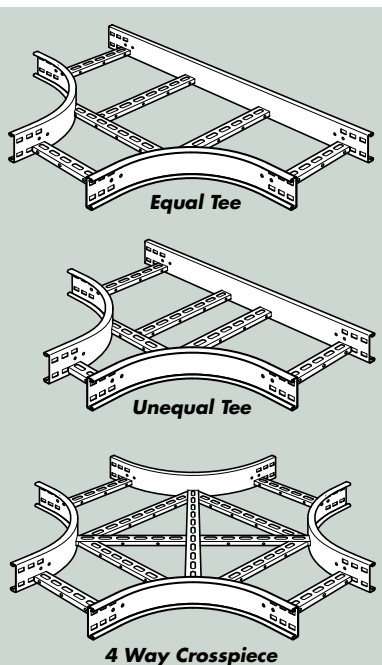
LR2.03

Equal Tees

Unequal Tees*

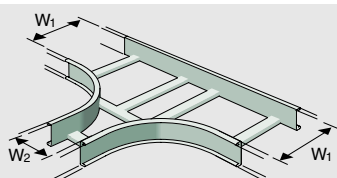
WIDTH₁ = Main Ladder Run
WIDTH₂ = Ladder Branch

ZX/ WIDTH / **RADIUS R** / FINISH



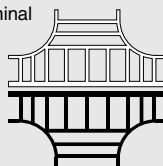
The ordering code for a hot dip galvanized Unequal Tee with a 300 main run (W_1) and a 150 branch (W_2) with a 450 radius:-

ZUT/300/150/450R/G.



For dimensions, see pages 49 and 50.
dimensions (mm) are nominal

Crosspieces in larger width/radius combinations are supplied in two identical halves with fastenings.



Data Sheets

Equal Tees

Equal Tees
Unequal Tees

4-Way Crosspieces

LR2.05

LR2.06

LR2.07

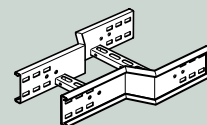
Straight Reducers

Offset Reducers - Left Hand

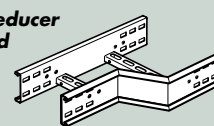
Offset Reducers - Right Hand

WIDTH₁ = Main Ladder Run

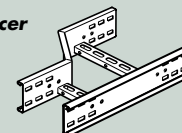
WIDTH₂ = Reduced Ladder Rung



Offset Reducer Left Hand

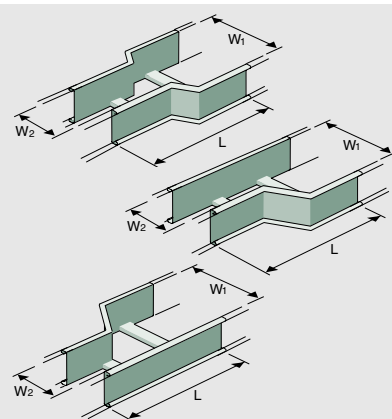


Offset Reducer Right Hand



The ordering code for a hot dip galvanized Straight Reducer with a 300 main run (W_1) reducing to 150 (W_2):-

ZSR/300/150/G.



For L dimensions, see page 51.

Data Sheet

LR2.04

cable ladder systems

Sapphire heavy duty

Ordering Information

Component references are obtained by giving the component code followed by the width(s), angle and radius (where needed) and the finish.

EXAMPLES:

For a hot dip galvanized Sapphire Straight Length, 600mm wide:- **PL/600/G**

For a hot dip galvanized Sapphire 90° Flat Bend, 600mm wide:- **PFB/600/90/300/G**

Standard length: 3.0m

Standard widths:

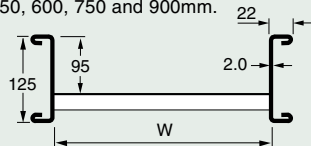
150, 300, 450, 600, 750 and 900mm.

Rung spacing:

300mm between centres.

Radii available for all Accessories:

300, 450, 600, 750 and 900mm.



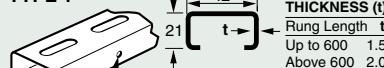
RUNG DETAILS

Sapphire Cable Ladder can be supplied with rungs in a range of slot patterns and sections. In addition, all rungs can be inverted to special order. Select a specific rung throughout or any combination of types 1 and 2 as required.

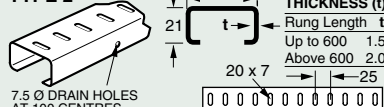
Type 1 will be supplied throughout unless otherwise specified.

Type 3 is not available in -DG finish.

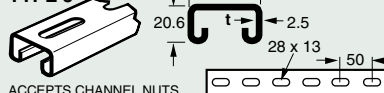
TYPE 1



TYPE 2



TYPE 3



ACCEPTS CHANNEL NUTS

Slot pattern may differ on stainless steel type 3 rungs. Contact our Sales Support for advice.

Finishes

Standard Stocked Finish:

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

Additional Finishes:

-DG Deep Galvanized Corten A steel.

-SS Stainless steel to BS EN 10088 grade 1-4401 (equivalent to 316S31).

-E Plastic coated (to customer's specification).

Data Sheets are available for all Swifts' Sapphire Ladder, please contact our Sales Support.

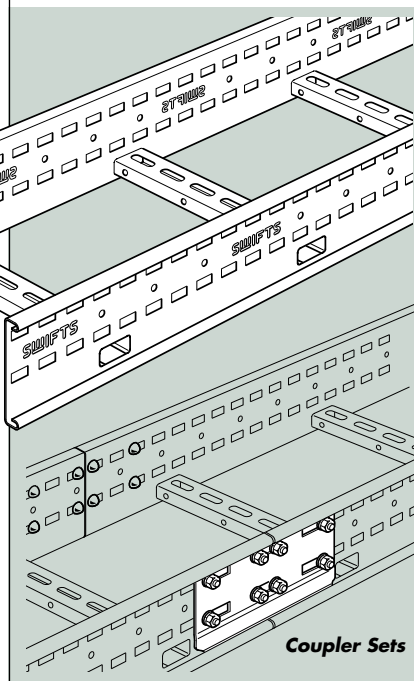
The Data Sheet page reference is given with each component.

Straight Lengths - 3m

PL/ WIDTH / FINISH

Coupler Sets

PC/ FINISH



Coupler Sets

Supplied in pairs, with fastenings (8 per coupler). Use to couple straight lengths and accessories.

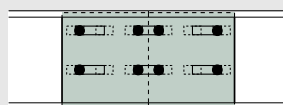
Even when ladder is cut to length, the slots in the coupler will always align with slots in the ladder side rail.

When bolting to cut ends adjust coupler to ensure 8 bolts can be inserted.

COUPLING DETAILS

Straight Length to:

Straight Length and all accessories.

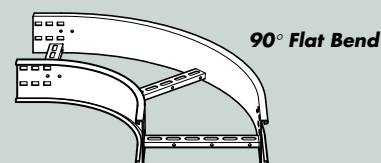


Data Sheets
Straight Lengths
Coupler Sets

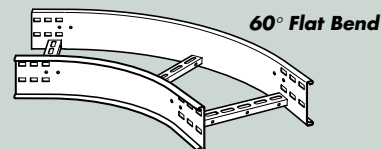
LR3.01
LR6.01

Flat Bends

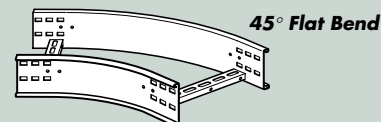
90°	PFB/	WIDTH /	90/	RADIUS /	FINISH
60°	PFB/	WIDTH /	60/	RADIUS /	FINISH
45°	PFB/	WIDTH /	45/	RADIUS /	FINISH
30°	PFB/	WIDTH /	30/	RADIUS /	FINISH



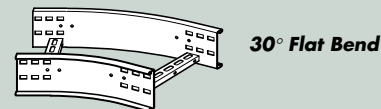
90° Flat Bend



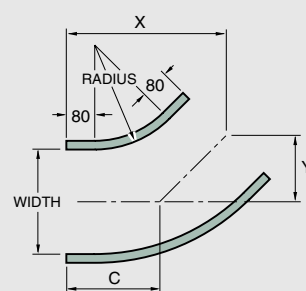
60° Flat Bend



45° Flat Bend



30° Flat Bend



For X, Y and C dimensions, see page 48. dimensions (mm) are nominal

Data Sheet

LR3.02

cable ladder systems

Sapphire heavy duty

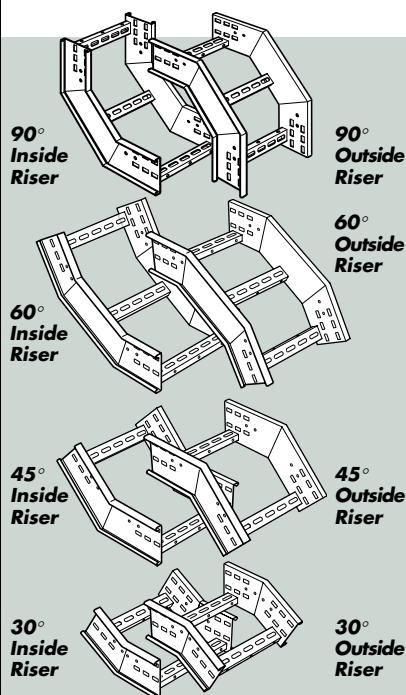
Risers

Inside Risers

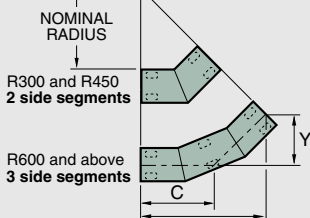
90°	PIR/	WIDTH	/90/	RADIUS	/	FINISH
60°	PIR/	WIDTH	/60/	RADIUS	/	FINISH
45°	PIR/	WIDTH	/45/	RADIUS	/	FINISH
30°	PIR/	WIDTH	/30/	RADIUS	/	FINISH

Outside Risers

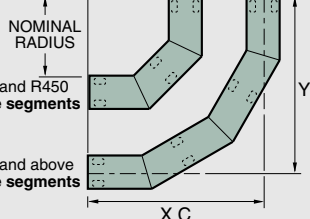
90°	POR/	WIDTH	/90/	RADIUS	/	FINISH
60°	POR/	WIDTH	/60/	RADIUS	/	FINISH
45°	POR/	WIDTH	/45/	RADIUS	/	FINISH
30°	POR/	WIDTH	/30/	RADIUS	/	FINISH



45° Risers



90° Risers



For X, Y and C dimensions, see page 49.
dimensions (mm) are nominal

Data Sheet

LR3.03

Tees

Equal Tees

PT/	WIDTH	/	RADIUS	R	/	FINISH
-----	-------	---	--------	---	---	--------

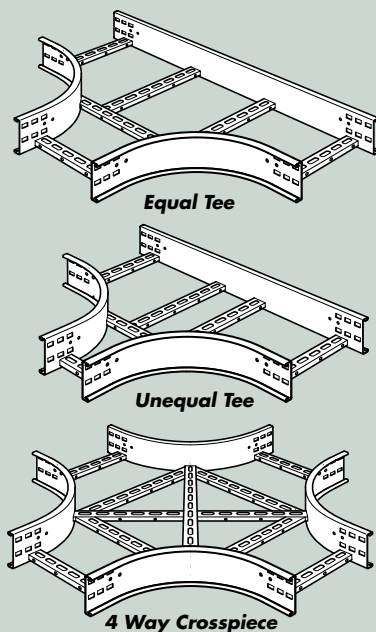
Unequal Tees*

PUT/	WIDTH 1	/	WIDTH 2	/	RADIUS	R	/	FINISH
------	---------	---	---------	---	--------	---	---	--------

WIDTH 1 = Main Ladder Run
WIDTH 2 = Ladder Branch

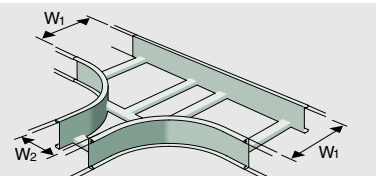
4-Way Crosspieces

PX/	WIDTH	/	RADIUS	R	/	FINISH
-----	-------	---	--------	---	---	--------



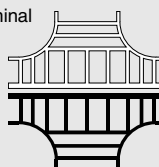
The ordering code for a hot dip galvanized Unequal Tee with a 300 main run (W_1) and a 150 branch (W_2) with a 450 radius:-

PUT/300/150/450R/G.



For dimensions, see pages 49 and 50.
dimensions (mm) are nominal

Crosspieces in larger width/radius combinations are supplied in two identical halves with fastenings.



Data Sheets

Equal Tees

LR3.05

Unequal Tees

LR3.06

4-Way Crosspieces

LR3.07

Reducers

Straight Reducers

PSR/	WIDTH 1	/	WIDTH 2	/	FINISH
------	---------	---	---------	---	--------

Offset Reducers - Left Hand

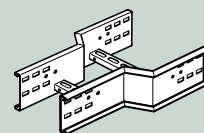
PLR/	WIDTH 1	/	WIDTH 2	/	FINISH
------	---------	---	---------	---	--------

Offset Reducers - Right Hand

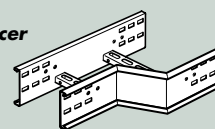
PRR/	WIDTH 1	/	WIDTH 2	/	FINISH
------	---------	---	---------	---	--------

WIDTH 1 = Main Ladder Run
WIDTH 2 = Reduced Ladder Run

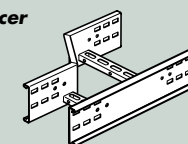
Straight Reducer



Offset Reducer Left Hand

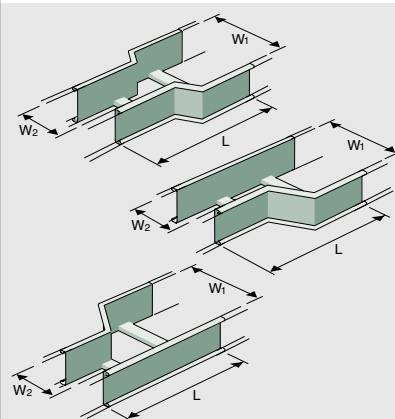


Offset Reducer Right Hand



The ordering code for a hot dip galvanized Straight Reducer with a 300 main run (W_1) reducing to 150 (W_2):-

PSR/300/150/G.



For L dimensions, see page 51.

Data Sheet

LR3.04

cable ladder systems

Emerald extra heavy duty

Ordering Information

Component references are obtained by giving the component code followed by the width(s), angle and radius (where needed) and the finish.

EXAMPLES:

For a hot dip galvanized Emerald Straight Length, 600mm wide:- **EL/600/G**

For a hot dip galvanized Emerald 90° Flat Bend, 600mm wide:- **EFB/600/90/300/G**

Standard length: 3.0m

Standard widths:

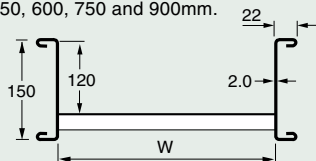
150, 300, 450, 600, 750 and 900mm.

Rung spacing:

300mm between centres.

Radii available for all Accessories:

300, 450, 600, 750 and 900mm.



RUNG DETAILS

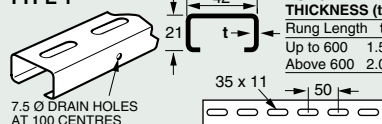
Emerald Cable Ladder can be supplied with rungs in a range of slot patterns and sections. In addition, all rungs can be inverted to special order.

Select a specific rung throughout or any combination of types 1 and 2 as required.

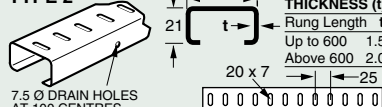
Type 1 will be supplied throughout unless otherwise specified.

Type 3 is not available in -DG finish.

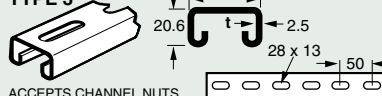
TYPE 1



TYPE 2



TYPE 3



Slot pattern may differ on stainless steel type 3 rungs. Contact our Sales Support for advice.

Finishes

Standard Stocked Finish:

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

Additional Finishes:

-DG Deep Galvanized Corten A steel.

-SS Stainless steel to BS EN 10088 grade 1-4401 (equivalent to 316S31).

-E Plastic coated (to customer's specification).

Data Sheets are available for all Swifts' Emerald Ladder, please contact our Sales Support.

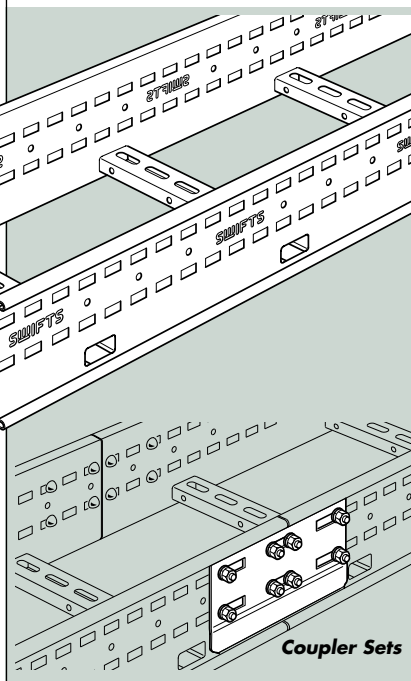
The Data Sheet page reference is given with each component.

Straight Lengths - 3m

EL/ WIDTH / FINISH

Coupler Sets

EC/ FINISH



Coupler Sets

Supplied in pairs, with fastenings (8 per coupler). Use to couple straight lengths and accessories.

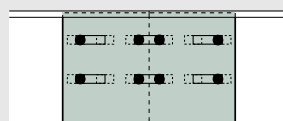
Even when ladder is cut to length, the slots in the coupler will always align with slots in the ladder side rail.

When bolting to cut ends adjust coupler to ensure 8 bolts can be inserted.

COUPLING DETAILS

Straight Length to:

Straight Length and all accessories.

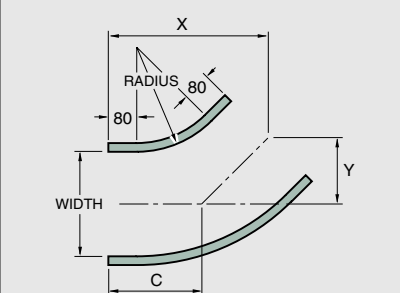
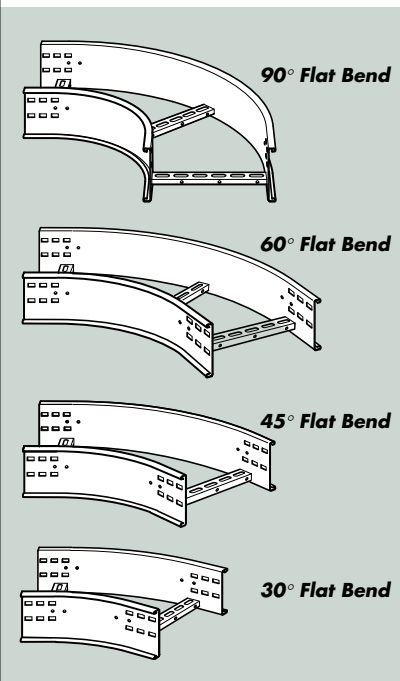


Data Sheets
Straight Lengths
Coupler Sets

LR4.01
LR6.01

Flat Bends

90°	EFB/	WIDTH	/90/	RADIUS	/ FINISH
60°	EFB/	WIDTH	/60/	RADIUS	/ FINISH
45°	EFB/	WIDTH	/45/	RADIUS	/ FINISH
30°	EFB/	WIDTH	/30/	RADIUS	/ FINISH



For X, Y and C dimensions, see page 48. dimensions (mm) are nominal

Data Sheet

LR4.02

cable ladder systems

Emerald extra heavy duty

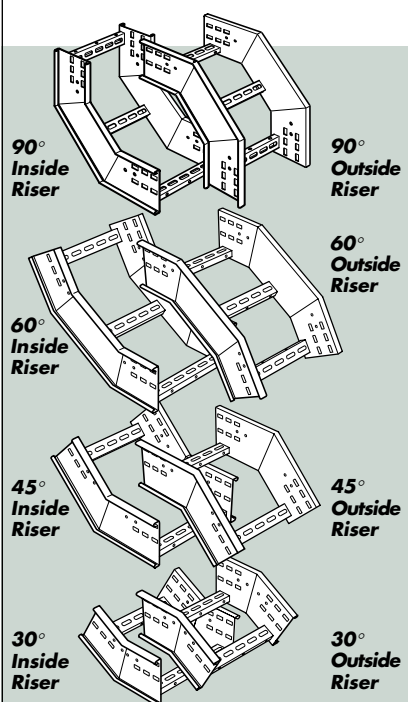
Risers

Inside Risers

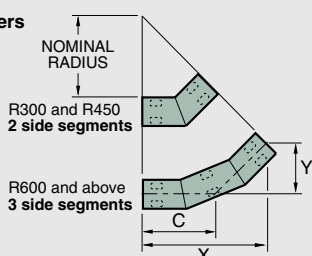
90°	EIR/	WIDTH	/90/	RADIUS	/	FINISH
60°	EIR/	WIDTH	/60/	RADIUS	/	FINISH
45°	EIR/	WIDTH	/45/	RADIUS	/	FINISH
30°	EIR/	WIDTH	/30/	RADIUS	/	FINISH

Outside Risers

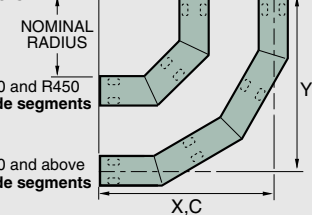
90°	EOR/	WIDTH	/90/	RADIUS	/	FINISH
60°	EOR/	WIDTH	/60/	RADIUS	/	FINISH
45°	EOR/	WIDTH	/45/	RADIUS	/	FINISH
30°	EOR/	WIDTH	/30/	RADIUS	/	FINISH



45° Risers



90° Risers



For X, Y and C dimensions, see page 49.
dimensions (mm) are nominal

Data Sheet

LR4.03

Tees

Equal Tees

ET/	WIDTH	/	RADIUS	R	/	FINISH
-----	-------	---	--------	---	---	--------

Unequal Tees*

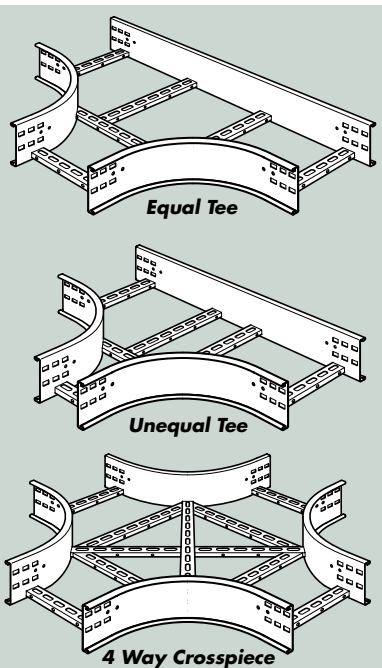
EUT/	WIDTH 1	/	WIDTH 2	/	RADIUS	R	/	FINISH
------	---------	---	---------	---	--------	---	---	--------

WIDTH 1 = Main Ladder Run

WIDTH 2 = Ladder Branch

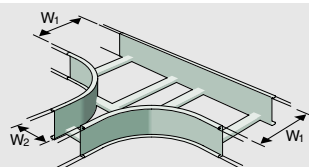
4-Way Crosspieces

EX/	WIDTH	/	RADIUS	R	/	FINISH
-----	-------	---	--------	---	---	--------



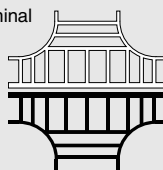
The ordering code for a hot dip galvanized Unequal Tee with a 300 main run (W_1) and a 150 branch (W_2) with a 450 radius :-

EUT/300/150/450R/G.



For dimensions, see pages 49 and 50.
dimensions (mm) are nominal

Crosspieces in larger width/radius combinations are supplied in two identical halves with fastenings.



Data Sheets

Equal Tees

Unequal Tees

4-Way Crosspieces

LR4.05

LR4.06

LR4.07

Reducers

Straight Reducers

ESR/	WIDTH 1	/	WIDTH 2	/	FINISH
------	---------	---	---------	---	--------

Offset Reducers - Left Hand

ELR/	WIDTH 1	/	WIDTH 2	/	FINISH
------	---------	---	---------	---	--------

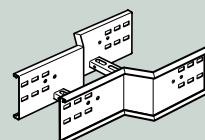
Offset Reducers - Right Hand

ERR/	WIDTH 1	/	WIDTH 2	/	FINISH
------	---------	---	---------	---	--------

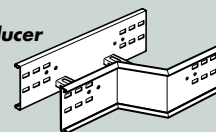
WIDTH 1 = Main Ladder Run

WIDTH 2 = Reduced Ladder Run

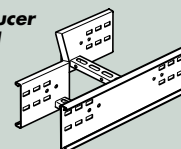
Straight Reducer



Offset Reducer Left Hand

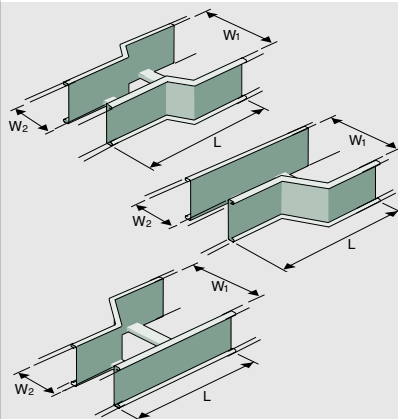


Offset Reducer Right Hand



The ordering code for a hot dip galvanized Straight Reducer with a 300 main run (W_1) reducing to 150 (W_2) :-

ESR300/150/G.

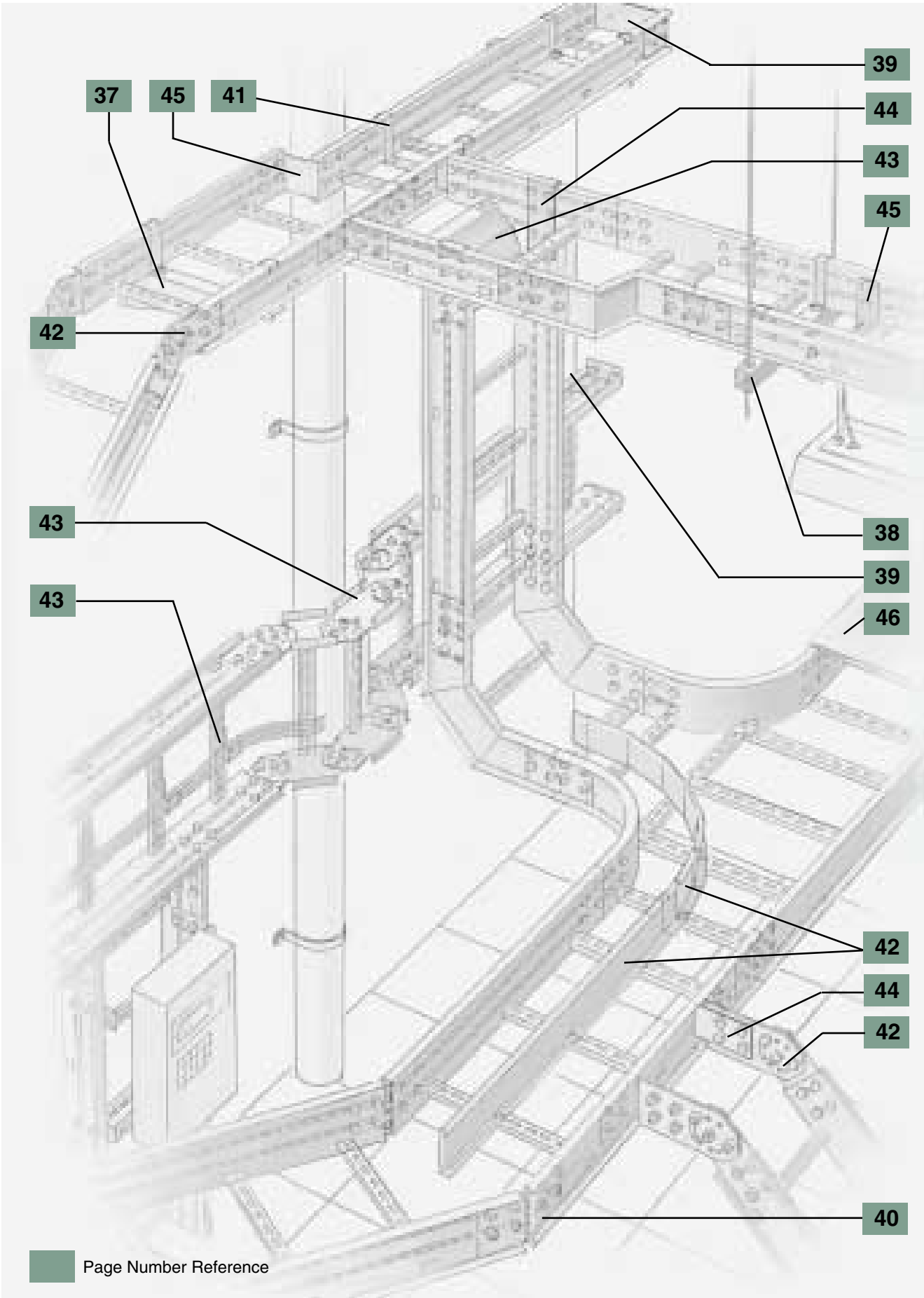


For L dimensions, see page 51.

Data Sheet

LR4.04

cable ladder systems
supports and ancillary items



cable ladder systems

supports

Finishes

Standard Stocked Finish:

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

Additional Finishes:

-/DG Deep galvanized Corten A steel.

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

-/E Plastic coated (to customer's specification).

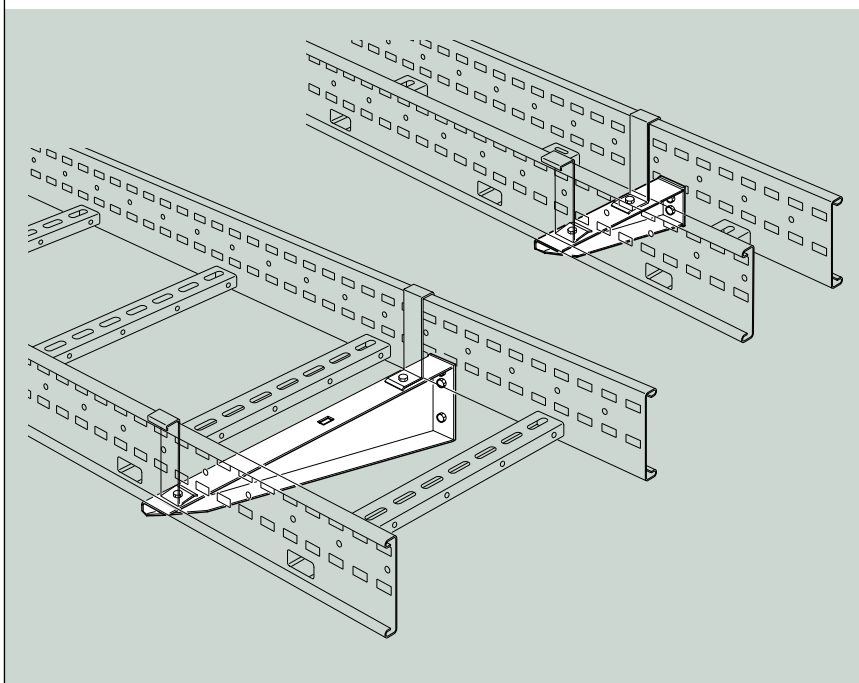
Data Sheets are available for all Swifts' Ladder Supports, please contact our Sales Support.

The Data Sheet page reference is given with each Support.

Heavy Duty Cantilever Arms

150mm wide ladder	HCA150/ FINISH
300mm wide ladder	HCA300/ FINISH
450mm wide ladder	HCA450/ FINISH
600mm wide ladder	HCA600/ FINISH
750mm wide ladder	HCA750/ FINISH
900mm wide ladder	HCA900/ FINISH

For Opal use *Light Duty Cantilever Arms*, see page 20.

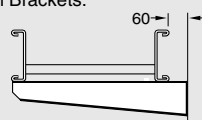


Supplied singly without fastenings.

Fit horizontal runs of ladder to flat surfaces and Swiftrack Channel.

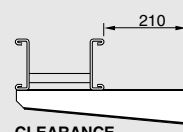
All arms have slots in top and side flanges to accept brackets.

Use Hold Down Brackets.



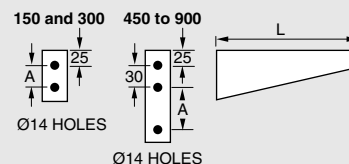
NORMAL INSTALLATION

Arm = Ladder width



CLEARANCE INSTALLATION

Arm = 1 size greater than Ladder width



Component Reference	A	L	SWL, kgf*	
			surface	Swiftrack
HCA/150/_	30	250	300	250
HCA/300/_	30	400	350	250
HCA/450/_	45	550	400	300
HCA/600/_	95	700	500	350
HCA/750/_	145	850	600	400
HCA/900/_	195	1000	700	450

*Per cantilever arm for load uniformly distributed across the complete arm, when ladder fixed to arm using Swifts' Hold Down Brackets.
Safety factor: 2

Swiftrack Channel **pages 78 & 79**

Swiftrack Channel Nuts **page 79**

Swiftrack Beam Clamps **pages 86 & 87**

Hold Down Brackets **page 41**

Data Sheet **LR5.01**

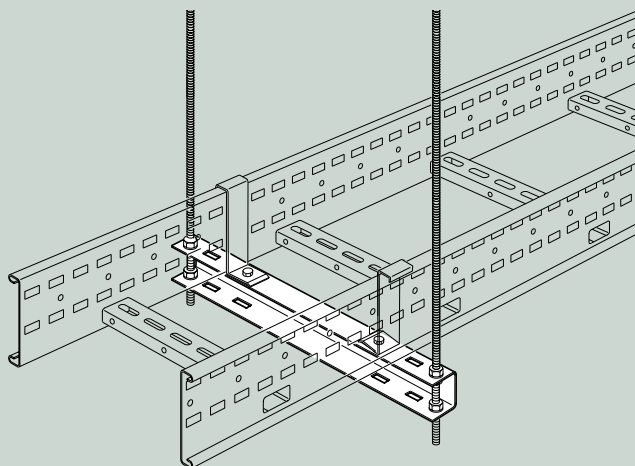
cable ladder systems supports

Finishes
See page 37

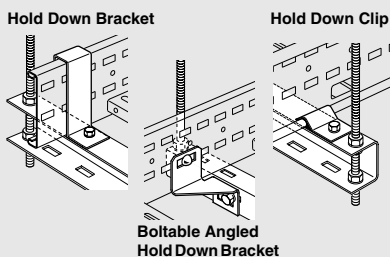
Heavy Duty Trapeze Hangers

150mm wide ladder	HTH150/ FINISH
300mm wide ladder	HTH300/ FINISH
450mm wide ladder	HTH450/ FINISH
600mm wide ladder	HTH600/ FINISH
750mm wide ladder	HTH750/ FINISH
900mm wide ladder	HTH900/ FINISH

For Opal use *Light Duty Trapeze Hangers*, see page 21.



Supplied singly without fastenings.
Support horizontal runs of ladder from overhead structure.
Use M12 Threaded Rods.

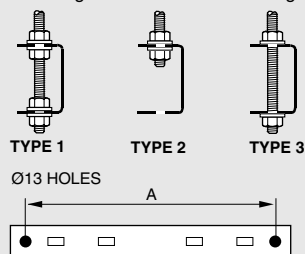


Hold Down Brackets and Clips **page 41**

Threaded Rod and Rod to Hanger fastenings **page 47**

Data Sheet **LR5.04**

Trapeze Hanger to Threaded Rod fixing.



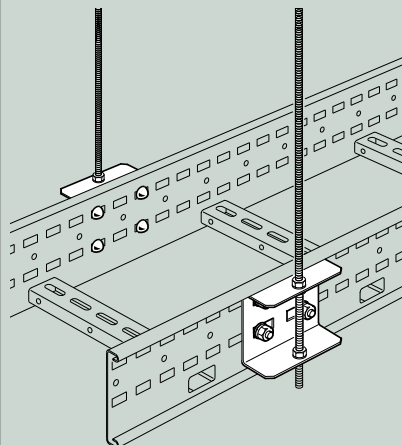
Component Reference	A	Type 1	Type 2	Type 3
HTH/150/_	310	400	240	120
HTH/300/_	460	400	240	120
HTH/450/_	610	400	240	120
HTH/600/_	760	500	300	150
HTH/750/_	910	500	300	150
HTH/900/_	1060	500	300	150

*Per trapeze hanger for load uniformly distributed across complete hanger. Safety factor: 2.

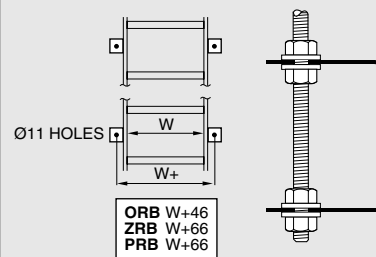
Hanger Rod Brackets

Opal	ORB/ FINISH
Topaz	ZRB/ FINISH
Sapphire	PRB/ FINISH
Emerald	EWSB/ FINISH

When hanger rod brackets are fitted to ladder, covers can not be used.



Supplied in pairs with Bracket to Ladder fastenings.
Support horizontal runs of ladder from overhead structure.
Use M10 Threaded Rods.



Safe working loads
Contact our Sales Support for advice.

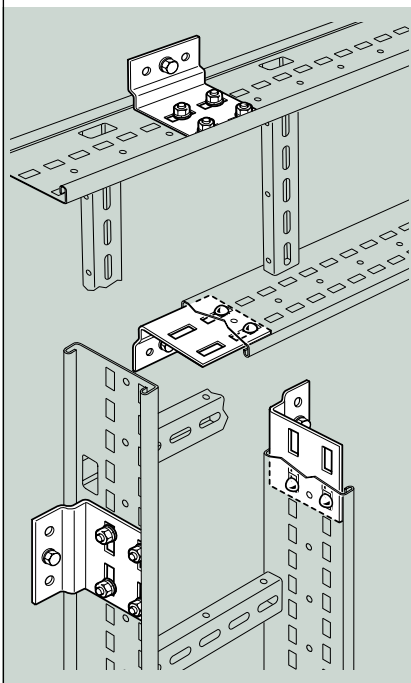
Threaded Rod and Rod to Bracket fastenings **page 47**

Data Sheet **LR5.05**

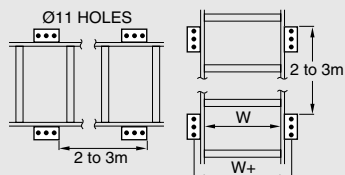
cable ladder systems supports

Wall Support Brackets

Opal	OWSB/ FINISH
Topaz	ZWSB/ FINISH
Sapphire	PWSB/ FINISH
Emerald	EWSB/ FINISH



Supplied in pairs with Bracket to Ladder fastenings.
Fit horizontal or vertical runs of ladder to vertical surfaces and Swiftack Channel.



OWSB W+76
ZWSB W+106
PWSB W+106

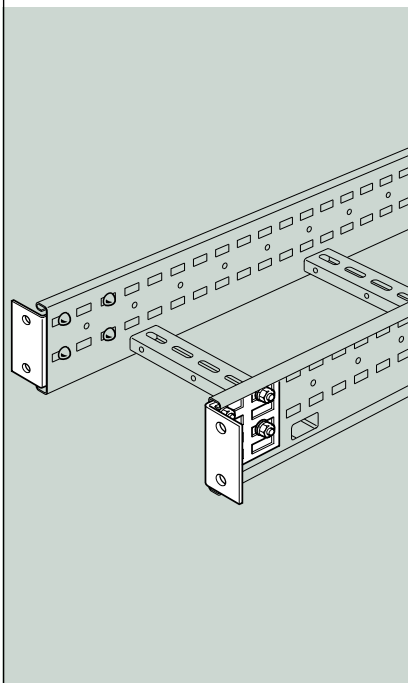
Safe working loads
Contact our Sales Support for advice.

Data Sheet

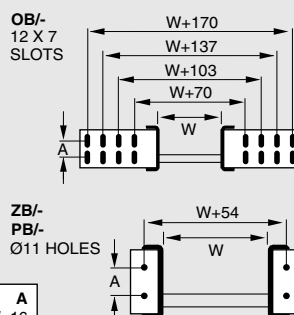
LR5.02

90° End Connectors

Opal	OB/ FINISH
Topaz	ZB/ FINISH
Sapphire	PB/ FINISH
Emerald	EB/ FINISH



Supplied in pairs with Bracket to Ladder fastenings.
Fit ends of ladder to vertical surfaces.



OB/-
12 X 7
SLOTS

ZB/-
PB/-
Ø11 HOLES

A
OB/- 16
ZB/- 50
PB/- 75
EB/- 75

Connector to support fastenings **page 47**

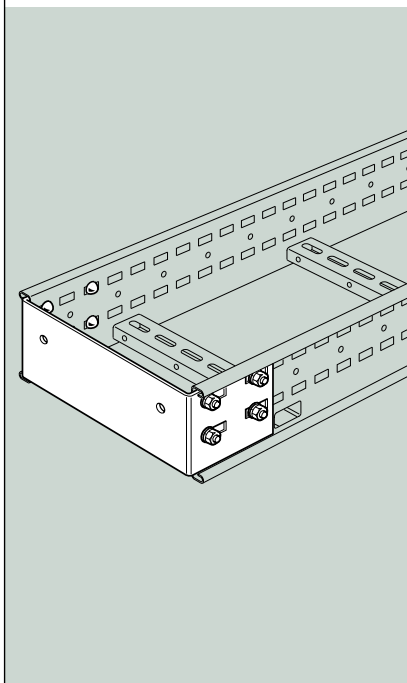
Data Sheet

LR5.03

Stop Ends

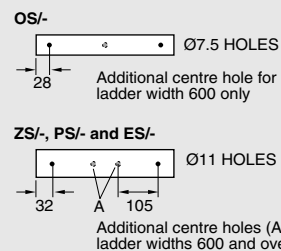
Opal	OS/ WIDTH / FINISH
Topaz	ZS/ WIDTH / FINISH
Sapphire	PS/ WIDTH / FINISH
Emerald	ES/ WIDTH / FINISH

WIDTH = Ladder width



Supplied singly with Stop End to Ladder fastenings.

Provide a neat method of terminating a cable ladder run and can be used as an alternative to 90° End Connectors to fit end of ladder to vertical surfaces.



OS/-

Ø7.5 HOLES
Additional centre hole for ladder width 600 only

ZS/-, PS/- and ES/-

Ø11 HOLES
Additional centre holes (A) for ladder widths 600 and over

Stop End to support fastenings **page 47**

Data Sheet

LR5.06

cable ladder systems

ancillary items

Finishes

Standard Stocked Finish:

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

Additional Finishes:

-/DG Deep galvanized Corten A steel.

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

-/E Plastic coated (to customer's specification).

Bendable Connectors

Opal	OH/ FINISH
Topaz	ZH/ FINISH
Sapphire	PH/ FINISH
Emerald	EH/ FINISH

Flexible Expansion Couplers

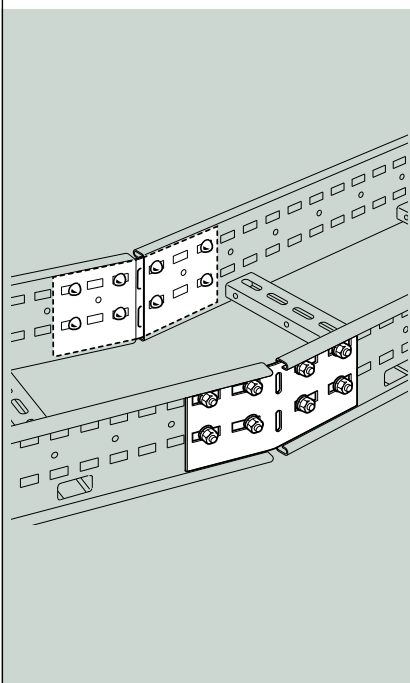
Opal	OE/ FINISH
Topaz	ZE/ FINISH
Sapphire	PE/ FINISH
Emerald	EE/ FINISH

Data Sheets are available for all Swifts' Ladder Ancillary Items, please contact our Sales Support.

The Data Sheet page reference is given with each Ancillary Item.

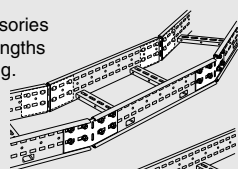
Earth Continuity Connectors

Opal	pack 20	PTFEB
All except Opal	pack 10	PLFEB

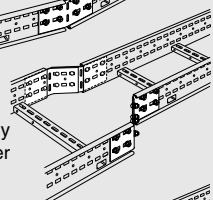


Supplied in pairs with fastenings.

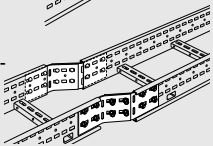
Fabricating accessories on site from cut lengths of cable ladder, e.g. a long articulated bend.



Reducing width of a run to the next size down when a properly manufactured reducer is not available.



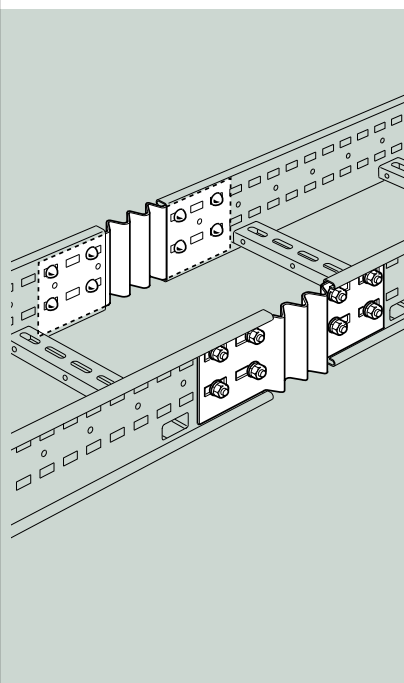
Correcting minor misalignment problems.



Opal Bendable Connectors must be fitted to the inside of the ladder side rails.

Data Sheet

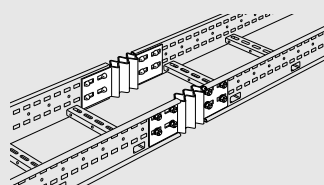
LR6.03



Supplied in pairs with fastenings.

Provide a semi-flexible joint to compensate for relative movement when spanning separate structures or changes in ladder lengths due to temperature variation.

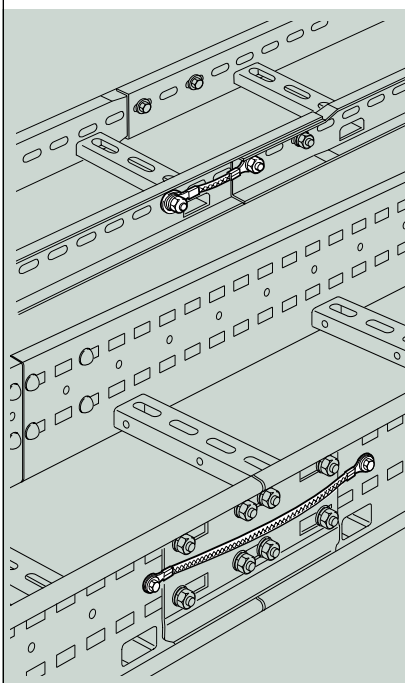
Mounting pairs of couplers back-to-back (except for Opal), will increase the stiffness of each joint.



Opal Flexible Expansion Couplers must be fitted to the inside of the ladder side rails.

Data Sheet

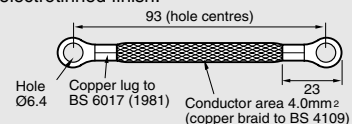
LR6.02



Opal

Use M6 fastenings (not included), see Data Sheet for details.

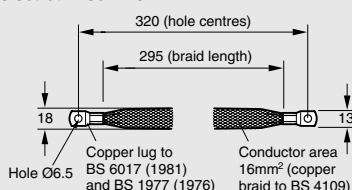
Copper braid and copper lugs, both in electroplated finish.



Topaz, Sapphire and Emerald

M6 brass fastenings included in pack.

Copper braid and copper lugs, both in electroplated finish.



Data Sheets

PTFEB
PLFEB

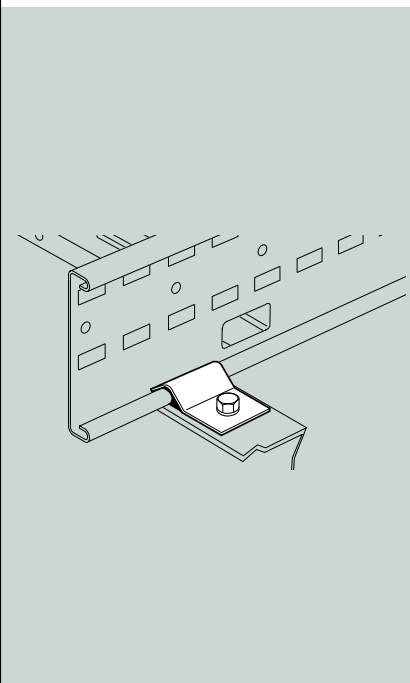
TY7.07
LR6.17

cable ladder systems

ancillary items

Hold Down Clip

Opal	OF/ FINISH
Topaz	ZF/ FINISH
Sapphire	PF/ FINISH
Emerald	EF/ FINISH



Fit ladder to flat surfaces, Swiftrack Channel or Heavy Duty Trapeze Hangers which have slots in the top flange to accept fastenings.

Supplied singly without fastenings.

OF/_ use M6; ZF/_ , PF/_ , EF/_ use M10

Insulated Hold Down Clips are available for stainless steel ladder, contact our Sales Support for details.

All Swifts' supports are provided with correctly positioned fixing holes to accept hold down clips without drilling. The table below gives the fixing hole spacing required when attaching hold down clips to other supports.

Component Reference	Centre distance between fixing holes
OF/-	W + 35
ZF/-	W + 95
PF/-	W + 95
EF/-	W + 95

W = ladder width

Clip to support fastenings

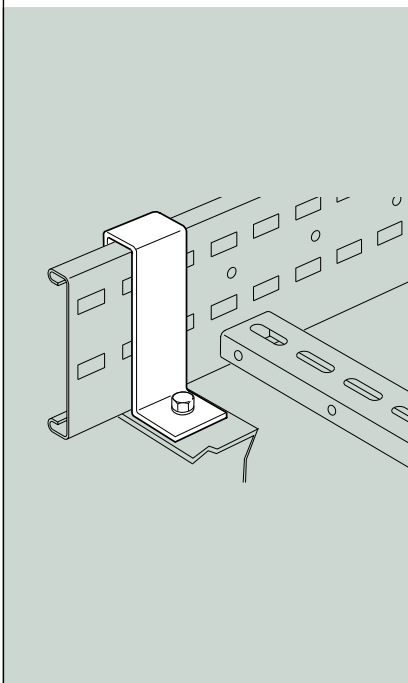
page 47

Data Sheet

LR5.06

Hold Down Bracket

Opal	OJ/ FINISH
Topaz	ZJ/ FINISH
Sapphire	PJ/ FINISH
Emerald	EJ/ FINISH



Fit ladder to flat surfaces, Swiftrack Channel, Cantilever Arms or Heavy Duty Trapeze Hangers which have slots in the top flange to accept fastenings.

Supplied singly without fastenings.

OF/_ use M6; ZF/_ , PF/_ , EF/_ use M10

Insulated Hold Down Brackets are available for stainless steel ladder, contact our Sales Support for details.

All Swifts' supports are provided with correctly positioned fixing holes to accept hold down brackets without drilling. The table below gives the fixing hole spacing required when attaching hold down clips to other supports.

Component Reference	Centre distance between fixing holes	
	Inside ladder	Outside ladder
OJ/-	W - 38	W + 62
ZJ/-	W - 44	W + 80
PJ/-	W - 44	W + 80
EJ/-	W - 44	W + 80

W = ladder width

Bracket to support fastenings

page 47

Data Sheet

LR5.07

Boltable Hold Down Bracket

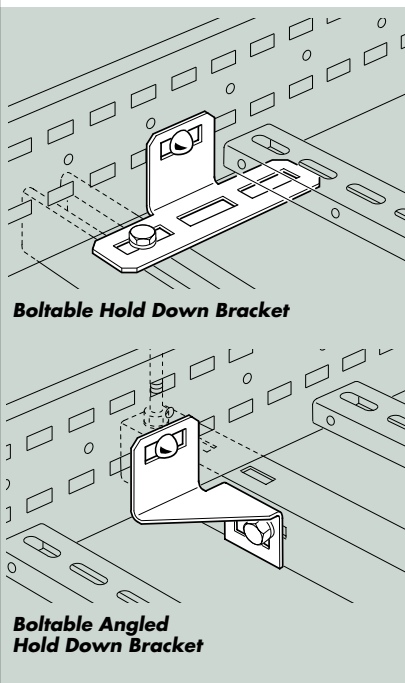
Topaz	ZN/ FINISH
Sapphire	PN/ FINISH
Emerald	EN/ FINISH

Opal Boltable Hold Down Brackets are not available.

Boltable Angled Hold Down Brackets

Topaz	ZP/ FINISH
Sapphire	PP/ FINISH
Emerald	EP/ FINISH

Opal Boltable Angled Hold Down Brackets are not available.



Boltable Hold Down Bracket

Boltable Angled Hold Down Bracket

Boltable Hold Down Bracket

Supplied singly with bracket to ladder fastening.

Fit ladder to Swiftrack Channel in fabricated structured steel support.

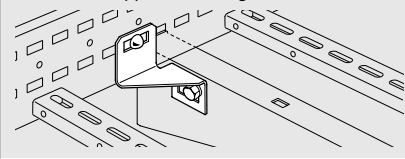
Bracket to support fastening: M12

Boltable Angled Hold Down Brackets

Supplied in handed pairs with bracket to ladder fastening.

Fit ladder to Heavy Duty Cantilever Arms and Trapeze Hangers which have slots in the side flange to accept fastenings.

Bracket to support fastening: M10



Bracket to support fastenings

page 47

Data Sheets

Boltable Hold Down Brackets

LR5.08

Boltable Angled Hold Down Brackets

LR5.09

cable ladder systems

ancillary items

Finishes

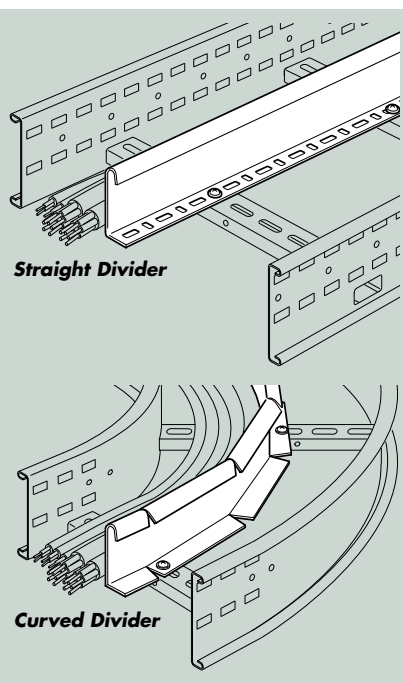
See page 40

Straight Dividers - 3.0m

Opal	ODV/ FINISH
Topaz	ZDV/ FINISH
Sapphire	PDV/ FINISH
Emerald	EDV/ FINISH

Curved Dividers - 1.0m

Opal	OCUR/ FINISH
Topaz	ZCUR/ FINISH
Sapphire	PCUR/ FINISH
Emerald	ECUR/ FINISH



Straight Divider

Supplied with fastenings.

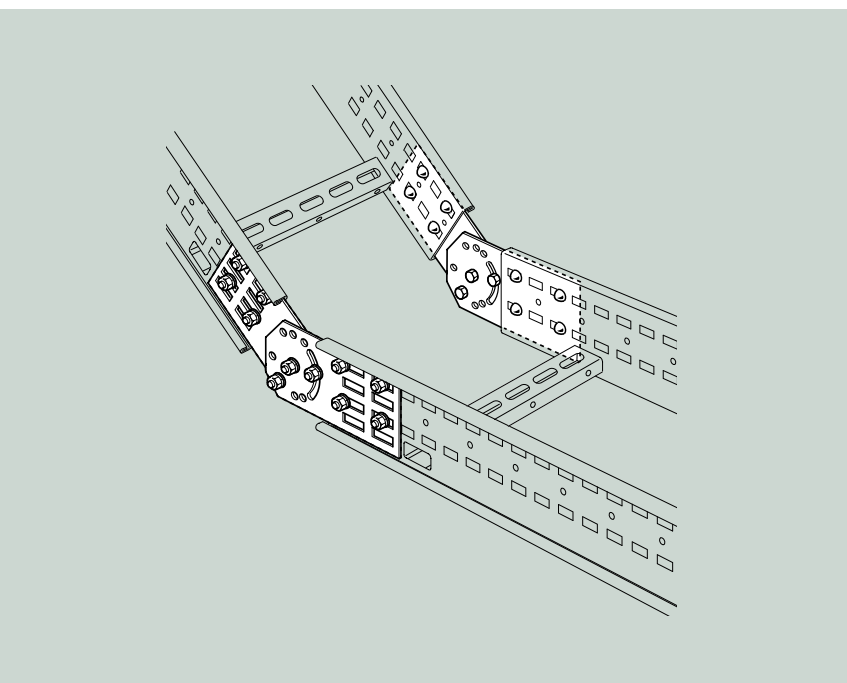
Curved Divider

Supplied with fastenings.

Drill for fastenings on site to suit rung positions.

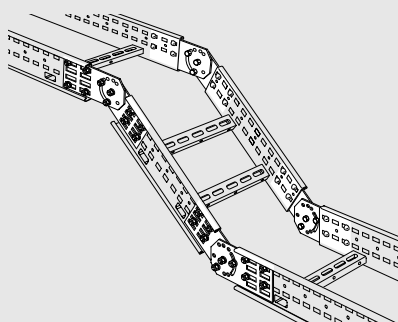
Vertical Hinged Connectors

Opal	OV/ FINISH
Topaz	ZV/ FINISH
Sapphire	PV/ FINISH
Emerald	EV/ FINISH



Supplied in sets comprising four plates and fastenings.

Use with straight lengths to form risers or solve minor misalignment problems on site.



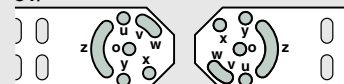
Opal Vertical Hinged Connectors must be fitted to the inside of the ladder side rails.

Use to couple Articulated Risers to adjacent ladders, see page 43.

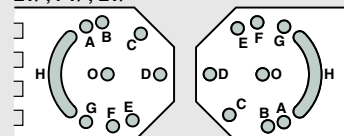
Connect together to form pre-set angles or pre-assemble for adjustment in situ using the holes/slots given below.

Component Reference	15°	18°	22.5°	30°	45°
OV/-	y:v	-	-	x:u	y:w
ZV/-, PV/-, EV/-	G:C	A:F	E:B	B:G	F:C

OV/-



ZV/-, PV/-, EV/-

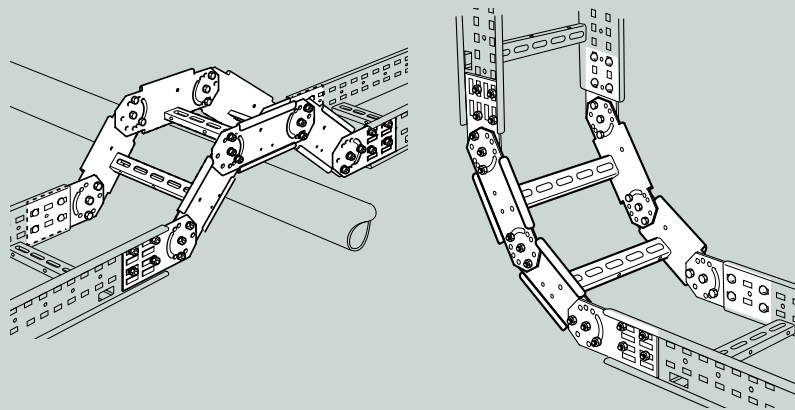


cable ladder systems ancillary items

Articulated Risers

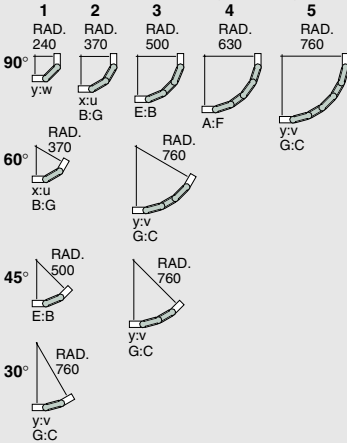
Opal	OAR/	WIDTH	/	FINISH
Topaz	ZAR/	WIDTH	/	FINISH
Sapphire	PAR/	WIDTH	/	FINISH
Emerald	EAR/	WIDTH	/	FINISH

WIDTH = Ladder width



Set comprises three ladder sections and the necessary Vertical Hinged Connectors with fastenings.
Use to form risers or solve most misalignment problems on site.

Sections required for a given angle



Connect together to form pre-set angles or pre-assembled for adjustment in situ using the holes/slots given below.

Component Reference	15°	18°	22.5°	30°	45°
OVI/-	y:v	-	-	x:u	y:w
ZVI/-, PVI/-, EVI/-	G:C	A:F	E:B	B:G	F:C

OAR/-		
ZAR/-, PAR/-, EAR/-		

Data Sheet

LR6.05

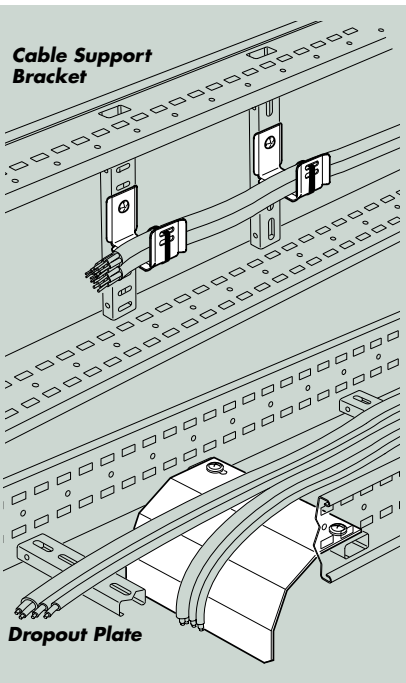
Cable Support Bracket

All	CSB/	FINISH
-----	-------------	--------

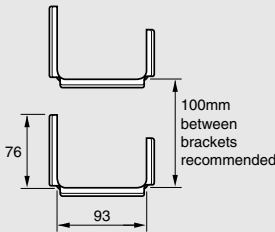
Dropout Plate

All	DO/	WIDTH	/	FINISH
-----	------------	-------	---	--------

WIDTH = Ladder width



Cable Support Bracket
Supplied singly with fastening.
Cable tie not included.



Dropout Plate
Supplied with fastenings.
Use to provide local support for cables as they exit a cable ladder run between rungs.

Data Sheets
Cable Support Bracket
Dropout Plate

LR6.16
LR6.15

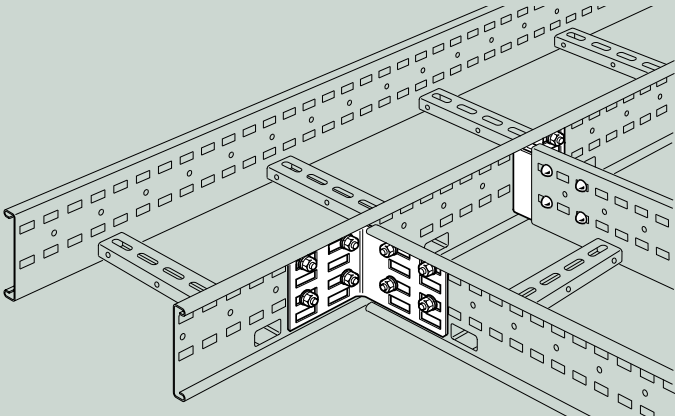
cable ladder systems
ancillary items

Finishes
See page 40

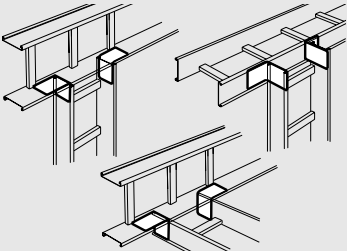
Tee Brackets

Opal	OTB/ FINISH
Topaz	ZTB/ FINISH
Sapphire	PTB/ FINISH
Emerald	ETB/ FINISH

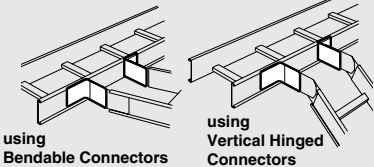
To connect Opal to Opal Ladder, use **90° End Connectors (OB/-)**, see page 39.



Supplied in pairs with fastenings.
Use to create a straight or 90° branch off a straight ladder run.



Couple with Vertical Hinged Connectors or Bendable Connectors to offset the branch.



using Bendable Connectors

using Vertical Hinged Connectors

Main Ladder Run	Permitted Ladder Branch			
	Opal	Topaz	Sapphire	Emerald
Opal	*OB/-	—	—	—
Topaz	OTB/-	ZTB/-	—	—
Sapphire	OTB/-	ZTB/-	PTB/-	—
Emerald	OTB/-	ZTB/-	PTB/-	ETB/-

* See above

Bendable Connectors **page 40**
Vertical Hinged Connectors **page 41**

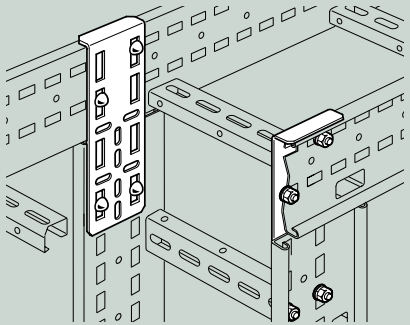
Data Sheet **LR6.06**

Rail-to-Rail Dropout Brackets

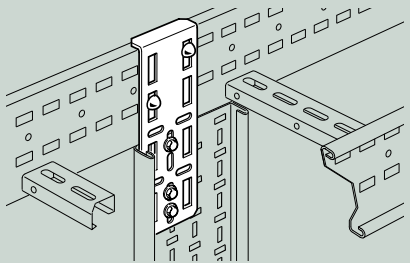
All except Opal	M/ FINISH
-----------------	------------------

A bracket suitable for Opal is available, reference **OM / FINISH**, contact our Sales Support for details.

LADDER TO LADDER CONNECTION



TRAY TO LADDER CONNECTION



Supplied in pairs with fastenings.
Use to attach a vertical run of ladder or tray beneath a horizontal main ladder run.

Data Sheet **LR6.14**

cable ladder systems ancillary items

Short Reducer Brackets

Topaz	ZR/	SIZE / FINISH
Sapphire	PR/	SIZE / FINISH
Emerald	ER/	SIZE / FINISH

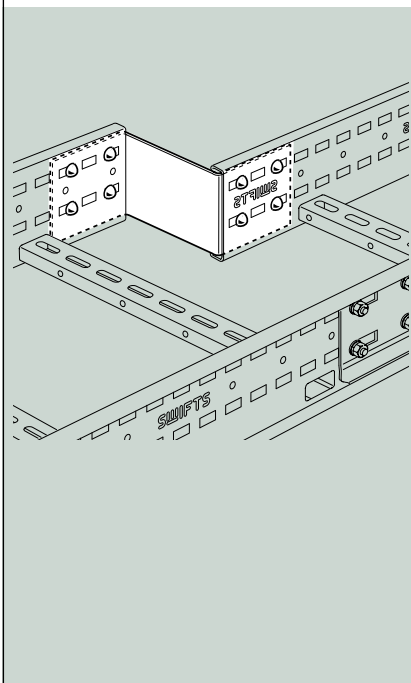
SIZE = Bracket size

Sizes available:

75, 150, 300, 450, 600 and 750mm.

See below for details.

Opal Short Reducer Brackets are not available.



Supplied singly with fastenings.

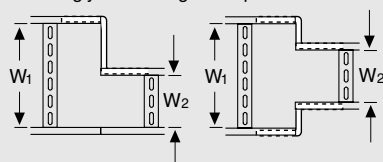
Use to form a Reducer on site.

Straight Reducer

- use in pairs

Offset Reducer

- use singly with Straight Coupler



Offset Reducer

Size = $W_1 - W_2$

W_1 = main ladder mm.
 W_2 = reduced ladder mm.

Straight Reducer

Size = $\frac{W_1 - W_2}{2}$

Short Reducer Brackets can also be used to convert an Equal Tee into an Unequal Tee.

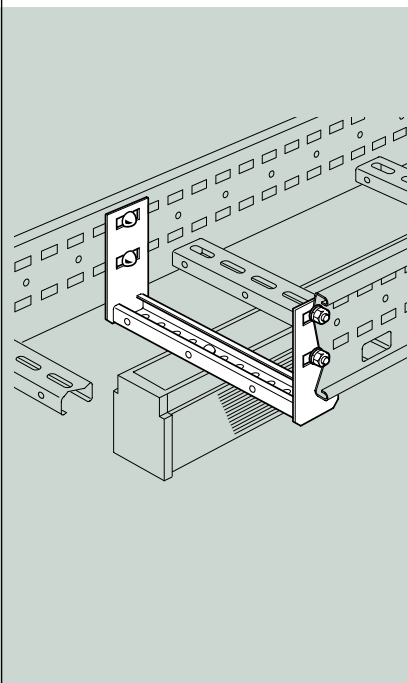
Data Sheet

LR6.07

Ancillary Mounting Bracket

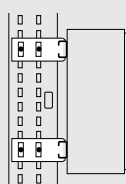
Opal	OAMB/	WIDTH / FINISH
All except Opal	AMB/	WIDTH / FINISH

WIDTH = Ladder width



Supplied singly with bracket to ladder fastening.

Slots for M6 fastenings are provided for mounting ancillary items.



Accessories fitted to a vertical ladder using the same brackets.

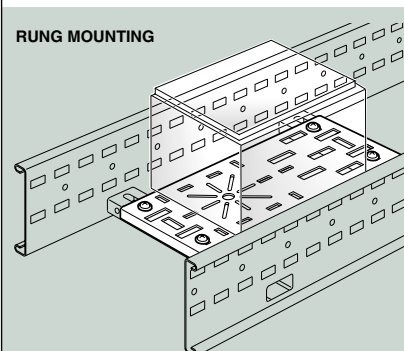
Data Sheet

LR5.10

Ancillary Mounting Plate

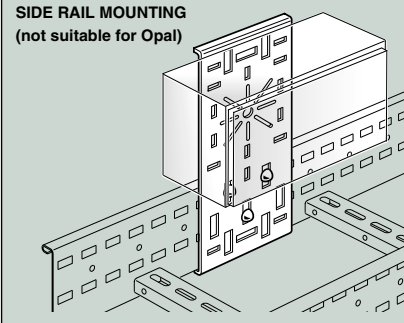
All	MP/	FINISH
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RUNG MOUNTING



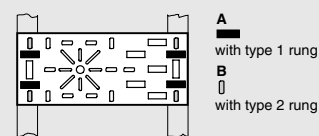
SIDE RAIL MOUNTING

(not suitable for Opal)



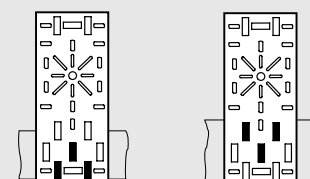
Supplied singly with plate to ladder fastenings.

Use to mount small lightweight items of ancillary equipment to cable ladder runs.



RUNG MOUNTING

All ladder ranges



SIDE RAIL MOUNTING

Topaz

Sapphire
Emerald

Data Sheet

LR5.11

cable ladder systems ancillary items

Finishes
See page 40

Covers for Opal

Straight Closed Covers

OCC/ WIDTH / FINISH

Straight Ventilated Covers

OCV/ WIDTH / FINISH

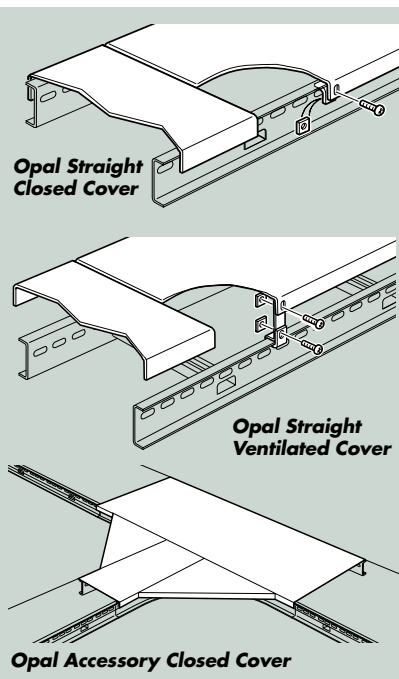
Accessory Closed Covers

O (Acc) CC/ WIDTH(s) / ANGLE / FINISH

Accessory Ventilated Covers

O (Acc) CV/ WIDTH(s) / ANGLE / FINISH

WIDTH = Ladder width



Straight Covers

Supplied with fastenings.
Up to 450mm: 3.0m long.
600mm and above: 1.5m long and are overlap jointed for rigidity.

Accessory Covers

Supplied with fastenings.

ORDERING INFORMATION

The ordering code for Accessory Covers should be completed with the inclusion of the accessory reference where indicated.

EXAMPLE:

A Closed Cover for an Opal Unequal Tee, allowing a 150mm branch off a 300mm run, with a hot dip galvanized finish:-
OUTCC/300/150/G

The standard radius for Opal is 300mm.

Data Sheets

Straight Length Covers

Accessory Covers

LR6.11

LR6.12

Covers for Topaz, Sapphire and Emerald

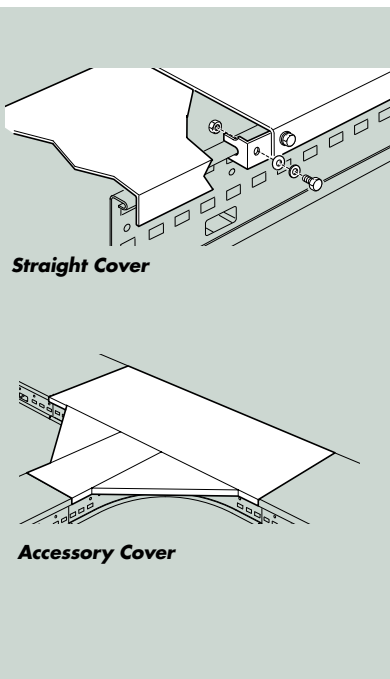
Straight Covers - 3.0m

CV/ WIDTH / FINISH

Accessory Covers (except Risers)

(Acc)CV/ WIDTH(s) / ANGLE / RAD / FINISH

WIDTH = Ladder width



Inside Riser Closed Covers

*IRCVC/ WIDTH / ANGLE / RAD / FINISH

Inside Riser Ventilated Covers

*IRCVCV/ WIDTH / ANGLE / RAD / FINISH

Outside Riser Closed Covers

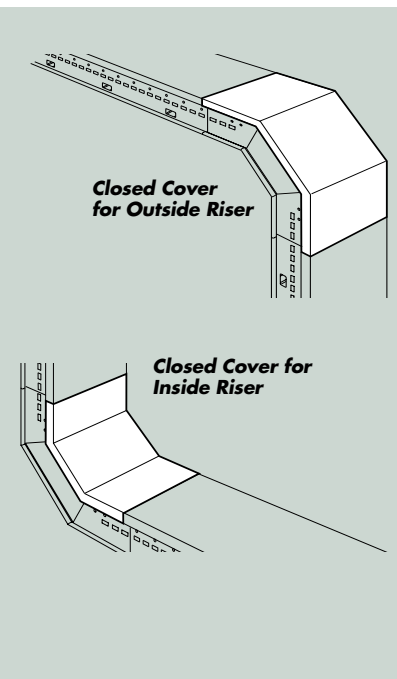
*ORCVC/ WIDTH / ANGLE / RAD / FINISH

Outside Riser Ventilated Covers

*ORCVCV/ WIDTH / ANGLE / RAD / FINISH

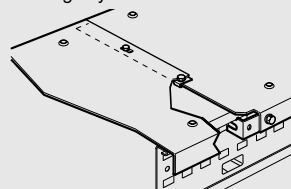
* Insert Ladder reference(Z,P or E).

WIDTH = Ladder width



Straight and Accessory Covers

Supplied with fastenings.
Covers (except for Inside and Outside Risers - see alongside) are suitable for either Closed or Ventilated installation.
600mm wide and above are overlap jointed and dimpled for rigidity.



ORDERING INFORMATION

The ordering code for Accessory Covers should be completed with the inclusion of the Accessory reference where indicated.

EXAMPLE:

A Topaz 90° Flat Bend Cover, 300 wide, 300 radius with a hot dip galvanized finish:-
FBCV/300/90/300/G

Inside and Outside Riser Covers

Supplied with fastenings.

ORDERING INFORMATION

The ordering code for Inside and Outside Riser Covers should be completed with the inclusion of the Ladder reference where indicated*

EXAMPLE:

A Closed Cover for a Topaz 90° Inside Riser, 300 wide, 300 radius with a hot dip galvanized finish:-
ZIRCVC/300/90/300/G.

Data Sheets

Straight Length Covers

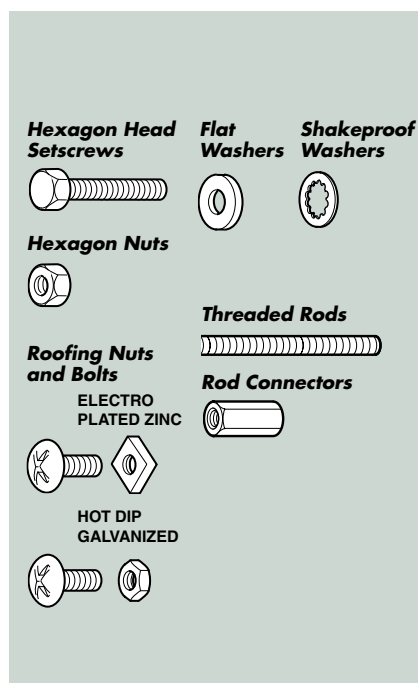
Accessory Covers

LR6.09

LR6.10

cable ladder systems

standard fixings and fastenings



Threaded Rods - maximum load for connector

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

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
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
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

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

Shakeproof Washers

ELECTRO PLATED ZINC

M6	pack 400	SW06
M8	pack 400	SW08
M10	pack 400	SW10
M12	pack 400	SW12

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

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

cable ladder systems

dimensions - flat bends

To assist in the installation of a complete cable ladder run following a centre-line drawing (usually CAD generated), the following pages contain C, X, Y and length dimensions where appropriate, and also diagrams to explain the dimensions.

The dimensions help to ensure that accessories are correctly positioned in line with the drawing and make it possible to accurately calculate the installed length of intermediate straight sections. This allows the sections to be cut to length and pre-assembled, making installation in elevated or restricted areas much simpler.

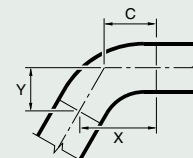


Flat Bends

X = length of accessory from each 'end' of centre-line.

Y = length from each 'end' of the accessory to the point at which the centre-lines intersect.

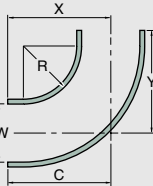
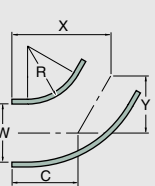
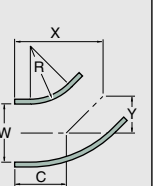
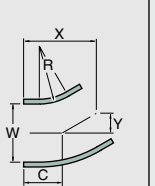
C = length of the centre-line from each 'end' of the accessory to the point at which the centre-lines intersect.



Opal

Opal

Topaz Sapphire Emerald

Topaz Sapphire Emerald		90°					60°			45°			30°			
																
All dimensions in mm.																
Width W	Radius R	X	Y	C	X	Y	C	X	Y	C	X	Y	C	X	Y	C
150	300	453	453	453	443	256	296	400	166	235	336	90	180			
	450	603	603	603	573	331	382	506	210	297	411	110	220			
	600	753	753	753	703	406	469	612	254	359	486	130	260			
	750	903	903	903	833	481	555	719	298	421	561	150	301			
	900	1053	1053	1053	963	556	642	825	342	483	636	170	341			
300	300	528	528	528	508	294	339	453	188	266	373	100	200			
	450	678	678	678	638	369	426	559	232	328	448	120	240			
	600	828	828	828	768	444	512	665	276	390	523	140	280			
	750	978	978	978	898	519	599	772	320	452	598	160	321			
	900	1128	1128	1128	1028	594	685	878	364	514	673	180	361			
450	300	603	603	603	573	331	382	506	210	297	411	110	220			
	450	753	753	753	703	406	469	612	254	359	486	130	260			
	600	903	903	903	833	481	555	719	298	421	561	150	301			
	750	1053	1053	1053	963	556	642	825	342	483	636	170	341			
	900	1203	1203	1203	1093	631	728	931	385	545	711	190	381			
600	300	678	678	678	638	368	426	559	232	328	448	120	240			
	450	828	828	828	768	443	512	665	276	390	523	140	280			
	600	978	978	978	898	518	599	772	320	452	598	160	321			
	750	1128	1128	1128	1028	593	685	878	364	514	673	180	361			
	900	1278	1278	1278	1157	668	772	984	407	576	748	201	401			
750	300	753	753	753	703	406	469	612	254	359	486	130	260			
	450	903	903	903	833	481	555	719	298	421	561	150	301			
	600	1053	1053	1053	963	556	642	825	342	483	636	170	341			
	750	1203	1203	1203	1093	631	729	931	385	545	711	190	381			
	900	1353	1353	1353	1222	706	815	1037	429	607	786	211	421			
900	300	828	828	828	768	443	512	665	276	390	523	140	280			
	450	978	978	978	898	518	598	772	320	452	598	160	321			
	600	1128	1128	1128	1028	593	685	878	364	514	673	180	361			
	750	1278	1278	1278	1157	668	772	984	407	576	748	201	401			
	900	1428	1428	1428	1287	743	858	1090	451	638	823	221	441			

cable ladder systems

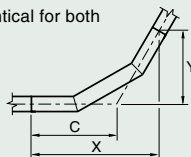
dimensions - riser, equal tees and 4-way crosspieces

Risers

X = length of accessory from each 'end' of centre-line.
Y = length from each 'end' of the accessory to the point at which the centre-lines intersect.
C = length of the centre-line from each 'end' of the accessory to the point at which the centre-lines intersect.

Dimensions shown are identical for both Inside and Outside Risers.

- * **90° RISERS**
600R and above have 4 side segments.
- * **45° RISERS**
600R and above have 3 side segments.



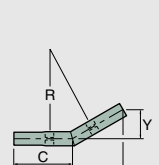
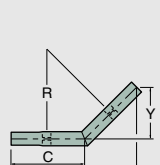
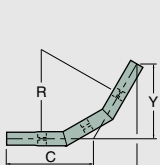
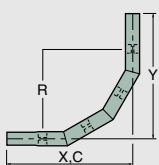
Opal

90°

60°

45°

30°



All dimensions in mm.

Width	Radius R	X	Y	C	X	Y	C	X	Y	C	X	Y	C
All Widths	300	450	450	450	469	271	313	443	183.5	260	396	106	212

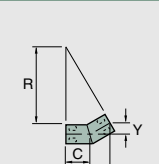
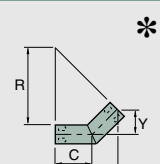
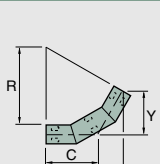
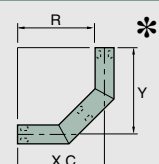
Topaz

90°

60°

45°

30°



All dimensions in mm.

Width	Radius R	X	Y	C	X	Y	C	X	Y	C	X	Y	C
All Widths	300	350	350	350	303	175	202	247	103	145	175	47	94
	450	500	500	500	433	250	289	354	146	207	250	67	134
	600	650	650	650	563	325	375	460	190	269	325	87	174
	750	800	800	800	693	400	462	566	234	331	400	107	214
	900	950	950	950	823	475	548	672	278	394	475	127	255

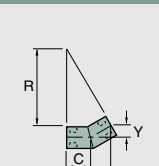
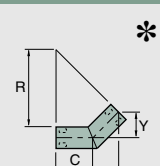
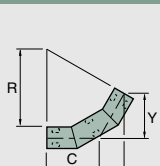
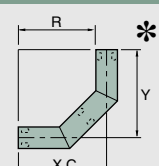
Sapphire

90°

60°

45°

30°



All dimensions in mm.

Width	Radius R	X	Y	C	X	Y	C	X	Y	C	X	Y	C
All Widths	300	363	363	363	314	181	209	256	106	150	181	49	97
	450	513	513	513	444	256	296	362	150	212	256	69	137
	600	663	663	663	574	331	382	468	194	274	331	89	178
	750	813	813	813	704	406	469	575	238	337	406	109	218
	900	963	963	963	834	481	556	681	282	399	481	129	258

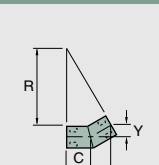
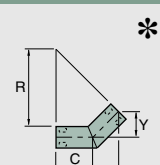
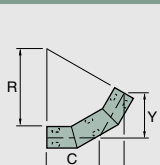
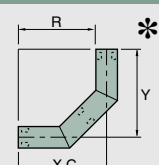
Emerald

90°

60°

45°

30°

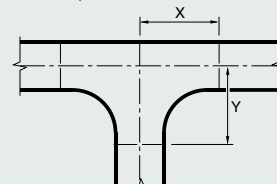


All dimensions in mm.

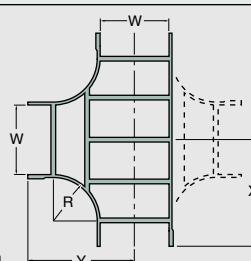
Width	Radius R	X	Y	C	X	Y	C	X	Y	C	X	Y	C
All Widths	300	375	375	375	325	187	217	265	110	155	187	50	100
	450	525	525	525	455	262	303	371	154	217	262	70	141
	600	675	675	675	585	337	390	477	198	280	337	90	181
	750	825	825	825	714	412	476	583	242	342	388	111	221
	900	975	975	975	844	487	563	689	286	404	466	131	261

Equal Tees and 4-Way Crosspieces

X = length of accessory from each 'end' of centre-line.
Y = length from each 'end' of the accessory to the point at which the centre-lines intersect.



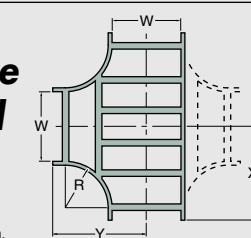
Opal



All dimensions in mm.

Width W	Radius R	X/Y
100	300	509
150	300	534
225	300	571
300	300	609
450	300	684
600	300	759

Topaz Sapphire Emerald



All dimensions in mm.

Width W	Radius R	X/Y
150	300	454
	450	604
	600	754
	750	904
	900	1054
300	300	529
	450	679
	600	829
	750	979
	900	1129
450	300	604
	450	754
	600	904
	750	1054
	900	1204
600	300	679
	450	829
	600	979
	750	1129
	900	1279
750	300	754
	450	904
	600	1054
	750	1204
	900	1354
900	300	829
	450	979
	600	1129
	750	1279
	900	1429

cable ladder systems

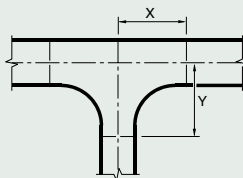
dimensions - unequal tees

Unequal Tees

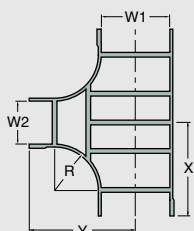
X and Y dimensions are given to assist in the installation of a complete cable ladder run following a centre-line drawing (usually CAD generated).

X = length of accessory from each 'end' of centre-line.

Y = length from each 'end' of the accessory to the point at which the centre-lines intersect.



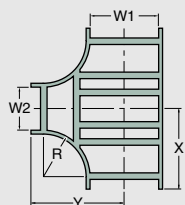
Opal



All dimensions in mm.

		Width W1 100		Width W1 150		Width W1 225		Width W1 300		Width W1 450		Width W1 600	
Width W2	Radius R	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
100	300	—	—	509	534	509	571	509	609	509	684	509	759
150	300	534	509	—	—	534	571	534	609	534	684	534	759
225	300	571	509	571	534	—	—	571	609	571	684	571	759
300	300	609	509	609	534	609	571	—	—	609	684	609	759
450	300	684	509	684	534	684	571	684	609	—	—	684	759
600	300	759	509	759	534	759	571	759	609	759	684	—	—

Topaz Sapphire Emerald



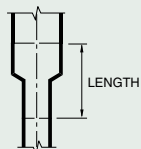
All dimensions in mm.

		Width W1 150		Width W1 300		Width W1 450		Width W1 600		Width W1 750		Width W1 900	
Width W2	Radius R	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
150	300	—	—	453	528	453	603	453	678	453	753	453	828
	450	—	—	603	678	603	753	603	828	603	903	603	978
	600	—	—	753	828	753	903	753	978	753	1053	753	1128
	750	—	—	903	978	903	1053	903	1128	903	1203	903	1278
	900	—	—	1053	1128	1053	1203	1053	1278	1053	1353	1053	1428
300	300	528	453	—	—	528	603	528	678	528	753	528	828
	450	678	603	—	—	678	753	678	828	678	903	678	978
	600	828	753	—	—	828	903	828	978	828	1053	828	1128
	750	978	903	—	—	978	1053	978	1128	978	1203	978	1278
	900	1128	1053	—	—	1128	1203	1128	1278	1128	1353	1128	1428
450	300	603	453	603	528	—	—	603	678	603	753	603	828
	450	753	603	753	678	—	—	753	828	753	903	753	978
	600	903	753	903	828	—	—	903	978	903	1053	903	1128
	750	1053	903	1053	978	—	—	1053	1128	1053	1203	1053	1278
	900	1203	1053	1203	1128	—	—	1203	1278	1203	1353	1203	1428
600	300	678	453	678	528	678	603	—	—	678	753	678	828
	450	828	603	828	678	828	753	—	—	828	903	828	978
	600	978	753	978	828	978	903	—	—	978	1053	978	1128
	750	1128	903	1128	978	1128	1053	—	—	1128	1203	1128	1278
	900	1278	1053	1278	1128	1278	1203	—	—	1278	1353	1278	1428
750	300	753	453	753	528	753	603	753	678	—	—	753	828
	450	903	603	903	678	903	753	903	828	—	—	903	978
	600	1053	753	1053	828	1053	903	1053	978	—	—	1053	1128
	750	1203	903	1203	978	1203	1053	1203	1128	—	—	1203	1278
	900	1353	1053	1353	1128	1353	1203	1353	1278	—	—	1353	1428
900	300	828	453	828	528	828	603	828	678	828	753	—	—
	450	978	603	978	678	978	753	978	828	978	903	—	—
	600	1128	753	1128	828	1128	903	1128	978	1128	1053	—	—
	750	1278	903	1278	978	1278	1053	1278	1128	1278	1203	—	—
	900	1428	1053	1428	1128	1428	1203	1428	1278	1428	1353	—	—

cable ladder systems

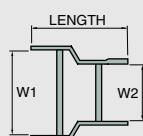
dimensions - reducers

Reducers

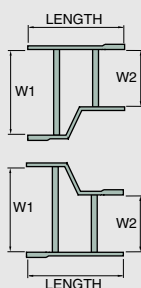


Opal

Straight



Offset

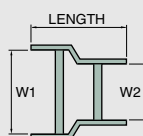


All dimensions in mm.

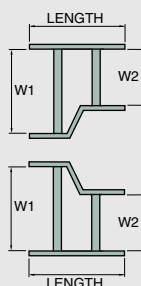
Width W1	Width W2	Length	Length
150	100	400	400
225	100	400	450
	150	400	450
300	100	450	450
	150	450	450
	225	400	450
450	100	450	550
	150	450	500
	225	450	500
	300	450	450
600	100	500	600
	150	500	550
	225	450	550
	300	450	500
	450	450	450

Topaz Sapphire Emerald

Straight



Offset



All dimensions in mm.

Width W1	Width W2	Length	Length
300	150	450	450
450	150	450	500
	300	450	450
600	150	500	550
	300	450	500
	450	450	450
750	150	500	600
	300	500	550
	450	450	500
	600	450	450
900	150	550	650
	300	500	600
	450	500	550
	600	450	500
	750	450	450

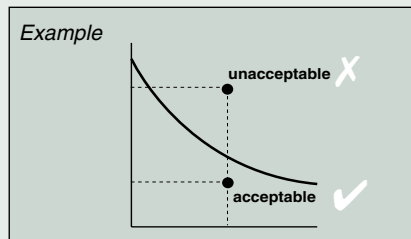
cable ladder systems

loading graphs

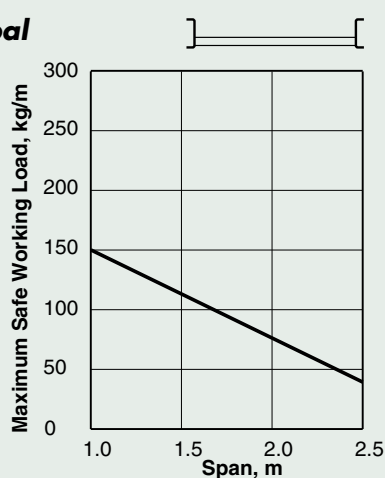
The loads shown on all graphs are the safe recommended maximum loads that can be applied and must include wind, snow and any other external forces in addition to the cable load. For further details see the Legrand Engineering Manual.

The graphs show the maximum load for Ladder installed at a support spacing within its recommended range.

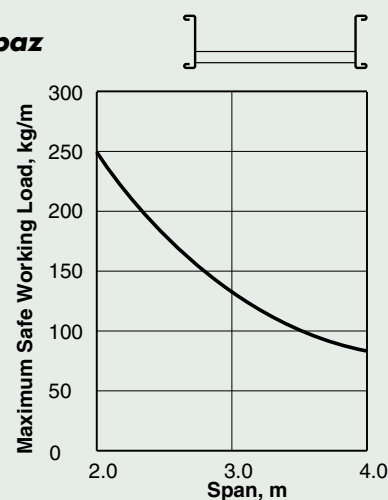
When the graph line is above the intersection of the required load and span lines, the support equipment is suitable for use within those load and span conditions.



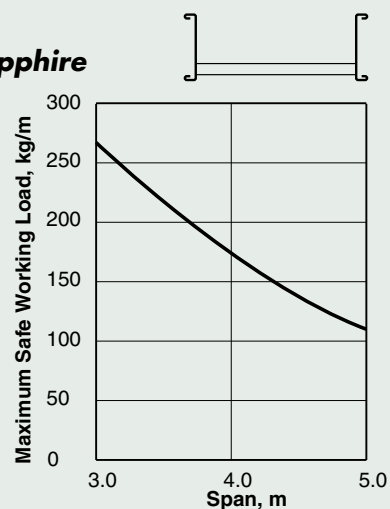
Opal



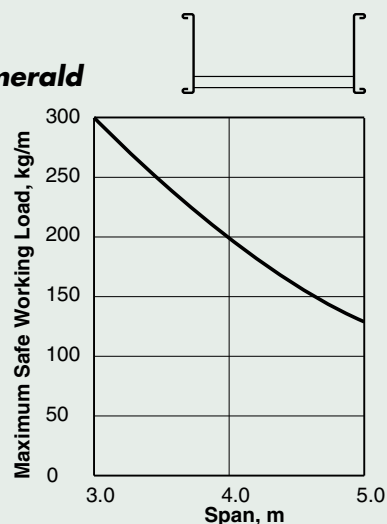
Topaz



Sapphire



Emerald



cable ladder systems

finishes

Opal, Topaz, Sapphire, Emerald

FINISH	Tray lengths	Supports	Ancillaries
Hot dip galvanized after manufacture	✓	✓	✓
Deep galvanized Corten A steel	✓	✓	✓
Stainless steel	✓	✓	✓
Plastic coated	✓	✓	✓

Hot dip galvanized after manufacture

An excellent, economical protective finish used on support systems in many industrial and commercial applications.

The galvanized coating is applied as a final manufacturing process by immersing a steel component (after various pre-treatments) in a large bath of molten zinc; the zinc forms an alloy with this the steel substrate and protects the steel from corrosion.

BS EN ISO 1416 provides the specification for a hot dip galvanized coating.

Deep galvanized Corten A steel

A Deep Galvanized finish has all of the characteristics of hot dip galvanizing but with a much thicker coating of zinc. This gives 2-3 times the life of the standard hot dip galvanized finish.

Although the appropriate British Standard for Deep Galvanizing is BS EN ISO 1416 (the same as for hot dip galvanizing after manufacture) the process requires the use of steel containing a slightly higher proportion of silicon; Corten 'A' steel is the usual choice.

Stainless steel

For all practical purposes stainless steel serces supports can be regarded as maintenance free and suffering no corrosion.

The fire resistance of stainless steel is particularly noteworthy; tests have demonstrated that stainless steel cable supports can be expected to maintain their integrity for considerable periods even when exposed to direct flame temperatures exceeding 1,000°C.

Stainless steel is also used where hygiene is a major consideration.

Many grades of stainless steel are available but the one generally used in aggressive marine environments is BS EN 10088 Grade 1-4401 (equivalent to 316S31, BS 1449: Part 2). This grade has improved corrosion resistance (particularly in the presence of chlorides) and high temperature strength. It is much used in the chloride-laden marine conditions which exist on offshore installations and in coastal regions.

For less aggressive environments BS EN 10088 Grade 1-4301 (equivalent to 304, BS 1449: Part 2) is the normal grade. This grade is called for when the reason for using stainless steel is aesthetic and commonly used in the dairy and food industries. Final finishes with mechanical brushing or polishing are used to provide a good looking and robust surface finish.

Plastic coated

Legrand offer a number of alternative coated finishes to customer's specification.

Details of those which are available for each product range are given in this catalogue and in relevant Data Sheets in the Legrand Engineering Manual.

More detailed information on finishes is given in the Legrand Engineering Manual.